



24-port Managed Layer 2 Gigabit Ethernet Switch with 2 SFP Slots

Benefits

Affordability and Availability

ZyXEL Dimension GS-2024, a Managed Layer 2 Wirespeed Gigabit performance switch, is a cost effective Gigabit connectivity solution for the SMB and Enterprise LAN market. With non-blocking 48 Gbps switching fabric, the GS-2024 provides 24-port 1000 Base-T Layer 2 switching capability at wire-speed over current CAT-5 cabling to the desktops, as well as two open SFP slots providing fiber connectivity for long loop reach applications.

High Performance

The highly effective switch architecture of ZyXEL GS-2024 offers 48Gbps non-blocking switch fabric, 35.7 million packet-per-second forwarding rate and wire-speed performance. Ten times bandwidth than traditional Fast Ethernet that offer a hardly wait network experience which is suitable for Today's diverse E-Business applications. These benefits allow customers to enjoy exceptional network speed with little effort.

Industry Standard-based Network Management

ZyXEL GS-2024 features a comprehensive set of network management interface, including Web-based management interface, CLI management interface (Local/Remoter) and a built-in out-of-band MGMT RJ-45 port. User can easily configure, troubleshoot and monitor switches through these methods.

The GS-2024 also supports ZyXEL iStacking™ a superior Web-based management software that allows administrators to remotely manage multiple switches located differently. Administrators can configure, monitor, troubleshoot and manage up to 24 switches at once with just one IP, regardless of the physical locations.

Enterprise-class Feature Set

With all ports support N-way auto negotiation and MDI/MDI-X crossover, the GS-2024 supports 802.1p priority queue, 802.1Q VLAN, port-based VLAN, 802.3ad port aggregation, 802.1w RSTP and rate limiting. Corporate IT users can also benefit from the QoS and Security features of ZyXEL GS-2024. For traffic management, the GS-2024 supports IEEE 802.1p that classifies and prioritizes network traffic by four independent queues. On security, the GS-2024 supports Specific MAC Addresses Forwarding Per Port, which means only designated subscribers has the privilege to pass through the specific ports. In addition, the GS-2024 also supports IEEE802.1x port authentication.



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GS-2024

Specifications

System Specifications

Standard Compliance

- IEEE 802.3 10 Base-T Ethernet
- IEEE 802.3u 100 Base-Tx Ethernet
- IEEE 802.ab 1000 Base-T Ethernet
- IEEE 802.3z
- IEEE 802.3x Flow control
- IEEE 802.1d Spanning tree protocol
- IEEE 802.1w Rapid Spanning tree protocol
- IEEE 802.1p Class of service, priority protocols
- IEEE 802.1Q VLAN tagging
- IEEE 802.1x
- IEEE 802.3ad Port aggregation

Performance

- 48Gbps non-blocking switching fabric
- 35.7 million packet-per-second forwarding rate
- Flexible design for both Gigabit copper and Gigabit fiber connectivity
- 1488000pps forwarding rate for 1000 Base-T/1000 Base-X connectivity,
- 148800pps forwarding rate for 100 Base-Tx connectivity
- Wire-speed performance

MAC and Packet Buffer

- 8K MAC entries
- 4Mbits packet buffer

Traffic Management and QoS

- IEEE 802.1p
- 4 egress queues per port for different types of traffic
- WRR (Weighted Round Robin) scheduling for different prioritization of packets
- SPQ (Strict Priority Queuing) for highest priority packets to get best service
- IEEE 802.1Q tag-based and port-based VLAN
- 256 static VLAN, up to 4K dynamic VLAN
- Support GVRP, automatic VLAN member registration
- Supports jumbo frame, up to 9K Bytes
- Supports IGMP snooping
- Congestion control on all ports
- Rate Limiting
 - Supports 14 scales for incremental rate limiting incrementally

Link Aggregation

- IEEE 802.3ad compliant
- Support LACP, static and dynamic link aggregation
- Up to 4 aggregation groups
- 8 ports per group randomly selected
- Redundancy for Fault Backup
- IEEE802.1w Rapid Spanning Tree Protocol (RSTP) provides rapid convergence of spanning tree independent of spanning-tree timer

User Security and Authentication

- MAC filtering per port secures access to each port
- Specific MAC forwarding per port: only specified MAC addresses can access the network (port lock)
- 802.1x port-based security, prevent unauthorized client access to the network
- Private VLAN provides security and isolation between ports on a switch, ensures that users can not snoop on each other's traffic

Network Administration Security

- User name/password required for web/telnet/local console administrators
- Two level security by specific SNMP read/write community

Network Management

- Supports ZyXEL iStacking™, up to 24 switches can be managed by one IP
- Web-based management
- Telnet CLI
- SNMP v2c
- RS-232c Local console
- IP management: static IP or DHCP client
- RMON four RMON groups 1, 2, 3, 9 (history, statistics, alarms, and events) for enhanced traffic management, monitoring, and analysis
- Port mirroring: supports
 - Source/Destination/Both port mirroring

Hardware Specifications

Interface connections

- 24 100/1000 Base-T, auto-negotiation and cross-over
- 2 shared SFP open slots
- 1 console port, D-Sub 9 pin Female (DCE)
- 1 out-of-band management port, RJ-45

Physical Specifications

- Dimensions:
 - 440 (L) x 300 (D) x 445 (H) mm
- Weight: 4 Kg

Power Requirement

- Input voltage of AC: 100-240VAC, 50/60Hz
- Max power rating of AC: 50 Watt

Environmental Specifications

- Operating temperature: 0°C ~ 45°C
- Storage temperature: -25°C ~ 70°C
- Operating humidity: 10% ~ 90%, non-condensing

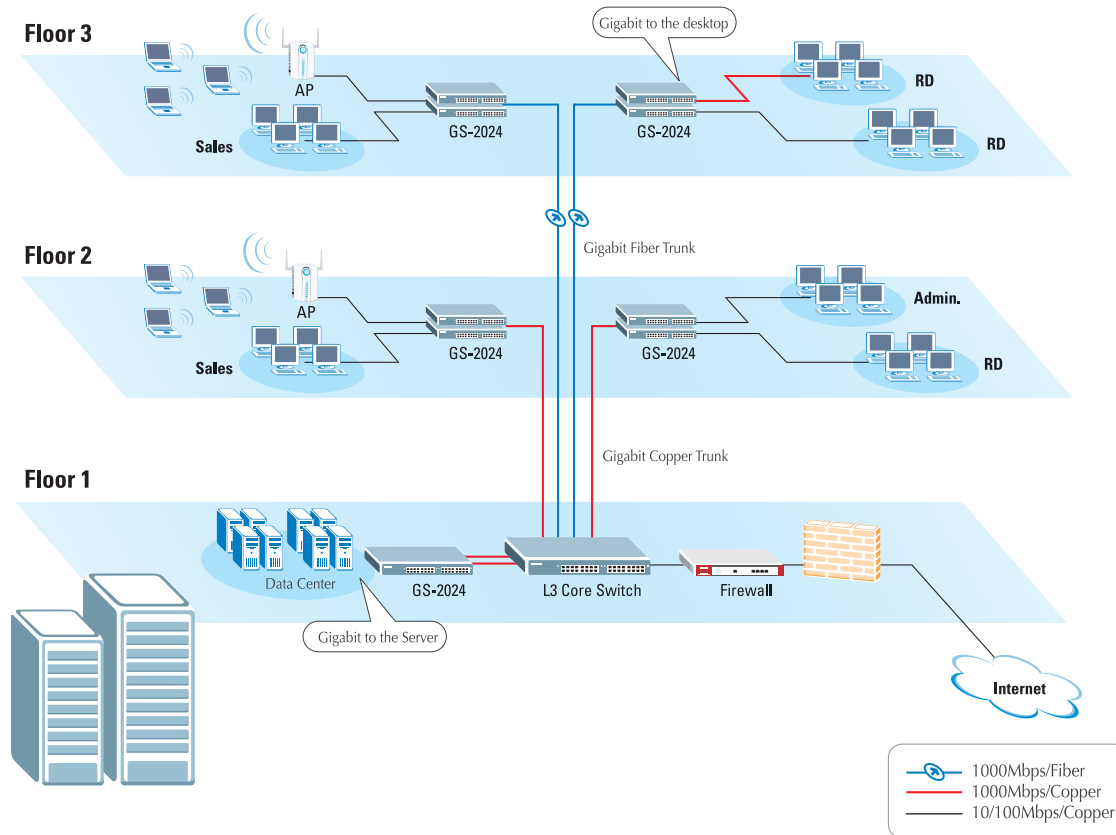
Feature Matrix

ZyXEL Managed Ethernet Switch

Feature/Model General Specs	ES-2008 Series	ES-2024	ES-4024	GS-2024	GS-3012	GS-3012F
Layer 3 IP Switching			X			
Height	1U	1U	1U	1U	1U	1U
-. of 100Base-TX	8(All Series)	24	24			
-. of 100Base-FX	1 x MM (ES-2008-SC) 1 x SM (ES-2008-SC30)					
-. of 1000Base-T	1(ES-2008-GTP)	2	1 x stacking bay	24	12	4 (shared)
-. of 1000Base-X		2 x SFP bays (shared)	2 x GBIC bays	2 x SFP bays (shared)	4 x SFP bays (shared)	12 x SFP bays (shared)
Switching fabric	3.6Gbps	8.8Gbps	12.8Gbps	48Gbps	24Gbps	24Gbps
MAC Address Table Size	8K	10K	16K	8K	16K	16K
IP Address Table Size			16K			
Packet Buffer Size	512KB	384KB	2MB	512KB	1MB	1MB
-. of IP Routing Domain		1	64			
Multiple IP Interface Per VLAN			X			
Routing Protocol						
RIP			X			
OSPF V2			X			
DVMRP			X			
Availability						
802.1D STP	X	X	X	X	X	X
802.1w RSTP		X	X	X	X	X
802.1s MSTP					*	*
VRRP			X			
BPS					X	X
802.3ad Link Aggregation	X	X	X	X	X	X
QoS						
802.1p	X	X	X	X	X	X
-. of CoS Per Port	2	2	4	4	8	8
WRR		X		X	X	X
WFQ			X			
Port based Rate Limiting		X	X	X	X	X
Policy based Rate Limiting			X		X	X
Port based traffic shaping		X	X	X	X	X
Broadcast Storm Control	X	X	X	X	X	X
IGMP			X			
IGMP Snooping		X	X	X	X	X
DiffServ			X	X	*	*
Security						
802.1x		X	X	X	X	X
Port Security	X	X	X	X	X	X
Static MAC Filtering	X		X	X	X	X
Limited MAC number per Port			X		X	X
IP Filtering			X		X	X
TCP/UDP Socket Filtering			X		X	X
SSH v1/v2					*	*
SSL/TLS					*	*
Port-Based VLAN	X	X	X	X	X	X
802.1Q VLAN	256	2k	4k	4k	4k	4K
Management						
SNMP	X	X	X	X	X	X
RMON 1.2.3.9	X	X	X	X	X	X
Web Management	X	X	X	X	X	X
Telnet CLI	X	X	X	X	X	X
iStacking		X	X	X	X	X
Out-of-band MGMT Port				X	X	X
Console Port	X	X	X	X	X	X
DHCP Server			X			
DHCP Relay			X			
DHCP Client		X		X	X	X
NTP		X	X	X	X	X
Port Mirroring	X	X	X	X	X	X
ACL						
Based on MAC address			X		X	X
Based on VLAN					X	X
Based on IP address			X		X	X
Based on protocol type			X		X	X
Based on TCP/UDP port			X		X	X
Based on DSCP			X		*	*

* Firmware upgradeable for future enhancement

Application Diagram



Operational Information

Transceiver (Optional)

Model Name	Optical Receiver Sensitivity	Wavelength	Connector	Transmission Distance	vs. Fiber Cable Specification	Operational Ranges		
				62.5um Multi-Mode Fiber	50um Multi-Mode Fiber	9/10um Single-Mode Fiber	Supply Voltage	Max Current
SFP-SX	-17 dBm	850nm	LC	220m	550 m	-	3.15 ~ 3.45 V	300 mA
SFP-LX-10	-20 dBm	1310nm	LC	550m	550 m	10 km	3.15 ~ 3.45 V	300 mA
SFP-LHX1310-40	-23 dBm	1310nm	LC	-	-	40 km	3.15 ~ 3.45 V	300 mA
SFP-ZX-80	-24 dBm	1550nm	LC	-	-	80 km	3.15 ~ 3.45 V	300 mA

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

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