

PROPUESTA DE ESPECIFICACIONES TECNICAS

Item 1: Cámara Domo IP, 4MP DS-2CD2147G2H-LISU. Hikvision 4 MP Smart Hybrid Light with ColorVu Fixed Dome Network Camera

Para este item estamos incluyendo la cámara IP Hikvision 4 MP Smart Hybrid Light with ColorVu Fixed Dome Network Camera, modelo DS-2CD2147G2H-LISU.

Características básicas

- Imágenes de alta calidad con resolución de 4 MP
- Smart Hybrid Light: tecnología avanzada con largo alcance
- Imágenes claras contra una fuerte luz de fondo gracias a la tecnología WDR de 130 dB
- Tecnología de compresión H.265+ eficiente
- Centrarse en la clasificación de personas y vehículos basada en el aprendizaje profundo
- -U: micrófono incorporado para seguridad de audio en tiempo real
- Resistente al agua y al polvo (IP67) y resistente al vandalismo (IK10)



Especificaciones Técnicas

Camera

- Image Sensor 1/1.8" Progressive Scan CMOS
- Max. Resolution 2688 × 1520
- Min. Illumination Color: 0.0005 Lux @ (F1.0, AGC ON), 0 Lux with light
- Shutter Time 1/3 s to 1/100,000 s
- Day & Night IR cut filter
- Angle Adjustment Pan: 0° to 355°, tilt: 0° to 75°, rotate: 0° to 355°

Lens

- Lens Type Fixed focal lens, 2.8 and 4 mm optional
- Focal Length & FOV
 - 2.8 mm, horizontal FOV 104.0°, vertical FOV 54.4°, diagonal FOV 126.7°
 - 4 mm, horizontal FOV 89.2°, vertical FOV 45.5°, diagonal FOV 108.2°
- Lens Mount M16
- Iris Type Fixed
- Aperture F1.0
- Depth Of Field
 - 2.8 mm: 2.5 m to ∞
 - 4 mm: 3.1 m to ∞



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**Item 2: Cámara Bullet IP, 4MP
DS-2CD2047G2H-LIU. Hikvision 4 MP Smart Hybrid Light with ColorVu Fixed
Mini Bullet Network Camera**

Para este item estamos incluyendo la cámara IP Hikvision 4 MP Smart Hybrid Light with ColorVu Fixed Mini Bullet Network Camera, modelo **DS-2CD2047G2H-LIU**.

Características básicas

- Imágenes de alta calidad con resolución de 4 MP
- Smart Hybrid Light: tecnología avanzada con largo alcance
- Imágenes claras contra una fuerte luz de fondo gracias a la tecnología WDR de 130 dB
- Tecnología de compresión H.265+ eficiente
- Centrarse en la clasificación de personas y vehículos basada en el aprendizaje profundo
- -U: micrófono incorporado para seguridad de audio en tiempo real
- Resistente al agua y al polvo (IP67)



Especificaciones Técnicas

Camera

- Image Sensor 1/1.8" Progressive Scan CMOS
- Max. Resolution 2688 × 1520
- Min. Illumination Color: 0.0005 Lux @ (F1.0, AGC ON), 0 Lux with light
- Shutter Time 1/3 s to 1/100,000 s
- Day & Night IR cut filter
- Angle Adjustment Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°

Lens

- Lens Type Fixed focal lens, 2.8 and 4 mm optional
- Focal Length & FOV
 - 2.8 mm, horizontal FOV 104.0°, vertical FOV 54.4°, diagonal FOV 126.7°
 - 4 mm, horizontal FOV 89.2°, vertical FOV 45.5°, diagonal FOV 108.2°
- Lens Mount M16
- Iris Type Fixed
- Aperture F1.0
- Depth Of Field
 - 2.8 mm: 2.5 m to ∞
 - 4 mm: 3.1 m to ∞



Item 3: NVR 32 Canales
DS-7732NI-M4_24P(B). Hikvision 32-ch 1.5U 24 PoE 8K NVR

Para este item estamos incluyendo el NVR Hikvision de 32 canales, 1.5U, 24 puertos PoE, 8K, modelo DS-7732NI-M4_24P(B).

Características básicas

- Formatos de vídeo H.265+/H.265/H.264+/H.264
- Entradas de cámara IP de hasta 32 canales
- Capacidad de decodificación de hasta 32 canales a 1080p
- Hasta 320 Mbps de ancho de banda entrante

Especificaciones Técnicas

Video y Audio

- IP Video Input 32-ch. Up to 32 MP resolution. *: After ultra HD resolution mode is enabled, the NVR supports up to 8-ch 32 MP/24 MP IP video inputs.
- Incoming Bandwidth 320 Mbps
- Outgoing Bandwidth 400 Mbps
- HDMI 1 Output. 8K (7680 × 4320)/30Hz, 4K (3840 × 2160)/60Hz, 4K (3840 × 2160)/30Hz, 2K (2560 × 1440)/60Hz, 1920 × 1080/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
- HDMI 2 Output. 4K (3840 × 2160)/60Hz, 4K (3840 × 2160)/30Hz, 2K (2560 × 1440)/60Hz, 1920 × 1080/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
- VGA Output 1920 × 1080/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
- Video Output Mode HDMI1/VGA simultaneous output, HDMI2/VGA independent output
- CVBS Output 1-ch, BNC (1.0 Vp-p, 75 Ω), resolution: PAL: 704 × 576/NTSC: 704 × 480
- Audio Output 1-ch, RCA (Linear, 1 KΩ)
- Two-Way Audio 1-ch, RCA (2.0 Vp-p, 1 KΩ, using the audio input)

Decoding Format H.265+/H.265/H.264+/H.264

Recording Resolution 32 MP/24 MP/12 MP/8 MP/6 MP/5 MP/4 MP/3

MP/1080p/UXGA/720p/VGA /4CIF/DCIF/ 2CIF/CIF/QCIF. *: After ultra HD resolution mode is enabled, the NVR supports up to 8-ch 32 MP/24 MP IP video inputs.



Network

- Remote Connection 128
- Network Protocol TCP/IP, DHCP, IPv4, IPv6, DNS, DDNS, NTP, RTSP, SADP, SMTP, SNMP, NFS, iSCSI, ISUP, UPnP™, HTTP, HTTPS
- Network Interface 1, RJ-45 10/100/1000 Mbps self-adaptive Ethernet interface

PoE

- Interface 24, RJ-45 10/100 Mbps self-adaptive Ethernet interface
- Power ≤ 210 W
- Standard IEEE 802.3 af/at

Auxiliary Interface

- eSATA 1 eSATA interface
- SATA 4 SATA interfaces
- Capacity Up to 16 TB capacity for each HDD
- Serial Interface 2 RS-485 (half-duplex), 1 RS-232
- Alarm In/Out 16/9
- USB Interface Front panel: 2 × USB 2.0; Rear panel: 1 × USB 3.0
- Ctrl 12V. Controllable 12 VDC, 1 A power output for external alarm device; The power will be turned on when the alarm output is triggered.
- DC 12V. 12 VDC, 1 A power output



**Item 6: Gabinete 7U
Gabinete de Pared 7U**

Para este item estamos incluyendo el Gabinete de Pared de 7U marca Landed modelo **LN-WM07U6045-B, 7U 600X450+150MM.**

Los gabinetes de red de la serie NETbox brindan la máxima optimización resultante en un rendimiento óptimo entre calidad y valor agregado.



Características

- Peso bruto: 14 kg
- Longitud de riel a riel: 19 "
- Ancho : 600 mm
- Altura : 418mm
- Color : Negro
- Profundidad : 650 mm
- Peso neto : 13 kg
- Altura del riel de montaje del equipo: 7 U



**Item 7: Gabinete 9U
Gabinete de Pared 9U**

Para este item estamos incluyendo el Gabinete de Pared de 9U marca Landed modelo **LN-WM09U6045-B, 9U 600X450+150MM.**

Los gabinetes de red de la serie NETbox brindan la máxima optimización resultante en un rendimiento óptimo entre calidad y valor agregado.



Características

- Peso bruto: 14 kg
- Longitud de riel a riel: 19 "
- Ancho : 600 mm
- Altura : 505mm
- Color : Negro
- Profundidad : 650 mm
- Peso neto : 13 kg
- Altura del riel de montaje del equipo: 9 U



Item 9: Cajas Cable UTP Ortronics Cable UTP Categoría 6

Para este item estamos incluyendo el Cable UTP categoría 6 marca Ortronics modelo **OR-305UC6R-06**, cable CM de 24 AWG, color azul, diámetro de 0.50mm, cajas de 1000 pies.

Características:

- Cable UTP Categoría 6 de 4 Pares 24AWG de Cobre CM, chaqueta con retardante a la flama, color azul.
- Cable CATEGORIA 6 No Blindado U/UTP LanPro Reliable® para redes, Clasificado CM con conductores de cobre 100% sólido AWG 24, núcleo de Nylon Flexible-X™ para simetría, con chaqueta color azul en caja tipo Easy Pull-Box de 305m (1000 pies).
- El Cable para redes LanPro Reliable® CAT 6, Clasificado CM con conductores de cobre 100% sólido AWG 24, núcleo de Nylon Flexible-X™ para simetría y con chaqueta color azul en caja tipo Easy Pull-Box de 305m (1000 pies), es la respuesta a la demanda impuesta por el Mercado de aplicaciones de alto desempeño a precios razonables.
- Probado a más de 250 MHz, el desempeño garantizado de este cable cumple con los exigentes requerimientos impuestos por las pruebas ANSI/TIA-568-C.2, ISO/IEC 11801, UL 1685 (UL 1581, Sec. 1160) Vertical-Tray, CSA FT1 y está registrado por UL con el número E329019, haciéndolo ideal para enlaces de transmisión que soportan los protocolos de redes actuales.
- EL cable Ortronics CAT 6 U/UTP clasificado CM está certificado CM por UL para aplicaciones comerciales y está disponible para despacho de inmediato.



Item 10: Conectores RJ45

Conectores RJ45 Machos Categoría 6

Para este item estamos incluyendo los conectores RJ45 machos Categoría 6 de LANPro modelo LP-RJ458P8CC6US11, para cable multifilar y cable sólido 23-26AWG.

CONECTOR RJ-45 MACHO

El RJ45 es un conector comunmente utilizado para redes de cableado estructurado. Dotado con hasta 8 pines de conexión, resulta válido tanto para cables de datos (8 hilos), como para cables telefónicos (2 hilos). Se utiliza de forma habitual en redes con estándares TIA/EIA-568-B.



Material:
1.- Carcasa: policarbonato, UL 94V-2, transparente.
2.- Terminal del contacto: bronce fosforado. Acabado: 50 micropulgadas de revestimiento dorado sobre 50 micropulgadas de níquel en el área de contacto.
Características eléctricas:
1.- Aplicaciones: 150 VAC máx. @ 15A @ 25°C, baja el rating a 2A @ 70°C.
2.- Voltaje de resistencia dieléctrica: 1000 VAC.
3.- Resistencia de aislamiento: 500 MΩ.
Rendimiento:
1.- Temperatura de funcionamiento: -40°C a 80°C.
2.- Fuerza de tensión del plug del cable: 7.7 Kg.
3.- Utilizado para conductores sólidos AWG 23 a 26.
4.- Duración: 750 ciclos de inserción-extracción.
Compatibilidad con los estándares:
1.- TIA 568-A y 568-B.
2.- IEC 60603-7.
3.- 250 MHz Ethernet.



Item 11: Botas de Protección
Botas de Protección Color Azul

Para este item estamos incluyendo las botas de protección para los conectores RJ45.
Las botas son de color azul, modelo **LP-B101BL**.



Item 12gr: Botas de Protección
Botas de Protección Color Gris

Para este item estamos incluyendo las botas de protección para los conectores RJ45.
Las botas son de color gris, modelo **LP-B101GR**.



DS-7732NI-M4/24P M Series 8K NVR

Key Feature

- H.265+/H.265/H.264+/H.264 video formats
- Up to 32-ch IP camera inputs
- Up to 40-ch@1080p decoding capacity
- Up to 320 Mbps incoming bandwidth



Professional and Reliability

- H.265+ compression effectively reduces the storage space by up to 75%
- Dual-stream recording saves bandwidth
- Adopt stream over TLS encryption technology which provides more secure stream transmission service
- Support double verification for playback and downloading
- Solar-powered camera is connectable through OTAP protocol. NVR would get stream when user requests, and camera would send back videos according to the schedule

HD Video Output

- Provide independent HDMI and VGA outputs
- HDMI video output at up to 8K resolution
- Dual 4K HDMI output resolution

Storage and Playback

- Up to 4 SATA interfaces for HDD connection
- 16-ch synchronous playback

Smart & POS Function

- Support multiple VCA (Video Content Analytics) events
- Configurable special camera smart functions, such as VCA detection (motion, line crossing, intrusion, etc.), heat map, WDR, and people counting
- POS information overlay on live view and playback, and POS triggered recording and alarm

Network & Ethernet Access

- 16 independent PoE network interfaces
- 1 self-adaptive 10/100/1000 Mbps Ethernet interface
- Hik-Connect & DDNS (Dynamic Domain Name System) for easy network management
- Smooth streaming technology
- Support web access without plug-in



■ Specification

Video and Audio

IP Video Input	32-ch Up to 32 MP resolution *: The NVR supports up to 8-ch 32 MP/24 MP IP video inputs.
Incoming Bandwidth	320 Mbps
Outgoing Bandwidth	400 Mbps
HDMI 1 Output	8K (7680 × 4320)/30Hz, 4K (3840 × 2160)/60Hz, 4K (3840 × 2160)/30Hz, 2K (2560 × 1440)/60Hz, 1920 × 1080/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
HDMI 2 Output	4K (3840 × 2160)/60Hz, 4K (3840 × 2160)/30Hz, 2K (2560 × 1440)/60Hz, 1920 × 1080/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz *: When HDMI 1 output resolution is 8K, the maximum HDMI 2 output resolution is 1080p.
VGA Output	1920 × 1080/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
Video Output Mode	HDMI1/VGA simultaneous output, HDMI2/VGA independent output
CVBS Output	1-ch, BNC (1.0 Vp-p, 75 Ω), resolution: PAL: 704 × 576, NTSC: 704 × 480
Audio Output	1-ch, RCA (Linear, 1 KΩ)
Two-Way Audio	1-ch, RCA (2.0 Vp-p, 1 KΩ, using the audio input)

Decoding

Decoding Format	H.265+/H.265/H.264+/H.264 32 MP/24 MP/12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/720p/VGA
Recording Resolution	/4CIF/DCIF/ 2CIF/CIF/QCIF *: The NVR supports up to 8-ch 32 MP/24 MP IP video inputs.
Synchronous Playback	16-ch
Decoding Capability	2-ch@32 MP (30 fps) + 2-ch@8 MP (30 fps)/10-ch@8 MP (30 fps)/20-ch@4 MP (30 fps)/40-ch@1080p (30 fps)
Dual-Stream Recording	Support
Stream Type	Video, Video & Audio
Audio Compression	G.711ulaw/G.711alaw/G.722/G.726/AAC/MP2L2

Network

Remote Connection	128
Network Protocol	TCP/IP, DHCP, IPv4, IPv6, DNS, DDNS, NTP, RTSP, SADP, SMTP, SNMP, NFS, iSCSI, ISUP, UPnP™, HTTP, HTTPS
Network Interface	1, RJ-45 10/100/1000 Mbps self-adaptive Ethernet interface

PoE

Interface	24, RJ-45 10/100 Mbps self-adaptive Ethernet interface
Power	≤ 210 W
Standard	IEEE 802.3 af/at

Auxiliary Interface

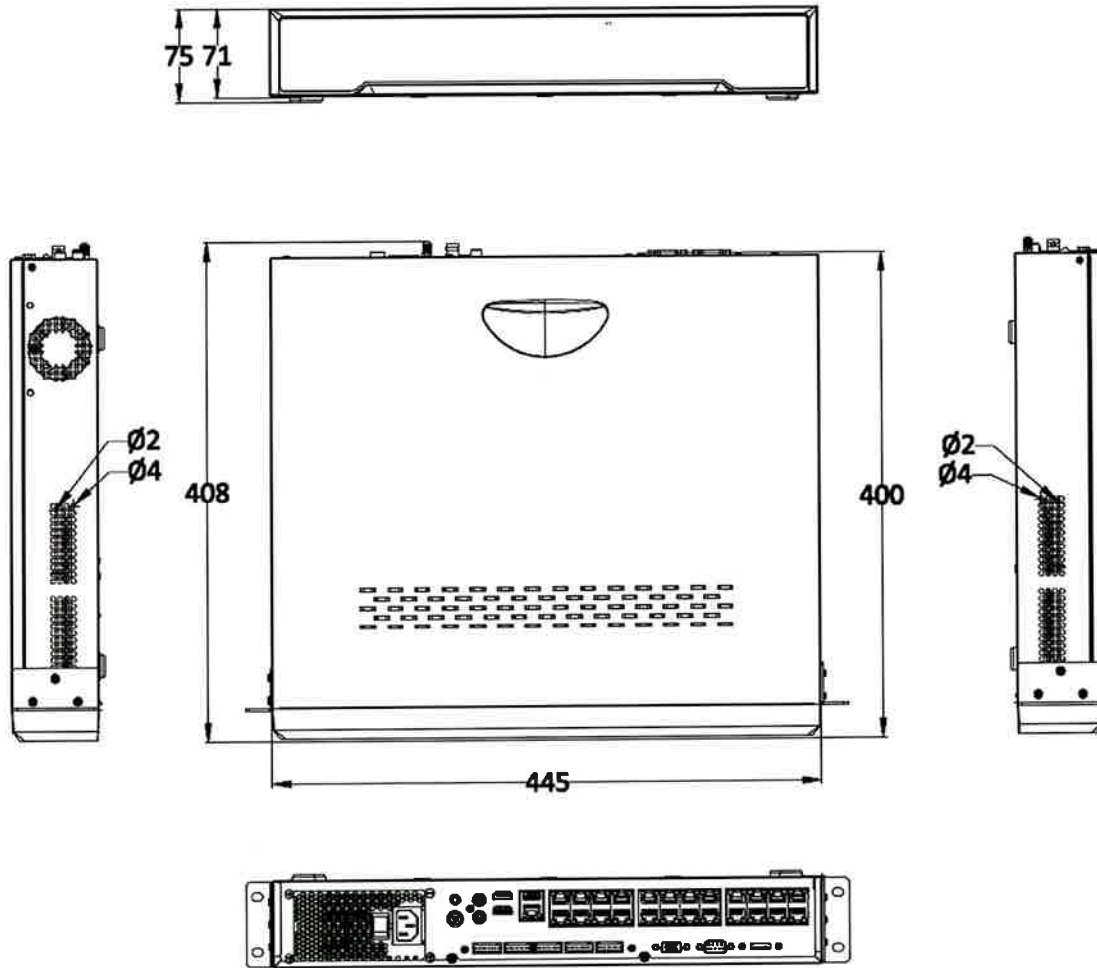
eSATA	1 eSATA interface
SATA	4 SATA interfaces
Capacity	Up to 16 TB capacity for each HDD
Serial Interface	2 RS-485 (half-duplex), 1 RS-232




Alarm In/Out	16/9
USB Interface	Front panel: 2 × USB 2.0; Rear panel: 1 × USB 3.0
Ctrl 12V	Controllable 12 VDC, 1 A power output for external alarm device; The power will be turned on when the alarm output is triggered. *: The Ctrl 12V power is controlled by alarm output 9.
DC 12V	12 VDC, 1 A power output
General	
Power Supply	100 to 240 VAC, 50 to 60 Hz
Consumption	≤ 15 W (without HDD and PoE off)
Working Temperature	-10 °C to 55 °C (14 °F to 131 °F)
Working Humidity	10% to 90%
Chassis	19-inch rack-mounted 1.5U chassis
Dimension (W × D × H)	445 × 400 × 75 mm (17.5"× 15.7" × 3.0")
Weight	≤ 5 kg (without HDD, 11 lb.)
Certification	
Obtained Certification	CE, REACH, WEEE, FCC, CB, RCM, KC, UL
CE	EN 55032:2015+A1:2020, ENIEC61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A1:2019, EN 50130-4:2011+A1:2014, EN 55035:2017+A11:2020
FCC	Part 15 Subpart B, ANSI C63.4-2014



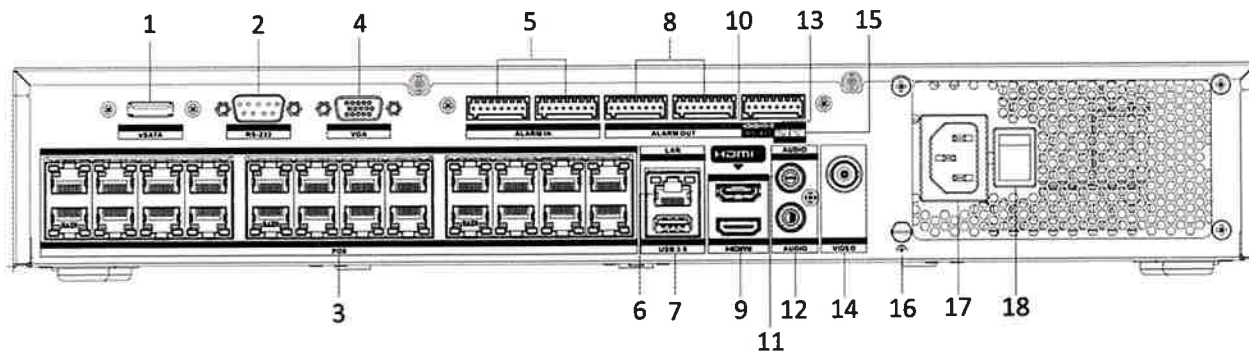
▪ Dimension



scale/1:1;Unit/mm



▪ **Physical Interface**



No.	Description	No.	Description
1	eSATA interface	10	RS-485 interface
2	RS-232 interface	11	AUDIO IN
3	Network interfaces with PoE functions	12	AUDIO OUT
4	VGA interface	13	Ctrl 12V
5	ALARM IN	14	VIDEO OUT
6	LAN interface	15	DC 12V
7	USB 3.0 interface	16	GND
8	ALARM OUT	17	Power supply
9	HDMI interface	18	Power switch

▪ **Available Model**

DS-7732NI-M4/24P

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HIKVISION®

DS-2CD2147G2H-LI(SU)

4 MP Smart Hybrid Light with ColorVu Fixed Dome Network Camera

ColorVu



- High quality imaging with 4 MP resolution
- Smart Hybrid Light: advanced technology with long range
- Clear imaging against strong back light due to 130 dB WDR technology
- Efficient H.265+ compression technology
- Focus on human and vehicle classification based on deep learning
- -U: Built-in microphone for real-time audio security
- Water and dust resistant (IP67) and vandal-resistant (IK10)



▪ Specification

Camera	
Image Sensor	1/1.8" Progressive Scan CMOS
Max. Resolution	2688 × 1520
Min. Illumination	Color: 0.0005 Lux @ (F1.0, AGC ON), 0 Lux with light
Shutter Time	1/3 s to 1/100,000 s
Day & Night	IR cut filter
Angle Adjustment	Pan: 0° to 355°, tilt: 0° to 75°, rotate: 0° to 355°
Lens	
Lens Type	Fixed focal lens, 2.8 and 4 mm optional
Focal Length & FOV	2.8 mm, horizontal FOV 104.0°, vertical FOV 54.4°, diagonal FOV 126.7° 4 mm, horizontal FOV 89.2°, vertical FOV 45.5°, diagonal FOV 108.2°
Lens Mount	M16
Iris Type	Fixed
Aperture	F1.0
Depth of Field	2.8 mm: 2.5 m to ∞ 4 mm: 3.1 m to ∞
DORI	
DORI	2.8 mm: D: 61 m, O: 24 m, R: 12 m, I: 6 m 4 mm: D: 75 m, O: 30 m, R: 15 m, I: 7 m
Illuminator	
Supplement Light Type	IR, White Light
Supplement Light Range	Up to 30 m
Smart Supplement Light	Yes
IR Wavelength	850 nm
Video	
Main Stream	50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)
Sub-Stream	50 Hz: 25 fps (1280 × 720, 640 × 480, 640 × 360) 60 Hz: 30 fps (1280 × 720, 640 × 480, 640 × 360)
Third Stream	50 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) 60 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) *The third stream is supported under certain settings.
Video Compression	Main stream: H.265/H.264/H.264+/H.265+, Sub-stream: H.265/H.264/MJPEG, Third stream: H.265/H.264, *Third stream is supported under certain settings.
Video Bit Rate	32 Kbps to 8 Mbps
H.264 Type	Baseline Profile, Main Profile, High Profile
H.265 Type	Main Profile
Bit Rate Control	CBR, VBR
Scalable Video Coding (SVC)	H.264 and H.265 encoding
Region of Interest (ROI)	1 fixed region for main stream and sub-stream
Audio	
Audio Compression	-U: G.711/G.722.1/G.726/MP2L2/PCM/MP3/AAC-LC
Audio Type	-U: Mono sound



Audio Bit Rate	-U: 64 Kbps (G.711ulaw/G.711alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/16 Kbps to 64 Kbps (AAC-LC)/32 to 192 Kbps (MP2L2)/8 to 320 Kbps (MP3)
Audio Sampling Rate	-U: 8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz
Environment Noise Filtering	-U: Yes

Network

Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SNMP, WebSocket, WebSockets, SRTP, SFTP
Simultaneous Live View	Up to 6 channels
API	Open Network Video Interface (Profile S, Profile G, Profile T), ISAPI, SDK, ISUP
User/Host	Up to 32 users 3 user levels: administrator, operator, and user
Security	Password protection, complicated password, HTTPS encryption, 802.1X authentication (EAP-TLS, EAP-LEAP, EAP-MD5), watermark, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for Open Network Video Interface, RTP/RTSP over HTTPS, control timeout settings, security audit log, TLS 1.1/1.2/1.3, host authentication (MAC address)
Network Storage	NAS (NFS, SMB/CIFS), Auto Network Replenishment (ANR), Together with high-end Hikvision memory card, memory card encryption and health detection are supported.
Client	iVMS-4200, Hik-Connect, Hik-Central
Web Browser	Plug-in required live view: IE 10, IE 11, Plug-in free live view: Chrome 57.0+, Firefox 52.0+, Edge 89+, Local service: Chrome 57.0+, Firefox 52.0+, Edge 89+

Image

Image Parameters Switch	Yes
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser
Day/Night Switch	Day, Night, Auto, Schedule
Image Enhancement	BLC, HLC, 3D DNR
SNR	≥ 52 dB
Wide Dynamic Range (WDR)	130 dB
Privacy Mask	4 programmable polygon privacy masks

Interface

Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port
On-Board Storage	Built-in memory card slot, support microSD/microSDHC/microSDXC card, up to 512 GB
Built-in Microphone	-U: Yes -S: 1 input (line in), two-core terminal block, max. input amplitude: 3.3 Vpp, input impedance: 4.7 KΩ, interface type: non-equilibrium, -S: 1 output (line out), two-core terminal block, max. output amplitude: 3.3 Vpp, output impedance: 100 Ω, interface type: non-equilibrium
Audio	
Alarm	-S: 1 input, 1 output (max. 12 VDC, 30 mA)
Reset Key	Yes

Event

Basic Event	Motion detection (support alarm triggering by specified target types (human and vehicle)), video tampering alarm, exception
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Linkage	Upload to FTP/NAS/memory card, notify surveillance center, trigger recording, trigger capture, send email
Smart Event	Scene change detection
Deep Learning Function	
Face Capture	Yes
Perimeter Protection	Line crossing, intrusion, region entrance, region exiting Support alarm triggered by specified target types (human and vehicle)
General	
Power	12 VDC ± 25%, 0.6 A, max. 7.2 W, Ø5.5 mm coaxial power plug, reverse polarity protection, PoE: IEEE 802.3af, Class 3, max. 8.5 W
Material	Base: aluminum alloy, cover: aluminum alloy
Dimension	Ø121.5 mm × 97.6 mm (Ø4.78" × 3.84")
Package Dimension	234 mm × 120 mm × 117 mm (9.2" × 4.7" × 4.6")
Weight	Approx. 525 g (1.2 lb.)
With Package Weight	Approx. 750 g (1.7 lb.)
Storage Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)
Startup and Operating Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)
General Function	Heartbeat, mirror, password reset via email, pixel counter, anti-banding
Language	33 languages: English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil), Ukrainian
Approval	
EMC	CE-EMC: EN 55032: 2015, EN 61000-3-2:2019, EN 61000-3-3: 2013+A1:2019, EN 50130-4: 2011 +A1: 2014, IC: ICES-003: Issue 7, KC: KN32: 2015, KN35: 2015, RCM: AS/NZS CISPR 32: 2015 UL: UL 62368-1,
Safety	CB: IEC 62368-1: 2014+A11, CE-LVD: EN 62368-1: 2014/A11: 2017, BIS: IS 13252 (Part 1): 2010/IEC 60950-1: 2005 CE-RoHS: 2011/65/EU,
Environment	WEEE: 2012/19/EU, Reach: Regulation (EC) No 1907/2006
Protection	IP67: IEC 60529-2013, IK10: IEC 62262:2002



▪ Typical Application

Hikvision products are classified into three levels according to their anti-corrosion performance. Refer to the following description to choose for your using environment.

This model has NO SPECIFIC PROTECTION.

Level	Description
Top-level protection	Hikvision products at this level are equipped for use in areas where professional anti-corrosion protection is a must. Typical application scenarios include coastlines, docks, chemical plants, and more.

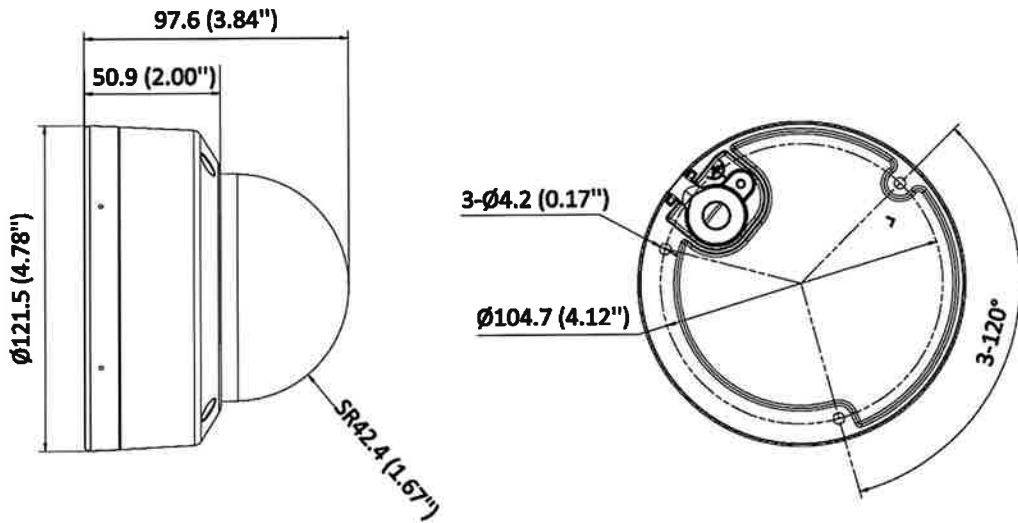
Moderate protection	Hikvision products at this level are equipped for use in areas with moderate anti-corrosion demands. Typical application scenarios include coastal areas about 2 kilometers (1.24 miles) away from coastlines, as well as areas affected by acid rain.
No specific protection	Hikvision products at this level are equipped for use in areas where no specific anti-corrosion protection is needed.

▪ **Available Model**

DS-2CD2147G2H-LISU (2.8/4 mm)

DS-2CD2147G2H-LI (2.8/4 mm)

▪ **Dimension**



Unit: mm (inch)



▪ **Accessory**

▪ **Optional**

<p>DS-2210ZJ-WA-120 Pendant Mount</p>	<p>DS-1275ZJ-SUS Vertical Pole Mount</p>	<p>DS-1276ZJ-SUS Corner Mount</p>	<p>DS-2280ZJ-WA120 Junction Box</p>	<p>DS-1280ZJ-DM46 Junction Box</p>
				
<p>DS-1272ZJ-120 Wall Mount</p>	<p>DS-1272ZJ-120B Wall Mount</p>	<p>DS-1271ZJ-120 Pendant Mount</p>	<p>DS-2200ZJ-WAJ-120 Wall Mount</p>	<p>DS-2200ZJ-WA-120 Wall Mount</p>
				

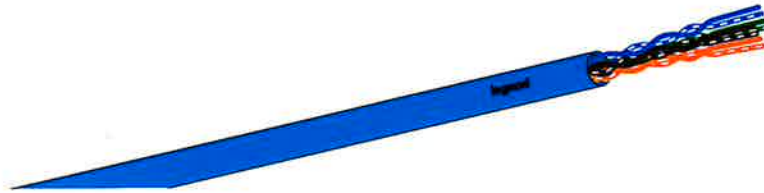


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1. USE

Cable for high-speed VDI transmission networks

802.3 bt PoE++ up to type 4 applications compatible according to installation standards ISO/IEC 14763-2 : 2019 and EN 50174-2 : 2018

2. DESCRIPTION



3. MARKING AND PACKAGING

Marking of Legrand cables

- LEGRAND
- Catalogue number
- Number of pairs
- Gauge
- Type
- Impedance
- Type of sleeve
- Category
- Conformity to standards
- EUROCLASS
- Velocity of propagation
- Traceability
- Measurement (remaining length in metres).

Complementary marking (on label)

- Designation
- Made in...

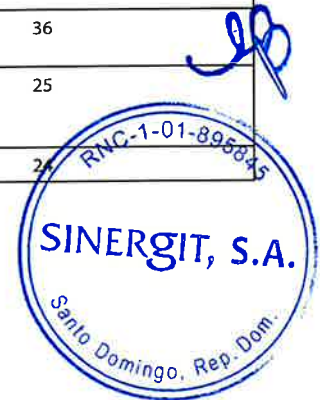
4. PERFORMANCE AT 250 MHZ (STAND. ANSI/TIA 568.2-D))

Reference	0 327 55
Maximum attenuation (dB/100 m)	32,8
Minimum NEXT (dB)	38,3
PS NEXT (dB)	36,3
ACRF (dB/100 m)	18,8
PS ACRF (dB/100 m)	16,8
Return Loss (dB)	17,3

5. TECHNICAL AND MECHANICAL FEATURES

Catalogue number	0 327 55
Type	U/UTP
Type of sleeve	PVC
Number of pairs	4
Assembly	Pairs
Diameter over insulation (mm)	0,95 ± 0,05
Average nominal diameter of the cable (mm)	5,8 ± 0,3
Weight of cable (kg/km)	36
Min. bending radius when laying (mm)	25
AWG gauge*	24

* According to UL 444 ed.3 table 4



6. ELECTRICAL FEATURES AT 20°C

Catalogue number	0 327 55
Type	U/UTP
Maximum linear resistance (ohm/km)	95 *
DC dielectric strength	1 KV / 1 min *
Minimum insulation resistance (Mohm.km)	5000
Minimum propagation speed	66 %
Characteristic impedance at 100 MHz	100 ±5Ω

* According to standard IEC 61156-5

7. ORDERING INFORMATION

Catalogue number	0 327 55
Type	U/UTP
Colour	Blue RAL 5015
Pack (m)	305
Packaging	Box

8. ENVIRONMENTAL FEATURES

Transport and storage temperature: -20 at + 60 °C
 Storage temperature before installation: 10°C during 24h (if stock ≤ 5°C)
 Usage temperature: - 20 to + 60 °C

Fire rating : IEC 60332-1-2, EN 60332-1-2

EUROCLASS EN 13501-6 = Class Eca

9. STANDARDS AND APPROVALS

Cat 6, 250 MHz
 Electrical performances and characteristics :
 - ANSI/TIA 568.2-D
 - EN 50173-1
 - EN 50288-6-1
 - ISO/IEC 11801 (ed. 2.2)
 - IEC 61156-5
 IEEE 802.3bt : PoE++



HIKVISION®

DS-2CD2047G2H-LI(U)

4 MP Smart Hybrid Light with ColorVu Fixed Mini Bullet Network Camera

ColorVu



- High quality imaging with 4 MP resolution
- Smart Hybrid Light: advanced technology with long range
- Clear imaging against strong back light due to 130 dB WDR technology
- Efficient H.265+ compression technology
- Focus on human and vehicle classification based on deep learning
- -U: Built-in microphone for real-time audio security
- Water and dust resistant (IP67)



▪ Specification

Camera	
Image Sensor	1/1.8" Progressive Scan CMOS
Max. Resolution	2688 × 1520
Min. Illumination	Color: 0.0005 Lux @ (F1.0, AGC ON), 0 Lux with light
Shutter Time	1/3 s to 1/100,000 s
Day & Night	IR cut filter
Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°
Lens	
Lens Type	Fixed focal lens, 2.8 and 4 mm optional
Focal Length & FOV	2.8 mm, horizontal FOV 104.0°, vertical FOV 54.4°, diagonal FOV 126.7° 4 mm, horizontal FOV 89.2°, vertical FOV 45.5°, diagonal FOV 108.2°
Lens Mount	M16
Iris Type	Fixed
Aperture	F1.0
Depth of Field	2.8 mm: 2.5 m to ∞ 4 mm: 3.1 m to ∞
DORI	
DORI	2.8 mm: D: 61 m, O: 24 m, R: 12 m, I: 6 m 4 mm: D: 75 m, O: 30 m, R: 15 m, I: 7 m
Illuminator	
Supplement Light Type	IR, White Light
Supplement Light Range	Up to 40 m
Smart Supplement Light	Yes
IR Wavelength	850 nm
Video	
Main Stream	50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)
Sub-Stream	50 Hz: 25 fps (1280 × 720, 640 × 480, 640 × 360) 60 Hz: 30 fps (1280 × 720, 640 × 480, 640 × 360)
Third Stream	50 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) 60 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) *The third stream is supported under certain settings.
Video Compression	Main stream: H.265/H.264/H.264+/H.265+, Sub-stream: H.265/H.264/MJPEG, Third stream: H.265/H.264, *Third stream is supported under certain settings.
Video Bit Rate	32 Kbps to 8 Mbps
H.264 Type	Baseline Profile, Main Profile, High Profile
H.265 Type	Main Profile
Bit Rate Control	CBR, VBR
Scalable Video Coding (SVC)	H.264 and H.265 encoding
Region of Interest (ROI)	1 fixed region for main stream and sub-stream
Audio	
Audio Compression	-U: G.711/G.722.1/G.726/MP2L2/PCM/MP3/AAC-LC



Audio Bit Rate	-U: 64 Kbps (G.711ulaw/G.711alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/16 Kbps to 64 Kbps (AAC-LC)/32 to 192 Kbps (MP2L2)/8 to 320 Kbps (MP3)
Audio Sampling Rate	-U: 8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz
Environment Noise Filtering	-U: Yes

Network

Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SNMP, WebSocket, WebSockets, SRTP, SFTP
Simultaneous Live View	Up to 6 channels
API	Open Network Video Interface (Profile S, Profile G, Profile T), ISAPI, SDK, ISUP
User/Host	Up to 32 users 3 user levels: administrator, operator, and user
Security	Password protection, complicated password, HTTPS encryption, 802.1X authentication (EAP-TLS, EAP-LEAP, EAP-MD5), watermark, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for Open Network Video Interface, RTP/RTSP over HTTPS, control timeout settings, security audit log, TLS 1.1/1.2/1.3, host authentication (MAC address)
Network Storage	NAS (NFS, SMB/CIFS), Auto Network Replenishment (ANR)
Client	iVMS-4200, Hik-Connect, Hik-Central Plug-in required live view: IE 10, IE 11,
Web Browser	Plug-in free live view: Chrome 57.0+, Firefox 52.0+, Edge 89+ Local service: Chrome 57.0+, Firefox 52.0+, Edge 89+

Image

Image Parameters Switch	Yes
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance, adjustable by client software or web browser
Day/Night Switch	Day, Night, Auto, Schedule
Image Enhancement	BLC, HLC, 3D DNR
SNR	≥ 52 dB
Wide Dynamic Range (WDR)	130 dB
Privacy Mask	4 programmable polygon privacy masks

Interface

Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port
On-Board Storage	Built-in memory card slot, support microSD/microSDHC/microSDXC card, up to 512 GB
Built-in Microphone	-U: Yes
Reset Key	Yes

Event

Basic Event	Motion detection (support alarm triggering by specified target types (human and vehicle)), video tampering alarm, exception
Linkage	Upload to FTP/NAS/memory card, notify surveillance center, trigger recording, trigger capture, send email
Smart Event	Scene change detection

Deep Learning Function

Face Capture	Yes
Perimeter Protection	Line crossing, intrusion, region entrance, region exiting Support alarm triggering by specified target types (human and vehicle)



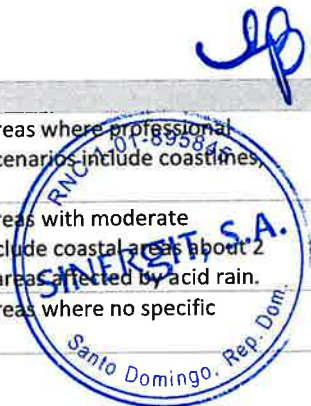
General	
Power	12 VDC ± 25%, 0.45 A, max. 5.5 W, Ø5.5 mm coaxial power plug, reverse polarity protection, PoE: IEEE 802.3af, Class 3, max. 7 W
Material	Front cover: Metal, body: Metal, bracket: Metal
Dimension	Ø74.4 mm × 179.2 mm (Ø2.9" × 7.1")
Package Dimension	234 mm × 120 mm × 117 mm (9.2" × 4.7" × 4.6")
Weight	Approx. 525 g (1.2 lb.)
With Package Weight	Approx. 750 g (1.7 lb.)
Storage Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)
Startup and Operating Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)
General Function	Heartbeat, mirror, password reset via email, pixel counter, anti-banding
Language	33 languages: English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil), Ukrainian
Approval	
EMC	CE-EMC: EN 55032: 2015, EN 61000-3-2:2019, EN 61000-3-3: 2013+A1:2019, EN 50130-4: 2011 +A1: 2014, IC: ICES-003: Issue 7, KC: KN32: 2015, KN35: 2015, RCM: AS/NZS CISPR 32: 2015 UL: UL 62368-1,
Safety	CB: IEC 62368-1: 2014+A11, CE-LVD: EN 62368-1: 2014/A11: 2017, BIS: IS 13252 (Part 1): 2010/IEC 60950-1: 2005
Environment Protection	CE-RoHS: 2011/65/EU IP67: IEC 60529-2013

Typical Application

Hikvision products are classified into three levels according to their anti-corrosion performance. Refer to the following description to choose for your using environment.

This model has NO SPECIFIC PROTECTION.

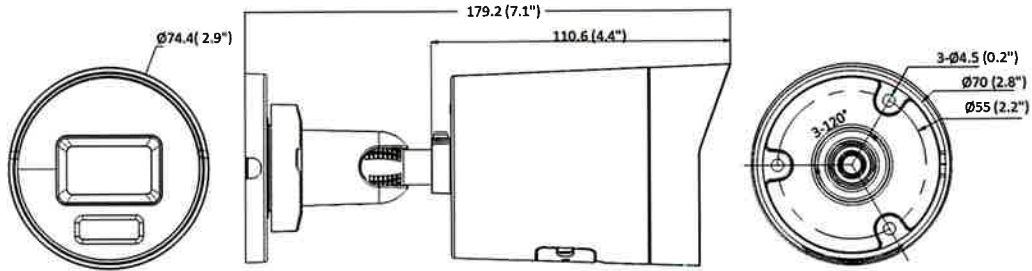
Level	Description
Top-level protection	Hikvision products at this level are equipped for use in areas where professional anti-corrosion protection is a must. Typical application scenarios include coastlines, docks, chemical plants, and more.
Moderate protection	Hikvision products at this level are equipped for use in areas with moderate anti-corrosion demands. Typical application scenarios include coastal areas about 2 kilometers (1.24 miles) away from coastlines, as well as areas affected by acid rain.
No specific protection	Hikvision products at this level are equipped for use in areas where no specific anti-corrosion protection is needed.



▪ **Available Model**

- DS-2CD2047G2H-LI(2.8mm)
- DS-2CD2047G2H-LI(4mm)
- DS-2CD2047G2H-LIU(2.8mm)
- DS-2CD2047G2H-LIU(4mm)
- DS-2CD2047G2H-LIU(2.8mm)/Black

▪ **Dimension**



Unit: mm (Inch)

▪ **Accessory**

▪ **Optional**

DS-1275ZJ-SUS Vertical Pole Mount	DS-1276ZJ-SUS Corner Mount	DS-1280ZJ-XS Junction Box
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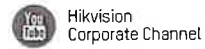


DS-1275ZJ-SUS(Black) Vertical Pole Mount	DS-1276ZJ-SUS(Black) Corner Mount	DS-1280ZJ-XS(Black) Junction Box
--	---	--



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19" NETbox Wall Mounting Cabinets

Width: 600 mm
Depth: 600 mm

Load Capacity: 80 kgs.

U Height: 7U, 9U, 12U, 16U and 20U

Standards and Compliances:



**ISO 9001
Quality Management System**

EN 61587-1
Mechanical Structures for
Electronic Equipment

IEC 297-1, 19" Mounting
IEC 297-2 Overall Cabinet Dimensions

EN/IEC 60529- IP20 Ingress Protection
performance

EN/IEC 62262- IK07 Mechanical
Impact Resistance



CE conform to
EN 60950-1
Information Technology
Equipment, Safety,
Part-1: General Requirement

EN IEC 62368-1 Audio/Video,
Information and Communication
Technology Equipment
Part 1: Safety requirements



UL listed to
UL 2416, Outline of Investigation for
Audio/Video, Information and
Communication Technology Equipment
Cabinet, Enclosure and Rack
Systems; UL 60950-1 and CSA
C22.2 NO. 60950-1-07, Information
Technology Equipment Safety
Part 1: General Requirements



Environment Friendly;
ISO 14001 Environmental
Management System
RoHS compliancy
%100 Recyclable Material

Standard Colors:



RAL 7035 Light Grey



RAL 9005 Black



NETbox Series Wall Mounting Networking Enclosures, with 19" w:600 mm and d:600 mm physical sizes, with max internal usable depth and 5 different height.

All Lande NETbox Wall cabinets are being delivered as a single piece pre-assembled enclosure, with standard factory settings.

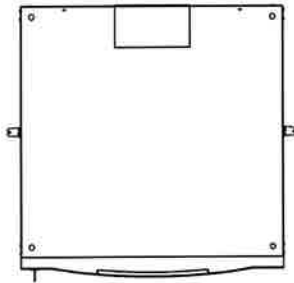
The Lande NETbox has an option of doors to suit customer specific applications.

*** Please see door options in page 4.

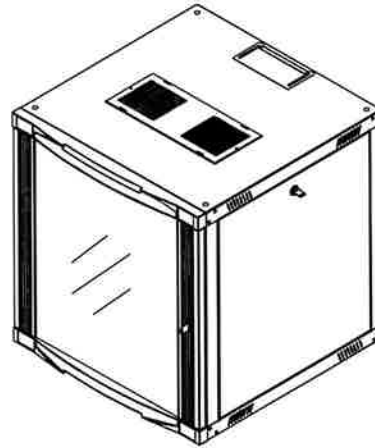
19" NETbox Wall Mounting Cabinets

Width: 600 mm
Depth: 600 mm

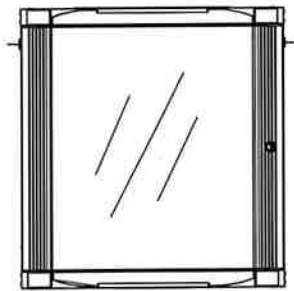
Construction Drawings



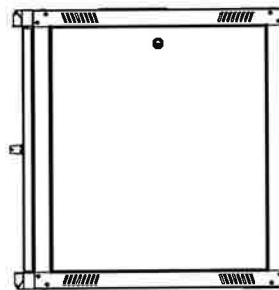
Bottom view



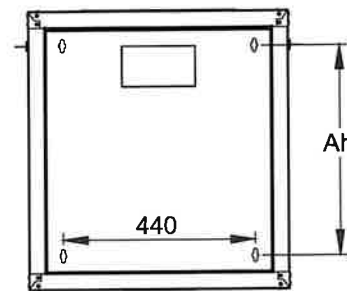
Isometric view



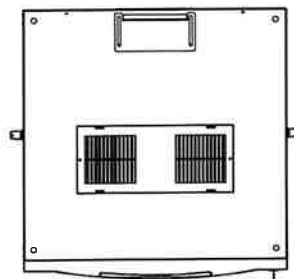
Front view



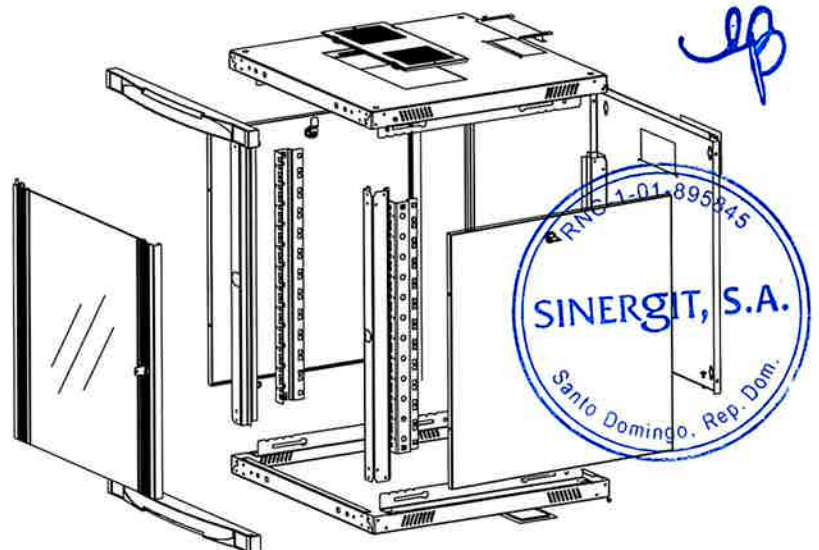
Side view



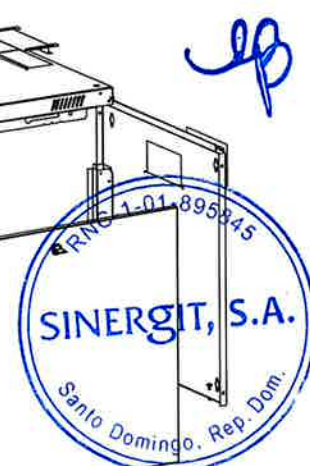
Rear view



Top view



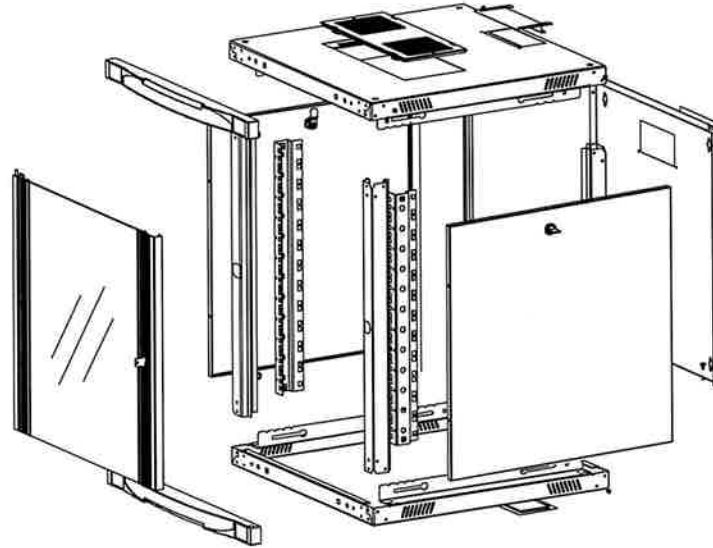
Exploded view



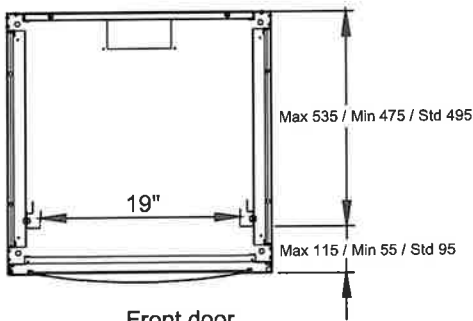
19" NETbox Wall Mounting Cabinets

Width: 600 mm
Depth: 600 mm

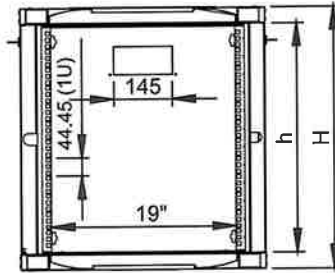
Construction Drawings



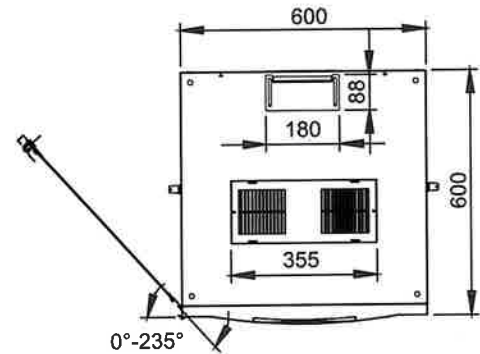
Exploded view



Front door opening angle



Max. / Std. / Min. Equipment mounting distance



Dimensions in width and height

19" NETbox Series Wall Mounting Cabinets W=600 mm D=600 mm													
***Product Number	Product Description	Size WxDxH mm	h Size In U	h in mm	*H mm, overall without feet and/or castor	An Wall Mounting h mm	Width Overall mm	Width Rail to Rail	Depth Overall mm	**Depth Shipping Cont. Rail to Rear Panel mm	QTY IN PACKAGE	PACKING DIMENSIONS WxDxH mm	Standard NET Weight of Product kgs
LN-WM07U6060-CC-111	7U 19" Wall Mounting Cabinet W=600 mm D=600 mm	600x600x423	7U	311	418	260	600	19"	600	495	1	620x620x450	18
LN-WM09U6060-CC-111	9U 19" Wall Mounting Cabinet W=600 mm D=600 mm	600x600x512	9U	400	505	349	600	19"	600	495	1	620x620x540	20
LN-WM12U6060-CC-111	12U 19" Wall Mounting Cabinet W=600 mm D=600 mm	600x600x646	12U	533	640	482	600	19"	600	495	1	620x620x670	24
LN-WM16U6060-CC-111	16U 19" Wall Mounting Cabinet W=600 mm D=600 mm	600x600x824	16U	711	818	660	600	19"	600	495	1	620x620x850	28
LN-WM20U6060-CC-111	20U 19" Wall Mounting Cabinet W=600 mm D=600 mm	600x600x1001	20U	889	996	838	600	19"	600	495	1	620x620x1030	32

* Please add 30 mm to H mm once used with leveling feet, add 60 mm to H mm once used with castor set.

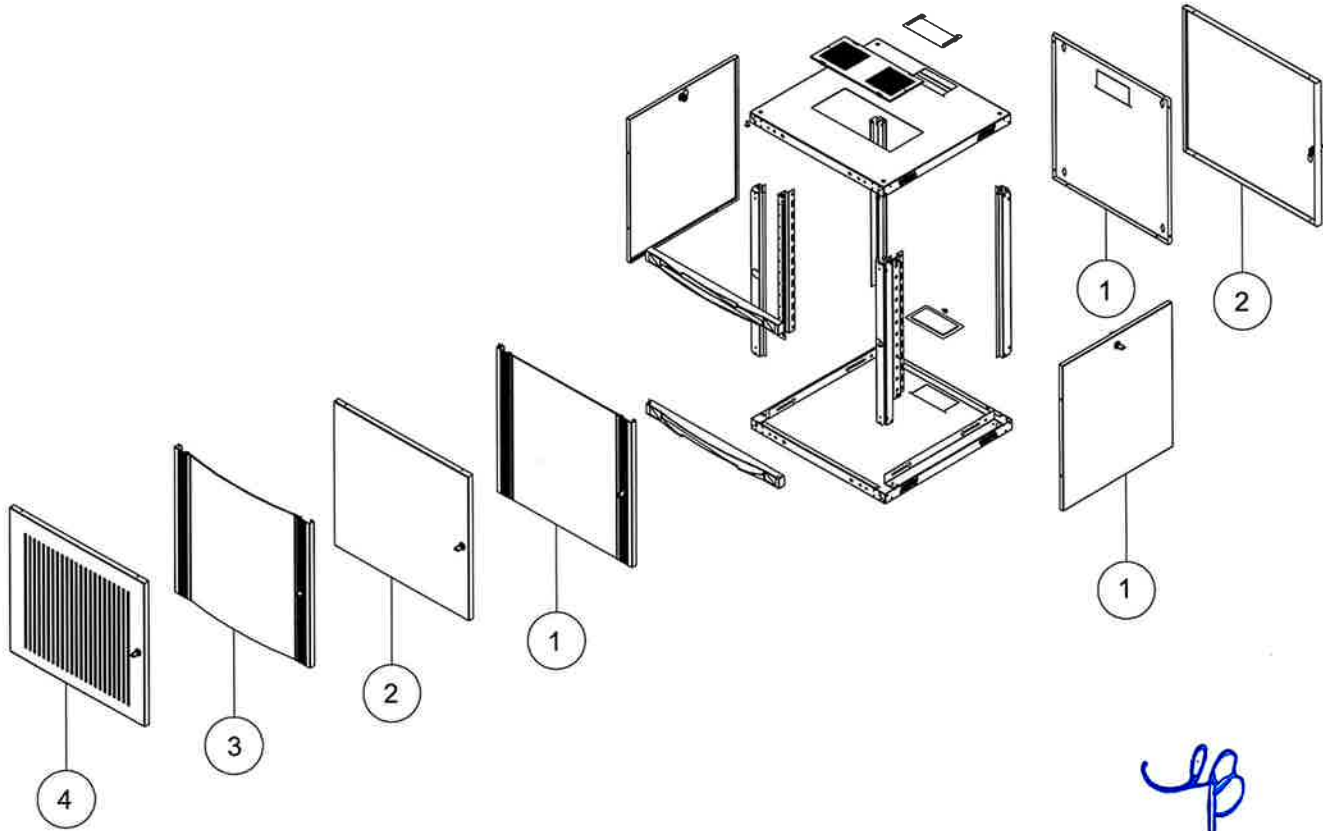
** See min and max adjustable depth variations on drawings.

*** CC= LG for Light Grey RAL 7035 & BL for Black RAL 9005 for customers to define while ordering, for "111" selection please see the door options.

19" NETbox Wall Mounting Cabinets

**Width: 600 mm
Depth: 600 mm**

Door Options



ep

NETbox Wall Mounting Cabinet W=600 mm D=600 mm All Heights FRONT DOOR Options	NETbox Wall Mounting Cabinet W=600 mm D=600 mm All Heights REAR DOOR Options	NETbox Wall Mounting Cabinet W=600 mm D=600 mm All Heights SIDE PANEL Options
<ul style="list-style-type: none"> 1 Single opening, flat shape, side framed glass front door, single point barrel lock 2 Single opening, flat shape, complete solid metal front door, single point barrel lock 3 Single opening, curved shape, side framed glass front door, single point barrel lock (Applicable on all U heights, please contact your sales representatives as it has MOQ.) 4 Single opening, flat shape, %63 perforated metal front door, single point barrel lock 	<ul style="list-style-type: none"> 1 Factory configured screwed and mechanically locked rear panel included 2 Hinged single point lock rear door 	<ul style="list-style-type: none"> 1 Both sides equipped with standard side panels 0 No side panels on cabinet
LN-AA - XXU - WW - DD - CC		0 0 0
<p>LN: Corporate codification beginning letters mentioning Lande in Short Format as LN</p> <p>AA: Family group of enclosure; WM for wall mounting cabinets</p> <p>XX: Numeric character defining the height of enclosures, depending on model differences between 07 to 20 to be selected from price list, website or catalogue</p> <p>U: U height alphanumeric notation (non editable- fixed character)</p> <p>WW: The first 2 digits of the width info, 60 for W=600 mm cabinets</p> <p>DD: The first 2 digits of the depth info, 60 for D=600 mm cabinets</p> <p>CC: Color code, LG for Light Grey RAL 7035, BL for Black RAL 9005</p>		<p>2-3-4 are options, unless defined, configuration will be standard glass front door with color number 1.</p> <p>Two options, unless defined, screwed mechanically locked rear panel which is option number 1 will be in shipping configuration.</p> <p>1 both sides equipped with standard side panels 0 no side panels on cabinet.</p>

Cisco Business 350 Series Managed Switches



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Critical Building Block for Any Small Office Network	3
Cisco Business 350 series managed switches	3
Business applications	4
Features and benefits	4
Product specifications	7
Ordering information	33
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ep



Critical Building Block for Any Small Office Network

From connectivity to cloud applications, networking plays a crucial role in every business journey. Reliability, security, and affordability continue to be top of mind while ongoing management and operations add additional complexity that take time and resources.

Cisco Business is a portfolio of affordable wireless access points, switches and routers designed and built for Small Business. Managed through Cisco Business Dashboard and mobile app, the portfolio provides a simple and reliable experience.

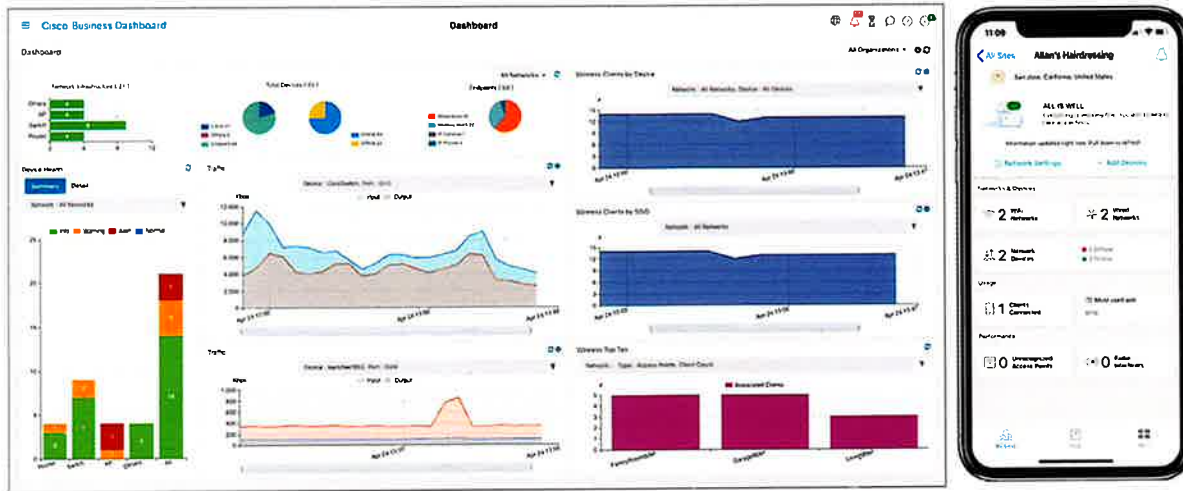


Figure 1.
Cisco Business Dashboard and Cisco Business mobile app

Cisco Business 350 series managed switches

The Cisco Business 350 Series Switches, part of the Cisco Business line of network solutions, is a portfolio of affordable managed switches that provides a critical building block for any small office network. Intuitive dashboard simplifies network setup, and advanced features accelerate digital transformation, while pervasive security protects business critical transactions. The Cisco Business 350 Series Switches provide the ideal combination of affordability and capabilities for small office and helps you create a more efficient, better-connected workforce. When your business needs advanced networking features and security for the digital transformation yet value is still a top consideration, you're ready for the Cisco Business 350 Series Switches.



Figure 2.
Cisco Business 350 series managed switches



Business applications

Whether you need a basic high-performance network to connect employee computers or a solution to deliver data, voice, and video services, the Cisco 350 Business Series Switches offer a solution to meet your needs. Possible deployment scenarios include:

- **Secure office connectivity:** Cisco Business 350 Series Switches can simply and securely connect employees working in small offices with each other and with all of the servers, printers, and other networking devices they use. High performance and reliable connectivity help speed file transfers and data processing, improve network uptime, and keep your employees connected and productive.
- **Unified communications:** As a managed network solution, the Cisco Business 350 Series Switches provide the performance and advanced traffic-handling intelligence you need to deliver all communications and data over a single network. Cisco offers a complete portfolio of IP telephony and other unified communications products designed for businesses. Cisco Business 350 Series Switches have been rigorously tested to help ensure easy integration and full compatibility with these and other products, providing a complete business solution.
- **Highly secure guest connectivity.** Cisco Business 350 Series Switches let you extend highly secure network connectivity to guests in a variety of settings, such as a hotel, an office waiting room, or any other area open to nonemployee users. Using powerful but easy-to-configure security and traffic segmentation capabilities, you can isolate your vital business traffic from guest services and keep guests' network sessions private from each other.

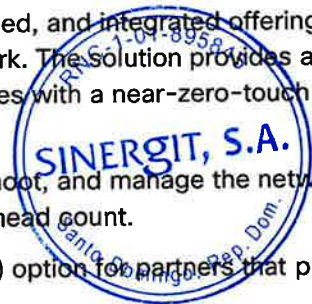
Features and benefits

Cisco Business 350 Series Switches provide the advanced feature set that growing businesses require and that high-bandwidth applications and technologies demand. The switches provide the following benefits.

Ease of Management and Deployment

Cisco Business 350 Series Switches are designed to be easy to use and manage by commercial customers or the partners that serve them, including the following features:

- Cisco Business Dashboard is designed to manage Cisco Business switches, routers, and wireless access points. Cisco Business Dashboard simplifies traditional challenges in deploying and managing business networks while automating the deployment, monitoring, and lifecycle management of the network. Cisco Business 350 Series switches support embedded probe for Cisco Business Dashboard, eliminating the need to set up a separate hardware or virtual machine on site. For more information, visit <https://www.cisco.com/go/cbd>
- The Cisco Network Plug and Play solution provides a simple, secure, unified, and integrated offering to ease new device rollouts or for provisioning updates to an existing network. The solution provides a unified approach to provision Cisco routers, switches, and wireless devices with a near-zero-touch deployment experience.
- The intuitive user interfaces reduce the time required to deploy, troubleshoot, and manage the network and allow you to support sophisticated capabilities without increasing IT head count.
- The switches also support Text view, a full Command-Line Interface (CLI) option for partners that prefer it.



-
- Support for Simple Network Management Protocol (SNMP) allows you to set up and manage your switches and other Cisco devices remotely from a network management station, improving IT workflow and mass configurations.

High Reliability and Resiliency

In a growing business where availability 24 hours a day, 7 days a week is critical, you need to ensure business continuity and that employees can always access the data and resources they need. The Cisco Business 350 Series Switches support dual images, allowing you to perform software upgrades without having to take the network offline or worry about the network going down during the upgrade.

Strong Security

Cisco Business 350 Series Switches provide the advanced security features you need to protect your business data and keep unauthorized users off the network:

- Support for advanced network security applications such as IEEE 802.1X and port security tightly limits access to specific segments of your network. Web-based authentication provides a consistent interface to authenticate all types of host devices and operating systems, without the complexity of deploying IEEE 802.1X clients on each endpoint.
- Advanced defense mechanisms, including dynamic Address Resolution Protocol (ARP) inspection, IP Source Guard, and Dynamic Host Configuration Protocol (DHCP) snooping, detect and block deliberate network attacks. Combinations of these protocols are also referred to as IP-MAC port binding (IPMB).
- IPv6 First Hop Security extends the advanced threat protection to IPv6. This comprehensive security suite includes ND inspection, RA guard, DHCPv6 guard, and neighbor binding integrity check, providing unparalleled protection against a vast range of address spoofing and man-in-the-middle attacks on IPv6 networks.

Power over Ethernet

Cisco Business 350 Series Switches are available with up to 48 Power over Ethernet (PoE) ports. This capability simplifies advanced technology deployments such as IP telephony, wireless, and IP surveillance by allowing you to connect and power network endpoints over a single Ethernet cable. With no need to install separate power supplies for IP phones or wireless access points, you can take advantage of advanced communications technologies more quickly and at a lower cost. Models support 802.3af PoE and 802.3at PoE+. 60W PoE is also supported on select switches to power high-performance wireless access points and Internet of Things (IoT) devices.

IPv6 Support

As the IP address scheme evolves to accommodate a growing number of network devices, the Cisco Business 350 Series Switches can support the transition to the next generation of networking. These switches continue to support previous-generation IPv4, allowing you to evolve to the new IPv6 standard at your own pace and helping ensure that your current network will continue to support your business applications in the future. Cisco Business 350 Series Switches have successfully completed rigorous IPv6 testing and have received the USGv6 and IPv6 Gold certification.



Advanced Layer 3 Traffic Management

The Cisco Business 350 Series Switches enable a more advanced set of traffic management capabilities to help growing businesses organize their networks more effectively and efficiently. For example, the switches provide dynamic Layer 3 routing, allowing you to segment your network into workgroups and communicate across VLANs without degrading application performance.

With these capabilities, you can boost the efficiency of your network by offloading internal traffic-handling tasks from your router and allowing it to manage primarily external traffic and security.

True stacking

Cisco Business 350 Series switches provide true stacking capability, allowing you to configure, manage, and troubleshoot all switches in a stack as a single unit with a single IP address.

A true stack delivers a unified data and control plane, in addition to management plane, providing flexibility, scalability, and ease of use because the stack of units operates as a single entity constituting all the ports of the stack members. This capability can radically reduce complexity in a growing network environment while improving the resiliency and availability of network applications. True stacking also provides other cost savings and administrative benefits through features such as cross-stack QoS, VLANs, LAGs, and port mirroring, which clustered switches cannot support.

Compact Design

The sleek and compact design for the Cisco Business 350 Series Switches provide additional deployment flexibility, including outside wiring closet installation such as retail stores, open plan offices, and classrooms without disturbing the environment.

Power Efficiency

The Cisco Business 350 Series Switches integrate a variety of power-saving features across all models, providing the industry's most extensive energy-efficient switching portfolio. These switches are designed to conserve energy by optimizing power use, which helps protect the environment and reduce your energy costs. They provide an eco-friendly network solution without compromising performance. Cisco Business 350 Series Switches feature:

- Support for the Energy Efficient Ethernet (IEEE 802.3az) standard, which reduces energy consumption by monitoring the amount of traffic on an active link and putting the link into a sleep state during quiet periods
- Automatic power shutoff on ports when a link is down
- Embedded intelligence to adjust signal strength based on the length of the connecting cable
- Fanless design in most models, which reduces power consumption, increases reliability, and provides quieter operation

Peace of Mind and Investment Protection

Cisco Business 350 Series Switches offer the reliable performance and peace of mind you expect from a Cisco switch. A solution that has been rigorously tested to help ensure optimal network uptime to ensure business continuity. Complementary one-year access to our Small Business Support Center for ongoing support. Limited lifetime warranty with Next-Business-Day (NBD) advance replacement (where available) keeps your business running smoothly.



Product specifications

Table 1 gives the product specifications for the Cisco Business 350 Series Switches.

Table 1. Product Specifications

Feature	Description		
Performance			
Switching capacity and forwarding rate All switches are wire speed and nonblocking	Model Name	Capacity in Millions of Packets per Second (mpps) (64-byte packets)	Switching Capacity in Gigabits per Second (Gbps)
	CBS350-8T-E-2G	14.88	20.0
	CBS350-8P-2G	14.88	20.0
	CBS350-8P-E-2G	14.88	20.0
	CBS350-8FP-2G	14.88	20.0
	CBS350-8FP-E-2G	14.88	20.0
	CBS350-8S-E-2G	14.88	20.0
	CBS350-16T-2G	26.78	36.0
	CBS350-16T-E-2G	26.78	36.0
	CBS350-16P-2G	26.78	36.0
	CBS350-16P-E-2G	26.78	36.0
	CBS350-16FP-2G	26.78	36.0
	CBS350-24T-4G	41.66	56.0
	CBS350-24P-4G	41.66	56.0
	CBS350-24FP-4G	41.66	56.0
	CBS350-24S-4G	41.66	56.0
	CBS350-48T-4G	77.38	104.0
	CBS350-48P-4G	77.38	104.0
	CBS350-48FP-4G	77.38	104.0
	CBS350-24T-4X	95.23	128.0
CBS350-24P-4X	95.23	128.0	
CBS350-24FP-4X	95.23	128.0	



Feature	Description		
	CBS350-48T-4X	130.94	176.0
	CBS350-48P-4X	130.94	176.0
	CBS350-48FP-4X	130.94	176.0
	CBS350-8MGP-2X	46.13	62.0
	CBS350-8MP-2X	29.76	80.0
	CBS350-24MGP-4X	104.16	140.0
	CBS350-12NP-4X	148.80	200.0
	CBS350-24NGP-4X	142.85	192.0
	CBS350-48NGP-4X	178.56	240.0
	CBS350-8XT	119.05	160.0
	CBS350-12XS	178.56	240.0
	CBS350-12XT	178.56	240.0
	CBS350-16XTS	238.08	320.0
	CBS350-24XS	240.00	480.0
	CBS350-24XT	240.00	480.0
	CBS350-24XTS	240.00	480.0
	CBS350-48XT-4X	755.81	1,040.0

Layer 2 Switching

Spanning Tree Protocol

Standard 802.1d Spanning Tree support

Fast convergence using 802.1w (Rapid Spanning Tree [RSTP]), enabled by default

Multiple Spanning Tree instances using 802.1s (MSTP); 8 instances are supported

Per-VLAN Spanning Tree Plus (PVST+) and Rapid PVST+ (RPVST+); 126 instances are supported



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Feature	Description
Port grouping/link aggregation	<p>Support for IEEE 802.3ad Link Aggregation Control Protocol (LACP)</p> <ul style="list-style-type: none"> • Up to 8 groups • Up to 8 ports per group with 16 candidate ports for each (dynamic) 802.3ad link aggregation
VLAN	<p>Support for up to 4,094 VLANs simultaneously</p> <p>Port-based and 802.1Q tag-based VLANs; MAC-based VLAN; protocol-based VLAN; IP subnet-based VLAN</p> <p>Management VLAN</p> <p>Private VLAN with promiscuous, isolated, and community port</p> <p>Private VLAN Edge (PVE), also known as protected ports, with multiple uplinks</p> <p>Guest VLAN, unauthenticated VLAN</p> <p>Dynamic VLAN assignment via RADIUS server along with 802.1x client authentication</p> <p>CPE VLAN</p>
Voice VLAN	<p>Voice traffic is automatically assigned to a voice-specific VLAN and treated with appropriate levels of QoS. Voice Services Discovery Protocol (VSDP) delivers network wide zero-touch deployment of voice endpoints and call control devices</p>
Multicast TV VLAN	<p>Multicast TV VLAN allows the single multicast VLAN to be shared in the network while subscribers remain in separate VLANs. This feature is also known as Multicast VLAN Registration (MVR)</p>
VLAN Translation	<p>Support for VLAN One-to-One Mapping. In VLAN One-to-One Mapping, on an edge interface customer VLANs (C-VLANs) are mapped to service provider VLANs (S-VLANs) and the original C-VLAN tags are replaced by the specified S-VLAN</p>
Q-in-Q	<p>VLANs transparently cross a service provider network while isolating traffic among customers</p>
Selective Q-in-Q	<p>Selective Q-in-Q is an enhancement to the basic Q-in-Q feature and provides, per edge interface, multiple mappings of different C-VLANs to separate S-VLANs</p> <p>Selective Q-in-Q also allows configuring of Ethertype (Tag Protocol Identifier [TPID]) of the S-VLAN tag</p> <p>Layer 2 protocol tunneling over Q-in-Q is also supported</p>
Generic VLAN Registration Protocol (GVRP)/Generic Attribute Registration Protocol (GARP)	<p>Generic VLAN Registration Protocol (GVRP) and Generic Attribute Registration Protocol (GARP) enable automatic propagation and configuration of VLANs in a bridged domain</p>
Unidirectional Link Detection (UDLD)	<p>UDLD monitors physical connection to detect unidirectional links caused by incorrect wiring or cable/port faults to prevent forwarding loops and black holing of traffic in switched networks</p>



Feature	Description
Dynamic Host Configuration Protocol (DHCP) Relay at Layer 2	Relay of DHCP traffic to DHCP server in different VLAN; works with DHCP Option 82
Internet Group Management Protocol (IGMP) versions 1, 2, and 3 snooping	IGMP limits bandwidth-intensive multicast traffic to only the requesters; supports 2K multicast groups (source-specific multicasting is also supported)
IGMP Querier	IGMP querier is used to support a Layer 2 multicast domain of snooping switches in the absence of a multicast router
IGMP proxy	The IGMP proxy provides a mechanism for multicast forwarding based on IGMP membership information without the need for more complicated multicast routing protocols.
Head-of-Line (HOL) blocking	HOL blocking prevention
Loopback Detection	Loopback detection provides protection against loops by transmitting loop protocol packets out of ports on which loop protection has been enabled. It operates independently of STP
Layer 3	
IPv4 routing	Wirespeed routing of IPv4 packets Up to 990 static routes and up to 128 IP interfaces
IPv6 routing	Wirespeed routing of IPv6 packets
Layer 3 Interface	Configuration of Layer 3 interface on physical port, Link Aggregation (LAG), VLAN interface, or loopback interface
Classless Interdomain Routing (CIDR)	Support for classless interdomain routing
RIP v2	Support for Routing Information Protocol version 2 for dynamic routing
Policy-Based Routing (PBR)	Flexible routing control to direct packets to different next hop based on IPv4 or IPv6 Access Control List (ACL)
DHCP Server	Switch functions as an IPv4 DHCP server serving IP addresses for multiple DHCP pools/scopes Support for DHCP options
DHCP relay at Layer 3	Relay of DHCP traffic across IP domains
User Datagram Protocol (UDP) relay	Relay of broadcast information across Layer 3 domains for application discovery or relaying of Bootstrap Protocol (BOOTP)/DHCP packets



Feature	Description
Stacking	

Hardware stacking Up to 4 units in a stack. Up to 200 ports managed as a single system with hardware failover

Stacking is supported on the following models

CBS350-24T-4X, CBS350-24P-4X, CBS350-24FP-4X, CBS350-48T-4X, CBS350-48P-4X, CBS350-48FP-4X

CBS350-8MP-2X, CBS350-24MGP-4X, CBS350-12NP-4X, CBS350-24NGP-4X, CBS350-48NGP-4X

CBS350-8XT, CBS350-12XS, CBS350-12XT, CBS350-16XTS, CBS350-24XS, CBS350-24XT, CBS350-24XTS, CBS350-48XT-4X

High availability Fast stack failover delivers minimal traffic loss. Support link aggregation across multiple units in a stack

Plug-and-play stacking configuration/management Active/standby for resilient stack control

Autonumbering

Hot swap of units in stack

Ring and chain stacking options, auto stacking port speed, flexible stacking port options

High-speed stack interconnects Cost-effective high-speed 10G fiber interfaces.

Security	
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Secure Shell (SSH) Protocol SSH is a secure replacement for Telnet traffic. Secure Copy Protocol (SCP) also uses SSH. SSH v1 and v2 are supported

Secure Sockets Layer (SSL) SSL support: Encrypts all HTTPS traffic, allowing highly secure access to the browser-based management GUI in the switch

IEEE 802.1X (Authenticator role) 802.1X: Remote Authentication Dial-In User Service (RADIUS) authentication and accounting, MD5 hash; guest VLAN; unauthenticated VLAN, single/multiple host mode and single/multiple sessions

Supports time-based 802.1X; dynamic VLAN assignment; MAC authentication

IEEE 802.1X supplicant A switch can be configured to act as a supplicant to another switch. This enables extended secure access in areas outside the wiring closet (such as conference rooms)

Web-based authentication Web-based authentication provides network admission control through web browser to any host devices and operating systems

STP Bridge Protocol Data Unit (BPDU) Guard A security mechanism to protect the network from invalid configurations. A port enabled for BPDU Guard is shut down if a BPDU message is received on that port. This avoids accidental topology loops

STP Root Guard This prevents edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes

STP loopback guard Provides additional protection against Layer 2 forwarding loops (STP loops)

DHCP snooping Filters out DHCP messages with unregistered IP addresses and/or from unexpected or untrusted interfaces. This prevents rogue devices from behaving as DHCP Servers.



Feature	Description
IP Source Guard (IPSG)	When IP Source Guard is enabled at a port, the switch filters out IP packets received from the port if the source IP addresses of the packets have not been statically configured or dynamically learned from DHCP snooping. This prevents IP address spoofing.
Dynamic ARP Inspection (DAI)	The switch discards ARP packets from a port if there are no static or dynamic IP/MAC bindings or if there is a discrepancy between the source or destination addresses in the ARP packet. This prevents man-in-the-middle attacks.
IP/MAC/Port Binding (IPMB)	The preceding features (DHCP Snooping, IP Source Guard, and Dynamic ARP Inspection) work together to prevent DOS attacks in the network, thereby increasing network availability
Secure Core Technology (SCT)	Makes sure that the switch will receive and process management and protocol traffic no matter how much traffic is received
Secure Sensitive Data (SSD)	A mechanism to manage sensitive data (such as passwords, keys, and so on) securely on the switch, populating this data to other devices, and secure autoconfig. Access to view the sensitive data as plaintext or encrypted is provided according to the user-configured access level and the access method of the user.
Trustworthy systems	Trustworthy systems provide a highly secure foundation for Cisco products Run-time defenses (Executable Space Protection [X-Space], Address Space Layout Randomization [ASLR], Built-In Object Size Checking [BOSC])
Private VLAN	Private VLAN provides security and isolation between switch ports, which helps ensure that users cannot snoop on other users' traffic; supports multiple uplinks
Layer 2 isolation Private VLAN Edge (PVE)	PVE (also known as protected ports) provides Layer 2 isolation between devices in the same VLAN, supports multiple uplinks
Port security	Ability to lock source MAC addresses to ports and limits the number of learned MAC addresses
RADIUS/TACACS+	Supports RADIUS and TACACS authentication. Switch functions as a client
RADIUS accounting	The RADIUS accounting functions allow data to be sent at the start and end of services, indicating the amount of resources (such as time, packets, bytes, and so on) used during the session
Storm control	Broadcast, multicast, and unknown unicast
DoS prevention	Denial-of-Service (DOS) attack prevention
Multiple user privilege levels in CLI	Level 1, 7, and 15 privilege levels
ACLs	Support for up to 1,024 rules Drop or rate limit based on source and destination MAC, VLAN ID, IPv4 or IPv6 address, IPv6 flow label, protocol, port, Differentiated Services Code Point (DSCP)/IP precedence, Transmission Control Protocol/User Datagram Protocol (TCP/UDP) source and destination ports, 802.1p priority, Ethernet type, Internet Control Message Protocol (ICMP) packets, IGMP packets, TCP flag; ACL can be applied on both ingress and egress sides Time-based ACLs supported



Feature	Description
Quality of Service	
Priority levels	8 hardware queues
Scheduling	Strict priority and Weighted Round-Robin (WRR)
Class of service	Port based; 802.1p VLAN priority-based; IPv4/v6 IP precedence/Type of Service (ToS)/DSCP-based; Differentiated Services (DiffServ); classification and remarking ACLs, trusted QoS Queue assignment based on DSCP and class of service (802.1p/CoS)
Rate limiting	Ingress policer; egress shaping and rate control; per VLAN, per port, and flow based; 2R3C policing
Congestion avoidance	A TCP congestion avoidance algorithm is required to minimize and prevent global TCP loss synchronization
iSCSI traffic optimization	A mechanism for giving priority to iSCSI traffic over other types of traffic

Standards

Standards IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3ad Link Aggregation Control Protocol, IEEE 802.3z Gigabit Ethernet, IEEE 802.3ae 10 Gbit/s Ethernet over fiber for LAN, IEEE 802.3an 10GBase-T 10 Gbit/s Ethernet over copper twisted pair cable, IEEE 802.3x Flow Control, IEEE 802.1D (STP, GARP, and GVRP), IEEE 802.1Q/p VLAN, IEEE 802.1w Rapid STP, IEEE 802.1s Multiple STP, IEEE 802.1X Port Access Authentication, IEEE 802.3af, IEEE 802.3at, IEEE 802.1AB Link Layer Discovery Protocol, IEEE 802.3az Energy Efficient Ethernet, RFC 768, RFC 783, RFC 791, RFC 792, RFC 793, RFC 813, RFC 826, RFC 879, RFC 896, RFC 854, RFC 855, RFC 856, RFC 858, RFC 894, RFC 919, RFC 920, RFC 922, RFC 950, RFC 951, RFC 1042, RFC 1071, RFC 1123, RFC 1141, RFC 1155, RFC 1157, RFC 1213, RFC 1215, RFC 1286, RFC 1350, RFC 1442, RFC 1451, RFC 1493, RFC 1533, RFC 1541, RFC 1542, RFC 1573, RFC 1624, RFC 1643, RFC 1700, RFC 1757, RFC 1867, RFC 1907, RFC 2011, RFC 2012, RFC 2013, RFC 2030, RFC 2131, RFC 2132, RFC 2233, RFC 2576, RFC 2616, RFC 2618, RFC 2665, RFC 2666, RFC 2674, RFC 2737, RFC 2819, RFC 2863, RFC 3164, RFC 3176, RFC 3411, RFC 3412, RFC 3413, RFC 3414, RFC 3415, RFC 3416, RFC 4330



Feature	Description
IPv6	<p>IPv6 host mode; IPv6 over Ethernet; Dual IPv6/IPv4 stack</p> <p>IPv6 neighbor and router discovery (ND); IPv6 stateless address autoconfiguration; Path Maximum Transmission Unit (MTU) discovery</p> <p>Duplicate Address Detection (DAD); ICMP version 6</p> <p>DHCPv6 stateful client</p> <p>IPv6 over IPv4 network with Intrasite Automatic Tunnel Addressing Protocol (ISATAP) tunnel support</p> <p>USGv6 and IPv6 Gold Logo certified</p>
IPv6 QoS	Prioritize IPv6 packets in hardware
IPv6 ACL	Drop or rate limit IPv6 packets in hardware
IPv6 First Hop Security	<p>RA guard</p> <p>ND inspection</p> <p>DHCPv6 guard</p> <p>Neighbor binding table (snooping and static entries)</p> <p>Neighbor binding integrity check</p>
Multicast Listener Discovery (MLD v1/2) snooping	Deliver IPv6 multicast packets only to the required receivers
MLD proxy	The MLD proxy provides a mechanism for multicast forwarding based on MLD membership information without the need for more complicated multicast routing protocols.
IPv6 applications	Web/SSL, Telnet server/SSH, ping, traceroute, Simple Network Time Protocol (SNTP), Trivial File Transfer Protocol (TFTP), SNMP, RADIUS, syslog, Domain Name System (DNS) client, Telnet Client, DHCP Client, DHCP Autoconfig, IPv6 DHCP Relay, Terminal Access Controller Access Control System Plus (TACACS+)
IPv6 RFCs supported	<p>RFC 4443 (which obsoletes RFC2463): ICMP version 6</p> <p>RFC 4291 (which obsoletes RFC 3513): IPv6 address architecture</p> <p>RFC 4291: IPv6 addressing architecture</p> <p>RFC 2460: IPv6 specification</p> <p>RFC 4861 (which obsoletes RFC 2461): neighbor discovery for IPv6</p> <p>RFC 4862 (which obsoletes RFC 2462): IPv6 stateless address autoconfiguration</p> <p>RFC 1981: path MTU discovery</p> <p>RFC 4007: IPv6 scoped address architecture</p> <p>RFC 3484: default address selection mechanism</p> <p>RFC 5214 (which obsoletes RFC 4214): ISATAP tunneling</p> <p>RFC 4293: MIB IPv6: textual conventions and general group</p> <p>RFC 3595: textual conventions for IPv6 flow label</p>



Feature	Description																																												
Management																																													
Cisco Business Dashboard	Support for embedded probe for Cisco Business Dashboard running on the switch. Eliminates the need to set up a separate hardware or virtual machine for the Cisco Business Dashboard Probe on site.																																												
Cisco Business mobile app	Mobile app for Cisco Business Switch and Wireless products. Helps to set up a local network in minutes and provide easy management at your fingertips.																																												
Cisco Network Plug and Play (PnP) agent	The Cisco Network Plug and Play solution provides a simple, secure, unified, and integrated offering to ease new branch or campus device rollouts or for provisioning updates to an existing network. The solution provides a unified approach to provision Cisco routers, switches, and wireless devices with a near-zero-touch deployment experience Supports Cisco PnP Connect																																												
Web user interface	Built-in switch configuration utility for easy browser-based device configuration (HTTP/HTTPS). Supports simple and advanced mode, configuration, wizards, customizable dashboard, system maintenance, monitoring, online help, and universal search																																												
SNMP	SNMP versions 1, 2c, and 3 with support for traps, and SNMP version 3 User-based Security Model (USM)																																												
Standard Management Information Bases (MIBs)	<table border="0"> <tr> <td>lldp-MIB</td> <td>rfc2668-MIB</td> </tr> <tr> <td>lldpextdot1-MIB</td> <td>rfc2737-MIB</td> </tr> <tr> <td>lldpextdot3-MIB</td> <td>rfc2925-MIB</td> </tr> <tr> <td>lldpextmed-MIB</td> <td>rfc3621-MIB</td> </tr> <tr> <td>rfc2674-MIB</td> <td>rfc4668-MIB</td> </tr> <tr> <td>rfc2575-MIB</td> <td>rfc4670-MIB</td> </tr> <tr> <td>rfc2573-MIB</td> <td>trunk-MIB</td> </tr> <tr> <td>rfc2233-MIB</td> <td>tunnel-MIB</td> </tr> <tr> <td>rfc2013-MIB</td> <td>udp-MIB</td> </tr> <tr> <td>rfc2012-MIB</td> <td>draft-ietf-bridge-8021x-MIB-895845</td> </tr> <tr> <td>rfc2011-MIB</td> <td>draft-ietf-bridge-rstp-mib-04-MIB</td> </tr> <tr> <td>RFC-1212</td> <td>draft-ietf-hubmib-etherif-mib-v3-00-MIB</td> </tr> <tr> <td>RFC-1215</td> <td>draft-ietf-syslog-device-MIB</td> </tr> <tr> <td>SNMPv2-CONF</td> <td>ianaaddrfamnumbers-MIB</td> </tr> <tr> <td>SNMPv2-TC</td> <td>ianaifty-MIB</td> </tr> <tr> <td>p-bridge-MIB</td> <td>ianaprot-MIB</td> </tr> <tr> <td>q-bridge-MIB</td> <td>inet-address-MIB</td> </tr> <tr> <td>rfc1389-MIB</td> <td>ip-forward-MIB</td> </tr> <tr> <td>rfc1493-MIB</td> <td>ip-MIB</td> </tr> <tr> <td>rfc1611-MIB</td> <td>RFC1155-SMI</td> </tr> <tr> <td>rfc1612-MIB</td> <td>RFC1213-MIB</td> </tr> <tr> <td>rfc1850-MIB</td> <td>SNMPv2-MIB</td> </tr> </table>	lldp-MIB	rfc2668-MIB	lldpextdot1-MIB	rfc2737-MIB	lldpextdot3-MIB	rfc2925-MIB	lldpextmed-MIB	rfc3621-MIB	rfc2674-MIB	rfc4668-MIB	rfc2575-MIB	rfc4670-MIB	rfc2573-MIB	trunk-MIB	rfc2233-MIB	tunnel-MIB	rfc2013-MIB	udp-MIB	rfc2012-MIB	draft-ietf-bridge-8021x-MIB-895845	rfc2011-MIB	draft-ietf-bridge-rstp-mib-04-MIB	RFC-1212	draft-ietf-hubmib-etherif-mib-v3-00-MIB	RFC-1215	draft-ietf-syslog-device-MIB	SNMPv2-CONF	ianaaddrfamnumbers-MIB	SNMPv2-TC	ianaifty-MIB	p-bridge-MIB	ianaprot-MIB	q-bridge-MIB	inet-address-MIB	rfc1389-MIB	ip-forward-MIB	rfc1493-MIB	ip-MIB	rfc1611-MIB	RFC1155-SMI	rfc1612-MIB	RFC1213-MIB	rfc1850-MIB	SNMPv2-MIB
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RFC-1215	draft-ietf-syslog-device-MIB																																												
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Feature	Description
	rfc1907-MIB
	rfc2571-MIB
	rfc2572-MIB
	rfc2574-MIB
	rfc2576-MIB
	rfc2613-MIB
	rfc2665-MIB
Private MIBs	CISCOB-lldp-MIB
	CISCOB-brgmulticast-MIB
	CISCOB-bridgemibobjects-MIB
	CISCOB-bonjour-MIB
	CISCOB-dhcpcl-MIB
	CISCOB-MIB
	CISCOB-wrandomtaildrop-MIB
	CISCOB-traceroute-MIB
	CISCOB-telnet-MIB
	CISCOB-stormctrl-MIB
	CISCOB-ssh-MIB
	CISCOB-socket-MIB
	CISCOB-sntp-MIB
	CISCOB-smon-MIB
	CISCOB-phy-MIB
	CISCOB-multisessionterminal-MIB
	CISCOB-mri-MIB
	CISCOB-jumboframes-MIB
	CISCOB-gvrp-MIB
	CISCOB-endofmib-MIB
	CISCOB-dot1x-MIB
	CISCOB-deviceparams-MIB
	CISCOB-cli-MIB
	CISCOB-cdb-MIB
	CISCOB-brgmacswitch-MIB
	CISCOB-3sw2swtables-MIB
	CISCOB-smartPorts-MIB
	CISCOB-tbi-MIB
	CISCOB-macbaseprio-MIB
	CISCOB-policy-MIB
	SNMPv2-SMI
	SNMPv2-TM
	RMON-MIB
	rfc1724-MIB
	dcb-raj-DCBX-MIB-1108-MIB
	rfc1213-MIB
	rfc1757-MIB
	CISCOB-ip-MIB
	CISCOB-iprouter-MIB
	CISCOB-ipv6-MIB
	CISCOB-mnginf-MIB
	CISCOB-licli-MIB
	CISCOB-localization-MIB
	CISCOB-mcmngr-MIB
	CISCOB-mng-MIB
	CISCOB-physdescription-MIB
	CISCOB-PoE-MIB
	CISCOB-protectedport-MIB
	CISCOB-rmon-MIB
	CISCOB-rs232-MIB
	CISCOB-SecuritySuite-MIB
	CISCOB-snmp-MIB
	CISCOB-specialbpdu-MIB
	CISCOB-banner-MIB
	CISCOB-syslog-MIB
	CISCOB-TcpSession-MIB
	CISCOB-traps-MIB
	CISCOB-trunk-MIB
	CISCOB-tuning-MIB
	CISCOB-tunnel-MIB
	CISCOB-usb-MIB
	CISCOB-vlan-MIB
	CISCOB-justfac-MIB
	CISCOB-eee-MIB
	CISCOB-ssl-MIB
	CISCOB-qosclimib-MIB
	CISCOB-digitalkeymanage-MIB

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Feature	Description
	CISCOSB-env_mib
	CISCOSB-sensor-MIB
	CISCOSB-aaa-MIB
	CISCOSB-application-MIB
	CISCOSB-bridgesecurity-MIB
	CISCOSB-copy-MIB
	CISCOSB-CpuCounters-MIB
	CISCOSB-Custom1BonjourService-MIB
	CISCOSB-dhcp-MIB
	CISCOSB-dlf-MIB
	CISCOSB-dnscl-MIB
	CISCOSB-embweb-MIB
	CISCOSB-fft-MIB
	CISCOSB-file-MIB
	CISCOSB-greeneth-MIB
	CISCOSB-interfaces-MIB
	CISCOSB-interfaces_recovery-MIB
	CISCOSB-tbp-MIB
	CISCOSMB-MIB
	CISCOSB-secsd-MIB
	CISCOSB-draft-ietf-entmib-sensor-MIB
	CISCOSB-draft-ietf-syslog-device-MIB
	CISCOSB-rfc2925-MIB
	CISCO-SMI-MIB
	CISCOSB-DebugCapabilities-MIB
	CISCOSB-CDP-MIB
	CISCOSB-vlanVoice-MIB
	CISCOSB-EVENTS-MIB
	CISCOSB-sysmng-MIB
	CISCOSB-sct-MIB
	CISCO-TC-MIB
	CISCO-VTP-MIB
	CISCO-CDP-MIB
Remote Monitoring (RMON)	Embedded RMON software agent supports 4 RMON groups (history, statistics, alarms, and events) for enhanced traffic management, monitoring, and analysis
IPv4 and IPv6 dual stack	Coexistence of both protocol stacks to ease migration
Firmware upgrade	Web browser upgrade (HTTP/HTTPS) and TFTP and upgrade over SCP running over SSH Dual images for resilient firmware upgrades
Port mirroring	Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe. Up to 8 source ports can be mirrored to one destination port.
VLAN mirroring	Traffic from a VLAN can be mirrored to a port for analysis with a network analyzer or RMON probe. Up to 8 source VLANs can be mirrored to one destination port.
Flow-based redirection and mirroring	Redirect or mirror traffic to a destination port or mirroring session based on flow
Remote Switch Port Analyzer (RSPAN)	Traffic can be mirrored across Layer 2 domain to a remote port on a different switch for easier troubleshooting
sFlow agent	Switch can export sFlow sample to external collectors. sFlow provides visibility into network traffic down to flow level
DHCP (options 12, 59, 60, 66, 67, 82, 125, 129, and 150)	DHCP options facilitate tighter control from a central point (DHCP server) to obtain IP address, autoconfiguration (with configuration and image file download), DHCP relay, and hostname
Secure Copy (SCP)	Securely transfer files to and from the switch



Feature	Description
Autoconfiguration with Secure Copy (SCP) file download	Enables secure mass deployment with protection of sensitive data
Text-editable config files	Config files can be edited with a text editor and downloaded to another switch, facilitating easier mass deployment
Smartports	Simplified configuration of QoS and security capabilities
Auto Smartports	Applies the intelligence delivered through the Smartport roles and applies it automatically to the port based on the devices discovered over Cisco Discovery Protocol or LLDP-MED. This facilitates zero-touch deployments
Textview CLI	Scriptable command-line interface. A full CLI as well as a menu-based CLI is supported. User privilege levels 1, 7, and 15 are supported for the CLI
Localization	Localization of GUI and documentation into multiple languages
Login banner	Configurable multiple banners for web as well as CLI
Other management	Traceroute; single IP management; HTTP/HTTPS; SSH; RADIUS; port mirroring; TFTP upgrade; DHCP client; BOOTP; SNTP; Xmodem upgrade; cable diagnostics; ping; syslog; Telnet client (SSH secure support); automatic time settings from Management Station
Green (power efficiency)	
Energy Detect	Automatically turns power off on RJ-45 port when detecting link down. Active mode is resumed without loss of any packets when the switch detects the link up
Cable length detection	Adjusts the signal strength based on the cable length. Reduces the power consumption for shorter cables.
EEE Compliant (802.3az)	Supports IEEE 802.3az on all copper Gigabit Ethernet ports
Disable port LEDs	LEDs can be manually turned off to save on energy
Time-based port operation	Link up or down based on user-defined schedule (when the port is administratively up)
Time-based PoE	PoE power can be on or off based on user-defined schedule to save energy
General	
Jumbo frames	Frame sizes up to 9K bytes. The default MTU is 2K bytes
MAC table	16K addresses
Discovery	
Bonjour	The switch advertises itself using the Bonjour protocol
Link Layer Discovery Protocol (LLDP) (802.1ab) with LLDP-MED extensions	LLDP allows the switch to advertise its identification, configuration, and capabilities to neighboring devices that store the data in a MIB. LLDP-MED is an enhancement to LLDP that adds the extensions needed for IP phones
Cisco Discovery Protocol	The switch advertises itself using the Cisco Discovery Protocol. It also learns the connected device and its characteristics via Cisco Discovery Protocol

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Feature	Description
Power over Ethernet (PoE)	

802.3af PoE, 802.3at PoE+ or 60W PoE delivered over the RJ-45 ports within the listed power budgets

The following switches support 802.3at PoE+, 802.3af, and Cisco prestandard (legacy) PoE. 60W PoE is also supported on select RJ-45 network ports on select models. The total power available for PoE per switch is as follows:

Model Name	Power Dedicated to PoE	Number of Ports That Support PoE
CBS350-8P-2G	67W	8
CBS350-8P-E-2G	60W	8
CBS350-8FP-2G	120W	8
CBS350-8FP-E-2G	120W	8
CBS350-16P-2G	120W	16
CBS350-16P-E-2G	120W	16
CBS350-16FP-2G	240W	16
CBS350-24P-4G	195W	24
CBS350-24FP-4G	370W	24
CBS350-48P-4G	370W	48
CBS350-48FP-4G	740W	48
CBS350-24P-4X	195W	24
CBS350-24FP-4X	370W	24
CBS350-48P-4X	370W	48
CBS350-48FP-4X	740W	48
CBS350-8MGP-2X	124W	8
CBS350-8MP-2X	240W	8 (4 support 60W PoE)
CBS350-24MGP-4X	375W	24 (4 support 60W PoE)
CBS350-12NP-4X	375W	12 (8 support 60W PoE)
CBS350-24NGP-4X	375W	24 (8 support 60W PoE)
CBS350-48NGP-4X	740W	48 (8 support 60W PoE)



Feature	Description			
Hardware				
Power consumption (worst case)	Model	System Power Consumption	Power Consumption (with PoE)	Heat Dissipation (BTU/hr)
	CBS350-8T-E-2G	110V=12.55W 220V=12.56W	N/A	42.86
	CBS350-8P-2G	110V=17.35W 220V=17.95W	110V=83.17W 220V=82.63W	283.79
	CBS350-8P-E-2G	110V=13.84W 220V=14.31W	110V=80.79W 220V=80.86W	275.91
	CBS350-8FP-2G	110V=17.29W 220V=17.88W	110V=148.12W 220V=146.36W	505.41
	CBS350-8FP-E-2G	110V=17.07W 220V=16.68W	110V=147.48W 220V=145.26W	503.22
	CBS350-8S-E-2G	110V=11.1W 220V=11.9W	N/A	40.6
	CBS350-16T-2G	110V=18.63W 220V=18.37W	N/A	64.46
	CBS350-16T-E-2G	110V=19.63W 220V=19.32W	N/A	65.92
	CBS350-16P-2G	110V=24.51W 220V=25.01W	110V=156.4W 220V=154.5W	536.39
	CBS350-16P-E-2G	110V=23.65W 220V=23.68W	110V=150.1W 220V=148.8W	512.16
	CBS350-16FP-2G	110V=27.53W 220V=26.68W	110V=284W 220V=279.8W	971.78
	CBS350-24T-4G	110V=25.91W 220V=25.63W	N/A	89.13
	CBS350-24P-4G	110V=34.42W 220V=33.09W	110V=239.7W 220V=236.4W	820.52
	CBS350-24FP-4G	110V=46.60W 220V=46.35W	110V=449.7W 220V=438.3W	1,537.17



Feature	Description			
	CBS350-24S-4G	110V=32.0W 220V=34.3W	N/A	117.0
	CBS350-48T-4G	110V=48.27W 220V=48.64W	N/A	165.96
	CBS350-48P-4G	110V=60.77W 220V=59.73W	110V=451.95W 220V=445.85W	1,542.12
	CBS350-48FP-4G	110V=73.79W 220V=74.03W	110V=886.42W 220V=859.50W	3,024.59
	CBS350-24T-4X	110V=27.54W 220V=27.25W	N/A	93.32
	CBS350-24P-4X	110V=35.72W 220V=34.53W	110V=240.4W 220V=236.9W	823.01
	CBS350-24FP-4X	110V=47.14W 220V=47.01W	110V=451.8W 220V=437.4W	1,544.34
	CBS350-48T-4X	110V=51.01W 220V=50.58W	N/A	174.06
	CBS350-48P-4X	110V=61.53W 220V=60.73W	110V=471.90W 220V=463.32W	1,610.19
	CBS350-48FP-4X	110V=76.18W 220V=76.22W	110V=889.35W 220V=865.02W	3,034.59
	CBS350-8MGP-2X	110V=29.8W 220V=31.3W	110V=167W 220V=165.2W	569.5
	CBS350-8MP-2X	110V=48.4W 220V=50.5W	110V=312.4W 220V=307.3W	1,065.9
	CBS350-24MGP-4X	110V=64.3W 220V=64.8W	110V=476.6W 220V=450.6W	1,626.4
	CBS350-12NP-4X	110V=59.8W 220V=60.1W	110V=494.5W 220V=476.4W	1,187.3
	CBS350-24NGP-4X	110V=56.9W 220V=56.6W	110V=488.9W 220V=474.5W	1,108.2
	CBS350-48NGP-4X	110V=94.1W 220V=93.7W	110V=916W 220V=914.4W	3,125.5



Feature	Description			
	CBS350-8XT	110V=50.3W 220V=50.3W	N/A	171.6
	CBS350-12XS	110V=24.3W 220V=25.3W	N/A	86.33
	CBS350-12XT	110V=63.9W 220V=64.1W	N/A	218.7
	CBS350-16XTS	110V=57W 220V=57.7W	N/A	196.88
	CBS350-24XS	110V=38.5W 220V=39.0W	N/A	133.1
	CBS350-24XT	110V=124.1W 220V=124.5W	N/A	424.8
	CBS350-24XTS	110V=78.4W 220V=80.2W	N/A	273.65
	CBS350-48XT-4X	110V=234.4W 220V=229.2W	N/A	799.8

Ports	Model Name	Total System Ports	RJ-45 Ports	Combo Ports (RJ45 + Small form-factor pluggable [SFP])
	CBS350-8T-E-2G	10 x Gigabit Ethernet	8 x Gigabit Ethernet	2 x Gigabit Ethernet combo
	CBS350-8P-2G	10 x Gigabit Ethernet	8 x Gigabit Ethernet	2 x Gigabit Ethernet combo
	CBS350-8P-E-2G	10 x Gigabit Ethernet	8 x Gigabit Ethernet	2 x Gigabit Ethernet combo
	CBS350-8FP-2G	10 x Gigabit Ethernet	8 x Gigabit Ethernet	2 x Gigabit Ethernet combo
	CBS350-8FP-E-2G	10 x Gigabit Ethernet	8 x Gigabit Ethernet	2 x Gigabit Ethernet combo
	CBS350-8S-E-2G	10 x Gigabit Ethernet	8 x Gigabit SFP Slots	2 x Gigabit Ethernet combo
	CBS350-16T-2G	18 x Gigabit Ethernet	16 x Gigabit Ethernet	2 x SFP
	CBS350-16T-E-2G	18 x Gigabit Ethernet	16 x Gigabit Ethernet	2 x SFP



Feature	Description			
	CBS350-16P-2G	18 x Gigabit Ethernet	16 x Gigabit Ethernet	2 x SFP
	CBS350-16P-E-2G	18 x Gigabit Ethernet	16 x Gigabit Ethernet	2 x SFP
	CBS350-16FP-2G	18 x Gigabit Ethernet	16 x Gigabit Ethernet	2 x SFP
	CBS350-24T-4G	28 x Gigabit Ethernet	24 x Gigabit Ethernet	4 x SFP
	CBS350-24P-4G	28 x Gigabit Ethernet	24 x Gigabit Ethernet	4 x SFP
	CBS350-24FP-4G	28 x Gigabit Ethernet	24 x Gigabit Ethernet	4 x SFP
	CBS350-24S-4G	28 x Gigabit Ethernet	24 x Gigabit SFP Slots	2 x Gigabit Ethernet combo + 2 SFP
	CBS350-48T-4G	52 x Gigabit Ethernet	48 x Gigabit Ethernet	4 x SFP
	CBS350-48P-4G	52 x Gigabit Ethernet	48 x Gigabit Ethernet	4 x SFP
	CBS350-48FP-4G	52 x Gigabit Ethernet	48 x Gigabit Ethernet	4 x SFP
	CBS350-24T-4X	24 x Gigabit Ethernet + 4 x 10G	24 x Gigabit Ethernet	4 x SFP+
	CBS350-24P-4X	24 x Gigabit Ethernet + 4 x 10G	24 x Gigabit Ethernet	4 x SFP+
	CBS350-24FP-4X	24 Gigabit Ethernet + 4 x 10G	24 x Gigabit Ethernet	4 x SFP+
	CBS350-48T-4X	48 Gigabit Ethernet + 4 x 10G	48 x Gigabit Ethernet	4 x SFP+
	CBS350-48P-4X	48 Gigabit Ethernet + 4 x 10G	48 x Gigabit Ethernet	4 x SFP+
	CBS350-48FP-4X	48 Gigabit Ethernet + 4 x 10G	48 x Gigabit Ethernet	4 x SFP+
	CBS350-8MGP-2X	6 x Gigabit Ethernet + 2 x 2.5G + 2 x Multigigabit	6 x Gigabit Ethernet + 2 x 2.5G	2 x Multigigabit/SFP+ combo
	CBS350-8MP-2X	8 x 2.5G + 2 x 10G	8 x 2.5G	2 x 10G copper/SFP+ combo
	CBS350-24MGP-4X	20 x Gigabit Ethernet + 4 x 2.5G + 4 x 10G	20 x Gigabit Ethernet + 4 x 2.5G	2 x 10G copper/SFP+ combo + 2 SFP+



Feature	Description			
	CBS350-12NP-4X	12 x 5G + 4 x 10G	12 x 5G	2 x 10G copper/SFP+ combo + 2 SFP+
	CBS350-24NGP-4X	16 x Gigabit Ethernet + 8 x 5G + 4 x 10G	16 x Gigabit Ethernet + 8 x 5G	2 x 10G copper/SFP+ combo + 2 SFP+
	CBS350-48NGP-4X	40 x Gigabit Ethernet + 8 x 5G + 4 x 10G	40 x Gigabit Ethernet + 8 x 5G	2 x 10G copper/SFP+ combo + 2 SFP+
	CBS350-8XT	6 x 10G copper + 2 x 10G copper/SFP+ combo + 1 x GE OOB management	6 x 10G copper	2 x 10G copper/SFP+ combo
	CBS350-12XS	10 x 10G SFP+ + 2 x 10G copper/SFP+ combo + 1 x GE OOB management	10 x 10G SFP+	2 x 10G copper/SFP+ combo
	CBS350-12XT	10 x 10G copper + 2 x 10G copper/SFP+ combo + 1 x GE OOB management	10 x 10G copper	2 x 10G copper/SFP+ combo
	CBS350-16XTS	8 x 10G copper + 8 x 10G SFP+ + 1 x GE OOB management	8 x 10G copper	8 x 10G SFP+
	CBS350-24XS	20 x 10G SFP+ + 4 x 10G copper/SFP+ combo + 1 x GE OOB management	20 x 10G SFP+	4 x 10G copper/SFP+ combo
	CBS350-24XT	20 x 10G copper + 4 x 10G copper/SFP+ combo + 1 x GE OOB management	20 x 10G copper	4 x 10G copper/SFP+ combo
	CBS350-24XTS	12 x 10G copper + 12 x 10G SFP+ + 1 x GE OOB management	12 x 10G copper	12 x 10G SFP+
	CBS350-48XT-4X	48 x 10G copper + 4 x 10G SFP+ + 1 x GE OOB management	48 x 10G copper	4 x 10G SFP+

Console port

Cisco standard RJ45 console port



Feature	Description
USB slot	USB Type-A slot on the front panel of the switch for easy file and image management
Buttons	Reset button
Cabling type	Unshielded Twisted Pair (UTP) Category 5e or better for 1000BASE-T
LEDs	System, Link/Act, PoE, Speed
Flash	256 MB
CPU	800 MHz ARM
DRAM	512 MB
Packet buffer	All numbers are aggregate across all ports as the buffers are dynamically shared:

Model Name	Packet Buffer
CBS350-8T-E-2G	1.5 MB
CBS350-8P-2G	1.5 MB
CBS350-8P-E-2G	1.5 MB
CBS350-8FP-2G	1.5 MB
CBS350-8FP-E-2G	1.5 MB
CBS350-8S-E-2G	1.5 MB
CBS350-16T-2G	1.5 MB
CBS350-16T-E-2G	1.5 MB
CBS350-16P-2G	1.5 MB
CBS350-16P-E-2G	1.5 MB
CBS350-16FP-2G	1.5 MB
CBS350-24T-4G	1.5 MB
CBS350-24P-4G	1.5 MB
CBS350-24FP-4G	1.5 MB
CBS350-24S-4G	1.5 MB
CBS350-48T-4G	3 MB
CBS350-48P-4G	3 MB
CBS350-48FP-4G	3 MB



Feature	Description	
	CBS350-24T-4X	1.5 MB
	CBS350-24P-4X	1.5 MB
	CBS350-24FP-4X	1.5 MB
	CBS350-48T-4X	3 MB
	CBS350-48P-4X	3 MB
	CBS350-48FP-4X	3 MB
	CBS350-8MGP-2X	1.5 MB
	CBS350-8MP-2X	1.5 MB
	CBS350-24MGP-4X	3 MB
	CBS350-12NP-4X	3 MB
	CBS350-24NGP-4X	3 MB
	CBS350-48NGP-4X	6 MB
	CBS350-8XT	6 MB
	CBS350-12XS	3 MB
	CBS350-12XT	3 MB
	CBS350-16XTS	3 MB
	CBS350-24XS	3 MB
	CBS350-24XT	3 MB
	CBS350-24XTS	3 MB
	CBS350-48XT-4X	10 MB



Feature	Description			
Supported SFP modules	SKU	Media	Speed	Maximum Distance
	MGBSX1	Multimode fiber	1000 Mbps	500 m
	MGBLX1	Single-mode fiber	1000 Mbps	10 km
	MGBLH1	Single-mode fiber	1000 Mbps	40 km
	MGBT1	UTP cat 5e	1000 Mbps	100 m
	GLC-SX-MMD	Multimode fiber	1000 Mbps	550 m
	GLC-LH-SMD	Single-mode fiber	1000 Mbps	10 km
	GLC-BX-U	Single-mode fiber	1000 Mbps	10 km
	GLC-BX-D	Single-mode fiber	1000 Mbps	10 km
	GLC-TE	UTP cat 5e	1000 Mbps	100 m
	SFP-H10GB-CU1M	Copper coax	10 Gig	1 m
	SFP-H10GB-CU3M	Copper coax	10 Gig	3 m
	SFP-H10GB-CU5M	Copper coax	10 Gig	5 m
	SFP-10G-SR	Multimode fiber	10 Gig	26 m - 400 m
	SFP-10G-LR	Single-mode fiber	10 Gig	10 km
	SFP-10G-SR-S	Multimode fiber	10 Gig	26 m - 400 m
	SFP-10G-LR-S	Single-mode fiber	10 Gig	10 km

Environmental

**Unit dimensions
(W x D x H)**

Model Name

Unit Dimensions

CBS350-8T-E-2G	268 x 185 x 44 mm (10.56 x 7.28 x 1.73 in)
CBS350-8P-2G	268 x 272 x 44 mm (10.56 x 10.71 x 1.73 in)
CBS350-8P-E-2G	268 x 185 x 44 mm (10.56 x 7.28 x 1.73 in)
CBS350-8FP-2G	268 x 272 x 44 mm (10.56 x 10.71 x 1.73 in)
CBS350-8FP-E-2G	268 x 185 x 44 mm (10.56 x 7.28 x 1.73 in)
CBS350-8S-E-2G	280 x 170 x 44 mm (11.0 x 6.69 x 1.73 in)
CBS350-16T-2G	268 x 272 x 44 mm (10.56 x 10.69 x 1.73 in)



Feature	Description
CBS350-16T-E-2G	268 x 210 x 44 mm (10.56 x 8.26 x 1.73 in)
CBS350-16P-2G	268 x 297 x 44 mm (10.56 x 11.69 x 1.73 in)
CBS350-16P-E-2G	268 x 210 x 44 mm (10.56 x 8.26 x 1.73 in)
CBS350-16FP-2G	268 x 308 x 44 mm (10.56 x 12.14 x 1.73 in)
CBS350-24T-4G	445 x 240 x 44 mm (17.5 x 9.45 x 1.73 in)
CBS350-24P-4G	445 x 299 x 44 mm (17.5 x 11.77 x 1.73 in)
CBS350-24FP-4G	445 x 345 x 44 mm (17.5 x 13.59 x 1.73 in)
CBS350-24S-4G	440 x 203 x 44 mm (17.3 x 7.99 x 1.73 in)
CBS350-48T-4G	445 x 288 x 44 mm (17.5 x 11.33 x 1.73 in)
CBS350-48P-4G	445 x 350 x 44 mm (17.5 x 13.78 x 1.73 in)
CBS350-48FP-4G	445 x 350 x 44 mm (17.5 x 13.78 x 1.73 in)
CBS350-24T-4X	445 x 240 x 44 mm (17.5 x 9.45 x 1.73 in)
CBS350-24P-4X	445 x 299 x 44 mm (17.5 x 11.77 x 1.73 in)
CBS350-24FP-4X	445 x 345 x 44 mm (17.5 x 13.59 x 1.73 in)
CBS350-48T-4X	445 x 288 x 44 mm (17.5 x 11.33 x 1.73 in)
CBS350-48P-4X	445 x 350 x 44 mm (17.5 x 13.78 x 1.73 in)
CBS350-48FP-4X	445 x 350 x 44 mm (17.5 x 13.78 x 1.73 in)
CBS350-8MGP-2X	344 x 252 x 44 mm (13.6 x 9.94 x 1.73 in)
CBS350-8MP-2X	344 x 252 x 44 mm (13.6 x 9.94 x 1.73 in)
CBS350-24MGP-4X	440 x 257 x 44 mm (17.3 x 10.12 x 1.73 in)
CBS350-12NP-4X	440 x 257 x 44 mm (17.3 x 10.12 x 1.73 in)
CBS350-24NGP-4X	440 x 350 x 44 mm (17.3 x 13.78 x 1.73 in)
CBS350-48NGP-4X	440 x 350 x 44 mm (17.3 x 13.78 x 1.73 in)
CBS350-8XT	440 x 203 x 44 mm (17.3 x 8.0 x 1.73 in)
CBS350-12XS	440 x 257 x 44 mm (17.3 x 10.12 x 1.73 in)
CBS350-12XT	440 x 203 x 44 mm (17.3 x 8.0 x 1.73 in)
CBS350-16XTS	440 x 257 x 44 mm (17.3 x 10.12 x 1.73 in)



Feature	Description
	CBS350-24XS 440 x 350 x 44 mm (17.3 x 13.78 x 1.73 in)
	CBS350-24XT 440 x 350 x 44 mm (17.3 x 13.78 x 1.73 in)
	CBS350-24XTS 440 x 350 x 44 mm (17.3 x 13.78 x 1.73 in)
	CBS350-48XT-4X 440 x 450 x 44 mm (17.3 x 17.72 x 1.73 in)

Unit weight	Model Name	Unit Weight
	CBS350-8T-E-2G	1.39 kg (3.06 lb)
	CBS350-8P-2G	2.59 kg (5.71 lb)
	CBS350-8P-E-2G	1.53 kg (3.37 lb)
	CBS350-8FP-2G	2.59 kg (5.71 lb)
	CBS350-8FP-E-2G	1.53 kg (3.37 lb)
	CBS350-8S-E-2G	1.0 kg (2.20 lb)
	CBS350-16T-2G	1.78 kg (3.92 lb)
	CBS350-16T-E-2G	1.42 kg (3.13 lb)
	CBS350-16P-2G	2.38 kg (5.25 lb)
	CBS350-16P-E-2G	1.42 kg (3.13 lb)
	CBS350-16FP-2G	2.49 kg (5.49 lb)
	CBS350-24T-4G	2.63 kg (5.80 lb)
	CBS350-24P-4G	3.53 kg (7.78 lb)
	CBS350-24FP-4G	4.6 kg (10.14 lb)
	CBS350-24S-4G	2.7 kg (5.95 lb)
	CBS350-48T-4G	3.95 kg (8.71 lb)
	CBS350-48P-4G	5.43 kg (11.97 lb)
	CBS350-48FP-4G	5.82 kg (12.83 lb)
	CBS350-24T-4X	2.78 kg (6.13 lb)
	CBS350-24P-4X	3.68 kg (8.11 lb)
	CBS350-24FP-4X	4.6 kg (10.14 lb)
	CBS350-48T-4X	3.95 kg (8.71 lb)



Feature	Description
	CBS350-48P-4X 5.43 kg (11.97 lb)
	CBS350-48FP-4X 5.82 kg (12.83 lb)
	CBS350-8MGP-2X 2.5 kg (5.51 lb)
	CBS350-8MP-2X 2.74 kg (6.04 lb)
	CBS350-24MGP-4X 3.99 kg (8.79 lb)
	CBS350-12NP-4X 4.24 kg (9.35 lb)
	CBS350-24NGP-4X 5.3 kg (11.68 lb)
	CBS350-48NGP-4X 5.95 kg (13.12 lb)
	CBS350-8XT 2.98 kg (6.57 lb)
	CBS350-12XS 3.42 kg (7.54 lb)
	CBS350-12XT 2.93 kg (6.46 lb)
	CBS350-16XTS 3.79 kg (8.36lb)
	CBS350-24XS 4.4 kg (9.7 lb)
	CBS350-24XT 5.1 kg (11.2 lb)
	CBS350-24XTS 4.84 kg (10.67 lb)
	CBS350-48XT-4X 7.29 kg (16.1 lb)

Power

100-240V 50-60 Hz, internal, universal: CBS350-8P-2G, CBS350-8FP-2G, CBS350-16T-2G, CBS350-16P-2G, CBS350-16FP-2G, CBS350-24T-4G, CBS350-24P-4G, CBS350-24FP-4G, CBS350-24S-4G, CBS350-48T-4G, CBS350-48P-4G, CBS350-48FP-4G, CBS350-24T-4X, CBS350-24P-4X, CBS350-24FP-4X, CBS350-48T-4X, CBS350-48P-4X, CBS350-48FP-4X, CBS350-8MGP-2X, CBS350-8MP-2X, CBS350-24MGP-4X, CBS350-12NP-4X, CBS350-24NGP-4X, CBS350-48NGP-4X, CBS350-8XT, CBS350-12XS, CBS350-12XT, CBS350-16XTS, CBS350-24XS, CBS350-24XT, CBS350-24XTS, CBS350-48XT-4X

100-240V 50-60 Hz, external: CBS350-8T-E-2G, CBS350-8P-E-2G, CBS350-8FP-E-2G, CBS350-8S-E-2G, CBS350-16T-E-2G, CBS350-16P-E-2G

Certification

UL (UL 62368), CSA (CSA 22.2), CE mark, FCC Part 15 (CFR 47) Class A



Feature	Description
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Operating temperature 23° to 122° F (-5° to 50° C)

CBS350-8T-E-2G, CBS350-8P-2G, CBS350-8P-E-2G, CBS350-8FP-2G, CBS350-8FP-E-2G, CBS350-16T-2G, CBS350-16T-E-2G, CBS350-16P-2G, CBS350-16P-E-2G, CBS350-16FP-2G, CBS350-24T-4G, CBS350-24P-4G, CBS350-24FP-4G, CBS350-48T-4G, CBS350-48P-4G, CBS350-48FP-4G, CBS350-24T-4X, CBS350-24P-4X, CBS350-24FP-4X, CBS350-48T-4X, CBS350-48P-4X, CBS350-48FP-4X

32° to 122° F (0° to 50° C)

CBS350-8S-E-2G, CBS350-24S-4G, CBS350-24MGP-4X, CBS350-12NP-4X, CBS350-24NGP-4X, CBS350-48NGP-4X, CBS350-8XT, CBS350-12XS, CBS350-12XT, CBS350-16XTS, CBS350-24XS, CBS350-24XT, CBS350-24XTS, CBS350-48XT-4X

32° to 113° F (0° to 45° C)

CBS350-8MGP-2X, CBS350-8MP-2X

Storage temperature -13° to 158° F (-25° to 70° C)

Operating humidity 10% to 90%, relative, noncondensing

Storage humidity 10% to 90%, relative, noncondensing

Acoustic noise and Mean Time Between Failure (MTBF)

Model Name	FAN (Number)	Acoustic Noise	MTBF at 25° C (hours)
CBS350-8T-E-2G	Fanless	N/A	2,171,669
CBS350-8P-2G	Fanless	N/A	1,786,412
CBS350-8P-E-2G	Fanless	N/A	1,706,649
CBS350-8FP-2G	Fanless	N/A	1,786,412
CBS350-8FP-E-2G	Fanless	N/A	1,706,649
CBS350-8S-E-2G	Fanless	N/A	2,242,229
CBS350-16T-2G	Fanless	N/A	2,165,105
CBS350-16T-E-2G	Fanless	N/A	2,165,105
CBS350-16P-2G	Fanless	N/A	706,983
CBS350-16P-E-2G	Fanless	N/A	706,983
CBS350-16FP-2G	Fanless	N/A	706,983
CBS350-24T-4G	Fanless	N/A	2,026,793
CBS350-24P-4G	Fanless	N/A	698,220
CBS350-24FP-4G	1	25° C: 34.8 dBA	698,220
CBS350-24S-4G	Fanless	N/A	258,544
CBS350-48T-4G	1	25° C: 29.7 dBA	1,452,667



Feature	Description			
	CBS350-48P-4G	1	25° C: 37.3 dBA	856,329
	CBS350-48FP-4G	1	25° C:48.7 dBA	856,301
	CBS350-24T-4X	Fanless	N/A	2,026,793
	CBS350-24P-4X	Fanless	N/A	698,220
	CBS350-24FP-4X	1	25° C: 34.8 dBA	698,220
	CBS350-48T-4X	1	25° C: 29.7 dBA	1,452,667
	CBS350-48P-4X	1	25° C:37.3 dBA	856,329
	CBS350-48FP-4X	1	25° C:48.7 dBA	856,301
	CBS350-8MGP-2X	Fanless	N/A	1,524,625
	CBS350-8MP-2X	1	25° C: 41.3 dB	1,237,940
	CBS350-24MGP-4X	3	25° C: 40.5 dB	1,033,942
	CBS350-12NP-4X	3	25° C: 39.4 dB	553,218
	CBS350-24NGP-4X	3	25° C: 40.4 dB	562,415
	CBS350-48NGP-4X	4	25° C: 39.6 dB	316,088
	CBS350-8XT	2	25° C: 40.8 dB	1,418,411
	CBS350-12XS	4	25° C: 45.8dB	1,385,554
	CBS350-12XT	2	25° C: 40.5 dB	633,324
	CBS350-16XTS	3	25° C: 39.1dB	798,504
	CBS350-24XS	4	25° C: 43.0 dB	1,356,179
	CBS350-24XT	4	25° C: 41.2 dB	556,642
	CBS350-24XTS	3	25° C: 43.3dB	1,392,246
	CBS350-48XT-4X	5	25° C: 47.9 dB	287,135

Warranty

Limited lifetime with next business day advance replacement (where available)



Feature**Description****Package Contents**

- Cisco Business 350 Series Managed Switch
- Power Cord (Power adapter for select 8-port and 16-port SKUs)
- Mounting Kit
- Quick Start Guide

Minimum Requirements

- Web browser: Chrome, Firefox, Edge, Safari
- Category 5e Ethernet network cable
- TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed

Ordering information

Table 2 provides ordering information.

Table 2. Cisco Business 350 Series Switches Ordering Information

Model Name	Order Product ID Number	Description
Gigabit Ethernet		
CBS350-8T-E-2G	CBS350-8T-E-2G-xx	<ul style="list-style-type: none"> • 8 10/100/1000 ports • 2 Gigabit copper/SFP combo ports • Rack-mountable
CBS350-8P-2G	CBS350-8P-2G-xx	<ul style="list-style-type: none"> • 8 10/100/1000 PoE+ ports with 67W power budget • 2 Gigabit copper/SFP combo ports • Rack-mountable
CBS350-8P-E-2G	CBS350-8P-E-2G-xx	<ul style="list-style-type: none"> • 8 10/100/1000 PoE+ ports with 60W power budget • 2 Gigabit copper/SFP combo ports • Rack-mountable
CBS350-8FP-2G	CBS350-8FP-2G-xx	<ul style="list-style-type: none"> • 8 10/100/1000 PoE+ ports with 120W power budget • 2 Gigabit copper/SFP combo ports • Rack-mountable
CBS350-8FP-E-2G	CBS350-8FP-E-2G-xx	<ul style="list-style-type: none"> • 8 10/100/1000 PoE+ ports with 120W power budget • 2 Gigabit copper/SFP combo ports • Rack-mountable
CBS350-8S-E-2G	CBS350-8S-E-2G-xx	<ul style="list-style-type: none"> • 8 Gigabit SFP • 2 Gigabit copper/SFP combo ports • Rack-mountable
CBS350-16T-2G	CBS350-16T-2G-xx	<ul style="list-style-type: none"> • 16 10/100/1000 ports • 2 Gigabit SFP • Rack-mountable



Model Name	Order Product ID Number	Description
CBS350-16T-E-2G	CBS350-16T-E-2G-xx	<ul style="list-style-type: none"> • 16 10/100/1000 ports • 2 Gigabit SFP • Rack-mountable
CBS350-16P-2G	CBS350-16P-2G-xx	<ul style="list-style-type: none"> • 16 10/100/1000 PoE+ ports with 120W power budget • 2 Gigabit SFP • Rack-mountable
CBS350-16P-E-2G	CBS350-16P-E-2G-xx	<ul style="list-style-type: none"> • 16 10/100/1000 PoE+ ports with 120W power budget • 2 Gigabit SFP • Rack-mountable
CBS350-16FP-2G	CBS350-16FP-2G-xx	<ul style="list-style-type: none"> • 16 10/100/1000 PoE+ ports with 240W power budget • 2 Gigabit SFP • Rack-mountable
CBS350-24T-4G	CBS350-24T-4G-xx	<ul style="list-style-type: none"> • 24 10/100/1000 ports • 4 Gigabit SFP • Rack-mountable
CBS350-24P-4G	CBS350-24P-4G-xx	<ul style="list-style-type: none"> • 24 10/100/1000 PoE+ ports with 195W power budget • 4 Gigabit SFP • Rack-mountable
CBS350-24FP-4G	CBS350-24FP-4G-xx	<ul style="list-style-type: none"> • 24 10/100/1000 PoE+ ports with 370W power budget • 4 Gigabit SFP • Rack-mountable
CBS350-24S-4G	CBS350-24S-4G-xx	<ul style="list-style-type: none"> • 24 Gigabit SFP • 2 Gigabit copper/SFP combo + 2 Gigabit SFP • Rack-mountable
CBS350-48T-4G	CBS350-48T-4G-xx	<ul style="list-style-type: none"> • 48 10/100/1000 ports • 4 Gigabit SFP • Rack-mountable
CBS350-48P-4G	CBS350-48P-4G-xx	<ul style="list-style-type: none"> • 48 10/100/1000 PoE+ ports with 370W power budget • 4 Gigabit SFP • Rack-mountable
CBS350-48FP-4G	CBS350-48FP-4G-xx	<ul style="list-style-type: none"> • 48 10/100/1000 PoE+ ports with 740W power budget • 4 Gigabit SFP • Rack-mountable



Model Name	Order Product ID Number	Description
Gigabit Ethernet with 10G Uplinks		
CBS350-24T-4X	CBS350-24T-4X-xx	<ul style="list-style-type: none"> • 24 10/100/1000 ports • 4 10 Gigabit SFP+ • Rack-mountable
CBS350-24P-4X	CBS350-24P-4X-xx	<ul style="list-style-type: none"> • 24 10/100/1000 PoE+ ports with 195W power budget • 4 10 Gigabit SFP+ • Rack-mountable
CBS350-24FP-4X	CBS350-24FP-4X-xx	<ul style="list-style-type: none"> • 24 10/100/1000 PoE+ ports with 370W power budget • 4 10 Gigabit SFP+ • Rack-mountable
CBS350-48T-4X	CBS350-48T-4X-xx	<ul style="list-style-type: none"> • 48 10/100/1000 ports • 4 10 Gigabit SFP+ • Rack-mountable
CBS350-48P-4X	CBS350-48P-4X-xx	<ul style="list-style-type: none"> • 48 10/100/1000 PoE+ ports with 370W power budget • 4 10 Gigabit SFP+ • Rack-mountable
CBS350-48FP-4X	CBS350-48FP-4X-xx	<ul style="list-style-type: none"> • 48 10/100/1000 PoE+ ports with 740W power budget • 4 10 Gigabit SFP+ • Rack-mountable
Multi-Gigabit Ethernet		
CBS350-8MGP-2X	CBS350-8MGP-2X-xx	<ul style="list-style-type: none"> • 6 x 10/100/1000 PoE+ ports • 2 x 2.5G PoE+ ports • 2 x Multigigabit/SFP+ combo • 124W PoE power budget • Rack-mountable
CBS350-8MP-2X	CBS350-8MP-2X-xx	<ul style="list-style-type: none"> • 8 x 100M/1G/2.5G PoE+ ports (4 support 60W PoE) • 2 x 10G ports (2 x 10G copper/SFP+ combo) • 240W PoE power budget • Rack-mountable
CBS350-24MGP-4X	CBS350-24MGP-4X-xx	<ul style="list-style-type: none"> • 20 x 10/100/1000 PoE+ ports • 4 x 100M/1G/2.5G PoE+ ports (4 support 60W PoE) • 4 x 10G ports (2 x 10G copper/SFP+ combo + 2 x SFP+) • 375W PoE power budget • Rack-mountable
CBS350-12NP-4X	CBS350-12NP-4X-xx	<ul style="list-style-type: none"> • 12 x 100M/1G/2.5G/5G PoE+ ports (8 support 60W PoE) • 4 x 10G ports (2 x 10G copper/SFP+ combo + 2 x SFP+) • 375W PoE power budget • Rack-mountable



Model Name	Order Product ID Number	Description
CBS350-24NGP-4X	CBS350-24NGP-4X-xx	<ul style="list-style-type: none"> • 16 x 10/100/1000 PoE+ ports • 8 x 100M/1G/2.5G/5G PoE+ ports (8 support 60W PoE) • 4 x 10G ports (2 x 10G copper/SFP+ combo + 2 x SFP+) • 375W PoE power budget • Rack-mountable
CBS350-48NGP-4X	CBS350-48NGP-4X-xx	<ul style="list-style-type: none"> • 40 x 10/100/1000 PoE+ ports • 8 x 100M/1G/2.5G/5G PoE+ ports (8 support 60W PoE) • 4 x 10G ports (2 x 10G copper/SFP+ combo + 2 x SFP+) • 740W PoE power budget • Rack-mountable
10 Gigabit Ethernet		
CBS350-8XT	CBS350-8XT-xx	<ul style="list-style-type: none"> • 8 x 10 Gigabit copper ports • 2 x 10 Gigabit SFP+ (combo with 2 x 10G copper ports) • 1 x GE management port • Rack-mountable
CBS350-12XS	CBS350-12XS-xx	<ul style="list-style-type: none"> • 12 x 10 Gigabit SFP+ • 2 x 10 Gigabit copper ports (combo with 2 x SFP+) • 1 x GE management port • Rack-mountable
CBS350-12XT	CBS350-12XT-xx	<ul style="list-style-type: none"> • 12 x 10 Gigabit copper ports • 2 x 10 Gigabit SFP+ (combo with 2 x 10G copper ports) • 1 x GE management port • Rack-mountable
CBS350-16XTS	CBS350-16XTS-xx	<ul style="list-style-type: none"> • 8 x 10 Gigabit copper ports • 8 x 10 Gigabit SFP+ (dedicated) • 1 x GE management port • Rack-mountable
CBS350-24XS	CBS350-24XS-xx	<ul style="list-style-type: none"> • 24 x 10 Gigabit SFP+ • 4 x 10 Gigabit copper ports (combo with 4 x SFP+) • 1 x GE management port • Rack-mountable
CBS350-24XT	CBS350-24XT-xx	<ul style="list-style-type: none"> • 24 x 10 Gigabit copper ports • 4 x 10 Gigabit SFP+ (combo with 4 x 10G copper ports) • 1 x GE management port • Rack-mountable



Model Name	Order Product ID Number	Description
CBS350-24XTS	CBS350-24XTS-xx	<ul style="list-style-type: none"> • 12 x 10 Gigabit copper ports • 12 x 10 Gigabit SFP+ (dedicated) • 1 x GE management port • Rack-mountable
CBS350-48XT-4X	CBS350-48XT-4X-xx	<ul style="list-style-type: none"> • 48 x 10 Gigabit copper ports • 4 x 10 Gigabit SFP+ (dedicated) • 1 x GE management port • Rack-mountable

The 10 Gigabit Ethernet copper and SFP+ port supports 10 GE and 1 GE speeds.

Each combo port has one copper Ethernet port and one SFP or SFP+ slot, with one port active at a time.

The -xx in the Product Order ID Number is a country-/region-specific suffix. For example, the complete PID of CBS350-24P-4G for the United States is CBS350-24P-4G-NA. Please refer to Table 3 for the correct suffix to use for your country/region.

Cisco Business products are only available through distributors and not available to order directly from Cisco. Partners should order these products from their preferred distributors. End users should order from their preferred partners.

Accessories like power supply and mounting kit are included with the device and not available to order separately as spare parts. Replacement of malfunctioning accessories can be processed under the warranty with a support case.

Table 3. Country/Region Suffix for Product Order ID Number

Suffix	Country/Region
-NA	USA, Canada, Mexico, Colombia, Chile and rest of Latin America
-BR	Brazil
-AR	Argentina
-EU	European Economic Area, Switzerland, Turkey, Russia, Ukraine, Israel, United Arab Emirates, Egypt, South Africa, Indonesia, Philippines, Vietnam, Thailand, Korea
-UK	United Kingdom, Saudi Arabia, Qatar, Kuwait, Singapore, Hong Kong, Malaysia
-AU	Australia, New Zealand
-CN	China
-IN	India*
-JP	Japan
-KR	Korea
-TW	Taiwan



The products may also be available in a country/region not listed in Table 3. Not all product models are offered in all countries/regions. For Korea, either -EU or -KR suffix will be used depending on product models. Please consult with your local Cisco sales representative or Cisco partners for more details.

*CBS350 have been tested as L2 LAN Switch variant for India TEC and will be sold as L2 LAN Switch in India.

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Product sustainability

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

Table 4. Cisco environmental sustainability information

Sustainability Topic		Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries and packaging	WEEE Compliance
	Information on product takeback and reuse program	Cisco Takeback and Reuse Program
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com
Material	Product packaging weight and materials	Contact: environment@cisco.com

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For more information

To find out more about the Cisco Business 350 Series switches, visit

<https://www.cisco.com/c/en/us/products/switches/business-350-series-managed-switches/index.html>.

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