

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

- Fully managed Layer 2 switching solution
- GbE RJ-45, GbE combo (RJ-45/SFP) and fixed GbE SFP connectivity
- Complies with IEEE 802.3af PoE and 802.3at PoE Plus
- High 375 W power budget
- L2 multicast, IGMP snooping, and MVR 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
- Future-proofed with IPv6 support

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. This is why an increasing amount of businesses, educational institutions, and hotels are adopting such IP-based services as VoIP, video conferencing, IP surveillance, and IPTV. Yet such converged deployments pose many challenges to the IP network. IT staff need to ensure consistent performance for critical applications, provide sufficient isolation and network security, and shape network traffic to meet the demands of diverse deployments.

The ZyXEL GS2210 Series are fully featured Layer 2 Gigabit access switches designed to meet these converged data, video and voice networking challenges. The 48-port models have a flexible port configuration of forty-four (44) GbE RJ-45 ports, two (2) GbE SFP ports, and four (4) GbE combo (RJ-45/SFP) ports. The PoE models comply with the IEEE 802.3af PoE and 802.3at PoE Plus standards and provide a high PoE power budget of 375 watts. The complete GS2210 Series has a rich Layer 2 feature set with advanced traffic shaping, network isolation, and security features—making it 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. 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.

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 of 375 watts enables the GS2210 PoE switches to comfortably accommodate the PDs required in a modern network edge.



GS2210 Series
48-port GbE L2 Switch

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

GS2210-48HP 48-port GbE L2 PoE Switch



- 44 x GbE PoE RJ-45 ports
- 2 x GbE SFP ports
- 4 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

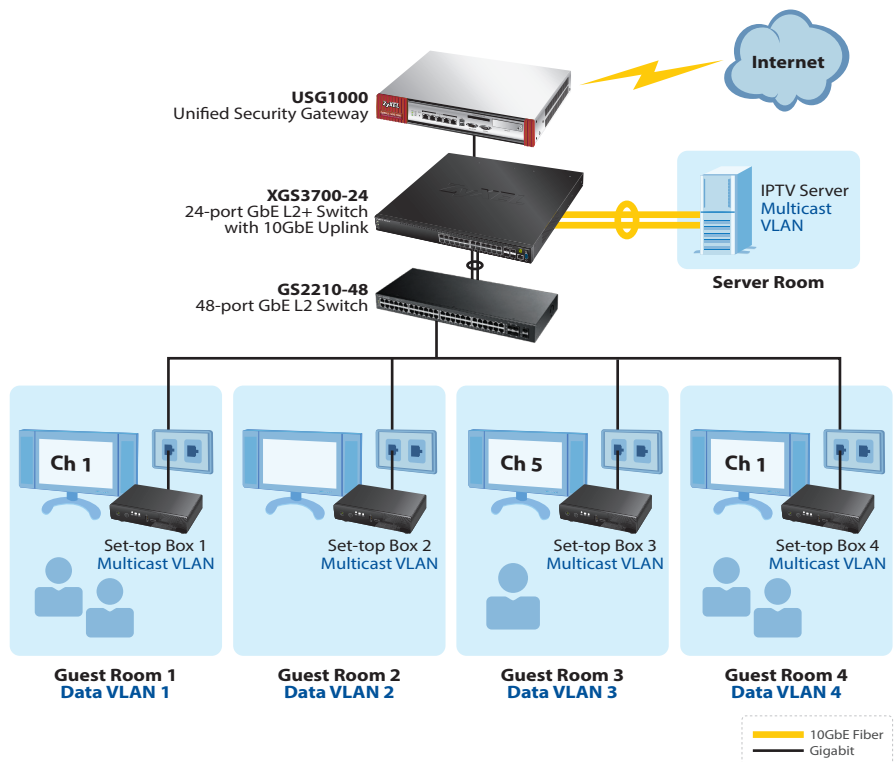
The intelligent PoE technology used in the GS2210 PoE switches enables more efficient use of power resources that delivers better ROI for businesses. Setting the PoE switch to Consumption Mode, it can automatically detect the power consumption status of each Powered Device and supply only the amount of power required. This intelligent power allocation function minimizes the waste of unused power, helps businesses save money, and enables the PoE switch to power more PDs.

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.

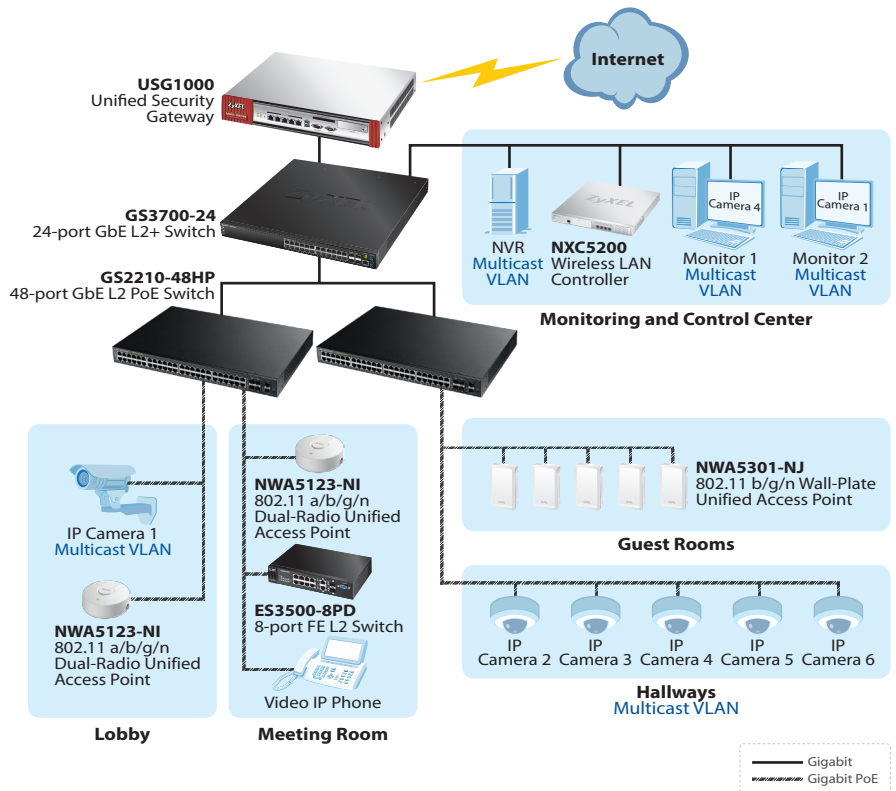
Future-proof connectivity for evolving networks

The ZyXEL GS2210 Series helps businesses and organizations stay ahead and get ready for future IPv6 networks. It supports dual stack (IPv4 and IPv6) and IPv6 host that allows businesses and organizations to deploy the GS2210 switch at the network edge today, and easily migrate to the next-generation Internet Protocol in the future. With support for IPv6 ACL packet filtering, the GS2210 L2 Gigabit switch can create secured IPv6 networks that are protected from illegal IPv6 clients. The GS2210 Series is designed with a comprehensive set of IPv6 management features that include ICMPv6, neighbor discovery and DHCPv6 relay, which facilitate the migration to next-generation networking applications without an extensive equipment upgrade.



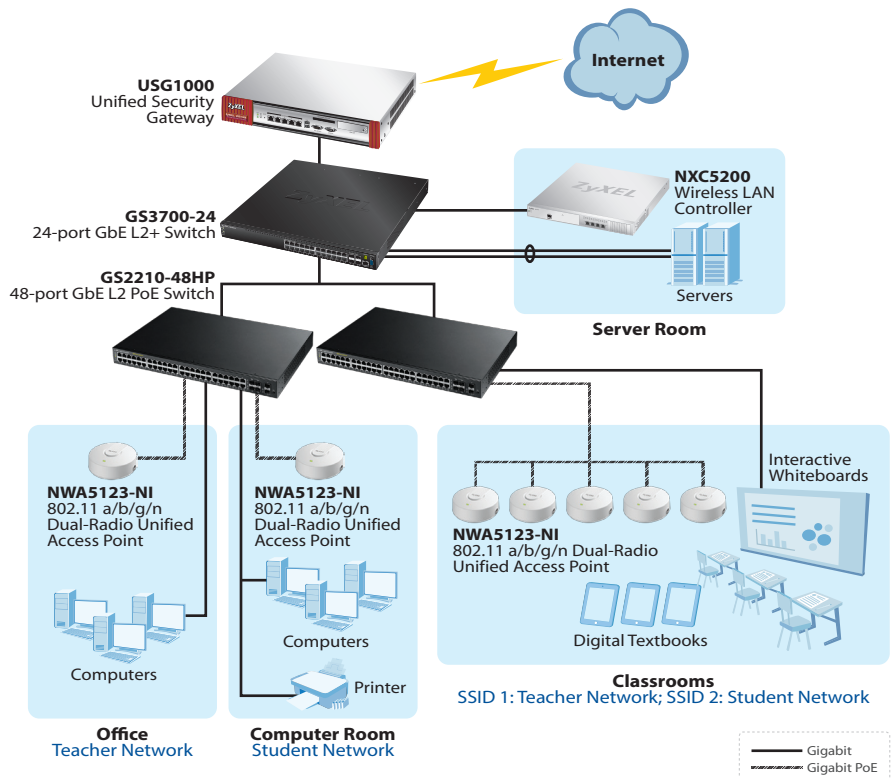
PoE deployment (hospitality)

- The PoE models have a high power budget of 375 W 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 MVR and 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	
Product name	48-port GbE L2 Switch 	48-port GbE L2 PoE Switch 	
Switch class	Layer 2	Layer 2	
Port Density			
Total port count	50	50	
100/1000 Mbps	44	-	
100/1000 Mbps PoE	-	44	
Gigabit SFP	2	2	
Gigabit combo (SFP/RJ-45)	4	4	
Performance			
Switching capacity (Gbps)	100	100	
Forwarding rate (Mpps)	74	74	
Packet buffer (byte)	1.5 M	1.5 M	
MAC address table	16 K	16 K	
Power			
Input	100 - 240 V AC, 50/60 Hz	100 - 240 V AC, 50/60 Hz	
Max. power consumption (watt)	40	461	
Total PoE power budget (watt)	-	375	
Physical Specifications			
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	
Weight (kg/lb.)	3.04/6.7	5.13/11.3	
Environmental Specifications			
Operating	Temperature	0°C to 50°C/32°F to 122°F	0°C to 50°C/32°F to 122°F
	Humidity	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
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)
MTBF (hr)	255,579.8	120,760.8	
Heat dissipation (BTU/hr)	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
- Virtual Router Redundancy Protocol (VRRP)
- 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
- VLAN ingress filtering
- LACP algorithm of source/destination IP
- GVRP
- L2PT

Security

- 802.1X
- Port security
- Layer 2 MAC filtering
- Layer 3 IP filtering

- Layer 4 TCP/UDP socket filtering
- BPDU transparency
- 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
- IP source guard
- Limit number of MAC per VLAN
- 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 method: SPQ, WRR, WFQ
- Storm control: Broadcast, multicast, unknown unicast (DLF)
- Port-based rate limiting (ingress/egress): 64/64 Kbps
- Rate limiting per IP/TCP/UDP per port
- Policy-based rate limiting
- Policy-based bandwidth control granularity
- 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

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

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 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)	-

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



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