

# Omada Switch | Datasheet

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## SG2008

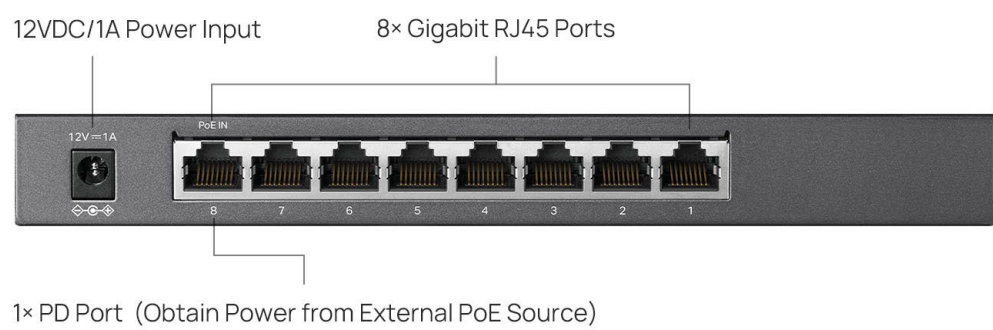
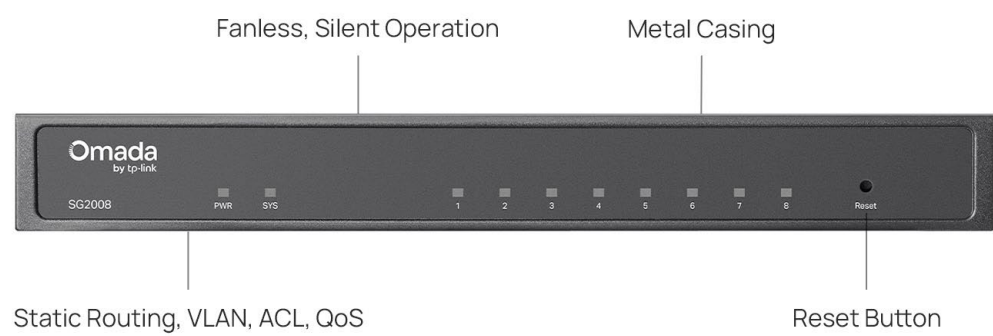
Omada Access 8-Port Gigabit Switch



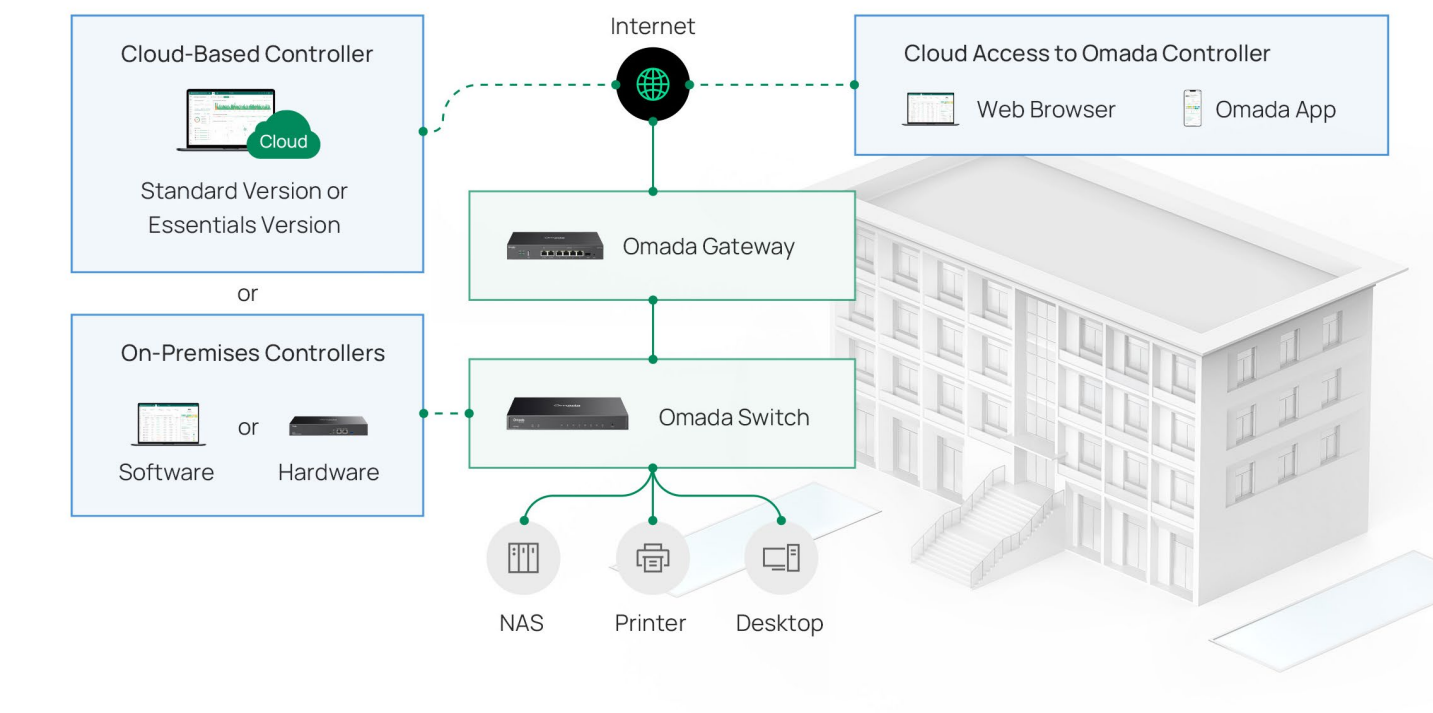
## Highlights

- 8× Gigabit RJ45 ports (1 PD port)
- 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, and IGMP Snooping
- Fanless design for silent operation
- Durable metal casing and desktop/wall mounting design

# Product Picture



# Omada Solution



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



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



**Multi-Site Cloud Management**



**Intelligent Monitoring**

# Specifications

| Hardware Features & Performance |                           |                                                                                                                                                                              |
|---------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                           |                           | SG2008                                                                                                                                                                       |
| General                         | Interface                 | 8 × 10/100/1000Mbps RJ45 Ports                                                                                                                                               |
|                                 | Flash                     | 32 MB                                                                                                                                                                        |
|                                 | DRAM                      | 256 MB                                                                                                                                                                       |
|                                 | Port Standard             | IEEE 802.3: Ethernet Media Access Control (MAC) Protocol<br>IEEE 802.3i:10BASE-T Ethernet<br>IEEE 802.3u:100BASE-X Fast Ethernet<br>IEEE 802.3ab:1000BASE-T Gigabit Ethernet |
| Performance                     | Switching Capacity        | 16 Gbps                                                                                                                                                                      |
|                                 | Packet Forwarding Rate    | 11.90 Mpps                                                                                                                                                                   |
|                                 | MAC Address Table         | 8K                                                                                                                                                                           |
|                                 | Packet Buffer             | 4.1 Mbit                                                                                                                                                                     |
|                                 | Transmission Method       | Store and Forward                                                                                                                                                            |
|                                 | Number of IP Interfaces   | 32                                                                                                                                                                           |
|                                 | Number of Static Routers  | 32 (IPv4, IPv6)                                                                                                                                                              |
|                                 | Jumbo Frame               | 9 KB                                                                                                                                                                         |
| Physical & Environment          | Power Supply              | 12 VDC/1 A External Adapter or Obtain Power from PoE Source                                                                                                                  |
|                                 | Max Power Consumption     | 6.4 W (220 V/50 Hz)<br>6.2 W (110 V/60 Hz)                                                                                                                                   |
|                                 | Standby Power Consumption | 2.0 W (220 V/50 Hz)<br>2.0 W (110 V/60 Hz)                                                                                                                                   |
|                                 | Max Heat Dissipation      | 21.73 BTU/hr (220 V/50 Hz)<br>21.15 BTU/hr (110 V/60 Hz)                                                                                                                     |
|                                 | Fan Quantity              | Fanless                                                                                                                                                                      |
|                                 | Surge Protection          | Service port: ±6 kV in common mode                                                                                                                                           |
|                                 | ESD Protection            | Air: ±8.5 kV, Contact: ±4.5 kV                                                                                                                                               |
|                                 | MTBF                      | 1821547 h @ 25 °C                                                                                                                                                            |
|                                 | Dimensions (W x D x H)    | 8.2 × 4.9 × 1.0 in (209 × 126 × 26 mm)                                                                                                                                       |
|                                 | Net Weight                | 0.58 kg (1.28 lbs)                                                                                                                                                           |
|                                 | Installation              | Desktop/Wall-Mounting                                                                                                                                                        |
|                                 | Operating Temperature     | -5 °C to 40 °C (23 °F to 104 °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        | SG2008                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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>• 32 IPv4/IPv6 Interfaces</li> <li>• Static Routing <ul style="list-style-type: none"> <li>- 32 IPv4/IPv6 Static Routes</li> </ul> </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>                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>• Static ARP</li> <li>• Proxy ARP</li> <li>• Gratuitous ARP</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</li> </ul> </li> <li>• Loopback Detection <ul style="list-style-type: none"> <li>- Port based</li> <li>- VLAN based</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Flow Control <ul style="list-style-type: none"> <li>- 802.3x Flow Control</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>- Flow-Based</li> <li>- Ingress/Egress/Both</li> </ul> </li> <li>• Device Link Detect Protocol (DLDP)</li> <li>• 802.1ab LLDP/ LLDP-MED</li> </ul> |
| L2 Multicast | <ul style="list-style-type: none"> <li>• Supports 511 (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>- Static Group Config</li> </ul> </li> <li>• Multicast VLAN Registration (MVR)</li> <li>• Multicast Filtering</li> </ul>                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>• Multicast Listener Discovery (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> </ul> </li> <li>• Limited IP Multicast <ul style="list-style-type: none"> <li>- 256 profiles and 16 entries per profile</li> </ul> </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 (12 entries)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>• Protocol VLAN (IEEE 802.1v)</li> <li>• GVRP</li> <li>• Voice VLAN</li> </ul>                                                                                                                                                                                                                                                                                                                         |
| QoS          | <ul style="list-style-type: none"> <li>• 802.1p CoS/DSCP priority</li> <li>• 8 priority queues</li> <li>• Priority Schedule Mode <ul style="list-style-type: none"> <li>- Strict Priority (SP)</li> <li>- Weighted Round Robin (WRR)</li> </ul> </li> <li>• Queue Weight Config</li> </ul>                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• Bandwidth Control <ul style="list-style-type: none"> <li>- Port/Flow based Rating Limit</li> </ul> </li> <li>• Smoother Performance</li> <li>• Storm Control <ul style="list-style-type: none"> <li>- Multiple Control Modes (kbps/ratio)</li> <li>- Broadcast/Multicast/Unknown-Unicast Control</li> </ul> </li> </ul>                                                                              |

## Software Features<sup>^</sup>

| Model        | SG2008                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| ACL          | <ul style="list-style-type: none"> <li>• Support up to 230 entries</li> <li>• Time-Range <ul style="list-style-type: none"> <li>- Time Slice</li> <li>- Week Time-Range</li> <li>- Absolute Time-Range</li> <li>- Holiday</li> </ul> </li> <li>• Time-based ACL</li> <li>• MAC ACL <ul style="list-style-type: none"> <li>- Source MAC</li> <li>- Destination MAC</li> </ul> </li> <li>- VLAN ID</li> <li>- User Priority</li> <li>- Ether Type</li> <li>• IP ACL <ul style="list-style-type: none"> <li>- Source IP</li> <li>- Destination IP</li> <li>- IP Protocol</li> <li>- TCP Flag</li> <li>- TCP/UDP Source Port</li> <li>- TCP/UDP Destination Port</li> <li>- DSCP/IP TOS</li> </ul> </li> </ul>                                                                            |  |
| Security     | <ul style="list-style-type: none"> <li>• Authentication, Authorization, Accounting (AAA)</li> <li>• 802.1X <ul style="list-style-type: none"> <li>- Port based authentication</li> <li>- MAC (Host) based authentication</li> <li>- Authentication Method includes PAP/EAP-MD5</li> <li>- MAB</li> <li>- Guest VLAN</li> <li>- Support Radius authentication and accountability</li> </ul> </li> <li>• IP/IPv6-MAC Binding <ul style="list-style-type: none"> <li>- 512 Binding Entries</li> <li>- DHCP Snooping</li> <li>- DHCPv6 Snooping</li> <li>- Dynamic ARP Inspection (DAI)</li> <li>- ND Detection</li> <li>- ND Snooping</li> </ul> </li> <li>• IP Source Guard <ul style="list-style-type: none"> <li>- 253 Entries</li> <li>- Source IP+Source MAC</li> </ul> </li> </ul> |  |
| IPv6 Support | <ul style="list-style-type: none"> <li>• IPv6 Static Routing and ACL</li> <li>• IPv4/IPv6 Dual Stack</li> <li>• IPv6 Interface</li> <li>• MLD Snooping</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>                                                                                                                                                                                                                                                                                                                                                                                                                              |  |

| Software Features <sup>^</sup> |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                    |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                          | SG2008                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                    |
| Management                     | <ul style="list-style-type: none"> <li>• Web-based GUI</li> <li>• Command Line Interface (CLI) through telnet</li> <li>• SNMPv1/v2c/v3</li> <li>• SNMP Trap/Inform</li> <li>• RMON (1,2,3,9 groups)</li> <li>• SDM Template</li> <li>• DHCP/BOOTP Client</li> <li>• Dual Image, Dual Configuration</li> </ul> | <ul style="list-style-type: none"> <li>• CPU Monitoring</li> <li>• Cable Diagnostics</li> <li>• IEEE 802.1az Energy Efficient Ethernet (EEE)</li> <li>• SNTP</li> <li>• System Log</li> <li>• ONVIF</li> </ul>                     |
| MIBs                           | <ul style="list-style-type: none"> <li>• MIB II (RFC1213)</li> <li>• Bridge MIB (RFC1493)</li> <li>• P/Q-Bridge MIB (RFC2674)</li> <li>• Radius Accounting Client MIB (RFC2620)</li> </ul>                                                                                                                    | <ul style="list-style-type: none"> <li>• Radius Authentication Client MIB (RFC2618)</li> <li>• Remote Ping, Traceroute MIB (RFC2925)</li> <li>• Support TP-Link private MIBs</li> <li>• RMON MIB(RFC1757, rmon 1,2,3,9)</li> </ul> |

| Others              |                                                                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Package Content     | <ul style="list-style-type: none"> <li>• SG2008 Switch</li> <li>• Power Adapter</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                        |
| SG2008      | Omada Access 8-Port Gigabit Switch |

| 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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