

# Omada Switch | Datasheet

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## SG3428

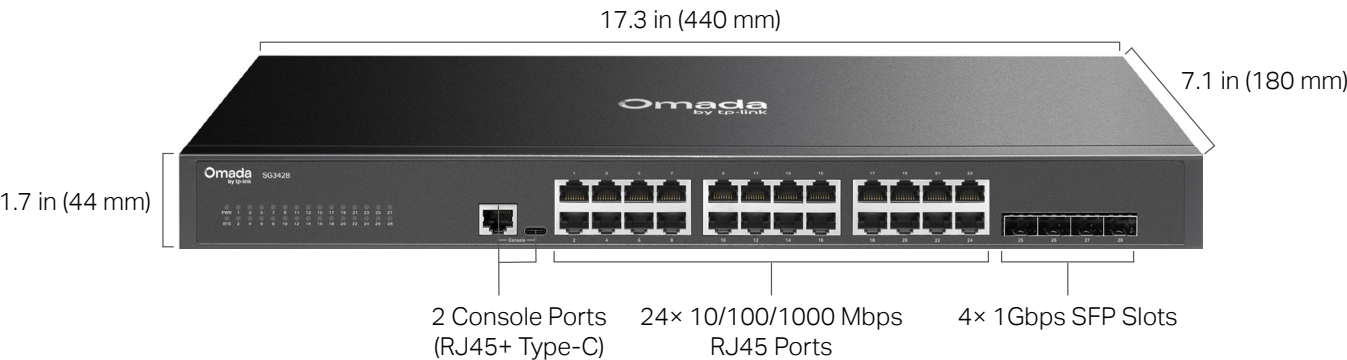
Omada Access 24-Port Gigabit Switch with 4 SFP Slots



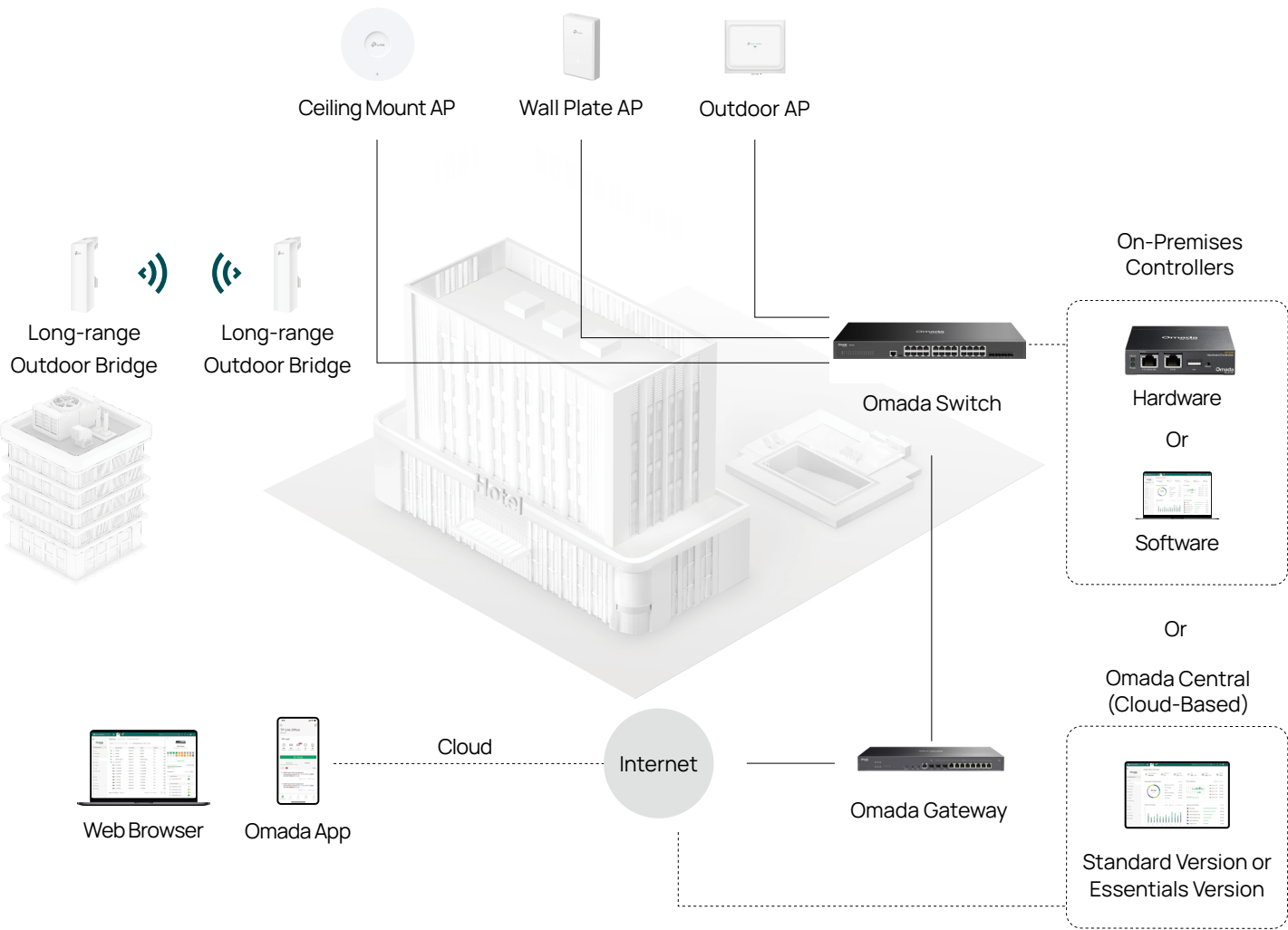
## Highlights

- 24× Gigabit RJ45 ports and 4× Gigabit SFP slots
- Centralized cloud management via the web or the Omada app<sup>†</sup>
- 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
- Fanless design for silent operation
- Durable metal casing and desktop/rack mounting design

# Product Picture



# Omada Solution



 **Hassle-Free Cloud or On-Premises Controllers**

 **Multi-Site Cloud Management**

 **Zero-Touch Provisioning (ZTP)<sup>†</sup>**

 **Intelligent Monitoring**

# Specifications

| Hardware Features & Performance |                           |                                                                                                                                                                                |
|---------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                           |                           | SG3428                                                                                                                                                                         |
| General                         | Interface                 | 24× 10/100/1000Mbps RJ45 Ports<br>4× 100/1000 Mbps SFP Slots                                                                                                                   |
|                                 | Console Port              | 1 RJ45 Console Port, 1 USB Type-C Console Port                                                                                                                                 |
|                                 | Flash                     | 32 MB                                                                                                                                                                          |
|                                 | DRAM                      | 256 MB                                                                                                                                                                         |
|                                 | Port Standard             | IEEE 802.3i:10BASE-T Ethernet;<br>IEEE 802.3u:100BASE-X Fast Ethernet;<br>IEEE 802.3ab:1000BASE-T Gigabit Ethernet;<br>IEEE 802.3z:1000BASE-X Gigabit Ethernet (Optical fiber) |
| Performance                     | Switching Capacity        | 56 Gbps                                                                                                                                                                        |
|                                 | Packet Forwarding Rate    | 41.66 Mpps                                                                                                                                                                     |
|                                 | MAC Address Table         | 16K                                                                                                                                                                            |
|                                 | Packet Buffer             | 12 Mbit                                                                                                                                                                        |
|                                 | Transmission Method       | Store and Forward                                                                                                                                                              |
|                                 | Number of IP Interfaces   | 128                                                                                                                                                                            |
|                                 | Number of Static Routers  | 48 (IPv4, IPv6)                                                                                                                                                                |
|                                 | Jumbo Frame               | 9 KB                                                                                                                                                                           |
| Physical & Environment          | Power Supply              | 100-240 V AC~50/60 Hz                                                                                                                                                          |
|                                 | Max Power Consumption     | 19.8 W (220 V/50 Hz)<br>18.2 W (110 V/60 Hz)                                                                                                                                   |
|                                 | Standby Power Consumption | 9.62 W (220 V/50 Hz)                                                                                                                                                           |
|                                 | Max Heat Dissipation      | 67.69 BTU/hr (220 V/50 Hz)<br>62.27 BTU/hr (110 V/60 Hz)                                                                                                                       |
|                                 | Noise                     | Max: 17.1 dBA @ 1cm 25 °C                                                                                                                                                      |
|                                 | Fan Quantity              | Fanless                                                                                                                                                                        |
|                                 | Surge Protection          | Service port: ±6 kV in common mode                                                                                                                                             |
|                                 | ESD Protection            | Air: ±15 kV, Contact: ±8 kV                                                                                                                                                    |
|                                 | MTBF                      | 519,544 h @ 25 °C                                                                                                                                                              |
|                                 | Dimensions (W x D x H)    | 17.3 × 7.1 × 1.7 in (440 × 180 × 44 mm)                                                                                                                                        |
|                                 | Net Weight                | 2 kg (4.41 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                                                                                                                                                                  |

| Software Features <sup>^</sup> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                          | SG3428                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| SDN Support                    | <ul style="list-style-type: none"> <li>• Support Omada Hardware Controller, Software Controller</li> <li>• Automatic Device Discovery</li> <li>• Batch Configuration</li> <li>• Batch Firmware Upgrading</li> </ul>                                                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>• Intelligent Network Monitoring</li> <li>• Abnormal Event Warnings</li> <li>• Unified Configuration</li> <li>• Reboot Schedule</li> </ul>                                                                                                                                                                                                                                                                                                                                               |
| L3 Features                    | <ul style="list-style-type: none"> <li>• 128 IPv4/IPv6 Interfaces</li> <li>• Static Routing               <ul style="list-style-type: none"> <li>- 48 static routes</li> </ul> </li> <li>• Static ARP               <ul style="list-style-type: none"> <li>- 128 static entries</li> </ul> </li> <li>• 512 ARP Entries</li> <li>• Proxy ARP</li> </ul>                                                                                                                                                             | <ul style="list-style-type: none"> <li>• Gratuitous ARP</li> <li>• DHCP Server</li> <li>• DHCP Relay               <ul style="list-style-type: none"> <li>- DHCP interface relay</li> <li>- DHCP VLAN relay</li> </ul> </li> <li>• DHCP L2 Relay</li> </ul>                                                                                                                                                                                                                                                                     |
| L2 Features                    | <ul style="list-style-type: none"> <li>• Link Aggregation               <ul style="list-style-type: none"> <li>- Static link aggregation</li> <li>- 802.3ad LACP</li> <li>- Up to 8 aggregation groups and up to 8 ports per group</li> </ul> </li> <li>• Spanning Tree Protocol               <ul style="list-style-type: none"> <li>- 802.1d STP</li> <li>- 802.1w RSTP</li> <li>- 802.1s MSTP</li> <li>- STP Security: TC Protect, BPDU Filter, BPDU Protect, Root Protect, Loop Protect</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Loopback Detection               <ul style="list-style-type: none"> <li>- Port based</li> <li>- VLAN based</li> </ul> </li> <li>• Flow Control               <ul style="list-style-type: none"> <li>- 802.3x Flow Control</li> <li>- HOL Blocking Prevention</li> </ul> </li> <li>• Mirroring               <ul style="list-style-type: none"> <li>- Port Mirroring</li> <li>- CPU Mirroring</li> <li>- One-to-One</li> <li>- Many-to-One</li> <li>- Tx/Rx/Both</li> </ul> </li> </ul> |
| L2 Multicast                   | <ul style="list-style-type: none"> <li>• Supports 4,000 (IPv4, IPv6) IGMP groups</li> <li>• IGMP Snooping               <ul style="list-style-type: none"> <li>- IGMP v1/v2/v3 Snooping</li> <li>- Fast Leave</li> <li>- IGMP Snooping Querier</li> <li>- IGMP Authentication</li> </ul> </li> <li>• IGMP Authentication</li> <li>• MVR</li> </ul>                                                                                                                                                                 | <ul style="list-style-type: none"> <li>• MLD Snooping               <ul style="list-style-type: none"> <li>- MLD v1/v2 Snooping</li> <li>- Fast Leave</li> <li>- MLD Snooping Querier</li> <li>- Static Group Config</li> <li>- Limited IP Multicast</li> </ul> </li> <li>• Multicast Filtering: 256 profiles and 16 entries per profile</li> </ul>                                                                                                                                                                             |
| VLAN                           | <ul style="list-style-type: none"> <li>• VLAN Group               <ul style="list-style-type: none"> <li>- Max 4K VLAN Groups</li> </ul> </li> <li>• 802.1Q Tagged VLAN</li> <li>• MAC VLAN: 30 Entries</li> <li>• Protocol VLAN (IEEE 802.1v): Protocol Template 16, Protocol VLAN 16</li> </ul>                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>• Private VLAN</li> <li>• GVRP</li> <li>• VLAN VPN (QinQ)               <ul style="list-style-type: none"> <li>- Port-Based QinQ</li> <li>- Selective QinQ</li> </ul> </li> <li>• Voice VLAN</li> </ul>                                                                                                                                                                                                                                                                                  |
| QoS                            | <ul style="list-style-type: none"> <li>• 8 priority queues</li> <li>• 802.1p CoS/DSCP priority</li> <li>• Queue scheduling               <ul style="list-style-type: none"> <li>- SP (Strict Priority)</li> <li>- WRR (Weighted Round Robin)</li> <li>- SP+WRR</li> </ul> </li> <li>• Bandwidth Control               <ul style="list-style-type: none"> <li>- Port/Flow based Rating Limiting</li> </ul> </li> </ul>                                                                                              | <ul style="list-style-type: none"> <li>• Smoother Performance</li> <li>• Action for Flows               <ul style="list-style-type: none"> <li>- Mirror (to supported interface)</li> <li>- Redirect (to supported interface)</li> <li>- Rate Limit</li> <li>- QoS Remark</li> </ul> </li> </ul>                                                                                                                                                                                                                                |
| ACL                            | <ul style="list-style-type: none"> <li>• MAC ACL               <ul style="list-style-type: none"> <li>- Source MAC</li> <li>- Destination MAC</li> <li>- VLAN ID</li> <li>- User Priority</li> <li>- Ether Type</li> </ul> </li> <li>• IP ACL               <ul style="list-style-type: none"> <li>- Source IP</li> <li>- Destination IP</li> <li>- Fragment</li> <li>- IP Protocol</li> <li>- TCP Flag</li> </ul> </li> </ul>                                                                                     | <ul style="list-style-type: none"> <li>- TCP/UDP Port</li> <li>- DSCP/IP TOS</li> <li>- User Priority</li> <li>• Combined ACL</li> <li>• IPv6 ACL</li> <li>• Policy               <ul style="list-style-type: none"> <li>- Mirroring</li> <li>- Redirect</li> <li>- Rate Limit</li> <li>- QoS Remark</li> </ul> </li> <li>• ACL apply to Port/VLAN</li> <li>• Time-based ACL</li> </ul>                                                                                                                                         |

Software Features<sup>^</sup>

| Model        | SG3428                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Security     | <ul style="list-style-type: none"><li>• IP-MAC-Port Binding<ul style="list-style-type: none"><li>- 512 Entries</li><li>- DHCP Snooping</li><li>- Dynamic ARP Inspection (DAI)</li><li>- IPv4 Source Guard: 100 Entries</li></ul></li><li>• IPv6-MAC-Port Binding<ul style="list-style-type: none"><li>- 512 Entries</li><li>- DHCPv6 Snooping</li><li>- ND Detection</li><li>- ND Snooping</li><li>- IPv6 Source Guard: 100 Entries</li></ul></li><li>• DoS Defend</li><li>• DHCP Filter</li><li>• Static/Dynamic Port Security<ul style="list-style-type: none"><li>- Up to 64 MAC addresses per port</li></ul></li><li>• Broadcast/Multicast/Unicast Storm Control<ul style="list-style-type: none"><li>- kbps/ratio/pps control mode</li></ul></li></ul> | <ul style="list-style-type: none"><li>• 802.1X<ul style="list-style-type: none"><li>- Port base authentication</li><li>- Mac base authentication</li><li>- VLAN Assignment</li><li>- MAB</li><li>- Guest VLAN</li><li>- Support RADIUS authentication and accountability</li></ul></li><li>• AAA (Authentication, Authorization, Accounting (including TACACS+))</li><li>• Port Isolation</li><li>• Secure web management through HTTPS with SSLv3/TLS 1.2</li><li>• Secure Command Line Interface (CLI) management with SSHv1/SSHv2</li><li>• IP/Port/MAC based access control</li></ul> |
| ISP Features | <ul style="list-style-type: none"><li>• 802.3ah Ethernet Link OAM (Operation Administration and Maintenance)</li><li>• L2PT (Layer 2 Protocol Tunneling)</li><li>• DDM (Digital Diagnostic Monitoring)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"><li>• Device Link Detect Protocol (DLDP)</li><li>• PPPoE ID Insertion</li><li>• sFlow</li><li>• ERPS</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Management   | <ul style="list-style-type: none"><li>• Web-based GUI</li><li>• Command Line Interface (CLI) through consoleport, telnet</li><li>• SNMPv1/v2c/v3<ul style="list-style-type: none"><li>- Trap/Inform</li><li>- RMON (1, 2, 3, 9 groups)</li></ul></li><li>• SDM Template</li><li>• DHCP/BOOTP Client</li><li>• 802.1ab LLDP/LLDP-MED</li><li>• DHCP Auto Install</li></ul>                                                                                                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"><li>• Dual Image, Dual Configuration</li><li>• CPU Monitoring</li><li>• Cable Diagnostics</li><li>• IEEE 802.3az Energy Efficient Ethernet (EEE)</li><li>• Password Recovery</li><li>• SNTp</li><li>• System Log</li><li>• Dying Gasp</li><li>• ONVIF</li></ul>                                                                                                                                                                                                                                                                                         |
| IPv6 Support | <ul style="list-style-type: none"><li>• IPv4/IPv6 dual stack</li><li>• Multicast Listener Discovery (MLD) Snooping</li><li>• IPv6 ACL</li><li>• IPv6 Interface</li><li>• Static IPv6 Routing</li><li>• IPv6 neighbor discovery (ND)</li><li>• Path maximum transmission unit (MTU) discovery</li><li>• Internet Control Message Protocol (ICMP) version 6</li><li>• TCPv6/UDPv6</li></ul>                                                                                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"><li>• IPv6 applications<ul style="list-style-type: none"><li>- DHCPv6 Client</li><li>- Ping6</li><li>- Tracert6</li><li>- Telnet (v6)</li><li>- IPv6 SNMP</li><li>- IPv6 SSH</li><li>- IPv6 SSL</li><li>- Http/Https</li><li>- IPv6 TFTP</li></ul></li></ul>                                                                                                                                                                                                                                                                                            |
| MIBs         | <ul style="list-style-type: none"><li>• MIB II (RFC1213)</li><li>• Interface MIB (RFC2233)</li><li>• Ethernet Interface MIB (RFC1643)</li><li>• Bridge MIB (RFC1493)</li><li>• P/Q-Bridge MIB (RFC2674)</li><li>• RMON MIB (RFC2819)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <ul style="list-style-type: none"><li>• RMON2 MIB (RFC2021)</li><li>• RADIUS Accounting Client MIB (RFC2620)</li><li>• RADIUS Authentication Client MIB (RFC2618)</li><li>• Remote Ping, Traceroute MIB (RFC2925)</li><li>• Support TP-Link Private MIB</li></ul>                                                                                                                                                                                                                                                                                                                         |

Others

|                     |                                                                                                                                                                                         |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Package Content     | <ul style="list-style-type: none"><li>• SG3428 Switch</li><li>• Power Cord</li><li>• Console Cable</li><li>• Rackmount Kit</li><li>• Rubber Feet</li><li>• Installation Guide</li></ul> |
| 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                                          |
| SG3428      | Omada Access 24-Port Gigabit Switch with 4 SFP Slots |

| 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  |

| RJ45 SFP Module |                            |
|-----------------|----------------------------|
| Model           | Description                |
| SM331T          | 1000BASE-T RJ45 SFP Module |

| MC Series Media Converter |                                                                     |
|---------------------------|---------------------------------------------------------------------|
| Model                     | Description                                                         |
| 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  |

<sup>†</sup>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.

<sup>^</sup>Some features are available only after upgrading to the latest software version.

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