ZYXEL

GS2220 Series
10/28/50-port GbE L2 Managed Switch

Zyxel's new generation of Layer 2 Managed Switch GS2220 Series are fully featured Layer 2 Gigabit access switches designed to meet converged data, video and voice networking needs. This latest series' eye-catching new look comes in 10-, 28-, and 50-port models with a combination of PoE and non-PoE. On top of the fully manageable L2 features set comes with the state-of-art Zyxel NebulaFlex Pro technology for cloud manageability.

Benefits

Agile traffic control for converged networking applications

The GS2220 Series has a rich Layer 2 feature set that can shape the traffic for diverse VoIP, video conference and IPTV deployments. Advanced traffic control features of the GS2220 Series 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.

Experience whisper-silent operations

The GS2220 Series includes fanless and built-in smart fan models. The smart fan is designed to automatically adjust speeds based on the device temperature, offering near silence while the GS2220 Series is in operation. Ideal for your office environment no matter if it's on the desktop or mounted on a rack.

NebulaFlex Pro allows users to switch between standalone management and intuitive Nebula cloud managed mode with 1-Year Pro Pack bundled

L2 multicast, IGMP snooping, MVR and voice VLAN for convergence

High power budget of 375 W (28HP/52HP) and 180 W (10HP) within its compact case design simplifying rack installation

Smart fan and fanless designs offer near silent operations in both desktop and rack-mount environment

Check real-time status intuitively by cloud and PoE LED indicators

nebula

Zyxel**one** network
Redefining network integration

Power your devices with efficiency and energy-saving

The GS2220 Series PoE switches support 802.3at PoE Plus standards to offer 30-watt per port along with maximum 375-watt high-power budget to meet the needs from power-hungry devices. The default consumption mode allows delivery of only the actual power required by devices connected to the switch for better business ROI.

The PoE scheduling feature supplies power to devices only during working hours, saving energy and money while preventing improper use of business network resources. The user-friendly PoE consumption indicator located on the front panel and Web GUI provides real-time power utilization.

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 with a 1-Year Pro Pack License Bundled or Standalone Management. 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.

* Please refer to the following feature sets for the detail cloud support features.
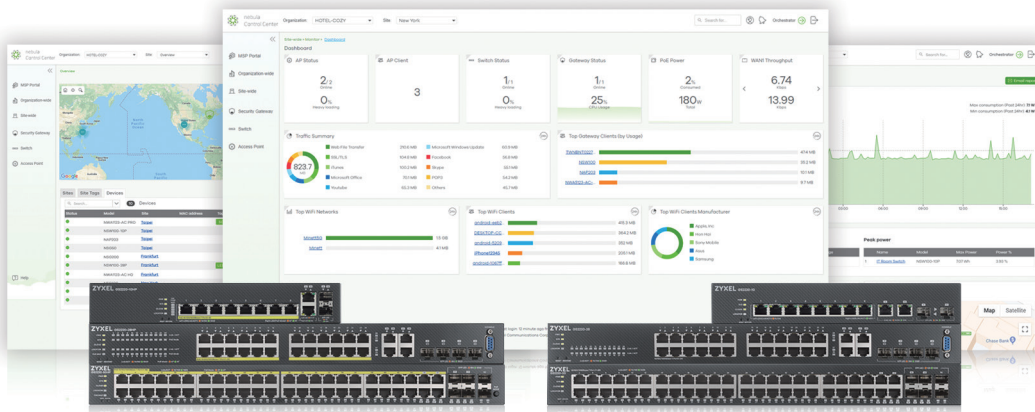
Model List

GS2220-10
8-port GbE L2 Switch with GbE Uplink

- 8 x GbE PoE RJ-45 ports
- 2 x GbE combo ports

GS2220-10HP
8-port GbE L2 PoE Switch with GbE Uplink

- 8 x GbE PoE RJ-45 ports
- 2 x GbE combo ports
- PoE power budget: 180 W

GS2220-28
24-port GbE L2 Switch with GbE Uplink

- 24 x GbE RJ-45 ports
- 4 x GbE combo ports

GS2220-28HP
24-port GbE L2 PoE Switch with GbE Uplink

- 24 x GbE PoE RJ-45 ports
- 4 x GbE combo ports
- PoE power budget: 375 W

GS2220-50
48-port GbE L2 Switch with GbE Uplink

- 44 x GbE RJ-45 ports
- 4 x GbE combo ports
- 2 x GbE SFP slots

GS2220-50HP
48-port GbE L2 PoE Switch with GbE Uplink

- 48 x GbE PoE RJ-45 ports
- 4 x GbE combo ports
- 2 x GbE SFP slots
- PoE power budget: 375 W

Application Diagram

Cloud Management

K-12 Campus

Branch Office

Retail Store/ Teleworker

Cloud Hosted Network Service nebula

Boutique Hotel

Browser & Apps-based Management

Hybrid AP NWA1123-AC HD

Management Traffic

Department Store

Hybrid Switch GS2220 Series

Nebula Security Gateway
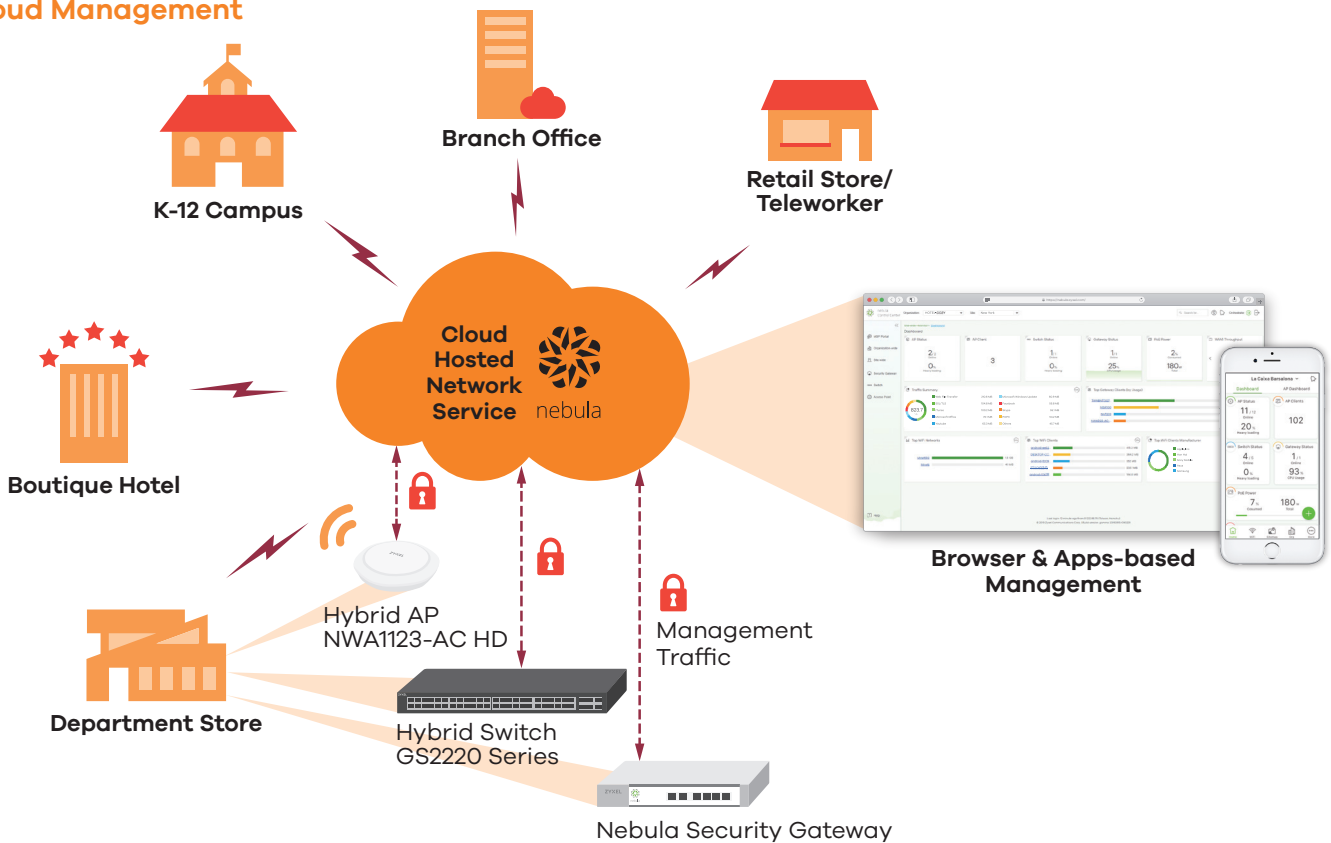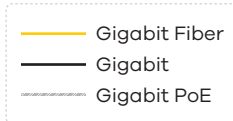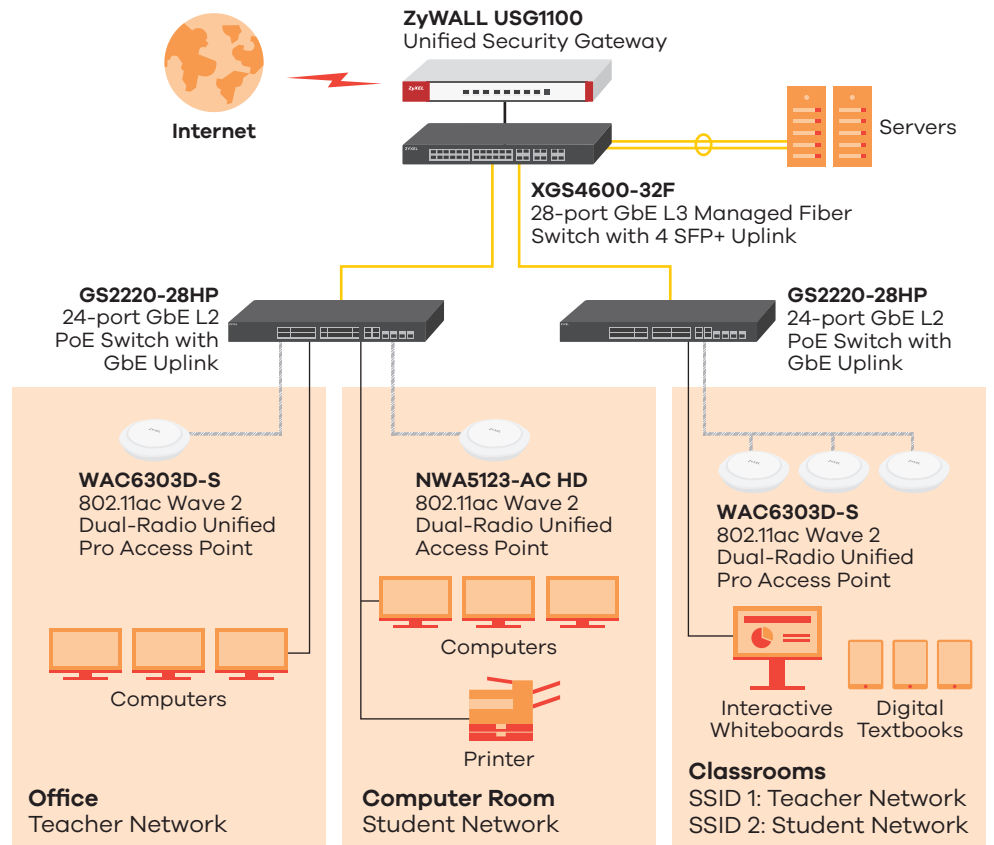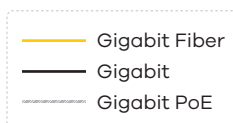
Standalone Management: For Hospitality

- MVR, IGMP snooping, IGMP fast leave
- Port isolation
- QoS by port, IP or application
- High PWR budget
- 802.3at support
- Multi-WAN load balancing
- Bandwidth management
- Promotion pages can be seen before (Walled Garden) or after (Advertisement) authentication
- Multiple captive portal for different Internet access requirements

Internet

ZyWALL USG1100
Unified Security Gateway

XGS4600-32F
28-port GbE L3
Managed Fiber Switch
with 4 SFP+ Uplink

Monitoring & Control Center

NVR
Multicast
VLAN

Monitor 1
Multicast
VLAN

Monitor 2
Multicast
VLAN

GS2220-10HP
8-port GbE L2
PoE Switch with
GbE Uplink

GS2220-28HP
24-port GbE L2
PoE Switch with
GbE Uplink

GS2220-50HP
48-port GbE L2
PoE Switch with
GbE Uplink

Guest Rooms

IPTV

IP CAM 1
Multicast VLAN

WAC6303D-S

WAC6303D-S
802.11ac Wave 2
Dual-Radio
Unified Pro
Access Point

Lobby

VoIP Phone

Meeting Room

Guest Rooms

WAC5302D-S
802.11ac Wall-Plate
Unified Access Point

Hallways

IP CAM

— Gigabit Fiber
— Gigabit
···· Gigabit PoE

Standalone Management: For Education

- Loop guard
- CPU protection
- IPv6/v4 static route
- sFlow
- IP source guard
- IPv6 ready logo phase 2 compatible

Internet

ZyWALL USG1100
Unified Security Gateway

Servers

XGS4600-32F
28-port GbE L3 Managed Fiber
Switch with 4 SFP+ Uplink

GS2220-28HP
24-port GbE L2
PoE Switch with
GbE Uplink

GS2220-28HP
24-port GbE L2
PoE Switch with
GbE Uplink

WAC6303D-S
802.11ac Wave 2
Dual-Radio Unified
Pro Access Point

NWA5123-AC HD
802.11ac Wave 2
Dual-Radio Unified
Access Point

WAC6303D-S
802.11ac Wave 2
Dual-Radio Unified
Pro Access Point

Computers

Computers

Printer

Interactive
Whiteboards

Digital
Textbooks

Office
Teacher Network

Computer Room
Student Network

Classrooms
SSID 1: Teacher Network
SSID 2: Student Network

— Gigabit Fiber
— Gigabit
···· Gigabit PoE

Specifications

Model	GS2220-10	GS2220-10HP	GS2220-28	GS2220-28HP	GS2220-50	GS2220-50HP
Product name	8-port GbE L2 Switch with GbE Uplink	8-port GbE L2 PoE Switch with GbE Uplink	24-port GbE L2 Switch with GbE Uplink	24-port GbE L2 PoE Switch with GbE Uplink	48-port GbE L2 Switch with GbE Uplink	48-port GbE L2 PoE Switch with GbE Uplink
Switch class	Layer 2	Layer 2	Layer 2	Layer 2	Layer 2	Layer 2
Port Density						
Total port count	10	10	28	28	50	50
100/1000 Mbps	8	8	24	24	44	44
Gigabit Combo (RJ-45/SFP)	2	2	4	4	4	4
Gigabit SFP	-	-	-	-	2	2
PoE						
802.3at PoE ports	-	8	-	24	-	48
Total PoE budget (watts)	-	180	-	375	-	375
Performance						
Switching capacity (Gbps)	20	20	56	56	100	100
Forwarding rate (Mpps)	15	15	42	42	74	74
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
Flash/RAM (MB)	32/256	32/256	32/256	32/256	32/256	32/256
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)	11	210.8	22.5	463.5	36.9	474.3

Physical Specifications

Item		GS2220-10	GS2220-10HP	GS2220-28	GS2220-28HP	GS2220-50	GS2220-50HP
Item	Dimensions (WxDxH) (mm/in.)	267 x 162 x 44/ 10.51 x 6.38 x 1.73	267 x 162 x 44/ 10.51 x 6.38 x 1.73	441 x 131 x 44/ 17.36 x 5.16 x 1.73	441 x 270 x 44/ 17.36 x 10.63 x 1.73	440 x 200 x 44.5/ 17.32 x 7.87 x 1.75	441 x 270 x 44/ 17.36 x 10.63 x 1.73
	Weight (kg/lb.)	1.3/2.87	1.8/3.97	2.2/4.85	3.8/8.38	2.9/6.39	4.1/9.04
Packing	Dimensions (WxDxH) (mm/in.)	375 x 235 x 61/ 14.76 x 9.25 x 2.4	375 x 235 x 61/ 14.76 x 9.25 x 2.4	558 x 214 x 79/ 21.97 x 8.43 x 3.11	616 x 355 x 107/ 24.25 x 13.98 x 4.21	496 x 289 x 90/ 19.53 x 11.38 x 3.54	616 x 355 x 107/ 24.25 x 13.98 x 4.21
	Weight (kg/lb.)	2.21/4.87	2.7/5.95	2.91/6.42	4.97/10.96	3.97/8.75	5.25/11.57
Included accessories		• Power cord • Wall-mount kit • Rack mounting kit	• Power cord • Wall-mount kit • Rack mounting kit	• Power cord • Rack mounting kit	• Power cord • Rack mounting kit	• Power cord • Rack mounting kit	• Power cord • Rack mounting kit

Green Features

	GS2220-10	GS2220-10HP	GS2220-28	GS2220-28HP	GS2220-50	GS2220-50HP
Fanless	Yes	-	Yes	-	-	-

Environmental Specifications

		Value
Operating	Temperature	0°C to 50°C/32°F to 122°F
	Humidity	10% to 95% (non-condensing)
Storage	Temperature	-40°C to 70°C/-40°F to 158°F
	Humidity	10% to 95% (non-condensing)

	GS2220-10	GS2220-10HP	GS2220-28	GS2220-28HP	GS2220-50	GS2220-50HP
MTBF (hr)	1,213,492	587,477	989,157	693,245	660,245	466,921
Heat dissipation (BTU/hr)	37.51	718.828	76.725	1,580.535	125.829	1,617.363
Acoustic noise (min/max, dBA)	0	18/41	0	27.2/49.8	23.6/47.3	26.5/49.5

Features

Standard Compliance
- 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 802.1AB LLDP/LLDP-MED
- IEEE 802.3ad LACP aggregation*
- 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*
- Root guard
- 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*
- Vendor ID based VLAN*
- 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*
- Authorization on TACACS+
- SSH v2
- SSL
- Intrusion lock
- MAC freeze
- DHCP snooping IPv4*
- DHCP snooping IPv6
- ARP inspection
- Static IP-MAC-Port binding
- Policy-based security filtering
- Port isolation
- IP source guard (IPv4/IPv6)
- MAC search
- Guest VLAN*
- ACL packet filtering (IPv4/IPv6)
- CPU protection
- Interface related trap enable disable (by port)
- MAC-based authentication per VLAN

Quality of Service (QoS)
- No. of hardware queues per port: 8*
- 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)

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
- 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 relay
- Default DHCP client mode*

Device Management
- Standalone management by Web interface
- Cloud management by Nebula Control Center*
- 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 IPv4*
- DHCP client IPv6
- DHCP option 82
- DHCP Auto
- Daylight saving*
- NTP supports IPv4/IPv6
- Port mirroring*
- RS-232 out-of-band console port
- Scheduled PoE*
- PoE default consumption mode*
- Restore to last custom default

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
- Cable diagnostic MIB

Certifications Safety

- Safety
  - LVD
  - BSMI
- EMC
  - FCC Part 15 (Class A)
  - CE EMC (Class A)
  - BSMI ENC
- 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)
- Automatic detection of the latest firmware
- Displays device serial number and hardware version
- Cloud mode on/off option for Hybrid series devices

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
SFP-1000T	Gigabit	RJ-45	-	0.1 km (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 (Rx) 1310 nm (Tx)	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	0.55 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)	-
SFP-100TX	Fast Ethernet	RJ-45	-	0.1 km (109 yd)	-

For more product information, visit us on the web at www.zyxel.com

07/02/20

Datasheet GS2220 Series