ZyXEL

ZyXEL One Network is supported

Agile L2 Access Switch Solution for
Converged Data, Video and Voice Networking

- **Fully managed Layer 2 switching solution**
- **High power budget of 375W (24HP/48HP) and 180W (8HP)**
- **L2 multicast, IGMP snooping, MVR and voice VLAN for convergence**
- **Enhanced network protection with IP source guard, DHCP snooping, ARP inspection, CPU protection**
- **L2, L3 and L4 filtering, MAC freeze, port isolation, guest VLAN for improved isolation and access control**
- **Limited life-time warranty***
- **ZyXEL One Network is supported**

  * Warranty terms, service availability, and service response times may vary from country or region to country or region.

Incorporating data, video and voice communications into a single IP network provides more effective communications, centralized IT management, and lower overall deployment cost for the entire organization.

The ZyXEL GS2210 Series are fully featured Layer 2 Gigabit access switches designed to meet these converged data, video and voice networking needs. The Series comes in 8-, 24- and 48-port models with a combination of GbE RJ-45, GbE SFP and GbE combo (RJ-45/SFP) connectivity. The PoE models comply with the IEEE 802.3af PoE and 802.3at PoE Plus standards and provide a high PoE power budget. With rich traffic shaping, network isolation, and security features, the GS2210 Series is the perfect L2 access switch solution for converged data, video and voice networking.

Benefits

Agile traffic control for converged networking applications

Designed for access layer converged data, video and voice applications, the ZyXEL GS2210 Series has a rich Layer 2 feature set that can shape the traffic for diverse VoIP, video conference, IPTV and IP surveillance deployments. Supporting L2 multicast and IGMP snooping, the GS2210 Series can support large IPTV deployments, while using bandwidth efficiently by directing multicast traffic to the subscribers only. The Multicast VLAN Registration (MVR) function ensures better network security by allowing a single multicast VLAN to be shared in the network while subscribers remain in separate VLANs. In terms of voice, the GS2210 switch uses OUI to detect compliant IP phones, and then assigns the delay-sensitive VoIP traffic to a dedicated voice VLAN with appropriate QoS prioritization. These advanced traffic control features of the GS2210 Series provide hotels, businesses and educational institutions greater agility and more effective traffic management for the converged applications of today.

ZyXEL One Network experience

Aiming for relieving our customers from repetitive operations of deploying and managing a network, ZyXEL One Network is designed to simplify the configuration, management, and troubleshooting, allowing our customers to focus on the business priorities. ZyXEL One Network presents an easy-to-use tool, ZyXEL One Network Utility (ZON Utility), to realize speed network setup. ZyXEL Smart Connect allows ZyXEL networking equipment to be aware and recognize each other and further facilitating the network maintenance via one-click remote functions such as factory reset or power cycling. ZyXEL One Network redefines the network integration across multiple networking products from switch to Wi-Fi AP and to Gateway.

ZyXELonenetwork
Redefining network integration

GS2210 Series
8/24/48-port GbE L2 Switch

| ZON Utility | Power Cycle | Reset to Default | Web GUI Redirection | Neighbor Device Discovery |

ZyXEL

GS2210 Series
8/24/48-port GbE L2 Switch

Intelligent and high-powered Power over Ethernet (PoE)

The ZyXEL GS2210 Series PoE switches feature advanced and intelligent PoE functions that simplify and lower the cost of PoE deployments such as IP telephony, WLAN and IP surveillance. This Series of L2 PoE switches support the IEEE 802.3af PoE and 802.3at PoE Plus standards, which provide up to 30 watts of power per port for advanced Powered Devices (PD) like 802.11ac wireless APs and video IP phones. The high power budget enables the GS2210 PoE switches to comfortably accommodate the PDs required in a modern network edge.

The intelligent PoE technology used in the GS2210 PoE switches can automatically detect the power requirements of each PoE device and supply only what is needed, minimizing overall power consumption while maximizing the number of devices the switch can power.

High level network and access security

Equipped with an extensive array of access security, traffic security and network storm protection features, the ZyXEL GS2210 Series offers enhanced control and isolation for improved convergence of video, voice and data. Such advanced defense mechanisms as IP source guard, DHCP snooping, and ARP inspection can detect and block intentional network attacks. The CPU protection function ensures normal switch operation by preventing malicious traffic from trying to shut down the switch. Combining multiple L2, L3 and L4 filtering mechanisms with such education- and hospitality-friendly features as MAC freeze, port isolation and guest VLAN, the ZyXEL GS2210 Series offers a high level of security, flexibility and control for diverse access layer deployments.

Future-proof connectivity for evolving networks

Full IPv6 support with features including auto-configuration, duplicate address prevention, dual-stack (IPv4 and IPv6) and neighbor discovery, the ZyXEL GS2210 Series helps businesses and organizations stay ahead and get ready for future IPv6 networks.

Model List

GS2210-48
48-port GbE L2 Switch

• 44 x GbE RJ-45 ports, 2 x GbE SFP ports,
  4 x GbE combo (RJ-45/SFP) ports

GS2210-24
24-port GbE L2 Switch

• 24 x GbE RJ-45 ports,
  4 x GbE combo (RJ-45/SFP) ports

GS2210-8
8-port GbE L2 Switch

• 8 x GbE RJ-45 ports,
  2 x GbE combo (RJ-45/SFP) ports

GS2210-48HP
48-port GbE L2 PoE Switch

• 48 x GbE PoE RJ-45 ports, 2 x GbE SFP ports,
  4 x GbE combo (RJ-45/SFP) ports

GS2210-24HP
24-port GbE L2 PoE Switch

• 24 x GbE PoE RJ-45 ports,
  4 x GbE combo (RJ-45/SFP) ports
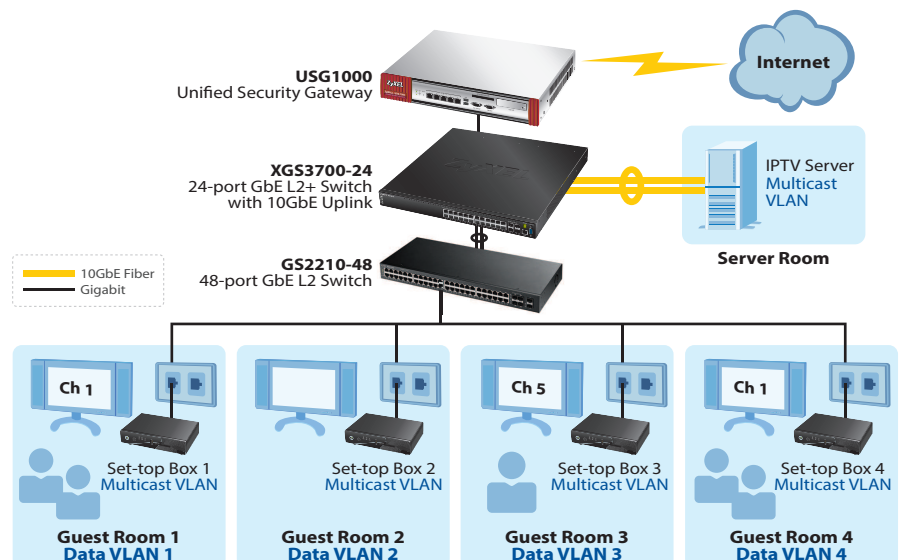
GS2210-8HP
8-port GbE L2 PoE Switch

• 8 x GbE PoE RJ-45 ports,
  2 x GbE combo (RJ-45/SFP) ports

Key Applications

IPTV deployment (hospitality)

• Each guest room can be assigned a dedicated data VLAN to provide better isolation and security to the Internet users

• The MVR function allows a single IPTV multicast VLAN to be shared with all the set-top boxes while the subscribers remain in separate data VLANs

• Enabling the IGMP snooping function allows IPTV traffic to be directed to the subscribers only, which reduces the waste of bandwidth caused by multicasting IPTV traffic to all ports

• The rich QoS feature set provides effective bandwidth prioritization and control to ensure optimal IPTV quality and prevent bandwidth abuse from P2P applications
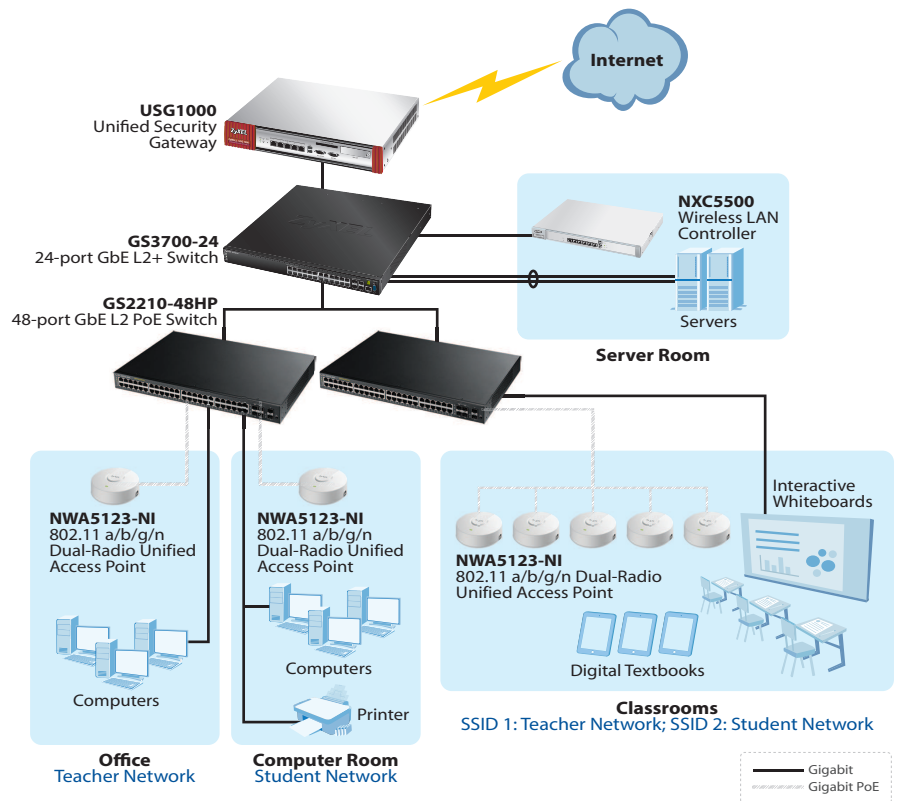
USG1000
Unified Security Gateway

Internet

XGS3700-24
24-port GbE L2+ Switch
with 10GbE Uplink

IPTV Server
Multicast VLAN

Server Room

10GbE Fiber
Gigabit

GS2210-48
48-port GbE L2 Switch

Ch 1

Set-top Box 1
Multicast VLAN

Guest Room 1
Data VLAN 1

Set-top Box 2
Multicast VLAN

Guest Room 2
Data VLAN 2

Ch 5

Set-top Box 3
Multicast VLAN

Guest Room 3
Data VLAN 3

Ch 1

Set-top Box 4
Multicast VLAN

Guest Room 4
Data VLAN 4

PoE deployment (hospitality)

- The PoE models have a high power budget for large PoE deployments with multiple APs and IP cameras

- With IEEE 802.3at PoE Plus compliance, the PoE models can supply up to 30 W per port to power high power consuming PDs like video IP phones and 802.11ac APs

- In Consumption Mode, the PoE switch automatically detects the power consumption status of each PD and supplies only the amount of power required to provide more efficient power usage

- With IGMP snooping, the GS2210 Series switch can separate surveillance traffic from data traffic, and direct surveillance footage to the NVR and/or selected monitors with high flexibility
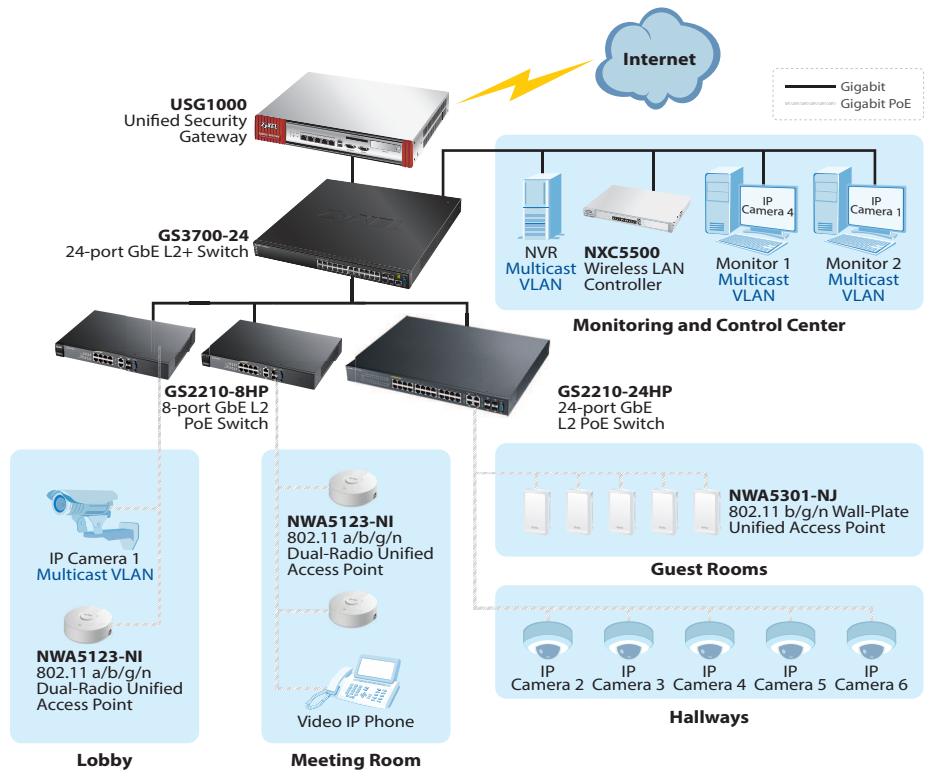
Robust network infrastructure (education)

- The high power budget (375 W) and high port density make the GS2210-48HP perfect for classroom WLAN deployments with many APs for student digital textbooks

- The GS2210 Series switch can separate the teacher's network from the student's network and grant different bandwidth privileges with port-based and ACL-based bandwidth management

- Support for 8 hardware queues per port and QoS based on 802.1p and DSCP reduces traffic congestions for latency-sensitive interactive learning applications

- Advanced defense mechanisms like IP source guard, DHCP snooping and ARP inspection safeguards the network from intentional attacks

Specifications

Model	GS2210-48	GS2210-48HP	GS2210-24	GS2210-24HP	GS2210-8	GS2210-8HP
Product name	48-port GbE L2 Switch	48-port GbE L2 PoE Switch	24-port GbE L2 Switch	24-port GbE L2 PoE Switch	8-port GbE L2 Switch	8-port GbE L2 PoE Switch
Switch class	Layer 2	Layer 2	Layer 2	Layer 2	Layer 2	Layer 2
Port Density						
Total port count	50	50	28	28	10	10
100/1000 Mbps	44	-	24	-	8	-
100/1000 Mbps PoE	-	48	-	24	-	8
Gigabit SFP	2	2	-	-	-	-
Gigabit combo (SFP/RJ-45)	4	4	4	4	2	2
Performance						
Switching capacity (Gbps)	100	100	56	56	20	20
Forwarding rate (Mpps)	74	74	41.67	41.67	15	15
Packet buffer (byte)	1.5 M	1.5 M	1.5 M	1.5 M	1.5 M	1.5 M
MAC address table	16 K	16 K	16 K	16 K	16 K	16 K
Power						
Input	100 - 240 V AC, 50/60 Hz	100 - 240 V AC, 50/60 Hz	100 - 240 V AC, 50/60 Hz	100 - 240 V AC, 50/60 Hz	100 - 240 V AC, 50/60 Hz	100 - 240 V AC, 50/60 Hz
Max. power consumption (watt)	37.8	482	25.9	454	12.1	229.1
Total PoE power budget (watt)	-	375	-	375	-	180
Physical Specifications						
Item — Dimensions (WxDxH) (mm/in.)	440 x 200 x 44.5/ 17.32 x 7.87 x 1.75	440 x 330 x 44.5/ 17.32 x 12.99 x 1.75	441 x 131 x 44/ 17.36 x 5.16 x 1.73	440 x 330 x 44.5/ 17.32 x 12.99 x 1.75	250 x 150 x 44/ 9.84 x 5.91 x 1.73	330 x 230.5 x 44.5/12.99 x 9.07 x 1.75
Item — Weight (kg/lb.)	3.04/6.7	5.13/11.3	2.62/5.78	4.79/10.56	1.425/3.14	2.703/5.96
Packing — Dimensions (WxDxH) (mm/in.)	512 x 293 x 92/ 20.15 x 11.53 x 3.62	586 x 452 x 97/ 23.06 x 17.79 x 3.82	561 x 220 x 82/ 22.08 x 8.66 x 3.23	583 x 451 x 98/ 22.95 x 17.75 x 3.86	366 x 214 x 79/ 14.41 x 8.43 x 3.11	389 x 337 x 79/ 15.31 x 13.27 x 3.11
Packing — Weight (kg/lb.)	4.10/9.06	6.25/13.81	3.41/7.54	5.90/13.03	2.27/5	3.65/8.05
Included accessories	• Power cord • Console cable • Rack mounting kit				• Power cord • Wall mount kit • Rack mounting kit	• Power cord • Rack mounting kit
Green Feature						
Fanless	-	-	Yes	-	Yes	-
Environmental Specifications						
Operating — Temperature	0°C to 50°C/ 32°F to 122°F	0°C to 50°C/ 32°F to 122°F	0°C to 50°C/ 32°F to 122°F	0°C to 50°C/ 32°F to 122°F	0°C to 50°C/ 32°F to 122°F	0°C to 50°C/ 32°F to 122°F
Operating — Humidity	10% to 95% (non-condensing)	10% to 95% (non-condensing)	10% to 95% (non-condensing)	10% to 95% (non-condensing)	10% to 95% (non-condensing)	10% to 95% (non-condensing)
Storage — Temperature	-40°C to 70°C/ -40°F to 158°F	-40°C to 70°C/ -40°F to 158°F	-40°C to 70°C/ -40°F to 158°F	-40°C to 70°C/ -40°F to 158°F	-40°C to 70°C/ -40°F to 158°F	-40°C to 70°C/ -40°F to 158°F
Storage — Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 95% (non-condensing)	10% to 95% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)
MTBF (hr)	255,579.8	120,760.8	211,623.0	133,062.5	1,382,029.73	1,155,719.14
Heat dissipation (BTU/hr)	128.90	1,643.62	88.32	1,548.14	41.26	781.23
Acoustic noise (dBA)	40.9	43.6	0	59.6	0	53.2

Features

Standard Compliance
- IEEE 802.3 10BASE-T Ethernet
- IEEE 802.3u 100BASE-TX Ethernet
- IEEE 802.3ab 1000BASE-T Ethernet
- IEEE 802.3z 1000BASE-X
- IEEE 802.3af PoE
- IEEE 802.3at PoE plus
- IEEE 802.3az EEE
- IEEE 802.3x flow control
- IEEE 802.3ad LACP aggregation
- IEEE 802.1AB LLDP/LLDP-MED
- IEEE 802.1D Spanning Tree Protocol (STP)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- IEEE 802.1Q VLAN tagging
- IEEE 802.1p Class of Service (CoS) prioritization
- IEEE 802.1X port authentication

Resilience and Availability
- IEEE 802.1D Spanning Tree Protocol (STP)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- IEEE 802.3ad LACP
- Loop guard
- New Root guard
- New BPDU guard
- ErrDisable recovery
- MRSTP (ZyXEL Proprietary)
- Dual configuration files
- Dual images

Traffic Control
- 802.1Q static VLANs/dynamic VLANs: 1 K/4 K
- Port-based VLAN
- Protocol-based VLAN
- IP subnet-based VLAN
- MAC-based VLAN
- Private VLAN
- Voice VLAN
- VLAN ingress filtering
- LACP algorithm of source/destination IP or MAC
- GVRP
- L2PT

Security
- 802.1X
- Port security
- Layer 2 MAC filtering
- Layer 3 IP filtering
- Layer 4 TCP/UDP socket filtering
- Static MAC forwarding
- Multiple RADIUS servers
- Multiple TACACS+ servers
- 802.1x VLAN and 802.1p assignment by RADIUS
- Login authentication by RADIUS
- Login authentication by TACACS+
- TACACS+ accounting
- Authorization on RADIUS
- Authorization on TACACS+
- SSH v1/v2
- SSL
- Intrusion lock
- MAC freeze
- DHCP snooping
- ARP inspection
- Static IP-MAC-Port binding
- Policy-based security filtering
- Port isolation
- New IP source guard (IPv4/IPv6)
- MAC search
- Guest VLAN
- ACL packet filtering (IPv4/IPv6)
- CPU protection
- Interface related trap enable/disable (by port)
- New MAC-based authentication per VLAN

Quality of Service (QoS)
- No. of hardware queues per port: 8
- Storm control: Broadcast, multicast, unknown unicast (DLF)
- Port-based rate limiting (ingress/egress)
- Rate limiting per IP/TCP/UDP per port
- Policy-based rate limiting
- 802.3x flow control
- 802.1p Class of Service (SPQ, WFQ, WRR, hybrid-SPQ combination capable)
- DiffServ (DSCP)

Layer 2 Multicast
- L2 multicast
- IGMP snooping (v1, v2, v3)
- IGMP snooping fast leave

- Configurable IGMP snooping timer and priority
- IGMP snooping statistics
- IGMP throttling
- MVR support
- IGMP filtering
- IGMP snooping immediate leave
- IGMP proxy mode & snooping mode selection
- MLD snooping

Manageability
- SNMP v1, v2c, v3
- SNMP trap group
- RMON (1, 2, 3, 9)
- ICMP echo/echo reply
- Syslog
- IEEE 802.1AB LLDP
- IEEE 802.1AB LLDP-MED

IPv6 Management
- IPv6 over Ethernet (RFC 2464)
- IPv6 addressing architecture (RFC 4291)
- Dual stack (RFC 4213)
- ICMPv6 (RFC 4443)
- Path MTU (RFC 1981)
- Minimum path MTU size of 1280 (RFC 5095)
- Encapsulation for maximum PMTU of 1500
- Neighbor discovery (RFC 4861)
- DHCPv6 relay
- New Default DHCP client mode

Device Management
- ZyXEL iStacking™
- Web interface
- Management through Console, Telnet, SNMP
- Remote firmware upgrade by FTP/Web/TFTP
- Configuration saving and retrieving
- Multiple logins supported
- Configure clone
- Multilevel CLI
- CLI (Cisco-like)
- DHCP relay per VLAN
- DHCP client
- DHCP option 82
- Daylight saving
- NTP
- Port mirroring
- RS-232 out-of-band console port
- New Scheduled PoE

MIB

- ZyXEL new private MIB
- RFC 1066 TCP/IP-based MIB
- RFC 1213, 1157 SNMPv2c/v3 MIB
- RFC 1493 bridge MIB
- RFC 1643 Ethernet MIB
- RFC 1757 RMON group 1, 2, 3, 9
- RFC 2011, 2012, 2013 SNMPv2 MIB
- RFC 2233 SMIv2 MIB
- RFC 2358 Ethernet-like MIB
- RFC 2674 bridge MIB extension
- RFC 2819, 2925 remote management MIB
- RFC 3621 power Ethernet MIB
- RFC 4022 management information base for transmission control protocol
- RFC 4113 management information base for user datagram protocol
- RFC 4292 IP forwarding table MIB
- RFC 4293 Management Information Base (MIB) for IP

Certifications

Safety
- LVD
- BSMI

EMC
- FCC Part 15 (Class A)
- CE EMC (Class A)
- BSMI EMC

RoHS
- Level A

ZyXEL One Network

ZON Utility
- Discovery of ZyXEL switches, APs and gateways
- Centralized and batch configurations
  - IP configuration
  - IP renew
  - New Device factory reset

- Device reboot
- Device locating
- Web GUI access
- Password configuration
- One-click quick association with ZyXEL AP Configurator (ZAC)

Smart Connect
- Discover neighboring devices
- One-click remote management access to the neighboring ZyXEL devices
- Reset neighboring devices remotely to factory defaults
- Power cycle neighboring powered devices (PoE switches only)

Accessories

Transceivers (Optional)

Model	Speed	Connector	Wavelength	Max. Distance	DDMI
SFP-1000T	Gigabit	RJ-45	-	100 m (109 yd)	-
SFP-BX1310-10-D	Gigabit	LC	1310 nm (Tx); 1490 nm (Rx)	10 km (10936 yd)	Yes
SFP-BX1490-10-D	Gigabit	LC	1490 nm (Tx); 1310 nm (Rx)	10 km (10936 yd)	Yes
SFP-LHX1310-40-D	Gigabit	LC	1310 nm	40 km (43744 yd)	Yes
SFP-LX-10-D	Gigabit	LC	1310 nm	10 km (10936 yd)	Yes
SFP-SX-D	Gigabit	LC	850 nm	550 m (601 yd)	Yes
SFP-ZX-80-D	Gigabit	LC	1550 nm	80 km (87488 yd)	Yes
SFP-100BX1310-20-D	Fast Ethernet	LC	1310 nm (Tx); 1550 nm (Rx)	20 km (21872 yd)	Yes
SFP-100BX1550-20-D	Fast Ethernet	LC	1550 nm (Tx); 1310 nm (Rx)	20 km (21872 yd)	Yes
SFP-100FX-2	Fast Ethernet	LC	1310 nm	2 km (2187 yd)	-
SFP-100LX-20	Fast Ethernet	LC	1310 nm	20 km (21872 yd)	-

5-100-01015012   08/15