

Oferta Técnica

Fecha: 30 Enero del 2024

Referencia: JCE-CCC-CP-2024-0002

Señores:
Comite de Compras y Contrataciones
Junta Central Electoral
Santo Domingo, Distrito Nacional, Rep. Dom.

Adquisición de Switches			
Items	Descripción	Unidad	Cantidad
1	<p>Switches</p> <p>Switch Fortinet L2+ managed POE switch with 24GE + 4SFP+, 24port POE with max 370W limit and smart fan temperature control</p> <p>Numero de Parte: FS-124F-FPOE</p> <p>Incluye Licencias FortiCare Premium Support, numero de parte: FC-10-S124F-247-02-36, 3 años</p> <p>Incluye 4 x 10GE SFP+ transceiver module, short range for systems with SFP+ and SFP/SFP+ slots, numero de parte FN-TRAN-SFP+SR, por cada equipo.</p>	UD	10
2	<p>Switches</p> <p>Switch Fortinet 10 x GE RJ45 ports (including 7 x Internal Ports, 2 x WAN Ports, 1 x DMZ Port).</p> <p>Numero de parte: FG-60F</p> <p>Incluye: Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, URL, DNS & Video Filtering, Antispam Service, and FortiCare Premium), numero de parte: FC-10-0060F-950-02-36, 3 Años</p>	UD	20

Condiciones de la Oferta

Coniones de pago: Un Pago de 20% del monto adjudicado, restante al recibir los bienes.

Tiempo de entrega: 35 días laborables apartir de la recepción de Orden de compra.

Validez de la Oferta: (60) días, luego de presentada la oferta.

Notas:

- 2) Equipos nuevos (No remanufacturados).
- 3) Se presentan ficha técnicas de los equipos ofertados.
- 4) Los equipos ofertados tienen garantía local.
- 5) Cecomsa es Canal Autorizado para servicios tecnicos para cumplir con las reparaciones por garantía en caso de ser necesario.

Nombre **Ricardo Adolfo Rodríguez** en calidad de Gerente debidamente autorizado para actuar en nombre y representación de Cecomsa, SRL.

Firma

martes, 30 de enero de 2024





Certificado de Revendedor Autorizado

Fecha: 30 de enero de 2024

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Fortinet, Inc. ("Fortinet") opera a través de un canal de distribuidores y revendedores independientes. A la vista de ello, Fortinet confirma por la presente que:

CECOMSA

con domicilio social en: Av.Romulo Betancourt #331, Bella Vista, Santo Domingo, 10112, DOMINICAN REPUBLIC;

es actualmente un revendedor (FortiPartner) autorizado para vender productos y servicios de Fortinet en DO conforme a las siguientes designaciones:

- Nivel de contrato: Advanced
- Modelo de negocio: Integrator

Este certificado se emite en la fecha señalada arriba y es válido por un periodo de 180 días a partir de dicha fecha.

Siempre y cuando el FortiPartner identificado anteriormente haya adquirido servicios de soporte, y estos hayan sido, efectivamente, registrados y contratados con Fortinet, Fortinet se compromete a proporcionar dicho servicio de soporte para los productos aplicables de conformidad con los términos del contrato de soporte de Fortinet disponibles en la dirección: <https://support.fortinet.com>. Los productos de Fortinet son distribuidos de conformidad con los términos y la garantía de Fortinet establecidos en el acuerdo de licencia de usuario final (End User License Agreement) disponible en la dirección: <http://www.fortinet.com/doc/legal/EULA.pdf>.

La validez de este Certificado se encuentra sujeta a que el FortiPartner mantenga su contrato vigente con Fortinet y que éste cumpla las políticas y directrices de Fortinet. El programa de partners de Fortinet y sus directrices están disponibles en http://www.fortinet.com/partners/partner_program/fpp.html. Sin perjuicio de lo anterior, los FortiPartner no representan a Fortinet y, por consiguiente, no están autorizados a emitir declaraciones vinculantes por o para Fortinet.


Manufacturer Confirmation
Gonzalo Ruiz
VP of Legal and Compliance Americas



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FortiGuard Security Services



To break the attack sequence and protect your organization, you need to detect and rapidly adjust your security posture to newly discovered attacks across the ever-expanding attack surface.

Can your security do that?

FortiGuard Security Services is a suite of market-leading, AI-enabled security capabilities providing application Content, Web, Device, and User security that continuously assesses the risks and automatically adjusts the Fortinet Security Fabric and ecosystem. It provides coordinated and consistent real-time defense for the latest attacks across network endpoints and clouds.

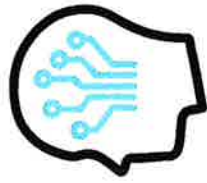
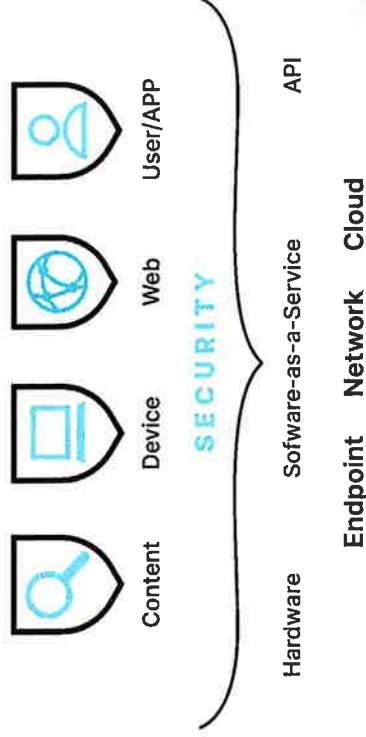
Why FortiGuard

Comprehensive. You can only protect against what you see, and in places that you can influence the enforcement in real time. We close the security gaps.

Be everywhere. Coordinated and consistent security detection and response across the attack surface and cycle with the largest portfolio of products supporting hybrid models of hardware, software, and as-a-service.

Impact everything. The largest technology and threat intelligence ecosystem with native and API-based integration.

Advanced SOC/NOC tools



Quality of the analysis. AI and analytics systems are only as good as the inputs and training that go into them. We deliver credible security analysis results based on a unified dataset.

Trainers matters. Our AI is trained by one of the largest and most experienced security research organizations in the industry—FortiGuard Labs.

Data matters. Our AI is trained on one of the largest and most diverse datasets in the industry, spanning intelligence from endpoints, networks, and clouds.

Scale matters. Our platform ingests and analyzes more than 100 billion events every day, on average, to deliver over 1 billion security updates daily across the Fortinet Security Fabric and ecosystem.

Community matters. We see and protect you against millions of events from our global fabric deployments and from our partners, preventing a “second” Patient Zero for community known threats.



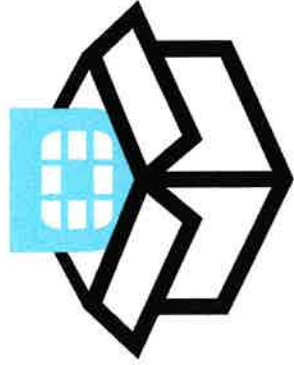
Time to protection for newly discovered threats.

You can only break the attack sequence if you can update your security posture, in time. We deliver coordinated and automated protection in near real time.

Break the sequence. We generate in near real time a holistic set of new protection for all relevant security technologies, enabling coordinated enforcement that is tailored for the attack sequence.

Have the reach. We automatically distribute the newly created protections, adjusting the Fortinet Security Fabric and ecosystem with coordinated market-leading defense.

Empower. We continually invest in advanced SOC and NOC tools, training, and capabilities, making sure that your teams are set for success.



Security efficacy that is backed up by leading certifications and testing organizations



Simplicity. Faster time to activation is key in supporting the pace of digital innovation. We deliver easy to choose, attach, and consume high-performing security.

Operation. Mix and match security capabilities to fit your diverse set of use cases across the organization, attaching them to the desired product across HW, VM, and as-a-service models. Rest assured that they are all designed from the ground up to work together in synergy. Leverage our Fabric Management Center to gain a unified view across your deployment.

Purchasing. We provide you with the freedom of choosing a la carte, optimized bundles for NGFW, cloud, mail, endpoint, etc., AND Enterprise Agreement.

Coordinated, market-leading security capabilities providing protection across the attack life cycle and surface.



Web Security

Optimized to monitor and protect data and applications against web-based attack tactics while assisting you with meeting compliance.

Web and Video Filtering

FortiGuard's massive web content rating, URL databases, and AI-enabled analysis environments power our accurate web and video filtering services. Providing granular blocking and filtering for web and video categories to allow, log, or block for rapid and comprehensive protection and regulatory compliance.

DNS

Consistent protection against malicious domain blocking attack tactics like DNS tunneling, C2 server identification, and Domain Generation Algorithms.

Antibot and CS

Block unauthorized attempts to communicate with compromised remote servers for both receiving malicious commands or extracting information.

Geo IP

Geo IP adds additional protection to this category by providing location information on IP traffic to help manage region-based threats.

WAF

In conjunction with our WAF product, this service delivers automated continuous signature updates that protect against SQL injection, cross-site scripting, and various other attacks, with hundreds of data-type and web robot patterns, vulnerability scan signatures, and suspicious URLs.





Content Security

Optimized to monitor and protect against file-based attack tactics, while assisting you with meeting compliance.

Cloud Sandbox

Top-rated behavior-based AI-powered static and dynamic malware analysis to address the rapidly evolving and more targeted threats including ransomware, crypto-malware, and others across a broad digital attack surface. Delivers real-time actionable intelligence and prevention through the automation of zero-day advanced malware detection and response. MITRE ATT&CK-based reporting and investigation tools.

AV

FortiGuard Antivirus delivers automated updates that protect against the latest polymorphing attack components, viruses, spyware, and other content-level threats. It uses industry-leading advanced detection engines to prevent both new and evolving threats from gaining a foothold inside your network, endpoint, and clouds and access invaluable content.

Innovative Capabilities

Additional capabilities like mobile malware, credential protection, content disarm and reconstruction, virus outbreak prevention, DLP, and dynamic adult image analysis add additional protection to this category.

Antispam

Work in conjunction with our mail product to dramatically reduce spam volume at the perimeter, giving you unmatched control of email attacks and infections, providing greater protection than standard real-time blacklists.



Device Security

Optimized to monitor and protect against device and vulnerability-based attack tactics while assisting you with meeting compliance.

IPS

IPS blocks the latest stealthy network-level threat and network intrusions working with the most comprehensive IPS library with thousands of signatures AND backed up by FortiGuard research credited with 850+ zero-day discoveries. Natively embedded in our context-aware policies for full control of attack detection methods to suit complex security applications and resistance to evasion techniques.

OT and IoT

Identify and police common ICS/SCADA protocols and equipment for granular visibility and control with our OT service, and reduce your attack surface with automated discovery, real-time query, segmentation, and enforcement for IoT devices.
Additional capabilities like device and OS detection and IoT hardware MAC address vendor mapping updates provide additional protection within this category.


















Consistent and Coordinated Security Detection and Response

The Fortinet Security Fabric is natively integrated with FortiGuard actionable threat intelligence that is continuously updating a rich set of capabilities for content, web, device, and user security across the Fabric.

FortiGuard maintains AI-powered analysis environments across unified databases, ensuring that all products operate from the same up-to-the-minute data. Different products gain access to all relevant security technologies appropriate to their function and location across the attack plane, ensuring security is deployed consistently and enforced cohesively.

The Fabric is based on common standards and open APIs, so you can connect and leverage your existing investments with our threat insights.

		Content Security						Web Security						Device Security					
		Malware	Spam	Phishing	URL Filtering	IP Rep	Web and Video Filtering	Botnet DP	Geo IP	DNS	Web Application	Vulnerability Scan	IPS	IoT mac to	IoT Real-Time Query	OT Detection and Protection	Device/OS Detection		
	 FortiGate HW, VM, SWG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
	 FortiProxy	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
	 Linksys HomeWORK	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
 FortiClient ZTNA, EPP, XDR	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
 FortiWeb	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
 FortiCASB	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
 FortiADC	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
 FortiMail	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
 FortiDDoS	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
 FortiSandbox	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
 FortiAnalyzer	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
 FortiSIEM	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
 +Developers Network	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
 Open Ecosystem	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
Shared threat intelligence, IoC, Analysis & Recommendations																			



From our threat researchers to yours



Advanced Tools for SOC/NOC

Security Operational Teams / Network Operational Teams

Continuously evaluate and advance your security posture and set your team for success



Fabric Rating

Provide you with guided experience to design, implement, and continually advance your security posture. Fabric Rating Service provides audit checks, identifies critical vulnerabilities and configuration weaknesses, and recommends best practice implementations.

IoC

Automated breach defense system that continuously monitors your network for attacks, vulnerabilities, and persistent threats. It provides protection against legitimate threats, guarding your data, defending against fraudulent access, malware, and breaches.

Vulnerability Scan

Vulnerability scan network assets for security weaknesses, with on-demand or scheduled scans. Comprehensive reports on the security posture of your critical assets and automated scanning of remote location.

SOC-as-a-Service



Free your teams to focus on major executions by offloading all tier one analysis to our team of experts. We will notify you of any significant events that need your attention and recommend an action plan.

Purchasing Options

We provide you with the freedom to choose and mix and match between:

- A la carte
- Optimized bundles for products and use cases
- Enterprise Agreement

This data sheet includes purchasing options and bundles for the FortiGate product line. For enabling FortiGuard Security Services on all other products and for other use cases, please refer to the relevant product data sheet.



FortiGate Hardware and VM

SD-WAN and ZTNA capabilities are made available with FortiOS on all FortiGates.

	INDIVIDUAL				BUNDLES			
	A La Carte	Enterprise	SMB ¹	UTP	ATP			
FortiGuard Security Services	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
IPS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Advanced Malware Protection (AMP)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Antivirus	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Botnet	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Mobile Malware	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
FortiGate Cloud Sandbox	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Outbreak Prevention	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Web Security	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Web and Content Filtering	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Secure DNS Filtering	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Video Filtering	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Antispam	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
IoT Query Service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
OT Protocols Signature Service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
NOC Services								
FortiGate Cloud (SMB Logging and Cloud Management)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					
FortiManager Cloud ²	<input checked="" type="checkbox"/>							
Security Fabric Rating and Compliance Monitoring	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
FortiConverter Service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
SD-WAN Bandwidth Monitoring	<input checked="" type="checkbox"/>							
SOC Services								
FortiCloud SOCaas (managed service)	<input checked="" type="checkbox"/>							
FortiCare Support Services 24x7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Web, Chat, and Telephone	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
1-hour Response Time SLA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Base Services (Included with all FortiCare support contracts)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Application Control	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Geo IP Updates	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Device/OS Detection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
IoT Mac Database	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Trusted Certificate Database	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Internet Service (SaaS) Database	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
DDNS (v4/v6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Important Add-ons								
FortiDeploy								
FortiCloud Premium								
FortiAnalyzer Cloud Storage top-up								
Add-on (1 unit per P.O. to route all FortiGates for zero-touch provisioning) Add-on (required to deploy base VMs for FortiManager Cloud and FortiAnalyzer Cloud) Top up as needed using central FortiCloud account add-on								

¹SMB Bundle is available for FortiGate 80F-series and below.

² Requires FortiCloud Premium to deploy the base FortiManager Cloud.



Order Information

The following table provides an example for the FortiGate-60F:

BUNDLES

	SKU
Hardware and Service Bundles	
FG-60F plus Enterprise Bundle	FG-60F-BDL-811-DD
FG-60F plus SMB Bundle	FG-60F-BDL-879-DD
FG-60F plus UTP Bundle	FG-60F-BDL-950-DD
FG-60F plus ATP Bundle	FG-60F-BDL-928-DD
Service Bundles	
Enterprise Bundle	FC-10-0060F-811-02-DD
SMB Bundle	FC-10-0060F-879-02-DD
UTP Bundle	FC-10-0060F-950-02-DD
ATP Bundle	FC-10-0060F-928-02-DD

A LA CARTE

	SKU
Hardware and Support	
FG-60F	FG-60F
24x7 FortiCare Support	FC-10-0060F-247-02-DD
A la Carte - FortiGuard Security Services	
IPS	FC-10-0060F-108-02-DD
AMP	FC-10-0060F-100-02-DD
Web Security	FC-10-0060F-112-02-DD
IoT Query Service	FC-10-0060F-231-02-DD
OT Signature Service	FC-10-0060F-159-02-DD
A la Carte - NOC/SOC Services	
FortiGate Cloud	FC-10-0060F-131-02-DD
FortiAnalyzer Cloud (including SOCAaS)	FC-10-0060F-464-02-DD
FortiManager Cloud	FC-10-0060F-179-02-DD
Security Fabric Rating and Compliance Service	FC-10-0060F-175-02-DD
FortiConverter Migration Service	FC-10-0060F-189-02-DD
FortiGuard Bandwidth Monitor Service	FC-10-0060F-288-02-DD
Frequently Ordered Together	
FortiDeploy (order 1 unit per Purchase Order to route all devices to FortiDeploy ZTP portal)	FDP-SINGLE-USE
FortiCloud Premium (required to launch base FortiAnalyzer Cloud and/or FortiManager Cloud instances)	FC-15-CLDPS-219-02-DD
FortiAnalyzer Cloud Log Storage Upgrade (FC1/FC2/FC3 = 5/50/500 GB/day add-on to cloud account)	FCx-10-AZCLD-463-01-DD



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Fortinet Transceivers

Transceiver Modules for Fortinet Products

Take the Guesswork Out of Selecting Transceivers

Common connectivity problems in enterprise and data center networks are often traced back to low-quality and incompatible transceiver modules, rather than a fault in the network appliances themselves. Fortinet's transceivers have been purpose-built and tested to work with Fortinet equipment, ensuring that your network is as stable and robust as possible, and taking the guesswork out of selecting compatible transceivers.

Highlights

Copper and optical options

Supports

SFP
SFP+
SFP28
SFP56
QSFP+
DAC
CFP2
QSFP28
QSFP56
QSFP-DD

Performance from 1 Gbps
to 400 Gbps

Tested for compatibility
with Fortinet appliances

Wide Range for Maximum Flexibility

Supporting various form factors, media types, and throughput, Fortinet transceivers provide connectivity options to meet many different network architectures and deployment scenarios. Whether your network demands high-speed 400 GE inside the data center, or long-range 1 GE to connect data centers in different cities, Fortinet has a transceiver to meet your needs.





Available in



Appliance

Key Features and Benefits

Various Interface Options

Fortinet transceivers support various interfaces including: SFP, SFP+, DAC, and newer high-speed standards including SFP28, SFP56, QSFP+, CFP2, QSFP28, QSFP56, and QSFP-DD.

Tested for Compatibility

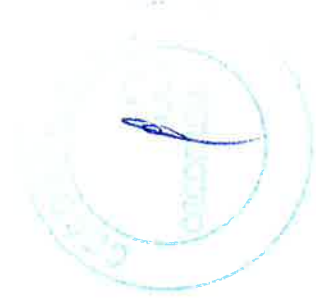
You can rest assured that your Fortinet transceivers have been tested for compatibility on Fortinet products, taking the guesswork out of selecting transceivers for your environment.

Maximize Network Uptime

Eliminate connectivity problems to maximize network uptime by using quality transceivers, designed to work with Fortinet products.

Cost Effective

Transceiver modules can be expensive, especially those with sensitive high-speed optics. Fortinet delivers high-quality transceivers, while keeping cost to a minimum.



Quick Reference Matrix

Maximum Transmission Distance	SFP (100MBPS)	SFP (GE)	SFP+ (10 GE)	SFP28 (25 GE)	SFP56 (50 GE)
10 Meter			SP-CABLE-ADASFP+		
30 Meter			FN-TRAN-SFP+GC		
100 Meter		FN-TRAN-GC FS-TRAN-GC		FN-TRAN-SFP28-SR	FN-TRAN-SFP56-SR
150 Meter					
220 Meter		FN-TRAN-SX (62.5/125 µm) FR-TRAN-SX (62.5/125 µm)			
300 Meter			FN-TRAN-SFP+SR		
400 Meter			FN-TRAN-SFP+SR (on OM4 MMF)		
500 Meter		FN-TRAN-SX (50/125 µm) FR-TRAN-SX (50/125 µm)			
2 Kilometer	FS-TRAN-FX				
10 Kilometer		FN-TRAN-LX	FN-TRAN-SFP+LR	FG-TRAN-SFP28-LR	
20 Kilometer					
30 Kilometer			FN-TRAN-SFP+BD27 FN-TRAN-SFP+BD33		
40 Kilometer			FN-TRAN-SFP+ER		
80 Kilometer			FN-TRAN-SFP+ZR		
90 Kilometer		FR-TRAN-ZX			
Maximum Transmission Distance					
10 Meter			QSFP28 (100 GE)	QSFP56 (200 GE)	QSFPDD (400 GE)
30 Meter					
100 Meter	FN-TRAN-QSFP+SR and FG-TRAN-QSFP+SR-BIDI (on OM3 MMF)	FG-TRAN-CFP2-SR10	FN-TRAN-QSFP28-SR FN-TRAN-QSFP28-BIDI (on OM4 MMF) FN-TRAN-QSFP28-BIDI-H FN-TRAN-QSFP28-BIDI (on OM5 MMF)	FN-TRAN-QSFP56-SR4	FN-TRAN-QSFPDD-SR8
150 Meter	FN-TRAN-QSEFP+SR and FG-TRAN-QSEFP+SR-BIDI (on OM4 MMF)				
220 Meter					
300 Meter					
400 Meter					
500 Meter					
2 Kilometer			FN-TRAN-QSFP28-DR FN-TRAN-QSFP28-CWDM4	FN-TRAN-QSFP56-FR4	FN-TRAN-QSFPDD-DR4 FN-TRAN-QSFPDD-DR4+ FN-TRAN-QSFPDD-FR4 FN-TRAN-QSFPDD-LR4
10 Kilometer		FG-TRAN-CFP2-LR4			
20 Kilometer			FN-TRAN-QSFP28-ER		
30 Kilometer					
40 Kilometer					
80 Kilometer					
90 Kilometer					



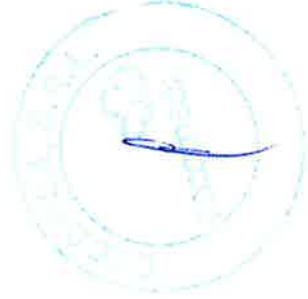
Specifications

TRANSCEIVERS

HARDWARE	FS-TRAN-FX	FN-TRAN-GC / FS-TRAN-GC	FN-TRAN-SX	FR-TRAN-SX	FN-TRAN-LX	FR-TRAN-ZX
Protocol Standard	100Base-FX	1000Base-T	1000Base-SX	1000Base-SX	1000Base-LX	1000Base-LX
IEEE Standard	802.3u	802.3ab	802.3z	802.3z	802.3z	802.3z
Module Type	SFP	SFP	SFP	SFP	SFP	SFP
Data Link Rate for Ethernet	100Mbps	1.25 Gbps	1.25 Gbps	1.25 Gbps	1.25 Gbps	1.25 Gbps
Transmission Range	2km	100m	220m / 500m	500m	10km	90km
Media	MM	Copper interface	MM	MM	SM	SM
Wavelength (nm)	1310		850	850	1310	1550
Connector Type	Duplex LC	RJ-45	Duplex LC	Duplex LC	Duplex LC	Duplex LC
Power Dissipation	<1.1W	1.05W	< 800mW	< 500mW	< 830mW	< 700mW
Operating Temperature	-40°C to 85°C	0°-85°C	0°-70°C	-40°-85°C	-40°-85°C	-40°-85°C
Hot Plug	Yes	Yes	Yes	Yes	Yes	Yes
Serial ID PROM	Yes	Yes	Yes	Yes	Yes	Yes
Digital Monitoring	Yes	No	Yes	Yes	Yes	Yes
Auto Negotiation	Yes	Yes	Yes	Yes	Yes	Yes
Link Status	Yes	Yes	Yes	Yes	Yes	Yes

TRANSCEIVERS

HARDWARE	FN-TRAN-SFP+GC	FN-TRAN-SFP+SR	FN-TRAN-SFP+LR	FN-TRAN-SFP+ER
Protocol Standard	10GBASE-T	10GBase-SR	10GBase-LR	10GBASE-ER
IEEE Standard	802.3an	802.3ae	802.3ae	802.3ae
Module Type	SFP+	SFP+	SFP+	SFP+
Data Link Rate for Ethernet	10 Gbps	10 Gbps	10 Gbps	11.3 Gbps
Transmission Range	30m (Cat6A or better)	300m	10km	40km
Media	Copper interface	MM	SM	SM
Wavelength (nm)	—	850	1310	1550
Connector Type	RJ-45	Duplex LC	Duplex LC	Duplex LC
Power Dissipation	2.5W	600mW	850mW	1.5W
Operating Temperature	-5°-85°C	0°-70°C	0°-85°C	-5°-70°C
Hot Plug	Yes	Yes	Yes	Yes
Serial ID PROM	Yes	Yes	Yes	Yes
Digital Monitoring	No	Yes	Yes	Yes
Auto Negotiation	Yes	Yes	Yes	Yes
Link Status	Yes	Yes	Yes	Yes



Specifications

TRANSCEIVERS

HARDWARE FN-TRAN-SFP-ZR

Protocol Standard	10G-Base-ZR
IEEE Standard	802.3ae
Module Type	SFP+
Data Link Rate for Ethernet	11.3 Gbps
Transmission Range	80km
Media	SM
Wavelength (nm)	1550
Connector Type	Duplex LC
Power Dissipation	< 1.5W
Operating Temperature	-5°-70°C
Hot Plug	Yes
Serial ID PROM	Yes
Digital Monitoring	Yes
Auto Negotiation	Yes
Link Status	Yes

FN-TRAN-SFP-BD27*

Protocol Standard	10G-Base-LR/LW
IEEE Standard	802.3ae
Module Type	SFP+
Data Link Rate for Ethernet	11.3Gbps
Transmission Range	30km
Media	SM
Wavelength (nm)	TX: 1271 RX: 1331
Connector Type	Single LC
Power Dissipation	<1W
Operating Temperature	-40°-85°C
Hot Plug	Yes
Serial ID PROM	Yes
Digital Monitoring	Yes
Auto Negotiation	Yes
Link Status	Yes

FN-TRAN-SFP+BD33**

Protocol Standard	10G-Base-LR/LW
IEEE Standard	802.3ae
Module Type	SFP+
Data Link Rate for Ethernet	11.3Gbps
Transmission Range	30km
Media	SM
Wavelength (nm)	TX: 1331 RX: 1271
Connector Type	Single LC
Power Dissipation	<1W
Operating Temperature	-40°-85°C
Hot Plug	Yes
Serial ID PROM	Yes
Digital Monitoring	Yes
Auto Negotiation	Yes
Link Status	Yes

TRANSCEIVERS

HARDWARE FN-TRAN-SFP28-SR

Protocol Standard	25GBase-SR, 10GBase-SR
IEEE Standard	802.3by, 802.3ae
Module Type	SFP28
Data Link Rate for Ethernet	25.78 / 10.3 Gbps
Transmission Range	100m
Media	MM
Wavelength (nm)	850
Connector Type	Duplex LC
Power Dissipation	1.2W
Operating Temperature	0°-70°C
Hot Plug	Yes
Serial ID PROM	Yes
Digital Monitoring	Yes
Auto Negotiation	No
Link Status	Yes

FG-TRAN-SFP28-LR

Protocol Standard	25GBase-LR
IEEE Standard	802.3cc
Module Type	SFP28
Data Link Rate for Ethernet	25.78 Gbps
Transmission Range	10km
Media	SM
Wavelength (nm)	1310
Connector Type	Duplex LC
Power Dissipation	1.5W
Operating Temperature	0°-70°C
Hot Plug	Yes
Serial ID PROM	Yes
Digital Monitoring	Yes
Auto Negotiation	No
Link Status	Yes



* Connects to FN-TRAN-SFP+BD33, ordered separately.

** Connects to FN-TRAN-SFP+BD27, ordered separately.



Specifications

TRANSCEIVERS

HARDWARE FN-TRAN-QSFP+SR

Protocol Standard	40GBase-SR4
IEEE Standard	802.3ba
Module Type	QSFP+
Data Link Rate for Ethernet	1.06 Gbps-41.2 Gbps
Transmission Range	100m (OM3)-150m (OM4)
Media	MM

Wavelength (nm) 750-980

Connector Type Single 1x12 MPO

Power Dissipation < 1.5W

Operating Temperature 0°-70°C

Hot Plug Yes

Serial ID PROM Yes

Digital Monitoring Yes

Auto Negotiation Yes

Link Status Yes

HARDWARE FN-TRAN-QSFP+LR

Protocol Standard	40GBase-LR4
IEEE Standard	802.3ba
Module Type	QSFP+
Data Link Rate for Ethernet	41.2 Gbps
Transmission Range	10km
Media	SM

Wavelength (nm) 1264.5 - 1277.5

1284.5 - 1297.5

1304.5 - 1317.5

1324.5 - 1337.5

Connector Type Duplex LC

Power Dissipation < 3.5W

Operating Temperature 0°-70°C

Hot Plug Yes

Serial ID PROM Yes

Digital Monitoring Yes

Auto Negotiation Yes

Link Status Yes

HARDWARE FN-TRAN-QSFP+ER

Protocol Standard	40G+Base-ER4
IEEE Standard	802.3bm
Module Type	QSFP+
Data Link Rate for Ethernet	41.3 Gbps
Transmission Range	40km
Media	SM

Wavelength (nm) 1264.5 - 1277.5

1284.5 - 1297.5

1304.5 - 1317.5

1324.5 - 1337.5

Connector Type Duplex LC

Power Dissipation < 3.5W

Operating Temperature 0°-70°C

Hot Plug Yes

Serial ID PROM Yes

Digital Monitoring Yes

Auto Negotiation Yes

Link Status Yes

HARDWARE FG-TRAN-QSFP+SR BIDI

Protocol Standard	40GBase-SR-BIDI
IEEE Standard	802.3ba
Module Type	QSFP+
Data Link Rate for Ethernet	41.2 Gbps
Transmission Range	100m (OM3)-150m (OM4)
Media	MM

Wavelength (nm) 850-900

Connector Type Duplex LC

Power Dissipation < 3.5W

Operating Temperature 0°-70°C

Hot Plug Yes

Serial ID PROM Yes

Digital Monitoring Yes

Auto Negotiation Yes

Link Status Yes

TRANSCEIVERS

HARDWARE FG-TRAN-CFP2-SR10

Protocol Standard	100GBase-SR10
IEEE Standard	802.3ba
Module Type	CFP2
Data Link Rate for Ethernet	103.12 Gbps
Transmission Range	100m (OM3)-150m (OM4)
Media	MM

Wavelength (nm) 850

Connector Type 24 fiber MPO

Power Dissipation < 8W

Operating Temperature 0°-70°C

Hot Plug Yes

Serial ID PROM Yes

Digital Monitoring Yes

Auto Negotiation Yes

Link Status Yes

HARDWARE FG-TRAN-CFP2-LR4

Protocol Standard	100GBase-LR4
IEEE Standard	802.3ba
Module Type	CFP2
Data Link Rate for Ethernet	103.1 Gbps
Transmission Range	10km
Media	SM

Wavelength (nm) 1310

Connector Type Duplex LC

Power Dissipation < 8W

Operating Temperature 0°-70°C

Hot Plug Yes

Serial ID PROM Yes

Digital Monitoring Yes

Auto Negotiation Yes

Link Status Yes

HARDWARE FN-TRAN-QSFP28-SR

Protocol Standard	100GBase-SR4
IEEE Standard	802.3bm
Module Type	QSFP28
Data Link Rate for Ethernet	103.1 Gbps
Transmission Range	100m (OM4)
Media	MM

Wavelength (nm) 850

Connector Type MPO12

Power Dissipation < 3.5W

Operating Temperature 0°-70°C

Hot Plug Yes

Serial ID PROM Yes

Digital Monitoring Yes

Auto Negotiation Yes

Link Status Yes

HARDWARE FN-TRAN-QSFP28-LR

Protocol Standard	100GBase-LR4
IEEE Standard	802.3ba
Module Type	QSFP28
Data Link Rate for Ethernet	103.1 Gbps
Transmission Range	10km (SMF)
Media	SM

Wavelength (nm) 1310

Connector Type Duplex LC

Power Dissipation < 3.5W

Operating Temperature 0°-70°C

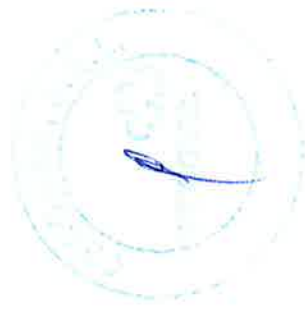
Hot Plug Yes

Serial ID PROM Yes

Digital Monitoring Yes

Auto Negotiation Yes

Link Status Yes



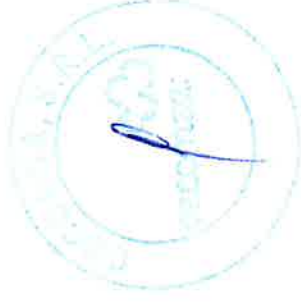
Specifications

TRANSCEIVERS

	FN-TRAN-QSFP28-ER	FN-TRAN-QSFP28-DR	FN-TRAN-QSFP28-CWDM4	FN-TRAN-QSFP28-BIDI	FN-TRAN-QSFP28-BIDI-I
HARDWARE					
Protocol Standard	100G-Base-LR4	100G-Base-DR	100GBase-CWDM4	100GBase-SR-BIDI	100G-Base-SR1.2
IEEE Standard	802.3ba/bm	802.3ba/cd/cu	802.3bm	802.3bm	802.3bm
Module Type	QSFP28	QSFP28	QSFP28	QSFP28	QSFP28
Data Link Rate for Ethernet	103.1 Gbps	103.1 Gbps	103.1 Gbps	103.1 Gbps	106.25Gbps
Transmission Range	20km	500m	2km	100m	100m
Media	SM	SM	SM	MM	MM
Wavelength (nm)	1284.53 – 1296.59 1299.02 – 1301.09 1303.54 – 1305.63 1308.09 – 1310.19	1304.5 – 1317.5	1264.5 – 1277.5 1284.5 – 1297.5 1304.5 – 1317.5 1324.5 – 1337.5	850 900	850 900
Connector Type	Duplex LC	Duplex LC	Duplex LC	Duplex LC	Duplex LC
Power Dissipation	< 3.5W	< 4.5W	< 3.5W	<3.5W	<4W
Operating Temperature	0°-70°C	0°-70°C	0°-70°C	10°-70°C	0°-70°C
Hot Plug	Yes	Yes	Yes	Yes	Yes
Serial ID PROM	Yes	Yes	Yes	Yes	Yes
Digital Monitoring	Yes	Yes	Yes	Yes	Yes
Auto Negotiation	Yes	Yes	Yes	Yes	Yes
Link Status	Yes	Yes	Yes	Yes	Yes

TRANSCEIVERS

	FN-TRAN-SFP56-SR	FN-TRAN-QSFP56-SR4	FN-TRAN-QSFP56-FR4
HARDWARE			
Protocol Standard	50G-Base-SR	200G-Base-SR4	200G-Base-FR4
IEEE Standard	802.3cd	802.3cd	802.3bs
Module Type	SFP56	QSFP56	QSFP56
Data Link Rate for Ethernet	53.125Gbps	212.5Gbps	212.5Gbps
Transmission Range	100m	100m	2km
Media	MM	MM	SM
Wavelength (nm)	850	850	1264.5 – 1277.5 1284.5 – 1297.5 1304.5 – 1317.5 1324.5 – 1337.5
Connector Type	Duplex LC	MPO-12	Duplex LC
Power Dissipation	<1.5W	<4.5W	<6W
Operating Temperature	0°-70°C	0°-70°C	0°-70°C
Hot Plug	Yes	Yes	Yes
Serial ID PROM	Yes	Yes	Yes
Digital Monitoring	Yes	Yes	Yes
Auto Negotiation	Yes	Yes	Yes
Link Status	Yes	Yes	Yes



Specifications

TRANSCEIVERS

HARDWARE	FN-TRAN-QSFPDD-SR8	FN-TRAN-QSFPDD-LR4	FN-TRAN-QSFPDD-FR4	FN-TRAN-QSFPDD-DR4	FN-TRAN-QSFPDD-DR4+
Protocol Standard	400G-Base-SR8	400G-Base-LR4	400G-Base-FR4	400G-Base-DR4	400G-Base-DR4
IEEE Standard	802.3bs	802.3bs	802.3cu	802.3bs	802.3bs
Module Type	QSFP-DD	QSFP-DD	QSFP-DD	QSFP-DD	QSFP-DD
Data Link Rate for Ethernet	425Gbps	425Gbps	425Gbps	425Gbps	425Gbps
Transmission Range	100m	10km	2km	500m	2km
Media	MM	SM	SM	SM	SM
Wavelength (nm)	850	1271 1291 1311 1331	1271 1291 1311 1331	1310	1311
Connector Type	MPO-16 APC	Duplex LC	Duplex LC	MPO-12	MPO-12
Power Dissipation	<9W	<10.5W	<12W	<12W	<14W
Operating Temperature	0°-70°C	0°-70°C	0°-70°C	0°-70°C	0°-70°C
Hot Plug	Yes	Yes	Yes	Yes	Yes
Serial ID PROM	Yes	Yes	Yes	Yes	Yes
Digital Monitoring	Yes	Yes	Yes	Yes	Yes
Auto Negotiation	Yes	Yes	Yes	Yes	Yes
Link Status	Yes	Yes	Yes	Yes	Yes

DIRECT ATTACH CABLES

HARDWARE	SP-CABLE-FS-SFP+1	SP-CABLE-FS-SFP+3	SP-CABLE-FS-SFP+5	SP-CABLE-ADASFP+
Protocol Standard	10GBase-CR	10GBase-CR	10GBase-CR	10GBase-CR
Data Link Rate for Ethernet	up to 10 Gbps	up to 10 Gbps	up to 10 Gbps	1 Gbps to 10 Gbps
Module Type	SFP+	SFP+	SFP+	SFP+
Power Dissipation	< 0.5W	< 0.5W	< 0.5W	< 0.5W
Operating Temperature	0°-70°C	0°-70°C	0°-70°C	0°-70°C
Hot Plug	Yes	Yes	Yes	Yes
Cable Length	1m	3m	5m	10m
Cable Type	Twinax Copper Passive	Twinax Copper Passive	Twinax Copper Passive	Twinax Copper Active
Transceiver	Included	Included	Included	Included
Compliance	RoHS	RoHS	RoHS	RoHS
Bend Radius	25mm (30AWG)	25mm (30AWG)	25mm (30AWG)	25mm (30AWG)
Cable Diameter	4.5mm	4.5mm	4.5mm	4.5mm
Digital Monitoring	N/A	N/A	N/A	Yes

DIRECT ATTACH CABLES

HARDWARE	FN-CABLE-SFP+1	FN-CABLE-SFP+3	FN-CABLE-SFP+5
Protocol Standard	10GBase-CR	10GBase-CR	10GBase-CR
Data Link Rate for Ethernet	10Gbps	10Gbps	10Gbps
Module Type	SFP+	SFP+	SFP+
Power Dissipation	<0.1W	<0.1W	<0.1W
Operating Temperature	0°-70°C	0°-70°C	0°-70°C
Hot Plug	Yes	Yes	Yes
Cable Length	1m	3m	5m
Cable Type	Twinax Copper Passive	Twinax Copper Passive	Twinax Copper Passive
Transceiver	Included	Included	Included
Compliance	RoHS	RoHS	RoHS
Bend Radius	22mm (30AWG)	22mm (30AWG)	33mm (24AWG)
Cable Diameter	4.5mm	4.5mm	5.6mm
Digital Monitoring	Yes	Yes	Yes



Specifications

DIRECT ATTACH CABLES

HARDWARE	FN-CABLE-SFP28-1	FN-CABLE-SFP28-3	FN-CABLE-SFP28-5
Protocol Standard	25GBase-CR	25GBase-CR	25GBase-CR
Data Link Rate for Ethernet	25Gbps	25Gbps	25Gbps
Module Type	SFP28	SFP28	SFP28
Power Dissipation	<0.1W	<0.1W	<0.1W
Operating Temperature	-40°-85°C	-40°-85°C	-40°-85°C
Hot Plug	Yes	Yes	Yes
Cable Length	1m	3m	5m
Cable Type	Twinax Copper Passive	Twinax Copper Passive	Twinax Copper Passive
Transceiver	Included	Included	Included
Compliance	RoHS	RoHS	RoHS
Bend Radius	35mm (30AWG)	35mm (30AWG)	35mm (30AWG)
Cable Diameter	4.83mm	4.83mm	4.83mm
Digital Monitoring	Yes	Yes	Yes

DIRECT ATTACH CABLES

HARDWARE	SP-CABLE-FS-QSFP+1	SP-CABLE-FS-QSFP+3	SP-CABLE-FS-QSFP+5
Protocol Standard	40GBase-CR4	40GBase-CR4	40GBase-CR4
Data Link Rate for Ethernet	40 Gbps	40 Gbps	40 Gbps
Module Type	QSFP+	QSFP+	QSFP+
Power Dissipation	< 0.5W	< 0.5W	< 0.5W
Operating Temperature	0°-70°C	0°-70°C	0°-70°C
Hot Plug	Yes	Yes	Yes
Cable Length	1m	3m	5m
Cable Type	Twinax Copper Passive	Twinax Copper Passive	Twinax Copper Passive
Transceiver	Included	Included	Included
Compliance	RoHS	RoHS	RoHS
Bend Radius	25mm (30AWG)	25mm (30AWG)	25mm (30AWG)
Cable Diameter	6.4mm	6.4mm	6.4mm
Digital Monitoring	N/A	N/A	N/A

DIRECT ATTACH CABLES

HARDWARE	FN-CABLE-QSFP+1	FN-CABLE-QSFP+3	FN-CABLE-QSFP+5
Protocol Standard	40GBase-CR4	40GBase-CR4	40GBase-CR4
Data Link Rate for Ethernet	40Gbps	40Gbps	40Gbps
Module Type	QSFP+	QSFP+	QSFP+
Power Dissipation	<0.1W	<0.1W	<0.1W
Operating Temperature	-40°-85°C	-40°-85°C	-40°-85°C
Hot Plug	Yes	Yes	Yes
Cable Length	1m	3m	5m
Cable Type	Twinax Copper Passive	Twinax Copper Passive	Twinax Copper Passive
Transceiver	Included	Included	Included
Compliance	RoHS	RoHS	RoHS
Bend Radius	37mm (30AWG)	37mm (30AWG)	43mm (26 AWG)
Cable Diameter	7.11mm	7.11mm	8.38mm
Digital Monitoring	Yes	Yes	Yes



Specifications

DIRECT ATTACH CABLES

	FN-CABLE-QSFP28-1	FN-CABLE-QSFP28-2	FN-CABLE-QSFP28-3	FN-CABLE-QSFP28-5
HARDWARE				
Protocol Standard	100GBase-CR4	100GBase-CR4	100GBase-CR4	100GBase-CR4
Data Link Rate for Ethernet	100 Gbps	100 Gbps	100 Gbps	100 Gbps
Module Type	QSFP28	QSFP28	QSFP28	QSFP28
Power Dissipation	< 0.1W	< 0.1W	< 0.1W	< 0.1W
Operating Temperature	0°-70°C	0°-70°C	0°-70°C	0°-70°C
Hot Plug	Yes	Yes	Yes	Yes
Cable Length	1m	2m	3m	5m
Cable Type	Twinax Copper Passive	Twinax Copper Passive	Twinax Copper Passive	Twinax Copper Passive
Transceiver	Included	Included	Included	Included
Compliance	RoHS	RoHS	RoHS	RoHS
Bend Radius	25mm (30AWG)	25mm (30AWG)	25mm (30AWG)	25mm (30AWG)
Cable Diameter	6.4mm	6.4mm	6.4mm	6.4mm
Digital Monitoring	N/A	N/A	N/A	N/A

DIRECT ATTACH CABLES (DAC)

	FN-CABLE-QSFPDD-DAC-01	FN-CABLE-QSFPDD-DAC-B5
HARDWARE		
Protocol Standard	400GBase-CR8	400GBase-CR8
IEEE Standard	IEEE802.3bs	IEEE802.3bs
Data Link Rate for Ethernet	425Gbps	425Gbps
Module Type	QSFP-DD	QSFP-DD
Power Dissipation	<0.1W	<0.1W
Operating Temperature	0°-70°C	0°-70°C
Hot Plug	Yes	Yes
Cable Length	1m	2.5m
Cable Type	Twinax Copper Passive	Twinax Copper Passive
Transceiver	Included	Included
Compliance	RoHS	RoHS
Bend Radius	31.5mm (30AWG)	40.6mm (26AWG)
Cable Diameter	9.0mm	11.6mm
Digital Monitoring	No	No



Specifications

BREAKOUT DIRECT ATTACH CABLES (DAC)

	FN-CABLE-QSFP28-4SFP28-1 25GBase-CR	FN-CABLE-QSFP28-4SFP28-3 25GBase-CR	FN-CABLE-QSFP28-4SFP28-5 25GBase-CR
HARDWARE			
Protocol Standard	25GBase-CR	25GBase-CR	25GBase-CR
IEEE Standard			
Data Link Rate for Ethernet	1x 10Gbps 4x 25Gbps	1x 10Gbps 4x 25Gbps	1x 10Gbps 4x 25Gbps
Module Type	1x QSFP28 4x SFP28	1x QSFP28 4x SFP28	1x QSFP28 4x SFP28
Power Dissipation	<0.1W	<0.1W	<0.1W
Operating Temperature	-40°-85°C	-40°-85°C	-40°-85°C
Hot Plug	Yes	Yes	Yes
Cable Length	1m	3m	5m
Cable Type	Twinax Copper Passive	Twinax Copper Passive	Twinax Copper Passive
Transceiver	Included	Included	Included
Compliance	RoHS	RoHS	RoHS
Bend Radius	30mm (30AWG)	30mm (30AWG)	30mm (30AWG)
Cable Diameter	4.83mm	4.83mm	4.83mm
Digital Monitoring	Yes	Yes	Yes

BREAKOUT CABLES

	FG-TRAN-QSFP-4SFP 1x 40 GE QSFP+ MPO	FG-TRAN-QSFP-4SFP-5 1x 40 GE QSFP+ MPO	FG-CABLE-SR10-SFP+ 1x 100 GE SR10 CFP2 MPO	FG-CABLE-SR10-SFP+5 1x 100 GE SR10 CFP2 MPO
HARDWARE				
Connector A	1x 40 GE QSFP+ MPO	1x 40 GE QSFP+ MPO	1x 100 GE SR10 CFP2 MPO	1x 100 GE SR10 CFP2 MPO
Connector A Type	4x 10 GE SFP+ LC duplex	4x 10 GE SFP+ LC duplex	10x 10 GE SFP+ LC duplex	10x 10 GE SFP+ LC duplex
Connector B	1m	5m	1m	5m
Cable Length	OM3 MMF	OM3 MMF	OM3 MMF	OM3 MMF
Cable Type	Not included	Not included	Not included	Not included
Transceiver				

Fortinet Breakout Cables — Qualified on Fortinet Products (on applicable interfaces)



Ordering Information

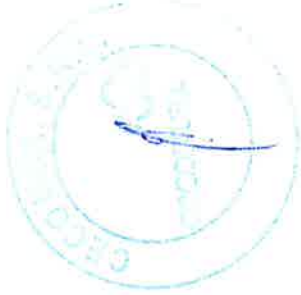
PRODUCT	SKU	DESCRIPTION
100Mb SFP transceiver module, short range	FS-TRAN-FX	100Mb multimode SFP transceiver module, -40° to 85°C, 2km range for systems with SFP slots and capable of 10/100Mb mode selection
1 GE SFP LX transceiver module, long range	FN-TRAN-LX	1 GE SFP LX transceiver module, 10km range, -40°C to 85°C, over SMF, for systems with SFP and SFP/SFP+ slots.
1 GE SFP RJ45 transceiver module	FN-TRAN-GC	1 GE SFP RJ45 transceiver module for systems with SFP and SFP/SFP+ slots.
1 GE SFP RJ45 transceiver module	FS-TRAN-GC	1 GE SFP RJ45 transceiver module for FortiSwitch with SFP and SFP/SFP+ slots.
1 GE SFP SX transceiver module, short range	FN-TRAN-SX	1 GE SFP SX transceiver module for systems with SFP and SFP/SFP+ slots.
1 GE SFP SX transceiver module, MMF, -40°-85°C operation	FR-TRAN-SX	1 GE SFP SX transceiver module, -40°-85°C, over MMF, for systems with SFP and SFP/SFP+ slots
1 GE SFP transceiver module, 90 km range, -40°-85°C operation	FR-TRAN-ZX	1 GE SFP transceiver module, -40°-85°C operation, 90km range for systems with SFP slots.
10 GE SFP+ transceiver module, short range	FN-TRAN-SFP+SR	10 GE SFP+ transceiver module, short range for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ transceiver module, long range	FN-TRAN-SFP+LR	10 GE SFP+ transceiver module, 10km range for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ transceiver module, short range, BiDi	FN-TRAN-SFP+BD27	10 GE SFP+ transceiver module, 30KM long range single BiDi for systems with SFP+ and SFP/SFP+ slots (connects to FN-TRAN-SFP+BD33, ordered separately)
10 GE SFP+ transceiver module, short range, BiDi	FN-TRAN-SFP+BD33	10GE SFP+ transceiver module, 30KM long range single BiDi for systems with SFP+ and SFP/SFP+ slots (connects to FN-TRAN-SFP+BD27, ordered separately)
10 GE SFP+ active direct attach cable, 10m/32.8 ft	SP-CABLE-ADASFP+	10 GE SFP+ active direct attach cable, 10m / 32.8ft. for systems with SFP+ and SFP/SFP+ slots
10 GE SFP+ transceiver module, extended range	FN-TRAN-SFP+ER	10 GE SFP+ transceiver module, 40km range for systems with SFP+ slots.
10 GE SFP+ transceiver module, extended range	FN-TRAN-SFP+ZR	10 GE SFP+ transceiver module, 80km range, for systems with SFP+ slots.
10 GE copper SFP+ RJ45 transceiver module, 30m range	FN-TRAN-SFP+GC	10 GE copper SFP+ RJ45 Fortinet transceiver module (30m range) for systems with SFP+ slots.
10 GE SFP+ passive direct attach cable 1m	SP-CABLE-FS-SFP+1	10 GE SFP+ passive direct attach cable, 1m for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ passive direct attach cable 3m	SP-CABLE-FS-SFP+3	10 GE SFP+ passive direct attach cable, 3m for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ passive direct attach cable 5m	SP-CABLE-FS-SFP+5	10 GE SFP+ passive direct attach cable, 5m for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ passive direct attach cable 1m	FN-CABLE-SFP+1	10 GE SFP+ passive direct attach cable, 1m for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ passive direct attach cable 3m	FN-CABLE-SFP+3	10 GE SFP+ passive direct attach cable, 3m for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ passive direct attach cable 5m	FN-CABLE-SFP+5	10 GE SFP+ passive direct attach cable, 5m for systems with SFP+ and SFP/SFP+ slots.
25 GE SFP28 transceiver module, long range	FG-TRAN-SFP28-LR	25 GE SFP28 transceiver module, 10km range for systems with SFP28 slots.
25 GE/10 GE dual rate SFP28 transceiver module, short range	FN-TRAN-SFP28-SR	25 GE/10 GE dual rate SFP28 transceiver module, short range for systems with SFP28/SFP+ slots.
25 GE passive direct attach cable 1m	FN-CABLE-SFP28-1	25 GE SFP28 passive direct attach cable 1m for systems with SFP28 slots.
25 GE passive direct attach cable 3m	FN-CABLE-SFP28-3	25 GE SFP28 passive direct attach cable 3m for systems with SFP28 slots.
25 GE passive direct attach cable 5m	FN-CABLE-SFP28-5	25 GE SFP28 passive direct attach cable 5m for systems with SFP28 slots.
40 GE QSFP+ transceiver module, short range	FN-TRAN-QSFP+SR	40 GE QSFP+ transceiver module, short range for systems with QSFP+ slots.
40 GE QSFP+ transceiver module, extended range	FN-TRAN-QSFP+ER	40 GE QSFP+ transceiver module, 40km range for systems with QSFP+ slots.
40 GE QSFP+ transceiver module, short range, BiDi	FG-TRAN-QSFP+SR-BIDI	40 GE QSFP+ transceiver module, short range BiDi for systems with QSFP+ slots.
40 GE QSFP+ transceiver module, long range	FN-TRAN-QSFP+LR	40 GE QSFP+ transceiver module, 10km range for systems with QSFP+ slots.
40 GE QSFP+ passive direct attach cable 1m	SP-CABLE-FS-QSFP+1	40 GE QSFP+ passive direct attach cable, 1m for systems with QSFP+ slots.
40 GE QSFP+ passive direct attach cable 3m	SP-CABLE-FS-QSFP+3	40 GE QSFP+ passive direct attach cable, 3m for systems with QSFP+ slots.
40 GE QSFP+ passive direct attach cable 5m	SP-CABLE-FS-QSFP+5	40 GE QSFP+ passive direct attach cable, 5m for systems with QSFP+ slots.
40 GE QSFP+ passive direct attach cable 1m	FN-CABLE-QSFP+1	40 GE QSFP+ passive direct attach cable, 1m for systems with QSFP+ slots.
40 GE QSFP+ passive direct attach cable 3m	FN-CABLE-QSFP+3	40 GE QSFP+ passive direct attach cable, 3m for systems with QSFP+ slots.
40 GE QSFP+ passive direct attach cable 5m	FN-CABLE-QSFP+5	40 GE QSFP+ passive direct attach cable, 5m for systems with QSFP+ slots.



Ordering Information

PRODUCT	SKU	DESCRIPTION
40G/100G QSFP+ to 4x SFP+/SFP28 optical breakout 1m	FG-TRAN-QSFP-4XSFP	40G/100G QSFP+/QSFP28 to SFP+/SFP28 Parallel Breakout MPO to 4xLC connectors, 1m reach, transceivers not included.
40G/100G QSFP+ to 4x SFP+/SFP28 optical breakout 5m	FG-TRAN-QSFP-4SFP-5	40G/100G QSFP+/QSFP28 to SFP+/SFP28 Parallel Breakout MPO to 4xLC connectors, 5m reach, transceivers not included.
50 GE SFP56 transceiver module, short range	FN-TRAN-SFP56-SR	50 GE SFP56 transceiver module, short range for systems with SFP56 slots.
100 GE CFP2 transceiver module, long range	FG-TRAN-CFP2-LR4	100 GE CFP2 transceiver module, 10km range, over single mode fiber, for systems with CFP2 slots.
100 GE CFP2 transceiver module, short range	FG-TRAN-CFP2-SR10	100 GE CFP2 transceiver module, 10 channel parallel fiber, short range for systems with CFP2 slots.
100 GE QSFP28 transceiver module, short range	FN-TRAN-QSFP28-SR	100 GE QSFP28 transceiver module, 4 channel parallel fiber, short range for systems with QSFP28 slots.
100 GE QSFP28 transceiver module, long range	FN-TRAN-QSFP28-LR	100 GE QSFP28 transceiver module, 10km range for systems with QSFP28 slots.
100 GE QSFP28 transceiver module, extended range	FN-TRAN-QSFP28-ER	100 GE QSFP28 transceiver module, 20km range, for systems with QSFP28 slots.
100 GE QSFP28 transceiver module, short range	FN-TRAN-QSFP28-DR	100GE QSFP28 transceiver module, single channel single-mode fiber, 10GBBase-DR for systems with QSFP28 slots.
100 GE QSFP28 transceiver module, CWDM	FN-TRAN-QSFP28-CWDM4	100GE QSFP28 transceiver module, CWDM, LC connectors, 2km range, for systems with QSFP28 slots.
100 GE QSFP28 transceiver module, short range, BIDI	FN-TRAN-QSFP28-BIDI	100 GE / 40 GE QSFP28 BIDI transceiver module, short range, for systems with QSFP28 slots
100 GE QSFP28 transceiver module, short range, BIDI	FN-TRAN-QSFP28-BIDI-H	100 GE QSFP28 transceiver module, short range BIDI for systems with QSFP28 slots
100 GE SR10 to 10x 10 GE fan out cable, 1m	FG-CABLE-SR10-SFP+	100 GE CFP2/QSFP28 parallel breakout MPO to 10x LC connectors, 1m reach, transceiver module not included.
100 GE SR10 to 10x 10 GE fan out cable, 5m	FG-CABLE-SR10-SFP+ 5	100 GE CFP2/QSFP28 parallel breakout MPO to 10x LC connectors, 5m reach, transceiver module not included.
100 GE passive direct attach cable 1m	FN-CABLE-QSFP28-1	100 GE QSFP28 passive direct attach cable 1m for systems with QSFP28 slots.
100 GE passive direct attach cable 2m	FN-CABLE-QSFP28-2	100 GE QSFP28 passive direct attach cable 2m for systems with QSFP28 slots.
100 GE passive direct attach cable 3m	FN-CABLE-QSFP28-3	100 GE QSFP28 passive direct attach cable 3m for systems with QSFP28 slots.
100 GE passive direct attach cable 5m	FN-CABLE-QSFP28-5	100 GE QSFP28 passive direct attach cable 5m for systems with QSFP28 slots.
100 GE QSFP28 to 4x 25 GE SFP28 direct attach cable breakout, 1m	FN-CABLE-QSFP28-4SFP28-1	100 GE QSFP28 breakout to 4x 25 GE SFP28 passive direct attach cable, 1m
100 GE QSFP28 to 4x 25 GE SFP28 direct attach cable breakout, 3m	FN-CABLE-QSFP28-4SFP28-3	100 GE QSFP28 breakout to 4x 25 GE SFP28 passive direct attach cable, 3m
100 GE QSFP28 to 4x 25 GE SFP28 direct attach cable breakout, 5m	FN-CABLE-QSFP28-4SFP28-5	100 GE QSFP28 breakout to 4x 25 GE SFP28 passive direct attach cable, 5m
200 GE QSFP56 transceiver module, short range	FN-TRAN-QSFP56-SR4	200 GE QSFP56 transceiver module, short range, for systems with QSFP56 slots.
400 GE passive direct attach cable 1m	FN-TRAN-QSFP56-FR4	400 GE QSFPDD passive Direct Attach Cable, 1m, for systems with QSFP-DD slots.
400 GE passive direct attach cable 2.5m	FN-CABLE-QSFPDD-DAC-01	400 GE QSFPDD passive Direct Attach Cable, 2.5m, for systems with QSFP-DD slots.
400 GE QSFPDD transceiver module, short range	FN-TRAN-QSFPDD-SR8	400 GE QSFPDD transceiver module, 8 channel parallel fiber, short range, for systems with QSFP-DD slots
400 GE QSFPDD transceiver module, short range	FN-TRAN-QSFPDD-DR4	400 GE QSFPDD transceiver module, 4 channel parallel fiber, short range, for systems with QSFP-DD slots
400 GE QSFPDD transceiver module, long range	FN-TRAN-QSFPDD-LR4	400 GE QSFPDD transceiver module, 10km range, SMF, for systems with QSFP-DD slots
400 GE QSFPDD transceiver module, mid range	FN-TRAN-QSFPDD-FR4	400 GE QSFPDD transceiver module, 2km range, SMF, for systems with QSFP-DD slots
400 GE QSFPDD transceiver module, mid range	FN-TRAN-QSFPDD-DR4+	400 GE QSFPDD transceiver module, 4-channel parallel fiber, 2km range, for systems with QSFPDD slots.



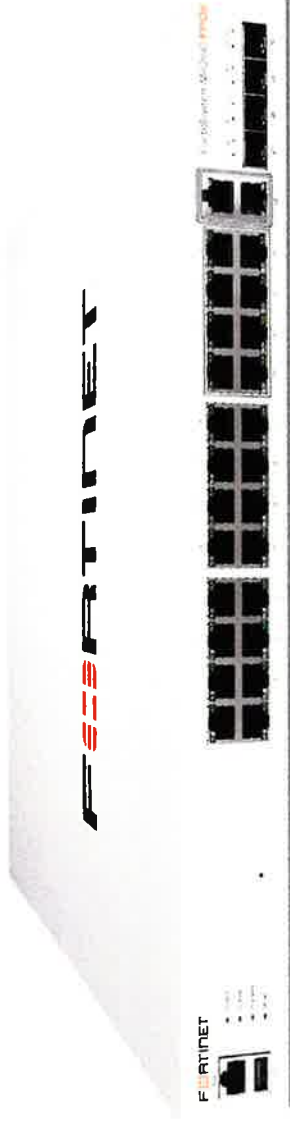


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FortiSwitch™ Secure Access



Highlights

- Designed for installations from desktops to wiring closets
- Ideal for SD-Branch deployments
- Centralized security and access management from FortiGate interfaces with FortiLink
- Optimal for converged network environments; enabling voice, data, and wireless traffic to be delivered across a single network
- Supports non-FortiLink deployments through onboard GUI, API, or command line configuration
- Up to 48 ports in a compact 1 RU form factor
- Stackable up to 300 switches per FortiGate, depending on model
- Supports wire-speed switching and store and forward forwarding mode

Security, Performance, and Manageability

The FortiSwitch™ Secure Access Family delivers outstanding security, performance, and manageability. Secure, simple, and scalable, FortiSwitch is the right choice for threat-conscious businesses of all sizes.

Tightly integrated into the Fortinet Security Fabric via FortiLink, FortiSwitch can be managed directly from the familiar FortiGate interface. This single-pane-of-glass management provides complete visibility and control of users and devices on the network regardless of how they connect. This makes the FortiSwitch ideal for SD-Branch and campus deployments with applications that range from desktop to data center aggregation, enabling businesses to converge their security and network access.



Available in



Appliance

Integration

Security Fabric Integration through FortiLink

FortiLink is an innovative proprietary management protocol that allows our FortiGate Next-Generation Firewall to seamlessly manage any FortiSwitch. FortiLink enables the FortiSwitch to become a logical extension of the FortiGate, integrating it directly into the Fortinet Security Fabric. This management option reduces complexity and decreases management costs as network security and access layer functions are enabled and managed through a single console. FortiLink integration enables centralized policy management, including role-based access and control, making it easy to implement and manage.

Collection

Entry 100 Series

- Entry level switch
- 8-48 GE ports, PoE+ capable
- Desktop to wiring closet
- 2-4 GE SFP uplink ports
- 4x 10GE SFP+ uplink ports

Premium 400 Series

- Enterprise switch
- 24-48 GE and Multi-Gig port options, PoE+ and UPOE options
- Larger wiring closet or high throughput requirements
- 4x 10 GE SFP+ uplink ports

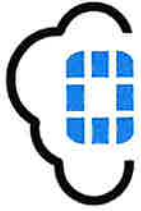
Mid-Range 200 Series

- Mid-level switch
- 24-48 GE ports, PoE+ capable
- Typical wiring closet switch
- 4 GE SFP uplink ports

Aggregation 500 Series

- Aggregation switch
- 24-48 GE ports, PoE+ capable
- Larger wiring closet or high throughput requirements
- 4x 10 GE SFP+ and
2x 40 GE QSFP+ uplink ports





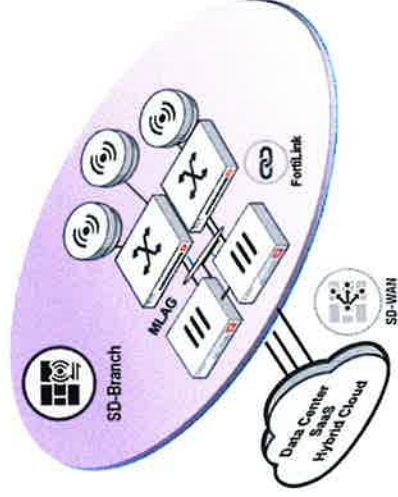
Deployment

Overview

FortiSwitch is commonly managed and deployed through our FortiGate with FortiLink but can also be deployed and managed in non-FortiGate environments. Cloud management for both deployment options shown below is available through FortiCloud.

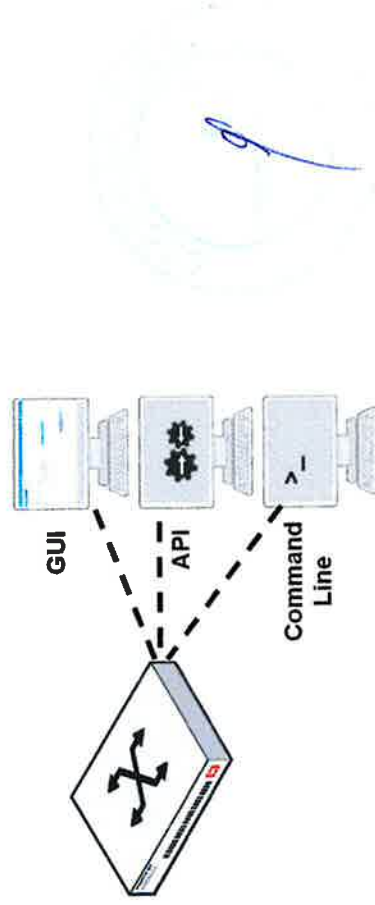
FortiGate

- Deployment and management via FortiLink
- Security extended from NGFW
- Most common Fortinet deployment model



Non-FortiGate

- Standalone GUI or CLI
- Manage at scale with FortiSwitch Manager
- Industry standard, no Fortinet Security Fabric integration



Product Offerings

Model Numbers

FS-108E-POE, FS-108E-FPOE, FS-108F, FS-108F-POE, FS-108F-FPOE, FS-124E, FS-124E-POE, FS-124E-FPOE, FS-148E, FS-148E-POE, FS-124F, FS-124F-POE, FS-124F-FPOE, FS-148F, FS-148F-POE, FS-148F-FPOE, FS-224D-FPOE, FS-224E, FS-224E-POE, FS-248D, FS-248E-POE, FS-248E-FPOE, FS-424E-FIBER, FS-M426E-FPOE, FS-424E, FS-424E-POE, FS-424E-FPOE, FS-448E, FS-448E-POE, FS-448E-FPOE, FS-524-D, FS-524D-FPOE, FS-548D, FS-548D-FPOE

Features

Refer to the FortiSwitch Feature Matrix for details about the features supported by each FortiSwitch model.

FOR IISWITCH FORTILINK MODE (WITH FORTIGATE)

Management and Configuration

Auto Discovery of Multiple Switches
 8 to 300 Managed Switches depending on FortiGate model
 FortiLink Stacking (Auto Inter-Switch Links)
 Software Upgrade of Switches
 Centralized VLAN Configuration
 Switch POE Control
 Link Aggregation Configuration
 Spanning Tree
 LLDP/MED
 IGMP Snooping
 L3 Routing and Services (FortiGate)
 Policy-Based Routing (FortiGate)
 Virtual Domain (FortiGate)
 Automated detection and recommendations

Dynamic Port Profiles for FortiSwitch ports
 Provision firmware upon authorization
 Health Monitoring

High Availability

Support FortiLink FortiGate in HA Cluster
 LAG support for FortiLink Connection
 Active-Active Split LAG from FortiGate to FortiSwitches for Advanced Redundancy

FORTISWITCH FORTILINK MODE (WITH FORTIGATE)

Security and Visibility

802.1X Authentication (Port-based, MAC-based, MAB)
 Syslog Collection
 DHCP Snooping
 Device Detection
 MAC Black/White Listing (FortiGate)
 Policy Control of Users and Devices (FortiGate)
 Block Intra-VLAN Traffic
 Network Device Detection
 Host Quarantine on Switch Port
 Integrated FortiGate Network Access Control (NAC) function
 FortiGuard IoT Identification
 FortiSwitch recommendations in Security Rating
 Switch Controller traffic collector
 Port Statistics
 Clients Monitoring
UTM Features
 Firewall (FortiGate)
 IPC, AV, Application Control, Botnet (FortiGate)



Features

Refer to the FortiSwitch Feature Matrix for details about the features supported by each FortiSwitch model.

	FORTISWITCH	FORTISWITCH
	Layer 2	Layer 3
Jumbo Frames		Static Routing (Hardware-based)
Auto-negotiation for Port Speed and Duplex		Dynamic Routing Protocols: OSPFv2, RIPv2, VRRP, BGP, ISIS *
MDI/MDIX Auto-crossover		Multicast Protocols: PIM-SSM *
IEEE 802.1D MAC Bridging/STP		ECMP
IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)		Bidirectional Forwarding Detection (BFD)
IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)		DHCP Relay
STP Root Guard		IP conflict detection and notification
STP BPDU Guard		DHCP server
Edge Port / Port Fast		Unicast Reverse Path Forwarding - uRPF
IEEE 802.1Q VLAN Tagging		IPv6 route filtering
Private VLAN		Filtering routemaps based on routing protocol
IEEE 802.3ad Link Aggregation with LACP		Security and Visibility
Unicast/Multicast traffic balance over trunking port (dst-ip, dst-mac, src-dst-ip, src-dst-mac, src-ip, src-mac)		Port Mirroring
IEEE 802.1AX Link Aggregation		Admin Authentication Via RFC 2865 RADIUS
Spanning Tree Instances (MSTP/CST)		IEEE 802.1X Authentication Port-based
IEEE 802.3x Flow Control and Back-pressure		IEEE 802.1X Authentication MAC-based
IEEE 802.3 10Base-T		IEEE 802.1X Guest and Falback VLAN
IEEE 802.3u 100Base-TX		IEEE 802.1X MAC Access Bypass (MAB)
IEEE 802.3z 1000Base-SX/LX		IEEE 802.1X Dynamic VLAN Assignment
IEEE 802.3ab 1000Base-T		Radius CoA (Change of Authority)
IEEE 802.3ae 10 Gigabit Ethernet		Radius Accounting
IEEE 802.3az Energy Efficient Ethernet		MAC-IP Binding
IEEE 802.3bz Multi Gigabit Ethernet		sFlow
IEEE 802.3 CSMA/CD Access Method and Physical Layer Specifications		ACL
Storm Control		IEEE 802.1ab Link Layer Discovery Protocol (LLDP)
MAC, IP, Ethertype-based VLANs		IEEE 802.1ab LLDP-MED
Virtual-Wire		IEEE 802.1ae MAC Security (MAC Sec)
Split Port (QSFP+ breakout to 4x10G SFP+ or 4x1G SFP)		DHCP-Snooping
Time-Domain Reflectometry (TDR) Support		Dynamic ARP Inspection
LAG min/max bundle		Sticky MAC and MAC Limit
Rapid PVST Interoperation		IEEE 802.1X open auth
Ingress Pause Metering		IEEE 802.1X EAP pass-through
Loop Guard		Flow Export (NetFlow and IPFIX)
Per-port storm control		ACL Multistage
Priority-based Flow Control (802.1Qbb)		ACL Multiple Ingress
IEEE 802.1ad QinQ		ACL Schedule
VLAN Mapping		IP source guard
IEEE 802.3ba, 802.3bj, and 802.3bm 40 and 100 Gigabit Ethernet		IPv6 RA Guard
Auto topology		LLDP-MED ELIN support
Dynamically shared packet buffers		Per-port and per-VLAN MAC learning limit
Services		Assign VLANs via Radius attributes (RFC 4675)
IGMP proxy / querier		Wake on LAN
MLD Snooping		
MLD proxy / querier		
IGMP Snooping		

*Requires 'Advanced Features' License.



Features

Refer to the FortiSwitch Feature Matrix for details about the features supported by each FortiSwitch model.

FORTISWITCH

High Availability

Multi-Chassis Link Aggregation (MCLAG)

Quality of Service

IEEE 802.1p Based Priority Queuing

IP TOS/DSCP Based Priority Queuing

IEEE 1588 PTP (Transparent Clock)

Explicit Congestion Notification

Egress priority tagging

Percentage Rate Control

FORTISWITCH

Management

IPv4 and IPv6 Management

Telnet / SSH

HTTP / HTTPS

SNMP v1/v2c/v3

SNTP

Standard CLI and Web GUI Interface

Software download/upload: TFTP/FTP/GUI

Managed from FortiGate

Support for HTTP REST APIs for Configuration and Monitoring

Dual Firmware Support

RMON Group 1

Packet Capture

SPAN, RSPAN, and ERSPAN

Link Monitor

POE Control Modes

System Temperature and Alert

Syslog UDP/TCP

Provide warning if L2 table is getting full

Display Average Bandwidth and Allow Sorting on Physical Port / Interface Traffic

System alias command

SNMP v3 traps

Automation Stitches



Features

ALL FORTISWITCH MODELS

RFC and MIB Support*

BFD

- RFC 5880: Bidirectional Forwarding Detection (BFD)
- RFC 5881: Bidirectional Forwarding Detection (BFD) for IPv4 and IPv6 (Single Hop)
- RFC 5882: Generic Application of Bidirectional Forwarding Detection (BFD)

BGP

- RFC 1771: A Border Gateway Protocol 4 (BGP-4)
- RFC 1965: Autonomous System Confederations for BGP
- RFC 1997: BGP Communities Attribute
- RFC 2545: Use of BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing
- RFC 2796: BGP Route Reflection – An Alternative to Full Mesh IBGP
- RFC 2842: Capabilities Advertisement with BGP-4
- RFC 2858: Multiprotocol Extensions for BGP-4
- RFC 4271: BGP-4
- RFC 6286: Autonomous-System-Wide Unique BGP Identifier for BGP-4
- RFC 6608: Subcodes for BGP Finite State Machine Error
- RFC 6793: BGP Support for Four-Octet Autonomous System (AS) Number Space
- RFC 7606: Revised Error Handling for BGP UPDATE Messages
- RFC 7607: Codification of AS 0 Processing
- RFC 7705: Autonomous System Migration Mechanisms and Their Effects on the BGP AS_PATH Attribute
- RFC 8212: Default External BGP (EBGP) Route Propagation Behavior without Policies
- RFC 8654: Extended Message Support for BGP

DHCP

- RFC 2131: Dynamic Host Configuration Protocol
- RFC 3046: DHCP Relay Agent Information Option
- RFC 7513: Source Address Validation Improvement (SAVI) Solution for DHCP

IP/IPv4

- RFC 2697: A Single Rate Three Color Marker
- RFC 3168: The Addition of Explicit Congestion Notification (ECN) to IP
- RFC 5227: IPv4 Address Conflict Detection
- RFC 5517: Cisco Systems' Private VLANs: Scalable Security in a Multi-Client Environment
- RFC 7039: Source Address Validation Improvement (SAVI) Framework

IP Multicast

- RFC 2362: Protocol Independent Multicast-Sparse Mode (PIM-SM): Protocol Specification
- RFC 2710: Multicast Listener Discovery (MLD) for IPv6 (MLDv1)
- RFC 4541: Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches
- RFC 4605: Internet Group Management Protocol (IGMP)/Multicast Listener Discovery (MLD)-Based Multicast Forwarding ("IGMP/MLD Proxying")
- RFC 4607: Source-Specific Multicast for IP

ALL FORTISWITCH MODELS

RFC and MIB Support*

IPv6

- RFC 2464: Transmission of IPv6 Packets over Ethernet Networks: Transmission of IPv6 Packets over Ethernet Networks
- RFC 2474: Definition of the Differentiated Services Field (DS Field) in the and IPv6 Headers (DSCP)
- RFC 2893: Transition Mechanisms for IPv6 Hosts and Routers
- RFC 4213: Basic Transition Mechanisms for IPv6 Hosts and Router
- RFC 4291: IP Version 6 Addressing Architecture
- RFC 4443: Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
- RFC 4861: Neighbor Discovery for IP version 6 (IPv6)
- RFC 4862: IPv6 Stateless Address Auto configuration
- RFC 5095: Deprecation of Type 0 Routing Headers in IPv6
- RFC 6724: Default Address Selection for Internet Protocol version 6 (IPv6)
- RFC 7113: IPv6 RA Guard
- RFC 8200: Internet Protocol, Version 6 (IPv6) Specification
- RFC 8201: Path MTU Discovery for IP version 6

IS-IS

- RFC 1195: Use of OSI IS-IS for Routing in TCP/IP and Dual Environments
- RFC 5308: Routing IPv6 with IS-IS

MIB

- RFC 1213: MIB II parts that apply to FortiSwitch 100 units
- RFC 1354: IP Forwarding Table MIB
- RFC 1493: Bridge MIB
- RFC 1573: SNMP MIB II
- RFC 1643: Ethernet-like Interface MIB
- RFC 1724: RIPv2-MIB
- RFC 1850: OSPF Version 2 Management Information Base
- RFC 2233: The Interfaces Group MIB using SMV2
- RFC 2618: Radius-Auth-Client-MIB
- RFC 2620: Radius-Acc-Client-MIB
- RFC 2665: Definitions of Managed Objects for the Ethernet-like Interface Types
- RFC 2674: Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering and Virtual LAN extensions
- RFC 2787: Definitions of Managed Objects for the Virtual Router Redundancy Protocol
- RFC 2819: Remote Network Monitoring Management Information Base
- RFC 2863: The Interfaces Group MIB
- RFC 2932: IPv4 Multicast Routing MIB
- RFC 2934: Protocol Independent Multicast MIB for IPv4
- RFC 3289: Management Information Base for the Differentiated Services Architecture
- RFC 3433: Entity Sensor Management Information Base
- RFC 3621: Power Ethernet MIB
- RFC 6933: Entity MIB (Version 4)



* RFC and MIB supported by FortiSwitch Operating System. Check FortiSwitch Feature Matrix for model specific support.



Features

ALL FORTISWITCH MODELS

RFC and MIB Support*

OSPF

- RFC 1583: OSPF version 2
- RFC 1765: OSPF Database Overflow
- RFC 2328: OSPF version 2
- RFC 2370: The OSPF Opaque LSA Option
- RFC 2740: OSPF for IPv6
- RFC 3101: The OSPF Not-So-Stubby Area (NSSA) Option
- RFC 3137: OSPF Stub Router Advertisement
- RFC 3623: OSPF Graceful Restart
- RFC 5340: OSPF for IPv6 (OSPFv3)
- RFC 5709: OSPFv2 HMAC-SHA Cryptographic Authentication
- RFC 6549: OSPFv2 Multi-Instance Extensions
- RFC 6845: OSPF Hybrid Broadcast and Point-to-Multipoint Interface Type
- RFC 6860: Hiding Transit-Only Networks in OSPF
- RFC 7474: Security Extension for OSPFv2 When Using Manual Key Management
- RFC 7503: OSPF for IPv6
- RFC 8042: CCITT Draft Recommendation T.4
- RFC 8362: OSPFv3 Link State Advertisement (LSA) Extensibility

OTHER

- RFC 2030: SNTP
- RFC 3176: InMon Corporation's sFlow: A Method for Monitoring Traffic in Switched and Routed Networks
- RFC 3768: VRRP
- RFC 3954: Cisco Systems NetFlow Services Export Version 9
- RFC 5101: Specification of the IP Flow Information Export (IPFIX) Protocol for the Exchange of Flow Information
- RFC 5798: VRRPv3 (IPv4 and IPv6)

ALL FORTISWITCH MODELS

RFC and MIB Support*

RADIUS

- RFC 2865: Admin Authentication Using RADIUS
- RFC 2866: RADIUS Accounting
- RFC 4675: RADIUS Attributes for Virtual LAN and Priority Support
- RFC 5176: Dynamic Authorization Extensions to Remote Authentication Dial In User Service (RADIUS)

RIP

- RFC 1058: Routing Information Protocol
- RFC 2080: RIPng for IPv6
- RFC 2082: RIP-2 MD5 Authentication
- RFC 2453: RIPv2
- RFC 4822: RIPv2 Cryptographic Authentication

SNMP

- RFC 1157: SNMPv1v2c
- RFC 2571: Architecture for Describing SNMP
- RFC 2572: SNMP Message Processing and Dispatching
- RFC 2573: SNMP Applications
- RFC 2576: Coexistence between SNMP versions



* RFC and MIB supported by FortiSwitch Operating System. Check FortiSwitch Feature Matrix for model specific support.



Specifications

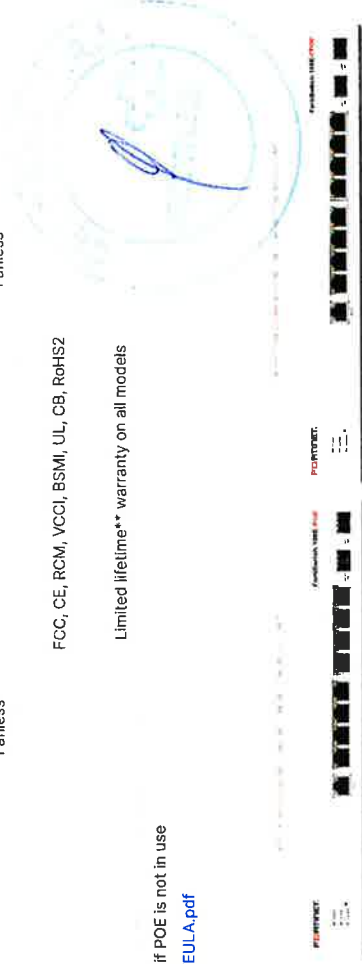
FORTISWITCH 108E-POE

Hardware Specifications

	8x GE RJ45 and 2x GE SFP	8x GE RJ45 and 2x GE SFP
Total Network Interfaces	0	0
Dedicated Management 10/100 Port	1	1
RJ-45 Serial Console Port	1 RU Rack Mount	1 RU Rack Mount
Form Factor	4 (802.3af/at)	8 (802.3af/at)
Power over Ethernet (PoE) Ports	65 W	130 W
PoE Power Budget	> 10 years	> 10 years
Mean Time Between Failures		
System Specifications		
Switching Capacity (Duplex)	20 Gbps	20 Gbps
Packets Per Second (Duplex)	30 Mpps	30 Mpps
MAC Address Storage	8 K	8 K
Network Latency	4µs	4µs
VLANs Supported	4 K	4 K
Link Aggregation Group Size	8	8
Total Link Aggregation Groups	8	8
Packet Buffers	512 KB	512 KB
DRAM	256 MB DDR3	256 MB DDR3
FLASH	32 MB	32 MB
ACL	640	640
Spanning Tree Instances	16	16
Dimensions		
Height x Depth x Width (inches)	1.7 x 8.2 x 13	1.7 x 8.2 x 13
Height x Depth x Width (mm)	44 x 209 x 330	44 x 209 x 330
Weight	4.3 lbs (1.95 kg)	4.5 lbs (2.04 kg)
Environment		
Power Required	100-240V AC, 50/60 Hz	100-240V AC, 50/60 Hz
Power Supply	AC Built in	AC Built in
Redundant Power	—	—
Power Consumption* (Average / Maximum)	70.19 W / 71.10 W	135.19 W / 136.10 W
Heat Dissipation	17.7 BTU/h	17.7 BTU/h
Operating Temperature	32°-113°F (0°-45°C)	32°-113°F (0°-45°C)
Storage Temperature	-40°-158°F (-40°-70°C)	-40°-158°F (-40°-70°C)
Humidity	10%-90% non-condensing	10%-90% non-condensing
Air-Flow Direction	side-to-back	side-to-back
Noise Level	Fanless	Fanless
Certification and Compliance		
Warranty	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
Fortinet Warranty	Limited lifetime** warranty on all models	Limited lifetime** warranty on all models

* POE models power consumption is similar to non-POE model if POE is not in use

** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 108E-POE

FortiSwitch 108E-FPOE

Specifications

FORTISWITCH 108F

FORTISWITCH 108F-POE

FORTISWITCH 108F-FPOE

Hardware Specifications	7x GE RJ45, 1x GE/POE-PD RJ45, and 2x GE SFP	8x GE RJ45 and 2x GE SFP	8x GE RJ45 and 2x GE SFP
Total Network Interfaces	7x GE RJ45, 1x GE/POE-PD RJ45, and 2x GE SFP	8x GE RJ45 and 2x GE SFP	8x GE RJ45 and 2x GE SFP
Dedicated Management 10/100 Port	0	0	0
RJ-45 Serial Console Port	1	1	1
Form Factor	Desktop	Desktop / 19" rack bracket	Desktop / 19" rack bracket
Power over Ethernet (PoE) Ports	0	8 (802.3af/at)	8 (802.3af/at)
PoE Power Budget	0	65 W	130 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
System Specifications			
Switching Capacity (Duplex)	20 Gbps	20 Gbps	20 Gbps
Packets Per Second (Duplex)	30 Mpps	30 Mpps	30 Mpps
MAC Address Storage	8 K	8 K	8 K
Network Latency	4 μs	4 μs	4 μs
VLANs Supported	4 K	4 K	4 K
Link Aggregation Group Size	8	8	8
Total Link Aggregation Groups	8	8	8
Packet Buffers	512 KB	512 KB	512 KB
DRAM	256 MB DDR3	256 MB DDR3	256 MB DDR3
FLASH	32 MB	32 MB	32 MB
ACL	768	768	768
Spanning Tree Instances	16	16	16
Dimensions			
Height x Depth x Width (inches)	1.18 x 4.72 x 7.09	1.73 x 8.23 x 9.85	1.73 x 8.23 x 9.85
Height x Depth x Width (mm)	30 x 120 x 180	44 x 209 x 250	44 x 209 x 250
Weight	1.36 lbs (0.62 kg)	3.75 lbs (1.70 kg)	4.05 lbs (1.84 kg)
Environment			
Power Required	100–240V AC, 50/60 Hz / PoE-PSE(al)	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Supply	12V/1A DC power adapter included, PoE-PD Built in	AC built in	AC built in
Redundant Power	No	No	No
Power Consumption	6.2 W	74.4 W	139.2 W
Heat Dissipation	21,142 BTU/h	34,12 BTU/h	34,56 BTU/h
Operating Temperature	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)
Storage Temperature	-49°–158°F (-40°–70°C)	-40°–158°F (-40°–70°C)	-40°–158°F (-40°–70°C)
Humidity	5%–95% non-condensing	5%–95% non-condensing	5%–95% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	Fanless	Fanless	Fanless
Certification and Compliance		FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	
Warranty		Limited lifetime* warranty on all models	
Fortinet Warranty			

* Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 108F



FortiSwitch 108F-POE



FortiSwitch 108F-FPOE



Specifications

FORTISWITCH 124E

FORTISWITCH 124E-POE

FORTISWITCH 124E-FPOE

Hardware Specifications

Total Network Interfaces	24x GE RJ45 and 4x GE SFP	24x GE RJ45 and 4x GE SFP	24x GE RJ45 and 4x GE SFP
Dedicated Management 10/100 Port	0	0	0
Dedicated Management 10/100 Port	1	1	1
RJ-45 Serial Console Port	1 RU Rack Mount	1 RU Rack Mount	1 RU Rack Mount
Form Factor	0	12 (802.3af/at)	24 (802.3af/at)
Power over Ethernet (PoE) Ports	0	185 W	370 W
PoE Power Budget	> 10 years	> 10 years	> 10 years
Mean Time Between Failures	56 Gbps	56 Gbps	56 Gbps
System Specifications	83 Mpps	83 Mpps	83 Mpps
Switching Capacity (Duplex)	8 K	8 K	8 K
Packets Per Second (Duplex)	4µs	4µs	4µs
MAC Address Storage	4 K	4 K	4 K
Network Latency	8	8	8
VLANs Supported	8	8	8
Link Aggregation Group Size	512 KB	512 KB	512 KB
Link Aggregation Group Size	256 MB DDR3	256 MB DDR3	256 MB DDR3
Packet Buffers	32 MB	32 MB	32 MB
DRAM	640	640	640
FLASH	16	16	16
ACL	1.7 x 8.2 x 13	1.7 x 12.2 x 17.3	1.7 x 12.2 x 17.3
Spanning Tree Instances	44 x 209 x 330	44 x 309 x 440	44 x 309 x 440
Dimensions	4.7 lbs (2.13 kg)	11.1 lbs (5.03 kg)	11.2 lbs (5.03 kg)
Height x Depth x Width (inches)	100-240V AC, 50/60 Hz	100-240V AC, 50/60 Hz	100-240V AC, 50/60 Hz
Height x Depth x Width (mm)	AC Built in	AC Built in	AC Built in
Weight	15.83 W /17.79 W	202.78 W / 205.45 W	387.78 W / 390.45 W
Environment	54 BTU/h	60.67 BTU/h	60.67 BTU/h
Power Required	32°-113°F (0°-45°C)	32°-113°F (0°-45°C)	32°-113°F (0°-45°C)
Power Supply	-40°-158°F (-40°-70°C)	-40°-158°F (-40°-70°C)	-40°-158°F (-40°-70°C)
Redundant Power	10%-90% non-condensing	10%-90% non-condensing	10%-90% non-condensing
Power Consumption* (Average / Maximum)	side-to-back	side-to-back	side-to-back
Heat Dissipation	Fanless	39.3 dBA	42.5 dBA
Operating Temperature			
Storage Temperature			
Humidity			
Air-Flow Direction			
Noise Level			
Certification and Compliance	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
Warranty	Limited lifetime** warranty on all models	Limited lifetime** warranty on all models	Limited lifetime** warranty on all models
Fortinet Warranty			

* POE models power consumption is similar to non-POE model if POE is not in use

** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 124E



FortiSwitch 124E-POE



FortiSwitch 124E-FPOE



Specifications

FORTISWITCH 148E

FORTISWITCH 148E-POE

Hardware Specifications

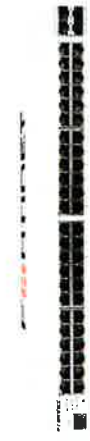
Total Network Interfaces	48x GE RJ45 and 4x GE SFP	48x GE RJ45 and 4x GE SFP
Dedicated Management 10/100 Port	0	0
RJ-45 Serial Console Port	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	0	24 (802.3af/at)
PoE Power Budget	0	370 W
Mean Time Between Failures	> 10 years	> 10 years
System Specifications		
Switching Capacity (Duplex)	104 Gbps	104 Gbps
Packets Per Second (Duplex)	155 Mpps	155 Mpps
MAC Address Storage	16 K	16 K
Network Latency	3860 ns	3860 ns
VLANs Supported	4 K	4 K
Link Aggregation Group Size	8	8
Total Link Aggregation Groups	16	16
Packet Buffers	1.5 MB	1.5 MB
DRAM	256 MB DDR3	256 MB DDR3
FLASH	64 MB	64 MB
ACL	640	640
Spanning Tree Instances	16	16
Dimensions		
Height x Depth x Width (inches)	1.73 x 12.2 x 17.3	1.73 x 13.7 x 17.3
Height x Depth x Width (mm)	44 x 309 x 440	44 x 348 x 440
Weight	8.6 lbs (3.9 kg)	11.5 lbs (5.2 kg)
Environment		
Power Required	100-240V AC, 50/60 Hz	100-240V AC, 50/60 Hz
Power Supply	AC Built In	AC Built In
Redundant Power	No	No
Power Consumption* (Average / Maximum)	19.804 W / 22.137 W	389.742 W /393.109 W
Heat Dissipation	67.574 BTU/h	78.82 BTU/h
Operating Temperature	32°-113°F (0°-45°C)	32°-113°F (0°-45°C)
Storage Temperature	-4°-158°F (-20°-70°C)	-4°-158°F (-20°-70°C)
Humidity	10%-90% non-condensing	10%-90% non-condensing
Air-Flow Direction	side-to-back	side-to-back
Noise Level	36.9 dBA	38.7 dBA
Certification and Compliance	FCC, CE, RoHS, VCCI, UL, CB, RoHS2	FCC, CE, RoHS, VCCI, UL, CB, RoHS2
Warranty	Limited lifetime** warranty on all models	Limited lifetime** warranty on all models
Fortinet Warranty		

* POE models power consumption is similar to non-POE model if POE is not in use.

** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 148E



FortiSwitch 148E-POE



Specifications

FORTISWITCH 124F

FORTISWITCH 124F-POE

FORTISWITCH 124F-FPOE

Hardware Specifications

Total Network Interfaces	24x GE RJ45 and 4x 10GE SFP+	24x GE RJ45 and 4x 10GE SFP+	24x GE RJ45 and 4x 10GE SFP+
Dedicated Management 10/100 Port	0	0	0
RJ-45 Serial Console Port	1	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	0	12 (802.3af/at)	24 (802.3af/at)
PoE Power Budget	0	185 W	370 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
System Specifications			
Switching Capacity (Duplex)	128 Gbps	128 Gbps	128 Gbps
Packets Per Second (Duplex)	190 Mpps	190 Mpps	190 Mpps
MAC Address Storage	32 K	32 K	32 K
Network Latency	< 1µs	< 1µs	< 1µs
VLANs Supported	4 K	4 K	4 K
Link Aggregation Group Size	8	8	8
Total Link Aggregation Groups	16	16	16
Packet Buffers	2 MB	2 MB	2 MB
DRAM	512 MB DDR3	512 MB DDR3	512 MB DDR3
FLASH	64 MB	64 MB	64 MB
ACL	768	768	768
Spanning Tree Instances	16	16	16
Dimensions			
Height x Depth x Width (inches)	1.73 x 9.06 x 12.99	1.73 x 10.24 x 17.32	1.73 x 10.24 x 17.32
Height x Depth x Width (mm)	44 x 230 x 330	44 x 260 x 440	44 x 260 x 440
Weight	4.48 lbs (2.03 kg)	7.85 lbs (3.56 kg)	8.42 lbs (3.82 kg)
Environment			
Power Required	100-240V AC, 50-60 Hz	100-240V AC, 50-60 Hz	100-240V AC, 50-60 Hz
Power Supply	AC built in	AC built in	AC built in
Redundant Power	No	No	No
Power Consumption* (Average / Maximum)	24.8 W / 26.3 W	235.9 W / 237.4 W	449.8 W / 451.3 W
Heat Dissipation	89.663 BTU/h	102.982 BTU/h	118.327 BTU/h
Operating Temperature	32°-113°F (0°-45°C)	32°-113°F (0°-45°C)	32°-113°F (0°-45°C)
Storage Temperature	-4°-158°F (-20°-70°C)	-4°-158°F (-20°-70°C)	-4°-158°F (-20°-70°C)
Humidity	10%-90% non-condensing	10%-90% non-condensing	10%-90% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	Fanless	46.3 dBA	45.8 dBA
Certification and Compliance		FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
Warranty		Limited lifetime** warranty on all models	Limited lifetime** warranty on all models

* POE models power consumption is similar to non-POE model if POE is not in use
 ** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 124F



FortiSwitch 124F-POE



FortiSwitch 124F-FPOE



Specifications

FORTISWITCH 148F

FORTISWITCH 148F-POE

FORTISWITCH 148F-FPOE

Hardware Specifications

	48x GE RJ45 and 4x 10GE SFP+	48x GE RJ45 and 4x 10GE SFP+	48x GE RJ45 and 4x 10GE SFP+
Total Network Interfaces	48x GE RJ45 and 4x 10GE SFP+	48x GE RJ45 and 4x 10GE SFP+	48x GE RJ45 and 4x 10GE SFP+
Dedicated Management 10/100 Port	0	0	0
RJ-45 Serial Console Port	1	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	0	24 (802.3af/at)	48 (802.3af/at)
PoE Power Budget	0	370 W	740 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
System Specifications			
Switching Capacity (Duplex)	176 Gbps	176 Gbps	176 Gbps
Packets Per Second (Duplex)	260 Mpps	260 Mpps	260 Mpps
MAC Address Storage	32 K	32 K	32 K
Network Latency	< 1µs	< 1µs	< 1µs
VLANs Supported	4 K	4 K	4 K
Link Aggregation Group Size	8	8	8
Total Link Aggregation Groups	16	16	16
Packet Buffers	2 MB	2 MB	2 MB
DRAM	512 MB DDR3	512 MB DDR3	512 MB DDR3
FLASH	64 MB	64 MB	64 MB
ACL	768	768	768
Spanning Tree Instances	16	16	16
Dimensions			
Height x Depth x Width (inches)	1.73 x 10.24 x 17.32	1.73 x 12.20 x 17.32	1.73 x 12.20 x 17.32
Height x Depth x Width (mm)	44 x 260 x 440	44 x 310 x 440	44 x 310 x 440
Weight	7.63 lbs (3.46 kg)	10.32 lbs (4.68 kg)	10.32 lbs (4.68 kg)
Environment			
Power Required	100-240V AC, 50-60 Hz	100-240V AC, 50-60 Hz	100-240V AC, 50-60 Hz
Power Supply	AC built in	AC built in	AC built in
Redundant Power	No	No	No
Power Consumption* (Average / Maximum)	55.8 W / 57 W	474.8 W / 476.3 W	893.5 W / 895.7 W
Heat Dissipation	194.37 BTU/h	195.73 BTU/h	198.46 BTU/h
Operating Temperature	32°-113°F (0°-45°C)	32°-113°F (0°-45°C)	32°-113°F (0°-45°C)
Storage Temperature	-4°-158°F (-20°-70°C)	-4°-158°F (-20°-70°C)	-4°-158°F (-20°-70°C)
Humidity	10%-90% non-condensing	10%-90% non-condensing	10%-90% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	42.8 dBA	46.9 dBA	46.5 dBA
Certification and Compliance			
Warranty		FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	
Fortinet Warranty		Limited lifetime** warranty on all models	

* POE models power consumption is similar to non-POE model if POE is not in use

** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 148F



FortiSwitch 148F-POE



FortiSwitch 148F-FPOE



Specifications

FORTISWITCH 224D-FPOE

FORTISWITCH 224E

FORTISWITCH 224E-POE

Hardware Specifications

Total Network Interfaces	24x GE RJ45 ports and 4x GE SFP ports	24x GE RJ45 ports and 4x GE SFP ports	24x GE RJ45 ports and 4x GE SFP ports
Dedicated Management 10/100 Port	1	1	1
RJ-45 Serial Console Port	1	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	24 (802.3af/802.3at)	NA	12 (802.3af/802.3at)
PoE Power Budget	370 W	NA	180 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
System Specifications			
Switching Capacity (Duplex)	56 Gbps	56 Gbps	56 Gbps
Packets Per Second (Duplex)	83 Mpps	83 Mpps	83 Mpps
MAC Address Storage	16 K	16 K	16 K
Network Latency	< 1µs	< 1µs	< 1µs
VLANs Supported	4 K	4 K	4 K
Link Aggregation Group Size	8	8	8
Total Link Aggregation Groups	Up to number of ports	Up to number of ports	Up to number of ports
Packet Buffers	1.5 MB	1.5 MB	1.5 MB
DRAM	512 MB DDR3	512 MB DDR3	512 MB DDR3
FLASH	128 MB	128 MB	128 MB
ACL	512	512	512
Spanning Tree Instances	16	16	16
Route Entries (IPv4/IPv6)	64/32	64/32	64/32
Host Entries	512	512	512

Dimensions

Height x Depth x Width (inches)	1.73 x 12.2 x 17.5	1.73 x 9 x 12.99	1.73 x 9 x 12.99
Height x Depth x Width (mm)	44 x 310 x 440	44 x 230 x 330	44 x 230 x 330
Weight	10.64 lbs (4.83 kg)	4.78 lbs (2.17 kg)	5.37 lbs (2.44 kg)

Environment

Power Required	100-240V AC, 50/60 Hz	100-240V AC, 50/60 Hz	100-240V AC, 50/60 Hz
Power Supply	AC built in	AC built in	AC built in
Redundant Power	Optional FRPS-740	Redundant AC	Optional FRPS-740
Power Consumption* (Average / Maximum)	380 W / 397 W	17.2 W / 17.3 W	22018 W / 223.57 W
Heat Dissipation	85 BTU/h	59.095 BTU/h	74.29554 BTU/h
Operating Temperature	32°-122°F (0°-50°C)	32°-122°F (0°-50°C)	32°-122°F (0°-50°C)
Storage Temperature	-4°-158°F (-20°-70°C)	-4°-158°F (-20°-70°C)	-4°-158°F (-20°-70°C)
Humidity	10%-90% non-condensing	10%-90% non-condensing	10%-90% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	42.7 dBA	Fanless	30.6 dBA

Certification and Compliance

FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2

Warranty

Limited lifetime** warranty on all models

Fortinet Warranty

* POE models power consumption is similar to non-POE model if POE is not in use
 ** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 224D-FPOE



FortiSwitch 224E



FortiSwitch 224E-POE



Specifications

FORTISWITCH 248D

FORTISWITCH 248E-POE

FORTISWITCH 248E-FPOE

Hardware Specifications

Total Network Interfaces	48x GE RJ45 ports and 4x GE SFP ports	48x GE RJ45 ports and 4x GE SFP ports	48x GE RJ45 ports and 4x GE SFP ports
Dedicated Management 10/100 Port	1	1	1
RJ-45 Serial Console Port	1	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	—	24 (802.3af/802.3at)	48 (802.3af/802.3at)
PoE Power Budget	N/A	370 W	740 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
System Specifications			
Switching Capacity (Duplex)	104 Gbps	104 Gbps	104 Gbps
Packets Per Second (Duplex)	155 Mpps	155 Mpps	155 Mpps
MAC Address Storage	16 K	16 K	16 K
Network Latency	< 1µs	< 1µs	< 1µs
VLANs Supported	4 K	4 K	4 K
Link Aggregation Group Size	8	8	8
Total Link Aggregation Groups	Up to number of ports	Up to number of ports	Up to number of ports
Packet Buffers	1.5 MB	1.5 MB	1.5 MB
DRAM	512 MB DDR3	512 MB DDR3	512 MB DDR3
FLASH	128 MB	128 MB	128 MB
ACL	512	512	512
Spanning Tree Instances	16	16	16
Route Entries (IPv4/IPv6)	64/32	64/32	64/32
Host Entries	512	512	512
Dimensions			
Height x Depth x Width (inches)	1.73 x 9.68 x 17.3	1.73 x 16.1 x 17.3	1.73 x 16.1 x 17.3
Height x Depth x Width (mm)	44 x 246 x 440	44 x 410 x 440	44 x 410 x 440
Weight	7.81 lbs (3.54 kg)	12.12 lbs (5.5 kg)	13.44 lbs (6.1 kg)
Environment			
Power Required	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Supply	AC built in	AC built in	AC built in
Redundant Power	—	Optional FRPS-740	Optional FRPS-740
Power Consumption* (Average / Maximum)	38.66 W / 39.19 W	457.46 W / 466.47 W*	842 W / 855.02 W
Heat Dissipation	134 BTU/h	1771,4268 BTU/h	162,87865 BTU/h
Operating Temperature	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)
Storage Temperature	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)
Humidity	10%–90% non-condensing	10%–90% non-condensing	10%–90% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	32.3 dBA	34.2 dBA	44.7 dBA
Certification and Compliance		FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
Warranty		Limited lifetime** warranty on all models	Limited lifetime** warranty on all models

* POE models power consumption is similar to non-POE model if POE is not in use

** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 248D



FortiSwitch 248E-POE



FortiSwitch 248E-FPOE



Specifications

FORTISWITCH-424E-FIBER

FORTISWITCH-M426E-FPOE

Hardware Specifications

Total Network Interfaces	24x GE SFP and 4x 10GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP	16x GE RJ45, 8x 2.5 GE RJ45 ports, 2x 5 GE RJ45, and 4x 10 GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP
Dedicated Management 10/100 Port	1	1
RJ-45 Serial Console Port	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	N/A	24 [16x 802.3af/at, 8x 802.3af/at/UPOE (60W)]
PoE Power Budget	N/A	420 W
Mean Time Between Failures	> 10 years	> 10 years
System Specifications		
Switching Capacity (Duplex)	128 Gbps	172 Gbps
Packets Per Second (Duplex)	204 Mpps	255 Mpps
MAC Address Storage	32 K	16 K
Network Latency	< 1µs	< 1µs
VLANs Supported	4 K	4 K
Link Aggregation Group Size	8	8
Total Link Aggregation Groups	Up to number of ports	Up to number of ports
Packet Buffers	4 MB	2 MB
DRAM	1 GB DDR4	1 GB DDR4
FLASH	256 MB	256 MB
ACL	1.5k	1k
Spanning Tree Instances	16	16
Route Entries (IPv4/IPv6)	16k/Bk	1000/500
Host Entries	16k	5k
Dimensions		
Height x Depth x Width (inches)	1.75 x 7.87 x 17.3	1.73 x 16.14 x 17.3
Height x Depth x Width (mm)	44 x 200 x 440	44 x 410 x 440
Weight	5.62 lbs (2.55 kg)	13.00 lbs (5.9 kg)
Environment		
Power Required	100-240V AC, 50/60 Hz	100-240V AC, 50/60 Hz
Power Supply	AC built in	AC built in
Redundant Power	Redundant AC	Redundant AC
Power Consumption* (Average / Maximum)	36 W / 38 W	441 W / 442 W
Heat Dissipation	132.5 BTU/h	132.734 BTU/h
Operating Temperature	32°-122°F (0°-50°C)	32°-122°F (0°-50°C)
Storage Temperature	-4°-158°F (-20°-70°C)	-4°-158°F (-20°-70°C)
Humidity	5%-95% non-condensing	5%-95% non-condensing
Air-Flow Direction	side-to-back	side-to-back
Noise Level	32.8 dBA	35 dBA
Certification and Compliance		
Warranty	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
Fortinet Warranty	Limited lifetime** warranty on all models	Limited lifetime** warranty on all models

* POE models power consumption is similar to non-POE model if POE is not in use

** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 424E-Fiber



FortiSwitch M426E-FPOE



Specifications

FORTISWITCH 424E

FORTISWITCH 424E-POE

FORTISWITCH 424E-FPOE

Hardware Specifications

Total Network Interfaces 24x GE RJ45 and 4x10 GE SFP+ ports 24x GE RJ45 and 4x10 GE SFP+ ports 24x GE RJ45 and 4x10 GE SFP+ ports
 Note: SFP+ ports are compatible with 1 GE SFP. Note: SFP+ ports are compatible with 1 GE SFP. Note: SFP+ ports are compatible with 1 GE SFP.

Dedicated Management 10/100 Port

RJ-45 Serial Console Port 1 1 1

Form Factor

1 RU Rack Mount 1 RU Rack Mount 1 RU Rack Mount

Power over Ethernet (PoE) Ports

PoE Power Budget N/A 250 W 421 W

Mean Time Between Failures

> 10 years > 10 years > 10 years

System Specifications

Switching Capacity (Duplex) 128 Gbps 128 Gbps 128 Gbps

Packets Per Second (Duplex) 204 Mpps 204 Mpps 204 Mpps

MAC Address Storage 16 K 16 K 16 K

Network Latency < 1µs < 1µs < 1µs

VLANs Supported 4 K 4 K 4 K

Link Aggregation Group Size 8 8 8

Total Link Aggregation Groups Up to number of ports Up to number of ports Up to number of ports

Packet Buffers 2 MB 2 MB 2 MB

DRAM 1 GB DDR4 1 GB DDR4 1 GB DDR4

FLASH 256 MB 256 MB 256 MB

ACL 1k 1k 1k

Spanning Tree Instances 16 16 16

Route Entries (IPv4/IPv6) 1000/500 1000/500 1000/500

Host Entries 5k 5k 5k

Dimensions

Height x Depth x Width (inches) 1.75 x 10.23 x 17.3 1.75 x 16.14 x 17.3 1.75 x 16.14 x 17.3

Height x Depth x Width (mm) 44 x 260 x 440 44 x 410 x 440 44 x 410 x 440

Weight 6.83 lbs (3.1 kg) 11.57 lbs (5.25 kg) 12.72 lbs (5.77 kg)

Environment

Power Required 100–240V AC, 50/60 Hz 100–240V AC, 50/60 Hz 100–240V AC, 50/60 Hz

Power Supply AC built in AC built in AC built in

Redundant Power Redundant AC Redundant AC Redundant AC

Power Consumption* (Average / Maximum) 22.3 W / 23.6 W 281.3 W / 283.5 W 431.2 W / 433.7 W

Heat Dissipation 76.04 BTU/h 102.64 BTU/h 117.2 BTU/h

Operating Temperature 32°–122°F (0°–50°C) 32°–122°F (0°–50°C) 32°–122°F (0°–50°C)

Storage Temperature -40°–158°F (-40°–70°C) -4°–158°F (-40°–70°C) -40°–158°F (-40°–70°C)

Humidity 5%–95% non-condensing 5%–95% non-condensing 5%–95% non-condensing

Air-Flow Direction side-to-back side-to-back side-to-back

Noise Level 32.3 dBA 31.8 dBA 30.9 dBA

Certification and Compliance

FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2

Limited lifetime** warranty on all models

Warranty

Fortinet Warranty

* POE models power consumption is similar to non-POE model if POE is not in use

** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 424E

FortiSwitch 424E-POE

FortiSwitch 424E-FPOE



Specifications

FORTISWITCH 448E

FORTISWITCH 448E-POE

FORTISWITCH 448E-+POE

Hardware Specifications

Total Network Interfaces	48x GE RJ45 and 4x 10GE SFP+ ports	48x GE RJ45 and 4x 10GE SFP+ ports	48x GE RJ45 and 4x 10GE SFP+ ports
	Note: SFP+ ports are compatible with 1 GE SFP	Note: SFP+ ports are compatible with 1 GE SFP	Note: SFP+ ports are compatible with 1 GE SFP
Dedicated Management 10/100 Port	1	1	1
RJ-45 Serial Console Port	1	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	—	48 (802.3af/at)	48 (802.3af/at)
PoE Power Budget	—	421 W	772 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
System Specifications			
Switching Capacity (Duplex)	176 Gbps	176 Gbps	176 Gbps
Packets Per Second (Duplex)	262 Mpps	262 Mpps	262 Mpps
MAC Address Storage	32 K	32 K	32 K
Network Latency	<1µs	<1µs	<1µs
VLANs Supported	4 K	4 K	4 K
Link Aggregation Group Size	8	8	8
Total Link Aggregation Groups	Up to number of ports	Up to number of ports	Up to number of ports
Packet Buffers	4 MB	4 MB	4 MB
DRAM	1GB DDR4	1GB DDR4	1GB DDR4
FLASH	256 MB	256 MB	256 MB
ACL	1.5k	1.5k	1.5k
Spanning Tree Instances	16	16	16
Route Entries (IPv4/IPv6)	16k/8k	16k/8k	16k/8k
Host Entries	16k	16k	16k
Dimensions			
Height x Depth x Width (inches)	1.75 x 12.2 x 17.3	1.73 x 16.1 x 17.3	1.73 x 16.1 x 17.3
Height x Depth x Width (mm)	44 x 310 x 440	44 x 410 x 440	44 x 410 x 440
Weight	9.17 lbs (4.16 kg)	13.8 lbs (6.26 kg)	14.04 lbs (6.37 kg)
Environment			
Power Required	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Supply	AC built in	AC built in	AC built in
Redundant Power	Redundant AC	Redundant AC	Redundant AC
Power Consumption* (Average / Maximum)	46.5 W / 47.81 W	44.0/12 W / 44.2/34 W	92/1.4 W / 92/3.6 W
Heat Dissipation	163.032 BTU/h	163.066 BTU/h	163.1 BTU/h
Operating Temperature	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)
Storage Temperature	–4°–158°F (–20°–70°C)	–4°–158°F (–20°–70°C)	–4°–158°F (–20°–70°C)
Humidity	10%–90% non condensing	10%–90% non condensing	10%–90% non condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	35.5 dBA	38.3 dBA	50.7 dBA
Certification and Compliance			
Warranty			
Fortinet Warranty			

FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2

Limited lifetime** warranty on all models

* POE models power consumption is similar to non-POE model if POE is not in use

** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>

FortiSwitch 448E



FortiSwitch 448E-POE



FortiSwitch 448E-+POE



Specifications

FORTISWITCH 524D

Hardware Specifications

Total Network Interfaces

24 GE/RJ45 ports, 4x 10 GE SFP+ ports and 2x 40 GE QSFP+ 24 GE/RJ45 ports, 4x 10 GE SFP+ ports and 2x 40 GE QSFP+
 Note: SFP+ ports are compatible with 1G SFP

Dedicated Management 10/100/1000 Ports

1

RJ-45 Serial Console Port

1

Form Factor

1 RU Rack Mount

1 RU Rack Mount

Power over Ethernet (PoE) Ports

N/A

24 (802.3af/at)

PoE Power Budget (single/dual PSU)

N/A

400 W / 720 W

Mean Time Between Failures

> 10 years

> 10 years

System Specifications

Switching Capacity (Duplex)

288 Gbps

288 Gbps

Packets Per Second (Duplex)

428 Mpps

428 Mpps

MAC Address Storage

36 K

36 K

Network Latency

< 2µs

< 2µs

VLANs Supported

4 K

4 K

Link Aggregation Group Size

24

24

Total Link Aggregation Groups

Up to number of ports

Up to number of ports

Packet Buffers

4 MB

4 MB

DRAM

2 GB DDR3

2 GB DDR3

FLASH

128 MB

128 MB

ACL

1k

1k

Spanning Tree Instances

32

32

Route Entries (IPv4/IPv6)

16k/8k

16k/8k

Multicast Route Entries

8k

8k

Host Entries

16k

16k

Dimensions

Height x Depth x Width (inches)

1.75 x 13.8 x 17.3

1.75 x 13.8 x 17.3

Height x Depth x Width (mm)

44 x 350 x 439

44 x 350 x 439

Weight

13.6 lbs (6.2 kg)

15.74 lbs (7.14 kg)

Environment

Power Required

100-240V AC, 50/60 Hz

100-240V AC, 50/60 Hz

Power Supply

150 W AC PSU*

600 W AC PSU*

Redundant Power

Optional FS-PSU-150*

Optional FS-PSU-600*

Power Consumption** (Average / Maximum)

73 W / 75 W

570 W / 579 W (full PoE load for single power supply)

296 BTU/h (full PoE load for single power supply)

Heat Dissipation

247 BTU/h

32°-113°F (0°-45°C)

Operating Temperature

-40°-158°F (-40°-70°C)

-40°-158°F (-40°-70°C)

Storage Temperature

5%-95% non-condensing

5%-95% non-condensing

Humidity

front-to-back

front-to-back

Air-Flow Direction

57.3 dBA

57.3 dBA

Certification and Compliance

FCC, CE, RoHS, VCCI, BSMI, UL, CB, RoHS2

FCC, CE, RoHS, VCCI, BSMI, UL, CB, RoHS2

Warranty

Limited lifetime*** warranty on all models

Limited lifetime*** warranty on all models

*FS-524D, FS-524D-FPOE, FS-548D, FS-548D-FPOE Power Supply Units are Hot-Swappable.

** POE models power consumption is similar to non-POE model if POE is not in use

*** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 524D



FortiSwitch 524D-FPOE

Specifications

FORTISWITCH 548D

FORTISWITCH 548D-FPOE

Hardware Specifications

Total Network Interfaces	48x GE/RJ45 ports, 4x 10 GE SFP+ ports and 2x 40 GE QSFP+ 48x GE/RJ45 ports, 4x 10 GE SFP+ ports and 2x 40 GE QSFP+ ports	1	1
Dedicated Management 10/100/1000 Ports		1	1
RJ-45 Serial Console Port		1	1
Form Factor	1 RU Rack Mount		
Power over Ethernet (PoE) Ports	N/A		
PoE Power Budget (single/dual PSU)	N/A		
Mean Time Between Failures	> 10 years		> 10 years
System Specifications			
Switching Capacity (Duplex)	336 Gbps		336 Gbps
Packets Per Second (Duplex)	512 Mpps		512 Mpps
MAC Address Storage	36 K		36 K
Network Latency	< 2µs		< 2µs
VLANs Supported	4 K		4 K
Link Aggregation Group Size	48		48
Total Link Aggregation Groups			Up to number of ports
Packet Buffers	4 MB		4 MB
DRAM	2 GB DDR3		2 GB DDR3
FLASH	128 MB		128 MB
ACL	1k		1k
Spanning Tree Instances	32		32
Route Entries (IPv4/IPv6)	16k/8k		16k/8k
Multicast Route Entries	8k		8k
Host Entries	16k		16k
Dimensions			
Height x Depth x Width (inches)	1.75 x 13.8 x 17.3		1.75 x 13.8 x 17.3
Height x Depth x Width (mm)	44 x 350 x 439		44 x 350 x 439
Weight	14.1 lbs (6.4 kg)		15.74 lbs (714 kg)
Environment			
Power Required	100-240V AC, 50/60 Hz		100-240V AC, 50/60 Hz
Power Supply	150 W AC PSU*		920 W AC PSU*
Redundant Power	Optional FS-PSU-150*		Optional FS-PSU-920*
Power Consumption** (Average / Maximum)	74 W / 77 W		925 W / 961 W (full PoE load for single power supply) 318 BTU/h (full PoE load for single power supply)
Heat Dissipation	252 BTU/h		32°-113°F (0°-45°C)
Operating Temperature	32°-113°F (0°-45°C)		-40°-158°F (-40°-70°C)
Storage Temperature	-40°-158°F (-40°-70°C)		5%-95% non-condensing
Humidity	5%-95% non-condensing		front-to-back
Air-Flow Direction	front-to-back		57.3 dBA
Noise Level	57.3 dBA		
Certification and Compliance	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2		FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
Warranty	Limited lifetime*** warranty on all models		Limited lifetime*** warranty on all models

*FS-524D, FS-524D-FPOE, FS-548D, FS-548D-FPOE Power Supply Units are Hot-Swappable.

** POE models power consumption is similar to non-POE model if POE is not in use

*** Fortinet Warranty Policy: <http://www.fortinet.com/doc/legal/EULA.pdf>



FortiSwitch 548D



FortiSwitch 548D-FPOE



Ordering Information

Product	SKU	Description
FortiSwitch Models		
FortiSwitch 108E-POE	FS-108E-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 8 GE RJ45 + 2 SFP ports, 4 port PoE with maximum 65 W PoE limit. Fanless.
FortiSwitch 108E-FPOE	FS-108E-FPOE	Layer 2 FortiGate switch controller compatible PoE+ switch with 8 GE RJ45 + 2 SFP ports, 8 port PoE with maximum 130 W PoE limit. Fanless.
FortiSwitch 108F	FS-108F	Layer 2 FortiGate switch controller compatible switch with 8 x GE RJ45 ports, 2 x GE SFP, Fanless, 12V/3A power adapter of input voltage 100 – 240VAC, and PSE dual powered.
FortiSwitch 108F-POE	FS-108F-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 8 x GE RJ45 ports, 2 x GE SFP, Fanless with automatic Max 65W PoE output limit.
FortiSwitch 108F-FPOE	FS-108F-FPOE	Layer 2 FortiGate switch controller compatible PoE+ switch with 8 x GE RJ45 ports, 2 x GE SFP, Fanless with automatic Max 130W PoE output limit.
FortiSwitch 124E	FS-124E	Layer 2 FortiGate switch controller compatible switch with 24 GE RJ45 + 4 SFP ports. Fanless.
FortiSwitch 124E-POE	FS-124E-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 SFP ports, 12 port PoE with maximum 195 W limit.
FortiSwitch 124E-F-POE	FS-124E-FPOE	Layer 2 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 SFP ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 148E	FS-148E	Layer 2 FortiGate switch controller compatible switch with 48 GE RJ45 + 4 SFP ports.
FortiSwitch 148E-POE	FS-148E-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45 + 4 SFP ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 124F	FS-124F	Layer 2 FortiGate switch controller compatible switch with 24 GE RJ45 + 4 10G SFP+ ports. Fanless.
FortiSwitch 124F-POE	FS-124F-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 10G SFP+ ports, 12 port PoE with maximum 185 W limit.
FortiSwitch 124F-FPOE	FS-124F-FPOE	Layer 2 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 10G SFP+ ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 148F	FS-148F	Layer 2 FortiGate switch controller compatible switch with 48 GE RJ45 + 4 10G SFP+ ports.
FortiSwitch 148F-POE	FS-148F-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45 + 4 10G SFP+ ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 148F-FPOE	FS-148F-FPOE	Layer 2 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45 + 4 10G SFP+ ports, 48 port PoE with maximum 740 W limit.
FortiSwitch 224D-FPOE	FS-224D-FPOE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 SFP ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 224E	FS-224E	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45 + 4 SFP ports. Fanless.
FortiSwitch 224E-POE	FS-224E-POE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 SFP ports, 12 port PoE with maximum 180 W limit.
FortiSwitch 248D	FS-248D	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45 + 4 SFP ports.
FortiSwitch 248E-POE	FS-248E-POE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45 + 4 SFP ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 248E-FPOE	FS-248E-FPOE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45 + 4 SFP ports, 48 port PoE with maximum 740 W limit.
FortiSwitch 424E-Fiber	FS-424E-Fiber	Layer 2/3 FortiGate switch controller compatible switch with 24x GE SFP and 4 x 10 GE SFP+ Uplinks
FortiSwitch M426E-FPOE	FS-M426E-FPOE	Layer 2/3 FortiGate switch controller compatible switch with 16x GE RJ45 PoE 802.3af/at, 8x 2.5 RJ45 PoE 802.3af/at/UPoE (60W), 2 x 5 GE RJ45 and 4 x 10 GE SFP+, with maximum 420 W PoE limit.
FortiSwitch 424E	FS-424E	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45, 4x 10 GE SFP + ports.
FortiSwitch 424E-POE	FS-424E-POE	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45, 4x 10 GE SFP + ports, 24 port PoE+ with maximum 283.5 W limit.
FortiSwitch 424E-FPOE	FS-424E-FPOE	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45, 4x 10 GE SFP + ports, 24 port PoE+ with maximum 433.7 W limit.
FortiSwitch 448E	FS-448E	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45, 4x 10 GE SFP + ports.
FortiSwitch 448E-POE	FS-448E-POE	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45, 4x 10 GE SFP + ports, 48 port PoE+ with maximum 421 W limit.
FortiSwitch 448E-FPOE	FS-448E-FPOE	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45, 4x 10 GE SFP + ports, 48 port PoE+ with maximum 772 W limit.



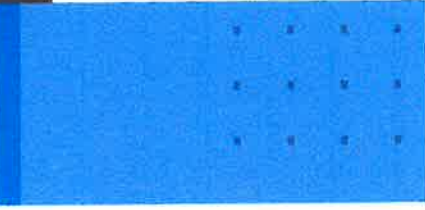
Ordering Information

Product	SKU	Description
FortiSwitch Models		
FortiSwitch 524D	FS-524D	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45, 4x 10 GE SFP+ and 2x 40 GE QSFP+ ports.
FortiSwitch 524D-FPOE	FS-524D-FPOE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45, 4x 10 GE SFP+, 2x 40 GE QSFP+ ports, 24 port PoE with maximum 400 W limit.
FortiSwitch 548D	FS-548D	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45, 4x 10 GE SFP+ and 2x 40 GE QSFP+ ports.
FortiSwitch 548D-FPOE	FS-548D-FPOE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45, 4x 10 GE SFP+ and 2x 40 GE QSFP+ ports, 48 port PoE with maximum 750 W limit.
Licenses		
FortiLAN Cloud Management License*		
	FC-10-FSW00-628-02-DD	FortiSwitch 100 Series (none-Rugged) FortiLAN Cloud Management SKU including Forticare 24x7. (Note, FortiCare only applicable when used with FortiLAN Cloud)
	FC-10-FSW10-628-02-DD	FortiSwitch 200-400 Series (incl all FSW Rugged Models) FortiLAN Cloud Management SKU including Forticare 24x7. (Note, FortiCare only applicable when used with FortiLAN Cloud)
	FC-10-FSW20-628-02-DD	FortiSwitch 500-900 Series FortiLAN Cloud Management SKU including Forticare 24x7. (Note, FortiCare only applicable when used with FortiLAN Cloud)
FortiSwitch Manager Subscription License		
	FC1-10-SWMM-258-01-DD	Subscription license for 10 FortiSwitch Units managed by FortiSwitchManager VM. 24x7 FortiCare support (for FSWM VM) included.
	FC2-10-SWMM-258-01-DD	Subscription license for 100 FortiSwitch Units managed by FortiSwitchManager VM. 24x7 FortiCare support (for FSWM VM) included.
	FC3-10-SWMM-258-01-DD	Subscription license for 1000 FortiSwitch Units managed by FortiSwitchManager VM. 24x7 FortiCare support (for FSWM VM) included.
FortiSwitch Advanced Features License		
	FS-SW-LIC-200	SW License for FS-200 Series Switches to activate Advanced Features.
	FS-SW-LIC-400	SW License for FS-400 Series Switches to activate Advanced Features.
	FS-SW-LIC-500	SW License for FS-500 Series Switches to activate Advanced Features.
Accessories		
External Redundant AC Power Supply		
	FRPS-740	Redundant AC power supply for up to 2 units: FS-224D-FPOE, FS-224E-POE, FS-248E-POE, FS-248E-FPOE.
Redundant AC Power Supply		
	FS-PSU-150	AC power supply for FS-548D and FS-524D.
	FS-PSU-600	AC power supply for FS-524D-FPOE.**
	FS-PSU-920	AC power supply for FS-548D-FPOE.**
* When managing a FortiSwitch with a FortiGate via FortiGate Cloud, no additional license is necessary.		
** Provides additional PoE capacity.		
For details of Transceiver modules, see the Fortinet Transceivers datasheet .		
Note that all PoE FortiSwitches are Alternative-A.		



Fortinet CSR Policy

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