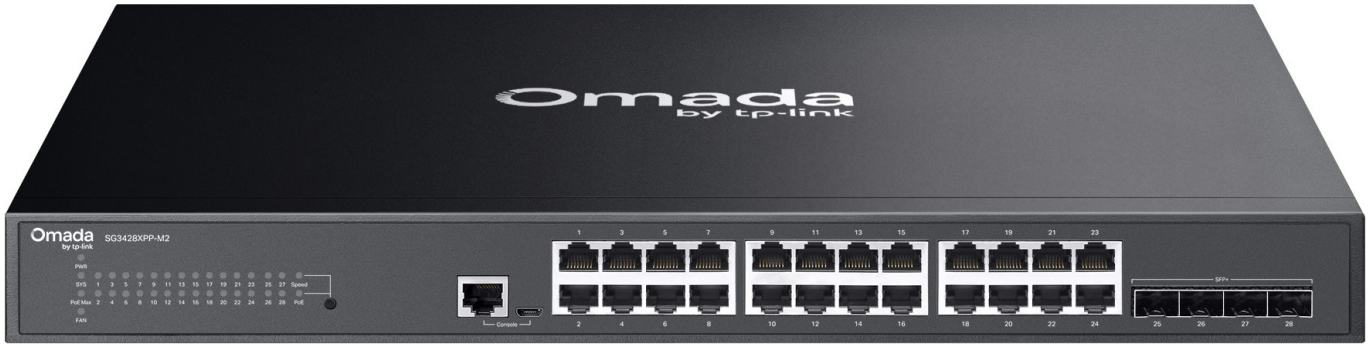
Omada Switch | Datasheet

SG3428XPP-M2

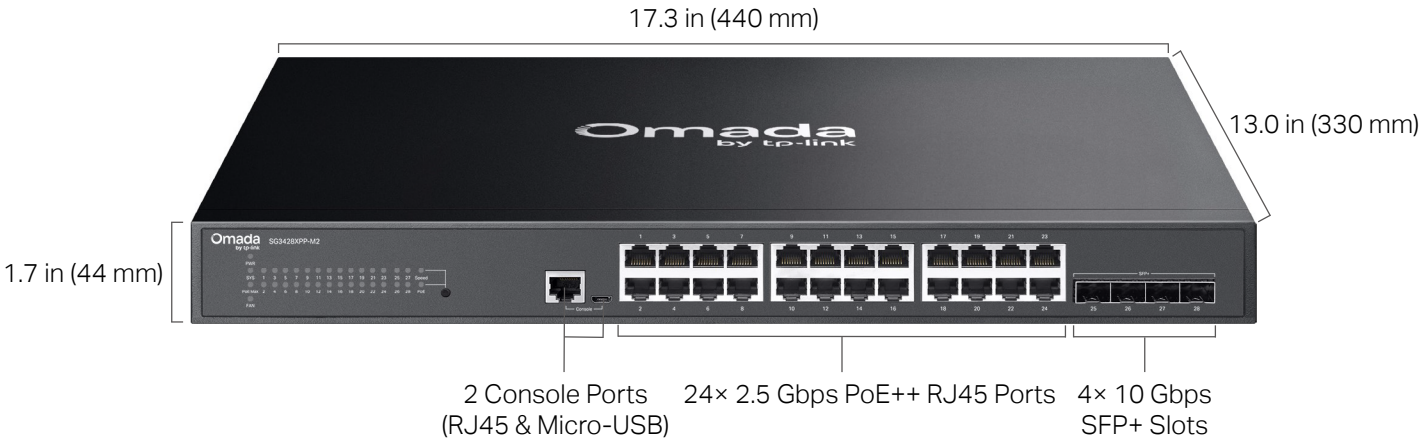
Omada Access Pro 24-Port 2.5G and 4-Port 10GE SFP+ Switch with 24-Port PoE++



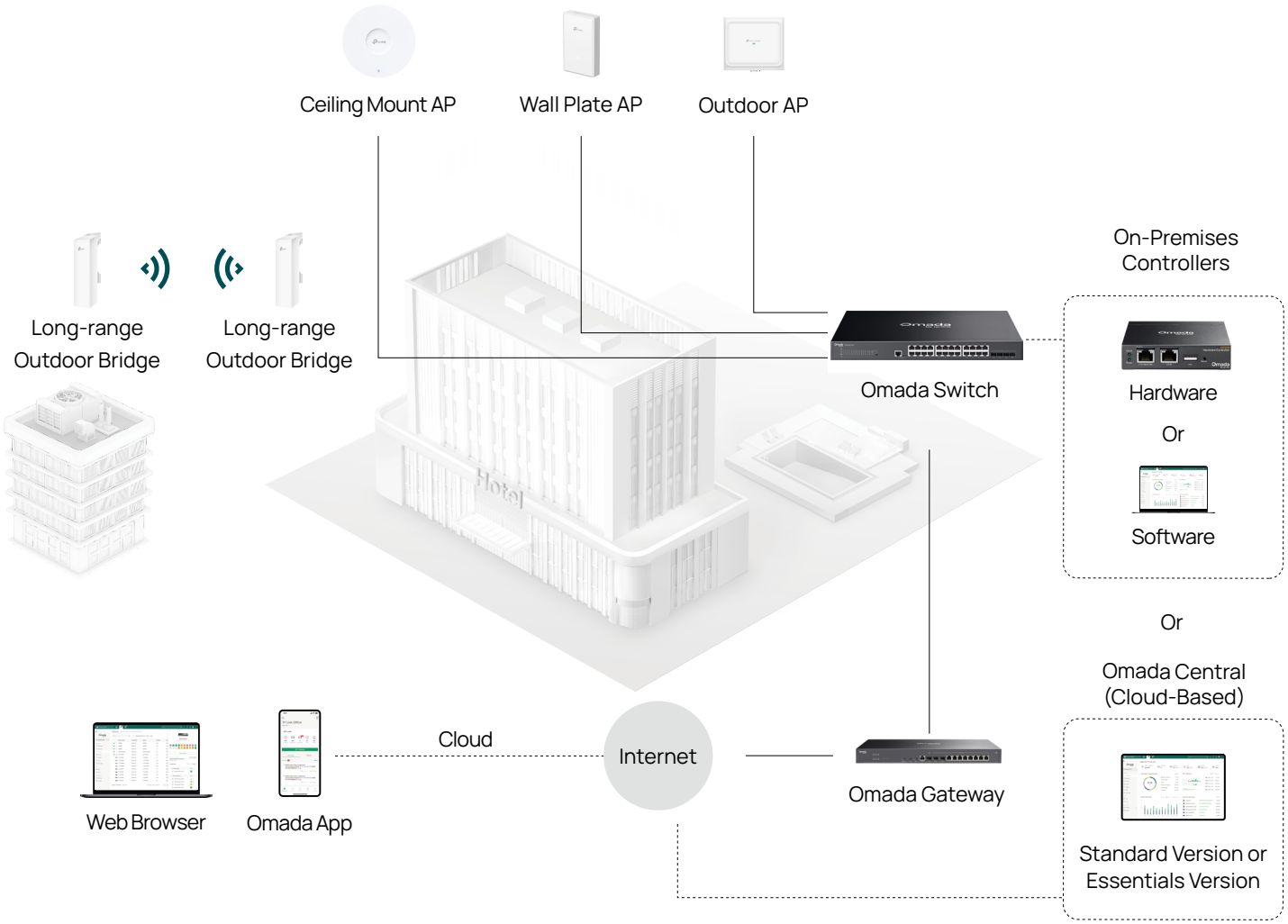
Highlights

- 24× 2.5G PoE++ ports (Max 90 W per port)*
- 4× 10 Gbps SFP+ slots enable high-bandwidth connectivity
- 770 W total PoE budget**
- Centralized cloud management via the web or the Omada app†
- Standalone management via web, CLI, SNMP, and RMON
- Static Routing helps route internal traffic for higher efficiency
- VLAN, ACL, QoS, IGMP Snooping, OAM, and DDM
- ERPS supports rapid protection and recovery in a ring topology

Product Picture



Omada Solution



Hassle-Free Cloud or On-Premises Controllers

Zero-Touch Provisioning (ZTP)†

Multi-Site Cloud Management

Intelligent Monitoring

Specifications

Hardware Features & Performance			
Model		SG3428XPP-M2	
General	Interface	24× 2.5 Gbps PoE++ RJ45 Ports, 4× 10Gbps SFP+ Slots***	
	Console Port	1 RJ45 Console Port, 1 Micro-USB Console Port	
	Flash	32 MB	
	DRAM	256 MB	
	Port Standard	IEEE 802.3i:10BASE-T Ethernet; IEEE 802.3u:100BASE-X Fast Ethernet; IEEE 802.3ab:1000BASE-T Gigabit Ethernet; IEEE 802.3bz:2.5GBASE-T Ethernet; IEEE 802.3z:1000BASE-X Gigabit Ethernet (Optical fiber); IEEE 802.3ae: 10 Gigabit Ethernet over fiber	
PoE	PoE Standard	802.3af/at/bt, support perpetual PoE and fast PoE	
	PoE Ports	24 (up to 90 W PoE per Port)	
	PoE Power Budget	770 W	
Performance	Switching Capacity	200 Gbps	
	Packet Forwarding Rate	148.80 Mpps	
	MAC Address Table	32K	
	Packet Buffer	16 Mbit	
	Transmission Method	Store and Forward	
	Number of IP Interfaces	32	
	Number of Static Routers	48 (IPv4, IPv6)	
	Jumbo Frame	9 KB	
Physical & Environment	Power Supply	100-240 V~ 50/60 Hz	
	Max Power Consumption	900.2 W (110 V/60 Hz @ 25 °C) (with 770 W PD connected) 946.8 W (220 V/50 Hz @ 25 °C) (with 770 W PD connected)	
	Standby Power Consumption	37.0 W max @ 110V/60Hz 25 °C 36.8 W max @ 220V/50Hz 25 °C	
	Max Heat Dissipation	3069.68 BTU/hr (110 V/60 Hz @ 25 °C) (with 770 W PD connected) 3228.59 BTU/hr (220 V/50 Hz @ 25 °C) (with 770 W PD connected)	
	Fan Quantity	3	
	Noise	Max	59.7 dBA @ 1 m (100% load, 45 °C ambient) 52.7 dBA @ 1m (100% load, 25°C ambient)
		Typical	44.6 dBA @ 1 m (100% system load, 616 W PoE load, 25°C ambient)
		Min	38.7 dBA @ 1 m (100% system load, PoE load <450 W, 25°C ambient)
	Surge Protection	Service port: ±6 kV in common mode Power port: ±6 kV in differential mode; ±6 kV in common mode	
	ESD Protection	Air: ±15 kV, Contact: ±8 kV	
	MTBF	474,958 h @ 25 °C	
	Dimensions (W x D x H)	17.3 × 13.0 × 1.7 in (440 × 330 × 44 mm)	
	Net Weight	5.20 kg (11.46 lbs)	
	Installation	Rack Mountable	
	Operating Temperature	-5 °C to 45 °C (23 °F to 113 °F)	
	Storage Temperature	-40 °C to 70 °C (-40 °F to 158 °F)	
	Operation Humidity	10% to 90% RH, non-condensing	
	Storage Humidity	5% to 90% RH, non-condensing	
	Certification	CE, FCC, RoHS	

***Only one 10G RJ45 SFP+ module (SM5310-T) can be inserted at a time.

Software Features△

Model	SG3428XPP-M2	
SDN Support	• Support Omada Hardware Controller, Software Controller • Automatic Device Discovery • Batch Configuration • Batch Firmware Upgrading	• Intelligent Network Monitoring • Abnormal Event Warnings • Unified Configuration • Reboot Schedule
L3 Features	• 32 IPv4/IPv6 Interfaces • Static Routing - 48 static routes • Static ARP - 128 static entries • 512 ARP Entries • Proxy ARP	• Gratuitous ARP • DHCP Server • DHCP Relay - DHCP interface relay - DHCP VLAN relay • DHCP L2 Relay
L2 Features	• Link Aggregation - Static link aggregation - 802.3ad LACP - Up to 8 aggregation groups and up to 8 ports per group • Spanning Tree Protocol - 802.1d STP - 802.1w RSTP - 802.1s MSTP - STP Security: TC Protect, BPDU Filter, BPDU Protect, Root Protect, Loop Protect	• Loopback Detection - Port based - VLAN based • Flow Control - 802.3x Flow Control - HOL Blocking Prevention • Mirroring - Port Mirroring - CPU Mirroring - One-to-One - Many-to-One - Tx/Rx/Both
L2 Multicast	• Supports 511 (IPv4, IPv6) IGMP groups • IGMP Snooping - IGMP v1/v2/v3 Snooping - Fast Leave - IGMP Snooping Querier - IGMP Authentication • IGMP Authentication • MVR	• Multicast Listener Discovery (MLD) Snooping - MLD v1/v2 Snooping - Fast Leave - MLD Snooping Querier - Static Group Config - Limited IP Multicast • Multicast Filtering: 256 profiles and 16 entries per profile
VLAN	• VLAN Group - Max 4K VLAN Groups • 802.1Q Tagged VLAN • MAC VLAN: 256 Entries • Protocol VLAN (IEEE 802.1v): Protocol Template 16, Protocol VLAN 16	• GVRP • VLAN VPN (QinQ) - Port-Based QinQ - Selective QinQ • Voice VLAN
QoS	• 8 priority queues • 802.1p CoS/DSCP priority • Queue scheduling - Strict Priority (SP) - Weighted Round Robin (WRR) - SP+WRR • Bandwidth Control - Port/Flow based Rating Limiting	• Smoother Performance • Action for Flows - Mirror (to supported interface) - Redirect (to supported interface) - Rate Limit - QoS Remark
ACL	• MAC ACL - Source MAC - Destination MAC - VLAN ID - User Priority - Ether Type • IP ACL -Source IP - Destination IP - Fragment - IP Protocol - TCP Flag	- TCP/UDP Port - DSCP/IP TOS - User Priority • Combined ACL • IPv6 ACL • Policy - Mirroring - Redirect - Rate Limit - QoS Remark • ACL apply to Port/VLAN • Time-based ACL

Software Features△

Model	SG3428XPP-M2	
Security	• IP-MAC-Port Binding -512 Entries - DHCP Snooping - Dynamic ARP Inspection (DAI) - IPv4 Source Guard: 100 Entries • IPv6-MAC-Port Binding -512 Entries - DHCPv6 Snooping - ND Detection - ND Snooping - IPv6 Source Guard: 100 Entries • DoS Defend • DHCP Filter • Static/Dynamic Port Security - Up to 64 MAC addresses per port • Broadcast/Multicast/Unicast Storm Control - kbps/ratio/pps control mode	• 802.1X - Port base authentication - Mac base authentication - VLAN Assignment - MAB - Guest VLAN - Support RADIUS authentication and accountability • Authentication, Authorization, Accounting (AAA) (including TACACS+) • Port Isolation • Secure web management through HTTPS with SSLv3/TLS 1.2 • Secure Command Line Interface (CLI) management with SSHv1/SSHv2 • IP/Port/MAC based access control
ISP Features	• 802.3ah Ethernet Link Operation Administration and Maintenance (OAM) • Layer 2 Protocol Tunneling (L2PT) • Digital Diagnostic Monitoring (DDM)	• Device Link Detect Protocol (DLDP) • PPPoE ID Insertion • sFlow • ERPS
Management	• Web-based GUI • Command Line Interface (CLI) through consoleport, telnet • SNMPv1/v2c/v3 - Trap/Inform - RMON (1, 2, 3, 9 groups) • SDM Template • DHCP/BOOTP Client • 802.1ab LLDP/LLDP-MED • DHCP Auto Install	• Dual Image, Dual Configuration • CPU Monitoring • Cable Diagnostics • IEEE 802.3az Energy Efficient Ethernet (EEE) • Password Recovery • SNTP • System Log • Dying Gasp • ONVIF
IPv6 Support	• IPv4/IPv6 dual stack • MLD Snooping • IPv6 ACL • IPv6 Interface • Static IPv6 Routing • IPv6 neighbor discovery (ND) • Path maximum transmission unit (MTU) discovery • Internet Control Message Protocol (ICMP) version 6 • TCPv6/UDPv6	• IPv6 applications - DHCPv6 Client - Ping6 - Tracert6 - Telnet (v6) - IPv6 SNMP - IPv6 SSH - IPv6 SSL - Http/Https - IPv6 TFTP
MIBs	• MIB II (RFC1213) • Interface MIB (RFC2233) • Ethernet Interface MIB (RFC1643) • Bridge MIB (RFC1493) • P/Q-Bridge MIB (RFC2674) • RMON MIB (RFC2819)	• RMON2 MIB (RFC2021) • RADIUS Accounting Client MIB (RFC2620) • RADIUS Authentication Client MIB (RFC2618) • Remote Ping, Traceroute MIB (RFC2925) • Support TP-Link Private MIB

Others

Package Content	• SG3428XPP-M2 Switch • Power Cord • Console Cable • Rackmount Kit • Rubber Feet • Installation Guide
System Requirements	Microsoft® Windows® 98SE, NT, 2000, XP, Vista™ or Windows 7/8/10/11, MAC® OS, NetWare®, UNIX® or Linux.

Ordering Information

Host Switch

Model	Description
SG3428XPP-M2	Omada Access Pro 24-Port 2.5G and 4-Port 10GE SFP+ Switch with 24-Port PoE++

SFP/SFP+ Module

Model	Description
SM311LS	Gigabit SFP module, Single-mode, LC interface, Up to 20km distance
SM311LM	Gigabit SFP module, Multi-mode, LC interface, Up to 550m distance
SM321A	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1550 nm/RX: 1310 nm, 20 km
SM321A-2	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1550 nm/RX: 1310 nm, 2 km
SM321B	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1310 nm/RX: 1550 nm, 20 km
SM321B-2	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1310 nm/RX: 1550 nm, 2 km
SM5110-LR	10GBase-LR SFP+ LC Transceiver, single-mode, LC connector, 1310nm, 10 km
SM5110-SR	10GBase-SR SFP+ LC Transceiver, multi-mode, LC connector, 850nm, 300 m
SM5110LSA-10	10GBase-BX WDM Bi-Directional SFP+ Module, single-mode, LC connector, TX: 1330 nm/RX: 1270 nm, 10 km
SM5110LSB-10	10GBase-BX WDM Bi-Directional SFP+ Module, single-mode, LC connector, TX: 1270 nm/RX: 1330 nm, 10 km

RJ45 SFP/SFP+ Module

Model	Description
SM331T	1000BASE-T RJ45 SFP Module
SM5310-T	10GBASE-T RJ45 SFP+ Module

MC Series Media Converter

Model	Description
MC420L	10G Multi-Gigabit SFP+ Media Converter, up to 100 m, chassis mountable
MC220L	Gigabit SFP Media Converter, up to 100 m, chassis mountable
MC210CS	Gigabit Single-Mode Media Converter, up to 20 km, chassis mountable
MC211CS-20	Gigabit WDM Media Converter, up to 20 km, chassis mountable
MC212CS-20	Gigabit WDM Media Converter, up to 20 km, chassis mountable
MC211CS-2	Gigabit WDM Media Converter, up to 2 km, chassis mountable
MC212CS-2	Gigabit WDM Media Converter, up to 2 km, chassis mountable
MC200CM	Gigabit Multi-Mode Media Converter, up to 550 m, chassis mountable

Direct Attach Cable

Model	Description
SM5220-1M	1 Meter 10G SFP+ Direct Attach Cable
SM5220-3M	3 Meters 10G SFP+ Direct Attach Cable

*SG3428XPP-M2 is incompatible with Passive PoE and other non-standard PoE devices. The standards refer to IEEE 802.3af/at/bt.

**PoE budget calculations are based on laboratory testing. The actual PoE power budget is not guaranteed and will vary due to client limitations and environmental factors. The maximum power output of every single PoE++ port is 90 W.

†These functions require the use of the Omada SDN Controller. Zero-Touch Provisioning requires the use of the Omada Cloud-Based Controller. Go to the Omada Cloud-Based Controller Product List to find all the models supported by the Omada Cloud-Based Controller.

△Some features are available only after upgrading to the latest software version.