XS3800-28

28-port 10GbE L3 Aggregation Switch

Designed for SME with 10GBASE-T connectivity and advanced L2+/L3 lite features, the Zyxel 10-Gigabit L3 Aggregation Switch XS3800-28 enables applications for aggregation or SME core switching and connection; and it comes with up to 12 Multi-Gigabit ports to help your preparation for network expansions with Multi-Gigabit capable devices such as servers, workstations and NAS. Apart from the aggregation, advanced audio and video equipments are on the trend to migrate to uncompressed high performance ProAV network with 10 Gigabit connectivity. XS3800-28 provides all the necessity that are required for high-bandwidth ProAV network infrastructure. It is also the first 10-Gigabit cloud switch that can step up the cloud network bandwidth.

Benefits

NebulaFlex Pro – simply manage it your way!

The NebulaFlex Pro provides extended flexibility to easily switch network management modes between standalone, and our intuitive Nebula cloud platform. Nebula provides both intuitive web interface and mobile APP to deliver a streamlined experience for installation and management of the network, without the cost for additional software or hardware controller. 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.

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

Unique port combination brings maximum flexibility to network diversity

Support Multi-Gigabit for 100M/1G/2.5G/5G/10G connections

Provides high-bandwidth with true physical stacking of up to 4 units

Design with "Restore to last custom default" button and redundant power supply to deliver high resiliency and availability

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Zyxel**one** network
Redefining network integration

Dedicated networked AV mode

The standard switch interface includes an abundance of generic networking features to address 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, follow 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, accompany with condensed function menu help you manage and monitor the system with ease.

Flexible port combination for all your needs

10GBASE-T and 10-Gigabit SFP+ are essential to a Layer-3 aggregation switch. The XS3800-28 offers a wide range of combo ports options to give you the greatest flexibility for any type of networks. With 16 x 10G SFP+, 8 combo ports (Multi-Gigabit RJ-45/SFP+) and 4 Multi-Gigabit RJ-45 ports, the XS3800-28 offers a maximum of 24 10G fiber ports or 12 10G copper ports that are well prepared for diversity of network requirement.

Future-proof deployments with Multi-Gigabit capability

If you are currently connecting a 2.5G/5G device to a traditional 10-Gigabit switch without Multi-Gigabit capability, the connection automatically downgrades to 1 Gbps since the switch only supports 1G/10G capability. Instead, the XS3800-28 offers up to 12 Multi-Gigabit RJ-45 ports that support 10G, 5G, 2.5G and 1G speeds that allow the connection to operate at the maximum speed as fast as the connected devices allow.

The most commonly used CAT5e Ethernet cables support both 2.5G/5 Gbps Multi-Gigabit operations without the need to purchase expensive CAT6 cables. For the existing networks that need to be upgraded to the Multi-Gigabit specification, the XS3800-28 is the perfect solution without replacing the current cabling infrastructure.
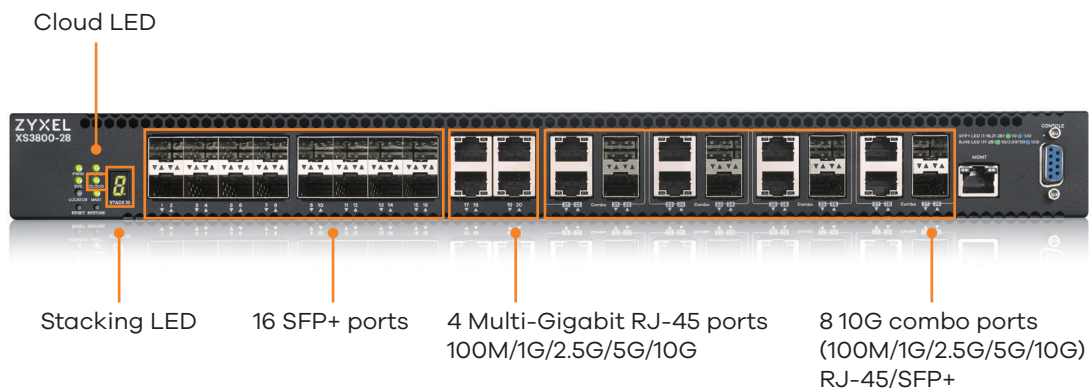
Layer-3 switching capacity

Designed with supports to the 4K L3 forwarding table and 1K static L3 routes, the XS3800-28 is suitable for aggregation and virtualization for SMB or campus networks that require low latency and high-density 10G backbone architectures with basic routing capability. Network with the demand for large installations which need more than just static route can leverage the flexibility of optional license availability. There's an option to purchase the basic routing license separately now. The basic routing license offers RIP v1/v2, OSPF and DVMRP to support more complex routing environment.
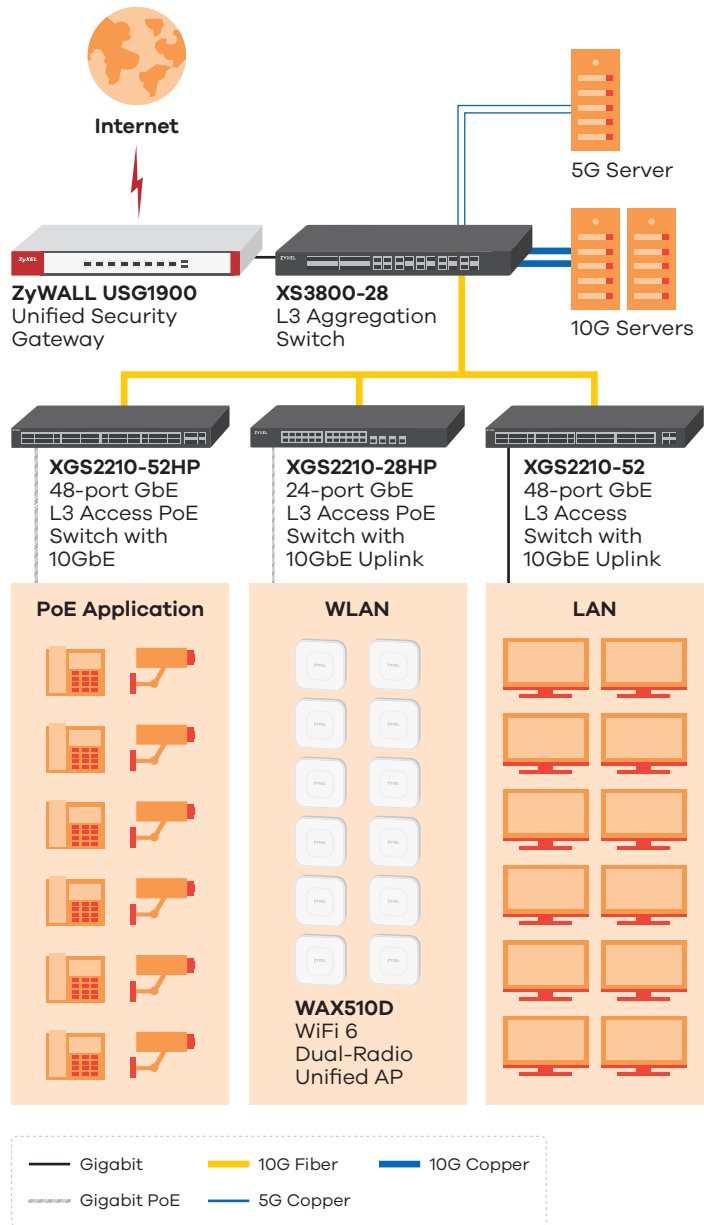
Resiliency and availability

The XS3800-28 comes with two PSUs supporting active-standby power redundancy that triggers backup power supply if the main unit fails. The one-touch "Restore" button on the front panel saves the last workable configuration as the custom default, which allows you to fall back anytime with a press in case of network misconfiguration. Also, it allows creating a physical stack through the last four 10-Gigabit combo ports. Four units can be configured as a stack to provide high bandwidth on XS3800-28 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.
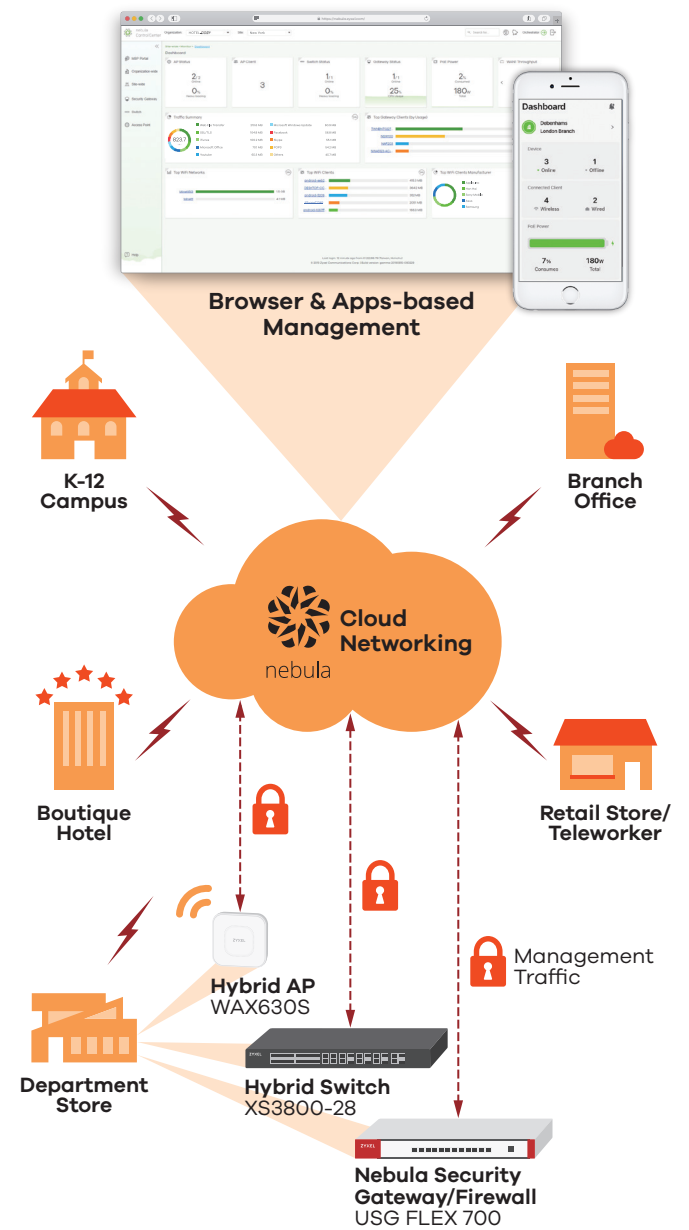
Front Panel

Cloud LED

Stacking LED

16 SFP+ ports

4 Multi-Gigabit RJ-45 ports
100M/1G/2.5G/5G/10G

8 10G combo ports
(100M/1G/2.5G/5G/10G)
RJ-45/SFP+

Application Diagram

Standalone Management

Internet

ZyWALL USG1900
Unified Security
Gateway

XS3800-28
L3 Aggregation
Switch

5G Server

10G Servers

XGS2210-52HP
48-port GbE
L3 Access PoE
Switch with
10GbE

XGS2210-28HP
24-port GbE
L3 Access PoE
Switch with
10GbE Uplink

XGS2210-52
48-port GbE
L3 Access
Switch with
10GbE Uplink

PoE Application

WLAN

LAN

WAX510D
WiFi 6
Dual-Radio
Unified AP

—— Gigabit	—— 10G Fiber	—— 10G Copper
···· Gigabit PoE	—— 5G Copper	

Cloud Management

**Browser & Apps-based
Management**

**K-12
Campus**

**Branch
Office**

**Cloud
Networking**
nebula

**Boutique
Hotel**

**Retail Store/
Teleworker**

Hybrid AP
WAX630S

Management
Traffic

**Department
Store**

Hybrid Switch
XS3800-28

**Nebula Security
Gateway/Firewall**
USG FLEX 700

Specifications

Model	XS3800-28
Product name	28-port 10GbE L3 Aggregation Switch

Switch class	L3 Aggregation
Port Density	
Total port count	28
100M/1G/2.5G/5G/10G Ethernet (RJ-45)	4
Multi-Gigabit combo (100M/1G/2.5G/5G/10G) RJ-45/SFP+	8
10-Gigabit SFP+	16
Performance	
Switching capacity (Gbps)	560
Forwarding rate (Mpps)	416
Packet buffer (byte)	4 MB
MAC address table	32 K
L3 forwarding table	Max. 4 K IPv4 entries; Max. 2 K IPv6 entries
Routing table	1K
IP interface	128
Flash/RAM	64 MB/8 GB
Power	
Input	100 - 240 V AC, 50/60 Hz
Max. power consumption (watt)	86.97

Physical Specifications

Item	Dimensions (WxDxH)(mm/in.)	441 x 360 x 44/17.36 x 14.17 x 1.73
	Weight (kg/lb.)	4.81/10.6
Packing	Dimensions (WxDxH)(mm/in.)	593 x 526 x 131/23.35 x 20.71 x 5.16
	Weight (kg/lb.)	7.09/16
Included accessories		• Power cord • Rack mounting kit

ESD/Surge Protections

Ethernet port surge protection		1 KV
Power supply surge protection	Line-GND	2 KV
	LIne-Line	1 KV
Ethernet port ESD protection (air/contact)		8 KV/6 KV

Environmental Specifications

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 185°F
	Humidity	10% to 95% (non-condensing)
MTBF (hr)		656,274.78
Heat dissipation (BTU/hr)		296.57
Acoustic noise @ 25°C (dBA)		58.2

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 802.3bz 2.5G/5GBase-T Ethernet*
- IEEE 802.3az EEE support*
- IEEE 802.3x flow control
- IEEE 802.1p CoS support*
- IEEE 802.1AB LLDP/LLDP-MED
- IEEE 802.3ah OAM (Link Discovery, Loopback)
- Store and forward
- N-way auto-negotiation

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*
- Equal Cost Multipath Routing (ECMP)
- Virtual Router Redundancy Protocol (VRRP)
- Loop guard*
- CPU protection
- ErrDisable recovery
- MRSTP (Zyxel proprietary)
- Redundant power supply support
- Dual configuration files
- Dual images*
- Physical stacking up to 4 units
- **New for V4.80** Flex link

Traffic Control

- 802.1Q static VLANs*/dynamic VLANs: 4 K/4 K
- Port-based VLAN*
- Vendor ID-based VLAN
- Protocol-based VLAN
- IP subnet-based VLAN
- Private VLAN
- VLAN trunking
- VLAN translation
- VLAN ingress filtering
- 802.1ad VLAN stacking (Q-in-Q)
- LACP algorithm of source/ destination IP
- GVRP
- Selected Q-in-Q
- L2PT

Security

- 802.1x*
- Port security*
- MAC authentication*
- Layer 2 MAC filtering
- Layer 3 IP filtering
- Layer 4 TCP/UDP socket filtering
- BPDU transparency
- Static MAC forwarding
- Multiple RADIUS servers (IPv4*/IPv6)
- Multiple TACACS+ servers
- 802.1x VLAN and bandwidth assignment by RADIUS*
- Login authentication by RADIUS*
- Login authentication by TACACS+
- TACACS+ accounting
- RADIUS accounting
- Authorization on TACACS+
- Authorization on console
- SSH v2
- SSL
- MAC freeze
- DHCP snooping
- DHCP Server Guard
- ARP inspection
- ARP freeze
- Static ARP setting
- Static IP/MAC binding
- Policy-based security filtering
- Port isolation
- IP source guard*
- Limit number of MAC per VLAN
- MAC search
- Guest VLAN*
- Guest VLAN on MAC-based Authentication
- ACL packet filtering (IPv4/IPv6)
- PPPoE relay agent
- PPPoE option82
- PPPoE IA
- CPU protection
- MAC pinning
- Interface related trap can be 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 kbps
- Rate limiting, per IP/TCP/UDP per port
- Policy-based rate limiting
- Policy-based bandwidth control granularity
- Ingress CIR for bandwidth control
- 802.3x flow control
- Port-based egress traffic shaping CIR/PIR supported
- Policy based prioritization
- 802.1p Class of Service (SPQ, WFQ, SPQ/WFQ combination capable)
- DiffServ (DSCP)

Layer 2 Multicast

- L2 multicast (Group)
- 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 snooping and proxy*
- IPv6 MLD snooping proxy
- Multicast load sharing over trunk port

Routing

- Static route
- Policy-based route
- IP port moving
- **Basic Routing License** RIP v1/v2
- **Basic Routing License** OSPFv2
- **Basic Routing License** DVMRP

Manageability

- SNMP v1, v2c, v3
- SNMP trap group
- RMON (1, 2, 3, 9)
- ICMP echo/echo reply
- Syslog
- Support NebulaFlex Pro for Cloud Management

IPv6 Management

- IPv6 over Ethernet (RFC 2464)
- IPv6 addressing architecture (RFC 4291)
- Dual stack (RFC4213)
- ICMPv6 (RFC4884)
- Path MTU (RFC 1981)
- Minimum path MTU size of 1280 (RFC 5905)
- Encapsulation for minimum MTU of 1500
- Neighbor discovery (RFC4861)
- DHCPv6 Relay

Device Management

- Standalone management by Web interface
- Cloud management by Nebula Control Center*
- iStacking
- **New for V4.80** Auto configuration recovery (only for cloud mode)
- **New for V4.80** New Web interface
- Management through console, telnet, SNMP
- Firmware upgrade by FTP/SFTP
- Remote firmware upgrade by FTP/ Web
- Configuration saving and retrieving
- Multiple login supported
- Configure Clone
- Multilevel CLI
- CLI (Cisco like)
- DHCP servers
- DHCP relay per VLAN
- DHCP option 82

- Daylight Saving*
- NTP*
- Port mirroring*
- Policy-based port mirroring
- RJ-45 out-of-band management port
- RS-232 console port
- sFlow
- Remote port monitoring
- Restore to last custom default
- Networked AV mode

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

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
- **New for V4.80** Intuitive Cloud connection status

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-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-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)

License

Model	Service Duration	Description
XS3800-28	Life Time	Basic Routing

07/07/22