ZYXEL NETWORKS

XGS2220 Series

24/48-port GbE L3 Access Switch with 6 10G Uplink

The XGS2220 Series is a family of Layer 3 access Switch that consists of six models, including PoE, Non-PoE and fiber options. In addition to four 10G SFP+ uplink, all of them come with two additional 10G Multi-Gigabit (1G/2.5G/5G/10G) RJ-45 ports for more flexible connectivity. Non-PoE models XGS2220-30 and XGS2220-54 provide 24 or 48 Gigabit desktop ports for every day network access. PoE models XGS2220-30HP, XGS2220-54HP and XGS2220-54FP provide additional power over Ethernet capability and ready for WiFi 6/6E connectivity. The fiber option XGS2220-30F provides 24 SFP port, all serving the purpose to achieve business connectivity based on the flexibility of variety option of media interfaces and make itself an ideal choice for increasing business productivity. This Series is built with smart fan designed to automatically adjust speeds based on the device temperature, offering near silence while the Switch is in operation.

Benefits

Sufficient and flexible 10G support – ideal for converged networking applications

The XGS2220 provides up to six high performance 10 Gigabit connectivity including two 10G Multi-Gigabit ports and four SFP+ ports for Layer 3 access network. These 10G uplinks offer the flexibility to connect to servers, network storages, or other high-speed network devices with either 10G copper or fiber connection. In addition, the SFP+ ports can be used to connect to aggregation switches for backbone services or resiliency. This series switch has a full Layer 2 feature set that can shape the traffic for diverse VoIP, video conference, IPTV and networked AV deployments. Advanced traffic control features such as L2 multicast, IGMP snooping, Multicast VLAN Registration (MVR) provide hotels, businesses and educational institutions greater agility and more effective traffic management for the converged applications of today.

Datasheet XGS2220 Series

- Handles the latest high-bandwidth applications easily with up to six 10G connectivity
- NebulaFlex Pro allows users to switch between standalone management and intuitive Nebula cloud managed mode with 1-YEAR Pro Pack bundled
- Tailor-made Networked AV mode brings efficiency to professional AVoIP networking setups and monitoring services
- Support both PoE++ and PoE+ providing 60 W and 30 W for each port respectively with high power budget of up to 960 W
- Support Multi-Gigabit: 100M/1G/2.5G/5G/10G connections
- L2 multicast, IGMP snooping, MVR and voice VLAN for convergence

nebula

Zyxel one network
Redefining network integration

Dedicated networked AV mode

The standard switch interface includes an abundance of generic networking features to address a wide variety of applications, making it a challenge for traditional AV system integrators to setup an IP-based network that needs to run Audio and Video services. The tailor-made networked AV mode begins with an intuitive wizard that prompts for high-level requirement for network infrastructure, followed up with AI-intelligent to apply all the necessary details to setup a professional AVoIP system. With the intuitive graphical status overview of the key AV network elements such as IGMP and IP information, accompanied with condensed function menu helps you manage and monitor the system with ease.

NebulaFlex Pro – simply manage it your way!

The NebulaFlex Pro provides extended flexibility, especially for those who hesitate to step up for cloud networking. You can switch easily between Cloud Managed or Standalone Management. Included with a 1-Year Pro Pack License Bundled, the NebulaFlex Pro even allows you to change your mind at any time without additional cost while protecting previous investments on wired technology. You can have the privilege to use advanced features with professional pack for one year upon registration on Nebula; these features include advanced IGMP technology, comprehensive IPTV reports that provide insights to channel usage information, network analytics alert to optimize network performance along with more upcoming new features on NCC and its app.

High-powered Power over Ethernet (PoE)

The XGS2220 PoE Switches come with 10 ports of IEEE 802.3bt (PoE++) offering up to 60 W per port, as well as 16/40 ports of IEEE 802.3at delivering up to 30 W per port to meet a variety of WiFi 6/6E AP adoptions. Maximize the performance of the 400 W/600 W/960 W system power budget with a wide range of choices from Zyxel WiFi 6/6E AP family, as well as VoIP, surveillance and even high-density networked AV applications. Especially in consumption mode, the XGS2220 PoE switches deliver only the actual power required by the networked devices, reserves the rest and maximize its power budget. This capability increases the number of devices connected and ensures a better ROI for the business.

Resiliency and availability

XGS2220 Series allows creating a physical stack* through the last four 10-Gigabit fiber ports. Four units can be configured as one stack to provide high bandwidth on XGS2220 for more flexible management. The stacking topology under the ring architecture provides high redundancy in case one of the stacking links fail. The system can quickly recover through another stacking connection.

* In the future firmware release

Model List

XGS2220-30
24-port GbE L3 Access Switch with 6 10G Uplink

- 24 x Gigabit RJ-45 ports
- 2 x 10G Multi-Gigabit (1G/2.5G/5G/10G) RJ-45 ports
- 4 x 1G SFP/10G SFP+ slots

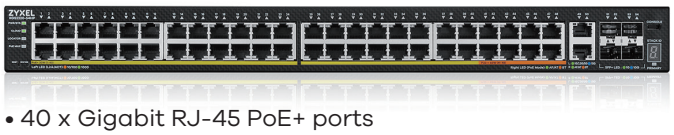
XGS2220-30F
24-port SFP L3 Access Switch with 6 10G Uplink

- 24 x Gigabit SFP ports
- 2 x 10G Multi-Gigabit (1G/2.5G/5G/10G) RJ-45 ports
- 4 x 1G SFP/10G SFP+ slots

XGS2220-54
48-port GbE L3 Access Switch with 6 10G Uplink

- 48 x Gigabit RJ-45 ports
- 2 x 10G Multi-Gigabit (1G/2.5G/5G/10G) RJ-45 ports
- 4 x 1G SFP/10G SFP+ slots

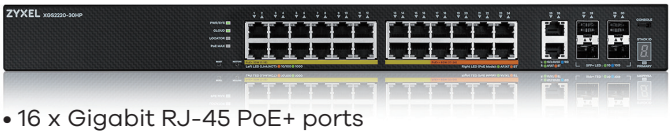
XGS2220-54HP
48-port GbE L3 Access PoE+ Switch with 6 10G Uplink (600 W)



- 40 x Gigabit RJ-45 PoE+ ports
- 8 x Gigabit RJ-45 PoE++ (60 W) ports
- 2 x 10G Multi-Gigabit (1G/2.5G/5G/10G) RJ-45 PoE++ (60 W) ports
- 4 x 1G SFP/10G SFP+ slots
- PoE power budget: 600 W

XGS2220-30HP

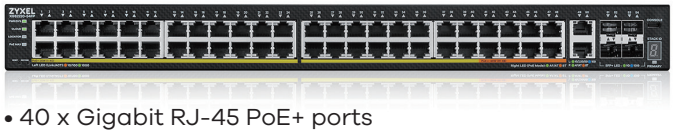
24-port GbE L3 Access PoE+ Switch with 6 10G Uplink (400 W)



- 16 x Gigabit RJ-45 PoE+ ports
- 8 x Gigabit RJ-45 PoE++ (60 W) ports
- 2 x 10G Multi-Gigabit (1G/2.5G/5G/10G) RJ-45 PoE++ (60 W) ports
- 4 x 1G SFP/10G SFP+ slots
- PoE power budget: 400 W

XGS2220-54FP

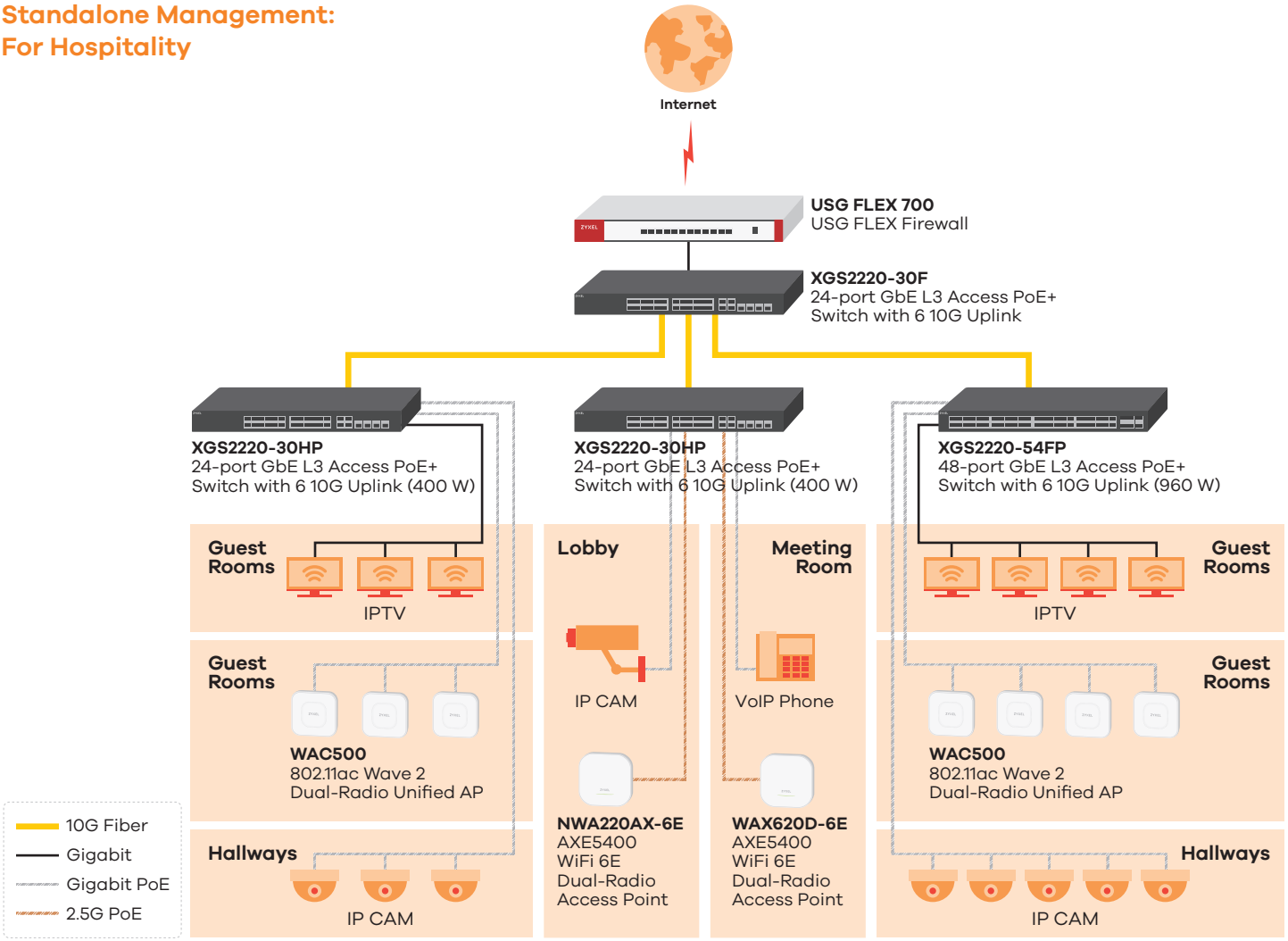
48-port GbE L3 Access PoE+ Switch with 6 10G Uplink (960 W)



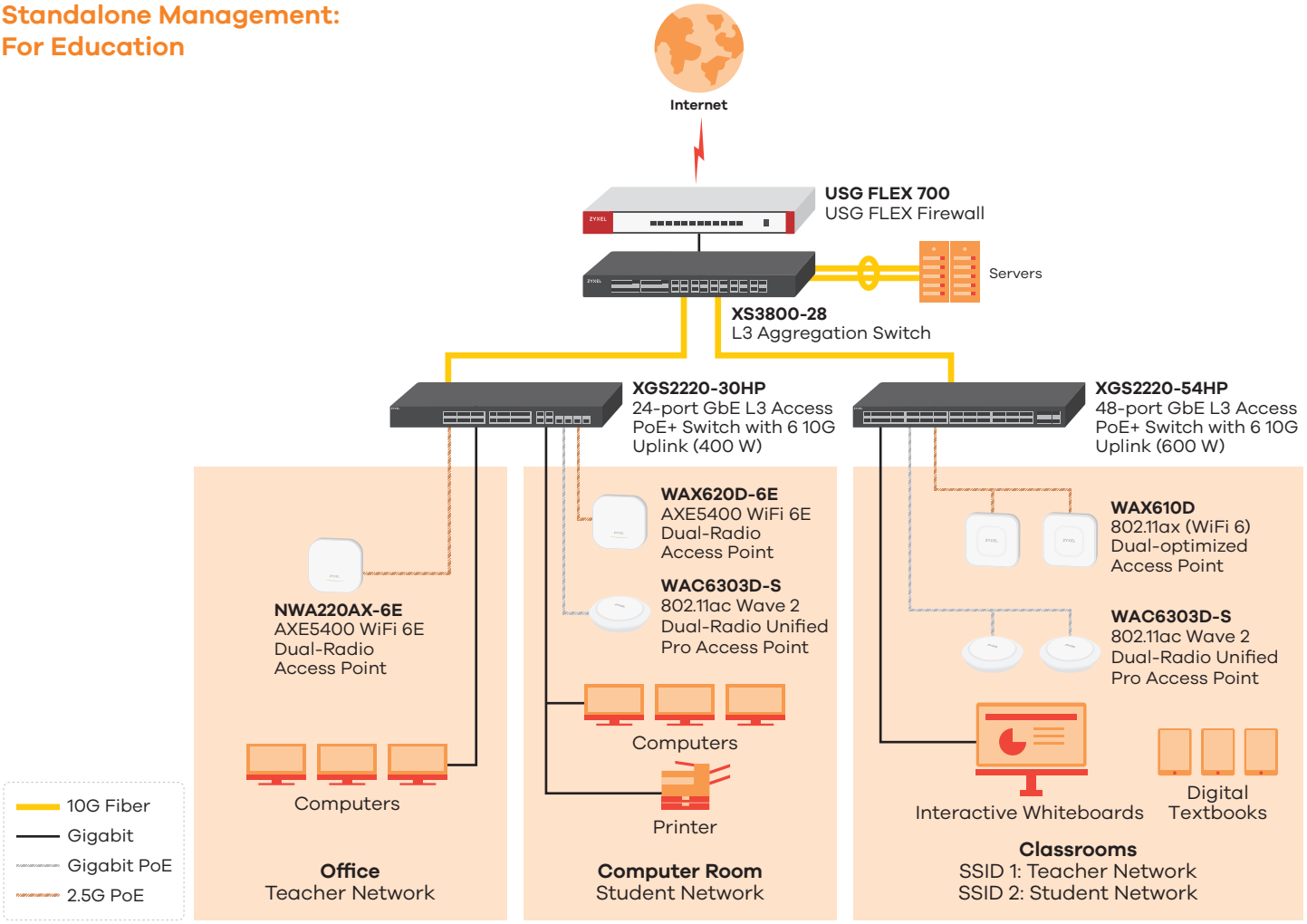
- 40 x Gigabit RJ-45 PoE+ ports
- 8 x Gigabit RJ-45 PoE++ (60 W) ports
- 2 x 10G Multi-Gigabit (1G/2.5G/5G/10G) RJ-45 PoE++ (60 W) ports
- 4 x 1G SFP/10G SFP+ slots
- PoE power budget: 960 W

Application Diagram

Standalone Management: For Hospitality

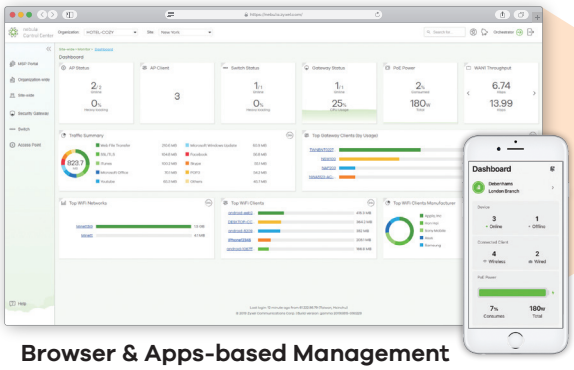


Standalone Management: For Education

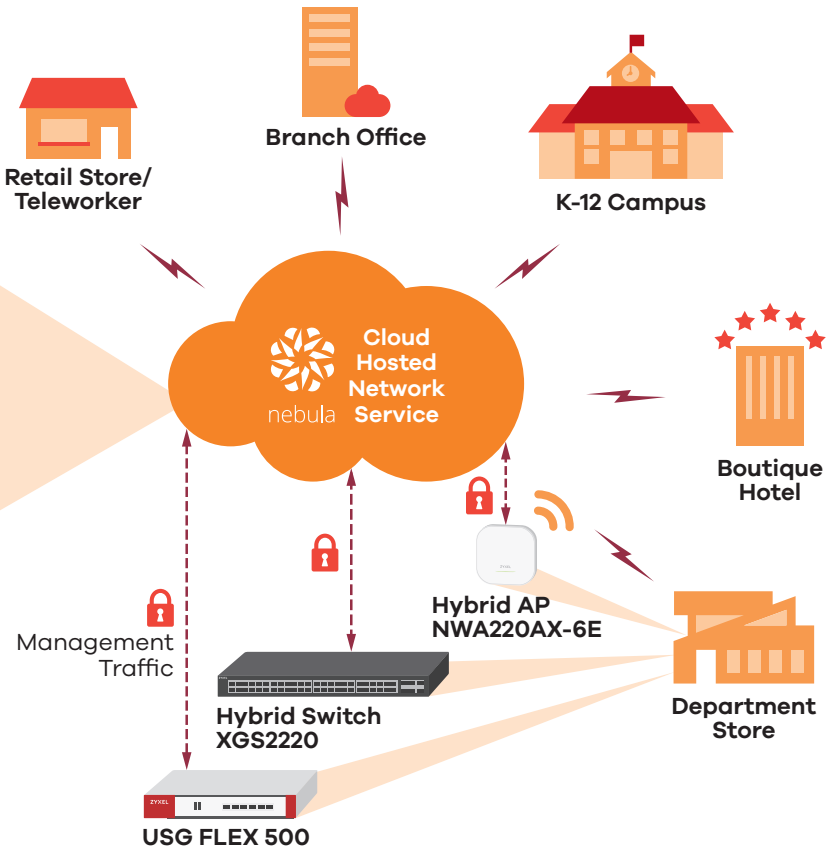


The Nebula Ecosystem

The support of Zyxel Nebula allows your business to experience a unified cloud network from Switch, AP, Firewall to 5G/LTE routers anytime with just a few simple clicks.



Browser & Apps-based Management



Specifications

Model		XGS2220-30	XGS2220-30HP	XGS2220-30F
Product name		24-port GbE L3 Access Switch with 6 10G Uplink	24-port GbE L3 Access PoE+ Switch with 6 10G Uplink (400 W)	24-port SFP L3 Access Switch with 6 10G Uplink
Switch class		Layer 3 Access	Layer 3 Access	Layer 3 Access
Port Density				
Total port count		30	30	30
100/1000 Mbps		24	24	-
100M/1G/2.5G/5G/10G Ethernet (RJ-45)		2	2	2
Gigabit SFP		-	-	24
1G SFP/10G SFP+		4	4	4
PoE				
PoE ports		-	26	-
Total PoE budget (watts)		-	400	-
IEEE 802.3at (PoE+)		-	Port 1-16	-
IEEE 802.3bt (PoE++, 60 W)		-	100/1000 Mbps: Port 17 - 24 1G/2.5G/5G/10G: Port 25 - 26	-
Performance				
Switching capacity (Gbps)		168	168	168
Forwarding rate (Mpps)		125	125	125
Packet buffer (byte)		2 M	2 M	2 M
MAC address table		32 K	32 K	32 K
Jumbo frame (byte)		9 K	9 K	9 K
L3 forwarding table		Max. 1 K IPv4 entries; Max. 512 IPv6 entries	Max. 1 K IPv4 entries; Max. 512 IPv6 entries	Max. 1 K IPv4 entries; Max. 512 IPv6 entries
Static route		64	64	64
IP interface		32	32	32
Flash/RAM		64 MB/1 GB	64 MB/1 GB	64 MB/1 GB
Power				
Input		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)		37.62	477	66
Physical Specifications				
Item	**Dimensions (WxDxH)(mm/in.)**	441 x 270 x 44/ 17.36 x 10.63 x 1.73	441 x 330 x 44/ 17.36 x 12.99 x 1.73	441 x 270 x 44/ 17.36 x 10.63 x 1.73
	Weight (kg/lb.)	3.4/7.5	4.35/9.59	3.5/7.72
Packing	**Dimensions (WxDxH)(mm/in.)**	616 x 355 x 107/ 24.25 x 13.98 x 4.21	580 x 503 x 95/ 22.83 x 19.8 x 3.74	616 x 355 x 107/ 24.25 x 13.98 x 4.21
	Weight (kg/lb.)	4.73/10.43	5.77/12.72	4.83/10.65
Included accessories		• Power cord • Rack mounting kit	• Power cord • Rack mounting kit	• Power cord • Rack mounting kit
ESD/Surge Protection				
Ethernet port surge protection		2 KV	2 KV	2 KV
Power supply surge protection	**Line-GND**	2 KV	2 KV	2 KV
	Line-Line	1 KV	1 KV	1 KV
Ethernet port ESD protection (air/contact)		8 KV/6 KV	8 KV/6 KV	8 KV/6 KV
Environmental Specifications				
Operating	**Temperature**	-20°C to 50°C/-40°F to 122°F	-20°C to 50°C/-40°F to 122°F	-20°C to 50°C/-40°F to 122°F
	Humidity	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
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)
MTBF (hr)		520,185	268,305	352,923
Heat dissipation (BTU/hr)		128.28	1626.57	225.06
Acoustic noise @ 25°C (min/max, dBA)		27.19/47.88	30.21/50.21	28.82/48.97

Model		XGS2220-54	XGS2220-54HP	XGS2220-54FP
Product name		48-port GbE L3 Access Switch with 6 10G Uplink	48-port GbE L3 Access PoE+ Switch with 6 10G Uplink (600 W)	48-port GbE L3 Access PoE+ Switch with 6 10G Uplink (960 W)
Switch class		Layer 3 Access	Layer 3 Access	Layer 3 Access
Port Density				
Total port count		54	54	54
100/1000 Mbps		48	48	48
100M/1G/2.5G/5G/10G Ethernet (RJ-45)		2	2	2
Gigabit SFP		-	-	-
1G SFP/10G SFP+		4	4	4
PoE				
PoE ports		-	50	50
Total PoE budget (watts)		-	600	960
IEEE 802.3at (PoE+)		-	Port 1-40	Port 1-40
IEEE 802.3bt (PoE++, 60 W)		-	100/1000 Mbps: Port 41 - 48 1G/2.5G/5G/10G: Port 49 - 50	100/1000 Mbps: Port 41 - 48 1G/2.5G/5G/10G: Port 49 - 50
Performance				
Switching capacity (Gbps)		261	261	261
Forwarding rate (Mpps)		161	161	161
Packet buffer (byte)		2 M	2 M	2 M
MAC address table		32 K	32 K	32 K
Jumbo frame (byte)		9 K	9 K	9 K
L3 forwarding table		Max. 1 K IPv4 entries; Max. 512 IPv6 entries	Max. 1 K IPv4 entries; Max. 512 IPv6 entries	Max. 1 K IPv4 entries; Max. 512 IPv6 entries
Static route		64	64	64
IP interface		32	32	32
Flash/RAM		64 MB/1 GB	64 MB/1 GB	64 MB/1 GB
Power				
Input		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)		57.31	754.11	1161.6
Physical Specifications				
Item	**Dimensions (WxDxH)(mm/in.)**	441 x 270 x 44/ 17.36 x 10.63 x 1.73	441 x 330 x 44/ 17.36 x 12.99 x 1.73	441 x 330 x 44/ 17.36 x 12.99 x 1.73
	Weight (kg/lb.)	3.85/8.49	5/11.02	5/11.02
Packing	**Dimensions (WxDxH)(mm/in.)**	616 x 355 x 107/ 24.25 x 13.98 x 4.21	580 x 503 x 95/ 22.83 x 19.8 x 3.74	580 x 503 x 95/ 22.83 x 19.8 x 3.74
	Weight (kg/lb.)	5.18/11.42	6.33/13.96	6.33/13.96
Included accessories		• Power cord • Rack mounting kit	• Power cord • Rack mounting kit	• Power cord • Rack mounting kit
ESD/Surge Protection				
Ethernet port surge protection		2 KV	2 KV	2 KV
Power supply surge protection	**Line-GND**	2 KV	2 KV	2 KV
	Line-Line	1 KV	1 KV	1 KV
Ethernet port ESD protection (air/contact)		8 KV/6 KV	8 KV/6 KV	8 KV/6 KV
Environmental Specifications				
Operating	**Temperature**	-20°C to 50°C/-40°F to 122°F	-20°C to 50°C/-40°F to 122°F	-20°C to 50°C/-40°F to 122°F
	Humidity	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
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)
MTBF (hr)		298,735	214,388	227,352
Heat dissipation (BTU/hr)		195.43	2571.52	3961.06
Acoustic noise @ 25°C (min/max, dBA)		27.0/49.95	25.21/50.23	47.57/67.11

Features

Standard Compliance

- IEEE 802.3z 1000BASE-X*
- IEEE 802.3ab 1000BASE-T Ethernet*
- IEEE 802.3an 10G BASE-T Ethernet*
- IEEE 802.3ae 10 Gbit/s Ethernet over fiber*
- IEEE 802.3af PoE*
- IEEE 802.3at PoE plus*
- IEEE 802.3bt (60 W) PoE over 4 pair*
- IEEE 802.3az EEE
- IEEE 802.3x flow control
- IEEE 802.1AB LLDP/LLDP-MED*
- 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)
- Static port trunking*
- IEEE 802.3ad LACP*
- Loop guard* (with broadcast packet detection mechanism)
- Root guard*
- BPDU guard*
- ErrDisable recovery
- MRSTP (Zyxel Proprietary)
- Dual configuration files
- Dual images*
- ZULD
- Flex link
- Physical stacking (In the future firmware release)

Traffic Control

- 802.1Q static VLANs*/dynamic VLANs: 4 K/4 K
- Port-based VLAN
- VLAN isolation
- Vendor ID based VLAN*
- Protocol-based VLAN
- IP subnet-based VLAN
- MAC-based VLAN
- Private VLAN
- Voice VLAN*
- Independent VLAN Learning (IVL)
- VLAN Translation
- VLAN trunking
- VLAN mapping
- IEEE 802.1AD VLAN stacking (QinQ)
- VLAN ingress filtering
- LACP algorithm of source/ destination IP or MAC*
- GVRP
- L2PT

Security

- 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
- RADIUS accounting
- Authorization on RADIUS
- Compound authentication
- Authorization on TACACS+
- SSH v2*
- SSL
- MAC freeze
- IP source guard (IPv4*/IPv6)
- DHCP snooping
- DHCP Server Guard
- ARP inspection
- ARP freeze
- Anti-ARP scan
- Static IP-MAC-Port binding
- Policy-based security filtering
- Port isolation*
- MAC search*
- Guest VLAN*
- ACL packet filtering* (IPv4/IPv6)
- CPU protection
- Interface related trap enable/disable (by port)
- MAC-based authentication per VLAN
- BPDU transparency
- PPPoE relay agent/option82
- WoL/WoL Relay

Quality of Service (QoS)

- No. of hardware queues per port (Standalone/stacking): 8*/6
- Storm control and event log: 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)
- Storm Control: Broadcast/Unknown Multicast/Unknown Unicast (DLF)

Layer 2 Multicast

- L2 multicast*
- IGMP snooping (v1, v2, v3)*
- IGMP snooping fast leave*
- IGMP snooping immediate leave*
- Configurable IGMP snooping timer and priority*
- IGMP snooping statistics*
- IGMP throttling*
- IGMP filtering*
- IGMP proxy mode & snooping mode selection*
- Multicast load balance over trunking port
- Static mulitcast
- MVR support
- MLD snooping (MLD v1/v2)

Routing

- Static route
- IP port moving
- Assigned DHCP relay with specific source IP interface

Manageability

- SNMP* v1, v2c, v3
- SNMP trap group
- RMON (1, 2, 3, 9)
- ICMP echo/echo reply
- Syslog*
- IEEE 802.1AB LLDP*/LLDP-MED*
- Custom default
- Syslog (IPv4/IPv6)
- Display port utilization*
- Support NebulaFlex Pro for Cloud Management

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 snooping
- IPv6 binding- static/dynamic
- Extend Radius server
- DHCPv6 relay
- Default DHCP client mode*

Device Management

- Standalone management by Web interface
- Cloud management by Nebula Control Center*
- Networked AV mode by Web Interface
- Intuitive Cloud connection status
- Zyxel iStacking™
- Management through Console, Telnet, SNMP
- Remote firmware upgrade by FTP/ Web/TFTP
- Configuration saving and retrieving*
- Multiple logins supported
- Configure clone*
- Custom default Configuration
- Multilevel CLI*
- CLI (Cisco-like)
- DHCP server
- DHCP relay per VLAN
- DHCP client IPv4*/IPv6
- DHCP client option 60
- DHCP option 82
- Daylight saving*
- DHCP relay MAC proxy
- Auto PD Recovery
- NTP supports IPv4/IPv6
- Port mirroring*
- Policy-based mirroring
- Mirror CPU
- VLAN-based mirroring
- USB-C out-of-band console port
- Scheduled PoE*
- PoE default consumption mode*
- Auto PD Recovery*
- Continuous PoE
- LLDP power via MDI
- sFlow
- Fiber Module Rescue

MIB

- Zyxel new private MIB
- Zyxel common MIB
- Zyxel ES-Common MIB
- RFC 1066 TCP/IP-based MIB
- RFC 1213, 1157 SNMPv2c/v3 MIB
- RFC 1493, 4188 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
- Cable diagnostic MIB

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
  - 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)

Warranty

- Limited life-time warranty**

* Cloud and standalone modes supported features.

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

Accessories

Transceivers (Optional)

Model	Speed	Connector	Wavelength	Max. Distance	DDMI
SFP10G-SR	10-Gigabit SFP+	Duplex LC	850 nm	0.3 km (984 ft)	Yes
SFP10G-SR-E	10-Gigabit SFP+	Duplex LC	850 nm	0.3 km (984 ft)	Yes
SFP10G-LR	10-Gigabit SFP+	Duplex LC	1310 nm	10 km (10936 yd)	Yes
SFP10G-LR-E	10-Gigabit SFP+	Duplex LC	1310 nm	10 km (10936 yd)	Yes
SFP-1000T	Gigabit	RJ-45	-	0.1 km (109 yd)	-
SFP-SX-D	Gigabit	Duplex LC	850 nm	0.55 km (601 yd)	Yes
SFP-SX-D-E	Gigabit	Duplex LC	850 nm	0.55 km (601 yd)	Yes
SFP-LX-10-D	Gigabit	Duplex LC	1310 nm	10 km (10936 yd)	Yes
SFP-LX-10-D-E	Gigabit	Duplex LC	1310 nm	10 km (10936 yd)	Yes
SFP-LHX1310-40-D	Gigabit	Duplex LC	1310 nm	40 km (43744 yd)	Yes
SFP-ZX-80-D	Gigabit	Duplex LC	1550 nm	80 km (87488 yd)	Yes
SFP-BX1310-10-D	Gigabit	Single LC	1310 nm (Tx); 1490 nm (Rx)	10 km (10936 yd)	Yes
SFP-BX1310-E	Gigabit	Single LC	1310 nm (Tx); 1550 nm (Rx)	20 km (21872 yd)	Yes
SFP-BX1490-10-D	Gigabit	Single LC	1490 nm (Tx); 1310 nm (Rx)	10 km (10936 yd)	Yes
SFP-BX1550-E	Gigabit	Single LC	1550 nm (Tx); 1310 nm (Rx)	20 km (21872 yd)	Yes

Direct Attach Cables (Optional)

Model	Connector	Cable Length
DAC10G-1M	SFP+ to SFP+	1 m (39.37 inch)
DAC10G-3M	SFP+ to SFP+	3 m (118.11 inch)

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