



DOCUMENTACIÓN TECNICA



Ave. 27 febrero #262, El Dorado 1ro, Santiago de los Caballeros, 51000, Rep. Dom.

RNC: 1-30-83336-2.

RPE: 35152

Santiago de los Caballeros, República Dominicana
14 de OCTUBRE de 2025

Asunto: Carta PRESENTACION OFERTA. Proceso Ref. JCE-CCC-CP-2025-0023.

Señores:

Comité de Compras y Contrataciones

Junta Central Electoral

Referencia: JCE-CCC-CP-2025-0023.



El suscribiente, EMMANUEL GUILLÉN, mayor de edad, titular y portador de la cédula de Identidad y electoral No.031-0412757-0, dominicano y residente en esta ciudad de Santiago de los Caballeros, República Dominicana, actuando en nombre y representación de **APLEX SECURITY SRL**, RNC: 1-30-83336-2, de conformidad con lo previsto en el Pliego de Especificaciones Técnicas del Procedimiento JCE-CCC-CP-2025-0023.

Presentamos nuestra oferta técnica.

COMPARACION DE PRECIOS JCE JCE-CCC-CP-2025-0023							
Items	Producto	Cantidad	Unidad de medida	Solución ofertada	Especificaciones técnicas	Cumplimiento de la solución ofertada	Cumple / No cumple
1	Switch	3	UND	Cisco C9300-48T-E	Catalyst 9300 48-port 1G eooper with modular uplinks, data only, network essentials	Cumple con el equipo y numero de parte solicitado ver página 64 del datasheet nb-06-cat9300-ser-datasheet-cte-en.pdf	CUMPLE
2	Network module	3	UND	Cisco C9300-NM-2Y	Catalyst 9300 series 2X 25G/10G/1G network module	Cumple con el equipo y numero de parte solicitado ver página 68 del datasheet nb-06-cat9300-ser-datasheet-cte-en.pdf	CUMPLE
3	Power supply	3	UND	PWR-C1-350WAC	Cisco 3850 350WAC power supply	Cumple ver página 2 del datasheet b_c3850_hlg_appendix_0111.pdf	CUMPLE
4	Transceiver	6	UND	SFP-10/25G-CSR-S	10/25GBASE-CSR SFP28 module for MMF	Cumple ver página 5 de datasheet-c78-736950.pdf	CUMPLE
5	Stack cable	1	UND	STACK-T1-1M	Cisco stackwise-480 stacking cable	Cumple con el modelo solicitado ver página 3 del datasheet b_c3850_hlg_appendix_01000.pdf	CUMPLE
6	CISCO LA-EDelivery	3	UND	C9300-DNA-E-48-3Y	LA 3YR C9300 DNA ESSENTIALS UCS 48PORT UCS	Cumple con garantía de 3 años	CUMPLE

De igual manera, incluimos las condiciones de pago, garantía y tiempos de entrega, así como también la documentación requerida en el pliego de condiciones específicas y sus adendas.

Dado en la ciudad de Santiago de los Caballeros, a los catorce (14) días del mes de octubre (10) del año dos mil veinticinco (2025).



Emmanuel Guillén

Gerente General y Representante Legal
Aplex Security, Srl.

COMPARACION DE PRECIOS JCE JCE-CCC-CP-2025-0023							
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1	Switch	3	UND	Cisco C9300-48T-E	Catalyst 9300 48-port 1G cooper with modular uplinks, data only, network essentials	Cumple con el equipo y numero de parte solicitado ver página 64 del datasheet nb-06-cat9300-ser-data-sheet-cte-en.pdf	CUMPLE
2	Network module	3	UND	Cisco C9300-NM-2Y	Catalys 9300 series 2X 25G/10G/1G network module	Cumple con el equipo y numero de parte solicitado ver página 68 del datasheet nb-06-cat9300-ser-data-sheet-cte-en.pdf	CUMPLE
3	Power supply	3	UND	PWR-C1-350WAC	Cisco 3850 350WAC power supply	Cumple ver página 2 del datasheet b_c3850_hig_appendix_0111.pdf	CUMPLE
4	Transceiver	6	UND	SFP-10/25G-CSR-S	10/25GBASE-CSR SFP28 module for MMF	Cumple ver página 5 de datasheet-c78-736950.pdf	CUMPLE
5	Stack cable	1	UND	STACK-T1-1M	Cisco stackwise-480 stacking cable	Cumple con el modelo solicitado ver página 3 del datasheet b_c3850_hig_appendix_01000.pdf	CUMPLE
6	CISCO LA - EDELIVERY	3	UND	C9300-DNA-E-48-3Y	LA 3YR C9300 DNA ESSENTIALS LICS 48PORT LICS	Cumple con garantia de 3 años	CUMPLE





Cisco Catalyst 9300 Series Switches

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Built to reimagine connection, reinforce security, and redefine experience

Cisco Catalyst™ 9300 Series Switches are Cisco's lead stackable enterprise access switching platform and, as part of the Catalyst 9000 family, are built to transform your network to handle a hybrid world where the workplace is anywhere, endpoints could be anything, and applications are hosted all over the place.

The Catalyst 9300 Series, including the Catalyst 9300X models, continues to shape the future with continued innovation that helps you reimagine connections, reinforce security and redefine the experience for your hybrid workforce, big or small. With Catalyst 9300 Series switches, you choose how you want to manage your network – on-premises, virtual, or from the cloud.

The many industry firsts of the Catalyst 9300 Series include:

- **Up to 1 TB of stacking bandwidth:** With Cisco StackWise-1T, Catalyst 9300 Series switches are the industry's highest-density stacking bandwidth solution with the most flexible uplink architecture.
- **Flexible and dense uplink offerings** with 100 Gigabit Ethernet (G), 40G, 25G, Multigigabit, 10G, and 1G modular uplinks.
- **Mixed stacking with backward compatibility:** Stack your Catalyst 9300X fiber switches with Catalyst 9300 and Catalyst 9300X Multigigabit switches, bringing stackable high-speed fiber to the access layer.
- **Highest number of Multigigabit ports:** With standalone and StackWise-1T, Catalyst 9300X models enable 48 Multigigabit ports in standalone mode and 448 Multigigabit ports with an 8-member stack.
- **Highest 90W UPOE+ density:** Enable your OT/IT needs with up to 48 ports of 90W Cisco UPOE+ in standalone mode or 384 ports of 90W UPOE+ with an 8-member stack.
- **StackPower with backward compatibility:** Enable power resiliency with higher power budgets in a mixed Catalyst 9300 and Catalyst 9300X stack.
- **100G IPsec in hardware:** Built on the Cisco® Unified Access Data Plane (UADP) 2.0sec application-specific integrated circuit (ASIC), the Catalyst 9300X models come with 100G line-rate IPsec to enable various options for new edge connectivity.
- **Secure tunnel connectivity:** With the new edge, the Catalyst 9300X enables secure connections to secure internet gateways, cloud service providers, and site-to-site connectivity using IPsec tunnels with 256-bit Advanced Encryption Standard encryption (AES-256) and speeds up to 100G.
- **Enhanced application hosting:** With twice the capacity and additional RAM, Intel® QuickAssist Technology (QAT), and 2x 10G AppGig ports, the Catalyst 9300X models can host multiple Cisco Signed performance-savvy applications.
- **ThousandEyes enabled:** Enable end-to-end visualization of the path from campus/branch to clouds/data center with Cisco ThousandEyes® Network and Application Synthetics (included with Cisco DNA Advantage licenses).
- **Cisco ASAc firewall enabled:** Using application hosting, Cisco Adaptive Security Virtual Appliance (ASAc) and stateful inspection of traffic can be seamlessly added to existing networks without any additional hardware.



- **Cloud management:** Migrate Catalyst 9300 Series switches to the Cisco Meraki® dashboard to unlock centralized management and monitoring of devices while retaining advanced features like a cloud-hosted command-line interface terminal. [Learn more.](#)
- **Investment protection:** Catalyst 9300X redundant fans and power supplies, data stack, and StackPower cables are backward compatible with the Catalyst 9300 Series.

The Foundation of Software-Defined Access

Advanced persistent security threats. The exponential growth of Internet of Things (IoT) devices. Mobility everywhere. Cloud adoption. All of these require a network fabric that integrates advanced hardware and software innovations to automate, secure, and simplify customer networks. The goal of this network fabric is to enable customer revenue growth by accelerating the rollout of business services.

The Cisco Networking Cloud with Software-Defined Access (SD-Access) is the network fabric that powers business. It is an open and extensible, software-driven architecture that accelerates and simplifies your enterprise network operations. The programmable architecture frees your IT staff from time-consuming, repetitive network configuration tasks so they can focus instead on innovation that positively transforms your business. SD-Access enables policy-based automation from edge to cloud with foundational capabilities that include:

- Simplified device deployment
- Unified management of wired and wireless networks
- Network virtualization and segmentation
- Group-based policies
- Context-based analytics

Cisco Catalyst, Cisco DNA, and Meraki software

Cisco Catalyst, Cisco DNA, and Meraki software subscriptions offer a valuable and flexible way to buy software for the access layer, WAN, and data center domains. At each stage in the product lifecycle, Cisco Catalyst, Cisco DNA, and Meraki software helps make buying, managing, and upgrading your network and infrastructure software easier. Cisco software provides:

- Flexible licensing models to smoothly distribute customers' software spending over time.
- Investment protection for software purchases through software services-enabled license portability.
- Access to updates, upgrades, and new technology from Cisco through Cisco Software Support Service (SWSS).
- Lower cost of entry with the new Cisco Catalyst Software Subscription for Switching support model.
- Choose what management model works best for you – on-premises, virtual, or in the cloud.
- Access to end-to-end network visibility with Cisco Spaces, service assurance through Cisco ThousandEyes Network and Application Synthetics, and Cisco ASAc firewall (with Cisco Catalyst and Cisco DNA Advantage licenses).

Cisco Catalyst 9300 Series Switches let you manage your entire switching structure as a single, converged component. With one management system, whether on-premises or in the cloud, and one policy for wired and wireless networks, they offer an efficient way to provide more secure access.



Product overview

Product highlights

- Highest wireless scale for Wi-Fi 6 and 802.11ac Wave 2 access points supported on a single switch with select models.
- Catalyst 9300 and Catalyst 9300L/LM models are based on the Cisco UADP 2.0 ASIC with programmable pipeline and micro-engine capabilities, along with template-based, configurable allocation of Layer 2 and Layer 3 forwarding, access control lists (ACLs), and quality-of-service (QoS) entries.
- Catalyst 9300X models are based on UADP 2.0sec ASIC, which adds line-rate support for crypto, including 100G hardware-based IPsec.
- x86 CPU complex with 8 GB memory, 16 GB of flash, and an external USB 3.0 SSD pluggable storage slot (delivering up to 240 GB of storage with an optional SSD drive) to host containers. Catalyst 9300X models support 16 GB of memory.
- USB 2.0 slot to load system images and set configurations.
- Up to 1 Tbps of local stackable switching bandwidth with the Catalyst 9300X models.
- Deeper buffer and higher scale model options for rich multimedia content delivery applications.
- Flexible and dense uplink offerings with 100G, 40G, 25G, Multigigabit, 10G, and 1G as fixed or modular uplinks.
- Easy transition from 40G to 100G and 10G to 25G with dual-rate optics.
- Flexible downlink options with 25G, 10G and 1G copper and fiber as well as the densest Multigigabit links.
- With a mix of copper (1G up to 10G) and fiber (1G up to 25G) supported in a single stack, multiple flexible deployment scenarios are enabled, including 2-tier, 3-tier, and hybrid architectures.
- Leading Power over Ethernet (PoE) capabilities with up to 384 ports of PoE per stack, PoE+, and 288 ports of high-density IEEE 802.3bt-90W UPOE+ and 60W Cisco UPOE®.
- Intelligent power management with Cisco StackPower technology, providing power stacking among members for power redundancy. StackPower pools the power supplies across the stack to be used for redundancy and supplemental power purposes.
- Line-rate, hardware-based Flexible NetFlow (FNF), delivering flow collection of up to 128,000 flows with select models.
- IPv6 support in hardware, providing wire-rate forwarding for IPv6 networks.
- Dual-stack support for IPv4/IPv6 and dynamic hardware forwarding table allocations, for ease of IPv4-to-IPv6 migration.



- Support for both static and dynamic Network Address Translation (NAT) and Port Address Translation (PAT).
- IEEE 802.1ba Audio Video Bridging (AVB) built in to provide a better audio and video experience through improved time synchronization and QoS.
- Precision Time Protocol (PTP; IEEE 1588v2) provides accurate clock synchronization with sub-microsecond accuracy, making it suitable for distribution and synchronization of time and frequency over the network.
- Cisco IOS® XE, a modern operating system for the enterprise with support for model-driven programmability, including NETCONF, RESTCONF, YANG, on-box Python scripting, streaming telemetry, container-based application hosting, and patching for critical bug fixes. The OS also has built-in defenses to protect against runtime attacks.
- End-to-end visualization of the path from campus/branch to clouds/data center with Cisco ThousandEyes Network and Application Synthetics (included with a Cisco Catalyst and Cisco DNA Advantage license).
- Fully managed Meraki cloud customers can take advantage of the power of Catalyst 9300 switching in their Meraki cloud through the cloud-management service.
- **SD-Access:** Cisco Catalyst 9300 Series Switches form the foundational building block for SD-Access, Cisco's lead enterprise architecture:
 - Policy-based automation from edge to cloud.
 - Simplified segmentation and micro-segmentation, with predictable performance and scalability.
 - Automation through Cisco Catalyst Center and Meraki dashboard.
 - Policy handled through the Cisco Identity Services Engine (ISE).
 - Network assurance provided through Cisco Catalyst Center and Meraki dashboard.
 - Faster launch of new business services and significantly improved issue resolution time.
- Plug and Play (PnP) enabled: A simple, secure, unified, and integrated offering to ease new branch or campus device rollouts or updates to an existing network.
- Advanced security
 - **Encrypted Traffic Analytics (ETA):** Uses the power of machine learning to identify and take action against threats or anomalies in your network, including malware detection in encrypted traffic (without decryption) and distributed anomaly detection.
 - Support for AES-256 with the powerful MACsec 256-bit encryption algorithm available on all models.
 - **Trustworthy solutions:** Hardware-anchored Secure Boot and Secure Unique Device Identification (SUDI) support for PnP, to verify the identity of the hardware and software.



Platform details

Switch models and configurations

Table 1. Product family configurations

Model	Modular uplinks and speeds	Stacking bandwidth support	Multigigabit density	Cisco StackPower	Hardware-based IPsec	App hosting capacity
Catalyst 9300X	10G, 25G, 40G, Multigigabit, and 100G	Stackwise-1T (480G when stacking with a Catalyst 9300 model)	48x 10G	✓ (larger power budget)	Up to 100G IPsec*	✓ (2x hosting resources compared to Catalyst 9300 models)
Catalyst 9300	10G, 25G, 40G and Multigigabit	Stackwise-480	48x 5G and 24x 10G	✓	X	✓
Catalyst 9300L	X	Stackwise-320	12x 10G	X	X	✓
Catalyst 9300LM	X	Stackwise-320	8x 10G	X	X	✓

* Need to order HSEC key for IPsec feature.

The Cisco Catalyst 9300 Series consists of 19 modular uplink switch models and 14 fixed uplink switch models.



Figure 1. Cisco Catalyst 9300 Series Switches

Table 2 lists port scale and power details for the Cisco Catalyst 9300 Series models.

Table 2. Cisco Catalyst 9300 Series switch configurations

Model	Total 10/100/1000, Multigigabit copper or SFP fiber	Uplink configuration	Default AC power supply
Modular uplink models			
C9300X-48HX	48 ports Cisco UPOE+, 48x 10G Multigigabit (10G/5G/2.5G/1G/100M) with 90W UPOE+	Modular uplinks	1100W AC
C9300X-48TX	48 ports data, 48x 10G Multigigabit (10G/5G/2.5G/1G/100M)	Modular uplinks	715W AC

Model	Total 10/100/1000, Multigigabit copper or SFP fiber	Uplink configuration	Default AC power supply
C9300X-48HXN	48 ports Cisco UPOE+, 8x 10G Multigigabit (10G/5G/2.5G/1G/100M) + 40x 5G Multigigabit (5G/2.5G/1G/100M)	Modular uplinks	1100W AC
C9300X-24HX	24 ports Cisco UPOE+, 24x 10G Multigigabit (10G/5G/2.5G/1G/100M)	Modular uplinks	1100W AC
C9300X-12Y	12 ports 25G/10G/1G SFP28	Modular uplinks	715W AC
C9300X-24Y	24 ports 25G/10G/1G SFP28	Modular uplinks	715W AC
C9300-24T	24 ports data	Modular uplinks	350W AC
C9300-48T	48 ports data	Modular uplinks	350W AC
C9300-24P	24 ports PoE+	Modular uplinks	715W AC
C9300-48P2	48 ports PoE+ ENERGY STAR certified	Modular uplinks	715W AC
C9300-24U	24 ports Cisco UPOE	Modular uplinks	1100W AC
C9300-48U	48 ports Cisco UPOE	Modular uplinks	1100W AC
C9300-24UX	24 ports Multigigabit Cisco UPOE (10G/5G/2.5G/1G/100M)	Modular uplinks	1100W AC
C9300-48UXM2	48 ports Cisco UPOE, 36 ports 100M/1G/2.5G + 12 ports Multigigabit (10G/5G/2.5G/1G/100M) ENERGY STAR® certified	Modular uplinks	1100W AC
C9300-48UN	48 port 5Gbps Multigigabit UPOE ports (5G/2.5G/1G/100M)	Modular uplinks	1100W AC
C9300-24UB	24 port Cisco UPOE	Modular uplinks	1100W AC
C9300-24UXB	24 ports Multigigabit Cisco UPOE (10G/5G/2.5G/1G/100M)	Modular uplinks	1100W AC
C9300-48UB	48 ports Cisco UPOE	Modular uplinks	1100W AC
C9300-24H	24 ports Cisco UPOE+	Modular uplinks	1100W AC
C9300-48H	48 ports Cisco UPOE+	Modular uplinks	1100W AC
C9300-24S	24 ports 1G SFP	Modular uplinks	715W AC
C9300-48S	48 ports 1G SFP	Modular uplinks	715W AC



Model	Total 10/100/1000, Multigigabit copper or SFP fiber	Uplink configuration	Default AC power supply
Fixed uplink models			
C9300L-24T-4G	24 ports data	4x 1G fixed uplinks	350W AC
C9300L-24T-4X	24 ports data	4x 10G/1G fixed uplinks	350W AC
C9300L-48T-4G	48 ports data	4x 1G fixed uplinks	350W AC
C9300L-48T-4X	48 ports data	4x 10G/1G fixed uplinks	350W AC
C9300L-24P-4G	24 ports PoE+	4x 1G fixed uplinks	715W AC
C9300L-24P-4X	24 ports PoE+	4x 10G/1G fixed uplinks	715W AC
C9300L-48P-4G	48 ports PoE+	4x 1G fixed uplinks	715W AC
C9300L-48P-4X	48 ports PoE+	4x 10G/1G fixed uplinks	715W AC
C9300L-48PF-4G	48 ports PoE+	4x 1G fixed uplinks	1100W AC
C9300L-48PF-4X	48 ports PoE+	4x 10G/1G fixed uplinks	1100W AC
C9300L-24UXG-4X	24 ports Cisco UPOE, 8 ports Multigigabit (10G/5G/2.5G/1G/100M) + 16 ports 1G (1G/100M/10M)	4x 10G/1G fixed uplinks	1100W AC
C9300L-24UXG-2Q	24 ports Cisco UPOE, 8 ports Multigigabit (10G/5G/2.5G/1G/100M) + 16 ports 1G (1G/100M/10M)	2x 40G fixed uplinks	1100W AC
C9300L-48UXG-4X	48 ports Cisco UPOE, 12 ports Multigigabit (10G/5G/2.5G/1G/100M) + 36 ports 1G (1G/100M/10M)	4x 10G/1G fixed uplinks	1100W AC
C9300L-48UXG-2Q	48 ports Cisco UPOE, 12 ports Multigigabit (10G/5G/2.5G/1G/100M) + 36 ports 1G (1G/100M/10M)	2x 40G fixed uplinks	1100W AC



Model	Total 10/100/1000, Multigigabit copper or SFP fiber	Uplink configuration	Default AC power supply
C9300LM-48UX-4Y	48 port Cisco UPOE, 8 port 10G Multigigabit (10G/5G/2.5G/1G/100M) + 40 port 1G (1G/100M/10M)	4x 25G fixed uplinks	1000W AC ¹
C9300LM-48U-4Y	48 ports 1G (1G/100M/10M) with Cisco UPOE	4x 25G fixed uplinks	1000W AC ¹
C9300LM-24U-4Y	24 ports 1G (1G/100M/10M) with Cisco UPOE	4x 25G fixed uplinks	600W AC ¹
C9300LM-48T-4Y	48 ports 1G (1G/100M/10M) Data	4x 25G fixed uplinks	600W AC ¹

¹ C9300LM models use different power supplies compared to the Catalyst 9300, 9300X, and 9300L models.

² ENERGY STAR certified model.

Network modules

Cisco Catalyst 9300 Series Switches (C9300X and C9300 SKUs) support optional network modules for uplink ports (Figures 2 and 3). These field-replaceable network modules with 25G and 40G speeds in the Cisco Catalyst 9300 Series enable greater architectural flexibility and infrastructure investment protection by allowing a nondisruptive migration from 10G to 25G and beyond. The default switch configuration does not include the network module. When you purchase the switch, you can choose from the network modules described in Table 3.

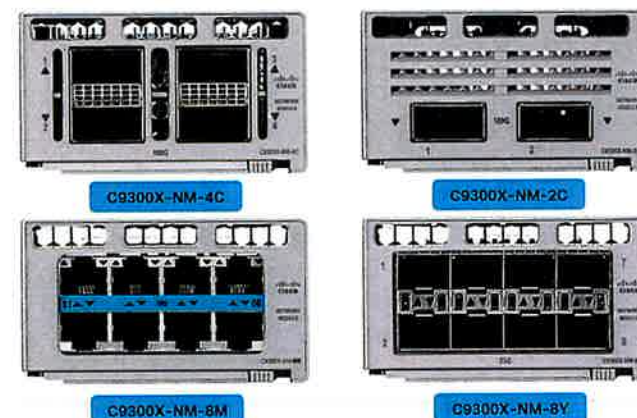


Figure 2. Cisco Catalyst 9300X network modules



Figure 3. Cisco Catalyst 9300 Series network modules

Table 3. Network module numbers and descriptions

Network module	Description
C9300X-NM-8M**	Catalyst 9300X 8x 10G/1G Multigigabit Network Module
C9300X-NM-8Y**	Catalyst 9300X 8x 25G/10G/1G Network Module
C9300X-NM-2C**	Catalyst 9300X 2x 100G/40G Network Module
C9300X-NM-4C*	Catalyst 9300X 4x 100G/40G Network Module
C9300-NM-4G	Catalyst 9300 Series 4x 1G Network Module
C9300-NM-4M	Catalyst 9300 Series 4x Multigigabit Network Module
C9300-NM-8X	Catalyst 9300 Series 8x 10G/1G Network Module
C9300-NM-2Q	Catalyst 9300 Series 2x 40G Network Module
C9300-NM-2Y	Catalyst 9300 Series 2x 25G/10G/1G Network Module

* C9300X-NM-4C is compatible only with the C9300X-48HX, C9300X-48TX, and C9300X-24Y models.

** The number of network module ports is limited when a C9300X-NM-xx is used with the C9300X-48HXN models.

Please note: Catalyst 3850 and Catalyst 9300 network modules are supported on the Catalyst 9300 models. Catalyst 9300X network modules are supported only on the Catalyst 9300X models.

For additional details, please read the Cisco Catalyst 9000 Switching Platform FAQ: <https://www.cisco.com/c/dam/en/us/products/collateral/switches/catalyst-9300-series-switches/nb-09-cat-9k-faq-cte-en.pdf>.

Power supplies

Cisco Catalyst 9300 Series Switches support dual redundant power supplies. The switches ship with one power supply by default, and the second power supply can be purchased when the switch is ordered or at a later time. If only one power supply is installed, it should always be in power supply bay #1. The switches also ship with three field-replaceable fans. Power supplies are common across the Catalyst 9300 Series.



Figure 4. Cisco Catalyst 9300 Series dual redundant power supplies

Table 4 lists the different power supplies available in these switches and available PoE power.

Table 4. Power supply models

Model	Primary power supply	Default or upgrade	Available PoE	With 350W secondary PS	With 715W secondary PS	With 1100W secondary PS	With 1900W secondary PS
C9300X-48HX	PWR-C1-1900WAC-P	Upgrade	1390W	1740W	2105W	2490W	3290W
	PWR-C1-1100WAC-P	Default	590W	940W	1305W	1690W	2490W
C9300X-48TX	PWR-C1-715WAC-P	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300X-48HXN	PWR-C1-1900WAC-P	Upgrade	1490W	1840W	2205W	2590W	3390W
	PWR-C1-1100WAC-P	Default	690W	1040W	1405W	1790W	2590W
C9300X-24HX	PWR-C1-1900WAC-P	Upgrade	1535W	1885W	2160W*	2160W*	2160W*
	PWR-C1-1100WAC-P	Default	735W	1085W	1450W	1835W	2160W*
C9300X-24Y	PWR-C1-715WAC-P	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300X-12Y	PWR-C1-715WAC-P	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300-48H	PWR-C1-1900WAC-P	Upgrade	1622W	1972W	2337W	2722W	2880W
	PWR-C1-1100WAC-P	Default	822W	1172W	1537W	1922W	2722W
C9300-24H	PWR-C1-1900WAC-P	Upgrade	1630W	1980W	2160W*	2160W*	2160W*
	PWR-C1-1100WAC-P	Default	830W	1180W	1545W	1930W	2160W
C9300-48UN	PWR-C1-1900WAC-P	Upgrade	1445W	1795W	2160W	2545W	2880W*
	PWR-C1-1100WAC-P	Default	645W	995W	1360W	1745W	2545W



Model	Primary power supply	Default or upgrade	Available PoE	With 350W secondary PS	With 715W secondary PS	With 1100W secondary PS	With 1900W secondary PS
C9300-48UXM	PWR-C1-1900WAC-P	Upgrade	1290W	1640W	2005W	2880W*	2880W*
	PWR-C1-1100WAC-P	Default	490W	840W	1205W	1590W	2390W
C8300-24UX	PWR-C1-1900WAC-P	Upgrade	1360W	1440W*	1440W*	1440W*	1440W*
	PWR-C1-1100WAC-P	Default	560W	910W	1275W	1440W*	1440W*
C9300-48U	PWR-C1-1900WAC-P	Upgrade	1622W	1800W**	1800W**	1800W**	1800W**
	PWR-C1-1100WAC-P	Default	822W	1172W	1537W	1800W**	1800W**
C9300-24U	PWR-C1-1900WAC-P	Upgrade	1440W*	1440W*	1440W*	1440W*	1440W*
	PWR-C1-1100WAC-P	Default	830W	1180W	1152W	1440W*	1440W*
C9300-48P	PWR-C1-1100WAC-P	Upgrade	822W	1172W	1440W*	1440W*	1440W*
	PWR-C1-715WAC-P	Default	437W	787W	1152W	1440W*	1440W*
C9300-24P	PWR-C1-1100WAC-P	Upgrade	720W*	720W*	720W*	720W*	720W*
	PWR-C1-715WAC-P	Default	445W	720W*	720W*	720W*	720W*
C9300-48T	PWR-C1-350WAC-P***	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300-24T	PWR-C1-350WAC-P***	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300-48S	PWR-C1-715WAC-P	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300-24S	PWR-C1-715WAC-P	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300-48UB	PWR-C1-1100WAC-P	Default	822W	1172W	1537W	1800W**	1800W**
C9300-24UB	PWR-C1-1100WAC-P	Default	830W	1180W	1440W*	1440W*	1440W*
C9300-24UXB	PWR-C1-1100WAC-P	Default	560W	910W	1275W	1440W*	1440W*

Model	Primary power supply	Default or upgrade	Available PoE power	With 350W secondary PS	With 715W secondary PS	With 1100W secondary PS
C9300L-24T-4G	PWR-C1-350WAC-P	Default	No PoE	No PoE	No PoE	No PoE
C9300L-24T-4X	PWR-C1-350WAC-P	Default	No PoE	No PoE	No PoE	No PoE
C9300L-48T-4G	PWR-C1-350WAC-P	Default	No PoE	No PoE	No PoE	No PoE



Model	Primary power supply	Default or upgrade	Available PoE power	With 350W secondary PS	With 715W secondary PS	With 1100W secondary PS
C9300L-48T-4X	PWR-C1-350WAC-P	Default	No PoE	No PoE	No PoE	No PoE
C9300L-24P-4G	PWR-C1-715WAC-P	Default	505W	720W*	720W*	720W*
C9300L-24P-4X	PWR-C1-715WAC-P	Default	505W	720W*	720W*	720W*
C9300L-48P-4G	PWR-C1-715WAC-P	Default	505W	855W	1220W	1440W*
C9300L-48P-4X	PWR-C1-715WAC-P	Default	505W	855W	1220W	1440W*
C9300L-48PF-4G	PWR-C1-1100WAC-P	Default	890W	1240W	1440W	1440W*
C9300L-48PF-4X	PWR-C1-1100WAC-P	Default	890W	1240W	1440W	1440W*
C9300L-24UXG-4X	PWR-C1-1100WAC-P	Default	880W	1230W	1440W	1440W*
C9300L-24UXG-2Q	PWR-C1-1100WAC-P	Default	722W	1072W	1440W	1440W*
C9300L-48UXG-4X	PWR-C1-1100WAC-P	Default	675W	1025W	1390W	1775W
C9300L-48UXG-2Q	PWR-C1-1100WAC-P	Default	675W	1025W	1390W	1775W

* Limited by port number and port rating (e.g., 24 PoE+ 30W ports = 720W).

** Limited by design.

*** Upgrade options for 715W and 1100W PSUs are available.

Model	Primary power supply	Default or upgrade	Available PoE power	With 600W AC secondary PS	With 715W DC secondary PS	With 1000W AC secondary PS
C9300LM-48UX-4Y	PWR-C6-1KWAC	Default	790W	1390W	1505W	1790W
C9300LM-48U-4Y	PWR-C6-1KWAC	Default	790W	1390W	1505W	1790W*
C9300LM-24U-4Y	PWR-C6-1KWAC	Upgrade	820W	1420W	1440W*	1440W*
	PWR-C6-600WAC	Default	420W	1020W	1135W	1420W
C9300LM-48T-4Y	PWR-C6-600WAC	Default	No PoE	No PoE	No PoE	No PoE

* Limited by port number and port rating (e.g. 24x 60W UPOE ports = 1440W).



Stacking

Cisco Catalyst 9300 Series Switch models are designed for stacking as a single virtual switch, enabling customers to have a single management plane and control plane for up to 448 access ports.



Figure 5. Cisco Catalyst 9300 Series modular uplink models stack (C9300/C9300X SKUs) and fixed uplink models stack (C9300L SKUs).

Table 5 lists the supported stacking options.

Table 5. Supported stacking options

Model	Stacking support	Stacking bandwidth support	Optional stacking hardware	Number of members	Supported stack members
C9300X SKUs	StackWise-1T	1 Tbps	StackWise cable	8	Stacks with other Catalyst 9300X models at StackWise-1T speeds with same license level Stacks with C9300 SKUs at StackWise-480 speeds with same license level
C9300 SKUs	StackWise-480	480 Gbps	StackWise cable	8	Other C9300 SKUs with same license level C9300 higher-scale SKUs only stack with other like higher-scale models
C9300L SKUs	StackWise-320	320 Gbps	C9300L-STACK-KIT Or C9300L-STACK-KIT2	8	Stacks with other Catalyst 9300L and 9300LM models with same license level
C9300LM SKUs	StackWise-320	320 Gbps	C9300L-STACK-KIT2	8	Stacks with other Catalyst 9300L and 9300LM models with same license level



Mixed stacking between Catalyst 9300X and Catalyst 9300 models are supported at StackWise-480 speeds.

Mixed stacking between Catalyst 9300 and Catalyst 9300X and Catalyst 9300 higher-scale models (C9300-24UB, C9300-24UXB, C9300-48UB) is **not supported**. You cannot stack fixed uplink models (C9300L SKUs) with modular uplink models (C9300 SKUs) or other Catalyst switches, such as the Cisco Catalyst 3850 and 3650 Series. Any combination of Catalyst 9300 Series models can form a stack. Separately, any combination of Catalyst 9300L models can form a stack.

Catalyst 9300 Series higher-scale SKUs (C9300-24UB, C9300-24UXB, C9300-48UB) need to be stacked with other higher-scale models.

StackWise cables that are available to configure stacking with Catalyst 9300 Series modular uplink models (C9300X and C9300 SKUs) come in lengths of 0.5m, 1m, and 3m.

The optional StackWise-320 kit for Catalyst 9300 Series fixed uplink models (C9300L and 9300LM SKUs) consists of two stack adapters and a stacking cable. The default stacking cable is 0.5m, but options of 1m and 3m are also available. Table 6 lists the stacking accessories.

Table 6. Stacking accessories

Model	Description
STACK-T1-50CM	Data stack 50 cm (cable option with C9300 and C9300X SKUs)
STACK-T1-1M	Data stack 1m (cable option with C9300 and C9300X SKUs)
STACK-T1-3M	Data stack 3m (cable option with C9300 and C9300X SKUs)
C9300L-STACK-KIT	Stack kit for C9300L SKUs only: Two data stack adapters and one data stack cable
STACK-T3-50CM	Data stack 50cm cable (default cable with C9300L Stack Kit)
STACK-T3-1M	Data stack 1m cable (cable option with C9300L Stack Kit)
STACK T3-3M	Data stack 3m cable (cable option with C9300L Stack Kit)
C9300L-STACK-KIT2	Stack kit for C9300LM and C9300L SKUs: Two data stack adapters and one data stack cable
STACK-T3A-50CM	Data stack 50cm cable (default cable with C9300L Stack Kit2)
STACK-T3A-1M	Data stack 1m cable (cable option with C9300L Stack Kit2)
STACK T3A-3M	Data stack 3m cable (cable option with C9300L Stack Kit2)



Figure 6. Cisco Catalyst 9300 Series fixed uplink models with optional stack kit

Fan

Cisco Catalyst 9300 Series Switches also come with three field-replaceable fans and support (N+1) redundancy. Table 7 lists the fan module part number.

Table 7. Fan module

Model	Description
FAN-T2*	Fan module

Performance and scalability

Performance and scalability metrics for the Cisco Catalyst 9300 Series are provided in Table 8.

Performance specifications

Table 8. Performance specifications

Description	Catalyst 9300X modular uplink models	Catalyst 9300 modular uplink models	Catalyst 9300 higher-scale models	Catalyst 9300L/LM fixed uplink models
Total number of MAC addresses	32,000	32,000	64,000	32,000
Total number of IPv4 routes (ARP plus learned routes)	39,000 (24,000 direct routes and 15,000 indirect routes)	32,000 (24,000 direct routes and 8,000 indirect routes)	112,000 (48,000 direct routes and 64,000 indirect routes)	32,000 (24,000 direct routes and 8,000 indirect routes)
IPv6 routing entries	19,500	16,000	56,000	16,000
Multicast routing scale	8,000	8,000	16,000	8,000
QoS scale entries	4,000	5,120	18,000	5,120
ACL scale entries	8,000	5,120	18,000	5,120

Description	Catalyst 9300X modular uplink models	Catalyst 9300 modular uplink models	Catalyst 9300 higher-scale models	Catalyst 9300L/LM fixed uplink models
Packet buffer per SKU	16-MB buffer for 48-port 5G Multigigabit, 24-port 10G Multigigabit and 12-port fiber 32-MB buffer for 48-port 10G Multigigabit and 24-port fiber	16-MB buffer for 24- or 48-port Gigabit Ethernet models 32-MB buffer for 24- and 48-port Multigigabit	32-MB buffer for 24- and 48-port Gigabit Ethernet models 64-MB buffer for 24-port Multigigabit model (24UXB)	16-MB buffer for 24- and 48-port Gigabit Ethernet models
DNF entries	64,000 flows on 48-port 5G Multigigabit and 24-port 10G Multigigabit and 12-port fiber 128,000 flows on 48-port 10G Multigigabit and 24-port fiber	64,000 flows on 24- and 48-port Gigabit Ethernet models 128,000 flows on 24-port Multigigabit	128,000 flows on 24- and 48-port Gigabit Ethernet models 256,000 flows on 24-port Multigigabit	64,000 flows on 24- and 48-port Gigabit Ethernet models
DRAM	16 GB	8 GB	8 GB	8 GB
Flash	16 GB	16 GB	16 GB	16 GB
VLAN IDs	4094	4094	4094	4094
PVST instances	300	300	300	300
STP virtual ports (port* VLANs) for PVST	13,000	13,000	13,000	13,000
STP virtual ports (port* VLANs) for MST	13,000	13,000	13,000	13,000
Total switched virtual interfaces (SVIs)	1000	1000	1000	1000
Jumbo frames	9198 bytes	9198 bytes	9198 bytes	9198 bytes
Total routed ports per Catalyst 9300 Series stack	448	448	448	416



Bandwidth specifications

Table 9. Bandwidth specifications

SKU	Switching capacity	Switching capacity with stacking	Forwarding rate	Forwarding rate with stacking
C9300X-48TX	1,760 Gbps	2,760 Gbps	1309 Mpps	2232 Mpps
C9300X-48HX	1,760 Gbps	2,760 Gbps	1309 Mpps	2232 Mpps
C9300X-48HXN	960 Gbps	1960 Gbps	714.24 Mpps	1458.24 Mpps
C9300X-24HX	800 Gbps	1,880 Gbps	654.72 Mpps	1398.72 Mpps
C9300X-12Y	1000G	2000G	744Mpps	1488mpps
C9300X-24Y	2,000 Gbps	3,000 Gbps	1488 Mpps	2232 Mpps
C9300-24T	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48T	256 Gbps	736 Gbps	190.47 Mpps	547.62 Mpps
C9300-24P	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48P	256 Gbps	736 Gbps	190.47 Mpps	547.62 Mpps
C9300-24U	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48U	256 Gbps	736 Gbps	190.48 Mpps	547.62 Mpps
C9300-24UX	640 Gbps	1120 Gbps	476.19 Mpps	833.33 Mpps
C9300-48UXM	580 Gbps	1060 Gbps	431.54 Mpps	788.69 Mpps
C9300-48UN	640 Gbps	1120 Gbps	476.19 Mpps	833.33 Mpps
C9300-24UB	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48UB	256 Gbps	736 Gbps	190.48 Mpps	547.62 Mpps
C9300-24UXB	640 Gbps	1120 Gbps	476.19 Mpps	833.33 Mpps
C9300-24H	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48H	256 Gbps	736 Gbps	190.48 Mpps	547.62 Mpps
C9300-24S	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48S	256 Gbps	736 Gbps	190.47 Mpps	547.62 Mpps



SKU	Switching capacity	Switching capacity with stacking	Forwarding rate	Forwarding rate with stacking
C9300X-12Y	1,000 Gbps	2,000 Gbps	744.04 Mpps	1488 Mpps
C9300X-24Y	2,000 Gbps	3,000 Gbps	1488 Mpps	2232 Mpps
C9300LM-48UX-4Y	440 Gbps	760 Gbps	327.36 Mpps	565.44 Mpps
C9300LM-48U-4Y	296 Gbps	616 Gbps	220.22 Mpps	458.30 Mpps
C9300LM-24U-4Y	248 Gbps	568 Gbps	184.51 Mpps	422.59 Mpps
C9300LM-48T-4Y	296 Gbps	616 Gbps	220.22 Mpps	458.30 Mpps
C9300L-24T-4G	56 Gbps	376 Gbps	41.66 Mpps	279.76 Mpps
C9300L-24T-4X	128 Gbps	448 Gbps	95.23 Mpps	333.33 Mpps
C9300L-48T-4G	104 Gbps	424 Gbps	77.38 Mpps	315.48 Mpps
C9300L-48T-4X	176 Gbps	496 Gbps	130.95 Mpps	369.05 Mpps
C9300L-24P-4G	56 Gbps	376 Gbps	41.66 Mpps	279.76 Mpps
C9300L-24P-4X	128 Gbps	448 Gbps	95.23 Mpps	333.33 Mpps
C9300L-48P-4G	104 Gbps	424 Gbps	77.38 Mpps	315.48 Mpps
C9300L-48P-4X	176 Gbps	496 Gbps	130.95 Mpps	369.05 Mpps
C9300L-48PF-4G	104 Gbps	424 Gbps	77.38 Mpps	315.48 Mpps
C9300L-48PF-4X	176 Gbps	496 Gbps	130.95 Mpps	369.05 Mpps
C9300L-24UXG-4X	272 Gbps	592 Gbps	202.38 Mpps	440.47 Mpps
C9300L-24UXG-2Q	352 Gbps	672 Gbps	261.90 Mpps	500.00 Mpps
C9300L-48UXG-4X	392 Gbps	712 Gbps	291.66 Mpps	529.76 Mpps
C9300L-48UXG-2Q	472 Gbps	792 Gbps	351.19 Mpps	589.28 Mpps

All models are at wire-speed nonblocking performance for both IPv4 and IPv6. The forwarding rates in the table above are measured with 64-byte IPv4 packet sizes.



SD-Access architecture

What if you could give time back to IT? Provide network access in minutes for any user or device to any application – without compromise? SD-Access provides the industry's first policy-based automation from network edge to cloud. Your foundation for your digital network, Cisco SD-Access. Built on the principles of Cisco DNA, SD-Access provides end-to-end segmentation to keep user, device, and application traffic separate without a redesign of the network. It automates user access policy so organizations can make sure the right policies are set for any user or device with any application across the network. This is accomplished with a single network fabric across LAN and WLAN, which creates a consistent user experience anywhere without compromising on security.

There are many challenges today in managing the network to drive business outcomes. These limitations are due to manual configuration and fragmented tool offerings. SD-Access provides:

- A transformational management solution that reduces operational expenses and enhances business agility
- Consistent management of wired and wireless network provisioning and policy
- Automated network segmentation and group-based policy
- Contextual insights for fast issue resolution and capacity planning
- Open and programmable interfaces for integration with third-party solutions

For an overview of the key use cases SD-Access addresses, refer to the [SD-Access Solution Overview](#).



Platform benefits

Cisco IOS XE opens a completely new paradigm in network configuration, operation, and monitoring through network automation. Cisco's automation solution is open, standards-based, and extensible across the entire lifecycle of a network device. The various automation mechanisms are outlined below.

- **Automated device provisioning** is the ability to automate the process of upgrading software images and installing configuration files on Cisco Catalyst switches when they are being deployed in the network for the first time. Cisco provides both turnkey solutions such as PnP and off-the-shelf tools such as zero-touch provisioning (ZTP) and Preboot Execution Environment (PXE) that enable an effortless and automated deployment.
- **API-driven configuration** is available with modern network switches such as the Cisco Catalyst 9300 Series. It supports a wide range of automation features and provides robust open APIs over NETCONF, RESTCONF, and GNM1 using YANG data models for external tools, both off-the-shelf and custom built, to automatically provision network resources.
- **Granular visibility** enables model-driven telemetry to stream data from a switch to a destination. The data to be streamed is identified through subscription to a data set in a YANG model. The subscribed data set is streamed to the destination at specified intervals. Additionally, Cisco IOS XE enables the push model. It provides near-real-time monitoring of the network, leading to quick detection and rectification of failures.
- **Seamless software upgrades and patching** supports OS resilience. Cisco IOS XE supports patching, which provides fixes for critical bugs and security vulnerabilities between regular maintenance releases. This support lets you add patches without having to wait for the next maintenance release.

Security

- **Encrypted Traffic Analytics (ETA)** is a unique capability for identifying malware in encrypted traffic coming from the access layer. Since more and more traffic is becoming encrypted, the visibility this feature affords for threat detection is critical for keeping your network secure at different layers.
- **AES-256 MACsec encryption** is the IEEE 802.1AE standard for authenticating and encrypting packets between switches. The Cisco Catalyst 9300 Series Switches support 256-bit and 128-bit AES, providing the most secure link encryption.
- **IPsec encryption** delivers secure end-to-end encrypted traffic between sites and connectivity to the Cloud. Catalyst 9300X models support line-rate IPsec up to 100 Gbps, delivering uncompromised secure connectivity.
- **Trustworthy solutions built with Cisco Trust Anchor technology** provide a highly secure foundation for Cisco products. With the Catalyst 9300 Series, this technology enables hardware and software authenticity assurance for supply chain trust and strong mitigation against man-in-the-middle attacks that compromise software and firmware. Trust Anchor capabilities include:
 - **Image signing:** Cryptographically signed images provide assurance that the firmware, BIOS, and other software are authentic and unmodified. As the system boots, the system's software signatures are checked for integrity.



- **Secure Boot:** Cisco Secure Boot technology anchors the boot sequence chain of trust to immutable hardware, mitigating threats against a system's foundational state and the software that is to be loaded, regardless of a user's privilege level. It provides layered protection against the persistence of illicitly modified firmware.
- **Cisco Trust Anchor module:** A tamper-resistant, strong cryptographic, single-chip solution provides hardware authenticity assurance to uniquely identify the product so that its origin can be confirmed to Cisco. This provides assurance that the product is genuine.

Cloud Security

• Cisco Umbrella® DNS Integration:

Small to midsize networks reliant on managed service providers can now host the Cisco Umbrella agent directly on their Catalyst 9300 Series Switches. This allows the business to easily customize its DNS filtering policies granularly at the user or group level to prevent bring-your-own-device (BYOD) or IoT guest or corporate users from accessing malicious or inappropriate websites, without having to rely on the service provider to push the policies out. It also lets the business optimize use of bandwidth by allowing direct cloud access for trusted apps. Requires a Cisco Catalyst and Cisco DNA Advantage license and Cisco Umbrella license per device.

• Cisco ASAc app hosting Integration:

The integration of ASAc on Cisco Catalyst 9300 switches simplifies the network design by providing the flexibility to plug small-form-factor firewalls into the network closer to the source. It also avoids complex tunnels to centralized firewalls. This design lowers the total cost of ownership by reducing the number of physical firewall appliances in the network.

The ASAc Firewall App hosting solution hosts a virtual firewall or ASAc on Cisco Catalyst 9300 Series Switches. All the physical firewalls next to a switch can be virtualized and deployed on the switch itself. As in a traditional network, the SecOps team manages the ASAc firewalls deployed on the Catalyst switches, and the NetOps team instantiates the application and performs lifecycle management using Cisco Catalyst Center. The SecOps team controls policy management using Cisco Defense Orchestrator. Both the SecOps and NetOps teams can seamlessly manage the network without any disruptions.

The container version of Cisco ASAc provides full firewall functionality to secure IT, OT, and IoT converged networks. ASAc uses Layer 3 firewall policies and does a stateful inspection of the traffic.

The ASAc firewall runs on a 240-GB external SSD that is mounted on a Cisco Catalyst 9300 Series Switch. Cisco Catalyst Center deploys the ASAc on these Catalyst switches, and ASAc is then onboarded to Cisco Defense Orchestrator.

Service assurance

• Cisco ThousandEyes integration:

Deliver a superior network and service experience for your users, employees, and partners with groundbreaking observability from network to app. Cisco ThousandEyes network tests are now integrated into Cisco Catalyst 9300 Series Switches with Cisco Catalyst and Cisco DNA Advantage licenses, giving you visibility beyond your campus



perimeter so you can resolve issues faster. The Cisco ThousandEyes Network and Application Synthetics license is included by default upon the selection of a Cisco Catalyst and Cisco DNA Advantage option with a 3-year, 5-year, or 7-year subscription. Please see [Cisco Catalyst and DNA Advantage Use Right to ThousandEyes](#) for more information about the free Cisco ThousandEyes entitlements that come with your Cisco Catalyst 9300 or 9400 Series switch's Cisco DNA Advantage subscription.

Resiliency and high availability

- **StackWise-1T:** Cisco Catalyst 9300 Series modular uplink models (C9300X SKUs) support the industry's highest back-panel stacking bandwidth solution (1 Tbps) with StackWise-1T. Up to eight switches can be configured in a StackWise-1T with the special connector at the back of the switch, using dedicated stack cables.
- **StackWise-480:** Cisco Catalyst 9300 Series modular uplink models (C9300 SKUs) support a high-speed back-panel stacking bandwidth solution (480 Gbps) with StackWise-480. Up to eight switches can be configured in a StackWise-480 with the special connector at the back of the switch, using dedicated stack cables.
- **StackWise-320:** Cisco Catalyst 9300 Series fixed uplink models (C9300L and C9300LM SKUs) support a stacking bandwidth solution (320 Gbps) with StackWise-320. Up to eight switches can be optionally configured in a StackWise-320 with the special stack kit at the back of the switch, using dedicated stack cables.
- **Cisco StackPower:** Cisco StackPower is an innovative power interconnect system that allows the power supplies in a stack to be shared as a common resource among all the switches. This allows you to simply add one extra power supply in any switch of the stack and either provide power redundancy for any of the stack members or simply add more power to the shared pool. Up to four switches can be configured in a StackPower stack with the special connector at the back of the switch. However, with the use of the XPS-2200 appliance, up to eight switches can be configured in the StackPower stack. **Cisco StackPower is supported only on the models with a modular uplink stack - C9300 and C9300X SKUs. Catalyst 9300X models support StackPower+, delivering more power over StackPower cables compared to the Catalyst 9300 models.**



Figure 7. Cisco Catalyst 9300 Series StackPower

- **High availability:** The Catalyst 9300 Series supports high-availability features, including the following:
 - Cross-stack EtherChannel provides the ability to configure Cisco EtherChannel technology across different members of the stack for high resiliency.



- **FlexLink+:** FlexLink+ allows you to set up active and backup interfaces or port channels, which can provide Layer 2 failover redundancy without the use of Spanning Tree Protocol (STP).
- **Extended fast software upgrade** provides the ability to upgrade the platform software or to reload the system in under 30 seconds of traffic impact, in both standalone and stack configurations.
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) provides rapid spanning tree convergence independent of spanning tree timers and also offers the benefit of Layer 2 load balancing and distributed processing.
- Per-VLAN Rapid Spanning Tree (PVRST+) allows rapid spanning tree (IEEE 802.1w) reconvergence on a per-VLAN spanning tree basis, providing simpler configuration than MSTP. In both MSTP and PVRST+ modes, stacked units behave as a single spanning tree node.
- Switch-port auto-recovery ("err-disable" recovery) automatically attempts to reactivate a link that is disabled because of a network error.
- The Catalyst 9300 Series platform delivers an industry-leading non-stop forwarding (NSF)/stateful switchover (SSO) resiliency architecture in a stackable solution with sub-50-ms failover.
- Always-on wireless network with stateful switchover when wireless functionality is enabled on stack of Catalyst 9300 Series Switches.

Deep buffer technology

The Catalyst 9300 Series higher-scale models have a deeper buffer to address the requirements of rich multimedia lossless content delivery and large routing tables in a fixed access solution with a wide range of uplink choices for deployment flexibility.

Flexible NetFlow

- Cisco IOS Software FNF is the next generation in flow visibility technology. It enables optimization of the network infrastructure, reduces operating costs, and improves capacity planning and security incident detection with increased flexibility and scalability. The Catalyst 9300 Series is capable of up to 64,000 flow entries on 48-port, 24-port, and 12-port models and up to 128,000 flow entries on Multigigabit models.

Application visibility and control

- Next-Generation Network-Based Application Recognition (NBAR2) enables advanced application classification techniques, up to 1400 predefined and well-known application signatures, and up to 150 encrypted applications on the Cisco Catalyst 9000 switches. Some of the most popular applications included are Skype, Office 365, Microsoft Lync, Webex, and Facebook, among many others that are predefined and easy to configure. NBAR2 provides the network administrator with an important tool to identify, control, and monitor end-user application usage while helping ensure a quality user experience and securing the network from malicious attacks. NBAR2 leverages FNF to report application performance and activities within the network to any supported NetFlow collector, such as Cisco Prime®, Cisco Secure Network Analytics, or any compliant third-party tool.



QoS

- **Superior QoS:** The Cisco Catalyst 9300 Series offers Gigabit Ethernet speeds with intelligent services that keep traffic flowing smoothly, even at 10 times the normal network speed. Industry-leading mechanisms for cross-stack marking, classification, and scheduling deliver superior performance for data, voice, and video traffic at wire speed. Superior QoS includes granular wireless bandwidth management and fair sharing, 802.1p class of service (CoS) and Differentiated Services Code Point (DSCP) field classification, shaped round robin (SRR) scheduling, Committed Information Rate (CIR), and eight egress queues per port.

Service discovery

- **Multicast DNS (mDNS) gateway:** This service discovery gateway capability facilitates sharing of services advertised using the Apple mDNS (Bonjour) protocol, such as printers, Apple TVs, and file services across the network. Additionally, the administrator can create policies defining which services can be seen and accessed by the users in the network. This capability facilitates a BYOD rollout.

Smart operation

- **Simplified Campus Automation** is designed to optimize the discovery and configuration of devices in your network with a more streamlined simple and easy-to-use automation tool. With features such as simplified discovery, IT can discover devices within the network with just a few steps. Also available is a more streamlined GUI that provides a simplified view of switch configurations and software details on a port-by-port basis.

Cloud management with IOS XE: Cloud management with IOS XE simplifies network operations by providing a centralized, intuitive dashboard that enables IT teams to manage, configure, and monitor all devices in real time. With features like zero-touch provisioning, automated firmware updates, and port-level visibility, cloud management reduces manual effort, minimizes errors, and delivers end-to-end visibility across the network.

The Cisco Catalyst 9300 Series Switches provide flexibility in cloud management by offering the ability to choose the configuration source of each device managed from the Meraki dashboard.

Configuration Source: Cloud: This operating mode offers the full cloud management experience. Device configurations are managed via the Meraki user interface and delivered entirely from the cloud. This capability also offers a read-only Cloud CLI terminal to view the entire running configuration or perform advanced troubleshooting using IOS XE show commands.

Configuration Source: Device: This capability is an evolution of Cloud Monitoring. With device configuration, users can onboard their device to the cloud to access central monitoring and troubleshooting tools, as well as a Cloud CLI terminal to execute read/write commands. Configurations are managed via local console, Secure Shell (SSH), or CLI and remain local to the device.

To learn more about cloud management with IOS XE, see [Cloud Management with IOS XE](#).

- **Meraki dashboard monitoring and management:** Catalyst 9300 Series Switches can be ordered or migrated to be Meraki dashboard managed, combining the simplicity of the Meraki dashboard with the power of Catalyst 9000 switching. All configuration and monitoring is performed natively in the dashboard.



- **WebUI:** WebUI is an embedded GUI-based device-management tool that provides the ability to provision the device, to simplify device deployment and manageability, and to enhance the user experience. It comes with the default image, so there is no need to enable anything or install any license on the device. You can use WebUI to build configurations, and to monitor and troubleshoot the device without having CLI expertise.
- **Efficient switch operation:** Cisco Catalyst 9300 Series Switches provide optimum power saving with Energy Efficient Ethernet (EEE) on the RJ-45 ports and low-power operations for industry best-in-class power management and power consumption capabilities. The ports support reduced power modes so that ports not in use can move into a lower power utilization state. Other efficient switch operation features are as follows:
 - Per-port power consumption command allows customers to specify a maximum power setting on an individual port.
 - Per-port PoE power sensing measures actual power being drawn, enabling more intelligent control of powered devices. The PoE MIB provides proactive visibility into power usage and allows you to set different power-level thresholds.
- **RFID tags:** Catalyst 9300 Series Switches have an embedded RFID tag that facilitates easy asset and inventory management using commercial RFID readers.
- **Blue beacon:** Catalyst 9300 Series Switches support a blue beacon LED for easy identification of the switch being accessed.

Open standards-based fabric

The Cisco Catalyst 9300 Series Switches support modern fabric technologies such as VXLAN with Border Gateway Protocol Ethernet VPN (BGP-EVPN) control plane, with open APIs. This technology provides the flexibility to build open standards-based fabrics to secure infrastructure, users, and data. This fabric architecture provides rich unicast and multicast protocol support to optimally route or bridge traffic as well as support for integrated campus services, all of which can be automated via open APIs to effectively configure and monitor the network.

Programmability

Cisco IOS XE provides open standards-based APIs such as NETCONF, RESTCONF, and gNMI to simplify provisioning and configuration, allowing network administrators to save time when provisioning new network devices and to prevent the human errors that often are a byproduct of manual configuration. Integrating ZTP with various DevOps toolkits allows network administrators to drastically reduce the time and resources needed to onboard a device to their network. The ability to collect real-time statistics through model-driven telemetry through gRPC and gNMI allows administrators to integrate with many health monitoring tools to optimize their environments and to troubleshoot and provide alerts about any potential problems.



High-performance IP routing

The Cisco Express Forwarding hardware routing architecture delivers extremely high-performance IP routing in the Cisco Catalyst 9300 Series Switches, based on:

- IP unicast routing protocols (including static, Routing Information Protocol version 1 [RIPv1], RIPv2, RIPv3, and Open Shortest Path First [OSPF]) are supported for small network routing applications with the Network Essentials stack. Equal-cost routing facilitates Layer 3 load balancing and redundancy across the stack.
- Advanced IP unicast routing protocols (including full OSPF, Enhanced Interior Gateway Routing Protocol [EIGRP], BGPv4, and Intermediate System-to-Intermediate System version 4 [IS-ISv4]) are supported for load balancing and for constructing scalable LANs. IPv6 routing (using OSPFv3 and BGPv6) is supported in hardware for maximum performance.
- Protocol-Independent Multicast (PIM) for IP multicast routing is supported, including PIM Sparse Mode (PIM SM), and Source-Specific Multicast (SSM).
- IPv6 addressing is supported on interfaces with appropriate show commands for monitoring and troubleshooting.

Audio Video Bridging

Starting with Cisco IOS XE Software Release 16.8, the Cisco Catalyst 9300 Series supports the IEEE 802.1 AVB standard. This standard provided the means for highly reliable delivery of low-latency, time-synchronized audio and video streaming services through Layer 2 Ethernet networks. The standard also makes it easier to integrate new services and for AV equipment from different vendors to interoperate.

Benefits

- Improves quality of experience by lowering jitter and latency for time-synchronized delivery of high-quality AV.
- Provides scalability of applications across networked deployments, including expansive and complex AV infrastructure.
- Lowers total cost of ownership (TCO) with reduced cabling (lowers CapEx) and no license fees (lowers OpEx).

For more details about AVB and specific models supported, see <https://www.cisco.com/go/avb>.

Multigigabit Ethernet technology

Cisco Multigigabit Ethernet technology allows you to achieve bandwidth speeds from 1 Gbps to 10 Gbps over traditional Category 5e/6 cabling or above. This technology addresses the need for exponential increases in bandwidth with the enormous growth of 802.11ac Wave 2, to be eclipsed by the growth of Wi-Fi 6 and new wireless applications without having to replace current cabling infrastructure.



Multiprotocol Label Switching

The Cisco Catalyst 9300 Series Switches support Multiprotocol Label Switching (MPLS), which combines the performance and capabilities of Layer 2 (data link layer) switching with the proven scalability of Layer 3 (network layer) routing. MPLS enables explosive growth in network utilization while providing the opportunity to differentiate services without sacrificing the existing network infrastructure. MPLS support includes:

- **MPLS Layer 3 VPN:** An MPLS VPN consists of a set of sites that are interconnected by means of an MPLS provider core network. At each customer site, one or more customer edge (CE) devices attach to one or more provider edge (PE) devices.
- **VPLS:** Virtual Private LAN Service (VPLS) enables enterprises to link together their Ethernet-based LANs from multiple sites via the infrastructure provided by their service provider.
- **EoMPLS:** Ethernet over MPLS (EoMPLS) is a category of Any Transport over MPLS (AToM) to transport Layer 2 packets over an MPLS backbone.
- **MPLS over GRE:** L3VPN over Generic Routing Encapsulation (GRE) and VPLS over GRE are supported to tunnel MPLS/VPLS packets over non-MPLS networks using GRE tunneling.

Power over Ethernet leadership

Cisco UPOE and UPOE+: PoE removes the need for wall sockets to power each PoE-enabled device and eliminates the cost of additional electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments. Cisco UPOE extends the IEEE PoE standard to double the power per port to 60 watts. This facilitates delivery of network power to a broad range of devices requiring higher power, including virtual desktop terminals, IP turrets, compact switches, building management gateways, LED lights, wireless access points, and IP phones. For even higher-powered devices such as those in smart building and IoT applications, Cisco Catalyst 9300 UPOE+ switches can deliver PoE power up to 90W and. UPOE+ ports provide data and power over a single cable to power devices like wireless access points, digital signage, security cameras, thermal cameras with pan-tilt-zoom features, LED lighting fixtures, and large display screens. UPOE+ offers reduced cabling and installation costs without need for permits, device daisy-chaining, real-time device information, centralized management and remote control, and fast, flexible device installation, enabling devices to be positioned in a practical location instead of Catalyst 9300 Series modular uplink (C9300 and C9300X SKUs) models support Cisco UPOE, PoE+, and PoE, thereby addressing the largest range of network power needs.

Catalyst 9300 Series fixed uplink (C9300L and C9300LM SKUs) models support Cisco UPOE, PoE+, and PoE.

Tables 10 through 13 show the power supply combinations required for different PoE needs.

Table 10. Power supply requirements for Catalyst 9300 Series modular uplink PoE/PoE+ models (C9300-xxP SKUs)

	24-port PoE switch	48-port PoE switch
PoE on all ports (15.4W per port)	1 PWR-C1-715WAC/ PWR-C1-715WAC-P/ PWR-C1-715WDC	1 PWR-C1-1100WAC/PWR-C1- 1100WAC-P or 2 PWR-C1-715WAC/ PWR-C1-715WAC-P/PWR-C1-715WDC



	24-port PoE switch	48-port PoE switch
PoE+ on all ports (30W per port)	1 PWR-C1-1100WAC/ PWR-C1-1100WAC-P or 2 PWR-C1-715WAC/ PWR-C1-715WAC-P/ PWR-C1-715WDC	2 PWR-C1-1100WAC/PWR-C1- 1100WAC-P or 1 PWR-C1-1100WAC/ PWR-C1-1100WAC-P and 1 PWR- C1-715WAC/PWR-C1-715WAC-P/ PWR-C1-715WDC

Table 11. Power supply requirements for Catalyst 9300 Series UPOE models (C9300-xxU/UR/UXM/UN, C9300L-xxUXG-xx SKUs)

	24-port Cisco UPOE switch	48-port Cisco UPOE switch	48- and 24-port Multigigabit Cisco UPOE switch*
Cisco UPOE (60W per port) and IEEE 802.3bt Type 3 on all ports (24-port switch) or up to 30 ports (48-port switch)	1 PWR-C1-1100WAC/PWR-C1- 1100WAC-P and 1 PWR-C1- 715WAC/PWR-C1-715WAC-P/ PWR-C1-715WDC	2 PWR-C1- 1100WAC/PWR- C1-1100WAC-P	2 PWR-C1- 1100WAC/PWR-C1- 1100WAC-P

Table 12. Power supply requirements for Catalyst 9300 Series UPOE+ models (C9300-xxH SKUs)

	24-port Cisco UPOE+ switch	48-port Cisco UPOE+ switch
Cisco UPOE+ (90W per port) and IEEE 802.3bt Type 4 on 21 ports (24-port and 48-port switch)	1 PWR-C1-1100WAC/PWR-C1- 1100WAC-P and 1 PWR-C1- 715WAC/PWR-C1-715WAC-P/ PWR-C1-715WDC	2 PWR-C1-1100WAC/PWR-C1- 1100WAC-P or 2 PWR-C1-1900WAC-P

Table 13. Power supply requirements for Catalyst 9300 Series fixed uplink PoE/PoE+ models (C9300L-xxP SKUs)

	24-port PoE switch	48-port PoE switch
PoE on all ports (15.4W per port)	1 PWR-C1-715WAC-P/ PWR-C1-715WDC	1 PWR-C1-1100WAC-P or 2 PWR-C1-715WAC-P
PoE+ on all ports (30W per port)	1 PWR-C1-1100WAC-P or 2 PWR-C1-715WAC-P/ PWR-C1-715WDC	2 PWR-C1-1100WAC-P or 1 PWR-C1-1100WAC-P and 1 PWR-C1-715WAC-P/PWR-C1-715WDC

- **Perpetual PoE:** With Perpetual PoE, the PoE power is maintained during a switch reload. This is important for IoT endpoints such as PoE-powered lights, so that there is no disruption during switch reboot.
- **Fast PoE:** When power is restored to a switch, PoE starts delivering power to endpoints without waiting for the operating system to fully load, thereby speeding up the time for the endpoint to start up.

* C9300-48UN, C9300-24UX, and C9300-48UXM are available with PWR-C1-1100WAC-P, a Platinum-rated power supply. Platinum-rated power supplies are more efficient, lowering operating power costs.

* PWR-C1-1100WAC-UP and PWR-C1-715WAC-UP Platinum-rated power supply upgrade options are available to upgrade the default AC power supply to 1100W or 715W.



Software requirements

Cisco Catalyst and Cisco DNA Software for Access Switching is available for the Cisco Catalyst 9300 Series. Meraki software for cloud management is also available for certain models.

Cisco Catalyst and Cisco DNA Software for Access Switching offers comprehensive solutions for the enterprise campus and branch offices. Cisco Catalyst and Cisco DNA for Access Switching introduces a simpler and more economical way to deploy access, aggregation, and core switches across enterprise campus and branch locations.

The Cisco Catalyst and Cisco DNA Subscription for Switching offer delivers an unbound network on an open and extensible architecture to help you navigate the digital journey. This subscription offer simplifies the buying process and includes lower initiation costs and flexible terms. It includes Cisco Catalyst and Cisco DNA Advantage Software with full Cisco DNA capabilities and SD-Access, bundled with ISE Base, ISE Plus, and Secure Network Analytics.

For ordering information for Cisco Catalyst and Cisco DNA Software for the Cisco Catalyst 9300 Series, go to <https://www.cisco.com/c/en/us/products/software/one-access/switching-part-numbers.html>.

Cisco Catalyst 9300 Series Switches run on Cisco IOS XE Release 16.5.1a or later with the following exceptions. Catalyst 9300 Series 1G fiber models (C9300-xxS SKUs) are supported on Cisco IOS XE Release 16.11.1a or later. Catalyst 9300 Series fixed uplink models (C9300L SKUs) are supported on Cisco IOS XE Release 16.11.1b or later. These software releases include all the features listed earlier in the Platform Benefits section.

The Meraki software option combines the simplicity of the Meraki dashboard with power of Catalyst 9000 switching hardware. To satisfy high-bandwidth applications and the deployment of high-speed 802.11ax/ Wi-Fi 6/6E access points, the Meraki software option provides Multigigabit ports, 480G stacking, and modular 10G/40G uplinks. Catalyst 9300 Series models with the Meraki software option deliver resiliency with fast stack convergence and StackPower. They provide Adaptive Policy using an over-the-wire tag that segments traffic into security groups to deliver scalable security. The Catalyst 9300 models integrated under the Meraki dashboard provide a simple, powerful solution to the most demanding wired access applications.

Catalyst 9300 Series Switches come with Adaptive Policy to provide simple and scalable security policies to segment traffic using security groups in Meraki dashboard. Security groups are created in the dashboard using natural language such as "IoT device" and "Guest." The security policy intent (for example, Permit or Deny) is then simply provisioned between security groups, which results in the segmentation of each group's traffic. By making security policy management intuitive and scalable relative to legacy IP address-based ACLs, Adaptive Policy empowers operators to confidently secure their network traffic independent of future network changes.

Catalyst 9300 Series Switches can be ordered directly or migrated to the Meraki software option. For model compatibility and more information, please see Getting started: Cisco Catalyst 9300 Management with Meraki Dashboard.

You can also refer to Meraki data sheets that provide details on the models orderable with the Meraki software option ([Catalyst C9300-M data sheet](#), [Catalyst C9300X-M data sheet](#), [Catalyst C9300L-M data sheet](#)) as well as supported optics and accessories.



Licensing packaging

The Cisco Catalyst 9000 family of switches introduces a new and simplified licensing package in the form of base and add-on licenses.

- **The perpetual licensing package** includes the Network Essentials and Network Advantage licensing options that are tied to the hardware. Between them, the base licensing packages cover switching fundamentals, management automation, troubleshooting, and advanced switching features. These network licenses are perpetual.

The subscription licensing package includes the Cisco Catalyst and Cisco DNA Essentials, Cisco Catalyst and Cisco DNA Advantage, and Meraki Advanced and Enterprise options. In addition to on-box capabilities, the features available with this package provide Cisco innovations on the switch, as well as on Cisco Catalyst Center, and Meraki dashboard. For Catalyst 9300 models ordered with a Network Essentials and Network Advantage license, a Cisco Catalyst or Cisco DNA subscription license is mandatory at the time of configuration. For Catalyst 9300 models ordered with a Meraki SKU, the term license is ordered separately but is required for the switch to be recognized in Meraki dashboard. With Cisco Catalyst and Cisco DNA software licenses, customers receive embedded SWS, which covers 24x7x365 Cisco Technical Assistance Center (TAC) support, software release updates, advanced support analytics, and designated service management. This is valid only for the Cisco Catalyst and Cisco DNA Software subscription stacks (Cisco Catalyst and Cisco DNA Essentials or Advantage).

Note: For full hardware support, including the perpetual network stack, customers will require Cisco Smart Net Total Care[®] for 24x7x365 Cisco TAC support, proactive security and product alerts, and product lifecycle management. An additional option for hardware support is Solution Support for your multivendor Cisco solution environment.

License consumption is easily determined by the package itself. While Network Essentials and Network Advantage perpetual licenses are always permanent and without an expiration date, subscription licenses have to be purchased for a 3-, 5-, or 7-year term (and hence are also known as term-based licenses). Table 14 shows the combinations of network perpetual and Cisco Catalyst and Cisco DNA Software subscription licenses that must be purchased.

Table 14. Cisco Catalyst, Cisco DNA, and network licensing combinations

	Cisco Catalyst and Cisco DNA Essentials	Cisco Catalyst and Cisco DNA Advantage
Network Essentials	Yes**	Yes**
Network Advantage	No*	Yes

* At the time of Cisco Catalyst and Cisco DNA license renewal, the Cisco Catalyst and Cisco DNA Essentials license can be purchased to be used with Network Advantage.

** Network Advantage is inclusive of Network Essentials features.



Managing licenses with Smart Accounts

Creating Smart Accounts by using the Cisco Smart Software Manager (SSM) enables you to manage your software licenses from a centralized website. You can set up Cisco SSM to receive daily email alerts and to be notified of expiring subscription licenses that you want to renew.

You must order a Cisco Catalyst or Cisco DNA subscription term license in order to purchase a switch with Network Essentials or Network Advantage perpetual licenses. When the license term expires, you can either renew the add-on license to continue using it or deactivate the add-on license and then reload the switch to continue operating with the base license capabilities.

Both the base and add-on licenses are also available for a 90-day evaluation period. An evaluation license is activated temporarily, without purchase. An expired evaluation license cannot be reactivated after reload.

It is not required to deploy Cisco Catalyst Center just to use Cisco Catalyst, Cisco DNA, or network packages. Meraki dashboard is required to deploy a Catalyst 9300 switch with a Meraki software license.

Introduction to Smart Licensing

Cisco Smart Licensing is a flexible licensing model that provides you with an easier, faster, and more consistent way to purchase and manage software across the Cisco portfolio and across your organization. And it's secure – you control what users can access. With Smart Licensing you get:

- **Easy activation:** Smart Licensing establishes a pool of software licenses that can be used across the entire organization—no more product activation keys (PAKs).
- **Unified management:** My Cisco Entitlements provides a complete view into all of your Cisco products and services in an easy-to-use portal, so you always know what you have and what you are using.
- **License flexibility:** Your software is not node-locked to your hardware, so you can easily use and transfer licenses as needed.

To use Smart Licensing, you must first set up a Smart Account on Cisco Software Central (software.cisco.com).

For a more detailed overview of Cisco Licensing, go to cisco.com/go/licensingguide.

Table 15. Software licenses

	Cisco Catalyst Software subscription	Cisco DNA Software subscription	Cisco Meraki Software subscription	Network stack
Packages¹	3-, 5-, or 7-year terms	3-, 5-, or 7-year terms	1-, 3-, 5-, 7-, or 10 year terms	Perpetual
Tiers	Advantage, Essentials	Advantage, Essentials	Advanced, Enterprise	Advantage, Essentials
Portability²	✓	✓		✓



	Cisco Catalyst Software subscription	Cisco DNA Software subscription	Cisco Meraki Software subscription	Network stack
Management options	Catalyst Center, Meraki dashboard monitoring and management	Catalyst Center, Meraki dashboard monitoring and management	Meraki dashboard management	Meraki dashboard CLI, WebUI
Included support	Base product-level support for hardware, software, and OS	SWSS	Product-level support for hardware, software, and OS	X
Included³ add-ons: Common ISE policy, ThousandEyes network and application assurance, Cisco Spaces	✓	✓	X	X

¹ For all new orders, subscription licenses are mandatory and must be of the same tier as network licenses.

² Portability within the same Catalyst 9000 series of hardware.

³ Available only with the Advantage tier.

There are three choices for software subscription: Cisco DNA, Cisco Catalyst, or Cisco Meraki. They provide:

- Flexible licensing models to smoothly distribute customers' software spending over time.
- Investment protection for software purchases through software services-enabled license portability.
- Access to updates, upgrades, and new technology from Cisco through Cisco Software Support Service (SWSS).
- Base product-level support for hardware, software, and Cisco IOS (Catalyst software only).
- ISE licenses included in the Advantage tier to facilitate zero-trust network security* (Catalyst software only).
- Access to end-to-end network visibility with Cisco Spaces, service assurance through Cisco ThousandEyes Network and Application Synthetics and app hosted ASAc firewall (with the Advantage license).

Manage your entire switching structure as a single, converged component. With one management system, on-premises, virtual, or in the cloud, and one policy for wired and wireless networks, it offers an efficient way to provide more secure access.



Tables 16 and 17 show the features included in the Network Essentials and Advantage packages and in the Cisco Catalyst and Cisco DNA Essentials and Advantage packages.

Table 16. Network Essentials and Advantage package features

Features	Network Essentials	Network Advantage
Switch fundamentals	✓	✓
Layer 2, Routed Access (RIP, EIGRP Stub, OSPF - 1000 routes), PBR, PIM Stub Multicast (1000 routes), PVLAN, VRRP, PBR, CDP, QoS, FHS, 802.1X, MACsec-128, CoPP, SXP, IP SLA Responder, SSO		
Advanced switch capabilities and scale	×	✓
BGP, EIGRP, HSRP, IS-IS, BSR, MSDP, PIM-BIDIR,* IP SLA, OSPF		
Network segmentation	×	✓
VRF, VXLAN, LISP, Cisco TrustSec®, SGT, MPLS, mVPN		
Automation	×	✓
NETCONF, RESTCONF, gRPC, YANG, PnP Agent, ZTP/Open PnP, GuestShell (On-Box Python)		
Telemetry and visibility	✓	✓
Model-driven telemetry, sampled NetFlow, SPAN, RSPAN		
High availability and resiliency	×	✓
Nonstop Forwarding (NSF), Graceful Insertion and Removal (GIR), Extended Fast Software Upgrade (xFSU), Software Patching (CLI based)		
IoT integration	×	✓
AVB, PTP, CoAP		
Security	×	✓
MACsec-256		



Table 17. Cisco Catalyst and Cisco DNA Essentials and Advantage package features (add a section for other software support and add Prime, ISE and Stealthwatch support)

Features	Cisco Catalyst and Cisco DNA Essentials	Cisco Catalyst and Cisco DNA Advantage
Switch features		
Optimized network deployments	×	✓
Cisco Catalyst Service for Bonjour		
Advanced telemetry and visibility	✓	✓
Full Flexible NetFlow, EEM		
Optimized telemetry and visibility	×	✓
ERSPAN, AVC (NBAR2), app hosting (in containers/VMs), Wireshark		
Advanced security	×	✓
Encrypted Traffic Analytics (ETA), IPsec		
Cisco Catalyst Center features		
Simplified Campus Automation	✓	✓
Simplified Campus Automation optimizes the discovery and configuration of devices in your network with a more streamlined simple and easy-to-use automation tool		
Day-0 network bring-up automation	✓	✓
Cisco Network Plug-and-Play application, network settings, device credentials, LAN automation, host onboarding		
Element management	✓	✓
Discovery, inventory, topology, software image, licensing, and configuration management		
Element management	×	✓
Patch management		
Basic Assurance	✓	✓
Health dashboards - Network, Client, Application; switch and wired client health monitoring		



Features	Cisco Catalyst and Cisco DNA Essentials	Cisco Catalyst and Cisco DNA Advantage
Cisco ThousandEyes Network and Application Synthetics Network performance metrics, dashboarding, visibility into app and service experience, end-to-end visibility across cloud and DC applications	X	✓
App hosted Cisco ASAc firewall Stateful inspection of network traffic with Cisco Adaptive Security Virtual Appliance (ASAc) without any additional hardware	X	✓
SD-Access Policy-based automation and assurance for wired and wireless	X	✓
Network assurance and analytics Global insights, trends, compliance, custom reports; switch 360, wired client 360; fabric and non-fabric insights; app health, app 360, app performance (loss, latency, jitter)	X	✓
Catalyst 9300 Series Switches can be migrated into Meraki mode (fully cloud managed). For model compatibility and more information, see Getting Started: Cisco Catalyst 9300 Management with Meraki Dashboard: https://documentation.meraki.com/MS/Deployment_Guides/Getting_started%3A_Cisco_Catalyst_9300_Management_with_Meraki_Dashboard .		
Catalyst switches can also be ordered in Meraki mode by using the “-M” part numbers. For ordering information for Cisco C9300/XL-X-M switches, please refer to the Meraki data sheets listing -M part numbers.		
Meraki data sheets:		
• Catalyst 9300-M data sheet		
• Catalyst 9300X-M data sheet		
• Catalyst 9300L-M data sheet		
• Catalyst C9300/X/L-M Installation Guide		
• SFP and Stacking Accessories for Meraki C9300/X/L-M Switches		



Specifications

Dimensions, weight, acoustic, mean time between failures

The table below shows the dimensions, weights, acoustic details, and mean time between failures of all models of Cisco Catalyst 9300 Series Switches.

Table 18. Model dimensions, weight, and mean time between failures (MTBF) metrics

General specifications			
Dimensions (H x W x D) in inches			
Model	Chassis only	With default power supply	With 1100W power supply
C9300X-48HX	1.73 x 17.5 x 19	1.73 x 17.5 x 22.03	1.73 x 17.5 x 22.03
C9300X-48TX	1.73 x 17.5 x 19	1.73 x 17.5 x 20.56	1.73 x 17.5 x 22.03
C9300X-48HXN	1.73 x 17.5 x 17.57	1.73 x 17.5 x 20.63	1.73 x 17.5 x 20.63
C9300X-24HX	1.73 x 17.5 x 17.57	1.73 x 17.5 x 20.63	1.73 x 17.5 x 20.63
C9300X-12Y	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.6	1.73 x 17.5 x 19.2
C9300X-24Y	1.73 x 17.5 x 17.6	1.73 x 17.5 x 19.2	1.73 x 17.5 x 20.7
C9300-24T	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-24P	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-24U	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-24UX	1.73 x 17.5 x 17.1	1.73 x 17.5 x 20.2	1.73 x 17.5 x 20.2
C9300-24UB	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-24UXB	1.73 x 17.5 x 17.1	1.73 x 17.5 x 20.2	1.73 x 17.5 x 20.2
C9300-24H	1.73 x 17.5 x 18.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-48T	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-48P	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-48U	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-48UXM	1.73 x 17.5 x 19.1	1.73 x 17.5 x 22.2	1.73 x 17.5 x 22.2
C9300-48UN	1.73 x 17.5 x 19.1	1.73 x 17.5 x 22.2	1.73 x 17.5 x 22.2



General specifications			
C9300-48UB	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-48H	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-24S	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2	1.73 x 17.5 x 20.7
C9300-48S	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2	1.73 x 17.5 x 20.7
C9300LM-48UX-4Y	1.73" x 17.50"x 13.03"	1.73 x 17.50 x 13.17	1.73 x 17.50 x 13.03 (w/ DC power supply)
C9300LM-48U-4Y	1.73" x 17.50"x 13.03"	1.73 x 17.50 x 13.17	1.73 x 17.50 x 13.03 (w/ DC power supply)
C9300LM-24U-4Y	1.73" x 17.50"x 13.03"	1.73 x 17.50 x 13.17	1.73 x 17.50 x 13.03 (w/ DC power supply)
C9300LM-48T-4Y	1.73" x 17.50"x 10.84"	1.73 x 17.50 x 12.39	1.73 x 17.50 x 11.86 (w/ DC power supply)
C9300L-24T-4G	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-24T-4X	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-48T-4G	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-48T-4X	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-24P-4G	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-24P-4X	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-48P-4G	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-48P-4X	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
Dimensions (H x W x D) in centimeters			
C9300X-48HX	4.4 x 44.5 x 48.3	4.4 x 44.5 x 56.0	4.4 x 44.5 x 56.0
C9300X-48TX	4.4 x 44.5 x 48.3	4.4 x 44.5 x 52.2	4.4 x 44.5 x 56.0
C9300X-48HXN	4.4 x 44.5 x 44.6	4.4 x 44.5 x 52.4	4.4 x 44.5 x 52.4
C9300X-24HX	4.4 x 44.5 x 44.6	4.4 x 44.5 x 52.4	4.4 x 44.5 x 52.4
C9300X-12Y	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.7	4.4 x 44.5 x 48.8
C9300X-24Y	4.4 x 44.5 x 44.7	4.4 x 44.5 x 48.8	4.4 x 44.5 x 52.6



General specifications			
C9300-24T	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-24P	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-24U	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-24UX	4.4 x 44.5 x 43.4	4.4 x 44.5 x 51.3	4.4 x 44.5 x 51.3
C9300-24H	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-48T	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-48P	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-48U	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-48UXM	4.4 x 44.5 x 48.5	4.4 x 44.5 x 56.4	4.4 x 44.5 x 56.4
C9300-48UN	4.4 x 44.5 x 48.5	4.4 x 44.5 x 56.4	4.4 x 44.5 x 56.4
C9300-48H	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-24S	4.3 x 44.4 x 44.9	4.3 x 44.4 x 48.8	4.3 x 44.4 x 52.6
C9300-48S	4.3 x 44.4 x 44.9	4.3 x 44.4 x 48.8	4.3 x 44.4 x 52.6
C9300LM-48UX-4Y	4.3 x 44.4 x 33.1	4.3 x 44.4 x 33.4	4.3 x 44.4 x 32.5 (w/ DC power supply)
C9300LM-48U-4Y	4.3 x 44.4 x 33.1	4.3 x 44.4 x 33.4	4.3 x 44.4 x 32.5 (w/ DC power supply)
C9300LM-24U-4Y	4.3 x 44.4 x 33.1	4.3 x 44.4 x 33.4	4.3 x 44.4 x 32.5 (w/ DC power supply)
C9300LM-48T-4Y	4.3 x 44.4 x 27.5	4.3 x 44.4 x 27.5	4.3 x 44.4 x 29.7 (w/ DC power supply)
C9300L-24T-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-24T-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48T-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48T-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-24P-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-24P-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8



General specifications			
C9300L-48P-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48P-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48PF-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-48PF-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-24UXG-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-24UXG-2Q	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-48UXG-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-48UXG-2Q	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
Weight (with default power supply)			
Model	Pounds	Kilograms	
C9300X-48HX	14.6	6.62	
C9300X-48TX	14.6	6.62	
C9300X-48HXN	14.2	6.44	
C9300X-24HX	13.8	6.25	
C9300X-12Y	15.0	6.80	
C9300X-24Y	16.2	7.35	
C9300-24T	16.03	7.27	
C9300-24P	16.33	7.4	
C9300-24U	16.63	7.54	
C9300-24UX	18.18	8.25	
C9300-24UB	16.63	7.54	
C9300-24UXB	18.18	8.25	
C9300-24H	16.63	7.54	
C9300-48T	16.43	7.45	
C9300-48P	16.73	7.59	



General specifications		
C9300-48U	17.03	7.72
C9300-48UXM	20.50	9.34
C9300-48UN	20.05	9.09
C9300-48UB	17.03	7.72
C9300-48H	17.03	7.72
C9300-24S	16.84	7.64
C9300-48S	17.32	7.86
C9300LM-48UX-4Y	12	5.45
C9300LM-48U-4Y	12	5.45
C9300LM-24U-4Y	11.5	5.21
C9300LM-48T-4Y	11	4.99
C9300L-24T-4G	14.93	6.78
C9300L-24T-4X	14.93	6.78
C9300L-48T-4G	15.41	7.0
C9300L-48T-4X	15.41	7.0
C9300L-24P-4G	14.99	6.81
C9300L-24P-4X	14.99	6.81
C9300L-48P-4G	15.46	7.03
C9300L-48P-4X	15.46	7.03
C9300L-48PF-4G	15.48	7.03
C9300L-48PF-4X	15.48	7.03
C9300L-24UXG-4X	15.73	7.13
C9300L-24UXG-2Q	16.01	7.26
C9300L-48UXG-4X	16.86	7.65
C9300L-48UXG-2Q	16.86	7.65



General specifications	
Mean time between failures (hours)	
C9300X-48HX	185,420
C9300X-48TX	206,480
C9300X-48HXN	188,200
C9300X-24HX	220,250
C9300X-12Y	265,650
C9300X-24Y	249,350
C9300-24T	314,790
C9300-24P	299,000
C9300-24U	238,410
C9300-24UX	214,760
C9300-24UB	354,300
C9300-24UXB	288,520
C9300-24H	238,410
C9300-48T	305,870
C9300-48P	277,770
C9300-48U	227,410
C9300-48UXM	202,160
C9300-48UN	198,647
C9300-48UB	337,170
C9300-48H	227,410
C9300-24S	284,130
C9300-48S	281,920
C9300L-24T-4G	395,800
C9300L-24T-4X	387,700



General specifications	
C9300L-48T-4G	387,860
C9300L-48T-4X	380,080
C9300L-24P-4G	346,940
C9300L-24P-4X	340,710
C9300L-48P-4G	314,140
C9300L-48P-4X	309,020
C9300L-48PF-4G	303,660
C9300L-48PF-4X	298,880
C9300L-24UXG-4X	332,640
C9300L-24UXG-2Q	291,670
C9300L-48UXG-4X	273,820
C9300L-48UXG-2Q	275,010
C9300LM-24U-4Y	357,350
C9300LM-48U-4Y	304,970
C9300LM-48T-4Y	408,710
C9300LM-48UXG-4Y	292,410
PWR-C1-350WAC-P	1,335,012 (ranges from 1.3 million to 3.1 million, depending on temperature, input voltage, and vendor)
PWR-C1-715WAC-P	1,054,881 (ranges from 1.05 million to 2.6 million, depending on temperature, input voltage, and vendor)
PWR-C1-1100WAC-P	1,217,904 (ranges from 1.2 million to 2.8 million, depending on temperature, input voltage, and vendor) (investigating an anomaly in MTBF data received from 1 Power Supply vendor - Artesyn)
PWR-C1-1900WAC-P	
PWR-C1-715WDC	1,812,103 (-48V input at 40C and vendor Delta)
PWR-C6-600WAC	1,600,060
PWR-C6-1000WAC	1,600,060



General specifications	
PWR-C6-715WDC	1,712,103
C9300-NM-2Q	10,776,230
C9300-NM-2Y	7,568,820
C9300-NM-4G	8,953,570
C9300-NM-4M	10,549,060
C9300-NM-8X	7,151,930
C9300X-NM-8Y	
C9300X-NM-2C	
FAN-T2	4,521,330
Environmental ranges	
Acoustic noise	With AC power supply (with 24 PoE+ ports loaded for C9300 SKUs)
Measured per ISO 7779 and declared per ISO 9296	• LpA: 45 dB typical, 48 dB max • LwA: 5.6B typical, 5.9B max
Bystander positions operating to an ambient temperature of 25°C	With AC power supply (with half the number of PoE+ ports loaded for C9300L SKUs)
	• LpA: 44 dB typical, 47 dB max • LwA: 5.5B typical, 5.8B max
	Typical: Noise emission for a typical configuration
	Maximum: Statistical maximum to account for variation in production



Connectors

Table 19 shows the supported connectors for the Cisco Catalyst 9300 Series.

Table 19. Connectors

Connectors and cabling	• 1000BASE-T ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling • Multigigabit-T ports: RJ-45 connectors, 4-pair Cat 5E, Cat 6, Cat 6A UTP cabling • 1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling • SFP transceivers: LC fiber connectors (single-mode or multimode fiber) • SFP+ transceivers: LC fiber connectors (single-mode or multimode fiber) • QSFP+ transceivers: MPO and LC fiber connectors (single-mode or multimode fiber) • QSFP+ connector • SFP+ connector • Cisco StackWise stacking ports: Copper-based Cisco StackWise cabling • Cisco StackPower: Cisco proprietary power stacking cables • Ethernet management port: RJ-45 connectors, 4-pair Cat 5 UTP cabling • Management console port: RJ-45-to-DB9 cable for PC connections
Power connectors	• Customers can provide power to a switch by using the internal power at the back of the switch • Internal power supply connector: The internal power supply is an auto-ranging unit. It supports input voltages between 100 (115 for 1100WAC) and 240 VAC. Use the supplied AC power cord to connect the AC power connector to an AC power outlet

For the latest Cisco transceiver module compatibility information, refer to <https://www.cisco.com/c/en/us/support/interfaces-modules/transceiver-modules/products-device-support-tables-list.html>.



Management and standards support

Table 20 shows management and standards support for the Cisco Catalyst 9300 Series.

Table 20. Management and standards support*

Description	Specification	
Management	BRIDGE-MIB	CISCO-PORT-STORM-CONTROL-MIB
	CISCO-BRIDGE-EXT-MIB	CISCO-POWER-ETHERNET-EXT-MIB
	CISCO-BULK-FILE-MIB	CISCO-PRIVATE-VLAN-MIB
	CISCO-CABLE-DIAG-MIB	CISCO-PROCESS-MIB
	CISCO-CALLHOME-MIB	CISCO-PRODUCTS-MIB
	CISCO-CEF-MIB	CISCO-RF-MIB
	CISCO-CIRCUIT-INTERFACE-MIB	CISCO-RTP-METRICS-MIB
	CISCO-CONFIG-COPY-MIB	CISCO-RTTMON-ICMP-MIB
	CISCO-CONFIG-MAN-MIB	CISCO-STACKWISE-MIB
	CISCO-DEVICE-LOCATION-MIB	CISCO-STP-EXTENSIONS-MIB
	CISCO-DHCP-SNOOPING-MIB	CISCO-SYSLOG-MIB
	CISCO-EIGRP-MIB	CISCO-TCP-MIB
	CISCO-EMBEDDED-EVENT-MGR-MIB	CISCO-UDLD-MIB
	CISCO-ENTITY-FRU-CONTROL-MIB	CISCO-VLAN-IFTABLE-RELATIONSHIP-MIB
	CISCO-ENTITY-SENSOR-MIB	ENTITY-MIB
	CISCO-ENTITY-VENDORTYPE-OID-MIB	HC-ALARM-MIB
	CISCO-ERR-DISABLE-MIB	HC-RMON-MIB
	CISCO-FLASH-MIB	IEEE8023-LAG-MIB
	CISCO-FLOW-MONITOR-MIB	IF-MIB
	CISCO-FTP-CLIENT-MIB	IP-FORWARD-MIB
	CISCO-HSRP-EXT-MIB	IP-MIB
	CISCO-HSRP-MIB	LLDP-EXT-MED-MIB
	CISCO-IETF-BFD-MIB	LLDP-MIB
	CISCO-IETF-PPVPN-MPLS-VPN-MIB	MAU-MIB
	CISCO-IETF-PW-MPLS-MIB	MPLS-L3VPN-STD-MIB
	CISCO-IF-EXTENSION-MIB	MPLS-LSR-STD-MIB



Description	Specification	
	CISCO-IGMP-FILTER-MIB	MPLS-VPN-MIB
	CISCO-IMAGE-LICENSE-MGMT-MIB	OLD-CISCO-CHASSIS-MIB
	CISCO-IMAGE-MIB	OLD-CISCO-CPU-MIB
	CISCO-IP-CBR-METRICS-MIB	OLD-CISCO-INTERFACES-MIB
	CISCO-IP-STAT-MIB	OLD-CISCO-IP-MIB
	CISCO-IP-TAP-MIB	OLD-CISCO-MEMORY-MIB
	CISCO-IP-URPF-MIB	OLD-CISCO-SYS-MIB
	CISCO-IPSEC-FLOW-MONITOR-MIB	OLD-CISCO-TCP-MIB
	CISCO-IPSEC-MIB	OLD-CISCO-TS-MIB
	CISCO-IPSEC-PROVISIONING-MIB	POWER-ETHERNET-MIB
	CISCO-IPSLA-AUTOMEASURE-MIB	RFC1213-MIB
	CISCO-IPSLA-ECHO-MIB	RMON-MIB
	CISCO-IPSLA-JITTER-MIB	RMON2-MIB
	CISCO-L2-CONTROL-MIB	SMON-MIB
	CISCO-L2L3-INTERFACE-CONFIG-MIB	SNMPv2-MIB
	CISCO-LAG-MIB	SONET-MIB
	CISCO-LICENSE-MGMT-MIB	TCP-MIB
	CISCO-LOCAL-AUTH-USER-MIB	UDP-MIB
	CISCO-MAC-NOTIFICATION-MIB	
	CISCO-MDI-METRICS-MIB	
	CISCO-MEDIA-METRICS-MIB	
	CISCO-MEMORY-POOL-MIB	
	CISCO-MPLS-LSR-EXT-STD-MIB	
	CISCO-NBAR-PROTOCOL-DISCOVERY-MIB	
	CISCO-NHRP-EXT-MIB	
	CISCO-NTP-MIB	
	CISCO-PAGP-MIB	
	CISCO-PORT-SECURITY-MIB	



Description	Specification	
Standards	IEEE 802.1s	RMON I and II standards
	IEEE 802.1w	SNMPv1, v2c, and v3
	IEEE 802.1x	
	IEEE 802.1x-Rev	
	IEEE 802.3ad	
	IEEE 802.3ae	
	IEEE 802.3af	
	IEEE 802.3at	
	IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports	
	IEEE 802.1D Spanning Tree Protocol	
	IEEE 802.1p CoS prioritization	
	IEEE 802.1Q VLAN	
	IEEE 802.3 10BASE-T specification	
	IEEE 802.3u 100BASE-TX specification	
	IEEE 802.3ab 1000BASE-T specification	
	IEEE 802.3z 1000BASE-X specification	
	IEEE 802.3bz Multirate 2.5G/5G specification	
	IEEE 802.3an 10G BASE-T specification	



Power supply specifications

Table 21 lists the power specifications for the Cisco Catalyst 9300 Series based on the kind of power supply used.

Table 21. Power specifications

Description	Specification			
	PWR-C1-1100WAC**	PWR-C1-715WAC**	PWR-C1-350WAC**	PWR-C1-715WDC
Power supply rated maximum	1100W	715W	350W	715W
Total output BTU (note: 1000 BTU/hr = 293W)	3793 BTU/hr, 1100W	2465 BTU/hr, 715W	1207 BTU/hr, 350W	2440 BTU/hr
Input-voltage range and frequency	115V to 240 VAC, 50 to 60 Hz	100 to 240 VAC, 50 to 60 Hz	100 to 240 VAC, 50 to 60 Hz	-36V to-72 VDC
Input current	12-6A	10-5A	4-2A	24-12A
Output ratings	-56V at 19.64A	-56V at 12.8A	-56V at 6.25A	-56V at 12.8A
Output holdup time	10 ms minimum at 100VAC	16.7 ms minimum at 100VAC	16.7 ms minimum at 100VAC	2 ms minimum at -48Vdc
Power-supply input receptacles	IEC 320-C16 (IEC60320-C16)	IEC 320-C16 (IEC60320-C16)	IEC 320-C14 (IEC60320-C14)	Right angle barrier style terminal block
Power cord rating	15A	15A	10A	25A@100VDC
Physical specifications	(H x W x D): 1.58 x 3.25 x 13.7 in Weight: 3.1 lb (1.4 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.6 lb (1.2 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.3 lb (1.2 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.2 lb (1kg)

** These power supply options will not be available for purchase with the C9300 in COW starting Q2 FY21.



Table 22. Power specifications – Platinum-rated power supplies

Description	Specification				
	PWR-C1-1900WAC-P	PWR-C1-1100WAC-P	PWR-C1-715WAC-P	PWR-C1-350WAC-P	
Power supply rated maximum output power	1500W with 115V	1900W with 230V	1100W	715W	350W
Total output BTU (note: 1000 BTU/hr = 293W)	5118 BTU/hr, with 115V	6483 BTU/hr, with 230V	3754 BTU/hr, 1100W	2440 BTU/hr, 715W	1194 BTU/hr, 350W
Input-voltage range and frequency	115V to 127 VAC 50 to 60 Hz	200V to 240 VAC 55 to 60 Hz	115V to 240 VAC 50 to 60 Hz	100 to 240 VAC 50 to 60 Hz	100 to 240 VAC 50 to 60 Hz
Input current	16A maximum	12A maximum	12-6A	10-5A	4-2A
Output ratings	-56V at 26.78A	-56V at 33.92A	-56V at 19.64A	-56V at 12.8A	-56V at 6.25A
Output holdup time	20 ms minimum at 100VAC	20 ms minimum at 100VAC	20 ms minimum at 100VAC	20 ms minimum at 100VAC	20 ms minimum at 100VAC
Power-supply input receptacles	IEC 320-C22	IEC 320-C22	IEC 320-C16 (IEC60320-C16)	IEC 320-C16 (IEC60320-C16)	IEC 320-C14 (IEC60320-C14)
Power cord rating	20A	16A	15A	15A	10A
Physical specifications	(H x W x D): 1.58 x 3.25 x 13.7 in Weight: xxx lb (x.x kg)	(H x W x D): 1.58 x 3.25 x 13.7 in Weight: 3.1 lb (1.4 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.6 lb (1.2 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.3 lb (1.2 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.3 lb (1.2 kg)



Description	Specification	
Operating temperature	Normal operating temperature* and altitudes: -5°C to +45°C, up to 5000 feet (1500m) -5°C to +40°C, up to 10,000 feet (3000m) *Minimum ambient temperature for cold start is 32°F (0°C) Short-term* exceptional conditions: -5°C to +50°C, up to 5000 feet (1500m) -5°C to +45°C, up to 10,000 feet (3000m) -5°C to +45°C, at sea level with single fan failure *Not more than following in 1-year period: 96 consecutive hours, or 360 hours total, or 15 occurrences	Normal operating temperature* and altitudes: -5°C to +45°C, up to 5000 feet (1500m) -5°C to +40°C, up to 10,000 feet (3000m) *Minimum ambient temperature for cold start is 32°F (0°C) Short-term* exceptional conditions: -5°C to +50°C, up to 5000 feet (1500m) -5°C to +45°C, up to 10,000 feet (3000m) -5°C to +45°C, at sea level with single fan failure *Not more than following in 1-year period: 96 consecutive hours, or 360 hours total, or 15 occurrences
Storage temperature	40° to 159°F (-40° to 70°C)	-40° to 159°F (-40° to 70°C)
Relative humidity operating and nonoperating noncondensing	5% to 90% noncondensing	5% to 90% noncondensing
Altitude	10,000 ft. (3000 meters), up to 45°C	10,000 ft. (3000 meters), up to 45°C



Description	Specification	
EMI and EMC compliance	FCC Part 15 (CFR 47) Class A	FCC Part 15 (CFR 47) Class A
	ICES-003 Class A	ICES-003 Class A
	EN 55032 Class A	EN 55032 Class A
	CISPR 32 Class A	CISPR 32 Class A
	AS/NZS 3548 Class A	AS/NZS 3548 Class A
	BSMI Class A (AC Input models only)	BSMI Class A (AC Input models only)
	VCCI Class A	VCCI Class A
	EN 55024, EN300386, EN 61000-3-2, EN 61000-3-3	EN 55024, EN300386, EN 61000-3-2, EN 61000-3-3
	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6

Safety compliance

LED indicators	*AC OK*: Input power to the power supply is OK	*AC OK*: Input power to the power supply is OK
	PS OK: Output power from the power supply is OK	*PS OK*: Output power from the power supply is OK

*PWR-C1-1900WAC-UP is available as an PSU upgrade option to 1900W primary PSU

*PWR-C1-1100WAC-UP is available as an PSU upgrade option to 1100W primary PSU

*PWR-C1-715WAC-UP is available as an PSU upgrade option to 715W primary PSU

Power consumption of standalone Catalyst 9300 Series Switches

Table 23 shows the power consumption of standalone Cisco Catalyst 9300 Series Switches based on Alliance for Telecommunications Industry Solutions (ATIS) testing using Internet Mix (IMIX) distribution stream traffic, with input voltage of 115VAC at 60 Hz and no PoE loading. The values given are the maximum possible power consumption numbers under the respective test scenarios.

Table 23. Power consumption of standalone Catalyst 9300 Series Switches (tested on IOS XE Release 16.5.1)

SKU		TYP	Option	Input Voltage (V)	Maximum Power (W)										Full port power	Weighted Average Power	Notes	Full test per market				
					Full port power													PWR	PWR	PWR	PWR	
					Line	CPU	SSD	SFP	SFP	SFP	SFP	SFP	SFP	SFP								
C9300-24P 715W	Not Installed	C9300-NM-4G	115VAC	82.6	51	83.4	93.7	93.9	92	94.6	95.9	96.1	96.6	92.3	62.9	202.3	305.8	977.5	579			
			230VAC	61.8	69.8	92.2	92.4	92.8	91.7	93.7	94.8	94.7	95.2	92.6	62.3	199	318.2	910.8	659.9			
			115VAC	87.8	90	95.5	97.7	98.5	98.8	99.8	102.4	103	103.4	96.8	65.4	211.4	374.5	937.8	585.7			
			230VAC	66.1	91.3	94.4	95.8	96.8	98.9	99.5	101.5	101.9	102.4	97.9	64.9	207.9	328	920.3	558.2			
			115VAC	90.4	100.4	101.5	101.9	102.3	94.1	106.8	107.8	108.2	109.1	106.7	66.8	234.9	337.9	939.4	590.8			
			230VAC	69.4	95.1	100.3	100.5	100.7	92.8	105.1	106.5	106.9	107.8	104.9	69.5	211	329.7	922.2	571			
			115VAC	88.1	98.6	99.5	99.6	99.9	91.1	104.4	105.2	105.8	106.5	103.3	66.4	212.2	336.2	936.2	586.5			
			230VAC	67.1	97.2	96.1	96.3	96.8	90	103.3	103.9	104.3	105.2	102.1	67.5	208	326.8	919.3	567.6			
			115VAC	90	98.4	101	101.2	101.6	94.2	107.1	107.9	108.3	108.2	106	68.7	218.9	372.8	941.4	591.3			
			230VAC	69	97.9	99.8	100	100.5	93.1	105.8	106.7	107.1	108.1	104.6	69.8	211.7	331.9	924.2	572.3			
C9300-24S 715W	C9300-NM-4G	C9300-NM-4G	115VAC	96.4	100.3	101.5	102.1	102.5	118.2	117.7	118.1	118.5	119.8	117.76	91.7							
			230VAC	66	99.7	100.6	101.6	114.4	115.8	116.7	117.2	117.7	115.65	90.8								
			115VAC	101.9	104.8	105.3	106.4	106.1	117.5	128.5	121.1	121.7	123.1	120.47	88.4							
			230VAC	100.2	103	103.5	103.7	104.3	115.7	118.3	119.3	119.5	120.7	118.5	84.4							
			115VAC	184.4	187.4	188.3	188.5	189.1	121.3	124.1	124.9	125.4	126.4	124.66	85.9							
			230VAC	103.1	105.7	106.4	106.7	107	118.4	122.5	123.8	123.2	124.3	122.37	84.8							
			115VAC	99.16	101.8	101.5	102.7	103.3	119.6	119.7	120.3	121	122.2	119.94	82.1							
			230VAC	97.64	100.3	100.8	101	101.6	118.4	118.3	119.9	119.3	120.2	118.2	87.2							
			115VAC	101.24	104.48	104.75	104.81	105.42	119.4	119.01	120.21	120.84	121.31	119.99	85.02							
			230VAC	98.17	102.38	102.83	102.89	103.57	114.1	117.42	118	119.44	119.62	117.01	83.03							
C9300-24T 350W	Not Installed	C9300-NM-4G	115VAC	72.7	66.1	69.3	69.5	69.7	72.5	91	91.7	91.8	92.5	89.8	78.1							
			230VAC	77.4	85.4	89.5	89.7	89.9	77	99.9	90.7	90.9	91.3	89.7	77.7							
			115VAC	82.5	86.4	92.1	92.3	94.1	85.9	96	96.9	98.7	100	95.4	81.2							
			230VAC	81.6	87.6	90.4	92	92.9	84.9	94.2	95.9	97.9	98.3	93.7	80.5							
			115VAC	68.4	95.3	96	96.2	98.7	90.3	103.7	104.5	104.9	105.9	102.5	87							
			230VAC	65.4	93.1	94.8	96.8	97.3	89.1	102.1	102.8	103.2	104.2	101	85							
			115VAC	84	94.7	95.7	96.9	98.1	87.1	101.1	101.7	102.1	102	99.9	83.9							
			230VAC	63.2	92.6	94.4	94.8	95.1	86.2	98.2	100.1	100.5	101.4	95.1	83.2							
			115VAC	96.3	98.5	97.5	97.8	98.2	90.7	103.9	104.7	105.1	106.1	102.8	85							
			230VAC	65.4	94.8	98.2	98.4	97	88.7	102.2	103.2	103.6	104.5	101.2	84.3							
C9300-24U 1100W	Not Installed	C9300-NM-4G	115VAC	87.4	95.8	99	99.2	99.4	87	100.8	101.5	101.8	102.5	99.8	87.8	313.7	547.9	940.3	1041.4			
			230VAC	85.9	84.7	97.9	97.9	97.8	88.5	89	99.8	99.9	100.3	96.9	86.4	305.2	529.1	895.6	989.7			
			115VAC	82.2	97.8	101.2	102.7	103.8	95.4	105.2	108.3	109	109.4	104.8	84.4	321	594	943.5	1045.5			
			230VAC	90.6	96.1	96.4	100.9	101.7	93.7	103.4	108.4	107.2	107.8	102.9	92.2	313.8	536.6	901.5	981.6			
			115VAC	88	105.2	107.6	107.8	108.4	99.7	113.4	114.2	114.8	115.6	112.3	85.1	325.7	559	930.8	1053			
			230VAC	84.3	104.5	105.8	106.3	106.6	97.9	112.1	112.8	113.2	114	110.8	94.1	318.9	541.9	888.2	982.8			
			115VAC	93.4	102.9	104.8	105	105.5	96.5	110.4	111.3	111.9	112.4	109.2	86.4	323.2	585.8	946.7	1046.6			
			230VAC	91.8	102	103	103.3	103.7	94.8	106.7	109.4	109.8	110.8	107.5	91.8	314.8	538.4	902.2	994.5			
			115VAC	95.8	105.4	107.3	107.8	108.1	100.2	114	114.8	115.2	116.2	112.6	94.8	324.4	552.7	948.6	1049			
			230VAC	94	103	105.1	105.4	106	96.4	112	113.1	113.5	114.5	110.9	93.2	317.8	541.8	902.7	999.1			

SKU	FEP	Style	Input	Standard PWT										Weight lbs	Net Wt	Performance			
				Full port to full												PSI			
				001/2 FEE	1/2	3/8	1/4	1/8	001 FEE	1/2	3/8	1/4	1/8			25	50	100	150
C9300-24UB	1100W	Not Installed	118Vac	87.4	95.9	99	99.2	89.4	87	100.8	101.5	101.8	102.9	99.6	87.8	313.7	547.9	940.3	1041.4
			230Vac	85.9	94.7	97.3	97.5	87.8	85.8	98	99.8	99.8	100.2	96.9	86.4	308.2	529.1	895.6	988.7
		C9300-NM-4G	118Vac	92.2	97.8	101.2	102.7	102.8	98.4	105.2	106.3	109	109.4	104.5	94.4	321	554	943.5	1045.6
			230Vac	90.6	96.1	99.4	100.9	101.7	93.7	103.4	106.4	107.2	107.8	102.8	93.2	313.8	535.6	901.5	994.6
		C9300-NM-4M	118Vac	96	108.2	107.6	107.8	108.4	99.7	113.4	114.2	114.5	115.6	112.3	86.1	328.7	559	956.6	1057
			230Vac	94.3	104.8	106.8	106.1	106.6	97.9	112.1	112.8	113.2	114	110.8	84.4	318.3	541.8	905.2	997.8
		C9300-NM-2Q	118Vac	93.4	103.9	104.8	109	105.5	98.5	110.4	111.3	111.5	112.4	105.2	83.4	323.2	555.8	946.7	1048.8
			230Vac	91.6	102	103	103.3	103.7	94.9	106.7	109.4	109.8	110.5	101.5	91.6	318.4	543.2	902.2	994.5
		C9300-NM-8X	118Vac	95.8	105.4	107.3	107.9	108.3	100.2	114	114.8	115.2	116.2	112.8	84.4	324.4	557.7	945.6	1049
			230Vac	94	103	105.1	105.4	106	96.4	112	113.1	113.5	114.5	110.9	93.2	317.6	541.6	907.7	993.1
C9300-24UX	1100W	C9300-NM-6K	118Vac	98.8	106.7	108.6	107.4	106.8	208.9	226.5	227	228.5	232	222.8	108.8	364.2	521.6	764.3	851.4
		230Vac	98.4	106.2	102.9	103.5	105.1	204.6	220	232	223.5	228.9	238.2	105.9	96.2	366	769.7	810.6	
C9300-24UXB	1100W	C9300-NM-8X	118Vac	186	195.7	196.5	197.4	198.9	206.8	224.5	227	228.5	229.9	219.2	185.3	354.2	606	749.7	816.8
			230Vac	184	192.2	192.9	193.5	193.1	204.8	226	222	223.6	226.9	219.2	185.3	354.2	606	749.7	816.8
		Not Installed	118Vac	87.4	95.9	89	99.2	89.4	87	100.8	101.5	101.8	102.9	99.6	87.8	313.7	547.9	940.3	1041.4
			230Vac	85.9	94.7	97.3	97.5	87.8	85.8	98	99.8	99.8	100.2	96.9	86.4	308.2	529.1	895.6	988.7
		C8900-NM-4G	118Vac	92.2	97.8	101.2	102.7	102.9	98.4	105.2	106.3	109	109.4	104.5	94.4	321	554	943.5	1045.6
			230Vac	90.6	96.1	99.4	100.9	101.7	93.7	103.4	106.4	107.2	107.8	102.8	93.2	313.8	535.6	901.5	994.6
		C9300-NM-4M	118Vac	96	108.2	107.6	107.8	108.4	99.7	113.4	114.2	114.5	115.6	112.3	86.1	328.7	559	956.6	1057
			230Vac	94.3	104.8	106.8	106.1	106.6	97.9	112.1	112.8	113.2	114	110.8	84.4	318.3	541.8	905.2	997.8
		C9300-NM-2Q	118Vac	93.4	103.9	104.8	109	105.5	98.5	110.4	111.3	111.5	112.4	105.2	83.4	323.2	555.8	946.7	1048.8
			230Vac	91.6	102	103	103.3	103.7	94.9	106.7	109.4	109.8	110.5	101.5	91.6	318.4	543.2	902.2	994.5
C9300-48P 75W	Not Installed	C9300-NM-6K	118Vac	95.8	105.4	107.3	107.9	108.3	100.2	114	114.8	115.2	116.2	112.8	84.4	324.4	557.7	945.6	1049
			230Vac	94	103	105.1	105.4	106	96.4	112	113.1	113.5	114.5	110.9	93.2	317.6	541.6	907.7	993.1
		C9300-NM-4G	118Vac	90.5	102.3	104.5	104.7	105.2	99.9	104.8	108.2	109.2	109.9	91.3	208.1	324.1	514.4	593.2	
			230Vac	89.4	102.2	103.4	102.6	103.5	98.9	103.7	106.8	108.4	109.3	89.7	209.7	319.9	505.6	547.5	
		C9300-NM-4M	118Vac	88.3	103.5	106.2	106.1	106.8	99	112.1	114.6	115.8	116.2	111.1	94.3	215	322.6	528.1	672.1
			230Vac	86	102.2	105.2	106.8	106.8	96.4	111.3	114.1	115.2	115.8	110.2	93.1	211.2	324.0	509.3	685.9
		C9300-NM-2Q	118Vac	96.7	111.5	112.8	112.7	113.5	107.5	119.7	120.5	121.2	122.8	118.2	92.1	218.1	336.5	526.8	674.6
			230Vac	92.1	110.7	111.5	111.9	112.7	106.6	118.2	120	120.7	122.3	117.8	97.9	215.5	325.5	514.2	660.5
		C9300-NM-4Q	118Vac	97.9	116.1	116.7	111	111.9	99.3	116.2	119	119.7	121.5	116.7	97.8	219.4	325.4	527.4	577.9
			230Vac	95.8	108.2	109.7	110.1	111	98.1	117.5	118.2	119	120.8	115.9	96	212	328.9	511.9	558.6
C9300-48S 75W	Not Installed	C9300-NM-8X	118Vac	100.5	113.4	114.2	114.5	115.5	106.4	124.5	125.4	126.1	129	123	99.5	215.1	341.7	520.8	658.6
			230Vac	99.4	112.8	113.5	113.9	114.9	105.3	124	124.9	125.8	127.4	122.5	98.4	212.7	327.4	507.4	653.1
		C9300-NM-4G	118Vac	116.3	117	118.4	119.1	119.9	149.4	151.1	182.2	182.9	185.5	151.17	93.5				
			230Vac	114.9	115.8	116.7	117.8	119.3	147.1	148.6	180.1	180.3	180.7	149.82	92.1	92.1			
		C9300-NM-2Q	118Vac	117.7	121.3	121.8	122.4	124.1	159.8	154.1	158.3	156.3	159.6	154.2	89				
			230Vac	116.4	118.7	120.2	120.8	122.1	147.7	151.2	157.7	153.8	155.1	151.24	87.6				
		C9300-NM-8X	118Vac	120.5	123.8	124.3	125.2	126	152.8	156.1	137.5	186.6	160.8	150.24	87.4				
			230Vac	119	121.9	122.9	123.4	124.4	155.2	153.9	164.9	155.8	158.3	153.97	86.8				
		C9300-NM-4M	118Vac	118.20	121.62	122.78	122.78	124.63	153.8	187.53	159.17	159.36	161	157.57	87.93				
			230Vac	112.15	120.67	120.89	121.8	122.35	150.2	153.81	164.8	155.59	167.94	167.69	86.49				
C9300-NM-2Y	118Vac	114.3	119.2	118.7	128.3	121.5	144.4	162	162.8	153.1	186.1	151.95	85.6						
	230Vac	112	118	118.4	118.5	120.1	142.2	149.2	180.2	181	183.4	149.92	83.9						

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			Measured Power																													
			Full port (100%)								Half port (50%)								Estimated Power				Estimated Voltage									
Seq	FEP	U _{in}	Input	U _{OUT}	I _{OUT}	P _{OUT}	U _{in}	I _{OUT}	P _{OUT}	U _{in}	I _{OUT}	P _{OUT}	U _{in}	I _{OUT}	P _{OUT}	U _{in}	I _{OUT}	P _{OUT}	U _{in}	I _{OUT}	P _{OUT}	U _{in}	I _{OUT}	P _{OUT}	U _{in}	I _{OUT}	P _{OUT}	U _{in}	I _{OUT}	P _{OUT}		
C9300-4ET	350W	Not Installed	115Vac	81.5	94.9	35.7	95.5	96.4	80.8	96.6	100.2	101.3	102.3	97.2																		
			230Vac	80.5	93.7	34.8	94.8	95.3	80.1	97.3	99.5	99.9	100.6	96	81.5																	
			C9300-NM-4G	115Vac	85.4	94.9	37.9	99.4	100.9	89.3	104.6	107.6	108.6	108.8	95.5	85.7																
				230Vac	85.3	93.6	36.8	96.4	99.1	88.2	102.4	105.2	106.9	107.2	102.3	84.8																
			C9300-NM-4M	115Vac	89.6	102.4	104.2	104.6	105.9	93	112.7	113.5	114.1	115.7	111	59.6																
				230Vac	89	102	102.8	103.1	103.3	91.9	111	111.6	112.4	114	108.4																	
			C9300-NM-2Q	115Vac	98.3	102.4	102.9	102.3	104.2	91	110.5	113.1	112.3	113.9	108.8	86.5																
				230Vac	87.3	100.9	101.4	101.8	102.7	89.9	108.8	109.6	110.5	112.3	107.2																	
			C9300-NM-8X	115Vac	92.1	105.2	106.1	106.5	107.4	90.5	117.8	118.4	118.1	120.9	116	91																
				230Vac	91.1	103.9	104.7	105.1	106	97.3	115.8	116.6	117.3	119	114.3	90																
C9300-4DU	1100W	Not Installed	115Vac	88	110.2	110.9	111.2	111.7	95.8	112.5	114.3	115.9	116.6	111.3	97	315.1	344	325.9	1023													
				230Vac	91.8	108.6	109.7	109.4	109.9	94.2	110	112.5	114.1	116	106.9	95.6	308.8	326.4	309.9	978.8												
			C9300-NM-4G	115Vac	94.4	105.8	109	110.7	111	98.9	115.1	117.8	118.9	119.2	114	96.4	318.2	347.3	328	1025.1												
				230Vac	95.4	103.9	107.4	109.7	110	98.8	112.4	116.2	117	117.4	112.4	94.9	314.3	338.8	306	984.3												
			C9300-NM-4M	115Vac	104.4	116.9	119	119.5	120.1	107.4	126.6	127.6	128.3	130	125.2	104.9	328.2	356	338.8	1035.6												
				230Vac	102.6	119	117.1	117.8	118.2	106.4	124.9	125.8	126.2	127.7	123.2	103.8	328.4	341.4	303	991.6												
			C9300-NM-2Q	115Vac	102.9	117.2	117.8	118	119	104.8	123.8	124.8	125.8	127	122.2	102.8	324.1	352.4	334.4	1032.6												
				230Vac	101.2	134.9	116.5	115.9	117	103.8	123	123.7	124.4	128.1	121.4	101.7	316.9	339.9	306.2	980.2												
			C9300-NM-8X	115Vac	105.7	126.4	127.1	127.5	122.9	112.7	131.5	132.4	133	134.8	130	105.7	330	363.7	341.8	1043.4												
				230Vac	105	118.5	119.2	119.8	120.2	110.9	129.4	130.2	131	132.6	127.9	104.1	324.5	349	308	988.9												
C9300-4H	1100W	Not Installed	115Vac	96	119.2	110.8	111.2	111.7	95.6	112.3	114.3	115.9	116.9	111.3	97	316.1	344	325.9	1023													
				230Vac	94.8	108.5	109.2	109.4	109.9	94.2	110	112.5	114.1	115	108.9	95.6	306.6	323.4	308.9	978.8												
			C9300-NM-4G	115Vac	97.4	105.8	109	110.7	111	98.9	115.1	117.8	118.9	119.2	114	96.4	318.2	347.3	328	1025.1												
				230Vac	95.4	103.9	107.4	109.7	110	98.8	112.4	116.2	117	117.4	112.4	94.9	314.3	338.8	306	984.3												
			C9300-NM-4M	115Vac	104.4	116.9	119	119.5	120.1	107.4	126.6	127.6	128.3	130	125.2	104.9	328.2	356	338.8	1035.6												
				230Vac	102.6	118	117.1	117.8	118.2	106.4	124.9	125.8	126.2	127.7	123.2	103.8	328.4	341.4	303	991.6												
			C9300-NM-2Q	115Vac	102.9	117.2	117.8	118	119	104.8	123.8	124.8	125.8	127	122.2	102.8	324.1	352.4	334.4	1032.6												
				230Vac	101.2	134.9	116.5	115.9	117	103.8	123	123.7	124.4	128.1	121.4	101.7	316.9	339.9	306.2	980.2												
			C9300-NM-8X	115Vac	106.7	120.4	124.1	127.5	122.3	112.7	131.5	132.4	133	134.8	130	105.7	330	363.7	341.8	1043.4												
				230Vac	105	116.5	119.2	119.8	120.2	110.9	129.4	130.2	131	132.6	127.9	104.1	324.5	349	308	988.9												
C9300-4RUB	1100W	C9300-NM-8X	115Vac	106.7	120.4	127.1	127.5	122.3	112.7	131.5	132.4	133	134.8	130	105.7	330	363.7	341.8	1043.4													
				230Vac	105	116.5	119.8	120.8	111.9	129.8	130.4	130.7	131	132.6	127.9	104.1	324.5	349	308	988.9												
C9300-4UB	1100W	C9300-NM-8X	115Vac	112.9	116.7	116.7	119.8	118.8	103.9	109.9	201.5	203.1	208.9	197.9	196.1	321.4	328	303.9	976.1													
				230Vac	111.2	114.8	116.8	116.1	119.9	101.7	107.8	198.6	201	204.7	193.9	197.9	315.2	312	277.3	843.8												
C9300-4VUB	1100W	C9300-NM-8X	115Vac	238.2	281.4	246.9	247.8	299.6	253.2	261.5	272.4	278.8	283	282.8	218.2	394.3	526.7	350.8	810.1													
				230Vac	233.2	273.4	242.6	247.3	248.6	249	256.7	267.6	272.9	277.2	259.9	216.7	382.8	516.1	339	784.7												
C9300-24P-4G	715W	Integrated	115Vac	62.31	68.39	69.42	70.19	70.39	62.74	73.98	76.05	76.94	77.7	74.02	61.92	203.54	241.71	569.96	627.59													
				230Vac	60.91	67.07	68.39	68.91	68.88	61.32	74.98	76.09	76.91	77.7	74.02	61.92	199.69	234.16	552.06	606.54												
				115Vac	62.33	68.39	69.42	70.19	70.39	62.74	74.98	76.05	76.91	77.7	74.02	61.92	203.54	241.71	569.96	627.59												
				230Vac	60.91	67.07	68.39	68.91	68.88	61.32	73.98	76.09	76.94	76.58	72.69	60.5	199.69	234.16	552.06	606.54												
C9300L-24P-4X	715W	Integrated	115Vac	64.32	70.97	72.8	73.02	73.93	69.27	76.96	79.16	79.95	81	76.59	64.99	207.17	243	569.93	626.15													
				230Vac	64.08	69.9	71.25	72.29	72.92	67.18	76.12	78.34	78.78	79.91	78.67	63.7	203.04	236.39	553.25	607.02												
				115Vac	64.32	70.97	72.6	73.02	73.53	69.27	76.96	79.16	79.95	81	76.59	64.99	207.17	243	569.93	626.15												
				230Vac	64.08	69.9	71.75	72.28	72.92	67.8	76.12	78.34	78.78	79.91	78.67	63.7	203.04	236.39	553.25	607.02												
C9300L-24P-4G	350W	Integrated	115Vac	57.75	63.72	64.67	65.37	66.09	59.39	69.87	70.92	71.74	72.37	69.97	56.2																	
				230Vac	56.63	62.65	63.6	64.28	60.92	61.75	68.95	69.89	70.96	70.99	67.65	56.2																
				115Vac	57.75	63.72	64.67	65.37	66.09	59.39	69.87	70.92	71.74	72.37	69.97	57.3																
				230Vac	56.63	62.65	63.6	64.28	60.92	61.76	68.95	69.89	70.96	70.99	67.65	56.2																

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[illegible]

AHB Settings (50%)			Microcontroller (MCU)										Full-Port System										Weighted Average										Final Test Results									
Chip	Active Freq	Temp	Full-Port System										Full-Port System										Weighted Average										Final Test Results									
			Input	0-100% FFF	50%	60%	70%	80%	90%	100%	0-100% FFF	50%	60%	70%	80%	90%	100%	Weighted Avg	Max Load	Min Load	50%	60%	70%	80%	90%	100%																
C8000LA-48UX0-4K	1100W	Integrated	110Vdc	107.70	133.06	136.05	136.6	137.79	106.0	156.13	159.76	160.69	163.14	162.09	107.04	332.8	630.2	835.6	916.4																							
			230Vdc	105.6	104.88	132.5	134.12	135.67	106.04	150.51	152.24	156.19	160.17	161.43	104.68	316	505.7	801	675.0																							
C8000LA-24UX0-4K	1100W	Integrated	110Vdc	70.9	87.06	68.8	80.32	99.3	71.26	100.11	100.06	106.8	107.86	100.37	78.97	335.16	576.52	895.36	1108.51																							
			230Vdc	69.23	95.22	67.09	67.91	84.6	89.48	100.48	102.29	103.18	104.94	87.82	88.90	306.06	542.27	951.10	1049.47																							
C8000LA-48UX0-2Q	1100W	Integrated	110Vdc	111.3	138.24	146.48	141.17	143.22	112.38	162.3	164.13	165.51	168.69	157.94	111.1	335.47	621.76	835.04	919.11																							
			230Vdc	106.53	138.16	127.16	137.89	139.68	110.21	158.42	161.05	162.32	165.66	154.32	108.66	328.17	607.54	601.77	878.22																							
C8000LA-24UX0-2Q	1100W	Integrated	110Vdc	104.07	121.7	122.87	123.44	125.65	104.41	139.04	140.87	142.77	145.33	136.2	103.78	325.38	626.58	861.27	943.66																							
			230Vdc	108.88	118.72	119.46	120.13	122.11	101.16	139.91	137.68	139.28	142.13	133.15	100.52	317.06	510.67	829.62	909.1																							
C8000LMA-48UX-4Y	1000W	Integrated	118Vdc	95.1	110.7	111.6	112	114.6	103	123.3	124.6	126.2	130.1	121.8	87.9	323.03	543.2	813.0	1098.3																							
			230Vdc	93.8	106.8	109.5	110.4	112.4	101.3	120.9	122.6	124.3	126.4	119.7	86.7	317.1	500.1	819.1	955.2																							
C8000LMA-48U-4Y	1000W	Integrated	115Vdc	83.5	96.2	96.9	97.3	96.3	96.4	106.3	107.2	108	109.9	104.7	80.5	305.7	624	892.9	986.7																							
			230Vdc	82.3	94.8	95.5	95.9	96.8	95.3	104.5	105.5	106.2	106.3	101	79.5	299.5	530.7	854.4	944.4																							
C8000LMA-48T-4Y	600W	Integrated	115Vdc	75.1	86.8	89.4	88.9	90.7	76.2	87.9	90.8	89.6	101.4	84.3	71.3																											
			230Vdc	76.2	87.4	86	86.3	89.3	78.1	96.4	97.3	98.1	99.3	94.9	72.4																											
C8000LA-24U-4Y	800W	Integrated	118Vdc	77.7	84.5	86.9	87.1	87.8	80.1	91.1	93	94.3	93.0	78.3	301.5	523.6	834.9	890.9																								
			230Vdc	75.1	87.1	85.8	86	86.5	74.6	93.1	91.9	92.3	92.3	86.2	73.0	255.6	516.2	640	848.9																							



Table 24. Power consumption of standalone 9300 Series Switches with Platinum-rated power supply (tested on Cisco IOS XE 16.6.1)

			Measured PMV												Full port traffic				Weekend		No box		Per foot (no traffic)				
SKU	FEP	Unit	Ingr	S. 0.1% EE	10%	50%	90%	100%	S. 0.1% EE	10%	50%	90%	100%	0.1% EE	10%	50%	90%	100%	0.1% EE	10%	50%	90%	100%				
C9300-24P	715W-P	C9300-NM-BX	115Vac	89.2	94.3	99	100.1	100.7	92	96.9	103.5	106.9	107.1	99	95.8	208.8	324.7	518.9	568.4	208.8	324.7	518.9	568.4				
		230Vac	86.7	91.6	96.4	97.5	98	98.4	97.1	101.4	103.5	104.5	97	84.1	201.9	318.7	507.2	554.4									
C9300-24T	350W-P	C9300-NM-BX	115Vac	63.1	68.2	92.9	94	94.4	85.8	92.2	89.5	100.4	92.9	80.5													
		230Vac	61.9	65.6	91.3	92.4	92.9	94.4	91.6	93.5	95.2	95	91.6	79.2													
C9300-24U	1100W-P	C9300-NM-BX	115Vac	96.6	95.9	100.5	101.6	102.1	93.3	100.8	104.9	107.2	106.1	100.8	87.9	318.9	549.5	935.3	1021.1	318.9	549.5	935.3	1021.1				
		230Vac	88.1	93.1	97.7	98.6	98.4	92.8	98	102.4	104.6	105.5	98.2	80.4	313.4	525.8	899.7	990.3									
C9300-24UX	1300W-P	C9300-NM-EX	115Vac	168.8	181	194.9	197.1	198.9	209	215.4	227.2	230.1	232.1	216.5	165.9	367.8	622.1	776.1	847.3								
		230Vac	162.8	186.0	193.6	193	164.1	205	211.2	222.7	225.5	228.8	212.5	162.7	341.1	610.2	752.3	806.9									
C9300-24H	1100W-P	C9300-NM-BX	115Vac	93.8	95.9	100.5	101.6	102.1	93.3	100.6	104.9	107.2	108.1	100.6	87.9	319.9	549.8	935.3	1024.1								
		230Vac	84.1	91.1	97.7	98.6	99.1	92.8	95	102.4	104.6	105.5	98.2	85.4	313.4	539.5	898.7	990.3									
C9300-48P	715W-P	C9300-NM-BX	115Vac	98.1	105.5	110.8	111.3	112.4	99.8	112.5	118.2	120.1	122.2	112.2	94.7	214.7	336.1	521.5	585.4								
		230Vac	97.3	103.7	108.9	109.4	110.4	99	110.3	115.5	119.3	119.8	100.1	92.4	213.9	329.3	509.4	585									
C9300-48T	350W-P	C9300-NM-EX	115Vac	99.8	98.4	104.1	101.1	102	99.4	102.4	102.5	109.8	110	102.2	85.4												
		230Vac	88.7	94.5	98.4	100.1	101	98.7	101.2	106	108.1	109.9	100.8	83.9													
C9300-48U	1100W-P	C9300-NM-EX	115Vac	168.9	170.8	172.4	176.8	178.9	190.9	194.3	198.3	200.1	203.9	194.6	147.3	355.4	624.9	804.8	875.4								
		230Vac	165.7	167.3	169.2	169.9	171.5	160.5	189.5	193.8	196.7	198.8	190.3	145	348.9	511.7	777.7	844.8									
C9300-48UN	1100W-P	C9300-NM-EX	115Vac	172.9	176.7	178.7	179.8	181.8	183.8	187.8	201.5	202.1	206.9	199.9	159.1	383.3	625	802.9	875.1								
		230Vac	171.2	174.0	176.8	177.1	179.9	191.7	196.7	199.4	201	204.7	197.9	157.9	351.5	512.1	777	847.3									
C9300-48UX	1100W-P	C9300-NM-BX	115Vac	241	240.1	254.8	258.9	250.1	268.4	281.6	288.8	291.6	270.7	226.1	354.8	631.4	755	809.5									
		230Vac	235.3	243.1	249	250.3	251.1	252.9	261.8	273.9	279.2	283.8	263.2	242.5	360.6	616.1	731.3	785.5									
C9300-48H	1100W-P	C9300-NM-EX	115Vac	168.9	170.6	172.4	176.6	178.6	190.8	194	198.9	200.1	203.9	194.6	147.3	355.4	624.9	804.8	875.4								
		230Vac	165.7	167.3	169.2	169.9	171.5	160.5	189.5	193.9	195.7	199.8	190.3	145	348.9	511.7	777.7	844.9									
C9300X-12Y	715WAC-P	N/A Not Installed	115Vac	107.6	116.1	119.7	121.4	124.9	117	128.1	126.5	131.2	137.6	128.4	89.1												
		230Vac	105.7	112.8	115.6	114	116	114.8	112.6	123.5	120.3	125.4	124	87.1													
C9300X-12Y	715WAC-P	C9300X-NM-BM	115Vac	121.1	127.9	129.8	131.8	135.0	136.6	145.3	149.3	151.7	160.6	148	108.1												
		230Vac	117.3	126.9	128.6	130.4	134.8	135	144.5	147.9	150.6	157.1	149.2	106.1													
C9300X-12Y	715WAC-P	C9300X-NM-2C	115Vac	136.6	132.1	134.2	136.1	141.1	138.0	145	146.2	148.9	156.5	147.8	107.6												
		230Vac	136.8	129.6	131.7	133.7	138.8	134.4	141.1	144.1	147	154.1	141.8	104.4													
C9300X-12Y	715WAC-P	C9300X-NM-8Y	115Vac	119.8	128.2	129.6	131	134.4	135.5	147.6	150.5	153.2	169.9	147.7	106.1												
		230Vac	117.9	125.6	127	128.3	131.9	135	144.9	147.9	150.6	167.3	145.2	106.1													
C9300X-24Y	715WAC-P	N/A Not Installed	115Vac	159.2	173.0	177.4	180.9	187.4	179	187.7	204.5	206.4	221.2	189.2	142												
		230Vac	163.1	184.9	187.9	190.8	197	178.5	184.8	200.5	205.6	217.9	198.1	126.6													
C9300X-24Y	715WAC-P	C9300X-NM-BM	115Vac	173.4	187.3	184.6	188.3	196.7	189.7	218.2	228.5	232.6	247.7	220.1	151.8												
		230Vac	169.4	178.0	183.3	188.9	184.1	194	216.4	222.4	228.4	243.3	216.1	149.4													
C9300X-24Y	715WAC-P	C9300X-NM-2C	115Vac	171.7	181.9	186.2	188.0	189.8	188.8	216	226.4	232.7	247.7	219.1	151.8												
		230Vac	170.5	179.1	184.6	189.2	185.7	195.6	196.6	214.7	222.2	228.5	243.3	216.3	149.3												
C9300X-24Y	715WAC-P	C9300X-NM-8Y	115Vac	172.9	182	185.4	188.8	195.8	201.5	220.9	227.8	233.5	248.3	221.5	151.2												
		230Vac	170	178.9	182.3	185.6	192	198.6	204.3	223.2	229.1	243.7	217.2	149.1													
C9300X-24Y	715WAC-P	C9300X-NM-8C	115Vac	194.8	200.4	205	228.4	237.7	219.5	248.4	255.4	261.8	275	248.2	169.9												
		230Vac	191.3	216.5	222.5	226	202.8	216.4	239.3	245.9	252.0	267.9	235.4	159.7													
C9300X-48UX	1100WAC-P	N/A Not Installed	115Vac	217.4	225.2	224.1	223.8	224.2	252.2	255.8	269.8	268.5	289	260	180.4	307.1	433.2	640.8	694.4								
		230Vac	211.4	217.8	219.8	219.8	220.1	242.0	258.5	263.5	264.2	264.8	285.2	176.9	308.3	422.9	620.5	672									
C9300X-48UX	1100WAC-P	C9300X-NM-BM	115Vac	230.7	238.2	240.8	241	241.3	269.6	276.7	291.4	291.6	322.2	283.5	181.9	327.9	454.6	692.1	716.6								
		230Vac	225.2	232.3	234.8	235.6	236.1	259.5	264.3	285.5	286.7	286.5	277.8	189.9	321.4	444.6	642.5	695.3									

				100+ (and 90%)										50+ (and 40%)										25+ (and 20%)													
				Multi-point traffic										Multi-point traffic										Non-point traffic													
50M	25M	10M	5M	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%	
C9300X-40HX	1100WAC-P	C9300X-NM-2C	118Vdc	234.4	255.1	257.5	249.6	268.9	280.2	284.1	286.6	286.8	284.7	263.3	199.5	439.7	575.4	645.1	514.2																		
			230Vdc	229	250	252.6	255.1	268	261	276.4	280.3	282.5	280.3	278	195.1	490.5	554.4	908.7	873.6																		
C9300X-40HX	1100WAC-P	C9300X-NM-4Y	118Vdc	232.4	253.8	258.2	262.9	272.6	287.5	295.8	287.2	288.1	289.4	283.3	212.6	418.7	580.2	849.8	918																		
			230Vdc	226.6	246	252.5	257	269.4	261.2	269.4	281.6	281.6	282.2	285.9	196	407	560.9	918.3	890.2																		
C9300X-40HX	1100WAC-P	C9300X-NM-4C	118Vdc	234.2	278.3	272.9	275.8	282	289.3	304.9	307.8	310.2	318.2	304.4	224.3	437.2	599.9	869.6	936.6																		
			230Vdc	228.9	299.2	262.4	261.3	270.9	280.6	298.3	301	303.7	308.9	297.8	215.3	426.4	581.6	934.9	893.5																		
C9300X-40TX	715WAC-P	Not Installed	118Vdc	225.9	233.2	236.9	242.4	247.8	263.4	264.5	268.4	271.5	276.7	264.2	152.8																						
			230Vdc	219.6	233.4	235.7	237.8	242.7	245.9	260.2	263.5	265	268.8	260.3	164.3																						
C9300X-40TX	715WAC-P	C9300X-NM-6M	118Vdc	215.8	237	245.2	250.4	254.2	245.9	282.4	293.1	297.8	321.2	285.7																							
			230Vdc	210.2	233.6	232.8	240.5	242.6	244	278.9	285	291	305.5	275.6	161.4																						
C9300X-40TX	715WAC-P	C9300X-NM-2C	118Vdc	228.9	236.3	239.8	242.4	247.8	253.4	266.5	268.4	271.5	278.7	269.2	182.9																						
			230Vdc	212.6	233.4	235.7	237.8	242.7	245.9	260.8	263.5	265	268.8	260.3	184.3																						
C9300X-40TX	715WAC-P	C9300X-NM-9Y	118Vdc	212.6	231.8	236.4	242.1	250	254.4	264.2	267	267.9	315	284.3	167.6																						
			230Vdc	212.7	233.4	234.2	237.7	245.3	247.8	276.7	287	287	309.9	278.7	164.1																						
C9300X-40TX	715WAC-P	C9300X-NM-4C	118Vdc	232.2	246.7	248.1	251.4	258.6	270.1	288.1	290.8	296.9	255.2	266.																							



ATIS Testing - 100%			Residual Power																			
			Half sector in R				Half sector in T								Overlapped P-R		No. in		Vol. h of the traffic			
SEM	Antenna HxP	Options	Input	Output 100% 100%	20%	30%	50%	100%	Output 100% 100%	20%	30%	50%	100%	20%	30%	50%	100%	20%	30%	50%	100%	
C9300-48H 1900W	C9300-NIA-4G	115Vdc	91.16	96.8	98.07	69.6	99.12	92.85	10.4	104.67	105.25	105.74	102.58	90.17	419.9	750.2	1205.2	1440.5				
		230Vdc	90.64	95.67	96.73	97.27	97.75	92.18	102.55	103.94	104.25	101.6	101.72	89.35	57	939.1	1265.8	1616.5				
		115Vdc	93.16	100.87	101.21	101.56	102.4	94.69	106.16	108.95	109.71	111.86	107.16	91.53	420.7	749.8	1299.1	1441.6				
C9300-48H 1900W	C9300-NIA-4G	230Vdc	92.27	96.91	100.25	106.64	101.53	93.81	104.72	107.52	106.25	110.41	108.8	80.56	541	950.1	1635.3	1814.6				
		115Vdc	94.46	102.47	102.94	103.66	104.43	97.27	110.25	110.52	111.75	113.79	109.3	92.43	422.9	741.3	1296.6	1441.6				
		230Vdc	94.02	101.23	101.69	102.1	103.68	94.24	109.89	109.65	110.53	112.55	108	91.44	619.2	942.8	1843.5	1821.3				
C9300-48H 1900W	C9300-NIA-48M	115Vdc	94.02	101.47	102.6	102.81	103.41	95.78	109.48	110.25	110.58	112.77	108.93	91.43	421.9	749.9	1297.5	1449.1				
		230Vdc	93.08	102.08	103.16	103.15	103.31	96.32	108.16	108.96	109.73	111.46	107.29	92.29	518.8	1040.6	1635.2	1810.3				
		115Vdc	93.4	101.26	101.7	102.08	103.06	94.65	106.27	106.91	109.17	111.32	107.22	91.52	421.5	748.8	1258.7	1436.4				
C9300-48H 1900W	C9300-NIA-2Y	230Vdc	92.57	100.14	100.35	100.95	101.93	94.03	106.73	107.56	106.4	110.25	105.82	90.76	517	939.3	1638.3	1809.6				
		115Vdc	95.65	102.17	102.35	103.61	104.11	94.95	107.02	106.24	106.4	109.35	106.1	85.76	411.4	739.6	1268.7	1430.7				
		230Vdc	94.89	91.33	92.45	92.56	93.17	81.73	96.48	97	97.96	98.37	95.43	95.23	565.6	928.8	1912.9	1796.9				
C9300-24H 1900W	Not installed	115Vdc	90.83	84.57	85.17	86.4	85.65	80.79	86.49	87.62	87.93	88.40	85.32	80.41	40.75	741.3	1292.1	1438.1				
		230Vdc	79.55	82.21	84.7	84.91	85.25	79.7	86.09	87.13	87.35	87.94	85.69	79.39	863.6	931.6	1695.4	1810.3				
		115Vdc	81.58	84.76	89.98	90.51	91.09	87.24	94.57	95.08	96.06	92.88	85.58	416.5	741.8	1298.9	1432.7					
C9300-24H 1900W	C9300-NIA-4G	230Vdc	85.58	88.22	88.94	90.3	90.77	86.81	92.47	74.72	95.17	95.73	93.03	64.54	518.5	902.1	1285.5	1816.1				
		115Vdc	82.18	93.14	93.45	93.67	94.17	85.33	98.2	96.32	98.38	100.11	97.8	85.79	417.1	750.9	1304.4	1448.9				
		230Vdc	84.44	92.16	92.53	92.8	93.36	88.11	96.58	96.95	97.96	98.39	95.9	84.95	512.7	940.2	1641.6	1618.3				
C9300-24H 1900W	C9300-NIA-6X	115Vdc	68.85	92.82	94.89	95.08	95.98	91.72	90.5	100.05	101.03	102.21	98.99	95.95	418.9	754.5	1307.5	1450.9				
		230Vdc	68.1	82.69	90.8	94.32	94.71	81.92	95.82	96.79	100.1	100.6	97.81	95.24	516	942.7	1644.3	1822				
		115Vdc	68.57	93.9	94.72	94.81	94.65	93.73	99.29	100.13	100.44	101.54	99.72	95.63	418.9	741.2	1298.3	1449.9				
C9300-24H 1900W	C9300-NIA-48M	230Vdc	84.24	93.1	93.33	93.56	94.17	90.9	93.67	93.67	93.65	106.8	99.11	85.65	519.8	943.4	1544	1821.9				
		115Vdc	87.81	94.74	94.73	94.9	95.29	88.81	93.27	98.32	100.29	101.12	97.1	86.45	418.6	748.4	1311.1	1449.7				
		230Vdc	87.25	92.59	92.46	93.13	93.5	86.30	97.09	97.58	97.57	99.63	96.42	84.68	511.8	940.5	1642	1816				

* ENERGY STAR® certified model



Safety and compliance

Table 25 lists the safety and compliance information for the Cisco Catalyst 9300 Series.

Table 25. Safety and compliance information

Description	Specification
Safety certifications	- UL 60950-1 - CAN/CSA-C222.2 No. 60950-1 - EN 60950-1 - IEC 60950-1 - AS/NZS 60950.1 - IEEE 802.3
Electromagnetic compatibility certifications	47 CFR Part 15 - EN 300 386 V1.6.1 - EN 55032 Class A - CISPR 32 Class A - EN61000-3-2 - EN61000-3-3 - ICES-003 Class A - TCVN 7189 Class A - V-3 Class A - CISPR 35 - EN 300 386 - EN 55035 - TCVN 7317 - V-2/2015.04 - V-3/2015.04 - CNS13438 - KN32 - KN35 Additional certifications for C9300L SKUs: - QCVN 118:2018/BTTTT - VCCI-CISPR 32 Class A
Environmental	Reduction of Hazardous Substances (ROHS) 5



Ordering information

Table 26 lists ordering information for the Cisco Catalyst 9300 Series. To place an order, visit the Cisco Ordering homepage at https://www.cisco.com/en/US/ordering/or13/or8/order_customer_help/how_to_order_listing.html.

Table 26. Ordering information

Switches	
Product number	Product description
C9300X-48HX-E	Catalyst 9300 48-port 10G/mGig copper with modular uplink, UPOE+, Network Essentials
C9300X-48HX-A	Catalyst 9300 48-port 10G/mGig copper with modular uplink, UPOE+, Network Advantage
C9300X-48HX-M	Catalyst 9300 48-port 10G/mGig copper with modular uplink, Meraki Advanced or Enterprise
C9300X-48TX-E	Catalyst 9300 48-port 10G/mGig copper with modular uplink, data only, Network Essentials
C9300X-48TX-A	Catalyst 9300 48-port 10G/mGig copper with modular uplink, data only, Network Advantage
C9300X-48TX-M	Catalyst 9300 48-port 10G/mGig copper with modular uplink, data only, Meraki Advanced or Enterprise
C9300X-48HXN-E	Catalyst 9300 40-port 5G/mGig, 8-port 10G copper with modular uplink, UPOE+, Network Essentials
C9300X-48HXN-A	Catalyst 9300 40-port 5G/mGig, 8-port 10G copper with modular uplink, UPOE+, Network Advantage
C9300X-48HXN-M	Catalyst 9300 40-port 5G/mGig, 8-port 10G copper with modular uplink, UPOE+, Meraki Advanced or Enterprise
C9300X-24HX-E	Catalyst 9300 24-port 10G/mGig copper with modular uplink, UPOE+, Network Essentials
C9300X-24HX-A	Catalyst 9300 24-port 10G/mGig copper with modular uplink, UPOE+, Network Advantage
C9300X-24HX-M	Catalyst 9300 24-port 10G/mGig copper with modular uplink, UPOE+, Meraki Advanced or Enterprise
C9300X-12Y-E	Catalyst 9300 12-port 25G/10G/1G SFP28 with modular uplinks, Network Essentials
C9300X-12Y-A	Catalyst 9300 12-port 25G/10G/1G SFP28 with modular uplinks, Network Advantage
C9300X-12Y-M	Catalyst 9300 12-port 25G/10G/1G SFP28 with modular uplinks, Meraki Advanced or Enterprise



Switches	
Product number	Product description
C9300X-24Y-E	Catalyst 9300 24-port 25G/10G/1G SFP28 with modular uplinks, Network Essentials
C9300X-24Y-A	Catalyst 9300 24-port 25G/10G/1G SFP28 with modular uplinks, Network Advantage
C9300X-24Y-M	Catalyst 9300 24-port 25G/10G/1G SFP28 with modular uplinks, Meraki Advanced or Enterprise
C9300-24T-E	Catalyst 9300 24-port 1G copper with modular uplinks, data only, Network Essentials
C9300-24T-A	Catalyst 9300 24-port 1G copper with modular uplinks, data only, Network Advantage
C9300-24T-M	Catalyst 9300 24-port 1G copper with modular uplinks, data only, Meraki Advanced or Enterprise
C9300-24P-E	Catalyst 9300 24-port 1G copper with modular uplinks, PoE+, Network Essentials
C9300-24P-A	Catalyst 9300 24-port 1G copper with modular uplinks, PoE+, Network Advantage
C9300-24P-M	Catalyst 9300 24-port 1G copper with modular uplinks, PoE+, Meraki Advanced or Enterprise
C9300-24U-E	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE, Network Essentials
C9300-24U-A	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE, Network Advantage
C9300-24U-M	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE, Meraki Advanced or Enterprise
C9300-24UB-E	Catalyst 9300 higher scale 24-port 1G copper with modular uplinks, UPOE, Network Essentials
C9300-24UB-A	Catalyst 9300 higher scale 24-port 1G copper with modular uplinks, UPOE, Network Advantage
C9300-24U-E-UL	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE, Network Advantage (Compatible with UL1069 Standard*)
C9300-24U-A-UL	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE, Network Advantage (Compatible with UL1069 Standard*)
C9300-24H-E	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE+, Network Essentials
C9300-24H-A	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE+, Network Advantage
C9300-24UX-E	Catalyst 9300 24-port 10G/mGig copper with modular uplink, UPOE, Network Essentials
C9300-24UX-A	Catalyst 9300 24-port 10G/mGig copper with modular uplink, UPOE, Network Advantage
C9300-24UX-M	Catalyst 9300 24-port 10G/mGig copper with modular uplinks, UPOE, Meraki Advanced or Enterprise



Switches	
Product number	Product description
C9300-24UXB-E	Catalyst 9300 higher scale 24-port 10G/mGig copper with modular uplink, UPOE, Network Essentials
C9300-24UXB-A	Catalyst 9300 higher scale 24-port 10G/mGig copper with modular uplink, UPOE, Network Advantage
C9300-48P-E	Catalyst 9300 48-port 1G copper with modular uplinks, data only, Network Essentials
C9300-48T-A	Catalyst 9300 48-port 1G copper with modular uplinks, data only, Network Advantage
C9300-48T-M	Catalyst 9300 48-port 1G copper with modular uplinks, data only, Meraki Advanced or Enterprise
C9300-48P-E	Catalyst 9300 48-port 1G copper with modular uplinks, PoE+, Network Essentials
C9300-48P-A	Catalyst 9300 48-port 1G copper with modular uplinks, PoE+, Network Advantage
C9300-48P-M	Catalyst 9300 48-port 1G copper with modular uplinks, PoE+, Meraki Advanced or Enterprise
C9300-48U-E	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE, Network Essentials
C9300-48U-A	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE, Network Advantage
C9300-48U-M	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE, Meraki Advanced or Enterprise
C9300-48UB-E	Catalyst 9300 higher scale 48-port 1G copper with modular uplinks, UPOE, Network Essentials
C9300-48UB-A	Catalyst 9300 higher scale 48-port 1G copper with modular uplinks, UPOE, Network Advantage
C9300-48U-E-UL	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE, Network Essentials (Compatible with UL1069 Standard*)
C9300-48U-A-UL	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE, Network Advantage (Compatible with UL1069 Standard*)
C9300-48H-E	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE+, Network Essentials
C9300-48H-A	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE+, Network Advantage
C9300-48UXM-E	Catalyst 9300 48-port 2.5G (12 10G/mGig) copper with modular uplinks, UPOE, Network Essentials
C9300-48UXM-A	Catalyst 9300 48-port 2.5G (12 10G/mGig) copper with modular uplinks, UPOE, Network Advantage
C9300-48UXM-M	Catalyst 9300 48-port 2.5G (12 10G/mGig) copper with modular uplinks, UPOE, Meraki Advanced or Enterprise





Switches	
Product number	Product description
C9300-48UN-E	Catalyst 9300 48-port 5G copper with modular uplinks, UPOE, Network Essentials
C9300-48UN-A	Catalyst 9300 48-port 5G copper with modular uplinks, UPOE, Network Advantage
C9300-48UN-M	Catalyst 9300 48-port 5G copper with modular uplinks, UPOE, Meraki Advanced or Enterprise
C9300-24S-E	Catalyst 9300 24-port 1G SFP with modular uplinks, Network Essentials
C9300-24S-A	Catalyst 9300 24-port 1G SFP with modular uplinks, Network Advantage
C9300-24S-M	Cisco Catalyst 9300 24-port 1G SFP, modular uplinks, Meraki Advanced or Enterprise
C9300-48S-E	Catalyst 9300 48-port 1G SFP with modular uplinks, Network Essentials
C9300-48S-A	Catalyst 9300 48-port 1G SFP with modular uplinks, Network Advantage
C9300-48S-M	Catalyst 9300 48-port 1G SFP with modular uplinks, Meraki Advanced or Enterprise
C9300L-24T-4G-E	Catalyst 9300 24-port 1G copper, with fixed 4x1G SFP uplinks, data only, Network Essentials
C9300L-24T-4G-A	Catalyst 9300 24-port 1G copper, with fixed 4x1G SFP uplinks, data only, Network Advantage
C9300L-24P-4G-E	Catalyst 9300 24-port 1G copper, with fixed 4x1G SFP uplinks, PoE+, Network Essentials
C9300L-24P-4G-A	Catalyst 9300 24-port 1G copper, with fixed 4x1G SFP uplinks, PoE+, Network Advantage
C9300L-48T-4G-E	Catalyst 9300 48-port 1G copper, with fixed 4x1G SFP uplinks, data only, Network Essentials
C9300L-48T-4G-A	Catalyst 9300 48-port 1G copper, with fixed 4x1G SFP uplinks, data only, Network Advantage
C9300L-48P-4G-E	Catalyst 9300 48-port 1G copper, with fixed 4x1G SFP uplinks, PoE+, Network Essentials
C9300L-48P-4G-A	Catalyst 9300 48-port 1G copper with fixed 4x1G SFP uplinks, PoE+, Network Advantage
C9300L-48PF-4G-E	Catalyst 9300 48-port 1G copper with fixed 4x1G SFP uplinks, PoE+, Network Essentials
C9300L-48PF-4G-A	Catalyst 9300 48-port 1G copper with fixed 4x1G SFP uplinks, PoE+, Network Advantage
C9300L-24T-4X-E	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Network Essentials
C9300L-24T-4X-A	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Network Advantage



Switches	
Product number	Product description
C9300L-24T-4X-M	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Meraki Advanced or Enterprise
C9300L-24P-4X-E	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Network Essentials
C9300L-24P-4X-A	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Network Advantage
C9300L-24P-4X-M	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Meraki Advanced or Enterprise
C9300L-24UXG-4X-E	Catalyst 9300 24-port 8XmGig (100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G copper with fixed 4x10G/1G SFP+ uplinks, UPOE, Network Essentials
C9300L-24UXG-4X-A	Catalyst 9300 24-port 8XmGig (100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G copper with fixed 4x10G/1G SFP+ uplinks, UPOE, Network Advantage
C9300L-24UXG-4X-M	Catalyst 9300 24-port 8XmGig (100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G copper with fixed 4x10G/1G SFP+ uplinks, UPOE, Meraki Advanced or Enterprise
C9300L-48T-4X-E	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Network Essentials
C9300L-48T-4X-A	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Network Advantage
C9300L-48T-4X-M	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Meraki Advanced or Enterprise
C9300L-48P-4X-E	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Network Essentials
C9300L-48P-4X-A	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Network Advantage
C9300L-48P-4X-M	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Meraki Advanced or Enterprise
C9300L-48PF-4X-E	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, full PoE+, Network Essentials
C9300L-48PF-4X-A	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, full PoE+, Network Advantage
C9300L-48PF-4X-M	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, full PoE+, Meraki Advanced or Enterprise
C9300L-48UXG-4X-E	Catalyst 9300 48-port fixed uplinks UPOE, 12x mGig (100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G copper, 4x 10G uplinks, Network Essentials



Switches	
Product number	Product description
C9300L-48UXG-4X-A	Catalyst 9300 48-port 12x mGig (100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G copper with fixed 4x 10G/1G SFP+ uplinks, UPOE, Network Advantage
C9300L-48UXG-4X-M	Catalyst 9300 48-port 12x mGig (100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G copper with fixed 4x 10G/1G SFP+ uplinks, UPOE, Meraki Advanced or Enterprise
C9300L-24UXG-2Q-E	Catalyst 9300 24-port 8x mGig (100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G copper with fixed 2x 40G QSFP uplinks, UPOE, Network Essentials
C9300L-24UXG-2Q-A	Catalyst 9300 24-port 8x mGig (100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G copper with fixed 2x 40G QSFP uplinks, UPOE, Network Advantage
C9300L-48UXG-2Q-E	Catalyst 9300 48-port 12x mGig (100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G copper with fixed 2x 40G QSFP uplinks, UPOE, Network Essentials
C9300L-48UXG-2Q-A	Catalyst 9300 48-port 12x mGig (100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G copper with fixed 2x 40G QSFP uplinks, UPOE, Network Advantage
C9300LM-48UX-4Y-E	Catalyst 9300 mini 48-port UPOE, 8-port 10G Multigigabit copper, 40-port 1G, 4x 25G uplinks, Network Essentials
C9300LM-48UX-4Y-A	Catalyst 9300 mini 48-port UPOE, 8-port 10G Multigigabit copper, 40-port 1G, 4x 25G uplinks, Network Advantage
C9300LM-48U-4Y-E	Catalyst 9300 mini 48-port 1G copper, UPOE, 4x 25G uplinks, Network Essentials
C9300LM-48U-4Y-A	Catalyst 9300 mini 48-port 1G copper, UPOE, 4x 25G uplinks, Network Advantage
C9300LM-48T-4Y-E	Catalyst 9300 mini 48-port 1G copper, data, 4x 25G uplinks, Network Essentials
C9300LM-48T-4Y-A	Catalyst 9300 mini 48-port 1G copper, data, 4x 25G uplinks, Network Advantage
C9300LM-24U-4Y-E	Catalyst 9300 mini 24-port 1G copper, UPOE, 4x 25G uplinks, Network Essentials
C9300LM-24U-4Y-A	Catalyst 9300 mini 24-port 1G copper, UPOE, 4x 25G uplinks, Network Advantage

Network modules	
Product number	Product description
C9300X-NM-8M	Catalyst 9300X 8 x 10G/mGig copper Network Module
C9300X-NM-8M=	Catalyst 9300X 8 x 10G/mGig copper Network Module, spare
C9300X-NM-8Y	Catalyst 9300X 8 x 25G/10G/1G multi-rate SFP Network Module
C9300X-NM-8Y=	Catalyst 9300X 8 x 25G/10G/1G multi-rate SFP Network Module, spare
C9300X-NM-2C	Catalyst 9300X 2 x 100G/40G dual rate QSFP Network Module



Network modules	
Product number	Product description
C9300X-NM-2C=	Catalyst 9300X 2 x 100G/40G dual rate QSFP Network Module, spare
C9300X-NM-4C	Catalyst 9300X 4 x 100G/40G dual rate QSFP Network Module
C9300X-NM-4C=	Catalyst 9300X 4 x 100G/40G dual rate QSFP Network Module, spare
C9300-NM-4G	Catalyst 9300 4 x 1GE SFP Network Module
C9300-NM-4G=	Catalyst 9300 4 x 1GE SFP Network Module, spare
C9300-NM-8X	Catalyst 9300 8 x 10G/1G SFP+ Network Module
C9300-NM-8X=	Catalyst 9300 8 x 10G/1G SFP+ Network Module, spare
C9300-NM-2Q	Catalyst 9300 2 x 40GE QSFP Network Module
C9300-NM-2Q=	Catalyst 9300 2 x 40GE QSFP Network Module, spare
C9300-NM-2Y	Catalyst 9300 2 x 25G/10G/1G SFP28 Network Module
C9300-NM-2Y=	Catalyst 9300 2 x 25G/10G/1G SFP28 Network Module, spare
C9300-NM-4M	Catalyst 9300 4 x 10G/mGig copper Network Module
C9300-NM-4M=	Catalyst 9300 4 x 10G/mGig copper Network Module, spare
NM-BLANK-T1=	Cisco Catalyst Type 1 Network Module Blank, spare

Storage Module	
Product number	Product description
SSD-120G	Cisco pluggable USB3.0 120G SSD storage
SSD-120G=	Cisco pluggable USB3.0 120G SSD storage, spare
SSD-240G	Cisco pluggable USB3.0 240G SSD storage
SSD-240G=	Cisco pluggable USB3.0 240G SSD storage, spare



Software licenses for C9300 SKUs	
Product number	Product description
C9300-DNX-E-24-3Y	C9300 Cisco Catalyst Essentials, 24-port, 3 Year Term license
C9300-DNX-E-24-5Y	C9300 Cisco Catalyst Essentials, 24-port, 5 Year Term license
C9300-DNX-E-24-7Y	C9300 Cisco Catalyst Essentials, 24-port, 7 Year Term license
C9300-DNX-A-24-3Y	C9300 Cisco Catalyst Advantage, 24-port, 3 Year Term license
C9300-DNX-A-24-5Y	C9300 Cisco Catalyst Advantage, 24-port, 5 Year Term license
C9300-DNX-A-24-7Y	C9300 Cisco Catalyst Advantage, 24-port, 7 Year Term license
C9300-DNX-E-48-3Y	C9300 Cisco Catalyst Essentials, 48-port, 3 Year Term license
C9300-DNX-E-48-5Y	C9300 Cisco Catalyst Essentials, 48-port, 5 Year Term license
C9300-DNX-E-48-7Y	C9300 Cisco Catalyst Essentials, 48-port, 7 Year Term license
C9300-DNX-A-48-3Y	C9300 Cisco Catalyst Advantage, 48-port, 3 Year Term license
C9300-DNX-A-48-5Y	C9300 Cisco Catalyst Advantage, 48-port, 5 Year Term license
C9300-DNX-A-48-7Y	C9300 Cisco Catalyst Advantage, 48-port, 7 Year Term license
C9300-DNX-E-24S-3Y	C9300 1G Fiber Cisco Catalyst Essentials, 24-port, 3 Year Term license
C9300-DNX-E-24S-5Y	C9300 1G Fiber Cisco Catalyst Essentials, 24-port, 5 Year Term license
C9300-DNX-E-24S-7Y	C9300 1G Fiber Cisco Catalyst Essentials, 24-port, 7 Year Term license
C9300-DNX-A-24S-3Y	C9300 1G Fiber Cisco Catalyst Advantage, 24-port, 3 Year Term license
C9300-DNX-A-24S-5Y	C9300 1G Fiber Cisco Catalyst Advantage, 24-port, 5 Year Term license
C9300-DNX-A-24S-7Y	C9300 1G Fiber Cisco Catalyst Advantage, 24-port, 7 Year Term license
C9300-DNX-E-48S-3Y	C9300 1G Fiber Cisco Catalyst Essentials, 48-port, 3 Year Term license
C9300-DNX-E-48S-5Y	C9300 1G Fiber Cisco Catalyst Essentials, 48-port, 5 Year Term license
C9300-DNX-E-48S-7Y	C9300 1G Fiber Cisco Catalyst Essentials, 48-port, 7 Year Term license
C9300-DNX-A-48S-3Y	C9300 1G Fiber Cisco Catalyst Advantage, 48-port, 3 Year Term license
C9300-DNX-A-48S-5Y	C9300 1G Fiber Cisco Catalyst Advantage, 48-port, 5 Year Term license
C9300-DNX-A-48S-7Y	C9300 1G Fiber Cisco Catalyst Advantage, 48-port, 7 Year Term license



Software licenses for C9300 SKUs	
Product number	Product description
C9300-DNA-L-E-3Y	C9300 Cisco DNA Essentials license, for 12Y, 24Y SKUs, 3 Year Term license
C9300-DNA-L-E-5Y	C9300 Cisco DNA Essentials license, for 12Y, 24Y SKUs, 5 Year Term license
C9300-DNA-L-E-7Y	C9300 Cisco DNA Essentials license, for 12Y, 24Y SKUs, 7 Year Term license
C9300-DNA-L-A-3Y	C9300 Cisco DNA Advantage license, for 12Y, 24Y SKUs, 3 Year Term license
C9300-DNA-L-A-5Y	C9300 Cisco DNA Advantage license, for 12Y, 24Y SKUs, 5 Year Term license
C9300-DNA-L-A-7Y	C9300 Cisco DNA Advantage license, for 12Y, 24Y SKUs, 7 Year Term license
C9300-LIC=	Electronic Cisco DNA Upgrade License for C9300 switches. Note: when upgrading from Cisco DNA Essentials to Cisco DNA Advantage, Network Essentials is also upgraded to Network Advantage
LIC-C9300-24A-1Y	C9300 Cisco Meraki Advanced Software license, 24-port, 1 Year Term license
LIC-C9300-24A-3Y	C9300 Cisco Meraki Advanced Software license, 24-port, 3 Year Term license
LIC-C9300-24A-5Y	C9300 Cisco Meraki Advanced Software license, 24-port, 5 Year Term license
LIC-C9300-24A-7Y	C9300 Cisco Meraki Advanced Software license, 24-port, 7 Year Term license
LIC-C9300-24A-10Y	C9300 Cisco Meraki Advanced Software license, 24-port, 10 Year Term license
LIC-C9300-24E-1Y	C9300 Cisco Meraki Enterprise Software license, 24-port, 1 Year Term license
LIC-C9300-24E-3Y	C9300 Cisco Meraki Enterprise Software license, 24-port, 3 Year Term license
LIC-C9300-24E-5Y	C9300 Cisco Meraki Enterprise Software license, 24-port, 5 Year Term license
LIC-C9300-24E-7Y	C9300 Cisco Meraki Enterprise Software license, 24-port, 7 Year Term license
LIC-C9300-24E-10Y	C9300 Cisco Meraki Enterprise Software license, 24-port, 10 Year Term license
LIC-C9300-48A-1Y	C9300 Cisco Meraki Advanced Software license, 48-port, 1 Year Term license
LIC-C9300-48A-3Y	C9300 Cisco Meraki Advanced Software license, 48-port, 3 Year Term license
LIC-C9300-48A-5Y	C9300 Cisco Meraki Advanced Software license, 48-port, 5 Year Term license
LIC-C9300-48A-7Y	C9300 Cisco Meraki Advanced Software license, 48-port, 7 Year Term license
LIC-C9300-48A-10Y	C9300 Cisco Meraki Advanced Software license, 48-port, 10 Year Term license
LIC-C9300-48E-1Y	C9300 Cisco Meraki Enterprise Software license, 48-port, 1 Year Term license



Software licenses for C9300 SKUs	
Product number	Product description
LJC-C9300-48E-3Y	C9300 Cisco Meraki Enterprise Software license, 48-port, 3 Year Term license
LJC-C9300-48E-5Y	C9300 Cisco Meraki Enterprise Software license, 48-port, 5 Year Term license
LJC-C9300-48E-7Y	C9300 Cisco Meraki Enterprise Software license, 48-port, 7 Year Term license
LJC-C9300-48E-10Y	C9300 Cisco Meraki Enterprise Software license, 48-port, 10 Year Term license

Software licenses for C9300L SKUs	
Product number	Product description
C9300L-DNX-E-24-3Y	C9300L Cisco Catalyst Essentials, 24-port, 3 Year Term license
C9300L-DNX-E-24-5Y	C9300L Cisco Catalyst Essentials, 24-port, 5 Year Term license
C9300L-DNX-E-24-7Y	C9300L Cisco Catalyst Essentials, 24-port, 7 Year Term license
C9300L-DNX-A-24-3Y	C9300L Cisco Catalyst Advantage, 24-port, 3 Year Term license
C9300L-DNX-A-24-5Y	C9300L Cisco Catalyst Advantage, 24-port, 5 Year Term license
C9300L-DNX-A-24-7Y	C9300L Cisco Catalyst Advantage, 24-port, 7 Year Term license
C9300L-DNX-E-48-3Y	C9300L Cisco Catalyst Essentials, 48-port, 3 Year Term license
C9300L-DNX-E-48-5Y	C9300L Cisco Catalyst Essentials, 48-port, 5 Year Term license
C9300L-DNX-E-48-7Y	C9300L Cisco Catalyst Essentials, 48-port, 7 Year Term license
C9300L-DNX-A-48-3Y	C9300L Cisco Catalyst Advantage, 48-port, 3 Year Term license
C9300L-DNX-A-48-5Y	C9300L Cisco Catalyst Advantage, 48-port, 5 Year Term license
C9300L-DNX-A-48-7Y	C9300L Cisco Catalyst Advantage, 48-port, 7 Year Term license
C9300L-DNA-E-24-3Y	C9300L Cisco DNA Essentials, 24-port, 3 Year Term license
C9300L-DNA-E-24-5Y	C9300L Cisco DNA Essentials, 24-port, 5 Year Term license
C9300L-DNA-E-24-7Y	C9300L Cisco DNA Essentials, 24-port, 7 Year Term license
C9300L-DNA-A-24-3Y	C9300L Cisco DNA Advantage, 24-port, 3 Year Term license
C9300L-DNA-A-24-5Y	C9300L Cisco DNA Advantage, 24-port, 5 Year Term license



Software licenses for C9300L SKUs	
Product number	Product description
C9300L-DNA-A-24-7Y	C9300L Cisco DNA Advantage, 24-port, 7 Year Term license
C9300L-DNA-E-48-3Y	C9300L Cisco DNA Essentials, 48-port, 3 Year Term license
C9300L-DNA-E-48-5Y	C9300L Cisco DNA Essentials, 48-port, 5 Year Term license
C9300L-DNA-E-48-7Y	C9300L Cisco DNA Essentials, 48-port, 7 Year Term license
C9300L-DNA-A-48-3Y	C9300L Cisco DNA Advantage, 48-port, 3 Year Term license
C9300L-DNA-A-48-5Y	C9300L Cisco DNA Advantage, 48-port, 5 Year Term license
C9300L-DNA-A-48-7Y	C9300L Cisco DNA Advantage, 48-port, 7 Year Term license
C9300L-LIC=	Electronic Cisco DNA Upgrade License for C9300L switches. Note: when upgrading from Cisco DNA Essentials to Cisco DNA Advantage, Network Essentials is also upgraded to Network Advantage

Power supplies	
Product number	Product description
PWR-C1-350WAC=	350WAC power supply spare
PWR-C1-715WAC=	715WAC power supply spare
PWR-C1-715WDC=	715WDC power supply spare
PWR-C1-1100WAC=	1100WAC power supply spare
PWR-C1-1900WAC=	1900WAC Power supply spare
PWR-C1-350WAC-P=	350WAC Platinum-rated power supply spare
PWR-C1-715WAC-P=	715WAC Platinum-rated power supply spare
PWR-C1-1100WAC-P=	1100WAC Platinum-rated power supply spare
PWR-C1-715WAC-UP	Upgrade to 715WAC Platinum-rated power supply
PWR-C1-1100WAC-UP	Upgrade to 1100WAC Platinum-rated power supply
PWR-C1-1900WAC-UP	Upgrade to 1900WAC Platinum-rated power supply



Cisco StackWise-480/1T and StackPower cables	
Product number	Product description
STACK-T1-50CM=	Cisco StackWise-480/1T 50cm stacking cable spare
STACK-T1-1M=	Cisco StackWise-480/1T 1m stacking cable spare
STACK-T1-3M=	Cisco StackWise-480/1T 3m stacking cable spare
CAB-SPWR-30CM=	Cisco Catalyst StackPower cable 30cm spare
CAB-SPWR-150CM=	Cisco Catalyst StackPower cable 150cm spare

Cisco StackWise-320 Accessories	
Product number	Product description
C9300L-STACK-KIT	Stack Kit for C9300L SKUs – includes 2 Stack Adaptors and 1 Stack Cable
C9300L-STACK-KIT=	Stack Kit for C9300L SKUs – includes 2 Stack Adaptors and 1 Stack Cable, spare
STACK-T3-50CM	50CM Type 3 Stacking Cable – default with Stack Kit for C9300L SKUs
STACK-T3-50CM=	50CM Type 3 Stacking Cable, spare for C9300L SKUs
STACK-T3-1M	1M Type 3 Stacking Cable for C9300L SKUs
STACK-T3-1M=	1M Type 3 Stacking Cable, spare for C9300L SKUs
STACK-T3-3M	3M Type 3 Stacking Cable for C9300L SKUs
STACK-T3-3M=	3M Type 3 Stacking Cable, spare for C9300L SKUs
C9300L-STACK-KIT2	Stack Kit 2 for C9300L SKUs – includes 2 Stack Adaptors and 1 Stack Cable
C9300L-STACK-KIT2=	Stack Kit 2 for C9300L SKUs – includes 2 Stack Adaptors and 1 Stack Cable, spare
STACK-T3A-50CM	50CM Type 3A Stacking Cable – default with Stack Kit for C9300L SKUs
STACK-T3A-50CM=	50CM Type 3A Stacking Cable, spare for C9300L SKUs
STACK-T3A-1M	1M Type 3A Stacking Cable for C9300L SKUs
STACK-T3A-1M=	1M Type 3A Stacking Cable, spare for C9300L SKUs
STACK-T3A-3M	3M Type 3A Stacking Cable for C9300L SKUs
STACK-T3A-3M=	3M Type 3A Stacking Cable, spare for C9300L SKUs



Cisco StackWise-320 Accessories	
Product number	Product description
Spare power cords	
CAB-TA-NA=	AC power cord for Cisco Catalyst (North America)
CAB-TA-AP=	AC power cord for Cisco Catalyst (Australia)
CAB-TA-AR=	AC power cord for Cisco Catalyst (Argentina)
CAB-TA-SW=	AC power cord for Cisco Catalyst (Switzerland)
CAB-TA-UK=	AC power cord for Cisco Catalyst (United Kingdom)
CAB-TA-JP=	AC power cord for Cisco Catalyst (Japan)
CAB-TA-250V-JP	Japan 250VAC power cord for Cisco Catalyst (Japan)
CAB-TA-EU=	AC power cord for Cisco Catalyst (Europe)
CAB-TA-IT=	AC power cord for Cisco Catalyst (Italy)
CAB-TA-IN=	AC power cord for Cisco Catalyst (India)
CAB-TA-CN=	AC power cord for Cisco Catalyst (China)
CAB-TA-DN=	AC power cord for Cisco Catalyst (Denmark)
CAB-TA-IS=	AC power cord for Cisco Catalyst (Israel)
CAB-ACBZ-12A=	AC power cord for Cisco Catalyst (Brazil), 12A/125V BR-3-20 plug up to 12A
CAB-ACBZ-10A=	AC power cord for Cisco Catalyst (Brazil), 10A/250V BR-3-10 plug up to 10A
CAB-C15-CBN	Cabinet jumper power cord, 250VAC 13A, C14-C15 connectors

Optics online reference

The Cisco Catalyst 9300 Series supports a wide range of optics. Because the list of supported optics is updated on a regular basis, consult the tables available here for the latest QSFP28, QSFP+, SFP+, and SFP compatibility information: https://www.cisco.com/en/US/products/hw/modules/ps5455/products_device_support_tables_list.html.



Warranty

Cisco Enhanced Limited Lifetime hardware warranty

The Cisco Catalyst 9300 Series Switches come with the Cisco Enhanced Limited Lifetime hardware warranty (E-LLW) that includes next-business-day (NBD) delivery of replacement hardware where available and 90 days of 8x5 Cisco TAC support.

Your formal warranty statement, including the warranty applicable to Cisco software, appears in the information packet that accompanies your Cisco product. We encourage you to review the warranty statement shipped with your specific product carefully before use.

Cisco reserves the right to refund the purchase price as its exclusive warranty remedy.

For further information about warranty terms, visit <https://www.cisco.com/go/warranty>. Table 27 provides information about the E-LLW.

Table 27. E-LLW details

	Cisco E-LLW
Devices covered	Applies to Cisco Catalyst 9300 Series Switches.
Warranty duration	As long as the original customer owns the product.
End-of-life policy	In the event of discontinuance of product manufacture, Cisco warranty support is limited to 5 years from the announcement of discontinuance.
Hardware replacement	Cisco or its service center will use commercially reasonable efforts to ship a replacement for NBD delivery, where available. Otherwise, a replacement will be shipped within 10 working days after receipt of the Return Materials Authorization (RMA) request. Actual delivery times might vary depending on customer location.
Effective date	Hardware warranty commences from the date of shipment to customer (and in case of resale by a Cisco reseller, not more than 90 days after original shipment by Cisco).
TAC support	Cisco will provide during business hours, 8 hours per day, 5 days per week, basic configuration, diagnosis, and troubleshooting of device-level problems for up to a 90-day period from the date of shipment of the originally purchased Cisco Catalyst 9300 Series product. This support does not include solution or network-level support beyond the specific device under consideration.
Cisco.com access	Warranty allows guest access only to Cisco.com.

Product sustainability

Information about Cisco's Environmental, Social and Governance (ESG) initiatives and performance is provided in Cisco's CSR and sustainability [reporting](#).

ENERGY STAR certification

Cisco is driving long-term value and market advantage by continuing to embed energy efficiency through hardware and software and by providing customers visibility into their energy consumption to help them develop a baseline, identify trends and anomalies, and take corrective actions.

With the ENERGY STAR certification of Catalyst 9300 Series models, Cisco is one of the first networking company to have third party-approved campus switches. Ecolabel certifications like ENERGY STAR help customers identify "environmentally preferable" products to help maximize energy efficiency, reduce greenhouse gas emissions, and lower energy costs.

ENERGY STAR certification reinforces Cisco's ongoing commitment to deliver energy-efficient products including top-rated power supplies, active power management and monitoring capabilities, and alignment to ISO 14000 Environmental Management systems standards – all designed with circularity principles in mind.

Learn more:

[ENERGY STAR Certified Product Finder](#)

Table 28. Links to sustainability topics

Sustainability topic	Reference
General	
Information on product-material-content laws and regulations	Materials
Information on electronic waste laws and regulations, including our products, batteries and packaging	WEEE Compliance
Sustainability Inquiries	Contact: csr_inquiries@cisco.com
Information on product takeback and reuse program	Cisco Takeback and Reuse Program
Safety and compliance	Table 25. Safety and compliance information
Mean Time Between Failures – MTBF (hours)	Table 18. Model Dimensions, Weight, and Mean Time between failures metrics



Sustainability topic		Reference
Power	Default AC power supply	Table 2. Cisco Catalyst 9300 Series switch configurations
	Power supplies	Table 4. Power supply models Table 21. Power specifications Table 22. Power specifications – Platinum-rated power supplies
	Fan	Table 7. Fan modules
	Energy Efficient Ethernet	Smart operation
	Power over Ethernet (Cisco UPOE and UPOE+)	Power over Ethernet leadership
	Power connectors	Table 19. Power connectors
	Power consumption (ATIS)	Table 23. Power Consumption of Standalone 9300 Series Switches Table 24. Power consumption of Standalone 9300 Series Switches with Platinum-rated power supply
	ENERGY STAR certified models	ENERGY STAR Certified Large Network Equipment
	Material	
	Product packaging weight and materials	Contact: environment@cisco.com
Material	Dimensions	Table 18. Model dimensions, weight, and mean time between failures metrics.
	Weight	Table 18. Model dimensions, weight, and mean time between failures metrics.
	Elimination of wet paint on plastic bezel	2019 Cisco Corporate Social Responsibility Report , Pg. 19 Stepping up our work on circularity



Cisco Services

Cisco Services for next-generation Cisco Catalyst 9000 Series Switches

Achieve infrastructure excellence faster and with less risk. Cisco Catalyst 9000 Services provide expert guidance to help you successfully deploy, manage, and support the Cisco Catalyst 9000 switching family. With unmatched networking expertise, best practices, and innovative tools, we can help you reduce overall upgrade, refresh, and migration costs as you introduce new hardware, software, and protocols into the network. Offering a comprehensive lifecycle of services – from implementation, optimization, technical, and managed services – Cisco experts help you reduce disruption and achieve operational excellence to extract maximum value from your Cisco DNA-ready infrastructure.

[Learn more about Cisco Services for Enterprise Networks](#)

Software policy for Cisco Catalyst 9300 Series Switches

Software policy for network stack components

Customers with the Network Essentials Stack and Network Advantage Stack software feature sets are provided with maintenance updates and bug fixes designed to maintain compliance of the software. This includes compliance with published specifications, release notes, and industry standards as long as the original end user continues to own or use the product or up to one year from the end-of-sale date for the product, whichever occurs earlier.

Cisco Embedded Support for Cisco Catalyst and Cisco DNA term components

Cisco Embedded Support delivers the right support for Cisco software products and suites. It will keep your business applications performing as expected and protect your investment. Cisco Embedded Support for the Cisco Catalyst and Cisco DNA Essentials and Cisco Catalyst and Cisco DNA Advantage term components is included. Cisco Embedded Support provides access to TAC support, major software updates, maintenance and minor software releases, and the Cisco Embedded Support site, for increased productivity with anytime access.

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital® makes it easier to get the right technology to achieve your objectives, enable business transformation, and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services, and complementary third-party equipment in easy, predictable payments. [Learn more.](#)



Document history

New or revised topic	Described In	Date
Correction to say 9300 instead of 9200 in couple of entries (C9200-48S, C9200-24S)	Table 4: Power Supply Models	October 9, 2024
Correction for switching bandwidth numbers and addition of STP virtual ports	Table 9: Bandwidth Specifications	October 9, 2024
Added Simplified Campus Automation	All relevant sections	June 4, 2024
ENERGY STAR certification	All relevant sections	April 12, 2024
Added new models supporting the Meraki Software options	All relevant sections	February 6, 2024
Added Cisco Catalyst and Meraki Software options	All relevant sections	December 5, 2023
Added Information about 9300X, copper models	All relevant sections	February 3, 2022
Added Information about 9300X fiber models	All relevant sections	March 2, 2021
Added information about the 1G 90W UPOE+ SKUs	Across different sections	February 10, 2020
Added new SKUs for C9300L - Full PoE+ and mGig SKUs	Content added to all the tables	December 2, 2019
Updates for C9300 - large buffer/scale SKUs	All relevant sections	October 9, 2019
Adding Primary PSU upgrade option for 9300	Table 4: Power supply models	June 20, 2019
Product name change: Cisco ONE to Cisco DNA	Introduction	May 10, 2019
Wi-Fi 6 addition	Product Overview: Features	May 10, 2019
Add: Features	Product Overview: Features	May 10, 2019
Add: Modular uplink models table	Platform Details	May 10, 2019
Edit: Cisco Catalyst 9300 Series modular uplink	Platform Details	May 10, 2019
Edit: Table 1: Cisco Catalyst 9300 Series Switch configurations; uplink configuration add	Platform Details	May 10, 2019
Edit: Table 2: Name change to "Catalyst 9300..."	Platform Details	May 10, 2019
Add: Figure 3: picture for C9300L	Platform Details	May 10, 2019



New or revised topic	Described In	Date
Edit: Table 3: Power supply models	Platform Details	May 10, 2019
Add: Stacking, Table 4	Platform Details	May 10, 2019
Add: Stacking Accessories, Table 5	Platform Details	May 10, 2019
Edit: Replaced C3850 stack picture with C9300 stack picture	Platform Details	May 10, 2019
Add: Fan, Table 6	Platform Details	May 10, 2019
Edit: Table 7	Performance and Scalability	May 10, 2019
Add: Bandwidth Specifications	Performance and Scalability	May 10, 2019
Add: StackWise-320	Resiliency and High Availability	May 10, 2019
Edit: name change from Cisco One to Cisco DNA Software	Software Requirements	May 10, 2019
Edit: text edits	Licensing	May 10, 2019
Edit: Table 13	Licensing	May 10, 2019
Edit: Table 14	Specifications	May 10, 2019
Edit: Table 15	Connectors	May 10, 2019
Edit: Table 17	Power Supply Specifications	May 10, 2019
Edit: Table 21	Safety and Compliance	May 10, 2019
Edit: Table 23	Ordering Information	May 10, 2019
Added support for SD-Access Embedded Wireless	Added support for SD-Access Embedded Wireless Controller functionality.	November 13, 2018
Updated Platinum Power Supply specifications	Platinum rated power supplies available on the C9300 switches.	October 5, 2018
Updated availability of SSD card	Availability of 120G storage module for the C9300.	October 5, 2018



New or revised topic	Described in	Date
Updated Product overview	Added Catalyst 9500 high density platforms and updated associated speeds and densities, e.g. Up to 6.4-Tbps switching capacity with up to 2 Bpps of forwarding performance from "3.2 Tbps/1 Bpps" a. 32 port 100G, b. 32 port 40G, c. 48 port 25G. Added Catalyst 9500 mid density platform a. 24 port 25G, b. 16 port 1/10G. Added new optical interfaces - QSFP28, SFP28. Added new power supply options - 650W, 1600W. Added RESCONF support. StackWise Virtual extended to all Catalyst 9500 platforms.	March 31, 2018
Updated Audio Video Bridging	AVB support noted for certain platforms. Corrected references to Catalyst 9000 switches, rather than Catalyst 9000 Series switches. Corrected references to Cisco IOS XE, rather than IOS XE.	December 15, 2017



Cisco 25GBASE SFP28 Modules

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Product overview

The Cisco® 25GBASE SFP28 (Small Form-Factor Pluggable) portfolio offers customers a wide variety of high-density and low-power 25 Gigabit Ethernet connectivity options for data center and high-performance computing networks applications. The 25G Modules are based on SFP28 form factor.



25G Direct Attached Cables (DAC)



25G Active Optical Cables (AOC)



25G Short Reach (SR) Module



10/25G Cisco Short Reach (CSR) Module



10/25G Long Reach (LR) Module



10/25G Long Reach (LR) Industrial Temperature Module



SFP-10/25G-BXD-I



SFP-10/25G-BXU-I



SFP-25G-ER-I



SFP-25G-BX40D-I



SFP-25G-BXU-I

Features and benefits of Cisco 25G Modules

- Interoperable with other IEEE-compliant 25G interfaces where applicable.
- Certified and tested on Cisco SFP28 ports for superior performance, quality, and reliability.
- High-speed connectivity compliant to IEEE 802.3by and IEEE 802.3cc.

Table 1. Cisco 25G Portfolio

Product	Descriptions
SFP-H25G-CU1M	25GBASE-CR1 Copper Cable 1-meter
SFP-H25G-CU1.5M	25GBASE-CR1 Copper Cable 1.5-meter
SFP-H25G-CU2M	25GBASE-CR1 Copper Cable 2-meter
SFP-H25G-CU2.5M	25GBASE-CR1 Copper Cable 2.5-meter
SFP-H25G-CU3M	25GBASE-CR1 Copper Cable 3-meter
SFP-H25G-CU4M	25GBASE-CR1 Copper Cable 4-meter
SFP-H25G-CU5M	25GBASE-CR1 Copper Cable 5-meter
SFP-25G-AOC1M	25GBASE-AOC Active Optical Cable 1-meter
SFP-25G-AOC2M	25GBASE-AOC Active Optical Cable 2-meter
SFP-25G-AOC3M	25GBASE-AOC Active Optical Cable 3-meter
SFP-25G-AOC4M	25GBASE-AOC Active Optical Cable 4-meter
SFP-25G-AOC5M	25GBASE-AOC Active Optical Cable 5-meter
SFP-25G-AOC7M	25GBASE-AOC Active Optical Cable 7-meter
SFP-25G-AOC10M	25GBASE-AOC Active Optical Cable 10-meter
SFP-25G-SR-S	25GBASE-SR SFP28 Module for MMF
SFP-25G-SL	25GBASE-SL SFP28 Module for MMF
SFP-10/25G-CSR-S	10/25GBASE-CSR SFP28 Module for MMF
SFP-10/25G-LR-S	10/25GBASE-LR SFP28 Module for SMF
SFP-10/25G-LR-I	10/25GBASE-LR SFP28, Industrial Temperature Module for SMF



Product	Descriptions
SFP-10/25G-BXD-I	10GBASE-LR, 10GBASE-BR10, 25GBASE-BR10 SFP28, Bidirectional, Industrial Temp Module for SMF
SFP-10/25G-BXU-I	10GBASE-LR, 10GBASE-BR10, 25GBASE-BR10 SFP28, Bidirectional, Industrial Temp Module for SMF
SFP-25G-ER-I	25GBASE-ER, SFP28 Industrial Temperature Module for SMF
SFP-25G-BX40D-I	25GBASE-BR40, SFP28, Bidirectional, Industrial Temp Module for SMF
SFP-25G-BX40U-I	25GBASE-BR40, SFP28, Bidirectional, Industrial Temp Module for SMF

Cisco SFP-25G copper cables

Cisco SFP28 to SFP28 copper direct-attach 25GBASE-CR1 cables are suitable for very short links and offer a highly cost-effective way to establish a 25-Gigabit link between SFP28 ports of Cisco switches within racks and across adjacent racks. Cisco offers passive copper cables in lengths of x= 1, 1.5, 2, 2.5, 3, 4 and 5 meters. 1m, 1.5m, and 2m cables do not require FEC on the host ports; 2.5m and 3m cables require BASE-R FEC (also known as FC-FEC) on the host ports; 4m and 5m cables require RS-FEC on the host ports.

Cisco SFP-25G active optical cables

Cisco SFP28 to SFP28 Active Optical Cables are direct-attach fiber assemblies with SFP connectors. They are suitable for very short distances and offer a cost-effective way to connect within racks and across adjacent racks. Cisco offers Active Optical Cables in lengths of 1, 2, 3, 4, 5, 7, and 10 meters.

AOC cable require BASE-R FEC, or RS-FEC on the host ports.

Cisco SFP-25G-SR-S

The Cisco 25GBASE-SR Module supports a link length of 70/100m on OM3/4 MMF.

This module requires RS-FEC on the host ports.

Cisco SFP-25G-SL

The Cisco 25GBASE-SL Module supports a link length of 20/30m on OM3/4 MMF.

The Cisco SFP-25G-SL (Short Link) module requires RS-FEC on the host ports

Cisco SFP-10/25G-CSR-S

The Cisco 10/25GBASE-CSR Module supports a link length of up to 300/400m over OM3/4 at 10G, and up to 300/400m over OM3/4 at 25G. It also supports link lengths of 82m over OM2 at 10G, and up to 70m over OM2 at 25G.

This module requires RS-FEC on the host port for full reach operation at 25G. Using BASE-R FEC the module can support 70/100m over OM3/4 and with-out FEC it can support 30/50m over OM3/4 at 25G*. For 10G operation FEC is not required.

*Depends upon fiber quality.



Cisco SFP-10/25G-LR-S

The Cisco 10/25GBASE-LR Module supports a link length of 10 kilometers on standard Single-Mode Fiber (SMF) G.652 at both 10G and 25G.

This module requires RS-FEC on the host ports for operation at 25G.

Cisco SFP-10/25G-LR-I

The Cisco 10/25GBASE-LR Module supports a link length of 10 kilometers on standard Single-Mode Fiber (SMF) G.652 at both 10G and 25G. The module requires RS-FEC on the host ports for full reach operation at 25G. This module has an industrial temperature range. This module also supports CPRI datarates options 7, 8, 9 and 10.

In some applications using BASE-R FEC the module can support 3.5km and without FEC it can support 1.5km, depending on fiber quality.

Cisco SFP-10/25G-BXD-I and SFP-10/25G-BXU-I (single-fiber bidirectional applications)

The Cisco 10GBASE-LR/10GBASE-BR/25GBASE-BR Module supports a link length of 10 kilometers on a single strand of standard Single-Mode Fiber (SMF) G.652 at both 10G and 25G. A SFP-10/25G-BXD-I device is always connected to a SFP-10/25G-BXU-I device with a single strand of standard SMF. The communication over a single strand of fiber is achieved by separating the transmission wavelength of the two devices. SFP-10/25G-BXD-I transmits at 1330nm channel and receives at 1270nm signal. The SFP-10/25G-BXU-I transmits at a 1270nm wavelength and receives a 1330nm signal.

The module requires RS-FEC on the host ports for full reach operation at 25G. This module has an industrial temperature range. This module also supports CPRI datarates options 7, 8, 9 and 10.

In some applications using BASE-R FEC the module can support 3.5km and without FEC it can support 1.5km, depending on fiber quality.

Cisco SFP-25G-ER-I

The Cisco 25GBASE-ER Module supports a link length of 40 kilometers on standard Single-Mode Fiber (SMF) G.652 at 25G.

The module requires RS-FEC on the host ports for full reach operation at 25G. This module has an industrial temperature range.

Cisco SFP-25G-BX40D-I and SFP-25G-BX40U-I (single-fiber bidirectional applications)

The Cisco 25GBASE-BR40 Modules support link lengths of 40km over a single strand of standard Single-Mode Fiber (SMF) G.652 at 25G. An SFP-25G-BX40D-I device is always connected to an SFP-25G-BX40U-I device with a single strand of standard SMF. The communication over a single strand is achieved by separating the transmission wavelength of the two devices. SFP-25G-BX40D-I transmits at 1314nm wavelength and receives at 1289nm wavelength. The SFP-25G-BX40U-I transmits at 1289nm and receives at 1314nm wavelengths.

These modules require RS-FEC on the host ports for full reach operation at 25G. These modules have an industrial temperature range.

Technical specifications

Platform support

Cisco 25G transceivers are supported on Cisco switches. For more details, refer to the document "[Transceiver Module Group \(TMG\) Compatibility Matrix](#)".

Connectors and cabling

Refer to Table 2 for cabling specifications for each 25G product.

Table 2. 25G Port cabling specifications

SFP-25G	Cable Type	Cable Distance	Max Power Consumption (W)	Pull Tab / Bail Latch Color
SFP-H25G-CU1M	Direct-attach copper cable assembly	1m	1/10	Beige
SFP-H25G-CU1.5M		1.5m		Black
SFP-H25G-CU2M		2m		Brown
SFP-H25G-CU2.5M		2.5m		Yellow
SFP-H25G-CU3M		3m		Orange
SFP-H25G-CU4M		4m		Green
SFP-H25G-CU5M		5m		Gray
SFP-25G-AOC1M	Active Optical Cable assembly	1m	1	Beige
SFP-25G-AOC2M		2m		Brown
SFP-25G-AOC3M		3m		Orange
SFP-25G-AOC4M		4m		Green
SFP-25G-AOC5M		5m		Gray
SFP-25G-AOC7M		7m		Blue
SFP-25G-AOC10M		10m		Red
SFP-25G-SR-S	MMF	70/100m (OM3/OM4)	1.2	Beige
SFP-25G-SL	MMF	20/30m (OM3/OM4)	1.2	Purple
SFP-10/25G-CSR-S	MMF	300/400m (OM3/OM4)	1.2	Peach
SFP-10/25G-LR-S	SMF	10km	1.3	Blue
SFP-10/25G-LR-I	SMF	10km**	1.3	Blue



SFP-25G	Cable Type	Cable Distance	Max Power Consumption (W)	Pull Tab /Bail Latch Color
SFP-10/25G-BXD-I	SMF	10km ^{***}	1.5W	Violet
SFP-10/25G-BXU-I	SMF	10km ^{***}	1.5W	Blue
SFP-25G-ER-I	SMF	40km ^{****}	1.5W	Red
SFP-25G-BX40D-I	SMF	40km ^{****}	1.9W	Red
SFP-25G-BX40U-I	SMF	40km ^{****}	1.9W	Red

^{*}Depending upon fiber quality.

^{**}Links up to 15km reach are supported as engineered links as long as channel insertion loss is <9.3dB and RS-FEC is required.

^{***}Links up to 15km reach are supported as engineered links as long as channel insertion loss is <8dB and RS-FEC is required.

^{****}Links greater than 30km reach are considered engineered links.

^{*****}Links up to 40km reach are supported as engineered links as long as channel insertion loss is <18dB and RS-FEC is required.

Table 3. SFP28 port cabling specifications

SFP-25G	Wavelength (nm)	Cable Type	Core Size (Microns)	Modal Bandwidth	Cable Distance
SFP-25G-SR-S	850	MMF	50.0	2000 (OM3)	70m
				4700 (OM4)	100m
				4700 (OM5)	100m
SFP-25G-SL	850	MMF	50.0	2000 (OM3)	20m
				4700 (OM4)	30m
				4700 (OM5)	30m
SFP-10/25G-CSR-S	850	MMF	50.0	500 (OM2)	70m (25G) 82m (10G)
				2000 (OM3)	300m [*]
				4700 (OM4)	400m [*]
				4700 (OM5)	400m
SFP-10/25G-LR-S	1310	SMF	G.652	-	10km
SFP-10/25G-LR-I	1310	SMF	G.652	-	10km ^{**}
SFP-10/25G-BXD-I	1330	SMF	G.652	-	10km ^{***}
SFP-10/25G-BXU-I	1270	SMF	G.652	-	10km ^{***}

SFP-25G	Wavelength (nm)	Cable Type	Core Size (Microns)	Modal Bandwidth	Cable Distance
SFP-25G-ER-I	1310	SMF	G.652	-	40km ^{****}
SFP-25G-BX40D-I	1314	SMF	G.652	-	40km ^{****}
SFP-25G-BX40U-I	1289	SMF	G.652	-	40km ^{****}

^{**}Links up to 15km reach are supported as engineered links as long as channel insertion loss is <9.3dB and RS-FEC is required.

^{***}Links up to 15km reach are supported as engineered links as long as channel insertion loss is <8dB and RS-FEC is required.

^{****}Links greater than 30km reach are considered engineered links.

Table 4. Optical transmit and receive specifications

Product	Type	Transmit Power (dBm)		Receive Power (dBm)		Transmit and Receive Wavelength (nm)
		Maximum	Minimum	Maximum	Minimum	
SFP-25G-SR-S	25GBASE-SR 850nm MMF	+2.4	-8.4	+2.4	-10.3	840 to 860
SFP-25G-SL	25GBASE-SL 850nm MMF	+2.4	-8.4	+2.4	-10.3	840 to 860
SFP-10/25G-CSR-S	10G	+2.4	-7.3	+2.4	-9.9	840 to 860
	25G	+2.4	-6	+2.4	-8.7	840 to 860
SFP-10/25G-LR-S	10G	+0.5	-8.2	+0.5	-14.4	1260 to 1355 (10G)
	25G	+2.0	-7.0	+2.0	-13.3	1295 to 1325 (25G)
SFP-10/25G-LR-I	10G	+0.5	-6.7	+0.5	-15.9	1260 to 1355 (10G)
	25G	+2.0	-5.5	+2.0	-14.8	1295 to 1325 (25G)
SFP-10/25G-BXD-I	10G	+0.5	-8.2	+0.5	-16.2	1320 to 1340 (Tx) 1260 to 1280 (Rx)
	25G	+2.0	-7.0	+2.0	-15.0	1320 to 1340 (Tx) 1260 to 1280 (Rx)
SFP-10/25G-BXU-I	10G	+0.5	-8.2	+0.5	-16.2	1260 to 1280 (Tx) 1320 to 1340 (Rx)
	25G	+2.0	-7.0	+2.0	-15.0	1260 to 1280 (Tx) 1320 to 1340 (Rx)



Product	Type	Transmit Power (dBm)		Receive Power (dBm)		Transmit and Receive Wavelength (nm)
		Maximum	Minimum	Maximum	Minimum	
SFP-25G-ER-I	25G	+6.0	-3.0	-4.0	-21.0	1295 to 1310
SFP-25G-BX40D-I	25G	+6.0	-3.0	-4.0	-21.0	1306 to 1322 (Tx) 1281 to 1297 (Rx)
SFP-25G-BX40U-I	25G	+6.0	-3.0	-4.0	-21.0	1281 to 1297 (Tx) 1306 to 1322 (Rx)

*Transmitter and receiver power is in average, unless specified.

**The launch power shall be the lesser of the class 1 safety limit or the maximum receive power. Class 1 laser requirements are defined by IEC 60825-1: 2001.

***The SFP-10/25G-CSR-S when interoperating with IEEE 10G-SR may overload the receiver, see the Cisco Optics to Optics Interoperability matrix for details. <https://imgmatrix.cisco.com/10g>.

Connectors: Dual LC/PC connector (SFP-25G-SR-S, SFP-10/25G-CSR-S, SFP-10/25G-LR-S, SFP-10/25G-LR-I and SFP-25G-ER-I).

Fiber Channel over Ethernet: The 25G DAC's (SFP-H25G-CUxxM), AOC's (SFP-25G-AOCxxM) and transceivers (SFP-25G-SR-S, SFP-10/25G-CSR-S and SFP-10/25G-LR-S) support FCoE with the appropriate host s/w support.

Note: Only connections with patch cords with PC or UPC connectors are supported. Patch cords with APC connectors are not supported. All cables and cable assemblies used must be compliant with the standards specified in the standards section.

Environmental conditions

Operating temperature range:

- Commercial temperature range: 0 to 70°C (32 to 158°F)
- Industrial temperature range: -40 to 85°C (-40 to 185°F)
- Storage temperature range: -40 to 85°C (-40 to 185°F)



Ordering information

Table 5 provides the ordering information for Cisco 25G cables and transceivers.

Table 5. Ordering information

Description	Product Number
25GBASE-CR1 SFP28 Passive Copper Cable, 1-meter	SFP-H25G-CU1M
25GBASE-CR1 SFP28 Passive Copper Cable 1.5-meter	SFP-H25G-CU1.5M
25GBASE-CR1 SFP28 Passive Copper Cable, 2-meter	SFP-H25G-CU2M
25GBASE-CR1 SFP28 Passive Copper Cable 2.5-meter	SFP-H25G-CU2.5M
25GBASE-CR1 SFP28 Passive Copper Cable, 3-meter	SFP-H25G-CU3M
25GBASE-CR1 SFP28 Passive Copper Cable 4-meter	SFP-H25G-CU4M
25GBASE-CR1 SFP28 Passive Copper Cable, 5-meter	SFP-H25G-CU5M
25GBASE-AOC SFP28 Active Optical Cable, 1-meter	SFP-25G-AOC1M
25GBASE-AOC SFP28 Active Optical Cable, 2-meter	SFP-25G-AOC2M
25GBASE-AOC SFP28 Active Optical Cable, 3-meter	SFP-25G-AOC3M
25GBASE-AOC SFP28 Active Optical Cable 4-meter	SFP-25G-AOC4M
25GBASE-AOC SFP28 Active Optical Cable, 5-meter	SFP-25G-AOC5M
25GBASE-AOC SFP28 Active Optical Cable, 7-meter	SFP-25G-AOC7M
25GBASE-AOC SFP28 Active Optical Cable, 10-meter	SFP-25G-AOC10M
25GBASE-SR SFP28 Module for MMF	SFP-25G-SR-S
25GBASE-SL SFP28 Module for MMF	SFP-25G-SL
10/25GBASE-CSR SFP28 Module for MMF	SFP-10/25G-CSR-S
10/25GBASE-LR SFP28 Module for SMF	SFP-10/25G-LR-S
10/25GBASE-LR SFP28 Module for SMF, Industrial Temp	SFP-10/25G-LR-I
10/25GBASE-BR SFP28 Bidi module for SMF, Industrial Temp, Downstream	SFP-10/25G-BXD-I
10/25GBASE-BR SFP28 Bidi module for SMF, Industrial Temp, Upstream	SFP-10/25G-BXU-I
25GBASE-ER SFP28 Module for SMF, Industrial Temp	SFP-25G-ER-I
25GBASE-BR40 SFP28 Bidi module for SMF, Industrial Temp, Downstream	SFP-25G-BX40D-I
25GBASE-BR40 SFP28 Bidi module for SMF, Industrial Temp, Upstream	SFP-25G-BX40U-I

Regulatory and standards compliance

Standards:

- SFF-8402: SFP+ 28 Gb/s 1x Pluggable Transceiver Solution (SFP28) - Rev 1.0 March 30, 2014.
- SFF-8472: Diagnostic Monitoring Interface for Optical Transceivers - Rev 12 August 29, 2014.
- IEEE 802.3™ - 2015 IEEE Standard for Ethernet.
- IEEE P802.3by™ - 2016 Amendment 2: Media Access Control Parameters, Physical Layers, and Management Parameters for 25 Gb/s Operation.
- IEEE P802.3cc™ - 2017 Amendment 11: Physical Layer and Management Parameters for Serial 25 Gb/s Ethernet Operation Over Single-Mode Fiber.
- IEEE P802.3cp - Clause 159 Physical Layer specification for a 25Gb/s bidirectional link over one single-mode fiber with reach up to 40km.
- RoHS 6

Safety:

- Laser Class 1 21CFR-1040 LNH50 7/2001
- Laser Class 1 IEC60825-1
- Cable jacket of SFP copper modules is UL E116441 Compliant
- SFP copper cables are ELV Compliant

Warranty

- Standard warranty: 5 years
- Expedited replacement available via a Cisco SMARTnet® Service support contract

Product sustainability

Table 6. Product sustainability

	Sustainability topic	Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries and packaging	WEEE Compliance
	Information on product takeback and reuse program	Cisco Takeback and Reuse Program
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com
	Countries and Regions Supported	Regulatory Compliance
Power	Power (Including Pluggable)	Power Consumption

	Sustainability topic	Reference
Material	Product packaging weight and materials	Contact: environment@cisco.com



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Additional information

For more information about Cisco 25GBASE SFP28 optics and copper modules, contact your sales representative or visit <https://www.cisco.com/c/en/us/products/interfaces-modules/25-gigabit-modules/index.html>.

Document history

Table 7. Document history

New or Revised Topic	Described In	Date
Updated to include new transceivers, SFP-10/25G-BXD-I, SFP-10/25G-BXU-I, SFP-25G-ER-I	Ordering Information	July 1, 2021
Addition of SFP-25G-SL	Table 1	



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Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
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Connector and Cable Specifications

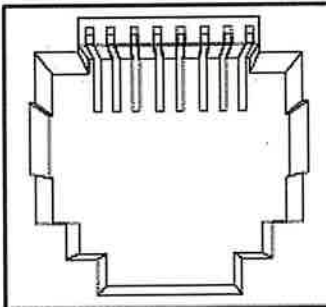
- Connector Specifications, on page 1
- Console Port, on page 2
- Cables and Adapters, on page 3

Connector Specifications

10/100/1000 Ports (Including PoE)

All 10/100/1000 ports use standard RJ-45 connectors and Ethernet pinouts.

Figure 1: 10/100/1000 Port Pinouts

Pin	Label	1 2 3 4 5 6 7 8
1	TP0+	
2	TP0-	
3	TP1+	
4	TP2+	
5	TP2-	
6	TP1-	
7	TP3+	
8	TP3-	

SFP Module Connectors

Figure 2: Duplex LC Cable Connector



Figure 3: Simplex LC Cable Connector

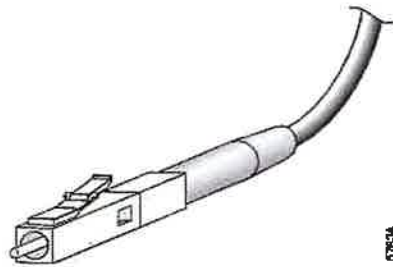
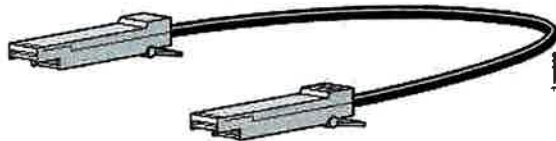


Figure 4: Copper SFP Module LC Connector

Pin	Label	1 2 3 4 5 6 7 8
1	TP0+	
2	TP0-	
3	TP1+	
4	TP2+	
5	TP2-	
6	TP1-	
7	TP3+	
8	TP3-	

Figure 5: SFP Module Patch Cable



Console Port

The switch has two console ports: a USB 5-pin mini-Type B port on the front panel and an RJ-45 console port on the rear panel.

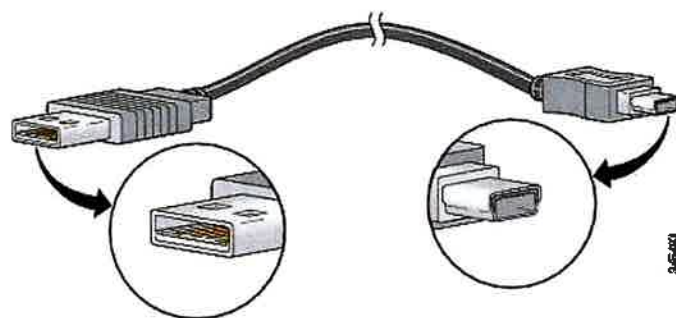
Figure 6: USB Mini-Type B Port



The USB console port uses a USB Type A to 5-pin mini-Type B cable. The USB Type A-to-USB mini-Type B cable is not supplied. You can order an accessory kit (part number 800-33434) that contains this cable.



Figure 7: USB Type A-to-USB 5-Pin Mini-Type B Cable



The RJ-45 console port uses an 8-pin RJ-45 connection. The supplied RJ-45-to-DB-9 adapter cable is used to connect the console port of the switch to a console PC. You need to provide a RJ-45-to-DB-25 female DTE adapter if you want to connect the switch console port to a terminal.

Cables and Adapters

StackWise Cables

You can order these StackWise cables (nonhalogen) from your Cisco sales representative:

- STACK-T1-50CM= (0.5-meter cable)
- **STACK-T1-1M**= (1-meter cable)
- STACK-T1-3M= (3-meter cable)

Table 1: StackWise Cables Minimum Bend Radius and Coiled Diameter

Cable Part Number	Cable Length	Minimum Bend Radius	Minimum Coiled Diameter
STACK-T1-50CM	1.64 feet (0.5 m)	2.60 in. (66 mm)	5.20 in. (132 mm)
STACK-T1-1M	3.28 feet (1.0 m)	2.60 in. (66 mm)	5.20 in. (132 mm)
STACK-T1-3M	9.84 feet (3.0 m)	3.58 in. (91 mm)	7.17 in. (182 mm)
STACK-T2-50CM	1.64 feet (0.5 m)	2.60 in. (66 mm)	5.20 in. (132 mm)
STACK-T2-1M	3.28 feet (1.0 m)	2.60 in. (66 mm)	5.20 in. (132 mm)
STACK-T2-3M	9.84 feet (3.0 m)	3.58 in. (91 mm)	7.17 in. (182 mm)

Transceiver Module Network Cables

For cabling specifications, refer to the following notes:

- Cisco SFP and SFP+ Transceiver Module Installation Notes



• **Cisco 40-Gigabit QSFP+ Transceiver Modules Installation Note**

Cisco Catalyst 2960-X and 2960-XR Switches now support QSFP-4X10G-AOC5M, the 40GQSFP to four 10G SFP+ direct attach breakout Active Optical cable assembly.

Each port must match the wavelength specifications on the other end of the cable, and the cable must not exceed the stipulated cable length. Copper 1000BASE-T SFP module transceivers use standard four twisted-pair, Category 5 cable at lengths up to 328 feet (100 meters).

Cisco QSFP to SFP or SFP+ Adapter

Cisco QSFP to SFP or SFP+ Adapter (QSA) is a pluggable adapter that converts a QSFP port in to an SFP or SFP+ port. You can connect one of the following SFP+ or SFP module or an SFP+ copper.

The following is the list of Cisco SFP or SFP+ transceiver modules that are currently supported.

- Cisco SFP-10G-SR - Cisco 10GBASE-SR SFP+ Module for Multimode Fiber
- Cisco SFP-10G-SR-S module (S-Class) - Cisco 10GBASE-SR SFP+ Module for Multimode Fiber
- Cisco SFP-10G-LR - Cisco 10GBASE-LR SFP+ Module for Single-Mode Fiber
- Cisco SFP-10G-LR-S module (S-Class) - Cisco 10GBASE-LR SFP+ Module for Single-Mode Fiber
- Cisco SFP-10G-ER - Cisco 10GBASE-ER SFP+ Module for Single-Mode Fiber (extended reach)
- Cisco SFP-10G-ER-S module (S-Class) - Cisco 10GBASE-ER SFP+ Module for Single-Mode Fiber (extended reach)
- Cisco SFP-10G-ZR - Cisco 10GBASE-ZR SFP+ Module for Single-Mode Fiber (up to 80 km reach)
- Cisco SFP-10G-ZR-S module (S-Class) - Cisco 10GBASE-ZR SFP+ Module for Single-Mode Fiber (up to 80 km reach)

Cable Pinouts

Figure 8: Four Twisted-Pair Straight-Through Cable Schematic

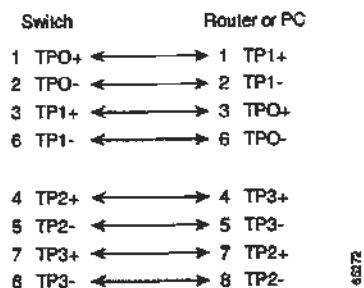
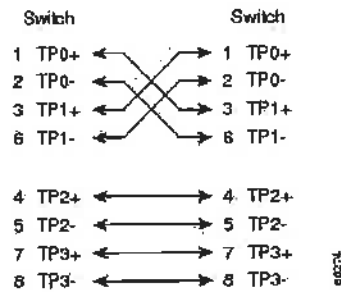
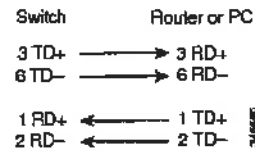
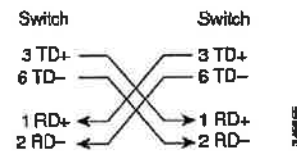
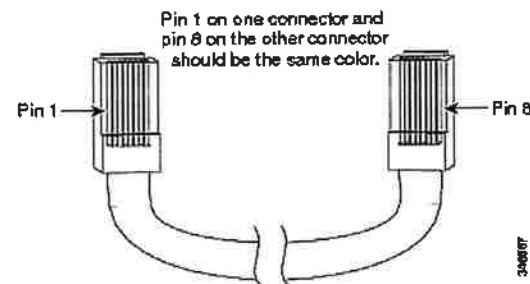


Figure 9: Four Twisted-Pair Semi-Cross Cable Schematic**Figure 10: Two Twisted-Pair Straight-Through Cable Schematic****Figure 11: Two Twisted-Pair Crossover Cable Schematic****Identifying a Crossover Cable**

To identify a crossover cable, compare the two modular ends of the cable. Hold the cable ends side-by-side, with the tab at the back. The wire connected to the pin on the outside of the left plug should be a different color from the wire connected to the pin on the inside of the right plug.

Figure 12: Identifying a Crossover Cable**Console Port Adapter Pinouts**

The RS-232 console port uses an 8-pin RJ-45 connector. Use an RJ-45-to-DB-9 adapter cable to connect the switch console port to a console PC. You need to provide a RJ-45-to-DB-25 female DTE adapter to connect the switch console port to a terminal.

Table 2: Console Port Signaling with a DB-9 Adapter

Switch Console Port (DTE)	RJ-45-to-DB-9 Terminal Adapter	Console Device
Signal	DB-9 Pin	Signal
RTS	8	CTS
DTR	6	DSR
TxD	2	RxD
GND	5	GND
GND	5	GND
RxD	3	TxD
DSR	4	DTR
CTS	7	RTS

Table 3: Console Port Signaling with a DB-25 Adapter

Switch Console Port (DTE)	RJ-45-to-DB-25 Terminal Adapter	Console Device
Signal	DB-25 Pin	Signal
RTS	5	CTS
DTR	6	DSR
TxD	3	RxD
GND	7	GND
GND	7	GND
RxD	2	TxD
DSR	20	DTR
CTS	4	RTS





Technical Specifications

- Environmental and Physical Specifications, on page 1
- Specifications for the Power Supplies, Switches, and Fan, on page 3

Environmental and Physical Specifications

This table describes the environmental specifications.

Table 1: Environmental Specifications for the Switch

Environmental Ranges	
Operating temperature ¹	23 to 113°F (–5 to 45°C)
Storage temperature	–40 to 158°F (–40 to 70°C)
Relative humidity	5 to 95% (noncondensing)
Operating altitude	Up to 10,000 ft (3000 m)
Storage altitude	Up to 15,000 ft (4500 m)

¹ Minimum ambient temperature for cold start is 32°F (0°C)

This table describes the environmental specifications.

Table 2: Environmental Specifications for the Power Supplies

Environmental Ranges	
Operating temperature	AC power supply: 23 to 113°F (–5 to 45°C) DC power supply: 23 to 131°F (–5 to 55°C)
Storage temperature	–40 to 158°F (–40 to 70°C)
Relative humidity	10 to 95% (noncondensing)



Environmental Ranges	
Altitude	AC power supply: up to 10,000 ft (3,000 m)
	DC power supply: up to 13,000 ft (4,000 m)

This table describes the physical specifications.

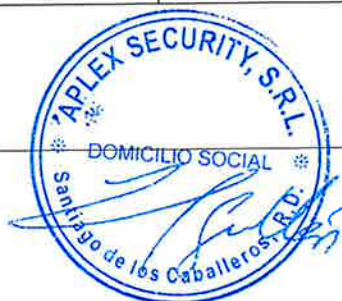
Table 3: Physical Specifications for the Switch

Physical Specifications	
Dimensions (H x W x D)	1.73 x 17.5 x 17.5 in. (4.4 x 44.5 x 44.5 cm) (with the FAN FRUs installed but without the power supplies installed)
Weight (weights do not include the functional network modules, the blank module, or the power supplies).	
Catalyst 3850 24-port PoE switches	13.3 lb (6.0 kg)
Catalyst 3850 24-port non-PoE switches	13.1 lb (6.0 kg)
Catalyst 3850 48-port non-PoE switches	14.2 lb (6.5 kg)
Catalyst 3850 48-port PoE switches	14.4 lb (6.5 kg)
WS-C3850-24S and WS-C3850-12S switches	12.4 lb (5.7 kg)
WS-C3850-12XS switches	12.9 lb (5.8 kg)
WS-C3850-24XS switches	13.5 lb (6.1 kg)
WS-C3850-48XS switches	16.42 lb (7.45 kg)

This table describes the physical specifications.

Table 4: Physical Specifications for the Power Supplies

Weight	
PWR-C1-1100WAC	3 lb (1.4 kg)
PWR-C1-715WAC	2.8 lb (1.3 kg)
PWR-C1-350WAC	2.4 lb (1.1 kg)
PWR-C1-440WDC=	2.6 lb (1.2 kg)
PWR-C3-750WAC-R	3.7 lb (1.68 kg)
PWR-C3-750WAC-F	3.7 lb (1.68 kg)
PWR-C3-750WDC-R	3.7 lb (1.68 kg)
PWR-C3-750WDC-F	3.7 lb (1.68 kg)



Dimensions (H x D x W)	
The dimensions shown include the extraction handle and the keying feature.	
PWR-C1-1100WAC	1.58 X 3.25 X 13.71 in. (40.1 X 82.55 X 348.2 mm)
PWR-C1-715WAC	1.58 X 3.25 X 12.21 in. (40.1 X 82.55 X 310.1 mm)
PWR-C1-350WAC	1.58 X 3.25 X 12.21 in. (40.1 X 82.55 X 310.1 mm)
PWR-C1-440WDC=	1.58 X 3.25 X 12.21 in. (40.1 X 82.55 X 310.1 mm)
PWR-C3-750WAC-R	1.58 X 2.15 X 14.28 in. (40.1 mm X 54.6 mm X 362.7 mm)
PWR-C3-750WAC-F	1.58 X 2.15 X 14.28 in. (40.1 mm X 54.6 mm X 362.7 mm)
PWR-C3-750WDC-R	1.58 X 2.15 X 14.28 in. (40.1 mm X 54.6 mm X 362.7 mm)
PWR-C3-750WDC-F	1.58 X 2.15 X 14.28 in. (40.1 mm X 54.6 mm X 362.7 mm)

Specifications for the Power Supplies, Switches, and Fan

Table 5: Power Specifications for the AC Power

Power Requirements	
Maximum output power	• PWR-C1-1100WAC: 1100 W • PWR-C1-715WAC: 715 W • PWR-C1-350WAC: 350 W • PWR-C3-750WAC-R: 750 W • PWR-C3-750WAC-F: 750 W
Input voltage and Frequency	• PWR-C1-1100WAC: 1100-W, 115 to 240 VAC (autoranging) 50-60 Hz • PWR-C1-715WAC: 715 W, 100 to 240 VAC (autoranging) 50-60 Hz • PWR-C1-350WAC: 350 W, 100 to 240 VAC (autoranging) 50-60 Hz • PWR-C3-750WAC-F: 750 W, 90 to 264 VAC (autoranging) 50-60 Hz • PWR-C3-750WAC-F: 750 W, 90 to 264 VAC (autoranging) 50-60 Hz



Input current	• PWR-C1-1100WAC: 12–6 A • PWR-C1-715WAC: 10–5 A • PWR-C1-350WAC: 4–2 A • PWR-C3-750WAC-R: 11 A @ 100 VAC (max), 6 A @ 200 VAC (max) • PWR-C3-750WAC-F: 11 A @ 100 VAC (max), 6 A @ 200 VAC (max)
Output ratings	• PWR-C1-1100WAC: –56 V@19.64 A • PWR-C1-715WAC: –56 V@12.8 A • PWR-C1-350WAC: –56 V@6.25 A • PWR-C3-750WAC-R: 12 VDC @ 62 A, 3.3 VDC @ 3 A • PWR-C3-750WAC-F: 12 VDC @ 62 A, 3.3 VDC @ 3 A
Total input BTU ²	• PWR-C1-1100WAC: 4263 BTUs per hour, 1250 W • PWR-C1-715WAC: 2742 BTUs per hour, 804 W • PWR-C1-350WAC: 1357 BTUs per hour, 398 W
Total output BTU ³	• PWR-C1-1100WAC: 3751 BTUs per hour, 1100 W • PWR-C1-715WAC: 2438 BTUs per hour, 715 W • PWR-C1-350WAC: 1194 BTUs per hour, 350 W • PWR-C3-750WAC-R: 1122 BTU/hour (nominal), 1365 BTU/hour (max) • PWR-C3-750WAC-F: 1122 BTU/hour (nominal), 1365 BTU/hour (max)

² The total input and total output BTU ratings refer to input power to the power supply and output power to the switch. The BTU ratings are based on 100 VAC for the 350-W and 715-W power supplies and 115 VAC for the 1100-W power supply.

³ The total input and total output BTU ratings refer to input power to the power supply and output power to the switch. The BTU ratings are based on 100 VAC for the 350-W and 715-W power supplies and 115 VAC for the 1100-W power supply.

Table 6: Power Specifications for DC-Power

Power Requirements	
Maximum output power	• PWR-C1-440WDC: 440 W • PWR-C3-750WDC-R: 750 W • PWR-C3-750WDC-F: 750 W



Input current	• PWR-C1-440WDC: 16 –8 A • PWR-C3-750WDC-R: 25 A • PWR-C3-750WDC-F: 25 A
DC input voltage	• PWR-C1-440WDC: –36 to –72 VDC • PWR-C3-750WDC-R: –36 to –72 VDC • PWR-C3-750WDC-F: –36 to –72 VDC
Output ratings	• PWR-C1-440WDC: –56 V@7.86 A • PWR-C3-750WDC-R: 62 A @ 12 VDC, 3 A @ 3.3 VDC • PWR-C3-750WDC-F: 62 A @ 12 VDC, 3 A @ 3.3 VDC
Voltage range domestic	• PWR-C1-440WDC: –36 VDC (minimum), –48 VDC (nominal), –72 VDC (maximum) • PWR-C3-750WDC-R: –48 VDC (nominal) (–40.5 VDC to –56 VDC) • PWR-C3-750WDC-F: –48 VDC (nominal) (–40.5 VDC to –56 VDC)
Voltage range international	• PWR-C1-440WDC: –36 VDC (minimum), –48 VDC (nominal), –72 VDC (maximum) • PWR-C3-750WDC-R: –60 VDC (nominal) (–55 VDC to –72 VDC) • PWR-C3-750WDC-F: –60 VDC (nominal) (–55 VDC to –72 VDC)
Total input BTU ⁴	PWR-C1-440WDC 1841 BTUs per hour, 540 W
Total output BTU ¹	PWR-C1-440WDC: 1502 BTUs per hour, 440 W
Wire gauge for ground connection	PWR-C1-440WDC: 12 AWG or 8 AWG
Branch circuit protection	PWR-C1-440WDC: 20 A

⁴ The total input and total output BTU ratings refer to input power to the power supply and output power to the switch. The BTU ratings are based on –36 VDC.

Table 7: Fan Module Environmental and Physical Specifications for Catalyst WS-C3850 Switch Models

Environmental Ranges	
Operating temperature	23 to 176°F (–5 to 80°C)



Storage temperature	-40 to 185°F (-40 to 85°C) up to 15,000 ft (4500 m)
Relative humidity	5 to 95% (noncondensing)
Altitude	Up to 13,000 ft (4000 m)
Physical Specification	
Dimensions (H x D x W)	1.62 x 1.73 x 4.24 in. (4.11 x 4.39 x 10.76 cm)
Weight (for three fans)	0.48 lb (0.21 kg)
Operating Specification	
Airflow	20 cfm

Table 8: Fan Module Environmental and Physical Specifications for Catalyst WS-C3850-48XS Switch Models

Environmental Ranges	
Operating temperature	50 to 104°F (10 to 40°C)
Relative humidity	8 to 80% (noncondensing)
Altitude	-50 to 6500 feet (-16 to 1981 meters)
Physical Specification	
Dimensions (H x D x W)	2.25 x 7.00 x 8.50 in (5.72 x 17.78 x 21.59 cm)
Weight	0.7 lb (0.32 kg)





Cisco Systems Costa Rica, S.A.
Centro Corporativo Plaza Roble
Edificio los Balcones, Primer Piso
San José, Costa Rica

Formulario De Autorización De Fabricante

Fecha: 10-Oct-2025
A: Junta Central Electoral (JCE)
Av. 27 de Febrero esquina Av. Luperón,
Santo Domingo Oeste, Provincia Santo
Domingo
Referencia: JCE-CCC-CP-2025-0023
Numero de Caso: CCM-514280

Cisco Systems, Inc. ("Cisco"), sociedad debidamente constituida bajo las leyes del Estado de Delaware, Estados Unidos, con domicilio social en 170 W. Tasman Drive, San Jose, CA 95134-1706, EE.UU., como proveedor de productos de redes y servicios asociados, confirma en este acto que, en la fecha de firma de la presente autorización, Apex Security S.R.L. (authorized channel (el "Revendedor"), desea participar en la Oferta o Proyecto referenciado en el encabezado y ha suscrito un Acuerdo de Partner de Canal Indirecto o Indirect Channel Partner Agreement que le faculta para lo siguiente:

1. revender y/o distribuir los productos y/o servicios Cisco en DOMINICAN REPUBLIC a los usuarios finales ubicados dentro de dicho territorio;
2. presentar ofertas, negociar y suscribir el correspondiente contrato con su empresa en relación con los productos/servicios anteriormente descritos y fabricados o suministrados por Cisco. El Partner actúa como contratista independiente y no tiene ninguna facultad para comprometer y/o vincular a Cisco o sus afiliadas de ninguna forma.

Cisco prestará, conforme a los términos de los acuerdos suscritos con sus canales autorizados, servicios de soporte y de garantía sobre los productos Cisco adquiridos través de sus canales autorizados.

La presente autorización tiene validez en la fecha indicada en la parte superior de esta autorización.

En caso de necesitar cualquier información adicional, rogamos no dude en ponerse en contacto con Ana Cristina Rojas Solorzano en el arojasso@cisco.com.

Para más información acerca del programa de canales autorizados de Cisco pueden visitar la siguiente URL: <http://www.cisco.com/web/partners/index.html>.

La persona que suscribe esta autorización se encuentra debidamente facultada para firmar en nombre de: **Cisco Systems, Inc.**
Atentamente,

Fdo.:

Ana Cristina Rojas Solorzano
Partner Account Manager
Cisco Systems Costa Rica, S.A.



RNC: 1-30-83336-2.

RPE: 35152

Santiago de los Caballeros, República Dominicana

14 de OCTUBRE de 2025

Asunto: Carta TIEMPO DE ENTREGA. Proceso Ref. **JCE-CCC-CP-2025-0023.**

Señores:

Comité de Compras y Contrataciones

Junta Central Electoral

Referencia: JCE-CCC-CP-2025-0023.

El suscribiente, EMMANUEL GUILLÉN, mayor de edad, titular y portador de la cédula de Identidad y electoral No.031-0412757-0, dominicano y residente en esta ciudad de Santiago de los Caballeros, República Dominicana, actuando en nombre y representación de **APLEX SECURITY SRL**, RNC: 1-30-83336-2, de conformidad con lo previsto en el Pliego de Especificaciones Técnicas del Procedimiento JCE-CCC-CP-2025-0023.

Certificamos que incluimos en nuestra propuesta, el tiempo de entrega para los bienes ofertados, acorde el pliego y documentación del proceso en referencia.

8.-Lugar y Tiempo de entrega

Los pedidos se librarán en el almacén de la sede principal de la Junta Central Electoral. El proponente presentará su tiempo de entrega y la institución evaluará en función de su mejor interés, que es recibir los bienes en el menor tiempo posible.

Concurso por Comparación de Precios Ref.: CP-2025-23, 7 de octubre, 2025
Adquisición de equipos y materiales

Página 4 de 6
FO01(PRO-CCC-004)01

Proponemos la entrega de los bienes, en caso de ser adjudicados, para 60 días, a partir de la recepción de la orden de compras y del anticipo.

Dado en la ciudad de Santiago de los Caballeros, a los catorce (14) días del mes de octubre (10) del año dos mil veinticinco (2025).



Emmanuel Guillén
Gerente General y Representante Legal
Aplex Security, Srl.

RNC: 1-30-83336-2.

RPE: 35152

Santiago de los Caballeros, República Dominicana

14 de OCTUBRE de 2025

Asunto: Carta CONDICIONES DE PAGO. Proceso Ref. JCE-CCC-CP-2025-0023.

Señores:

Comité de Compras y Contrataciones

Junta Central Electoral

Referencia: JCE-CCC-CP-2025-0023.

El suscribiente, EMMANUEL GUILLÉN, mayor de edad, titular y portador de la cédula de Identidad y electoral No.031-0412757-0, dominicano y residente en esta ciudad de Santiago de los Caballeros, República Dominicana, actuando en nombre y representación de **APLEX SECURITY SRL**, RNC: 1-30-83336-2, de conformidad con lo previsto en el Pliego de Especificaciones Técnicas del Procedimiento JCE-CCC-CP-2025-0023.

Certificamos que incluimos en nuestra propuesta, las condiciones de pago, acorde el pliego y documentación del proceso en referencia.

7.-Condiciones de Pago

Cada oferente debe especificar las condiciones de pago en su propuesta. La Junta Central Electoral no realizará pago total hasta haber recibido la totalidad de lo adjudicado; sin embargo, está en disposición, si así lo requiriere el oferente en su propuesta, de otorgar un anticipo no mayor del 20% del monto presupuestado y adjudicado. 

Nuestra propuesta de pago es un 20% de Anticipo y un 80% contra entrega conforme.

Dado en la ciudad de Santiago de los Caballeros, a los catorce (14) días del mes de octubre (10) del año dos mil veinticinco (2025).


Emmanuel Guillén
Gerente General y Representante Legal
Apdex Security, Srl.

RNC: 1-30-83336-2.

RPE: 35152

Santiago de los Caballeros, República Dominicana

14 de OCTUBRE de 2025

Asunto: Carta VIGENCIA/EQUIPOS NUEVOS. Proceso Ref. JCE-CCC-CP-2025-0023.

Señores:

Comité de Compras y Contrataciones

Junta Central Electoral

Referencia: JCE-CCC-CP-2025-0023.

El suscribiente, EMMANUEL GUILLÉN, mayor de edad, titular y portador de la cédula de Identidad y electoral No.031-0412757-0, dominicano y residente en esta ciudad de Santiago de los Caballeros, República Dominicana, actuando en nombre y representación de **APLEX SECURITY SRL**, RNC: 1-30-83336-2, de conformidad con lo previsto en el Pliego de Especificaciones Técnicas del Procedimiento JCE-CCC-CP-2025-0023.

Certifico y doy garantía de que los bienes ofertados no son usados, remanufacturados, reparados, que no están al final de su vida útil ni al final de su ciclo de venta, así como el aval que todos los bienes cuentan con la garantía solicitada. Según se requiere en el pliego de especificaciones y enmiendas de la presente propuesta.

1) Equipos nuevos (no remanufacturados).

Dado en la ciudad de Santiago de los Caballeros, a los catorce (14) días del mes de octubre (10) del año dos mil veinticinco (2025).


Emmanuel Guillén
Gerente General y Representante Legal
Aplex Security, S.R.L.



RNC: 1-30-83336-2.

RPE: 35152

Santiago de los Caballeros, República Dominicana
14 de OCTUBRE de 2025

Asunto: Carta GARANTIA. Proceso Ref. **JCE-CCC-CP-2025-0023.**

Señores:

Comité de Compras y Contrataciones
Junta Central Electoral

Referencia: JCE-CCC-CP-2025-0023.

El suscribiente, EMMANUEL GUILLÉN, mayor de edad, titular y portador de la cédula de Identidad y electoral No.031-0412757-0, dominicano y residente en esta ciudad de Santiago de los Caballeros, República Dominicana, actuando en nombre y representación de **APLEX SECURITY SRL**, RNC: 1-30-83336-2, de conformidad con lo previsto en el Pliego de Especificaciones Técnicas del Procedimiento JCE-CCC-CP-2025-0023.

Certificamos que incluimos en nuestra propuesta, la garantía de los equipos ofertados, acorde el pliego y documentación del proceso en referencia.

Incluimos una garantía de 1 año acorde política de RMA ANEXA

Dado en la ciudad de Santiago de los Caballeros, a los catorce (14) días del mes de octubre (10) del año dos mil veinticinco (2025).


Emmanuel Guillén
Gerente General y Representante Legal
Apdex Security, Srl.



RNC: 1-30-83336-2.

RPE: 35152

PROCESO RMA

Con el objetivo de ofrecer un servicio de calidad a nuestros clientes, a continuación, se detallan las políticas de garantía y proceso de RMA para los equipos comercializados por **APLEX SECURITY S.R.L.**

APLEX SECURITY, garantiza al cliente que los productos comercializados por la empresa están libres de defectos de fabricación y defectos de mano de obra por el período indicado para cada producto, bajo las siguientes consideraciones:

1. **APLEX SECURITY** sea notificado durante el período de retorno de equipo de cualquier producto defectuoso.
2. La garantía cubre aquellos defectos que surgiesen como resultado del uso normal del producto y no por aquellos defectos que resulten por ser utilizado en condiciones distintas de las normales, o no hubiese sido operado de acuerdo con el manual de uso del producto. Además, que no haya sido dañado, mal instalado o empleado, o se haya dado mantenimiento incorrecto por personal que no sea de **APLEX SECURITY**, y/o no se haya reparado durante el período de garantía por parte del cliente.
3. Que tal defecto no haya sido causado por desgaste ordinario ó provocado.
4. Que el defecto no sea el resultado de altas de voltaje o cortos eléctricos, de relámpagos, de daños por agua o inundaciones, de fuego, de explosión, de terremotos, de tornados, de actos de agresión o guerra, o del algún fenómeno fortuito similar.
5. Que los accesorios o consumibles empleados con el equipo sean los aprobados por la empresa **APLEX SECURITY**.

PERÍODO DE GARANTÍA

El Período de Garantía se considera, a partir de la fecha de la aceptación de la entrega de los bienes/equipos adjudicados, hasta el tiempo indicado (Para la Licitación Comparación de Precios, destinado a la selección de la (s) empresa (s) que se encargará (n) del suministro de equipos y materiales, detallados en la convocatoria adjunta. REFERENCIA: JCE-CCC-CP-2025-0023 El período de garantía aplica acorde al Plan de Garantía presentado, Cartas de fabricantes, especificaciones del pliego y adendas de dicha licitación.

El cliente podrá reclamar la garantía dentro del período indicado, proporcionando la documentación correspondiente de su compra (en caso de aplicar) y realizando el trámite de Retorno de Mercancía (RMA).



ENVÍO DE LOS EQUIPOS

Toda garantía se considera "Depot Repair" que significa que hacemos válidas las garantías de los equipos en nuestras oficinas de Santiago de los Caballeros. **Los gastos, logística de transporte, fletes y envíos hacia al fabricante y retorno hacia la oficina de Aplex, serán cubiertos por APLEX SECURITY S.R.L;** así como también Aplex se responsabiliza a recoger en la entidad contratante, los equipos que requieran RMA y se compromete a su retorno cuando se complete el proceso, cubriendo los gastos incurridos para tales fines, siempre y cuando los equipos se encuentren cubiertos por la garantía expresada en el período y plan de garantía incluido en la oferta de Aplex.

Para este proceso de licitación, el proceso de RMA aplica, 100 %, acorde los requerimientos del pliego de condiciones específicas y sus adendas

PROCEDIMIENTO DE RETORNO DE MERCANCÍA

El procedimiento completo se define en los siguientes pasos a continuación descritos.

A. DETERMINACIÓN DE UN RMA.

Un # RMA se obtiene por motivo de las siguientes circunstancias y a juicio del Ingeniero de Servicios que atiende el caso.

- Envío para Servicio en Garantía.
- Envío para Servicio Cobrable.
- Devolución de equipo o mercancía.



Por lo que:

1. El cliente entrará en contacto con un Ingeniero de Servicios para determinar la justificación de revisión del equipo o mercancía.
2. Una vez autorizado el envío del equipo o mercancía a **APLEX SECURITY**, el Ingeniero de Servicios le proporcionará su número de caso y APLEX procederá a tramitar la búsqueda del equipo a la **sede de la entidad contratante**.
 - a. Se proporciona un número RMA por equipo o mercancía.

b. Es posible enviar varios equipos o mercancías en una misma caja, si el espacio y el cuidado de cada uno lo permite. (Esto aplica para casos en los que Aplex realiza la búsqueda del equipo directamente a la localidad del cliente).

c. En el exterior de la caja o empaque es necesario listar TODOS los números RMA que se encuentran dentro de la caja o empaque. En caso de que los números RMA no se encuentren impresos en el exterior de la caja, no será posible identificar el motivo del arribo del paquete a nuestras oficinas, con lo que se generará un considerable atraso en el servicio de su equipo.

B. GENERACIÓN DEL NÚMERO RMA

Una vez autorizado recoger el equipo y traer a nuestras instalaciones ó recibido el equipo por parte del cliente, el Ingeniero de Servicios procederá en ese momento a generar el Número RMA que será proporcionado al cliente (e-mail, teléfono), para seguimiento de la orden.

Es necesario que previo a la asignación del # RMA se obtengan los datos de cada equipo referentes a: Modelo, Número de Serie, Descripción de la Falla y número de Factura de Compra y Fecha de Compra.

C. DEVOLUCION DEL EQUIPO.

Servicio: En función de las condiciones de venta que se hayan generado y de la decisión del cliente le será enviado su equipo.

E. EXPIRACION DE RMA.

Tiene una duración de 90 días

ABANDONO DE EQUIPO

Una vez transcurridos 6 meses y habiendo notificado el cliente en al menos 3 ocasiones por algún medio acerca de la cotización de diagnóstico para su autorización, en caso de que no se tenga algún tipo de respuesta del cliente, el equipo se considerará en abandono, por lo que el departamento de servicios enviará el equipo a desecho, notificando al cliente de la situación de su equipo y el departamento de servicios no se considerará responsable de la integridad del equipo, dada la falta de atención y seguimiento de parte del cliente.



AUTORIZACIÓN DE RETORNO DE MERCANCIA (RMA)

Forma F-019
Aplex-001

RMA: _____

FECHA: ____/____/____



Compañía: _____ R.F.C.: _____

Nombre: _____ Tel: _____

E-Mail: _____ Equipo: _____

Modelo: _____ Serie: _____ Núm. De Factura Del Equipo: _____

Fecha De Compra: _____

Inventario Del Equipo A Enviar: _____

Para aplicar la Garantía es importante indicar la Fecha y Número de Factura.

Firma: _____

Marque con una X el motivo por el cual retorna la mercancía descrita anteriormente.

☐ Producto equivocado

☐ Unidad descompuesta, detalle la falla:

☐ Otros. Especifique. _____

Una vez que hayamos recibido esta forma completamente llena, un Ingeniero de Servicios de APLEX SECURITY, se pondrá en contacto con usted. Su número RMA es indispensable para dar seguimiento al estado de su servicio. Agradecemos su comprensión.



Para uso exclusivo de APLEX SECURITY

☐ Servicio Cobrable

☐ Garantía

Fecha de recepción de este documento: _____ # de Cajas recibidas: _____

Autorizado por: _____

Describe el inventario del equipo al recibir (inspección visual):

Revisado por: _____ Firma: _____

Estado: ? Recibido (R) ? Diagnóstico (D) ? Espera Aut. (EA) ? En Servicio(S) ? Espera Enviar (EE) ? Enviado (E)

? Servicio No Autorizado (SNA) ? Cancelado (C)

sc@aplex.do



Connector and Cable Specifications

- Connector Specifications, on page 1
- Console Port, on page 2
- Cables and Adapters, on page 3

Connector Specifications

10/100/1000 Ports (Including PoE)

All 10/100/1000 ports use standard RJ-45 connectors and Ethernet pinouts.

Figure 1: 10/100/1000 Port Pinouts

Pin	Label	1 2 3 4 5 6 7 8
1	TP0+	
2	TP0-	
3	TP1+	
4	TP2+	
5	TP2-	
6	TP1-	
7	TP3+	
8	TP3-	

SFP Module Connectors

Figure 2: Duplex LC Cable Connector



Figure 3: Simplex LC Cable Connector

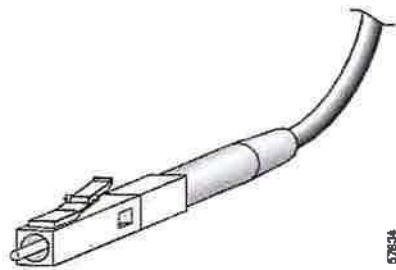
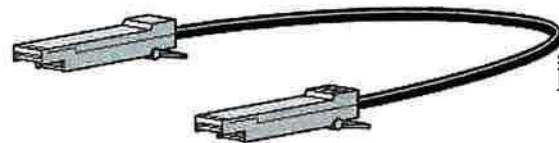


Figure 4: Copper SFP Module LC Connector

Pin	Label	1 2 3 4 5 6 7 8
1	TP0+	
2	TP0-	
3	TP1+	
4	TP2+	
5	TP2-	
6	TP1-	
7	TP3+	
8	TP3-	

Figure 5: SFP Module Patch Cable



Console Port

The switch has two console ports: a USB 5-pin mini-Type B port on the front panel and an RJ-45 console port on the rear panel.

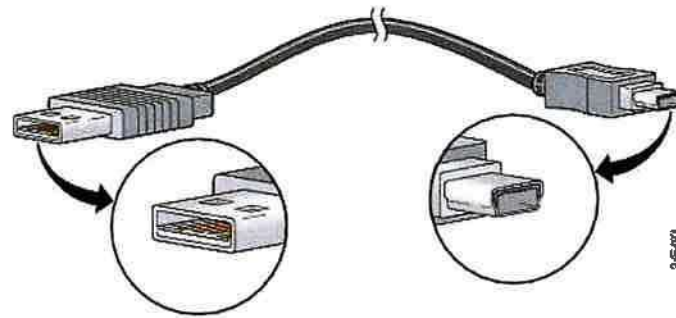
Figure 6: USB Mini-Type B Port



The USB console port uses a USB Type A to 5-pin mini-Type B cable. The USB Type A-to-USB mini-Type B cable is not supplied. You can order an accessory kit (part number 800-33434) that contains this cable.



Figure 7: USB Type A-to-USB 5-Pin Mini-Type B Cable



The RJ-45 console port uses an 8-pin RJ-45 connection. The supplied RJ-45-to-DB-9 adapter cable is used to connect the console port of the switch to a console PC. You need to provide a RJ-45-to-DB-25 female DTE adapter if you want to connect the switch console port to a terminal.

Cables and Adapters

StackWise Cables

You can order these StackWise cables (nonhalogen) from your Cisco sales representative:

- STACK-T1-50CM= (0.5-meter cable)
- **STACK-T1-1M=** (1-meter cable)
- STACK-T1-3M= (3-meter cable)

Table 1: StackWise Cables Minimum Bend Radius and Coiled Diameter

Cable Part Number	Cable Length	Minimum Bend Radius	Minimum Coiled Diameter
STACK-T1-50CM	1.64 feet (0.5 m)	2.60 in. (66 mm)	5.20 in. (132 mm)
STACK-T1-1M	3.28 feet (1.0 m)	2.60 in. (66 mm)	5.20 in. (132 mm)
STACK-T1-3M	9.84 feet (3.0 m)	3.58 in. (91 mm)	7.17 in. (182 mm)
STACK-T2-50CM	1.64 feet (0.5 m)	2.60 in. (66 mm)	5.20 in. (132 mm)
STACK-T2-1M	3.28 feet (1.0 m)	2.60 in. (66 mm)	5.20 in. (132 mm)
STACK-T2-3M	9.84 feet (3.0 m)	3.58 in. (91 mm)	7.17 in. (182 mm)

Transceiver Module Network Cables

For cabling specifications, refer to the following notes:

- Cisco SFP and SFP+ Transceiver Module Installation Notes



• Cisco 40-Gigabit QSFP+ Transceiver Modules [Installation Note](#)

Cisco Catalyst 2960-X and 2960-XR Switches now support QSFP-4X10G-AOC5M, the 40GQSFP to four 10G SFP+ direct attach breakout Active Optical cable assembly.

Each port must match the wavelength specifications on the other end of the cable, and the cable must not exceed the stipulated cable length. Copper 1000BASE-T SFP module transceivers use standard four twisted-pair, Category 5 cable at lengths up to 328 feet (100 meters).

Cisco QSFP to SFP or SFP+ Adapter

Cisco QSFP to SFP or SFP+ Adapter (QSA) is a pluggable adapter that converts a QSFP port in to an SFP or SFP+ port. You can connect one of the following SFP+ or SFP module or an SFP+ copper.

The following is the list of Cisco SFP or SFP+ transceiver modules that are currently supported.

- Cisco SFP-10G-SR - Cisco 10GBASE-SR SFP+ Module for Multimode Fiber
- Cisco SFP-10G-SR-S module (S-Class) - Cisco 10GBASE-SR SFP+ Module for Multimode Fiber
- Cisco SFP-10G-LR - Cisco 10GBASE-LR SFP+ Module for Single-Mode Fiber
- Cisco SFP-10G-LR-S module (S-Class) - Cisco 10GBASE-LR SFP+ Module for Single-Mode Fiber
- Cisco SFP-10G-ER - Cisco 10GBASE-ER SFP+ Module for Single-Mode Fiber (extended reach)
- Cisco SFP-10G-ER-S module (S-Class) - Cisco 10GBASE-ER SFP+ Module for Single-Mode Fiber (extended reach)
- Cisco SFP-10G-ZR - Cisco 10GBASE-ZR SFP+ Module for Single-Mode Fiber (up to 80 km reach)
- Cisco SFP-10G-ZR-S module (S-Class) - Cisco 10GBASE-ZR SFP+ Module for Single-Mode Fiber (up to 80 km reach)

Cable Pinouts

Figure 8: Four Twisted-Pair Straight-Through Cable Schematic

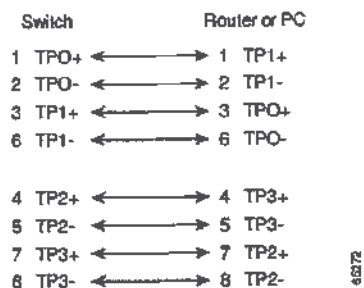


Figure 9: Four Twisted-Pair Semi-Cross Cable Schematic

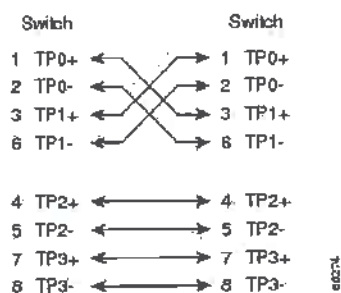


Figure 10: Two Twisted-Pair Straight-Through Cable Schematic

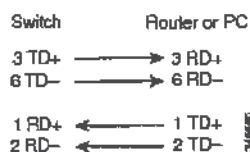
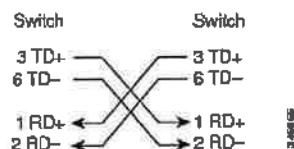


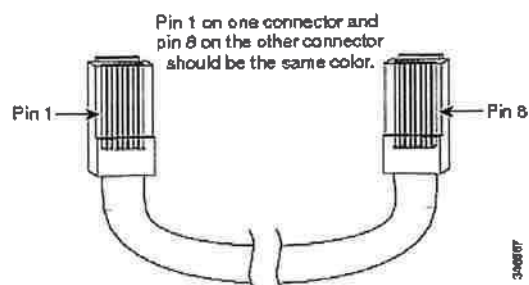
Figure 11: Two Twisted-Pair Crossover Cable Schematic



Identifying a Crossover Cable

To identify a crossover cable, compare the two modular ends of the cable. Hold the cable ends side-by-side, with the tab at the back. The wire connected to the pin on the outside of the left plug should be a different color from the wire connected to the pin on the inside of the right plug.

Figure 12: Identifying a Crossover Cable



Console Port Adapter Pinouts

The RS-232 console port uses an 8-pin RJ-45 connector. Use an RJ-45-to-DB-9 adapter cable to connect the switch console port to a console PC. You need to provide a RJ-45-to-DB-25 female DTE adapter to connect the switch console port to a terminal.

Table 2: Console Port Signaling with a DB-9 Adapter

Switch Console Port (DTE)	RJ-45-to-DB-9 Terminal Adapter	Console Device
Signal	DB-9 Pin	Signal
RTS	8	CTS
DTR	6	DSR
TxD	2	RxD
GND	5	GND
GND	5	GND
RxD	3	TxD
DSR	4	DTR
CTS	7	RTS

Table 3: Console Port Signaling with a DB-25 Adapter

Switch Console Port (DTE)	RJ-45-to-DB-25 Terminal Adapter	Console Device
Signal	DB-25 Pin	Signal
RTS	5	CTS
DTR	6	DSR
TxD	3	RxD
GND	7	GND
GND	7	GND
RxD	2	TxD
DSR	20	DTR
CTS	4	RTS





Technical Specifications

- Environmental and Physical Specifications, on page 1
- Specifications for the Power Supplies, Switches, and Fan, on page 3

Environmental and Physical Specifications

This table describes the environmental specifications.

Table 1: Environmental Specifications for the Switch

Environmental Ranges	
Operating temperature ¹	23 to 113°F (–5 to 45°C)
Storage temperature	–40 to 158°F (–40 to 70°C)
Relative humidity	5 to 95% (noncondensing)
Operating altitude	Up to 10,000 ft (3000 m)
Storage altitude	Up to 15,000 ft (4500 m)

¹ Minimum ambient temperature for cold start is 32°F (0°C)

This table describes the environmental specifications.

Table 2: Environmental Specifications for the Power Supplies

Environmental Ranges	
Operating temperature	AC power supply: 23 to 113°F (–5 to 45°C) DC power supply: 23 to 131°F (–5 to 55°C)
Storage temperature	–40 to 158°F (–40 to 70°C)
Relative humidity	10 to 95% (noncondensing)



Environmental Ranges	
Altitude	AC power supply: up to 10,000 ft (3,000 m)
	DC power supply: up to 13,000 ft (4,000 m)

This table describes the physical specifications.

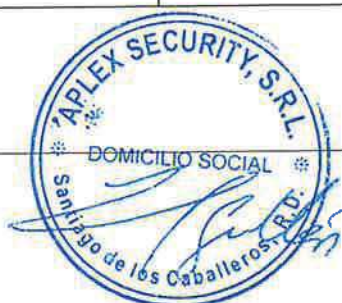
Table 3: Physical Specifications for the Switch

Physical Specifications	
Dimensions (H x W x D)	1.73 x 17.5 x 17.5 in. (4.4 x 44.5 x 44.5 cm) (with the FAN FRUs installed but without the power supplies installed)
Weight (weights do not include the functional network modules, the blank module, or the power supplies).	
Catalyst 3850 24-port PoE switches	13.3 lb (6.0 kg)
Catalyst 3850 24-port non-PoE switches	13.1 lb (6.0 kg)
Catalyst 3850 48-port non-PoE switches	14.2 lb (6.5 kg)
Catalyst 3850 48-port PoE switches	14.4 lb (6.5 kg)
WS-C3850-24S and WS-C3850-12S switches	12.4 lb (5.7 kg)
WS-C3850-12XS switches	12.9 lb (5.8 kg)
WS-C3850-24XS switches	13.5 lb (6.1 kg)
WS-C3850-48XS switches	16.42 lb (7.45 kg)

This table describes the physical specifications.

Table 4: Physical Specifications for the Power Supplies

Weight	
PWR-C1-1100WAC	3 lb (1.4 kg)
PWR-C1-715WAC	2.8 lb (1.3 kg)
PWR-C1-350WAC	2.4 lb (1.1 kg)
PWR-C1-440WDC=	2.6 lb (1.2 kg)
PWR-C3-750WAC-R	3.7 lb (1.68 kg)
PWR-C3-750WAC-F	3.7 lb (1.68 kg)
PWR-C3-750WDC-R	3.7 lb (1.68 kg)
PWR-C3-750WDC-F	3.7 lb (1.68 kg)



Dimensions (H x D x W)	
The dimensions shown include the extraction handle and the keying feature.	
PWR-C1-1100WAC	1.58 X 3.25 X 13.71 in. (40.1 X 82.55 X 348.2 mm)
PWR-C1-715WAC	1.58 X 3.25 X 12.21 in. (40.1 X 82.55 X 310.1 mm)
PWR-C1-350WAC	1.58 X 3.25 X 12.21 in. (40.1 X 82.55 X 310.1 mm)
PWR-C1-440WDC=	1.58 X 3.25 X 12.21 in. (40.1 X 82.55 X 310.1 mm)
PWR-C3-750WAC-R	1.58 X 2.15 X 14.28 in. (40.1 mm X 54.6 mm X 362.7 mm)
PWR-C3-750WAC-F	1.58 X 2.15 X 14.28 in. (40.1 mm X 54.6 mm X 362.7 mm)
PWR-C3-750WDC-R	1.58 X 2.15 X 14.28 in. (40.1 mm X 54.6 mm X 362.7 mm)
PWR-C3-750WDC-F	1.58 X 2.15 X 14.28 in. (40.1 mm X 54.6 mm X 362.7 mm)

Specifications for the Power Supplies, Switches, and Fan

Table 5: Power Specifications for the AC Power

Power Requirements	
Maximum output power	• PWR-C1-1100WAC: 1100 W • PWR-C1-715WAC: 715 W • PWR-C1-350WAC: 350 W • PWR-C3-750WAC-R: 750 W • PWR-C3-750WAC-F: 750 W
Input voltage and Frequency	• PWR-C1-1100WAC: 1100-W, 115 to 240 VAC (autoranging) 50-60 Hz • PWR-C1-715WAC: 715 W, 100 to 240 VAC (autoranging) 50-60 Hz • PWR-C1-350WAC: 350 W, 100 to 240 VAC (autoranging) 50-60 Hz • PWR-C3-750WAC-F: 750 W, 90 to 264 VAC (autoranging) 50-60 Hz • PWR-C3-750WAC-F: 750 W, 90 to 264 VAC (autoranging) 50-60 Hz



Input current	• PWR-C1-1100WAC: 12–6 A • PWR-C1-715WAC: 10–5 A • PWR-C1-350WAC: 4–2 A • PWR-C3-750WAC-R: 11 A @ 100 VAC (max), 6 A @ 200 VAC (max) • PWR-C3-750WAC-F: 11 A @ 100 VAC (max), 6 A @ 200 VAC (max)
Output ratings	• PWR-C1-1100WAC: –56 V@19.64 A • PWR-C1-715WAC: –56 V@12.8 A • PWR-C1-350WAC: –56 V@6.25 A • PWR-C3-750WAC-R: 12 VDC @ 62 A, 3.3 VDC @ 3 A • PWR-C3-750WAC-F: 12 VDC @ 62 A, 3.3 VDC @ 3 A
Total input BTU ²	• PWR-C1-1100WAC: 4263 BTUs per hour, 1250 W • PWR-C1-715WAC: 2742 BTUs per hour, 804 W • PWR-C1-350WAC: 1357 BTUs per hour, 398 W
Total output BTU ³	• PWR-C1-1100WAC: 3751 BTUs per hour, 1100 W • PWR-C1-715WAC: 2438 BTUs per hour, 715 W • PWR-C1-350WAC: 1194 BTUs per hour, 350 W • PWR-C3-750WAC-R: 1122 BTU/hour (nominal), 1365 BTU/hour (max) • PWR-C3-750WAC-F: 1122 BTU/hour (nominal), 1365 BTU/hour (max)

² The total input and total output BTU ratings refer to input power to the power supply and output power to the switch. The BTU ratings are based on 100 VAC for the 350-W and 715-W power supplies and 115 VAC for the 1100-W power supply.

³ The total input and total output BTU ratings refer to input power to the power supply and output power to the switch. The BTU ratings are based on 100 VAC for the 350-W and 715-W power supplies and 115 VAC for the 1100-W power supply.

Table 6: Power Specifications for DC-Power

Power Requirements	
Maximum output power	• PWR-C1-440WDC: 440 W • PWR-C3-750WDC-R: 750 W • PWR-C3-750WDC-F: 750 W



Input current	• PWR-C1-440WDC: 16 –8 A • PWR-C3-750WDC-R: 25 A • PWR-C3-750WDC-F: 25 A
DC input voltage	• PWR-C1-440WDC: –36 to –72 VDC • PWR-C3-750WDC-R: –36 to –72 VDC • PWR-C3-750WDC-F: –36 to –72 VDC
Output ratings	• PWR-C1-440WDC: –56 V@7.86 A • PWR-C3-750WDC-R: 62 A @ 12 VDC, 3 A @ 3.3 VDC • PWR-C3-750WDC-F: 62 A @ 12 VDC, 3 A @ 3.3 VDC
Voltage range domestic	• PWR-C1-440WDC: –36 VDC (minimum), –48 VDC (nominal), –72 VDC (maximum) • PWR-C3-750WDC-R: –48 VDC (nominal) (–40.5 VDC to –56 VDC) • PWR-C3-750WDC-F: –48 VDC (nominal) (–40.5 VDC to –56 VDC)
Voltage range international	• PWR-C1-440WDC: –36 VDC (minimum), –48 VDC (nominal), –72 VDC (maximum) • PWR-C3-750WDC-R: –60 VDC (nominal) (–55 VDC to –72 VDC) • PWR-C3-750WDC-F: –60 VDC (nominal) (–55 VDC to –72 VDC)
Total input BTU ⁴	PWR-C1-440WDC 1841 BTUs per hour, 540 W
Total output BTU ¹	PWR-C1-440WDC: 1502 BTUs per hour, 440 W
Wire gauge for ground connection	PWR-C1-440WDC: 12 AWG or 8 AWG
Branch circuit protection	PWR-C1-440WDC: 20 A

⁴ The total input and total output BTU ratings refer to input power to the power supply and output power to the switch. The BTU ratings are based on –36 VDC.

Table 7: Fan Module Environmental and Physical Specifications for Catalyst WS-C3850 Switch Models

Environmental Ranges	
Operating temperature	23 to 176°F (–5 to 80°C)



Storage temperature	–40 to 185°F (–40 to 85°C) up to 15,000 ft (4500 m)
Relative humidity	5 to 95% (noncondensing)
Altitude	Up to 13,000 ft (4000 m)
Physical Specification	
Dimensions (H x D x W)	1.62 x 1.73 x 4.24 in. (4.11 x 4.39 x 10.76 cm)
Weight (for three fans)	0.48 lb (0.21 kg)
Operating Specification	
Airflow	20 cfm

Table 8: Fan Module Environmental and Physical Specifications for Catalyst WS-C3850-48XS Switch Models

Environmental Ranges	
Operating temperature	50 to 104°F (10 to 40°C)
Relative humidity	8 to 80% (noncondensing)
Altitude	–50 to 6500 feet (–16 to 1981 meters)
Physical Specification	
Dimensions (H x D x W)	2.25 x 7.00 x 8.50 in (5.72 x 17.78 x 21.59 cm)
Weight	0.7 lb (0.32 kg)



Cisco 25GBASE SFP28 Modules

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Product overview

The Cisco® 25GBASE SFP28 (Small Form-Factor Pluggable) portfolio offers customers a wide variety of high-density and low-power 25 Gigabit Ethernet connectivity options for data center and high-performance computing networks applications. The 25G Modules are based on SFP28 form factor.



25G Direct Attached Cables (DAC)



25G Active Optical Cables (AOC)



25G Short Reach (SR) Module



10/25G Cisco Short Reach (CSR) Module



10/25G Long Reach (LR) Module



10/25G Long Reach (LR) Industrial Temperature Module



SFP-10/25G-BXD-I



SFP-10/25G-BXU-I



SFP-25G-ER-I



SFP-25G-BX40D-I



SFP-25G-BXU-I

Features and benefits of Cisco 25G Modules

- Interoperable with other IEEE-compliant 25G interfaces where applicable.
- Certified and tested on Cisco SFP28 ports for superior performance, quality, and reliability.
- High-speed connectivity compliant to IEEE 802.3by and IEEE 802.3cc.

Table 1. Cisco 25G Portfolio

Product	Descriptions
SFP-H25G-CU1M	25GBASE-CR1 Copper Cable 1-meter
SFP-H25G-CU1.5M	25GBASE-CR1 Copper Cable 1.5-meter
SFP-H25G-CU2M	25GBASE-CR1 Copper Cable 2-meter
SFP-H25G-CU2.5M	25GBASE-CR1 Copper Cable 2.5-meter
SFP-H25G-CU3M	25GBASE-CR1 Copper Cable 3-meter
SFP-H25G-CU4M	25GBASE-CR1 Copper Cable 4-meter
SFP-H25G-CU5M	25GBASE-CR1 Copper Cable 5-meter
SFP-25G-AOC1M	25GBASE-AOC Active Optical Cable 1-meter
SFP-25G-AOC2M	25GBASE-AOC Active Optical Cable 2-meter
SFP-25G-AOC3M	25GBASE-AOC Active Optical Cable 3-meter
SFP-25G-AOC4M	25GBASE-AOC Active Optical Cable 4-meter
SFP-25G-AOC5M	25GBASE-AOC Active Optical Cable 5-meter
SFP-25G-AOC7M	25GBASE-AOC Active Optical Cable 7-meter
SFP-25G-AOC10M	25GBASE-AOC Active Optical Cable 10-meter
SFP-25G-SR-S	25GBASE-SR SFP28 Module for MMF
SFP-25G-SL	25GBASE-SL SFP28 Module for MMF
SFP-10/25G-CSR-S	10/25GBASE-CSR SFP28 Module for MMF
SFP-10/25G-LR-S	10/25GBASE-LR SFP28 Module for SMF
SFP-10/25G-LR-I	10/25GBASE-LR SFP28, Industrial Temperature Module for SMF



Product	Descriptions
SFP-10/25G-BXD-I	10GBASE-LR, 10GBASE-BR10, 25GBASE-BR10 SFP28, Bidirectional, Industrial Temp Module for SMF
SFP-10/25G-BXU-I	10GBASE-LR, 10GBASE-BR10, 25GBASE-BR10 SFP28, Bidirectional, Industrial Temp Module for SMF
SFP-25G-ER-I	25GBASE-ER, SFP28 Industrial Temperature Module for SMF
SFP-25G-BX40D-I	25GBASE-BR40, SFP28, Bidirectional, Industrial Temp Module for SMF
SFP-25G-BX40U-I	25GBASE-BR40, SFP28, Bidirectional, Industrial Temp Module for SMF

Cisco SFP-25G copper cables

Cisco SFP28 to SFP28 copper direct-attach 25GBASE-CR1 cables are suitable for very short links and offer a highly cost-effective way to establish a 25-Gigabit link between SFP28 ports of Cisco switches within racks and across adjacent racks. Cisco offers passive copper cables in lengths of x= 1, 1.5, 2, 2.5, 3, 4 and 5 meters. 1m, 1.5m, and 2m cables do not require FEC on the host ports; 2.5m and 3m cables require BASE-R FEC (also known as FC-FEC) on the host ports; 4m and 5m cables require RS-FEC on the host ports.

Cisco SFP-25G active optical cables

Cisco SFP28 to SFP28 Active Optical Cables are direct-attach fiber assemblies with SFP connectors. They are suitable for very short distances and offer a cost-effective way to connect within racks and across adjacent racks. Cisco offers Active Optical Cables in lengths of 1, 2, 3, 4, 5, 7, and 10 meters.

AOC cable require BASE-R FEC, or RS-FEC on the host ports.

Cisco SFP-25G-SR-S

The Cisco 25GBASE-SR Module supports a link length of 70/100m on OM3/4 MMF.

This module requires RS-FEC on the host ports.

Cisco SFP-25G-SL

The Cisco 25GBASE-SL Module supports a link length of 20/30m on OM3/4 MMF.

The Cisco SFP-25G-SL (Short Link) module requires RS-FEC on the host ports

Cisco SFP-10/25G-CSR-S

The Cisco 10/25GBASE-CSR Module supports a link length of up to 300/400m over OM3/4 at 10G, and up to 300/400m over OM3/4 at 25G. It also supports link lengths of 82m over OM2 at 10G, and up to 70m over OM2 at 25G.

This module requires RS-FEC on the host port for full reach operation at 25G. Using BASE-R FEC the module can support 70/100m over OM3/4 and with-out FEC it can support 30/50m over OM3/4 at 25G*. For 10G operation FEC is not required.

*Depends upon fiber quality.

Cisco SFP-10/25G-LR-S

The Cisco 10/25GBASE-LR Module supports a link length of 10 kilometers on standard Single-Mode Fiber (SMF) G.652 at both 10G and 25G.

This module requires RS-FEC on the host ports for operation at 25G.

Cisco SFP-10/25G-LR-I

The Cisco 10/25GBASE-LR Module supports a link length of 10 kilometers on standard Single-Mode Fiber (SMF) G.652 at both 10G and 25G. The module requires RS-FEC on the host ports for full reach operation at 25G. This module has an industrial temperature range. This module also supports CPRI datarates options 7, 8, 9 and 10.

In some applications using BASE-R FEC the module can support 3.5km and without FEC it can support 1.5km, depending on fiber quality.

Cisco SFP-10/25G-BXD-I and SFP-10/25G-BXU-I (single-fiber bidirectional applications)

The Cisco 10GBASE-LR/10GBASE-BR/25GBASE-BR Module supports a link length of 10 kilometers on a single strand of standard Single-Mode Fiber (SMF) G.652 at both 10G and 25G. A SFP-10/25G-BXD-I device is always connected to a SFP-10/25G-BXU-I device with a single strand of standard SMF. The communication over a single strand of fiber is achieved by separating the transmission wavelength of the two devices. SFP-10/25G-BXD-I transmits at 1330nm channel and receives at 1270nm signal. The SFP-10/25G-BXU-I transmits at a 1270nm wavelength and receives a 1330nm signal.

The module requires RS-FEC on the host ports for full reach operation at 25G. This module has an industrial temperature range. This module also supports CPRI datarates options 7, 8, 9 and 10.

In some applications using BASE-R FEC the module can support 3.5km and without FEC it can support 1.5km, depending on fiber quality.

Cisco SFP-25G-ER-I

The Cisco 25GBASE-ER Module supports a link length of 40 kilometers on standard Single-Mode Fiber (SMF) G.652 at 25G.

The module requires RS-FEC on the host ports for full reach operation at 25G. This module has an industrial temperature range.

Cisco SFP-25G-BX40D-I and SFP-25G-BX40U-I (single-fiber bidirectional applications)

The Cisco 25GBASE-BR40 Modules support link lengths of 40km over a single strand of standard Single-Mode Fiber (SMF) G.652 at 25G. An SFP-25G-BX40D-I device is always connected to an SFP-25G-BX40U-I device with a single strand of standard SMF. The communication over a single strand is achieved by separating the transmission wavelength of the two devices. SFP-25G-BX40D-I transmits at 1314nm wavelength and receives at 1289nm wavelength. The SFP-25G-BX40U-I transmits at 1289nm and receives at 1314nm wavelengths.

These modules require RS-FEC on the host ports for full reach operation at 25G. These modules have an industrial temperature range.

Technical specifications

Platform support

Cisco 25G transceivers are supported on Cisco switches. For more details, refer to the document "[Transceiver Module Group \(TMG\) Compatibility Matrix](#)".

Connectors and cabling

Refer to Table 2 for cabling specifications for each 25G product.

Table 2. 25G Port cabling specifications

SFP-25G	Cable Type	Cable Distance	Max Power Consumption (W)	Pull Tab / Bail Latch Color
SFP-H25G-CU1M	Direct-attach copper cable assembly	1m	1/10	Beige
SFP-H25G-CU1.5M		1.5m		Black
SFP-H25G-CU2M		2m		Brown
SFP-H25G-CU2.5M		2.5m		Yellow
SFP-H25G-CU3M		3m		Orange
SFP-H25G-CU4M	Active Optical Cable assembly	4m	1	Green
SFP-H25G-CU5M		5m		Gray
SFP-25G-AOC1M		1m		Beige
SFP-25G-AOC2M		2m		Brown
SFP-25G-AOC3M		3m		Orange
SFP-25G-AOC4M		4m		Green
SFP-25G-AOC5M		5m		Gray
SFP-25G-AOC7M		7m		Blue
SFP-25G-AOC10M		10m		Red
SFP-25G-SR-S	MMF	70/100m (OM3/OM4)	1.2	Beige
SFP-25G-SL	MMF	20/30m (OM3/OM4)	1.2	Purple
SFP-10/25G-CSR-S	MMF	300/400m (OM3/OM4)	1.2	Peach
SFP-10/25G-LR-S	SMF	10km	1.3	Blue
SFP-10/25G-LR-I	SMF	10km	1.3	Blue



SFP-25G	Cable Type	Cable Distance	Max Power Consumption (W)	Pull Tab /Bail Latch Color
SFP-10/25G-BXD-I	SMF	10km ^{***}	1.5W	Violet
SFP-10/25G-BXU-I	SMF	10km ^{***}	1.5W	Blue
SFP-25G-ER-I	SMF	40km ^{****}	1.5W	Red
SFP-25G-BX40D-I	SMF	40km ^{****}	1.9W	Red
SFP-25G-BX40U-I	SMF	40km ^{****}	1.9W	Red

^{*}Depending upon fiber quality.

^{**}Links up to 15km reach are supported as engineered links as long as channel insertion loss is <9.3dB and RS-FEC is required.

^{***}Links up to 15km reach are supported as engineered links as long as channel insertion loss is <8dB and RS-FEC is required.

^{****}Links greater than 30km reach are considered engineered links.

^{*****}Links up to 40km reach are supported as engineered links as long as channel insertion loss is <18dB and RS-FEC is required.

Table 3. SFP28 port cabling specifications

SFP-25G	Wavelength (nm)	Cable Type	Core Size (Microns)	Modal Bandwidth	Cable Distance
SFP-25G-SR-S	850	MMF	50.0	2000 (OM3)	70m
				4700 (OM4)	100m
				4700 (OM5)	100m
SFP-25G-SL	850	MMF	50.0	2000 (OM3)	20m
				4700 (OM4)	30m
				4700 (OM5)	30m
SFP-10/25G-CSR-S	850	MMF	50.0	500 (OM2)	70m (25G) 82m (10G)
				2000 (OM3)	300m [*]
				4700 (OM4)	400m [*]
				4700 (OM5)	400m
SFP-10/25G-LR-S	1310	SMF	G.652	-	10km
SFP-10/25G-LR-I	1310	SMF	G.652	-	10km ^{**}
SFP-10/25G-BXD-I	1330	SMF	G.652	-	10km ^{***}
SFP-10/25G-BXU-I	1270	SMF	G.652	-	10km ^{***}

SFP-25G	Wavelength (nm)	Cable Type	Core Size (Microns)	Modal Bandwidth	Cable Distance
SFP-25G-ER-I	1310	SMF	G.652	-	40km ^{****}
SFP-25G-BX40D-I	1314	SMF	G.652	-	40km ^{****}
SFP-25G-BX40U-I	1289	SMF	G.652	-	40km ^{****}

^{**}Links up to 15km reach are supported as engineered links as long as channel insertion loss is <9.3dB and RS-FEC is required.

^{***}Links up to 15km reach are supported as engineered links as long as channel insertion loss is <8dB and RS-FEC is required.

^{****}Links greater than 30km reach are considered engineered links.

Table 4. Optical transmit and receive specifications

Product	Type	Transmit Power (dBm)		Receive Power (dBm)		Transmit and Receive Wavelength (nm)
		Maximum	Minimum	Maximum	Minimum	
SFP-25G-SR-S	25GBASE-SR 850nm MMF	+2.4	-8.4	+2.4	-10.3	840 to 860
SFP-25G-SL	25GBASE-SL 850nm MMF	+2.4	-8.4	+2.4	-10.3	840 to 860
SFP-10/25G-CSR-S	10G	+2.4	-7.3	+2.4	-9.9	840 to 860
	25G	+2.4	-6	+2.4	-8.7	840 to 860
SFP-10/25G-LR-S	10G	+0.5	-8.2	+0.5	-14.4	1260 to 1355 (10G)
	25G	+2.0	-7.0	+2.0	-13.3	1295 to 1325 (25G)
SFP-10/25G-LR-I	10G	+0.5	-6.7	+0.5	-15.9	1260 to 1355 (10G)
	25G	+2.0	-5.5	+2.0	-14.8	1295 to 1325 (25G)
SFP-10/25G-BXD-I	10G	+0.5	-8.2	+0.5	-16.2	1320 to 1340 (Tx) 1260 to 1280 (Rx)
	25G	+2.0	-7.0	+2.0	-15.0	1320 to 1340 (Tx) 1260 to 1280 (Rx)
SFP-10/25G-BXU-I	10G	+0.5	-8.2	+0.5	-16.2	1260 to 1280 (Tx) 1320 to 1340 (Rx)
	25G	+2.0	-7.0	+2.0	-15.0	1260 to 1280 (Tx) 1320 to 1340 (Rx)



Product	Type	Transmit Power (dBm)		Receive Power (dBm)		Transmit and Receive Wavelength (nm)
		Maximum	Minimum	Maximum	Minimum	
SFP-25G-ER-I	25G	+6.0	-3.0	-4.0	-21.0	1295 to 1310
SFP-25G-BX40D-I	25G	+6.0	-3.0	-4.0	-21.0	1306 to 1322 (Tx) 1281 to 1297 (Rx)
SFP-25G-BX40U-I	25G	+6.0	-3.0	-4.0	-21.0	1281 to 1297 (Tx) 1306 to 1322 (Rx)

*Transmitter and receiver power is in average, unless specified.

**The launch power shall be the lesser of the class 1 safety limit or the maximum receive power. Class 1 laser requirements are defined by IEC 60825-1: 2001.

***The SFP-10/25G-CSR-S when interoperating with IEEE 10G-SR may overload the receiver, see the Cisco Optics to Optics Interoperability matrix for details: <https://imgmatrix.cisco.com/10g>.

Connectors: Dual LC/PC connector (SFP-25G-SR-S, SFP-10/25G-CSR-S SFP-10/25G-LR-S, SFP-10/25G-LR-I and SFP-25G-ER-I).

Fiber Channel over Ethernet: The 25G DAC's (SFP-H25G-CUxxM), AOC's (SFP-25G-AOCxxM) and transceivers (SFP-25G-SR-S, SFP-10/25G-CSR-S and SFP-10/25G-LR-S) support FCoE with the appropriate host s/w support.

Note: Only connections with patch cords with PC or UPC connectors are supported. Patch cords with APC connectors are not supported. All cables and cable assemblies used must be compliant with the standards specified in the standards section.

Environmental conditions

Operating temperature range:

- Commercial temperature range: 0 to 70°C (32 to 158°F)
- Industrial temperature range: -40 to 85°C (-40 to 185°F)
- Storage temperature range: -40 to 85°C (-40 to 185°F)



Ordering information

Table 5 provides the ordering information for Cisco 25G cables and transceivers.

Table 5. Ordering information

Description	Product Number
25GBASE-CR1 SFP28 Passive Copper Cable, 1-meter	SFP-H25G-CU1M
25GBASE-CR1 SFP28 Passive Copper Cable 1.5-meter	SFP-H25G-CU1.5M
25GBASE-CR1 SFP28 Passive Copper Cable, 2-meter	SFP-H25G-CU2M
25GBASE-CR1 SFP28 Passive Copper Cable 2.5-meter	SFP-H25G-CU2.5M
25GBASE-CR1 SFP28 Passive Copper Cable, 3-meter	SFP-H25G-CU3M
25GBASE-CR1 SFP28 Passive Copper Cable 4-meter	SFP-H25G-CU4M
25GBASE-CR1 SFP28 Passive Copper Cable, 5-meter	SFP-H25G-CU5M
25GBASE-AOC SFP28 Active Optical Cable, 1-meter	SFP-25G-AOC1M
25GBASE-AOC SFP28 Active Optical Cable, 2-meter	SFP-25G-AOC2M
25GBASE-AOC SFP28 Active Optical Cable, 3-meter	SFP-25G-AOC3M
25GBASE-AOC SFP28 Active Optical Cable 4-meter	SFP-25G-AOC4M
25GBASE-AOC SFP28 Active Optical Cable, 5-meter	SFP-25G-AOC5M
25GBASE-AOC SFP28 Active Optical Cable, 7-meter	SFP-25G-AOC7M
25GBASE-AOC SFP28 Active Optical Cable, 10-meter	SFP-25G-AOC10M
25GBASE-SR SFP28 Module for MMF	SFP-25G-SR-S
25GBASE-SL SFP28 Module for MMF	SFP-25G-SL
10/25GBASE-CSR SFP28 Module for MMF	SFP-10/25G-CSR-S
10/25GBASE-LR SFP28 Module for SMF	SFP-10/25G-LR-S
10/25GBASE-LR SFP28 Module for SMF, Industrial Temp	SFP-10/25G-LR-I
10/25GBASE-BR SFP28 Bidi module for SMF, Industrial Temp, Downstream	SFP-10/25G-BXD-I
10/25GBASE-BR SFP28 Bidi module for SMF, Industrial Temp, Upstream	SFP-10/25G-BXU-I
25GBASE-ER SFP28 Module for SMF, Industrial Temp	SFP-25G-ER-I
25GBASE-BR40 SFP28 Bidi module for SMF, Industrial Temp, Downstream	SFP-25G-BX40D-I
25GBASE-BR40 SFP28 Bidi module for SMF, Industrial Temp, Upstream	SFP-25G-BX40U-I

Regulatory and standards compliance

Standards:

- SFF-8402: SFP+ 28 Gb/s 1x Pluggable Transceiver Solution (SFP28) - Rev 1.0 March 30, 2014.
- SFF-8472: Diagnostic Monitoring Interface for Optical Transceivers - Rev 12 August 29, 2014.
- IEEE 802.3™ - 2015 IEEE Standard for Ethernet.
- IEEE P802.3by™ - 2016 Amendment 2: Media Access Control Parameters, Physical Layers, and Management Parameters for 25 Gb/s Operation.
- IEEE P802.3cc™ - 2017 Amendment 11: Physical Layer and Management Parameters for Serial 25 Gb/s Ethernet Operation Over Single-Mode Fiber.
- IEEE P802.3cp - Clause 159 Physical Layer specification for a 25Gb/s bidirectional link over one single-mode fiber with reach up to 40km.
- RoHS 6

Safety:

- Laser Class 1 21CFR-1040 LNH50 7/2001
- Laser Class 1 IEC60825-1
- Cable jacket of SFP copper modules is UL E116441 Compliant
- SFP copper cables are ELV Compliant

Warranty

- Standard warranty: 5 years
- Expedited replacement available via a Cisco SMARTnet® Service support contract

Product sustainability

Table 6. Product sustainability

	Sustainability topic	Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries and packaging	WEEE Compliance
	Information on product takeback and reuse program	Cisco Takeback and Reuse Program
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com
	Countries and Regions Supported	Regulatory Compliance
Power	Power (Including Pluggable)	Power Consumption

	Sustainability topic	Reference
Material	Product packaging weight and materials	Contact: environment@cisco.com



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Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. [Learn more.](#)

Additional information

For more information about Cisco 25GBASE SFP28 optics and copper modules, contact your sales representative or visit <https://www.cisco.com/c/en/us/products/interfaces-modules/25-gigabit-modules/index.html>.

Document history

Table 7. Document history

New or Revised Topic	Described In	Date
Updated to include new transceivers, SFP-10/25G-BXD-I, SFP-10/25G-BXU-I, SFP-25G-ER-I	Ordering Information	July 1, 2021
Addition of SFP-25G-SL	Table 1	



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Asia Pacific Headquarters
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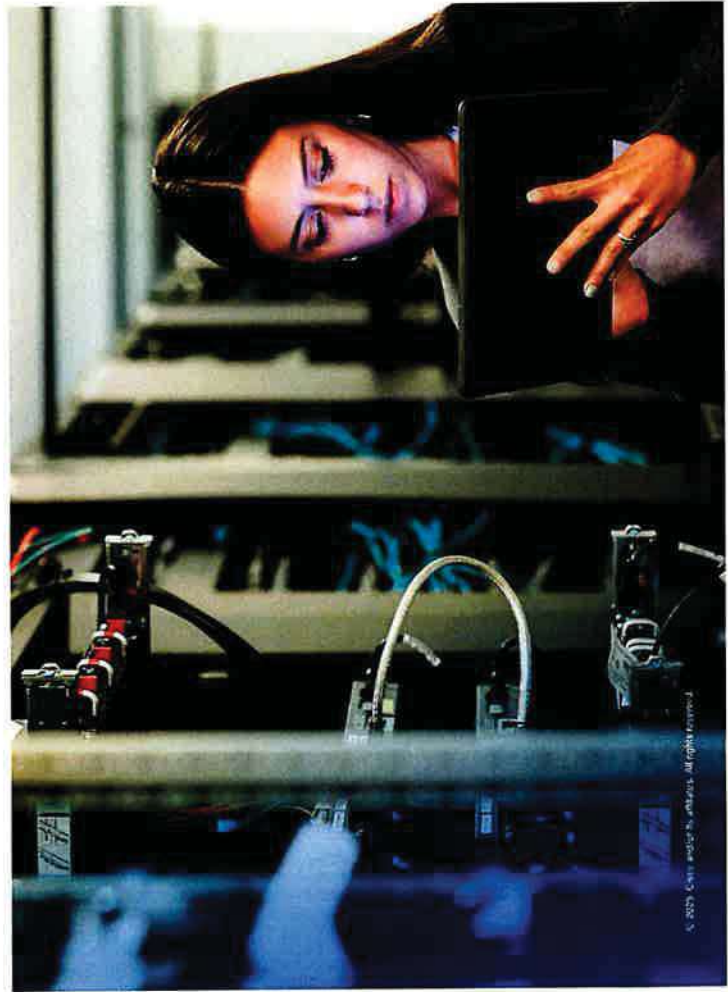
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Cisco Catalyst 9300 Series Switches



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Built to reimagine connection, reinforce security, and redefine experience

Cisco Catalyst™ 9300 Series Switches are Cisco's lead stackable enterprise access switching platform and, as part of the Catalyst 9000 family, are built to transform your network to handle a hybrid world where the workplace is anywhere, endpoints could be anything, and applications are hosted all over the place.

The Catalyst 9300 Series, including the Catalyst 9300X models, continues to shape the future with continued innovation that helps you reimagine connections, reinforce security and redefine the experience for your hybrid workforce, big or small. With Catalyst 9300 Series switches, you choose how you want to manage your network – on-premises, virtual, or from the cloud.

The many industry firsts of the Catalyst 9300 Series include:

- **Up to 1 TB of stacking bandwidth:** With Cisco StackWise-1T, Catalyst 9300 Series switches are the industry's highest-density stacking bandwidth solution with the most flexible uplink architecture.
- **Flexible and dense uplink offerings** with 100 Gigabit Ethernet (G), 40G, 25G, Multigigabit, 10G, and 1G modular uplinks.
- **Mixed stacking with backward compatibility:** Stack your Catalyst 9300X fiber switches with Catalyst 9300 and Catalyst 9300X Multigigabit switches, bringing stackable high-speed fiber to the access layer.
- **Highest number of Multigigabit ports:** With standalone and StackWise-1T, Catalyst 9300X models enable 48 Multigigabit ports in standalone mode and 448 Multigigabit ports with an 8-member stack.
- **Highest 90W UPOE+ density:** Enable your OT/IT needs with up to 48 ports of 90W Cisco UPOE+ in standalone mode or 384 ports of 90W UPOE+ with an 8-member stack.
- **StackPower with backward compatibility:** Enable power resiliency with higher power budgets in a mixed Catalyst 9300 and Catalyst 9300X stack.
- **100G IPsec in hardware:** Built on the Cisco® Unified Access Data Plane (UADP) 2.0sec application-specific integrated circuit (ASIC), the Catalyst 9300X models come with 100G line-rate IPsec to enable various options for new edge connectivity.
- **Secure tunnel connectivity:** With the new edge, the Catalyst 9300X enables secure connections to secure internet gateways, cloud service providers, and site-to-site connectivity using IPsec tunnels with 256-bit Advanced Encryption Standard encryption (AES-256) and speeds up to 100G.
- **Enhanced application hosting:** With twice the capacity and additional RAM, Intel® QuickAssist Technology (QAT), and 2x 10G AppGig ports, the Catalyst 9300X models can host multiple Cisco Signed performance-savvy applications.
- **ThousandEyes enabled:** Enable end-to-end visualization of the path from campus/branch to clouds/data center with Cisco ThousandEyes® Network and Application Synthetics (included with Cisco DNA Advantage licenses).
- **Cisco ASAC firewall enabled:** Using application hosting, Cisco Adaptive Security Virtual Appliance (ASAC) and stateful inspection of traffic can be seamlessly added to existing networks without any additional hardware.

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- **Cloud management:** Migrate Catalyst 9300 Series switches to the Cisco Meraki® dashboard to unlock centralized management and monitoring of devices while retaining advanced features like a cloud-hosted command-line interface terminal. [Learn more.](#)

- **Investment protection:** Catalyst 9300X redundant fans and power supplies, data stack, and StackPower cables are backward compatible with the Catalyst 9300 Series.

The Foundation of Software-Defined Access

Advanced persistent security threats. The exponential growth of Internet of Things (IoT) devices. Mobility everywhere. Cloud adoption. All of these require a network fabric that integrates advanced hardware and software innovations to automate, secure, and simplify customer networks. The goal of this network fabric is to enable customer revenue growth by accelerating the rollout of business services.

The Cisco Networking Cloud with Software-Defined Access (SD-Access) is the network fabric that powers business. It is an open and extensible, software-driven architecture that accelerates and simplifies your enterprise network operations. The programmable architecture frees your IT staff from time-consuming, repetitive network configuration tasks so they can focus instead on innovation that positively transforms your business. SD-Access enables policy-based automation from edge to cloud with foundational capabilities that include:

- Simplified device deployment
- Unified management of wired and wireless networks
- Network virtualization and segmentation
- Group-based policies
- Context-based analytics

Cisco Catalyst, Cisco DNA, and Meraki software

Cisco Catalyst, Cisco DNA, and Meraki software subscriptions offer a valuable and flexible way to buy software for the access layer, WAN, and data center domains. At each stage in the product lifecycle, Cisco Catalyst, Cisco DNA, and Meraki software helps make buying, managing, and upgrading your network and infrastructure software easier. Cisco software provides:

- Flexible licensing models to smoothly distribute customers' software spending over time.
- Investment protection for software purchases through software services-enabled license portability.
- Access to updates, upgrades, and new technology from Cisco through Cisco Software Support Service (SWSS).
- Lower cost of entry with the new Cisco Catalyst Software Subscription for Switching support model.
- Choose what management model works best for you – on-premises, virtual, or in the cloud.
- Access to end-to-end network visibility with Cisco Spaces, service assurance through Cisco ThousandEyes Network and Application Synthetics, and Cisco ASAC firewall (with Cisco Catalyst and Cisco DNA Advantage licenses).

Cisco Catalyst 9300 Series Switches let you manage your entire switching structure as a single, converged component. With one management system, whether on-premises or in the cloud, and one policy for wired and wireless networks, they offer an efficient way to provide more secure access.

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Product overview

Product highlights

- Highest wireless scale for Wi-Fi 6 and 802.11ac Wave 2 access points supported on a single switch with select models.
- Catalyst 9300 and Catalyst 9300X/LM models are based on the Cisco UADP 2.0 ASIC with programmable pipeline and micro-engine capabilities, along with template-based, configurable allocation of Layer 2 and Layer 3 forwarding, access control lists (ACLs), and quality-of-service (QoS) entries.
- Catalyst 9300X models are based on UADP 2.0sec ASIC, which adds line-rate support for crypto, including 100G hardware-based IPsec.
- x86 CPU complex with 8 GB memory, 16 GB of flash, and an external USB 3.0 SSD pluggable storage slot (delivering up to 240 GB of storage with an optional SSD drive) to host containers. Catalyst 9300X models support 16 GB of memory.
- USB 2.0 slot to load system images and set configurations.
- Up to 1 Tbps of local stackable switching bandwidth with the Catalyst 9300X models.
- Deeper buffer and higher scale model options for rich multimedia content delivery applications.
- Flexible and dense uplink offerings with 100G, 40G, 25G, Multigigabit, 10G, and 1G as fixed or modular uplinks.
- Easy transition from 40G to 100G and 10G to 25G with dual-rate optics.
- Flexible downlink options with 25G, 10G and 1G copper and fiber as well as the densest Multigigabit links.
- With a mix of copper (1G up to 10G) and fiber (1G up to 25G) supported in a single stack, multiple flexible deployment scenarios are enabled, including 2-tier, 3-tier, and hybrid architectures.
- Leading Power over Ethernet (PoE) capabilities with up to 384 ports of PoE per stack, PoE+, and 288 ports of high-density IEEE 802.3bt-90W UPOE+ and 60W Cisco UPOE[®].
- Intelligent power management with Cisco StackPower technology, providing power stacking among members for power redundancy. StackPower pools the power supplies across the stack to be used for redundancy and supplemental power purposes.
- Line-rate, hardware-based Flexible NetFlow (FNF), delivering flow collection of up to 128,000 flows with select models.
- IPv6 support in hardware, providing wire-rate forwarding for IPv6 networks.
- Dual-stack support for IPv4/IPv6 and dynamic hardware forwarding table allocations, for ease of IPv4-to-IPv6 migration.



- Support for both static and dynamic Network Address Translation (NAT) and Port Address Translation (PAT).
- IEEE 802.1ba Audio Video Bridging (AVB) built in to provide a better audio and video experience through improved time synchronization and QoS.
- Precision Time Protocol (PTP; IEEE 1588v2) provides accurate clock synchronization with sub-microsecond accuracy, making it suitable for distribution and synchronization of time and frequency over the network.
- Cisco IOS® XE, a modern operating system for the enterprise with support for model-driven programmability, including NETCONF, RESTCONF, YANG, on-box Python scripting, streaming telemetry, container-based application hosting, and patching for critical bug fixes. The OS also has built-in defenses to protect against runtime attacks.
- End-to-end visualization of the path from campus/branch to clouds/data center with Cisco ThousandEyes Network and Application Synthetics (included with a Cisco Catalyst and Cisco DNA Advantage license).
- Fully managed Meraki cloud customers can take advantage of the power of Catalyst 9300 switching in their Meraki cloud through the cloud-management service.
- **SD-Access:** Cisco Catalyst 9300 Series Switches form the foundational building block for SD-Access, Cisco's lead enterprise architecture:
 - Policy-based automation from edge to cloud.
 - Simplified segmentation and micro-segmentation, with predictable performance and scalability.
 - Automation through Cisco Catalyst Center and Meraki dashboard.
 - Policy handled through the Cisco Identity Services Engine (ISE).
 - Network assurance provided through Cisco Catalyst Center and Meraki dashboard.
 - Faster launch of new business services and significantly improved issue resolution time.
- Plug and Play (PnP) enabled: A simple, secure, unified, and integrated offering to ease new branch or campus device rollouts or updates to an existing network.
- Advanced security
 - **Encrypted Traffic Analytics (ETA):** Uses the power of machine learning to identify and take action against threats or anomalies in your network, including malware detection in encrypted traffic (without decryption) and distributed anomaly detection.
 - Support for AES-256 with the powerful MACsec 256-bit encryption algorithm available on all models.
 - **Trustworthy solutions:** Hardware-anchored Secure Boot and Secure Unique Device Identification (SUDI) support for PnP, to verify the identity of the hardware and software.

Platform details

Switch models and configurations

Table 1. Product family configurations

Model	Modular uplinks speeds	Stacking bandwidth support	Multigigabit density	Cisco StackPower	Hardware-based IPsec	App hosting capacity
Catalyst 9300X	10G, 25G, 40G, Multigigabit, and 100G	Stackwise-1T (480G when stacking with a Catalyst 9300 model)	48x 10G	✓ (larger power budget)	Up to 100G IPsec*	✓ (2x hosting resources compared to Catalyst 9300 models)
Catalyst 9300	10G, 25G, 40G and Multigigabit	Stackwise-480	48x 5G and 24x 10G	✓	X	✓
Catalyst 9300L	X	Stackwise-320	12x 10G	X	X	✓
Catalyst 9300LM	X	Stackwise-320	8x 10G	X	X	✓

* Need to order HSEC key for IPsec feature.

The Cisco Catalyst 9300 Series consists of 19 modular uplink switch models and 14 fixed uplink switch models.



Figure 1. Cisco Catalyst 9300 Series Switches

Table 2 lists port scale and power details for the Cisco Catalyst 9300 Series models.

Table 2. Cisco Catalyst 9300 Series switch configurations

Model	Total 10/100/1000, Multigigabit copper or SFP fiber	Uplink configuration	Default AC power supply
Modular uplink models			
C9300X-48HX	48 ports Cisco UPOE+, 48x 10G Multigigabit (10G/5G/2.5G/1G/100M) with 90W UPOE+	Modular uplinks	1100W AC
C9300X-48TX	48 ports data, 48x 10G Multigigabit (10G/5G/2.5G/1G/100M)	Modular uplinks	715W AC

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Model	Total 10/100/1000, Multigigabit copper or SFP fiber	Uplink configuration	Default AC power supply
C9300X-48HXN	48 ports Cisco UPOE+, 8x 10G Multigigabit (10G/5G/2.5G/1G/100M) + 40x 5G Multigigabit (5G/2.5G/1G/100M)	Modular uplinks	1100W AC
C9300X-24HX	24 ports Cisco UPOE+, 24x 10G Multigigabit (10G/5G/2.5G/1G/100M)	Modular uplinks	1100W AC
C9300X-12Y	12 ports 25G/10G/1G SFP28	Modular uplinks	715W AC
C9300X-24Y	24 ports 25G/10G/1G SFP28	Modular uplinks	715W AC
C9300-24T	24 ports data	Modular uplinks	350W AC
C9300-48T	48 ports data	Modular uplinks	350W AC
C9300-24P	24 ports PoE+	Modular uplinks	715W AC
C9300-48P2	48 ports PoE+ ENERGY STAR certified	Modular uplinks	715W AC
C9300-24U	24 ports Cisco UPOE	Modular uplinks	1100W AC
C9300-48U	48 ports Cisco UPOE	Modular uplinks	1100W AC
C9300-24UX	24 ports Multigigabit Cisco UPOE (10G/5G/2.5G/1G/100M)	Modular uplinks	1100W AC
C9300-48UXM2	48 ports Cisco UPOE, 36 ports 100M/1G/2.5G + 12 ports Multigigabit (10G/5G/2.5G/1G/100M) ENERGY STAR® certified	Modular uplinks	1100W AC
C9300-48UN	48 port 5Gbps Multigigabit UPOE ports (5G/2.5G/1G/100M)	Modular uplinks	1100W AC
C9300-24UB	24 port Cisco UPOE	Modular uplinks	1100W AC
C9300-24UXB	24 ports Multigigabit Cisco UPOE (10G/5G/2.5G/1G/100M)	Modular uplinks	1100W AC
C9300-48UB	48 ports Cisco UPOE	Modular uplinks	1100W AC
C9300-24H	24 ports Cisco UPOE+	Modular uplinks	1100W AC
C9300-48H	48 ports Cisco UPOE+	Modular uplinks	1100W AC
C9300-24S	24 ports 1G SFP	Modular uplinks	715W AC
C9300-48S	48 ports 1G SFP	Modular uplinks	715W AC

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Model	Total 10/100/1000, Multigigabit copper or SFP fiber	Uplink configuration	Default AC power supply
Fixed uplink models			
C9300L-24T-4G	24 ports data	4x 1G fixed uplinks	350W AC
C9300L-24T-4X	24 ports data	4x 10G/1G fixed uplinks	350W AC
C9300L-48T-4G	48 ports data	4x 1G fixed uplinks	350W AC
C9300L-48T-4X	48 ports data	4x 10G/1G fixed uplinks	350W AC
C9300L-24P-4G	24 ports PoE+	4x 1G fixed uplinks	715W AC
C9300L-24P-4X	24 ports PoE+	4x 10G/1G fixed uplinks	715W AC
C9300L-48P-4G	48 ports PoE+	4x 1G fixed uplinks	715W AC
C9300L-48P-4X	48 ports PoE+	4x 10G/1G fixed uplinks	715W AC
C9300L-48PF-4G	48 ports PoE+	4x 1G fixed uplinks	1100W AC
C9300L-48PF-4X	48 ports PoE+	4x 10G/1G fixed uplinks	1100W AC
C9300L-24UXG-4X	24 ports Cisco UPOE, 8 ports Multigigabit (10G/5G/2.5G/1G/100M) + 16 ports 1G (1G/100M/10M)	4x 10G/1G fixed uplinks	1100W AC
C9300L-24UXG-2Q	24 ports Cisco UPOE, 8 ports Multigigabit (10G/5G/2.5G/1G/100M) + 16 ports 1G (1G/100M/10M)	2x 40G fixed uplinks	1100W AC
C9300L-48UXG-4X	48 ports Cisco UPOE, 12 ports Multigigabit (10G/5G/2.5G/1G/100M) + 36 ports 1G (1G/100M/10M)	4x 10G/1G fixed uplinks	1100W AC
C9300L-48UXG-2Q	48 ports Cisco UPOE, 12 ports Multigigabit (10G/5G/2.5G/1G/100M) + 36 ports 1G (1G/100M/10M)	2x 40G fixed uplinks	1100W AC

Model	Total 10/100/1000, Multigigabit copper or SFP fiber	Uplink configuration	Default AC power supply
C9300LM-48UX-4Y	48 port Cisco UPOE, 8 port 10G Multigigabit (10G/5G/2.5G/1G/100M) + 40 port 1G (1G/100M/10M)	4x 25G fixed uplinks	1000W AC ¹
C9300LM-48U-4Y	48 ports 1G (1G/100M/10M) with Cisco UPOE	4x 25G fixed uplinks	1000W AC ¹
C9300LM-24U-4Y	24 ports 1G (1G/100M/10M) with Cisco UPOE	4x 25G fixed uplinks	600W AC ¹
C9300LM-48T-4Y	48 ports 1G (1G/100M/10M) Data	4x 25G fixed uplinks	600W AC ¹

¹ C9300LM models use different power supplies compared to the Catalyst 9300, 9300X, and 9300L models.

ENERGY STAR certified model.

Network modules

Cisco Catalyst 9300 Series Switches (C9300X and C9300 SKUs) support optional network modules for uplink ports (Figures 2 and 3). These field-replaceable network modules with 25G and 40G speeds in the Cisco Catalyst 9300 Series enable greater architectural flexibility and infrastructure investment protection by allowing a nondisruptive migration from 10G to 25G and beyond. The default switch configuration does not include the network module. When you purchase the switch, you can choose from the network modules described in Table 3.

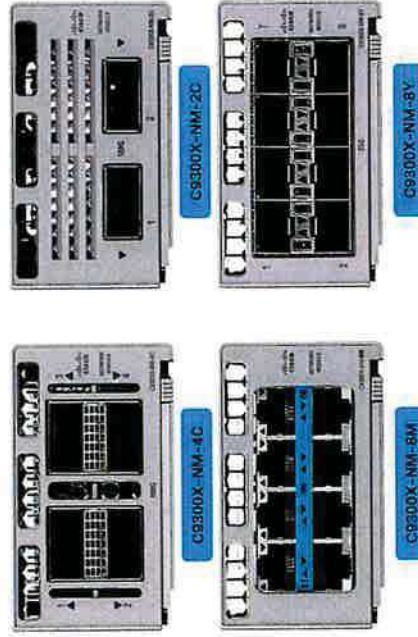


Figure 2. Cisco Catalyst 9300X network modules



Figure 3. Cisco Catalyst 9300 Series network modules

Table 3. Network module numbers and descriptions

Network module	Description
C9300X-NM-8M**	Catalyst 9300X 8x 10G/1G Multigigabit Network Module
C9300X-NM-8Y**	Catalyst 9300X 8x 25G/10G/1G Network Module
C9300X-NM-2C**	Catalyst 9300X 2x 100G/40G Network Module
C9300X-NM-4C*	Catalyst 9300X 4x 100G/40G Network Module
C9300-NM-4G	Catalyst 9300 Series 4x 1G Network Module
C9300-NM-4M	Catalyst 9300 Series 4x Multigigabit Network Module
C9300-NM-8X	Catalyst 9300 Series 8x 10G/1G Network Module
C9300-NM-2Q	Catalyst 9300 Series 2x 40G Network Module
C9300-NM-2Y	Catalyst 9300 Series 2x 25G/10G/1G Network Module

* C9300X-NM-4C is compatible only with the C9300X-48HX, C9300X-48TX, and C9300X-24Y models.

** The number of network module ports is limited when a C9300X-NM-xx is used with the C9300X-48HX models.

Please note: Catalyst 3850 and Catalyst 9300 network modules are supported on the Catalyst 9300 models. Catalyst 9300X network modules are supported only on the Catalyst 9300X models.

For additional details, please read the Cisco Catalyst 9000 Switching Platform FAQ: <https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9300-series-switches/nb-09-cat-9k-faq-cte-en.pdf>.

Power supplies

Cisco Catalyst 9300 Series Switches support dual redundant power supplies. The switches ship with one power supply by default, and the second power supply can be purchased when the switch is ordered or at a later time. If only one power supply is installed, it should always be in power supply bay #1. The switches also ship with three field-replaceable fans. Power supplies are common across the Catalyst 9300 Series.



Figure 4. Cisco Catalyst 9300 Series dual redundant power supplies

Table 4 lists the different power supplies available in these switches and available PoE power.

Table 4. Power supply models

Model	Primary power supply	Default or upgrade	Available PoE	With 350W secondary PS	With 715W secondary PS	With 1100W secondary PS	With 1900W secondary PS
C9300X-48HX	PWR-C1-1900WAC-P	Upgrade	1390W	1740W	2105W	2490W	3290W
	PWR-C1-1100WAC-P	Default	590W	940W	1305W	1650W	2490W
C9300X-48TX	PWR-C1-715WAC-P	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300X-48HXN	PWR-C1-1900WAC-P	Upgrade	1490W	1840W	2205W	2590W	3390W
	PWR-C1-1100WAC-P	Default	690W	1040W	1405W	1790W	2590W
C9300X-24HX	PWR-C1-1900WAC-P	Upgrade	1535W	1885W	2160W*	2160W*	2160W*
	PWR-C1-1100WAC-P	Default	735W	1085W	1450W	1835W	2160W*
C9300X-24Y	PWR-C1-715WAC-P	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300X-12Y	PWR-C1-715WAC-P	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300-48H	PWR-C1-1900WAC-P	Upgrade	1622W	1972W	2337W	2722W	2860W
	PWR-C1-1100WAC-P	Default	822W	1172W	1537W	1922W	2122W
C9300-24H	PWR-C1-1900WAC-P	Upgrade	1630W	1980W	2160W*	2160W*	2160W*
	PWR-C1-1100WAC-P	Default	830W	1180W	1545W	1930W	2160W
C9300-48UN	PWR-C1-1900WAC-P	Upgrade	1445W	1795W	2160W	2545W	2890W*
	PWR-C1-1100WAC-P	Default	645W	995W	1360W	1745W	2545W

Model	Primary power supply	Default or upgrade	Available PoE	With 350W secondary PS	With 715W secondary PS	With 1100W secondary PS	With 1900W secondary PS
C9300-48UXM	PWR-C1-1000WAC-P	Upgrade	1290W	1640W	2005W	2860W*	2860W*
	PWR-C1-1100WAC-P	Default	490W	840W	1205W	1590W	2390W
C9300-24UX	PWR-C1-1900WAC-P	Upgrade	1360W	1440W*	1440W*	1440W*	1440W*
	PWR-C1-1100WAC-P	Default	560W	910W	1275W	1440W*	1440W*
C9300-48U	PWR-C1-1900WAC-P	Upgrade	1622W	1800W**	1800W**	1800W**	1800W**
	PWR-C1-1100WAC-P	Default	822W	1172W	1537W	1800W**	1800W**
C9300-24U	PWR-C1-1900WAC-P	Upgrade	1440W*	1440W*	1440W*	1440W*	1440W*
	PWR-C1-1100WAC-P	Default	830W	1180W	1152W	1440W*	1440W*
C9300-48P	PWR-C1-1100WAC-P	Upgrade	822W	1172W	1440W*	1440W*	1440W*
	PWR-C1-715WAC-P	Default	437W	787W	1152W	1440W*	1440W*
C9300-24P	PWR-C1-1100WAC-P	Upgrade	720W*	720W*	720W*	720W*	720W*
	PWR-C1-715WAC-P	Default	445W	720W*	720W*	720W*	720W*
C9300-48T	PWR-C1-350WAC-P***	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300-24T	PWR-C1-350WAC-P***	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300-48S	PWR-C1-715WAC-P	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300-24S	PWR-C1-715WAC-P	Default	No PoE	No PoE	No PoE	No PoE	No PoE
C9300-48UB	PWR-C1-1100WAC-P	Default	822W	1172W	1537W	1800W**	1800W**
C9300-24UB	PWR-C1-1100WAC-P	Default	830W	1180W	1440W*	1440W*	1440W*
C9300-24UXB	PWR-C1-1100WAC-P	Default	560W	910W	1275W	1440W*	1440W*

Model	Primary power supply	Default or upgrade	Available PoE power	With 350W secondary PS	With 715W secondary PS	With 1100W secondary PS
C9300L-24T-4G	PWR-C1-350WAC-P	Default	No PoE	No PoE	No PoE	No PoE
C9300L-24T-4X	PWR-C1-350WAC-P	Default	No PoE	No PoE	No PoE	No PoE
C9300L-48T-4G	PWR-C1-350WAC-P	Default	No PoE	No PoE	No PoE	No PoE

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Model	Primary power supply	Default or upgrade	Available PoE power	With 350W secondary PS	With 715W secondary PS	With 1100W secondary PS
C9300L-48T-4X	PWR-C1-350WAC-P	Default	No PoE	No PoE	No PoE	No PoE
C9300L-24P-4G	PWR-C1-715WAC-P	Default	505W	720W*	720W*	720W*
C9300L-24P-4X	PWR-C1-715WAC-P	Default	505W	720W*	720W*	720W*
C9300L-48P-4G	PWR-C1-715WAC-P	Default	505W	855W	1220W	1440W*
C9300L-48P-4X	PWR-C1-715WAC-P	Default	505W	855W	1220W	1440W*
C9300L-48PF-4G	PWR-C1-1100WAC-P	Default	890W	1240W	1440W	1440W*
C9300L-48PF-4X	PWR-C1-1100WAC-P	Default	890W	1240W	1440W	1440W*
C9300L-24UXG-4X	PWR-C1-1100WAC-P	Default	860W	1230W	1440W	1440W*
C9300L-24UXG-2Q	PWR-C1-1100WAC-P	Default	722W	1072W	1440W	1440W*
C9300L-48UXG-4X	PWR-C1-1100WAC-P	Default	675W	1025W	1390W	1775W
C9300L-48UXG-2Q	PWR-C1-1100WAC-P	Default	675W	1025W	1390W	1775W

* Limited by port number and port rating (e.g., 24 PoE 30W ports = 720W).

** Limited by design.

*** Upgrade options for 715W and 1100W PSUs are available.

Model	Primary power supply	Default or upgrade	Available PoE power	With 350W secondary PS	With 715W DC secondary PS	With 1000W AC secondary PS
C9300LM-48UX-4Y	PWR-C6-1KWAC	Default	790W	1390W	1505W	1790W
C9300LM-48U-4Y	PWR-C6-1KWAC	Default	790W	1390W	1505W	1790W*
C9300LM-24U-4Y	PWR-C6-1KWAC	Upgrade	820W	1420W	1440W*	1440W*
C9300LM-48T-4Y	PWR-C6-600WAC	Default	420W	1020W	1135W	1420W
C9300LM-48T-4Y	PWR-C6-600WAC	Default	No PoE	No PoE	No PoE	No PoE

* Limited by port number and port rating (e.g., 24x 60W UPOE ports = 1440W).

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Stacking

Cisco Catalyst 9300 Series Switch models are designed for stacking as a single virtual switch, enabling customers to have a single management plane and control plane for up to 48 access ports.



Figure 5. Cisco Catalyst 9300 Series modular uplink models stack (C9300/C9300X SKUs) and fixed uplink models stack (C9300L SKUs).

Table 5 lists the supported stacking options.

Table 5. Supported stacking options

Model	Stacking support	Stacking bandwidth support	Optional stacking hardware	Number of members	Supported stack members
C9300X SKUs	StackWise-1T	1 Tbps	StackWise cable	8	Stacks with other Catalyst 9300X models at StackWise-1T speeds with same license level
C9300 SKUs	StackWise-480	480 Gbps	StackWise cable	8	Stacks with C9300 SKUs at StackWise-480 speeds with same license level Other C9300 SKUs with same license level
C9300L SKUs	StackWise-320	320 Gbps	C9300L-STACK-KIT or C9300L-STACK-KIT2	8	C9300 higher-scale SKUs only stack with other like higher-scale models Stacks with other Catalyst 9300L and C9300LM models with same license level
C9300LM SKUs	StackWise-320	320 Gbps	C9300L-STACK-KIT2	8	Stacks with other Catalyst 9300L and C9300LM models with same license level



Mixed stacking between Catalyst 9300X and Catalyst 9300 models are supported at StackWise-480 speeds.

Mixed stacking between Catalyst 9300 and Catalyst 9300X and Catalyst 9300 higher-scale models (C9300-24UB, C9300-24UXB, C9300-48UB) is not supported. You cannot stack fixed uplink models (C9300L SKUs) with modular uplink models (C9300 SKUs) or other Catalyst switches, such as the Cisco Catalyst 3850 and 3650 Series. Any combination of Catalyst 9300 Series models can form a stack. Separately, any combination of Catalyst 9300L models can form a stack.

Catalyst 9300 Series higher-scale SKUs (C9300-24UB, C9300-24UXB, C9300-48UB) need to be stacked with other higher-scale models.

StackWise cables that are available to configure stacking with Catalyst 9300 Series modular uplink models (C9300X and C9300 SKUs) come in lengths of 0.5m, 1m, and 3m.

The optional StackWise-320 kit for Catalyst 9300 Series fixed uplink models (C9300L and C9300LM SKUs) consists of two stack adapters and a stacking cable. The default stacking cable is 0.5m, but options of 1m and 3m are also available. Table 6 lists the stacking accessories.

Table 6. Stacking accessories

Model	Description
STACK-T1-50CM	Data stack 50 cm (cable option with C9300 and C9300X SKUs)
STACK-T1-1M	Data stack 1m (cable option with C9300 and C9300X SKUs)
STACK-T1-3M	Data stack 3m (cable option with C9300 and C9300X SKUs)
C9300L-STACK-KIT	Stack kit for C9300L SKUs only: Two data stack adapters and one data stack cable
STACK-T3-50CM	Data stack 50cm cable (default cable with C9300L Stack Kit)
STACK-T3-1M	Data stack 1m cable (cable option with C9300L Stack Kit)
STACK T3-3M	Data stack 3m cable (cable option with C9300L Stack Kit)
C9300L-STACK-KIT2	Stack kit for C9300LM and C9300L SKUs: Two data stack adapters and one data stack cable
STACK-T3A-50CM	Data stack 50cm cable (default cable with C9300L Stack Kit2)
STACK-T3A-1M	Data stack 1m cable (cable option with C9300L Stack Kit2)
STACK T3A-3M	Data stack 3m cable (cable option with C9300L Stack Kit2)



Figure 6. Cisco Catalyst 9300 Series fixed uplink models with optional stack kit

Fan

Cisco Catalyst 9300 Series Switches also come with three field-replaceable fans and support (N+1) redundancy. Table 7 lists the fan module part number.

Table 7. Fan module

Model	Description
FAN-T2*	Fan module

Performance and scalability

Performance and scalability metrics for the Cisco Catalyst 9300 Series are provided in Table 8.

Performance specifications

Table 8. Performance specifications				
Description	Catalyst 9300X modular uplink models	Catalyst 9300 modular uplink models	Catalyst 9300 higher-scale models	Catalyst 9300L/LM fixed uplink models
Total number of MAC addresses	32,000	32,000	64,000	32,000
Total number of IPv4 routes (ARP plus learned routes)	39,000 (24,000 direct routes and 15,000 indirect routes)	32,000 (24,000 direct routes and 8,000 indirect routes)	112,000 (48,000 direct routes and 64,000 indirect routes)	32,000 (24,000 direct routes and 8,000 indirect routes)
IPv6 routing entries	19,500	16,000	56,000	16,000
Multicast routing scale	8,000	8,000	16,000	8,000
QoS scale entries	4,000	5,120	18,000	5,120
ACL scale entries	8,000	5,120	18,000	5,120

* 32,000. Cisco switches are not 32-bit. All rights reserved.

Description	Catalyst 9300X modular uplink models	Catalyst 9300 modular uplink models	Catalyst 9300 higher-scale models	Catalyst 9300L/LM fixed uplink models
Packet buffer per SKU	16-MB buffer for 48-port 5G Multigigabit, 24-port 10G Multigigabit and 12-port fiber 32-MB buffer for 48-port 10G Multigigabit and 24-port fiber	16-MB buffer for 24- and 48-port Gigabit Ethernet models 32-MB buffer for 24- and 48-port Multigigabit	32-MB buffer for 24- and 48-port Gigabit Ethernet models 64-MB buffer for 24-port Multigigabit model (24LXB)	16-MB buffer for 24- and 48-port Gigabit Ethernet models
FNF entries	64,000 flows on 48-port 5G Multigigabit and 24-port 10G Multigigabit and 12-port fiber 128,000 flows on 48-port 10G Multigigabit and 24-port fiber	64,000 flows on 24- and 48-port Gigabit Ethernet models 128,000 flows on 24-port Multigigabit	128,000 flows on 24- and 48-port Gigabit Ethernet models 256,000 flows on 24-port Multigigabit	64,000 flows on 24- and 48-port Gigabit Ethernet models
DRAM	16 GB	8 GB	8 GB	8 GB
Flash	16 GB	16 GB	16 GB	16 GB
VLAN IDs	4094	4094	4094	4094
PVST Instances	300	300	300	300
STP virtual ports (port* VLANs) for PVST	13,000	13,000	13,000	13,000
STP virtual ports (port* VLANs) for MST	13,000	13,000	13,000	13,000
Total switched virtual interfaces (SVIs)	1000	1000	1000	1000
Jumbo frames	9198 bytes	9198 bytes	9198 bytes	9198 bytes
Total routed ports per Catalyst 9300 Series stack	448	448	448	416

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Bandwidth specifications

Table 9. Bandwidth specifications

SKU	Switching capacity	Switching capacity with stacking	Forwarding rate	Forwarding rate with stacking
C9300X-48TX	1,760 Gbps	2,760 Gbps	1309 Mpps	2232 Mpps
C9300X-48HX	1,760 Gbps	2,760 Gbps	1309 Mpps	2232 Mpps
C9300X-48HXN	960 Gbps	1960 Gbps	714.24 Mpps	1458.24 Mpps
C9300X-24HX	800 Gbps	1,880 Gbps	654.72 Mpps	1398.72 Mpps
C9300X-12Y	1000G	2000G	744Mpps	1488mpps
C9300X-24Y	2,000 Gbps	3,000 Gbps	1488 Mpps	2232 Mpps
C9300-24T	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48T	256 Gbps	736 Gbps	190.47 Mpps	547.62 Mpps
C9300-24P	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48P	256 Gbps	736 Gbps	190.47 Mpps	547.62 Mpps
C9300-24U	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48U	256 Gbps	736 Gbps	190.48 Mpps	547.62 Mpps
C9300-24UX	640 Gbps	1120 Gbps	476.19 Mpps	833.33 Mpps
C9300-48UXM	580 Gbps	1060 Gbps	431.54 Mpps	788.69 Mpps
C9300-48UN	640 Gbps	1120 Gbps	476.19 Mpps	833.33 Mpps
C9300-24UB	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48UB	256 Gbps	736 Gbps	190.48 Mpps	547.62 Mpps
C9300-24UXB	640 Gbps	1120 Gbps	476.19 Mpps	833.33 Mpps
C9300-24H	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48H	256 Gbps	736 Gbps	190.48 Mpps	547.62 Mpps
C9300-24S	208 Gbps	688 Gbps	154.76 Mpps	511.90 Mpps
C9300-48S	256 Gbps	736 Gbps	190.47 Mpps	547.62 Mpps

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SKU	Switching capacity	Switching capacity with stacking	Forwarding rate	Forwarding rate with stacking
C9300X-12Y	1,000 Gbps	2,000 Gbps	744.04 Mpps	1488 Mpps
C9300X-24Y	2,000 Gbps	3,000 Gbps	1488 Mpps	2232 Mpps
C9300LM-48UX-4Y	440 Gbps	760 Gbps	327.36 Mpps	565.44 Mpps
C9300LM-48U-4Y	296 Gbps	616 Gbps	220.22 Mpps	458.30 Mpps
C9300LM-24U-4Y	248 Gbps	568 Gbps	184.51 Mpps	422.59 Mpps
C9300LM-48T-4Y	296 Gbps	616 Gbps	220.22 Mpps	458.30 Mpps
C9300L-24T-4G	56 Gbps	376 Gbps	41.66 Mpps	279.76 Mpps
C9300L-24T-4X	128 Gbps	448 Gbps	95.23 Mpps	333.33 Mpps
C9300L-48T-4G	104 Gbps	424 Gbps	77.38 Mpps	315.48 Mpps
C9300L-48T-4X	176 Gbps	496 Gbps	130.95 Mpps	369.05 Mpps
C9300L-24P-4G	56 Gbps	376 Gbps	41.66 Mpps	279.76 Mpps
C9300L-24P-4X	128 Gbps	448 Gbps	95.23 Mpps	333.33 Mpps
C9300L-48P-4G	104 Gbps	424 Gbps	77.38 Mpps	315.48 Mpps
C9300L-48P-4X	176 Gbps	496 Gbps	130.95 Mpps	369.05 Mpps
C9300L-48PF-4G	104 Gbps	424 Gbps	77.38 Mpps	315.48 Mpps
C9300L-48PF-4X	176 Gbps	496 Gbps	130.95 Mpps	369.05 Mpps
C9300L-24UXG-4X	272 Gbps	592 Gbps	202.38 Mpps	440.47 Mpps
C9300L-24UXG-2Q	352 Gbps	672 Gbps	261.90 Mpps	500.00 Mpps
C9300L-48UXG-4X	392 Gbps	712 Gbps	291.66 Mpps	523.76 Mpps
C9300L-48UXG-2Q	472 Gbps	792 Gbps	351.19 Mpps	599.28 Mpps

All models are at wire-speed nonblocking performance for both IPv4 and IPv6. The forwarding rates in the table above are measured with 64-byte IPv4 packet sizes.

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SD-Access architecture

What if you could give time back to IT? Provide network access in minutes for any user or device to any application – without compromise? SD-Access provides the industry's first policy-based automation from network edge to cloud. Your foundation for your digital network, Cisco SD-Access. Built on the principles of Cisco DNA, SD-Access provides end-to-end segmentation to keep user, device, and application traffic separate without a redesign of the network. It automates user access policy so organizations can make sure the right policies are set for any user or device with any application across the network. This is accomplished with a single network fabric across LAN and WLAN, which creates a consistent user experience anywhere without compromising on security.

There are many challenges today in managing the network to drive business outcomes. These limitations are due to manual configuration and fragmented tool offerings. SD-Access provides:

- A transformational management solution that reduces operational expenses and enhances business agility
- Consistent management of wired and wireless network provisioning and policy
- Automated network segmentation and group-based policy
- Contextual insights for fast issue resolution and capacity planning
- Open and programmable interfaces for integration with third-party solutions

For an overview of the key use cases SD-Access addresses, refer to the [SD-Access Solution Overview](#).



Platform benefits

Cisco IOS XE opens a completely new paradigm in network configuration, operation, and monitoring through network automation. Cisco's automation solution is open, standards-based, and extensible across the entire lifecycle of a network device. The various automation mechanisms are outlined below.

- **Automated device provisioning** is the ability to automate the process of upgrading software images and installing configuration files on Cisco Catalyst switches when they are being deployed in the network for the first time. Cisco provides both turnkey solutions such as PiP and off-the-shelf tools such as zero-touch provisioning (ZTP) and Preboot Execution Environment (PXE) that enable an effortless and automated deployment.
- **API-driven configuration** is available with modern network switches such as the Cisco Catalyst 9300 Series. It supports a wide range of automation features and provides robust open APIs over NETCONF, RESTCONF, and GNM1 using YANG data models for external tools, both off-the-shelf and custom built, to automatically provision network resources.
- **Granular visibility** enables model-driven telemetry to stream data from a switch to a destination. The data to be streamed is identified through subscription to a data set in a YANG model. The subscribed data set is streamed to the destination at specified intervals. Additionally, Cisco IOS XE enables the push model. It provides near-real-time monitoring of the network, leading to quick detection and rectification of failures.
- **Seamless software upgrades and patching** supports OS resilience. Cisco IOS XE supports patching, which provides fixes for critical bugs and security vulnerabilities between regular maintenance releases. This support lets you add patches without having to wait for the next maintenance release.

Security

- **Encrypted Traffic Analytics (ETA)** is a unique capability for identifying malware in encrypted traffic coming from the access layer. Since more and more traffic is becoming encrypted, the visibility this feature affords for threat detection is critical for keeping your network secure at different layers.
- **AES-256 MACsec encryption** is the IEEE 802.1AE standard for authenticating and encrypting packets between switches. The Cisco Catalyst 9300 Series Switches support 256-bit and 128-bit AES, providing the most secure link encryption.
- **IPsec encryption** delivers secure end-to-end encrypted traffic between sites and connectivity to the Cloud. Catalyst 9300X models support line-rate IPsec up to 100 Gbps, delivering uncompromised secure connectivity.
- **Trustworthy solutions built with Cisco Trust Anchor technology** provide a highly secure foundation for Cisco products. With the Catalyst 9300 Series, this technology enables hardware and software authenticity assurance for supply chain trust and strong mitigation against man-in-the-middle attacks that compromise software and firmware. Trust Anchor capabilities include:
 - **Image signing:** Cryptographically signed images provide assurance that the firmware, BIOS, and other software are authentic and unmodified. As the system boots, the system's software signatures are checked for integrity.

- **Secure Boot:** Cisco Secure Boot technology anchors the boot sequence chain of trust to immutable hardware, mitigating threats against a system's foundational state and the software that is to be loaded, regardless of a user's privilege level. It provides layered protection against the persistence of malicious modified firmware.

- **Cisco Trust Anchor module:** A tamper-resistant, strong cryptographic, single-chip solution provides hardware authenticity assurance to uniquely identify the product so that its origin can be confirmed to Cisco. This provides assurance that the product is genuine.

Cloud Security

Cisco Umbrella® DNS Integration:

Small to midsize networks reliant on managed service providers can now host the Cisco Umbrella agent directly on their Catalyst 9300 Series Switches. This allows the business to easily customize its DNS filtering policies granularly at the user or group level to prevent bring-your-own-device (BYOD) or IoT guest or corporate users from accessing malicious or inappropriate websites, without having to rely on the service provider to push the policies out. It also lets the business optimize use of bandwidth by allowing direct cloud access for trusted apps. Requires a Cisco Catalyst and Cisco DNA Advantage license and Cisco Umbrella license per device.

Cisco ASAc app hosting Integration:

The integration of ASAc on Cisco Catalyst 9300 switches simplifies the network design by providing the flexibility to plug small-form-factor firewalls into the network closer to the source. It also avoids complex tunnels to centralized firewalls. This design lowers the total cost of ownership by reducing the number of physical firewall appliances in the network.

The ASAc Firewall App hosting solution hosts a virtual firewall or ASAc on Cisco Catalyst 9300 Series Switches. All the physical firewalls next to a switch can be virtualized and deployed on the switch itself. As in a traditional network, the SecOps team manages the ASAc firewalls deployed on the Catalyst switches, and the NetOps team instantiates the application and performs lifecycle management using Cisco Catalyst Center. The SecOps team controls policy management using Cisco Defense Orchestrator. Both the SecOps and NetOps teams can seamlessly manage the network without any disruptions.

The container version of Cisco ASAc provides full firewall functionality to secure IT, OT, and IoT converged networks. ASAc uses Layer 3 firewall policies and does a stateful inspection of the traffic.

The ASAc firewall runs on a 240-GB external SSD that is mounted on a Cisco Catalyst 9300 Series Switch. Cisco Catalyst Center deploys the ASAc on these Catalyst switches, and ASAc is then onboarded to Cisco Defense Orchestrator.

Service assurance

Cisco ThousandEyes integration:

Deliver a superior network and service experience for your users, employees, and partners with groundbreaking observability from network to app. Cisco ThousandEyes network tests are now integrated into Cisco Catalyst 9300 Series Switches with Cisco Catalyst and Cisco DNA Advantage licenses, giving you visibility beyond your campus



perimeter so you can resolve issues faster. The Cisco ThousandEyes Network and Application Synthetics license is included by default upon the selection of a Cisco Catalyst and Cisco DNA Advantage option with a 3-year, 5-year, or 7-year subscription. Please see [Cisco Catalyst and DNA Advantage Use Right to ThousandEyes](#) for more information about the free Cisco ThousandEyes entitlements that come with your Cisco Catalyst 9300 or 9400 Series switch's Cisco DNA Advantage subscription.

Resiliency and high availability

- **StackWise-1T:** Cisco Catalyst 9300 Series modular uplink models (C9300X SKUs) support the industry's highest back-panel stacking bandwidth solution (1 Tbps) with StackWise-1T. Up to eight switches can be configured in a StackWise-1T with the special connector at the back of the switch, using dedicated stack cables.
- **StackWise-480:** Cisco Catalyst 9300 Series modular uplink models (C9300 SKUs) support a high-speed back-panel stacking bandwidth solution (480 Gbps) with StackWise-480. Up to eight switches can be configured in a StackWise-480 with the special connector at the back of the switch, using dedicated stack cables.
- **StackWise-320:** Cisco Catalyst 9300 Series fixed uplink models (C9300L and C9300LM SKUs) support a stacking bandwidth solution (320 Gbps) with StackWise-320. Up to eight switches can be optionally configured in a StackWise-320 with the special stack kit at the back of the switch, using dedicated stack cables.
- **Cisco StackPower:** Cisco StackPower is an innovative power interconnect system that allows the power supplies in a stack to be shared as a common resource among all the switches. This allows you to simply add one extra power supply in any switch of the stack and either provide power redundancy for any of the stack members or simply add more power to the shared pool. Up to four switches can be configured in a StackPower stack with the special connector at the back of the switch. However, with the use of the XPS-2200 appliance, up to eight switches can be configured in the StackPower stack. Cisco StackPower is supported only on the models with a modular uplink stack - C9300 and C9300X SKUs. Catalyst 9300X models support StackPower+, delivering more power over StackPower cables compared to the Catalyst 9300 models.



Figure 7. Cisco Catalyst 9300 Series StackPower

- **High availability:** The Catalyst 9300 Series supports high-availability features, including the following:
 - Cross-stack EtherChannel provides the ability to configure Cisco EtherChannel technology across different members of the stack for high resiliency.

- **Flexlinks:** Flexlinks* allows you to set up active and backup interfaces or port channels, which can provide Layer 2 failover redundancy without the use of Spanning Tree Protocol (STP).
- **Extended fast software upgrade** provides the ability to upgrade the platform software or to reload the system in under 30 seconds of traffic impact, in both standalone and stack configurations.
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) provides rapid spanning tree convergence independent of spanning tree timers and also offers the benefit of Layer 2 load balancing and distributed processing.
- Per-VLAN Rapid Spanning Tree (PVRST+) allows rapid spanning tree (IEEE 802.1w) reconvergence on a per-VLAN spanning tree basis, providing simpler configuration than MSTP. In both MSTP and PVRST+ modes, stacked units behave as a single spanning tree node.
- Switch-port auto-recovery ("err-disable" recovery) automatically attempts to reactivate a link that is disabled because of a network error.
- The Catalyst 9300 Series platform delivers an industry-leading non-stop forwarding (NSF)/stateful switchover (SSO) resiliency architecture in a stackable solution with sub-50-ms failover.
- Always-on wireless network with stateful switchover when wireless functionality is enabled on stack of Catalyst 9300 Series Switches.

Deep buffer technology

The Catalyst 9300 Series higher-scale models have a deeper buffer to address the requirements of rich multimedia lossless content delivery and large routing tables in a fixed access solution with a wide range of uplink choices for deployment flexibility.

Flexible NetFlow

- Cisco IOS Software FNF is the next generation in flow visibility technology. It enables optimization of the network infrastructure, reduces operating costs, and improves capacity planning and security incident detection with increased flexibility and scalability. The Catalyst 9300 Series is capable of up to 64,000 flow entries on 48-port, 24-port, and 12-port models and up to 128,000 flow entries on Multigigabit models.

Application visibility and control

- Next-Generation Network-Based Application Recognition (NBAR2) enables advanced application classification techniques, up to 1400 predefined and well-known application signatures, and up to 150 encrypted applications on the Cisco Catalyst 9000 switches. Some of the most popular applications included are Skype, Office 365, Microsoft Lync, Webex, and Facebook, among many others that are predefined and easy to configure. NBAR2 provides the network administrator with an important tool to identify, control, and monitor end-user application usage while helping ensure a quality user experience and securing the network from malicious attacks. NBAR2 leverages FNF to report application performance and activities within the network to any supported NetFlow collector, such as Cisco Prime®, Cisco Secure Network Analytics, or any compliant third-party tool.



QoS

- **Superior QoS:** The Cisco Catalyst 9300 Series offers Gigabit Ethernet speeds with intelligent services that keep traffic flowing smoothly, even at 10 times the normal network speed. Industry-leading mechanisms for cross-stack marking, classification, and scheduling deliver superior performance for data, voice, and video traffic at wire speed. Superior QoS includes granular wireless bandwidth management and fair sharing, 802.1p class of service (CoS) and Differentiated Services Code Point (DSCP) field classification, shaped round robin (SRR) scheduling, Committed Information Rate (CIR), and eight egress queues per port.

Service discovery

- **Multicast DNS (mDNS) gateway:** This service discovery gateway facilitates sharing of services advertised using the Apple mDNS (Bonjour) protocol, such as printers, Apple TVs, and file services across the network. Additionally, the administrator can create policies defining which services can be seen and accessed by the users in the network. This capability facilitates a BYOD rollout.

Smart operation

- **Simplified Campus Automation** is designed to optimize the discovery and configuration of devices in your network with a more streamlined simple and easy-to-use automation tool. With features such as simplified discovery, IT can discover devices within the network with just a few steps. Also available is a more streamlined GUI that provides a simplified view of switch configurations and software details on a port-by-port basis.

Cloud management with IOS XE: Cloud management with IOS XE simplifies network operations by providing a centralized, intuitive dashboard that enables IT teams to manage, configure, and monitor all devices in real time. With features like zero-touch provisioning, automated firmware updates, and port-level visibility, cloud management reduces manual effort, minimizes errors, and delivers end-to-end visibility across the network.

The Cisco Catalyst 9300 Series Switches provide flexibility in cloud management by offering the ability to choose the configuration source of each device managed from the Meraki dashboard.

Configuration Source: Cloud: This operating mode offers the full cloud management experience. Device configurations are managed via the Meraki user interface and delivered entirely from the cloud. This capability also offers a read-only Cloud CLI terminal to view the entire running configuration or perform advanced troubleshooting using IOS XE show commands.

Configuration Source: Device: This capability is an evolution of Cloud Monitoring. With device configuration, users can onboard their device to the cloud to access central monitoring and troubleshooting tools, as well as a Cloud CLI terminal to execute read/write commands. Configurations are managed via local console, Secure Shell (SSH), or CLI and remain local to the device.

To learn more about cloud management with IOS XE, see [Cloud Management with IOS XE](#).

- **Meraki dashboard monitoring and management:** Catalyst 9300 Series Switches can be ordered or migrated to be Meraki dashboard managed, combining the simplicity of the Meraki dashboard with the power of Catalyst 9300 switching. All configuration and monitoring is performed natively in the dashboard.

- **WebUI:** WebUI is an embedded GUI-based device-management tool that provides the ability to provision the device, to simplify device deployment and manageability, and to enhance the user experience. It comes with the default image, so there is no need to enable anything or install any license on the device. You can use WebUI to build configurations, and to monitor and troubleshoot the device without having CLI expertise.
- **Efficient switch operation:** Cisco Catalyst 9300 Series Switches provide optimum power saving with Energy Efficient Ethernet (EEE) on the RJ-45 ports and low-power operations for industry best-in-class power management and power consumption capabilities. The ports support reduced power modes so that ports not in use can move into a lower power utilization state. Other efficient switch operation features are as follows:
 - Per-port power consumption command allows customers to specify a maximum power setting on an individual port.
 - Per-port PoE power sensing measures actual power being drawn, enabling more intelligent control of powered devices. The PoE MIB provides proactive visibility into power usage and allows you to set different power-level thresholds.
 - **RFD tags:** Catalyst 9300 Series Switches have an embedded RFID tag that facilitates easy asset and inventory management using commercial RFID readers.
 - **Blue beacon:** Catalyst 9300 Series Switches support a blue beacon LED for easy identification of the switch being accessed.

Open standards-based fabric

The Cisco Catalyst 9300 Series Switches support modern fabric technologies such as VXLAN with Border Gateway Protocol Ethernet VPN (BGP-EVPN) control plane, with open APIs. This technology provides the flexibility to build open standards-based fabrics to secure infrastructure, users, and data. This fabric architecture provides rich unicast and multicast protocol support to optimally route or bridge traffic as well as support for integrated campus services, all of which can be automated via open APIs to effectively configure and monitor the network.

Programmability

Cisco IOS XE provides open standards-based APIs such as NETCONF, RESTCONF, and gNMI to simplify provisioning and configuration, allowing network administrators to save time when provisioning new network devices and to prevent the human errors that often are a byproduct of manual configuration. Integrating ZTP with various DevOps toolkits allows network administrators to drastically reduce the time and resources needed to onboard a device to their network. The ability to collect real-time statistics through model-driven telemetry through gRPC and gNMI allows administrators to integrate with many health monitoring tools to optimize their environments and to troubleshoot and provide alerts about any potential problems.



High-performance IP routing

The Cisco Express Forwarding hardware routing architecture delivers extremely high-performance IP routing in the Cisco Catalyst 9300 Series Switches, based on:

- IP unicast routing protocols (including static, Routing Information Protocol version 1 [RIPv1], RIPv2, RIPv6, and Open Shortest Path First [OSPF]) are supported for small network routing applications with the Network Essentials stack. Equal-cost routing facilitates Layer 3 load balancing and redundancy across the stack.
- Advanced IP unicast routing protocols (including full OSPF, Enhanced Interior Gateway Routing Protocol [EIGRP], BGPv4, and Intermediate System-to-Intermediate System version 4 [IS-ISv4]) are supported for load balancing and for constructing scalable LANs. IPv6 routing (using OSPFv3 and BGPv6) is supported in hardware for maximum performance.
- Protocol-Independent Multicast (PIM) for IP multicast routing is supported, including PIM Sparse Mode (PIM SM), and Source-Specific Multicast (SSM).
- IPv6 addressing is supported on interfaces with appropriate show commands for monitoring and troubleshooting.

Audio Video Bridging

Starting with Cisco IOS XE Software Release 16.8, the Cisco Catalyst 9300 Series supports the IEEE 802.1 AVB standard. This standard provided the means for highly reliable delivery of low-latency, time-synchronized audio and video streaming services through Layer 2 Ethernet networks. The standard also makes it easier to integrate new services and for AV equipment from different vendors to interoperate.

Benefits

- Improves quality of experience by lowering jitter and latency for time-synchronized delivery of high-quality AV.
- Provides scalability of applications across networked deployments, including expensive and complex AV infrastructure.
- Lowers total cost of ownership (TCO) with reduced cabling (lowers CapEx) and no license fees (lowers OpEx).

For more details about AVB and specific models supported, see <https://www.cisco.com/go/avb>.

Multigigabit Ethernet technology

Cisco Multigigabit Ethernet technology allows you to achieve bandwidth speeds from 1 Gbps to 10 Gbps over traditional Category 5e/6 cabling or above. This technology addresses the need for exponential increases in bandwidth with the enormous growth of 802.11ac Wave 2, to be eclipsed by the growth of Wi-Fi 6 and new wireless applications without having to replace current cabling infrastructure.

Multiprotocol Label Switching

The Cisco Catalyst 9300 Series Switches support Multiprotocol Label Switching (MPLS), which combines the performance and capabilities of Layer 2 (data link layer) switching with the proven scalability of Layer 3 (network layer) routing. MPLS enables explosive growth in network utilization while providing the opportunity to differentiate services without sacrificing the existing network infrastructure. MPLS support includes:

- **MPLS Layer 3 VPN:** An MPLS VPN consists of a set of sites that are interconnected by means of an MPLS provider core network. At each customer site, one or more customer edge (CE) devices attach to one or more provider edge (PE) devices.
- **VPLS:** Virtual Private LAN Service (VPLS) enables enterprises to link together their Ethernet-based LANs from multiple sites via the infrastructure provided by their service provider.
- **EoMPLS:** Ethernet over MPLS (EoMPLS) is a category of Any Transport over MPLS (AToM) to transport Layer 2 packets over an MPLS backbone.
- **MPLS over GRE:** L3VPN over Generic Routing Encapsulation (GRE) and VPLS over GRE are supported to tunnel MPLS/VPLS packets over non-MPLS networks using GRE tunneling.

Power over Ethernet leadership

Cisco UPOE and UPOE+: PoE removes the need for wall sockets to power each PoE-enabled device and eliminates the cost of additional electrical cabling and circuits that would otherwise be necessary in IP phone and WLAN deployments. Cisco UPOE extends the IEEE PoE+ standard to double the power per port to 60 watts. This facilitates delivery of network power to a broad range of devices requiring higher power, including virtual desktop terminals, IP tunnels, compact switches, building management gateways, LED lights, wireless access points, and 9300 UPOE+ switches can deliver PoE power up to 90W and, UPOE+ ports provide data and power over a single cable to power devices like wireless access points, digital signage, security cameras, thermal cameras with pan-tilt-zoom features, LED lighting fixtures, and large display screens. UPOE+ offers reduced cabling and installation costs without need for permits, device daisy-chaining, real-time device information, centralized management and remote control, and fast, flexible device installation, enabling devices to be positioned in a practical location instead of Catalyst 9300 Series modular uplink (C9300 and C9300X SKUs) models support Cisco UPOE, PoE+, and PoE, thereby addressing the largest range of network power needs.

Catalyst 9300 Series fixed uplink (C9300L and C9300LM SKUs) models support Cisco UPOE, PoE+, and PoE.

Tables 10 through 13 show the power supply combinations required for different PoE needs.

Table 10. Power supply requirements for Catalyst 9300 Series modular uplink PoE/PoE+ models (C9300-XUP SKUs)

	24-port PoE switch	48-port PoE switch
PoE on all ports (15.4W per port)	1 PWR-C1-715WAC/ PWR-C1-715WAC-P/ PWR-C1-715WDC	1 PWR-C1-1100WAC/PWR-C1-1100WAC-P or 2 PWR-C1-715WAC/ PWR-C1-715WDC



	24-port PoE switch	48-port PoE switch
PoE+ on all ports (30W per port)	1 PWR-C1-1100WAC/ PWR-C1-1100WAC-P or 2 PWR-C1-715WAC/ PWR-C1-715WAC-P/ PWR-C1-715WDC	2 PWR-C1-1100WAC/PWR-C1-1100WAC-P or 1 PWR-C1-1100WAC/ PWR-C1-1100WAC-P and 1 PWR-C1-715WAC/PWR-C1-715WDC

Table 11. Power supply requirements for Catalyst 9300 Series UPOE models (C9300-XUP and C9300-XUP-XX SKUs)

	24-port Cisco UPOE switch	48-port Cisco UPOE switch	48- and 24-port Multigigabit Cisco UPOE switch ¹
Cisco UPOE (60W per port) and IEEE 802.3bt Type 3 on all ports (24-port switch) or up to 30 ports (48-port switch)	1 PWR-C1-1100WAC/PWR-C1-1100WAC-P and 1 PWR-C1-715WAC/PWR-C1-715WDC	2 PWR-C1-1100WAC/PWR-C1-1100WAC-P	2 PWR-C1-1100WAC/PWR-C1-1100WAC-P

Table 12. Power supply requirements for Catalyst 9300 Series UPOE+ models (C9300-XUP SKUs)

	24-port Cisco UPOE+ switch	48-port Cisco UPOE+ switch
Cisco UPOE+ (90W per port) and IEEE 802.3bt Type 4 on 21 ports (24-port and 48-port switch)	1 PWR-C1-1100WAC/PWR-C1-1100WAC-P and 1 PWR-C1-715WAC/PWR-C1-715WDC	2 PWR-C1-1100WAC/PWR-C1-1100WAC-P or 2 PWR-C1-1900WAC-P

Table 13. Power supply requirements for Catalyst 9300 Series fixed uplink PoE/PoE+ models (C9300-LXUP SKUs)

	24-port PoE switch	48-port PoE switch
PoE on all ports (15.4W per port)	1 PWR-C1-715WAC-P/ PWR-C1-715WDC	1 PWR-C1-1100WAC-P or 2 PWR-C1-715WAC-P
PoE+ on all ports (30W per port)	1 PWR-C1-1100WAC-P or 2 PWR-C1-715WAC-P/ PWR-C1-715WDC	2 PWR-C1-1100WAC-P or 1 PWR-C1-1100WAC-P and 1 PWR-C1-715WAC-P/PWR-C1-715WDC

- **Perpetual PoE:** With Perpetual PoE, the PoE power is maintained during a switch reload. This is important for IoT endpoints such as PoE-powered lights, so that there is no disruption during switch reboot.

- **Fast PoE:** When power is restored to a switch, PoE starts delivering power to endpoints without waiting for the operating system to fully load, thereby speeding up the time for the endpoint to start up.

- **C9300-48UPLX, C9300-24UPLX, and C9300-48UPLX are available with PWR-C1-1100WAC-P, a Platinum-rated power supply. Platinum-rated power supplies are more efficient, lowering operating power costs.**

- **PWR-C1-1100WAC-UP and PWR-C1-715WAC-UP Platinum-rated power supply upgrade options are available to upgrade the default AC power supply to 1100W or 715W.**

Software requirements

Cisco Catalyst and Cisco DNA Software for Access Switching is available for the **Cisco Catalyst 9300 Series**. Meraki software for cloud management is also available for certain models.

Cisco Catalyst and Cisco DNA Software for Access Switching offers comprehensive solutions for the enterprise campus and branch offices. Cisco Catalyst and Cisco DNA for Access Switching introduces a simpler and more economical way to deploy access, aggregation, and core switches across enterprise campus and branch locations.

The Cisco Catalyst and Cisco DNA Subscription for Switching offer delivers an unbound network on an open and extensible architecture to help you navigate the digital journey. This subscription offer simplifies the buying process and includes lower initiation costs and flexible terms. It includes Cisco Catalyst and Cisco DNA Advantage Software with full Cisco DNA capabilities and SD-Access, bundled with ISE Base, ISE Plus, and Secure Network Analytics.

For ordering information for Cisco Catalyst and Cisco DNA Software for the Cisco Catalyst 9300 Series, go to <https://www.cisco.com/c/en/us/products/software/one-access/switching-part-numbers.html>.

Cisco Catalyst 9300 Series Switches run on Cisco IOS XE Release 16.5.1a or later with the following exceptions. Catalyst 9300 Series 10 fiber models (C9300L-xxS SKUs) are supported on Cisco IOS XE Release 16.11.1a or later. Catalyst 9300 Series fixed uplink models (C9300L SKUs) are supported on Cisco IOS XE Release 16.11.1b or later. These software releases include all the features listed earlier in the Platform Benefits section.

The Meraki software option combines the simplicity of the Meraki dashboard with power of Catalyst 9000 switching hardware. To satisfy high-bandwidth applications and the deployment of high-speed 802.11ax/ Wi-Fi 6/6E access points, the Meraki software option provides Multigigabit ports, 480G stacking, and modular 10G/40G uplinks. Catalyst 9300 Series models with the Meraki software option deliver resiliency with fast stack convergence and StackPower. They provide Adaptive Policy using an over-the-wire tag that segments traffic into security groups to deliver scalable security. The Catalyst 9300 models integrated under the Meraki dashboard provide a simple, powerful solution to the most demanding wired access applications.

Catalyst 9300 Series Switches come with Adaptive Policy to provide simple and scalable security policies to segment traffic using security groups in Meraki dashboard. Security groups are created in the dashboard using natural language such as "IoT device" and "Guest." The security policy intent (for example, Permit or Deny) is then simply provisioned between security groups, which results in the segmentation of each group's traffic. By making security policy management intuitive and scalable relative to legacy IP address-based ACLs, Adaptive Policy empowers operators to confidently secure their network traffic independent of future network changes.

Catalyst 9300 Series Switches can be ordered directly or migrated to the Meraki software option. For model compatibility and more information, please see Getting started: Cisco Catalyst 9300 Management with Meraki Dashboard.

You can also refer to Meraki data sheets that provide details on the models orderable with the Meraki software option ([Catalyst C9300-M data sheet](#), [Catalyst C9300X-M data sheet](#), [Catalyst C9300L-M data sheet](#)) as well as supported optics and accessories.



Licensing packaging

The Cisco Catalyst 9000 family of switches introduces a new and simplified licensing package in the form of base and add-on licenses.

- The **perpetual licensing package** includes the Network Essentials and Network Advantage licensing options that are tied to the hardware. Between them, the base licensing packages cover switching fundamentals, management automation, troubleshooting, and advanced switching features. These network licenses are perpetual.

The **subscription licensing package** includes the Cisco Catalyst and Cisco DNA Essentials, Cisco Catalyst and Cisco DNA Advantage, and Meraki Advanced and Enterprise options. In addition to on-box capabilities, the features available with this package provide Cisco innovations on the switch, as well as on Cisco Catalyst Center, and Meraki dashboard. For Catalyst 9300 models ordered with a Network Essentials and Network Advantage license, a Cisco Catalyst or Cisco DNA subscription license is mandatory at the time of configuration. For Catalyst 9300 models ordered with a Meraki SKU, the term license is ordered separately but is required for the switch to be recognized in Meraki dashboard. With Cisco Catalyst and Cisco DNA software licenses, customers receive embedded SWSS, which covers 24x7x365 Cisco Technical Assistance Center (TAC) support, software release updates, advanced support analytics, and designated service management. This is valid only for the Cisco Catalyst and Cisco DNA Software subscription stacks (Cisco Catalyst and Cisco DNA Essentials or Advantage).

Note: For full hardware support, including the perpetual network stack, customers will require Cisco Smart Net Total Care® for 24x7x365 Cisco TAC support, proactive security and product alerts, and product lifecycle management. An additional option for hardware support is Solution Support for your multivendor Cisco solution environment.

License consumption is easily determined by the package itself. While Network Essentials and Network Advantage perpetual licenses are always permanent and without an expiration date, subscription licenses have to be purchased for a 3-, 5-, or 7-year term (and hence are also known as term-based licenses). Table 14 shows the combinations of network perpetual and Cisco Catalyst and Cisco DNA Software subscription licenses that must be purchased.

Table 14. Cisco Catalyst, Cisco DNA, and network licensing combinations

	Cisco Catalyst and Cisco DNA Essentials	Cisco Catalyst and Cisco DNA Advantage
Network Essentials	Yes**	Yes**
Network Advantage	No*	Yes

* At the time of Cisco Catalyst and Cisco DNA license renewal, the Cisco Catalyst and Cisco DNA Essentials license can be purchased to be used with Network Advantage.

** Network Advantage is inclusive of Network Essentials features.

Managing licenses with Smart Accounts

Creating Smart Accounts by using the Cisco Smart Software Manager (SSM) enables you to manage your software licenses from a centralized website. You can set up Cisco SSM to receive daily email alerts and to be notified of expiring subscription licenses that you want to renew.

You must order a Cisco Catalyst or Cisco DNA subscription term license in order to purchase a switch with Network Essentials or Network Advantage perpetual licenses. When the license term expires, you can either renew the add-on license to continue using it or deactivate the add-on license and then reload the switch to continue operating with the base license capabilities.

Both the base and add-on licenses are also available for a 90-day evaluation period. An evaluation license is activated temporarily, without purchase. An expired evaluation license cannot be reactivated after reload.

It is not required to deploy Cisco Catalyst Center just to use Cisco Catalyst, Cisco DNA, or network packages. Meraki dashboard is required to deploy a Catalyst 9300 switch with a Meraki software license.

Introduction to Smart Licensing

Cisco Smart Licensing is a flexible licensing model that provides you with an easier, faster, and more consistent way to purchase and manage software across the Cisco portfolio and across your organization. And it's secure – you control what users can access. With Smart Licensing you get:

- **Easy activation:** Smart Licensing establishes a pool of software licenses that can be used across the entire organization—no more product activation keys (PAKs).
- **Unified management:** My Cisco Entitlements provides a complete view into all of your Cisco products and services in an easy-to-use portal, so you always know what you have and what you are using.
- **License flexibility:** Your software is not node-locked to your hardware, so you can easily use and transfer licenses as needed.

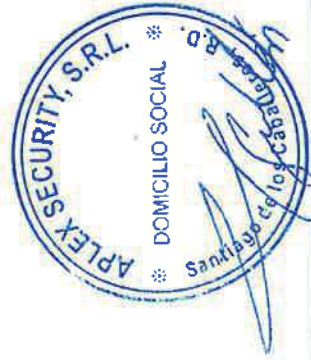
To use Smart Licensing, you must first set up a Smart Account on Cisco Software Central (software.cisco.com).

For a more detailed overview of Cisco Licensing, go to cisco.com/go/licensingguide.

Table 15. Software licenses

	Cisco Catalyst Software subscription	Cisco DNA Software subscription	Cisco Meraki Software subscription	Network stack
Packages¹	3-, 5-, or 7-year terms	3-, 5-, or 7-year terms	1-, 3-, 5-, 7-, or 10 year terms	Perpetual
Tiers	Advantage, Essentials	Advantage, Essentials	Advanced, Enterprise	Advantage, Essentials
Portability²	✓	✓		✓

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	Cisco Catalyst Software subscription	Cisco DNA Software subscription	Cisco Meraki Software subscription	Network stack
Management options	Catalyst Center, Meraki dashboard monitoring and management	Catalyst Center, Meraki dashboard monitoring and management	Meraki dashboard management	Meraki dashboard CLI, WebUI
Included support	Base product-level support for hardware, software, and OS	SWSS	Product-level support for hardware, software, and OS	✓
Included³ add-ons: Common ISE policy, ThousandEyes network and application assurance, Cisco Spaces	✓	✓	✓	✓

¹ For all new orders, subscription licenses are mandatory and must be of the same tier as network licenses.

² Portability within the same Catalyst 9000 series of hardware.

³ Available only with the Advantage tier.

There are three choices for software subscription: Cisco DNA, Cisco Catalyst, or Cisco Meraki. They provide:

- Flexible licensing models to smoothly distribute customers' software spending over time.
- Investment protection for software purchases through software services-enabled license portability.
- Access to updates, upgrades, and new technology from Cisco through Cisco Software Support Service (SWSS).
- Base product-level support for hardware, software, and Cisco IOS (Catalyst software only).
- ISE licenses included in the Advantage tier to facilitate zero-trust network security* (Catalyst software only).
- Access to end-to-end network visibility with Cisco Spaces, service assurance through Cisco ThousandEyes Network and Application Synthetics and app hosted ASAC firewall (with the Advantage license).

Manage your entire switching structure as a single, converged component. With one management system, on-premises, virtual, or in the cloud, and one policy for wired and wireless networks, it offers an efficient way to provide more secure access.

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Tables 16 and 17 show the features included in the Network Essentials and Advantage packages and in the Cisco Catalyst and Cisco DNA Essentials and Advantage packages.

Table 16. Network Essentials and Advantage package features

Features	Network Essentials	Network Advantage
Switch fundamentals	✓	✓
Layer 2, Routed Access (RIP, EIGRP Stub, OSPF - 1000 routes), PBR, PIM Stub Multicast (1000 routes), PVLAN, VRRP, PBR, CDP, QoS, FHS, 802.1X, MACsec-128, CoPP, SXP, IP SLA, Responder, SSO		
Advanced switch capabilities and scale	✗	✓
BGP, EIGRP, HSRP, IS-IS, BSR, MSDP, PIM-BIDIR, IP SLA, OSPF		
Network segmentation	✗	✓
VRF, VXLAN, LISP, Cisco TrustSec*, SGT, MPLS, mVPN		
Automation	✗	✓
NETCONF, RESTCONF, gRPC, YANG, PnP Agent, ZTP/Open PnP, GuestShell (On-Box Python)		
Telemetry and visibility	✓	✓
Model-driven telemetry, sampled NetFlow, SPAN, RSPAN		
High availability and resiliency	✗	✓
Nonstop Forwarding (NSF), Graceful Insertion and Removal (GIR), Extended Fast Software Upgrade (xFSU), Software Patching (CLI based)		
IoT integration	✗	✓
AVB, PTP, CoAP		
Security	✗	✓
MACsec-256		

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Table 17. Cisco Catalyst and Cisco DNA Essentials and Advantage package features (add a section for other software support and add Prime, ISE and Stealthwatch support)

Features	Cisco Catalyst and Cisco DNA Essentials	Cisco Catalyst and Cisco DNA Advantage
Switch features		
Optimized network deployments	✗	✓
Cisco Catalyst Service for Bonjour		
Advanced telemetry and visibility	✓	✓
Full Flexible NetFlow, EEM		
Optimized telemetry and visibility	✗	✓
ERSPAN, AVC (NBAR2), app hosting (in containers/VMs), Wireshark		
Advanced security	✗	✓
Encrypted Traffic Analytics (ETA), IPsec		
Cisco Catalyst Center features		
Simplified Campus Automation	✓	✓
Simplified Campus Automation optimizes the discovery and configuration of devices in your network with a more streamlined simple and easy-to-use automation tool		
Day-0 network bring-up automation	✓	✓
Cisco Network Plug-and-Play application, network settings, device credentials, LAN automation, host onboarding		
Element management	✓	✓
Discovery, inventory, topology, software image, licensing, and configuration management		
Element management	✗	✓
Patch management		
Basic Assurance	✓	✓
Health dashboards - Network, Client, Application; switch and wired client health monitoring		

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Features

Cisco ThousandEyes Network and Application Synthetics

Network performance metrics, dashboarding, visibility into app and service experience, end-to-end visibility across cloud and DC applications

App hosted Cisco ASA firewall

Statful inspection of network traffic with Cisco Adaptive Security Virtual Appliance (ASAC) without any additional hardware

SD-Access

Policy-based automation and assurance for wired and wireless

Network assurance and analytics

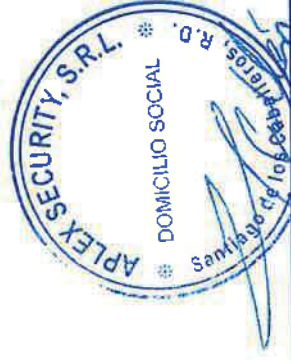
Global insights, trends, compliance, custom reports; switch 360, wired client 360; fabric and non-fabric insights; app health, app 360, app performance (loss, latency, jitter)

Catalyst 9300 Series Switches can be migrated into Meraki mode (fully cloud managed). For model compatibility and more information, see Getting Started: Cisco Catalyst 9300 Management with Meraki Dashboard: https://documentation.meraki.com/MS/Deployment_Guides/Getting_started%3A_Cisco_Catalyst_9300_Management_with_Meraki_Dashboard.

Catalyst switches can also be ordered in Meraki mode by using the "-M" part numbers. For ordering information for Cisco C9300LX-M switches, please refer to the Meraki data sheets listing -M part numbers.

Meraki data sheets:

- [Catalyst 9300-M data sheet](#)
- [Catalyst 9300X-M data sheet](#)
- [Catalyst 9300L-M data sheet](#)
- [Catalyst C9300/X/L-M Installation Guide](#)
- [SEP and Stacking Accessories for Meraki C9300/X/L-M Switches](#)



Specifications

Dimensions, weight, acoustic, mean time between failures

The table below shows the dimensions, weights, acoustic details, and mean time between failures of all models of Cisco Catalyst 9300 Series Switches.

Table 18. Model dimensions, weight, and mean time between failures (MTBF) metrics

General specifications

Dimensions (H x W x D) in inches

Model	Chassis only	With default power supply	With 1100W power supply
C9300X-48HX	1.73 x 17.5 x 19	1.73 x 17.5 x 22.03	1.73 x 17.5 x 22.03
C9300X-48TX	1.73 x 17.5 x 19	1.73 x 17.5 x 20.56	1.73 x 17.5 x 22.03
C9300X-48HXN	1.73 x 17.5 x 17.57	1.73 x 17.5 x 20.63	1.73 x 17.5 x 20.63
C9300X-24HX	1.73 x 17.5 x 17.57	1.73 x 17.5 x 20.63	1.73 x 17.5 x 20.63
C9300X-12Y	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.6	1.73 x 17.5 x 19.2
C9300X-24Y	1.73 x 17.5 x 17.6	1.73 x 17.5 x 19.2	1.73 x 17.5 x 20.7
C9300-24T	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-24P	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-24U	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-24UX	1.73 x 17.5 x 17.1	1.73 x 17.5 x 20.2	1.73 x 17.5 x 20.2
C9300-24UB	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-24UXB	1.73 x 17.5 x 17.1	1.73 x 17.5 x 20.2	1.73 x 17.5 x 20.2
C9300-24H	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-48T	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-48P	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300-48U	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-48UXM	1.73 x 17.5 x 19.1	1.73 x 17.5 x 22.2	1.73 x 17.5 x 22.2
C9300-48UN	1.73 x 17.5 x 19.1	1.73 x 17.5 x 22.2	1.73 x 17.5 x 22.2

General specifications

C9300-48UB	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-48H	1.73 x 17.5 x 16.1	1.73 x 17.5 x 19.2	1.73 x 17.5 x 19.2
C9300-24S	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2	1.73 x 17.5 x 20.7
C9300-48S	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2	1.73 x 17.5 x 20.7
C9300LM-48UX-4Y	1.73" x 17.50" x 13.03"	1.73 x 17.50 x 13.17	1.73 x 17.50 x 13.03 (w/ DC power supply)
C9300LM-48U-4Y	1.73" x 17.50" x 13.03"	1.73 x 17.50 x 13.17	1.73 x 17.50 x 13.03 (w/ DC power supply)
C9300LM-24U-4Y	1.73" x 17.50" x 13.03"	1.73 x 17.50 x 13.17	1.73 x 17.50 x 13.03 (w/ DC power supply)
C9300LM-48T-4Y	1.73" x 17.50" x 10.84"	1.73 x 17.50 x 12.39	1.73 x 17.50 x 11.86 (w/ DC power supply)
C9300L-24T-4G	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-24T-4X	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-48T-4G	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-48T-4X	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-24P-4G	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-24P-4X	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-48P-4G	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2
C9300L-48P-4X	1.73 x 17.5 x 16.1	1.73 x 17.5 x 17.7	1.73 x 17.5 x 19.2

Dimensions (H x W x D) in centimeters

C9300X-48HX	4.4 x 44.5 x 48.3	4.4 x 44.5 x 56.0	4.4 x 44.5 x 56.0
C9300X-48TX	4.4 x 44.5 x 48.3	4.4 x 44.5 x 52.2	4.4 x 44.5 x 56.0
C9300X-48HXN	4.4 x 44.5 x 44.6	4.4 x 44.5 x 52.4	4.4 x 44.5 x 52.4
C9300X-24HX	4.4 x 44.5 x 44.6	4.4 x 44.5 x 52.4	4.4 x 44.5 x 52.4
C9300X-12Y	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.7	4.4 x 44.5 x 48.8
C9300X-24Y	4.4 x 44.5 x 44.7	4.4 x 44.5 x 48.8	4.4 x 44.5 x 52.6



General specifications

C9300-24T	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-24P	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-24U	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-24UX	4.4 x 44.5 x 43.4	4.4 x 44.5 x 51.3	4.4 x 44.5 x 51.3
C9300-24H	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-48T	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-48P	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300-48U	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-48UXM	4.4 x 44.5 x 48.5	4.4 x 44.5 x 56.4	4.4 x 44.5 x 56.4
C9300-48UN	4.4 x 44.5 x 48.5	4.4 x 44.5 x 56.4	4.4 x 44.5 x 56.4
C9300-48H	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300-24S	4.3 x 44.4 x 44.9	4.3 x 44.4 x 48.8	4.3 x 44.4 x 52.6
C9300-48S	4.3 x 44.4 x 44.9	4.3 x 44.4 x 48.8	4.3 x 44.4 x 52.6
C9300LM-48UX-4Y	4.3 x 44.4 x 33.1	4.3 x 44.4 x 33.4	4.3 x 44.4 x 32.5 (w/ DC power supply)
C9300LM-48U-4Y	4.3 x 44.4 x 33.1	4.3 x 44.4 x 33.4	4.3 x 44.4 x 32.5 (w/ DC power supply)
C9300LM-24U-4Y	4.3 x 44.4 x 33.1	4.3 x 44.4 x 33.4	4.3 x 44.4 x 32.5 (w/ DC power supply)
C9300LM-48T-4Y	4.3 x 44.4 x 27.5	4.3 x 44.4 x 27.5	4.3 x 44.4 x 29.7 (w/ DC power supply)
C9300L-24T-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-24T-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48T-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48T-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-24P-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-24P-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8

General specifications

C9300L-48P-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48P-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 44.9	4.4 x 44.5 x 48.8
C9300L-48PF-4G	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-48PF-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-24UXG-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-24UXG-2Q	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-48UXG-4X	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8
C9300L-48UXG-2Q	4.4 x 44.5 x 40.9	4.4 x 44.5 x 48.8	4.4 x 44.5 x 48.8

Weight (with default power supply)

Model	Pounds	Kilograms
C9300X-48HX	14.6	6.62
C9300X-48TX	14.6	6.62
C9300X-48HXN	14.2	6.44
C9300X-24HX	13.8	6.25
C9300X-12Y	15.0	6.80
C9300X-24Y	16.2	7.35
C9300-24T	16.03	7.27
C9300-24P	16.33	7.4
C9300-24U	16.63	7.54
C9300-24UX	18.18	8.25
C9300-24UB	16.63	7.54
C9300-24UXB	16.18	8.25
C9300-24H	16.63	7.54
C9300-48T	16.43	7.45
C9300-48P	16.73	7.59

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General specifications

C9300-48U	17.03	7.72
C9300-48UXM	20.50	9.34
C9300-48UN	20.05	9.09
C9300-48UB	17.03	7.72
C9300-48H	17.03	7.72
C9300-24S	16.84	7.64
C9300-48S	17.32	7.86
C9300LM-48UX-4Y	12	5.45
C9300LM-48U-4Y	12	5.45
C9300LM-24U-4Y	11.5	5.21
C9300LM-48T-4Y	11	4.99
C9300L-24T-4G	14.93	6.78
C9300L-24T-4X	14.93	6.78
C9300L-48T-4G	15.41	7.0
C9300L-48T-4X	15.41	7.0
C9300L-24P-4G	14.99	6.81
C9300L-24P-4X	14.99	6.81
C9300L-48P-4G	15.46	7.03
C9300L-48P-4X	15.46	7.03
C9300L-48PF-4G	15.48	7.03
C9300L-48PF-4X	15.48	7.03
C9300L-24UXG-4X	15.73	7.13
C9300L-24UXG-2Q	16.01	7.26
C9300L-48UXG-4X	16.86	7.65
C9300L-48UXG-2Q	16.86	7.65

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General specifications

Mean time between failures (hours)

C9300X-48HX	185,420
C9300X-48TX	206,480
C9300X-48HXN	188,200
C9300X-24HX	220,250
C9300X-12Y	265,650
C9300X-24Y	249,350
C9300-24T	314,790
C9300-24P	299,000
C9300-24U	238,410
C9300-24UX	214,760
C9300-24UB	354,300
C9300-24UXB	288,520
C9300-24H	239,410
C9300-48T	305,870
C9300-48P	277,770
C9300-48U	227,410
C9300-48UXM	202,160
C9300-48UN	198,647
C9300-48UB	337,170
C9300-48H	227,410
C9300-24S	284,130
C9300-48S	281,920
C9300L-24T-4G	395,800
C9300L-24T-4X	357,700

General specifications

C9300L-48T-4G	387,860
C9300L-48T-4X	380,080
C9300L-24P-4G	346,940
C9300L-24P-4X	340,710
C9300L-48P-4G	314,140
C9300L-48P-4X	309,020
C9300L-48PF-4G	303,660
C9300L-48PF-4X	298,880
C9300L-24UXG-4X	332,640
C9300L-24UXG-2Q	291,670
C9300L-48UXG-4X	273,820
C9300L-48UXG-2Q	275,010
C9300LM-24U-4Y	357,350
C9300LM-48U-4Y	304,970
C9300LM-48T-4Y	408,710
C9300LM-48UXG-4Y	292,410
PWR-C1-350WAC-P	1,335,012 (ranges from 1.3 million to 3.1 million, depending on temperature, input voltage, and vendor)
PWR-C1-715WAC-P	1,054,881 (ranges from 1.05 million to 2.6 million, depending on temperature, input voltage, and vendor)
PWR-C1-1100WAC-P	1,217,904 (ranges from 1.2 million to 2.8 million, depending on temperature, input voltage, and vendor) (investigating an anomaly in MTBF data received from 1 Power Supply vendor - Artesyn)
PWR-C1-1900WAC-P	
PWR-C1-715WDC	1,812,103 (-48V input at 40C and vendor Delta)
PWR-C6-600WAC	1,600,060
PWR-C6-1000WAC	1,600,060

General specifications

PWR-C6-715WDC	1,712,103
C9300-NM-2Q	10,778,230
C9300-NM-2Y	7,568,820
C9300-NM-4G	8,953,570
C9300-NM-4M	10,549,060
C9300-NM-8X	7,151,930
C9300X-NM-8Y	
C9300X-NM-2C	
FAN-T2	4,521,330

Environmental ranges

Acoustic noise	With AC power supply (with 24 PoE+ ports loaded for C9300 SKUs)
Measured per ISO 7779 and declared per ISO 9296	- LpA: 45 dB typical, 48 dB max - LWA: 5.6B typical, 5.9B max
Bystander positions operating to an ambient temperature of 25°C	With AC power supply (with half the number of PoE+ ports loaded for C9300L SKUs)
	- LpA: 44 dB typical, 47 dB max - LWA: 5.5B typical, 5.8B max
Typical: Noise emission for a typical configuration	
Maximum: Statistical maximum to account for variation in production	

Connectors

Table 19 shows the supported connectors for the Cisco Catalyst 9300 Series.

Table 19. Connectors

Connectors and cabling

- 1000BASE-T ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling
- Multigigabit-T ports: RJ-45 connectors, 4-pair Cat 5E, Cat 6, Cat 6A UTP cabling
- 1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Cat 5E UTP cabling
- SFP transceivers: LC fiber connectors (single-mode or multimode fiber)
- SFP+ transceivers: LC fiber connectors (single-mode or multimode fiber)
- QSFP+ transceivers: MPO and LC fiber connectors (single-mode or multimode fiber)
- QSFP+ connector
- SFP+ connector
- Cisco StackWise stacking ports: Copper-based Cisco StackWise cabling
- Cisco StackPower: Cisco proprietary power stacking cables
- Ethernet management port: RJ-45 connectors, 4-pair Cat 5 UTP cabling
- Management console port: RJ-45-to-DB9 cable for PC connections

Power connectors

- Customers can provide power to a switch by using the internal power at the back of the switch
- Internal power supply connector: The internal power supply is an auto-ranging unit. It supports input voltages between 100 (115 for 1100WAC) and 240 VAC. Use the supplied AC power cord to connect the AC power connector to an AC power outlet

For the latest Cisco transceiver module compatibility information, refer to <https://www.cisco.com/c/en/us/support/interfaces-modules/transceiver-modules/products-device-support-tables-list.html>.

Management and standards support

Table 20 shows management and standards support for the Cisco Catalyst 9300 Series.

Table 20. Management and standards support*

Description	Specification
Management	
BRIDGE-MIB	CISCO-PORT-STORM-CONTROL-MIB
CISCO-BRIDGE-EXT-MIB	CISCO-POWER-ETHERNET-EXT-MIB
CISCO-BULK-FILE-MIB	CISCO-PRIVATE-VLAN-MIB
CISCO-CABLE-DIAG-MIB	CISCO-PROCESS-MIB
CISCO-CALLHOME-MIB	CISCO-PRODUCTS-MIB
CISCO-CEF-MIB	CISCO-RF-MIB
CISCO-CIRCUIT-INTERFACE-MIB	CISCO-RTP-METRICS-MIB
CISCO-CONFIG-COPY-MIB	CISCO-RTTMON-ICMP-MIB
CISCO-CONFIG-MAN-MIB	CISCO-STACKWISE-MIB
CISCO-DEVICE-LOCATION-MIB	CISCO-STP-EXTENSIONS-MIB
CISCO-DHCP-SNOOPING-MIB	CISCO-SYSLOG-MIB
CISCO-EIGRP-MIB	CISCO-TCP-MIB
CISCO-EMBEDDED-EVENT-MGR-MIB	CISCO-UDLD-MIB
CISCO-ENTITY-FRU-CONTROL-MIB	CISCO-VLAN-IFTABLE-RELATIONSHIP-MIB
CISCO-ENTITY-SENSOR-MIB	ENTITY-MIB
CISCO-ENTITY-VENDORTYPE-OID-MIB	HC-ALARM-MIB
CISCO-ERR-DISABLE-MIB	HC-RMON-MIB
CISCO-FLASH-MIB	IEEE8023-LAG-MIB
CISCO-FLOW-MONITOR-MIB	IF-MIB
CISCO-FTP-CLIENT-MIB	IP-FORWARD-MIB
CISCO-HSRP-EXT-MIB	IP-MIB
CISCO-HSRP-MIB	LLDP-EXT-MED-MIB
CISCO-IETF-BFD-MIB	LLDP-MIB
CISCO-IETF-PPVPN-MPLS-VPN-MIB	MAU-MIB
CISCO-IETF-PW-MPLS-MIB	MPLS-L3VPN-STD-MIB
CISCO-IF-EXTENSION-MIB	MPLS-LSR-STD-MIB

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Description

Specification

CISCO-IGMP-FILTER-MIB	MPLS-VPN-MIB
CISCO-IMAGE-LICENSE-MGMT-MIB	OLD-CISCO-CHASSIS-MIB
CISCO-IMAGE-MIB	OLD-CISCO-CPU-MIB
CISCO-IP-CBR-METRICS-MIB	OLD-CISCO-INTERFACES-MIB
CISCO-IP-STAT-MIB	OLD-CISCO-IP-MIB
CISCO-IP-TAP-MIB	OLD-CISCO-MEMORY-MIB
CISCO-IP-URPF-MIB	OLD-CISCO-SYS-MIB
CISCO-IPSEC-FLOW-MONITOR-MIB	OLD-CISCO-TCP-MIB
CISCO-IPSEC-MIB	OLD-CISCO-TS-MIB
CISCO-IPSEC-PROVISIONING-MIB	POWER-ETHERNET-MIB
CISCO-IPSLA-AUTOMEASURE-MIB	RFC1213-MIB
CISCO-IPSLA-ECHO-MIB	RMON-MIB
CISCO-IPSLA-JITTER-MIB	RMON2-MIB
CISCO-L2-CONTROL-MIB	SMON-MIB
CISCO-L2L3-INTERFACE-CONFIG-MIB	SNMPV2-MIB
CISCO-LAG-MIB	SONET-MIB
CISCO-LICENSE-MGMT-MIB	TCP-MIB
CISCO-LOCAL-AUTH-USER-MIB	UDP-MIB
CISCO-MAC-NOTIFICATION-MIB	
CISCO-MDI-METRICS-MIB	
CISCO-MEDIA-METRICS-MIB	
CISCO-MEMORY-POOL-MIB	
CISCO-MPLS-LSR-EXT-STD-MIB	
CISCO-NBAR-PROTOCOL-DISCOVERY-MIB	
CISCO-NHRP-EXT-MIB	
CISCO-NTP-MIB	
CISCO-PAGP-MIB	
CISCO-PORT-SECURITY-MIB	

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Description	Specification
Standards	RMON I and II standards
IEEE 802.1s	SNMPv1, v2c, and v3
IEEE 802.1w	
IEEE 802.1x	
IEEE 802.1x-Rev	
IEEE 802.3ad	
IEEE 802.3ae	
IEEE 802.3af	
IEEE 802.3at	
IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports	
IEEE 802.1D Spanning Tree Protocol	
IEEE 802.1p CoS prioritization	
IEEE 802.1Q VLAN	
IEEE 802.3 10BASE-T specification	
IEEE 802.3u 100BASE-TX specification	
IEEE 802.3ab 1000BASE-T specification	
IEEE 802.3z 1000BASE-X specification	
IEEE 802.3bz Multirate 2.5G/5G specification	
IEEE 802.3an 10G BASE-T specification	



Power supply specifications

Table 21 lists the power specifications for the Cisco Catalyst 9300 Series based on the kind of power supply used.

Table 21. Power specifications

Description	Specification			
	PWR-C1-1100WAC**	PWR-C1-715WAC**	PWR-C1-350WAC**	PWR-C1-715WDC
Power supply rated maximum	1100W	715W	350W	715W
Total output BTU (note: 1000 BTU/hr = 293W)	3793 BTU/hr, 1100W	2465 BTU/hr, 715W	1207 BTU/hr, 350W	2440 BTU/hr
Input-voltage range and frequency	115V to 240 VAC, 50 to 60 Hz	100 to 240 VAC, 50 to 60 Hz	100 to 240 VAC, 50 to 60 Hz	-36V to -72 VDC
Input current	12-6A	10-5A	4-2A	24-12A
Output ratings	-56V at 19.64A	-56V at 12.8A	-56V at 6.25A	-56V at 12.8A
Output holdup time	10 ms minimum at 100VAC	16.7 ms minimum at 100VAC	16.7 ms minimum at 100VAC	2 ms minimum at -48Vdc
Power-supply input receptacles	IEC 320-C16 (IEC60320-C16)	IEC 320-C16 (IEC60320-C16)	IEC 320-C14 (IEC60320-C14)	Right angle barrier style terminal block
Power cord rating	15A	15A	10A	25A@100VDC
Physical specifications	(H x W x D): 1.58 x 3.25 x 13.7 in	(H x W x D): 1.58 x 3.25 x 12.20 in	(H x W x D): 1.58 x 3.25 x 12.20 in	(H x W x D): 1.58 x 3.25 x 12.20 in
	Weight: 3.1 lb (1.4 kg)	Weight: 2.6 lb (1.2 kg)	Weight: 2.3 lb (1.2 kg)	Weight: 2.2 lb (1kg)

** These power supply options will not be available for purchase with the C9300 in COW starting Q2 FY21.



Table 22. Power specifications – Platinum-rated power supplies

Description	Specification			
	PWR-C1-150WAC-P	PWR-C1-1100WAC-P	PWR-C1-715WAC-P	PWR-C1-350WAC-P
Power supply rated maximum output power	1500W with 115V with 230V	1100W	715W	350W
Total output BTU (notes 1000 BTU/hr = 293W)	5118 BTU/hr with 115V with 230V	3754 BTU/hr, 1100W	2440 BTU/hr, 715W	1194 BTU/hr, 350W
Input-voltage range and frequency	115V to 200V to 240 VAC 127 VAC 50 to 60 Hz	115V to 240 VAC 50 to 60 Hz	100 to 240 VAC 50 to 60 Hz	100 to 240 VAC 50 to 60 Hz
Input current	16A maximum 12A maximum	12-6A	10-5A	4-2A
Output ratings	-56V at 26.78A -56V at 33.92A	-56V at 19.64A	-56V at 12.8A	-56V at 6.25A
Output holdup time	20 ms minimum at 100VAC	20 ms minimum at 100VAC	20 ms minimum at 100VAC	20 ms minimum at 100VAC
Power-supply input receptacles	IEC 320-C22 IEC 320-C16	IEC 320-C16 (IEC60320-C16)	IEC 320-C16 (IEC60320-C16)	IEC 320-C14 (IEC60320-C14)
Power cord rating	20A 16A	15A	15A	10A
Physical specifications	(H x W x D): 1.58 x 3.25 x 13.7 in Weight: xxx lb (x.x kg)	(H x W x D): 1.58 x 3.25 x 13.7 in Weight: 3.1 lb (1.4 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.6 lb (1.2 kg)	(H x W x D): 1.58 x 3.25 x 12.20 in Weight: 2.3 lb (1.2 kg)

Description	Specification	
	Operating temperature	Normal operating temperature* and altitudes:
		-5°C to +45°C, up to 5000 feet (1500m) -5°C to +40°C, up to 10,000 feet (3000m)
		*Minimum ambient temperature for cold start is 32°F (0°C)
		Short-term* exceptional conditions:
		-5°C to +40°C, up to 10,000 feet (3000m) -5°C to +35°C, up to 15,000 feet (5000m) - Minimum ambient temperature for cold start is 32°F (0°C)
		Short-term* exceptional conditions:
		-5°C to +55°C, at sea level -5°C to +50°C, up to 5000 feet (1500m) -5°C to +45°C, up to 10,000 feet (3000m) -5°C to +35°C, up to 15,000 feet (5000m)
		*Not more than following in 1-year period: 96 consecutive hours, or 360 hours total, or 15 occurrences
Storage temperature	40° to 159°F (-40° to 70°C)	-40° to 159°F (-40° to 70°C)
Relative humidity operating and nonoperating noncondensing	5% to 90% non-condensing	5% to 90% noncondensing
Altitude	10,000 ft. (3000 meters), up to 45°C	10,000 ft. (3000 meters), up to 45°C



Specification	Description
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EMH and EMC compliance

FCC Part 15 (CFR 47) Class A	FCC Part 15 (CFR 47) Class A
ICES-003 Class A	ICES-003 Class A
EN 55032 Class A	EN 55032 Class A
CISPR 32 Class A	CISPR 32 Class A
AS/NZS 3548 Class A	AS/NZS 3548 Class A
BSMI Class A (AC Input models only)	BSMI Class A (AC Input models only)
VCCI Class A	VCCI Class A
EN 55024, EN300386, EN 61000-3-2, EN 61000-3-3	EN 55024, EN300386, EN 61000-3-2, EN 61000-3-3
EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6

Safety compliance:

LED indicators

"AC OK": Input power to the power supply is OK
 "PS OK": Output power from the power supply is OK

"PS OK": Output power from the power supply is OK.

1900R-C1-1900RVA-C-107 is available as an PSU upgrade option to 1900R primary PSU

Power-C1-100WAC-UP is available as an PSU upgrade option to 100W primary PSU

Power-C1-715WAC-UP is available as an PSU upgrade option to 715W primary PSU

Table 23. Power consumption of standalone Catalyst 9300 Series Switches (tested on IOS XE Release 16.5.1)

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[illegible]

* ENERGY STAR® certified model.

Safety and compliance

Table 25 lists the safety and compliance information for the Cisco Catalyst 9300 Series.

Table 25. Safety and compliance information

Description	Specification
Safety certifications	- UL 60950-1 - CAN/CSA-C22.2 No. 60950-1 - EN 60950-1 - IEC 60950-1 - AS/NZS 60950.1 - IEEE 802.3 47 CFR Part 15 - EN 300 386 V1.6.1 - EN 55032 Class A - CISPR 32 Class A - EN61000-3-2 - EN61000-3-3 - ICES-003 Class A - TCVN 7189 Class A - V-3 Class A - CISPR 35 - EN 300 386 - EN 55035 - TCVN 7317 - V-2/2015.04 - V-3/2015.04 - CNS13438 - KN32 - KN35
Electromagnetic compatibility certifications	Additional certifications for C9300L SKUs: - QCVN 118:2018/BTTTT - VCCI-CISPR 32 Class A
Environmental	Reduction of Hazardous Substances (ROHS) 5

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Ordering information

Table 26 lists ordering information for the Cisco Catalyst 9300 Series. To place an order, visit the Cisco Ordering homepage at https://www.cisco.com/en/US/ordering/or13/or8/order_customer_help/how_to_order_listing.html.

Table 26. Ordering information

Switches	Product description
C9300X-48HX-E	Catalyst 9300 48-port 10G/mGig copper with modular uplink, UPOE+, Network Essentials
C9300X-48HX-A	Catalyst 9300 48-port 10G/mGig copper with modular uplink, UPOE+, Network Advantage
C9300X-48HX-M	Catalyst 9300 48-port 10G/mGig copper with modular uplink, Meraki Advanced or Enterprise
C9300X-48TX-E	Catalyst 9300 48-port 10G/mGig copper with modular uplink, data only, Network Essentials
C9300X-48TX-A	Catalyst 9300 48-port 10G/mGig copper with modular uplink, data only, Network Advantage
C9300X-48TX-M	Catalyst 9300 48-port 10G/mGig copper with modular uplink, data only, Meraki Advanced or Enterprise
C9300X-48HXN-E	Catalyst 9300 40-port 5G/mGig, 8-port 10G copper with modular uplink, UPOE+, Network Essentials
C9300X-48HXN-A	Catalyst 9300 40-port 5G/mGig, 8-port 10G copper with modular uplink, UPOE+, Network Advantage
C9300X-48HXN-M	Catalyst 9300 40-port 5G/mGig, 8-port 10G copper with modular uplink, UPOE+, Meraki Advanced or Enterprise
C9300X-24HX-E	Catalyst 9300 24-port 10G/mGig copper with modular uplink, UPOE+, Network Essentials
C9300X-24HX-A	Catalyst 9300 24-port 10G/mGig copper with modular uplink, UPOE+, Network Advantage
C9300X-24HX-M	Catalyst 9300 24-port 10G/mGig copper with modular uplink, UPOE+, Meraki Advanced or Enterprise
C9300X-12Y-E	Catalyst 9300 12-port 25G/10G/1G SFP28 with modular uplinks, Network Essentials
C9300X-12Y-A	Catalyst 9300 12-port 25G/10G/1G SFP28 with modular uplinks, Network Advantage
C9300X-12Y-M	Catalyst 9300 12-port 25G/10G/1G SFP28 with modular uplinks, Meraki Advanced or Enterprise

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Switches	
Product number	Product description
C9300X-24Y-E	Catalyst 9300 24-port 25G/10G/1G SFP28 with modular uplinks, Network Essentials
C9300X-24Y-A	Catalyst 9300 24-port 25G/10G/1G SFP28 with modular uplinks, Network Advantage
C9300X-24Y-M	Catalyst 9300 24-port 25G/10G/1G SFP28 with modular uplinks, Meraki Advanced or Enterprise
C9300-24T-E	Catalyst 9300 24-port 1G copper with modular uplinks, data only, Network Essentials
C9300-24T-A	Catalyst 9300 24-port 1G copper with modular uplinks, data only, Network Advantage
C9300-24T-M	Catalyst 9300 24-port 1G copper with modular uplinks, data only, Meraki Advanced or Enterprise
C9300-24P-E	Catalyst 9300 24-port 1G copper with modular uplinks, PoE+, Network Essentials
C9300-24P-A	Catalyst 9300 24-port 1G copper with modular uplinks, PoE+, Network Advantage
C9300-24P-M	Catalyst 9300 24-port 1G copper with modular uplinks, PoE+, Meraki Advanced or Enterprise
C9300-24U-E	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE, Network Essentials
C9300-24U-A	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE, Network Advantage
C9300-24U-M	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE, Meraki Advanced or Enterprise
C9300-24UB-E	Catalyst 9300 higher scale 24-port 1G copper with modular uplinks, UPOE, Network Essentials
C9300-24UB-A	Catalyst 9300 higher scale 24-port 1G copper with modular uplinks, UPOE, Network Advantage
C9300-24U-E-UL	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE, Network Advantage (Compatible with UL1069 Standard)
C9300-24U-A-UL	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE, Network Advantage (Compatible with UL1069 Standard)
C9300-24H-E	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE+, Network Essentials
C9300-24H-A	Catalyst 9300 24-port 1G copper with modular uplinks, UPOE+, Network Advantage
C9300-24UX-E	Catalyst 9300 24-port 10G/mGig copper with modular uplink, UPOE, Network Essentials
C9300-24UX-A	Catalyst 9300 24-port 10G/mGig copper with modular uplink, UPOE, Network Advantage
C9300-24UX-M	Catalyst 9300 24-port 10G/mGig copper with modular uplinks, UPOE, Meraki Advanced or Enterprise

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Switches	
Product number	Product description
C9300-24UXB-E	Catalyst 9300 higher scale 24-port 10G/mGig copper with modular uplink, UPOE, Network Essentials
C9300-24UXB-A	Catalyst 9300 higher scale 24-port 10G/mGig copper with modular uplink, UPOE, Network Advantage
C9300-48UB-E	Catalyst 9300 48-port 1G copper with modular uplinks, data only, Network Essentials
C9300-48T-A	Catalyst 9300 48-port 1G copper with modular uplinks, data only, Network Advantage
C9300-48T-M	Catalyst 9300 48-port 1G copper with modular uplinks, data only, Meraki Advanced or Enterprise
C9300-48P-E	Catalyst 9300 48-port 1G copper with modular uplinks, PoE+, Network Essentials
C9300-48P-A	Catalyst 9300 48-port 1G copper with modular uplinks, PoE+, Network Advantage
C9300-48P-M	Catalyst 9300 48-port 1G copper with modular uplinks, PoE+, Meraki Advanced or Enterprise
C9300-48U-E	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE, Network Essentials
C9300-48U-A	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE, Network Advantage
C9300-48U-M	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE, Meraki Advanced or Enterprise
C9300-48UB-E	Catalyst 9300 Higher scale 48-port 1G copper with modular uplinks, UPOE, Network Essentials
C9300-48UB-A	Catalyst 9300 higher scale 48-port 1G copper with modular uplinks, UPOE, Network Advantage
C9300-48U-E-UL	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE, Network Essentials (Compatible with UL1069 Standard)
C9300-48U-A-UL	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE, Network Advantage (Compatible with UL1069 Standard)
C9300-48H-E	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE+, Network Essentials
C9300-48H-A	Catalyst 9300 48-port 1G copper with modular uplinks, UPOE+, Network Advantage
C9300-48UXM-E	Catalyst 9300 48-port 2.5G (12 10G/mGig) copper with modular uplinks, UPOE, Network Essentials
C9500-48UXM-A	Catalyst 9300 48-port 2.5G (12 10G/mGig) copper with modular uplinks, UPOE, Network Advantage
C9300-48UXM-M	Catalyst 9300 48-port 2.5G (12 10G/mGig) copper with modular uplinks, UPOE, Meraki Advanced or Enterprise

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Switches	
Product number	Product description
C9300L-48UN-E	Catalyst 9300 48-port 5G copper with modular uplinks, UPOE, Network Essentials
C9300L-48UN-A	Catalyst 9300 48-port 5G copper with modular uplinks, UPOE, Network Advantage
C9300L-48UN-M	Catalyst 9300 48-port 5G copper with modular uplinks, UPOE, Meraki Advanced or Enterprise
C9300L-24S-E	Catalyst 9300 24-port 1G SFP with modular uplinks, Network Essentials
C9300L-24S-A	Catalyst 9300 24-port 1G SFP with modular uplinks, Network Advantage
C9300L-24S-M	Cisco Catalyst 9300 24-port 1G SFP, modular uplinks, Meraki Advanced or Enterprise
C9300L-48S-E	Catalyst 9300 48-port 1G SFP with modular uplinks, Network Essentials
C9300L-48S-A	Catalyst 9300 48-port 1G SFP with modular uplinks, Network Advantage
C9300L-48S-M	Catalyst 9300 48-port 1G SFP with modular uplinks, Meraki Advanced or Enterprise
C9300L-24T-4G-E	Catalyst 9300 24-port 1G copper, with fixed 4x1G SFP uplinks, data only, Network Essentials
C9300L-24T-4G-A	Catalyst 9300 24-port 1G copper, with fixed 4x1G SFP uplinks, data only, Network Advantage
C9300L-24P-4G-E	Catalyst 9300 24-port 1G copper, with fixed 4x1G SFP uplinks, PoE+, Network Essentials
C9300L-24P-4G-A	Catalyst 9300 24-port 1G copper, with fixed 4x1G SFP uplinks, PoE+, Network Advantage
C9300L-48T-4G-E	Catalyst 9300 48-port 1G copper, with fixed 4x1G SFP uplinks, data only, Network Essentials
C9300L-48T-4G-A	Catalyst 9300 48-port 1G copper, with fixed 4x1G SFP uplinks, data only, Network Advantage
C9300L-48P-4G-E	Catalyst 9300 48-port 1G copper, with fixed 4x1G SFP uplinks, PoE+, Network Essentials
C9300L-48P-4G-A	Catalyst 9300 48-port 1G copper, with fixed 4x1G SFP uplinks, PoE+, Network Advantage
C9300L-48P-4G-E	Catalyst 9300 48-port 1G copper, with fixed 4x1G SFP uplinks, PoE+, Network Essentials
C9300L-48P-4G-A	Catalyst 9300 48-port 1G copper, with fixed 4x1G SFP uplinks, PoE+, Network Advantage
C9300L-24T-4X-E	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Network Essentials
C9300L-24T-4X-A	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Network Advantage



Switches	
Product number	Product description
C9300L-24T-4X-M	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Meraki Advanced or Enterprise
C9300L-24P-4X-E	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Network Essentials
C9300L-24P-4X-A	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Network Advantage
C9300L-24P-4X-M	Catalyst 9300 24-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Meraki Advanced or Enterprise
C9300L-24UXG-4X-E	Catalyst 9300 24-port 8XmGig (100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G copper with fixed 4x10G/1G SFP+ uplinks, UPOE, Network Essentials
C9300L-24UXG-4X-A	Catalyst 9300 24-port 8XmGig (100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G copper with fixed 4x10G/1G SFP+ uplinks, UPOE, Network Advantage
C9300L-24UXG-4X-M	Catalyst 9300 24-port 8XmGig (100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G copper with fixed 4x10G/1G SFP+ uplinks, UPOE, Meraki Advanced or Enterprise
C9300L-48T-4X-E	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Network Essentials
C9300L-48T-4X-A	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Network Advantage
C9300L-48T-4X-M	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, data only, Meraki Advanced or Enterprise
C9300L-48P-4X-E	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Network Essentials
C9300L-48P-4X-A	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Network Advantage
C9300L-48P-4X-M	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, PoE+, Meraki Advanced or Enterprise
C9300L-48PF-4X-E	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, full PoE+, Network Essentials
C9300L-48PF-4X-A	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, full PoE+, Network Advantage
C9300L-48PF-4X-M	Catalyst 9300 48-port 1G copper with fixed 4x10G/1G SFP+ uplinks, full PoE+, Meraki Advanced or Enterprise
C9300L-48UXG-4X-E	Catalyst 9300 48-port fixed uplinks UPOE, 12x mGig (100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G copper, 4x 10G uplinks, Network Essentials

Switches	
Product number	Product description
C9300L-48UXG-4X-A	Catalyst 9300 48-port 12x mGig (100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G copper with fixed 4x 10G/1G SFP+ uplinks, UPOE, Network Advantage
C9300L-48UXG-4X-M	Catalyst 9300 48-port 12x mGig (100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G copper with fixed 4x 10G/1G SFP+ uplinks, UPOE, Meraki Advanced or Enterprise
C9300L-24UXG-2Q-E	Catalyst 9300 24-port 8x mGig (100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G copper with fixed 2x 40G QSFP uplinks, UPOE, Network Essentials
C9300L-24UXG-2Q-A	Catalyst 9300 24-port 8x mGig (100M/1G/2.5G/5G/10G) + 16x 10M/100M/1G copper with fixed 2x 40G QSFP uplinks, UPOE, Network Advantage
C9300L-48UXG-2Q-E	Catalyst 9300 48-port 12x mGig (100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G copper with fixed 2x 40G QSFP uplinks, UPOE, Network Essentials
C9300L-48UXG-2Q-A	Catalyst 9300 48-port 12x mGig (100M/1G/2.5G/5G/10G) + 36x 10M/100M/1G copper with fixed 2x 40G QSFP uplinks, UPOE, Network Advantage
C9300LM-48UX-4Y-E	Catalyst 9300 mini 48-port UPOE, 8-port 10G Multigigabit copper, 40-port 1G, 4x 25G uplinks, Network Essentials
C9300LM-48UX-4Y-A	Catalyst 9300 mini 48-port UPOE, 8-port 10G Multigigabit copper, 40-port 1G, 4x 25G uplinks, Network Advantage
C9300LM-48U-4Y-E	Catalyst 9300 mini 48-port 1G copper, UPOE, 4x 25G uplinks, Network Essentials
C9300LM-48U-4Y-A	Catalyst 9300 mini 48-port 1G copper, UPOE, 4x 25G uplinks, Network Advantage
C9300LM-48T-4Y-E	Catalyst 9300 mini 48-port 1G copper, data, 4x 25G uplinks, Network Essentials
C9300LM-48T-4Y-A	Catalyst 9300 mini 48-port 1G copper, data, 4x 25G uplinks, Network Advantage
C9300LM-24U-4Y-E	Catalyst 9300 mini 24-port 1G copper, UPOE, 4x 25G uplinks, Network Essentials
C9300LM-24U-4Y-A	Catalyst 9300 mini 24-port 1G copper, UPOE, 4x 25G uplinks, Network Advantage

Network modules	
Product number	Product description
C9300X-NM-8M	Catalyst 9300X 8 x 10G/mGig copper Network Module
C9300X-NM-8M=	Catalyst 9300X 8 x 10G/mGig copper Network Module, spare
C9300X-NM-8Y	Catalyst 9300X 8 x 25G/10G/1G multi-rate SFP Network Module
C9300X-NM-8Y=	Catalyst 9300X 8 x 25G/10G/1G multi-rate SFP Network Module, spare
C9300X-NM-2C	Catalyst 9300X 2 x 100G/40G dual rate QSFP Network Module

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Network modules	
Product number	Product description
C9300X-NM-2C=	Catalyst 9300X 2 x 100G/40G dual rate QSFP Network Module, spare
C9300X-NM-4C	Catalyst 9300X 4 x 100G/40G dual rate QSFP Network Module
C9300X-NM-4C=	Catalyst 9300X 4 x 100G/40G dual rate QSFP Network Module, spare
C9300-NM-4G	Catalyst 9300 4 x 1GE SFP Network Module
C9300-NM-4G=	Catalyst 9300 4 x 1GE SFP Network Module, spare
C9300-NM-8X	Catalyst 9300 8 x 10G/1G SFP+ Network Module
C9300-NM-8X=	Catalyst 9300 8 x 10G/1G SFP+ Network Module, spare
C9300-NM-2Q	Catalyst 9300 2 x 40GE QSFP Network Module
C9300-NM-2Q=	Catalyst 9300 2 x 40GE QSFP Network Module, spare
C9300-NM-2Y	Catalyst 9300 2 x 25G/10G/1G SFP28 Network Module
C9300-NM-2Y=	Catalyst 9300 2 x 25G/10G/1G SFP28 Network Module, spare
C9300-NM-4M	Catalyst 9300 4 x 10G/mGig copper Network Module
C9300-NM-4M=	Catalyst 9300 4 x 10G/mGig copper Network Module, spare
NM-BLANK-T1=	Cisco Catalyst Type 1 Network Module Blank, spare

Storage Module	
Product number	Product description
SSD-120G	Cisco pluggable USB3.0 120G SSD storage
SSD-120G=	Cisco pluggable USB3.0 120G SSD storage, spare
SSD-240G	Cisco pluggable USB3.0 240G SSD storage
SSD-240G=	Cisco pluggable USB3.0 240G SSD storage, spare

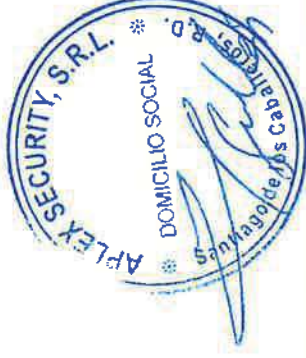
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Software licenses for C9300 SKUs	
Product number	Product description
C9300-DNX-E-24-3Y	C9300 Cisco Catalyst Essentials, 24-port, 3 Year Term license
C9300-DNX-E-24-5Y	C9300 Cisco Catalyst Essentials, 24-port, 5 Year Term license
C9300-DNX-E-24-7Y	C9300 Cisco Catalyst Essentials, 24-port, 7 Year Term license
C9300-DNX-A-24-3Y	C9300 Cisco Catalyst Advantage, 24-port, 3 Year Term license
C9300-DNX-A-24-5Y	C9300 Cisco Catalyst Advantage, 24-port, 5 Year Term license
C9300-DNX-A-24-7Y	C9300 Cisco Catalyst Advantage, 24-port, 7 Year Term license
C9300-DNX-E-48-3Y	C9300 Cisco Catalyst Essentials, 48-port, 3 Year Term license
C9300-DNX-E-48-5Y	C9300 Cisco Catalyst Essentials, 48-port, 5 Year Term license
C9300-DNX-E-48-7Y	C9300 Cisco Catalyst Essentials, 48-port, 7 Year Term license
C9300-DNX-A-48-3Y	C9300 Cisco Catalyst Advantage, 48-port, 3 Year Term license
C9300-DNX-A-48-5Y	C9300 Cisco Catalyst Advantage, 48-port, 5 Year Term license
C9300-DNX-A-48-7Y	C9300 Cisco Catalyst Advantage, 48-port, 7 Year Term license
C9300-DNX-E-24S-3Y	C9300 1G Fiber Cisco Catalyst Essentials, 24-port, 3 Year Term license
C9300-DNX-E-24S-5Y	C9300 1G Fiber Cisco Catalyst Essentials, 24-port, 5 Year Term license
C9300-DNX-E-24S-7Y	C9300 1G Fiber Cisco Catalyst Essentials, 24-port, 7 Year Term license
C9300-DNX-A-24S-3Y	C9300 1G Fiber Cisco Catalyst Advantage, 24-port, 3 Year Term license
C9300-DNX-A-24S-5Y	C9300 1G Fiber Cisco Catalyst Advantage, 24-port, 5 Year Term license
C9300-DNX-A-24S-7Y	C9300 1G Fiber Cisco Catalyst Advantage, 24-port, 7 Year Term license
C9300-DNX-E-48S-3Y	C9300 1G Fiber Cisco Catalyst Essentials, 48-port, 3 Year Term license
C9300-DNX-E-48S-5Y	C9300 1G Fiber Cisco Catalyst Essentials, 48-port, 5 Year Term license
C9300-DNX-E-48S-7Y	C9300 1G Fiber Cisco Catalyst Essentials, 48-port, 7 Year Term license
C9300-DNX-A-48S-3Y	C9300 1G Fiber Cisco Catalyst Advantage, 48-port, 3 Year Term license
C9300-DNX-A-48S-5Y	C9300 1G Fiber Cisco Catalyst Advantage, 48-port, 5 Year Term license
C9300-DNX-A-48S-7Y	C9300 1G Fiber Cisco Catalyst Advantage, 48-port, 7 Year Term license

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Software licenses for C9300 SKUs	
Product number	Product description
C9300-DNA-L-E-3Y	C9300 Cisco DNA Essentials license, for 12Y, 24Y SKUs, 3 Year Term license
C9300-DNA-L-E-5Y	C9300 Cisco DNA Essentials license, for 12Y, 24Y SKUs, 5 Year Term license
C9300-DNA-L-E-7Y	C9300 Cisco DNA Essentials license, for 12Y, 24Y SKUs, 7 Year Term license
C9300-DNA-L-A-3Y	C9300 Cisco DNA Advantage license, for 12Y, 24Y SKUs, 3 Year Term license
C9300-DNA-L-A-5Y	C9300 Cisco DNA Advantage license, for 12Y, 24Y SKUs, 5 Year Term license
C9300-DNA-L-A-7Y	C9300 Cisco DNA Advantage license, for 12Y, 24Y SKUs, 7 Year Term license
C9300-LIC=	Electronic Cisco DNA Upgrade License for C9300 switches. Note: when upgrading from Cisco DNA Essentials to Cisco DNA Advantage, Network Essentials is also upgraded to Network Advantage
LIC-C9300-24A-1Y	C9300 Cisco Meraki Advanced Software license, 24-port, 1 Year Term license
LIC-C9300-24A-3Y	C9300 Cisco Meraki Advanced Software license, 24-port, 3 Year Term license
LIC-C9300-24A-5Y	C9300 Cisco Meraki Advanced Software license, 24-port, 5 Year Term license
LIC-C9300-24A-7Y	C9300 Cisco Meraki Advanced Software license, 24-port, 7 Year Term license
LIC-C9300-24A-10Y	C9300 Cisco Meraki Advanced Software license, 24-port, 10 Year Term license
LIC-C9300-24E-1Y	C9300 Cisco Meraki Enterprise Software license, 24-port, 1 Year Term license
LIC-C9300-24E-3Y	C9300 Cisco Meraki Enterprise Software license, 24-port, 3 Year Term license
LIC-C9300-24E-5Y	C9300 Cisco Meraki Enterprise Software license, 24-port, 5 Year Term license
LIC-C9300-24E-7Y	C9300 Cisco Meraki Enterprise Software license, 24-port, 7 Year Term license
LIC-C9300-24E-10Y	C9300 Cisco Meraki Enterprise Software license, 24-port, 10 Year Term license
LIC-C9300-48A-1Y	C9300 Cisco Meraki Advanced Software license, 48-port, 1 Year Term license
LIC-C9300-48A-3Y	C9300 Cisco Meraki Advanced Software license, 48-port, 3 Year Term license
LIC-C9300-48A-5Y	C9300 Cisco Meraki Advanced Software license, 48-port, 5 Year Term license
LIC-C9300-48A-7Y	C9300 Cisco Meraki Advanced Software license, 48-port, 7 Year Term license
LIC-C9300-48A-10Y	C9300 Cisco Meraki Advanced Software license, 48-port, 10 Year Term license
LIC-C9300-48E-1Y	C9300 Cisco Meraki Enterprise Software license, 48-port, 1 Year Term license

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Software licenses for C9300L SKUs	
Product number	Product description
LIC-C9300-48E-3Y	C9300 Cisco Meraki Enterprise Software license, 48-port, 3 Year Term license
LIC-C9300-48E-5Y	C9300 Cisco Meraki Enterprise Software license, 48-port, 5 Year Term license
LIC-C9300-48E-7Y	C9300 Cisco Meraki Enterprise Software license, 48-port, 7 Year Term license
LIC-C9300-48E-10Y	C9300 Cisco Meraki Enterprise Software license, 48-port, 10 Year Term license
Software licenses for C9300L SKUs	
Product number	Product description
C9300L-DNX-E-24-3Y	C9300L Cisco Catalyst Essentials, 24-port, 3 Year Term license
C9300L-DNX-E-24-5Y	C9300L Cisco Catalyst Essentials, 24-port, 5 Year Term license
C9300L-DNX-E-24-7Y	C9300L Cisco Catalyst Essentials, 24-port, 7 Year Term license
C9300L-DNX-A-24-3Y	C9300L Cisco Catalyst Advantage, 24-port, 3 Year Term license
C9300L-DNX-A-24-5Y	C9300L Cisco Catalyst Advantage, 24-port, 5 Year Term license
C9300L-DNX-A-24-7Y	C9300L Cisco Catalyst Advantage, 24-port, 7 Year Term license
C9300L-DNX-E-48-3Y	C9300L Cisco Catalyst Essentials, 48-port, 3 Year Term license
C9300L-DNX-E-48-5Y	C9300L Cisco Catalyst Essentials, 48-port, 5 Year Term license
C9300L-DNX-E-48-7Y	C9300L Cisco Catalyst Essentials, 48-port, 7 Year Term license
C9300L-DNX-A-48-3Y	C9300L Cisco Catalyst Advantage, 48-port, 3 Year Term license
C9300L-DNX-A-48-5Y	C9300L Cisco Catalyst Advantage, 48-port, 5 Year Term license
C9300L-DNX-A-48-7Y	C9300L Cisco Catalyst Advantage, 48-port, 7 Year Term license
C9300L-DNA-E-24-3Y	C9300L Cisco DNA Essentials, 24-port, 3 Year Term license
C9300L-DNA-E-24-5Y	C9300L Cisco DNA Essentials, 24-port, 5 Year Term license
C9300L-DNA-E-24-7Y	C9300L Cisco DNA Essentials, 24-port, 7 Year Term license
C9300L-DNA-A-24-3Y	C9300L Cisco DNA Advantage, 24-port, 3 Year Term license
C9300L-DNA-A-24-5Y	C9300L Cisco DNA Advantage, 24-port, 5 Year Term license

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Software licenses for C9300L SKUs	
Product number	Product description
C9300L-DNA-A-24-7Y	C9300L Cisco DNA Advantage, 24-port, 7 Year Term license
C9300L-DNA-E-48-3Y	C9300L Cisco DNA Essentials, 48-port, 3 Year Term license
C9300L-DNA-E-48-5Y	C9300L Cisco DNA Essentials, 48-port, 5 Year Term license
C9300L-DNA-E-48-7Y	C9300L Cisco DNA Essentials, 48-port, 7 Year Term license
C9300L-DNA-A-48-3Y	C9300L Cisco DNA Advantage, 48-port, 3 Year Term license
C9300L-DNA-A-48-5Y	C9300L Cisco DNA Advantage, 48-port, 5 Year Term license
C9300L-DNA-A-48-7Y	C9300L Cisco DNA Advantage, 48-port, 7 Year Term license
C9300L-LIC=	Electronic Cisco DNA Upgrade License for C9300L switches. Note: when upgrading from Cisco DNA Essentials to Cisco DNA Advantage, Network Essentials is also upgraded to Network Advantage
Power supplies	
Product number	Product description
PWR-C1-350WAC=	350WAC power supply spare
PWR-C1-715WAC=	715WAC power supply spare
PWR-C1-715WDC=	715WDC power supply spare
PWR-C1-1100WAC=	1100WAC power supply spare
PWR-C1-1900WAC=	1900WAC Power supply spare
PWR-C1-350WAC-P=	350WAC Platinum-rated power supply spare
PWR-C1-715WAC-P=	715WAC Platinum-rated power supply spare
PWR-C1-1100WAC-P=	1100WAC Platinum-rated power supply spare
PWR-C1-715WAC-UP	Upgrade to 715WAC Platinum-rated power supply
PWR-C1-1100WAC-UP	Upgrade to 1100WAC Platinum-rated power supply
PWR-C1-1900WAC-UP	Upgrade to 1900WAC Platinum-rated power supply

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Cisco StackWise-480/1T and StackPower cables	
Product number	Product description
STACK-T1-50CM=	Cisco StackWise-480/1T 50cm stacking cable spare
STACK-T1-1M=	Cisco StackWise-480/1T 1m stacking cable spare
STACK-T1-3M=	Cisco StackWise-480/1T 3m stacking cable spare
CAB-SPWR-30CM=	Cisco Catalyst StackPower cable 30cm spare
CAB-SPWR-150CM=	Cisco Catalyst StackPower cable 150cm spare

Cisco StackWise-320 Accessories	
Product number	Product description
C9300L-STACK-KIT	Stack Kit for C9300L SKUs - includes 2 Stack Adaptors and 1 Stack Cable
C9300L-STACK-KIT=	Stack Kit for C9300L SKUs - includes 2 Stack Adaptors and 1 Stack Cable, spare
STACK-T3-50CM	50CM Type 3 Stacking Cable - default with Stack Kit for C9300L SKUs
STACK-T3-50CM=	50CM Type 3 Stacking Cable, spare for C9300L SKUs
STACK-T3-1M	1M Type 3 Stacking Cable for C9300L SKUs
STACK-T3-1M=	1M Type 3 Stacking Cable, spare for C9300L SKUs
STACK-T3-3M	3M Type 3 Stacking Cable for C9300L SKUs
STACK-T3-3M=	3M Type 3 Stacking Cable, spare for C9300L SKUs
C9300L-STACK-KIT2	Stack Kit 2 for C9300L SKUs - includes 2 Stack Adaptors and 1 Stack Cable
C9300L-STACK-KIT2=	Stack Kit 2 for C9300L SKUs - Includes 2 Stack Adaptors and 1 Stack Cable, spare
STACK-T3A-50CM	50CM Type 3A Stacking Cable - default with Stack Kit for C9300L SKUs
STACK-T3A-50CM=	50CM Type 3A Stacking Cable, spare for C9300L SKUs
STACK-T3A-1M	1M Type 3A Stacking Cable for C9300L SKUs
STACK-T3A-1M=	1M Type 3A Stacking Cable, spare for C9300L SKUs
STACK-T3A-3M	3M Type 3A Stacking Cable for C9300L SKUs
STACK-T3A-3M=	3M Type 3A Stacking Cable, spare for C9300L SKUs



Cisco StackWise-320 Accessories	
Product number	Product description
Spare power cords	
CAB-TA-NA=	AC power cord for Cisco Catalyst (North America)
CAB-TA-AP=	AC power cord for Cisco Catalyst (Australia)
CAB-TA-AR=	AC power cord for Cisco Catalyst (Argentina)
CAB-TA-SW=	AC power cord for Cisco Catalyst (Switzerland)
CAB-TA-UK=	AC power cord for Cisco Catalyst (United Kingdom)
CAB-TA-JP=	AC power cord for Cisco Catalyst (Japan)
CAB-TA-250W-JP	Japan 250WAC power cord for Cisco Catalyst (Japan)
CAB-TA-EU=	AC power cord for Cisco Catalyst (Europe)
CAB-TA-IT=	AC power cord for Cisco Catalyst (Italy)
CAB-TA-IN=	AC power cord for Cisco Catalyst (India)
CAB-TA-CN=	AC power cord for Cisco Catalyst (China)
CAB-TA-DN=	AC power cord for Cisco Catalyst (Denmark)
CAB-TA-IS=	AC power cord for Cisco Catalyst (Israel)
CAB-ACBZ-12A=	AC power cord for Cisco Catalyst (Brazil), 12A/125V BR-3-20 plug up to 12A
CAB-ACBZ-10A=	AC power cord for Cisco Catalyst (Brazil), 10A/250V BR-3-10 plug up to 10A
CAB-C15-CBN	Cabinet jumper power cord, 250VAC 13A, C14-C15 connectors

Optics online reference

The Cisco Catalyst 9300 Series supports a wide range of optics. Because the list of supported optics is updated on a regular basis, consult the tables available here for the latest QSFP28, QSFP+, SFP+, and SFP compatibility information: https://www.cisco.com/en/US/products/hw/modules/products455/products_device_support_tables_list.html.



Warranty

Cisco Enhanced Limited Lifetime hardware warranty

The Cisco Catalyst 9300 Series Switches come with the Cisco Enhanced Limited Lifetime hardware warranty (E-LLW) that includes next-business-day (NBD) delivery of replacement hardware where available and 90 days of 8x5 Cisco TAC support.

Your formal warranty statement, including the warranty applicable to Cisco software, appears in the information packet that accompanies your Cisco product. We encourage you to review the warranty statement shipped with your specific product carefully before use.

Cisco reserves the right to refund the purchase price as its exclusive warranty remedy.

For further information about warranty terms, visit <https://www.cisco.com/go/warranty>. Table 27 provides information about the E-LLW.

Table 27. E-LLW details

Cisco E-LLW	
Devices covered	Applies to Cisco Catalyst 9300 Series Switches.
Warranty duration	As long as the original customer owns the product.
End-of-life policy	In the event of discontinuance of product manufacture, Cisco warranty support is limited to 5 years from the announcement of discontinuance.
Hardware replacement	Cisco or its service center will use commercially reasonable efforts to ship a replacement for NBD delivery, where available. Otherwise, a replacement will be shipped within 10 working days after receipt of the Return Materials Authorization (RMA) request. Actual delivery times might vary depending on customer location.
Effective date	Hardware warranty commences from the date of shipment to customer (and in case of resale by a Cisco reseller, not more than 90 days after original shipment by Cisco).
TAC support	Cisco will provide during business hours, 8 hours per day, 5 days per week, basic configuration, diagnosis, and troubleshooting of device-level problems for up to a 90-day period from the date of shipment of the originally purchased Cisco Catalyst 9300 Series product. This support does not include solution or network-level support beyond the specific device under consideration.
Cisco.com access	Warranty allows guest access only to Cisco.com.

Product sustainability

Information about Cisco's Environmental, Social and Governance (ESG) initiatives and performance is provided in Cisco's CSR and sustainability reporting.

ENERGY STAR certification

Cisco is driving long-term value and market advantage by continuing to embed energy efficiency through hardware and software and by providing customers visibility into their energy consumption to help them develop a baseline, identify trends and anomalies, and take corrective actions.

With the ENERGY STAR certification of Catalyst 9300 Series models, Cisco is one of the first networking company to have third party-approved campus switches. Ecolabel certifications like ENERGY STAR help customers identify "environmentally preferable" products to help maximize energy efficiency, reduce greenhouse gas emissions, and lower energy costs.

ENERGY STAR certification reinforces Cisco's ongoing commitment to deliver energy-efficient products including top-rated power supplies, active power management and monitoring capabilities, and alignment to ISO 14000 Environmental Management systems standards – all designed with circularity principles in mind.

Learn more:

ENERGY STAR Certified Product Finder

Table 28. Links to sustainability topics

Sustainability topic		Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries and packaging	WEEE Compliance
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com
	Information on product takeback and reuse program	Cisco Takeback and Reuse Program
	Safety and compliance	Table 25. Safety and compliance information
	Mean Time Between Failures – MTBF (hours)	Table 18. Model Dimensions, Weight, and Mean Time between failures metrics

Sustainability topic

Reference

Power	Default AC power supply	Table 2. Cisco Catalyst 9300 Series switch configurations
	Power supplies	Table 4. Power supply models
		Table 21. Power specifications
		Table 22. Power specifications - Platinum-rated power supplies
	Fan	Table 7. Fan modules
	Energy Efficient Ethernet	Smart operation
	Power over Ethernet (Cisco UPOE and UPOE+)	Power over Ethernet leadership
	Power connectors	Table 19. Power connectors
	Power consumption (ATIS)	Table 23. Power Consumption of Standalone 9300 Series Switches
		Table 24. Power consumption of Standalone 9300 Series Switches with Platinum-rated power supply
	ENERGY STAR certified models	ENERGY STAR Certified Large Network Equipment
Material	Product packaging weight and materials	Contact: environment@cisco.com
	Dimensions	Table 18. Model dimensions, weight, and mean time between failures metrics
	Weight	Table 18. Model dimensions, weight, and mean time between failures metrics
	Elimination of wet point on plastic bezel	2019 Cisco Corporate Social Responsibility Report, Pg. 19 Stepping up our work on circularity



Cisco Services

Cisco Services for next-generation Cisco Catalyst 9000 Series Switches

Achieve infrastructure excellence faster and with less risk. Cisco Catalyst 9000 Services provide expert guidance to help you successfully deploy, manage, and support the Cisco Catalyst 9000 switching family. With unmatched networking expertise, best practices, and innovative tools, we can help you reduce overall upgrade, refresh, and migration costs as you introduce new hardware, software, and protocols into the network. Offering a comprehensive lifecycle of services – from implementation, optimization, technical, and managed services – Cisco experts help you reduce disruption and achieve operational excellence to extract maximum value from your Cisco DNA-ready infrastructure.

Learn more about Cisco Services for Enterprise Networks

Software policy for Cisco Catalyst 9300 Series Switches

Software policy for network stack components

Customers with the Network Essentials Stack and Network Advantage Stack software feature sets are provided with maintenance updates and bug fixes designed to maintain compliance of the software. This includes compliance with published specifications, release notes, and industry standards as long as the original end user continues to own or use the product or up to one year from the end-of-sale date for the product, whichever occurs earlier.

Cisco Embedded Support for Cisco Catalyst and Cisco DNA term components

Cisco Embedded Support delivers the right support for Cisco software products and suites. It will keep your business applications performing as expected and protect your investment. Cisco Embedded Support for the Cisco Catalyst and Cisco DNA Essentials and Cisco Catalyst and Cisco DNA Advantage term components is included. Cisco Embedded Support provides access to TAC support, major software updates, maintenance and minor software releases, and the Cisco Embedded Support site, for increased productivity with anytime access.

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital® makes it easier to get the right technology to achieve your objectives, enable business transformation, and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services, and complementary third-party equipment in easy, predictable payments. [Learn more.](#)

Document history

New or revised topic	Described in	Date
Correction to say 9300 instead of 9200 in couple of entries (C9200-48S, C9200-24S)	Table 4: Power Supply Models	October 9, 2024
Correction for switching bandwidth numbers and addition of STP virtual ports	Table 9: Bandwidth Specifications	October 9, 2024
Added Simplified Campus Automation	All relevant sections	June 4, 2024
ENERGY STAR certification	All relevant sections	April 12, 2024
Added new models supporting the Meraki Software options	All relevant sections	February 6, 2024
Added Cisco Catalyst and Meraki Software options	All relevant sections	December 5, 2023
Added Information about 9300X, copper models	All relevant sections	February 3, 2022
Added Information about 9300X fiber models	All relevant sections	March 2, 2021
Added Information about the 1G 90W UPOE+ SKUs	Across different sections	February 10, 2020
Added new SKUs for C9300L - Full PoE+ and mGig SKUs	Content added to all the tables	December 2, 2019
Updates for C9300 - large buffer/scale SKUs	All relevant sections	October 9, 2019
Adding Primary PSU upgrade option for 9300	Table 4: Power supply models	June 20, 2019
Product name change; Cisco ONE to Cisco DNA	Introduction	May 10, 2019
Wi-Fi 6 addition	Product Overview: Features	May 10, 2019
Add: Features	Product Overview: Features	May 10, 2019
Add: Modular uplink models table	Platform Details	May 10, 2019
Edit: Cisco Catalyst 9300 Series modular uplink	Platform Details	May 10, 2019
Edit: Table 1: Cisco Catalyst 9300 Series Switch configurations; uplink configuration add	Platform Details	May 10, 2019
Edit: Table 2: Name change to "Catalyst 9300..."	Platform Details	May 10, 2019
Add: Figure 3: picture for C9300L	Platform Details	May 10, 2019



New or revised topic	Described in	Date
Edit: Table 3: Power supply models	Platform Details	May 10, 2019
Add: Stacking, Table 4	Platform Details	May 10, 2019
Add: Stacking Accessories, Table 5	Platform Details	May 10, 2019
Edit: Replaced C3850 stack picture with C9300 stack picture	Platform Details	May 10, 2019
Add: Fan, Table 6	Platform Details	May 10, 2019
Edit: Table 7	Performance and Scalability	May 10, 2019
Add: Bandwidth Specifications	Performance and Scalability	May 10, 2019
Add: StackWise-320	Resiliency and High Availability	May 10, 2019
Edit: name change from Cisco One to Cisco DNA Software	Software Requirements	May 10, 2019
Edit: text edits	Licensing	May 10, 2019
Edit: Table 13	Licensing	May 10, 2019
Edit: Table 14	Specifications	May 10, 2019
Edit: Table 15	Connectors	May 10, 2019
Edit: Table 17	Power Supply Specifications	May 10, 2019
Edit: Table 21	Safety and Compliance	May 10, 2019
Edit: Table 23	Ordering Information	May 10, 2019
Added support for SD-Access Embedded Wireless	Added support for SD-Access Embedded Wireless Controller functionality.	November 13, 2018
Updated Platinum Power Supply specifications	Platinum rated power supplies available on the C9300 switches.	October 5, 2018
Updated availability of SSD card	Availability of 120G storage module for the C9300.	October 5, 2018

New or revised topic	Described in	Date
Updated Product overview	Added Catalyst 9500 high density platforms and updated associated speeds and densities, e.g., Up to 6.4-Tbps switching capacity with up to 2 Bpps of forwarding performance from "3.2 Tbps/1 Bpps" a, 32 port 100G, b, 32 port 40G, c, 48 port 25G. Added Catalyst 9500 mid density Platform a, 24 port 25G, b, 16 port 1/10G. Added new optical interfaces - QSFP28, SFP28. Added new power supply options - 650W, 1600W. Added RESCONF support. StackWise Virtual extended to all Catalyst 9500 platforms.	March 31, 2018
Updated Audio Video Bridging	AVB support noted for certain platforms. Corrected references to Catalyst 9000 switches, rather than Catalyst 9000 Series switches. Corrected references to Cisco IOS XE, rather than IOS XE.	December 15, 2017

