ZyXEL

ZyXEL Smart Switch Simplifies Robust Network Management

- **Smart managed switch with essential L2 features**
- **GbE RJ-45, GbE combo (RJ-45/SFP) and fixed GbE SFP connectivity**
- **Compliant with IEEE 802.3af PoE and 802.3at PoE Plus**
- **High 375-watt power budget**
- **Reliable network availability with Loop Guard, IPSG, and CPU protection**
- **RADIUS, static MAC forwarding and 802.1X authentication-enhance network security**
- **Future-proofed with IPv6 support**

Today's small and medium-sized businesses (SMBs) expect a higher level of performance from their networks—more connections to support diverse applications, fewer network disruptions, easier management and a greater degree of network security. The ZyXEL GS1920 Series of switches fulfills these expectations with support for 24/48 100/1000BASE-T PoE Plus or non-PoE copper ports, as well as non-blocking performance and high-power budget support to facilitate a greater number of network connections.

The ZyXEL GS1920 Series offers network protection features and comprehensive access management functions to establish a reliable and secure network environment. Easy deployment, smart management and solid security—the GS1920 Series is the ideal solution for SMB networks.

Benefits

Advanced standard compliance with intelligent power function support

ZyXEL GS1920 Series PoE switches support 802.3at PoE Plus standards, with a 375-watt high-power budget to meet the connectivity needs of additional powered devices like 802.11ac WLAN access points, VoIP phones and IP cameras. Not only do the GS1920 Series switch PoE models feature full PoE ports, they also employ intelligent technology. While set to Consumption Mode, switches can automatically detect the power consumption status of each powered device and supply only the amount of power required. This intelligent power allocation function minimizes wasteful overpowering of devices, thereby helping businesses save money, while enabling the PoE switch to power more devices.

Robust network availability

Network disruptions are a frequent source of headaches for small to medium-sized businesses. Whether outages are caused by internal errors or outside attack, the ZyXEL GS1920 Series protects users from network disruptions and ensures uninterrupted connectivity through several key features. Loop Guard helps networks avoid service disruptions caused by switching loops, and IP Source Guard (IPSG) shields your network from MAC spoof and ARP spoof attacks. Additionally, attacks such as BPDU, ARP and IGMP can target network facilities. However, CPU protection guarantees that a network continues to operate, even while under attack. Furthermore, dual firmware image and configuration features improve network reliability and availability. These are just some of the ways the GS1920 Series switches guarantee headache-free network connectivity for SMBs.

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GS1920 Series
24/48-port GbE Smart Managed Switch

Model List

GS1920-24
24-port GbE Smart Managed Switch

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

GS1920-24HP
24-port GbE Smart Managed PoE Switch

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

GS1920-48
48-port GbE Smart Managed Switch

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

GS1920-48HP
48-port GbE Smart Managed PoE Switch

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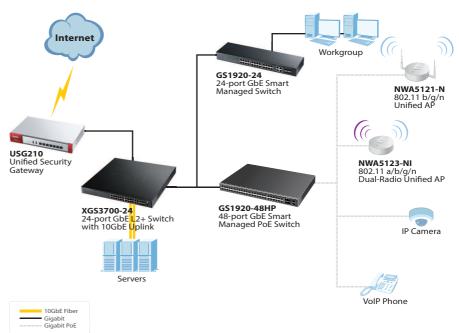• 2 x GbE SFP ports
• 4 x GbE combo (RJ-45/SFP) ports

Rigorous access protection to secure the network

The ZyXEL GS1920 Series provides efficient allocation of network resources while ensuring comprehensive access protection, along with simple and secure network control. Not only does the GS1920 Series support 802.1X authentication with RADIUS, but it can monitor, filter and police all traffic between clients within the same subnet, creating an even higher degree of security.

Simplified management and future-proof your investment

There's no need to learn a new command line interface. The ZyXEL GS1920 Series simplifies network management with a user-friendly web management interface. Additionally, full IPv6 support with features including auto configuration, duplicate address prevention, dual-stack and neighbor discovery, the ZyXEL GS1920 Series can easily migrate to the next-generation Internet Protocol in the future to ensure your investment is protected.

Application Diagram

Specifications

Model	GS1920-24	GS1920-24HP	GS1920-48	GS1920-48HP
Product name	24-port GbE Smart Managed Switch	24-port GbE Smart Managed PoE Switch	48-port GbE Smart Managed Switch	48-port GbE Smart Managed PoE Switch
Switch class	Smart Managed	Smart Managed	Smart Managed	Smart Managed
Port Density				
Total port count	28	28	50	50
100/1000 Mbps	24	-	44	-
100/1000 Mbps PoE	-	24	-	44
Gigabit SFP	-	-	2	2
Gigabit combo (SFP/RJ-45)	4	4	4	4
Performance				
Switching capacity (Gbps)	56	56	100	100
Forwarding rate (Mpps)	41.67	41.67	74.40	74.40
Packet buffer (byte)	1.5 M	1.5 M	1.5 M	1.5 M
MAC address table	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
Max. power consumption (watt)	27.2	476.7	40	503
Total PoE power budget (watt)	-	375	-	375
Physical Specifications				
Item	Dimensions (WxDxH)(mm/in.)	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	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
	Weight (kg/lb.)	2.17/4.78	4.79/10.56	3.04/6.7	5.13/11.3
Packing	Dimensions (WxDxH)(mm/in.)	561 x 220 x 82/ 22.09 x 8.66 x 3.23	583 x 451 x 98/ 22.95 x 17.76 x 3.86	512 x 293 x 92/ 20.16 x 11.54 x 3.62	586 x 452 x 97/ 23.07 x 17.8 x 3.82
	Weight (kg/lb.)	3.263/7.19	5.747/12.67	4.1/9.04	6.25/13.78
Environmental Specifications				
Operating	Temperature	0°C to 50°C/32°F to 122°F			
	Humidity	10% to 90% (non-condensing)			
Storage	Temperature	-40°C to 70°C/-40°F to 158°F			
	Humidity	10% to 95% (non-condensing)			
MTBF (hr)	211,623.0	133,062.5	255,579.8	120,761
Heat dissipation (BTU/hr)	92.75	1,625.55	136.40	1,572.01

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 (Max # Trunks/Links per Trunk): 8/8
• Loop 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 MAC/IP
• 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+
- SSL
- MAC freeze
- DHCP snooping
- ARP inspection
- Static IP-MAC-Port binding
- Policy-based security filtering
- Port isolation
- IP source guard
- MAC search
- Guest VLAN
- ACL packet filtering (IPv4/IPv6)
- CPU protection
- Interface related trap enable/disable (by port)

Quality of Service (QoS)
- No. of hardware queues per port: 8
- 802.1p queuing methods: SPQ, WRR, WFQ
- 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, SPQ/WFQ 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

Device Management
- ZyXEL iStackingTM
- Web interface
- Management through SNMP
- Remote firmware upgrade by Web
- Configuration saving and retrieving
- Configure clone
- DHCP relay per VLAN
- DHCP client
- Daylight saving
- NTP
- Port mirroring

MIB
- ZyXEL private common 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 ENC

RoHS
- Level A

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)	-