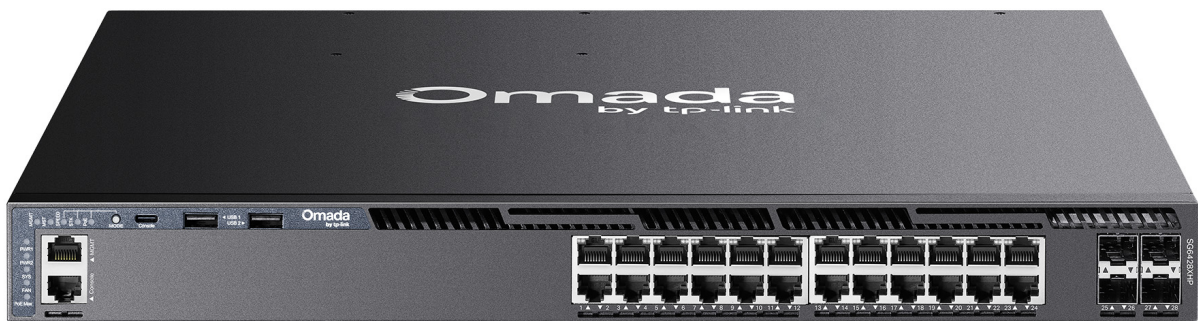


# Omada Switch | Datasheet

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## SG6428XHP

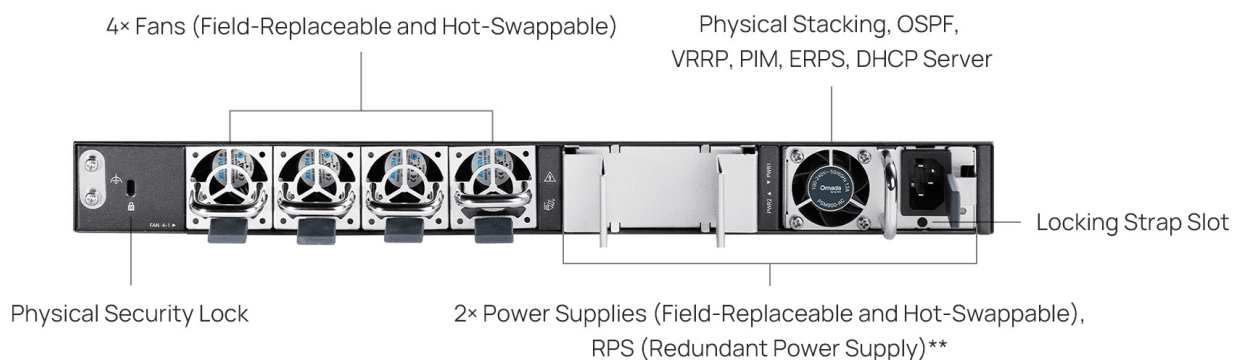
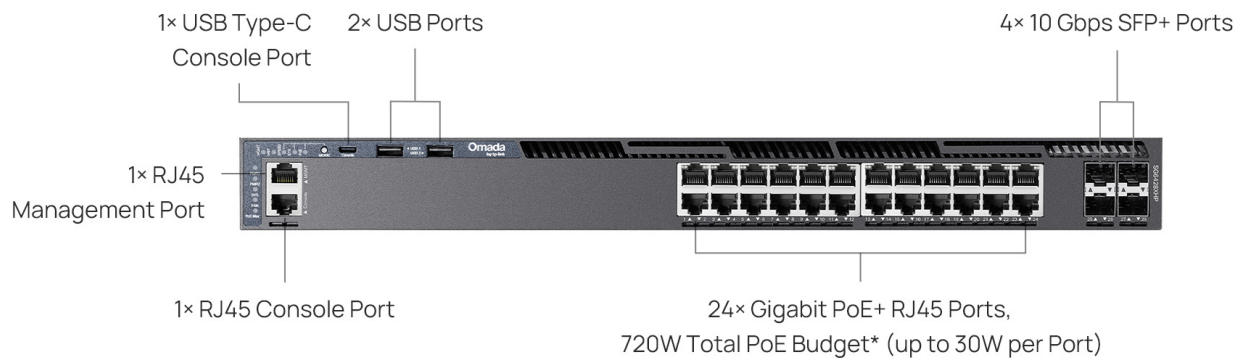
Omada 24-Port Gigabit Stackable L3 Managed PoE+ Switch with 4× 10G Slots



## Highlights

- 24× Gigabit RJ45 PoE+ ports
- 4× 10 Gbps SFP+ slots
- Up to 720W total PoE budget\*
- Fast PoE and Perpetual PoE
- Physical Stacking up to 8 units for built-in redundancy and performance\*\*\*
- L3 features: RIP, OSPF, ECMP, VRRP, PIM-DM, PIM-SM, and DHCP Server/Relay
- Security Strategies: ACL, Port Security, DoS Defend, 802.1X
- Highly Available with two field-replaceable power supplies,\*\* VRRP, and ERPS
- Centralized cloud management via the Omada SDN controller
- Standalone management via web, CLI, SNMP, and RMON

# Product Pictures



\*The total PoE budget varies with the power supply modules.

\*\*Ships with one PSM500-AC module by default, and another field-replaceable redundant power supply requires a separate purchase.

\*\*\*Physical stacking up to 8 units at standalone mode and 4 units at controller mode.

# Specifications

| Hardware Features & Performance |                                  |                                                                                                                                                                                     |
|---------------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                           |                                  | SG6428XHP                                                                                                                                                                           |
| General                         | Interface                        | 24× 10/100/1000 Mbps PoE+ RJ45 Ports<br>4× 10G SFP+ Slots <sup>†</sup>                                                                                                              |
|                                 | Console Ports                    | 1 × RJ45 + 1 × USB Type-C                                                                                                                                                           |
|                                 | Management Port                  | 1 × RJ45                                                                                                                                                                            |
|                                 | USB Ports                        | 2 × USB 2.0                                                                                                                                                                         |
|                                 | Flash                            | 2×4 MB Nor + 8,192 MB EMMC                                                                                                                                                          |
|                                 | DRAM                             | 4,096 MB DDR4                                                                                                                                                                       |
|                                 | Processor                        | Dual-core ARM @1.5GHz CPU                                                                                                                                                           |
| PoE                             | PoE Standard                     | 802.3af/at, support perpetual PoE and fast PoE                                                                                                                                      |
|                                 | PoE Ports                        | 24                                                                                                                                                                                  |
|                                 | PoE Power Budget                 | 402 W (with 1*PSM500-AC, by default)<br>720 W (with 1*PSM900-AC)<br>720 W (with 2*PSM500-AC)<br>720 W (with 2*PSM900-AC)<br>720 W (with 1*PSM500-AC and 1*PSM900-AC)                |
|                                 | PoE Pinout                       | Alternative A, 1/2(-) & 3/6(+)                                                                                                                                                      |
|                                 | Fast PoE                         | Yes                                                                                                                                                                                 |
|                                 | Perpetual PoE                    | Yes                                                                                                                                                                                 |
|                                 | PoE Extend                       | Yes (setting the copper port speed to 10 Mbps)                                                                                                                                      |
| Performance                     | Switching Capacity               | 128 Gbps                                                                                                                                                                            |
|                                 | Forwarding Bandwidth             | 64 Gbps                                                                                                                                                                             |
|                                 | MAC Address Table                | Max 32K                                                                                                                                                                             |
|                                 | Hardware Routes Entries          | Max 10,240                                                                                                                                                                          |
|                                 | Packet Forwarding Rate           | 95.2 Mpps                                                                                                                                                                           |
|                                 | Packet Buffer                    | 24 Mbit                                                                                                                                                                             |
|                                 | Stacking Port                    | 10G SFP+ slot* (all uplink ports can be used as stacking ports)                                                                                                                     |
|                                 | Max Stacking Number              | 8 in standalone mode, 4 in controller mode                                                                                                                                          |
|                                 | Stacking Bandwidth               | Up to 80 Gbps (4 stacking ports)                                                                                                                                                    |
|                                 | Compatible Model for Stacking    | SG6428X, SG6654X, SG6428XHP, SG6654XHP                                                                                                                                              |
|                                 | Transmission Method              | Store and Forward                                                                                                                                                                   |
|                                 | Jumbo Frame                      | 9 KB                                                                                                                                                                                |
| Physical & Environment          | Power Supply                     | 100-240 V ~50/60 Hz                                                                                                                                                                 |
|                                 | Redundant Power Supply           | Max 2 hot swappable power supply module, N+1 redundant (shipped with one PSM500-AC module by default) <sup>††</sup>                                                                 |
|                                 | Suitable Power Supply Module     | PSM500-AC, PSM900-AC                                                                                                                                                                |
|                                 | Max Power Consumption            | 42.9 W (110 V/60 Hz) (With no PD connected)<br>916.6 W (110 V/60 Hz) (With 720W PD connected and powered by 2× PSM500-AC)                                                           |
|                                 | Max Heat Dissipation             | 146.29 BTU/hr (110 V/60 Hz) (With no PD connected)<br>3,125.61 BTU/hr (110 V/60 Hz) (With 720W PD connected and powered by 2× PSM500-AC)                                            |
|                                 | Standby Power Consumption        | 32.0 W (220 V/50 Hz)                                                                                                                                                                |
|                                 | Noise                            | 1× PSM500-AC power supply module:<br>Min: 35.2 dBA @1m 25 °C<br>Max: 55.2 dBA @1m 25 °C<br>2× PSM500-AC power supply modules:<br>Min: 39.2 dBA @1m 25 °C<br>Max: 57.4 dBA @1m 25 °C |
|                                 | Fan Quantity                     | 4 hot swappable fan trays (shipped by default), N+1 redundant                                                                                                                       |
|                                 | Airflow                          | Front-to-back                                                                                                                                                                       |
|                                 | Surge Protection                 | Service port: ±6 kV in common mode<br>Power port: ±6 kV in differential mode; ±6 kV in common mode                                                                                  |
|                                 | ESD Protection                   | Air: ±15 kV, Contact: ±8 kV                                                                                                                                                         |
|                                 | MTBF                             | 753,531 h @ 25 °C                                                                                                                                                                   |
|                                 | Dimensions (W x D x H)           | 17.3 × 16.5 × 1.7 in (440 × 420 × 44 mm)                                                                                                                                            |
|                                 | Net Weight                       | 7.64 kg (16.84 lbs)                                                                                                                                                                 |
|                                 | Installation                     | Rackmount                                                                                                                                                                           |
|                                 | Operating Temperature & Altitude | -5 °C to 45 °C (23 °F to 113 °F) @ 2,000 meters<br>-5 °C to 40 °C (23 °F to 104 °F) @ 3,000 meters <sup>†††</sup>                                                                   |
|                                 | 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                                                                                                                                                                             |

<sup>†</sup>No more than two 10G RJ45 SFP+ modules are supported, and they can only be inserted into SFP+ slots 49&53.  
<sup>††</sup>An additional power supply module needs to be purchased separately.  
<sup>†††</sup>The supported altitude is sea level to 5,000 m. It should be noted that when the altitude is above 2,000 m, for every 220 meters of altitude increase, the maximum operating temperature will drop by 1°C (1.8°F).

| Software Features^ |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model              |                 | SG6428XHP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| System             | System Info     | <ul style="list-style-type: none"><li>• Device Description<ul style="list-style-type: none"><li>- Name</li><li>- Location</li><li>- System Contact</li></ul></li><li>• System Time<ul style="list-style-type: none"><li>- Manual</li><li>- Synchronize with PC's Clock</li><li>- SNTP Client</li></ul></li><li>• DST<ul style="list-style-type: none"><li>- Predefined Mode</li><li>- Recurring Mode</li><li>- Date Mode</li></ul></li></ul>                                                                        | <ul style="list-style-type: none"><li>• LED<ul style="list-style-type: none"><li>- LED on/off</li></ul></li><li>• System IP<ul style="list-style-type: none"><li>- Static IP/DHCP/BOOTP</li></ul></li><li>• System IPv6<ul style="list-style-type: none"><li>- Link-local Address Config</li><li>- Global Address Autoconfig via RA Message</li><li>- Global Address Autoconfig via DHCPv6 Server</li><li>- Add a Global Address Manually</li></ul></li></ul>                        |
|                    | User Management | <ul style="list-style-type: none"><li>• User Settings</li><li>• Access Level: 4 levels</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"><li>• Password Recorvery Settings</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                        |
|                    | System Tools    | <ul style="list-style-type: none"><li>• Config Restore/Backup<ul style="list-style-type: none"><li>- Web: HTTP</li><li>- CLI: TFTP/Flash/USB</li></ul></li><li>• Firmware Upgrade<ul style="list-style-type: none"><li>- Web: HTTP</li><li>- CLI: TFTP/Flash/USB</li></ul></li></ul>                                                                                                                                                                                                                                | <ul style="list-style-type: none"><li>• System Reboot</li><li>• System Reset</li><li>• Boot Config (Dual Image)</li><li>• Reboot Schedule</li></ul>                                                                                                                                                                                                                                                                                                                                  |
|                    | Access Security | <ul style="list-style-type: none"><li>• Access Control Config<ul style="list-style-type: none"><li>- IP-based</li><li>- MAC-based</li><li>- Port-based</li><li>- IPv6-based</li></ul></li><li>• HTTP Config<ul style="list-style-type: none"><li>- Enable/Disable</li><li>- Session Config</li><li>- Access User Number</li><li>- Port Setting</li></ul></li><li>• SSL Config<ul style="list-style-type: none"><li>- SSLv3/TLSv1 Enable/Disable</li><li>- CipherSuite Config</li><li>- IPv6 SSL</li></ul></li></ul> | <ul style="list-style-type: none"><li>• SSH Config<ul style="list-style-type: none"><li>- Enable/Disable</li><li>- v2</li><li>- Encryption Algorithm</li><li>- Data Integrity Algorithm</li><li>- Port Setting</li><li>- IPv6 SSH</li></ul></li><li>• Telnet Config<ul style="list-style-type: none"><li>- Enable/Disable</li><li>- Port Setting</li><li>- IPv6 Telnet</li></ul></li><li>• Console Port<ul style="list-style-type: none"><li>- Baud Rate setting</li></ul></li></ul> |
|                    | Stack           | <ul style="list-style-type: none"><li>• Stack Setting</li><li>• Stack-port LAG: up to 4 groups, each group supports a maximum of all stackable-ports</li><li>• Stackable Devices: up to 8 devices</li></ul>                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"><li>• Stack MAC Address Switching Delay</li><li>• Multi-active Detection (MAD)</li><li>• Virtual MAC</li></ul>                                                                                                                                                                                                                                                                                                                                     |
|                    | SDM Template    | <ul style="list-style-type: none"><li>• Dynamic SDM Template<sup>§</sup><ul style="list-style-type: none"><li>- IPv4 ACL Rules: 4,000 Max</li><li>- MAC ACL Rules: 4,500 Max</li><li>- Combined ACL Rules: 2,000 Max</li><li>- IPv6 ACL Rules: 1,000 Max</li><li>- IPv4 Source Guard: 6,100 Max</li><li>- IPv6 Source Guard: 2,000 Max</li></ul></li></ul>                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                    | Time Range      | <ul style="list-style-type: none"><li>• Time Range Config</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"><li>• Holiday Config</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                    | PTP             | <ul style="list-style-type: none"><li>• Profile: IEEE 1588v2 (PTPv2), IEEE 802.1AS</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"><li>• Clock-type: oc, bc, e2etc, p2ptc</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                   |
|                    | File System     | <ul style="list-style-type: none"><li>• File Operation</li><li>• FTP</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"><li>• TFTP</li><li>• USB Storage</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                         |

Software Features^

| Model       |                                     | SG6428XHP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| L2 Features | Port                                | <ul style="list-style-type: none"><li>• Auto Negotiation/Auto MDI/MDIX</li><li>• Port config<ul style="list-style-type: none"><li>- Status</li><li>- Speed and Duplex</li><li>- Flow Control (802.3x)</li><li>- Jumbo Frame: 1,518-9,216 KB</li></ul></li><li>• Port Mirror<ul style="list-style-type: none"><li>- Ingress (Many to One)</li><li>- Egress (Many to One)</li><li>- RSPAN</li></ul></li></ul>                                                                                                                                                                                     | <ul style="list-style-type: none"><li>• Port Security<ul style="list-style-type: none"><li>- Learn mode: Dynamic/Static/Permanent/Sticky</li><li>- Port Max Learned MAC: 64</li><li>- Current Learned Number</li><li>- Status</li><li>- Exceed Max Learned Trap</li></ul></li><li>• Port Isolation</li><li>• Loopback Detection<ul style="list-style-type: none"><li>- Alert</li><li>- Port Based</li><li>- VLAN Based</li></ul></li></ul>                                                                           |
|             | Digital Diagnostic Monitoring (DDM) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|             | LAG                                 | <ul style="list-style-type: none"><li>• Hash Algorithm: SRC MAC/DST MAC/SRC MAC + DST MAC/SRC IP/DST IP/SRC IP + DST IP</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"><li>• Static LAG: Up to 64 groups, up to 8 ports per group</li><li>• LACP (802.3ad)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                      |
|             | Traffic Monitor                     | <ul style="list-style-type: none"><li>• TX Packets/Bytes</li><li>• RX Packets/Bytes</li><li>• TX Unicast/Multicast/Broadcast</li><li>• RX Unicast/Multicast/Broadcast</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"><li>• TX Jumbo</li><li>• RX Jumbo</li><li>• TX Errors</li><li>• RX Errors</li><li>• TX/RX Packet Size Analysis</li></ul>                                                                                                                                                                                                                                                                                                                                                           |
|             | MAC Address                         | <ul style="list-style-type: none"><li>• MAC Address Table: Max 32K entries</li><li>• IVL/SVL: IVL</li><li>• Create Static Unicast Address</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"><li>• Bind Dynamic Address</li><li>• Create Filtering Address</li><li>• MAC Notification Settings</li></ul>                                                                                                                                                                                                                                                                                                                                                                        |
|             | VLAN                                | <ul style="list-style-type: none"><li>• 802.1Q VLAN (802.1q): 4K VLANs</li><li>• MAC VLAN: 256 entries</li><li>• Protocol VLAN (IEEE 802.1v)<ul style="list-style-type: none"><li>- 16 Protocol VLAN Templates</li><li>- 12 Protocol VLAN Groups</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"><li>• QinQ(VLAN VPN): 256 entries</li><li>• Private VLAN (RFC 5517)</li><li>• GVRP</li></ul>                                                                                                                                                                                                                                                                                                                                                                                       |
|             | L2 Multicast                        | <ul style="list-style-type: none"><li>• Max Multicast Groups: 4,093 (IGMP Snooping &amp; MLD Snooping &amp; MVR)</li><li>• IGMP Snooping<ul style="list-style-type: none"><li>- IGMP V1/V2/V3</li><li>- Report Message Suppression</li><li>- Fast Leave</li><li>- Unknown Multicast Discard</li><li>- Static Multicast Groups</li><li>- IGMP Snooping Querier</li><li>- IGMP Packet Statistics</li><li>- IGMP Authentication</li><li>- Multicast Filtering: 256 profiles and 16 entries per profile</li><li>- Router Port Setting: Static Router Port/Forbidden Router Port</li></ul></li></ul> | <ul style="list-style-type: none"><li>• Multicast Listener Discovery (MLD) Snooping<ul style="list-style-type: none"><li>- MLD V1/V2</li><li>- Report Message Suppression</li><li>- Unknown Multicast Discard</li><li>- Fast Leave</li><li>- Static Multicast Groups</li><li>- MLD Snooping Querier</li><li>- MLD Packet Statistics</li><li>- Multicast Filtering: 256 profiles and 16 entries per profile</li><li>- Router Port Setting: Static Router Port/Forbidden Router Port</li></ul></li><li>• MVR</li></ul> |
|             | STP                                 | <ul style="list-style-type: none"><li>• STP (802.1d)</li><li>• RSTP (802.1w)</li><li>• MSTP (802.1s)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"><li>• STP Security<ul style="list-style-type: none"><li>- Loop Protect</li><li>- Root Protect</li><li>- TC Protect</li><li>- BPDU Protect</li><li>- BPDU Filter</li></ul></li></ul>                                                                                                                                                                                                                                                                                                |
|             | LLDP (802.1ab)                      | <ul style="list-style-type: none"><li>• Local Info</li><li>• Neighbor Info</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"><li>• Statistic Info</li><li>• LLDP-MED</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|             | Layer 2 Protocol Tunneling (L2PT)   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|             | PPPoE ID Insertion                  | <ul style="list-style-type: none"><li>• Circuit-ID Type</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"><li>• Remote-ID</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|             | ERPS                                | <ul style="list-style-type: none"><li>• V1&amp;V2</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <ul style="list-style-type: none"><li>• Ring: 32</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|             | Virtual MAC                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|             | Sticky MAC                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Software Features^

| Model       |                                                                                                                                        | SG6428XHP                                                                                                                      |                                                                                                  |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| L3 Features | IPv4 Interfaces: 4,094<br>IPv6 Interfaces: 4,094                                                                                       |                                                                                                                                |                                                                                                  |
|             | IPv4 Static Routes: 1,024 (shared with IPv6 Static Routes)<br>IPv6 Static Routes: 512 (shared with IPv4 Static Routes)                 |                                                                                                                                |                                                                                                  |
|             | IPv4 Host Routes: 8,000 (shared with IPv6 Host Routes)<br>IPv6 Host Routes: 8,000 (shared with IPv4 Host Routes)                       |                                                                                                                                |                                                                                                  |
|             | IPv4 Network Routes: Max 10,240 (shared with IPv6 Network Routes)<br>IPv6 Network Routes: Max 10,240 (shared with IPv4 Network Routes) |                                                                                                                                |                                                                                                  |
|             | ECMP                                                                                                                                   | • Max ECMP Routes: 256<br>• Max ECMP Nexhops per Destination: 32                                                               |                                                                                                  |
|             | ARP                                                                                                                                    | • Static ARP: 512<br>• Dynamic ARP: 12,288 (shared with ND)                                                                    |                                                                                                  |
|             | ND: 12,288 (shared with ARP)                                                                                                           |                                                                                                                                |                                                                                                  |
|             | DHCPv4                                                                                                                                 | • DHCPv4 Server<br>- IP Pools: 64<br>- Max Leases: 8,000<br>- Manual Binding Entries: 1,000<br>- Exclude IP range Entries: 100 | • DHCPv4 Relay<br>• DHCPv4 L2 Relay                                                              |
|             | DHCPv6                                                                                                                                 | • DHCPv6 Server<br>- IP Pools: 64<br>- Max Leases: 8,000<br>- Manual Binding Entries: 64<br>- Exclude IP range Entries: 64     | • PD Server<br>• DHCPv6 Relay<br>• DHCPv6 L2 Relay                                               |
|             | VRRP                                                                                                                                   | • VRRP V2/V3<br>• VRRP Instance: 64<br>• VRRP Virtual IP: 32 per instance                                                      |                                                                                                  |
|             | OSPF                                                                                                                                   | • OSPFv2<br>- OSPF Process: 16                                                                                                 | • OSPFv3<br>- OSPFv3 Instance: 1                                                                 |
|             | RIP                                                                                                                                    | • RIPv1/v2                                                                                                                     | • RIPng                                                                                          |
|             | VRF                                                                                                                                    | • VRF Instance: 1,024                                                                                                          |                                                                                                  |
|             | PIM                                                                                                                                    | • PIM-DM (IPv4)<br>• PIM-SM (IPv4)<br>• PIM-SSM (IPv4)                                                                         | • IPv4 Multicast Route entries: 1,024                                                            |
|             | IGMP                                                                                                                                   | • Version: v1/v2/v3                                                                                                            | • IGMP Groups: 2,048                                                                             |
|             | PBR                                                                                                                                    |                                                                                                                                |                                                                                                  |
| QoS         | Class of Service                                                                                                                       | • Priority Queues: 8 Queues<br>• Port Priority<br>• 802.1P Priority<br>• DSCP/ToS Priority                                     | • Priority Schedule Mode: SP/WRR per Queue<br>• Queue Weight Config: For WRR/ SP+WRR Mode        |
|             | Bandwidth Control                                                                                                                      | • Rate Limit<br>- Ingress Rate Limit<br>- Egress Rate Limit<br>- Rate Limit Grade: 64kbps                                      | • Storm Control<br>- Control Mode: kbps/ratio<br>- Broadcast<br>- Multicast<br>- Unknown Unicast |
|             | Voice VLAN                                                                                                                             | • OUI entries: 64                                                                                                              |                                                                                                  |

| Software Features <sup>^</sup> |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                              |
|--------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                          |                                                 | SG6428XHP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                              |
| Network Security               | IP-MAC Binding                                  | <ul style="list-style-type: none"><li>• Binding entries: 8,192 entries</li><li>• Manual Binding</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"><li>• ARP Scanning</li><li>• DHCP Snooping</li></ul>                                                                                                                                                                                       |
|                                | IPv6-MAC Binding                                | <ul style="list-style-type: none"><li>• Binding entries: 8,192 entries</li><li>• Manual Binding</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"><li>• DHCPv6 Snooping</li><li>• ND Snooping</li></ul>                                                                                                                                                                                      |
|                                | ARP Inspection                                  | <ul style="list-style-type: none"><li>• ARP Detect entries: 8,192 entries</li><li>• Dynamic ARP Inspection (DAI)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"><li>• ARP Defend</li><li>• ARP Statistics</li></ul>                                                                                                                                                                                        |
|                                | ND Detection                                    | <ul style="list-style-type: none"><li>• ND Detection entries: 8,192 entries</li><li>• ND Detect</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"><li>• ND Statistics</li></ul>                                                                                                                                                                                                              |
|                                | IP Source Guard                                 | <ul style="list-style-type: none"><li>• IP Source Guard entries<ul style="list-style-type: none"><li>– Dynamic SDM Template: 6,100 Max</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"><li>• Security Type<ul style="list-style-type: none"><li>- Source IP</li><li>- Source IP + Source MAC</li></ul></li></ul>                                                                                                                  |
|                                | IPv6 Source Guard                               | <ul style="list-style-type: none"><li>• IPv6 Source Guard entries<ul style="list-style-type: none"><li>– Dynamic SDM Template: 2,000 Max</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"><li>• Security Type<ul style="list-style-type: none"><li>- Source IPv6</li><li>- Source IPv6 + Source MAC</li></ul></li></ul>                                                                                                              |
|                                | RA Guard: 30 entries                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                              |
|                                | DoS Defend                                      | <ul style="list-style-type: none"><li>• Scan SYNFIN</li><li>• Xmascan</li><li>• NULL Scan</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"><li>• SYN sPort less 1,024</li><li>• Ping Flooding</li><li>• SYN/SYN-ACK Flooding</li></ul>                                                                                                                                                |
|                                | DHCP Filter                                     | <ul style="list-style-type: none"><li>• DHCPv4 Filter<ul style="list-style-type: none"><li>- Legal Server entries: 200</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"><li>• DHCPv6 Filter<ul style="list-style-type: none"><li>- Legal Server entries: 200</li></ul></li></ul>                                                                                                                                   |
|                                | 802.1x                                          | <ul style="list-style-type: none"><li>• Control Type<ul style="list-style-type: none"><li>- Port Based</li><li>- MAC Based</li></ul></li><li>• Auth Method: PAP/EAP-MD5/EAP-TLS/EAP-TTLS/EAP-PEAP</li><li>• CoA &amp; DM</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"><li>• Radius Authentication</li><li>• Radius Accounting</li><li>• RADSEC</li><li>• Guest VLAN</li><li>• VLAN Assignment</li><li>• MAB</li></ul>                                                                                            |
|                                | Authentication, Authorization, Accounting (AAA) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                              |
|                                | ACL                                             | <ul style="list-style-type: none"><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>• MAC ACL</li><li>• IP ACL</li><li>• Combined ACL</li><li>• IPv6 ACL</li><li>• Rule Operation<ul style="list-style-type: none"><li>- Permit</li><li>- Deny</li></ul></li><li>• Policy Action<ul style="list-style-type: none"><li>- Mirror</li><li>- Rate Limit</li><li>- Redirect</li><li>- QoS Remark</li></ul></li><li>• Binding<ul style="list-style-type: none"><li>- Port Binding</li><li>- VLAN Binding</li></ul></li></ul> | <ul style="list-style-type: none"><li>• Dynamic SDM Template<sup>§</sup><ul style="list-style-type: none"><li>- IPv4 ACL Rules: 4,000 Max</li><li>- IPv6 ACL Rules: 1,000 Max</li><li>- MAC ACL Rules: 4,500 Max</li><li>- Combined ACL Rules: 2,000 Max</li></ul></li></ul> |
|                                | CPP (Control Plane Policing)                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                              |
|                                | MAC Spoofing Defend                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                              |
|                                | MAC Flapping Detection                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                              |

| Software Features^   |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                |                                              | SG6428XHP                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Maintenance          | System Monitor                               | <ul style="list-style-type: none"><li>• CPU Monitor</li><li>• Memory Monitor</li></ul>                                                                                                                                                                                                                                                                                                                                                  |
|                      | sFlow                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                      | OAM                                          | <ul style="list-style-type: none"><li>• EFM<ul style="list-style-type: none"><li>- Link Monitoring</li><li>- Remote Failure Indication Config</li><li>- Statistics</li></ul></li></ul>                                                                                                                                                                                                                                                  |
|                      | DLDP                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                      | SNMP                                         | <ul style="list-style-type: none"><li>• SNMP Version: v1/v2c/v3</li><li>• SNMP Config<ul style="list-style-type: none"><li>- Global Config</li><li>- SNMP View</li><li>- SNMP Group</li><li>- SNMP User</li><li>- SNMP Community</li></ul></li><li>• Notification<ul style="list-style-type: none"><li>- Trap: IPv4/IPv6</li><li>- Inform: IPv4/IPv6</li></ul></li><li>• RMON v1</li><li>• Public MIBs</li><li>• Private MIBs</li></ul> |
|                      | IEEE 802.3az Energy Efficient Ethernet (EEE) |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                      | DHCP Auto Install                            |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                      | Log                                          | <ul style="list-style-type: none"><li>• Display/Filtering</li><li>• Severity Level</li><li>• Save to Flash</li><li>• Remote Host</li><li>• Backup Log</li></ul>                                                                                                                                                                                                                                                                         |
|                      | Network Diagnostics                          | <ul style="list-style-type: none"><li>• Ping</li><li>• IPv6 Ping</li><li>• Tracert</li><li>• IPv6 Tracert</li></ul>                                                                                                                                                                                                                                                                                                                     |
|                      | IntelliRecover (Controller Mode Only)        |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                      | Packet Capture                               |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                      | Syslog (UDP/TCP/DTLS/TLS)                    |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                      | DNS Lookup                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Others               | Index                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                      | Show running config                          | <ul style="list-style-type: none"><li>• Use the show running config command to view device's running status via telnet.</li><li>• Configuration File: Import/Export/Edit</li></ul>                                                                                                                                                                                                                                                      |
| Omada SDN Controller | Omada SDN controller                         |                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Others              |                                                                                                                                                                                                                    |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Package Content     | <ul style="list-style-type: none"><li>• SG6428XHP Switch</li><li>• Power Cord</li><li>• Console Cable</li><li>• Rackmount Kit</li><li>• Rubber Feet</li><li>• Locking Strap</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                                                              |
| SG6428XHP   | Omada 24-Port Gigabit Stackable L3 Managed PoE+ Switch with 4× 10G Slots |

| Power Supply Module |                                   |
|---------------------|-----------------------------------|
| Model               | Description                       |
| PSM500-AC           | Omada 500W AC Power Supply Module |
| PSM900-AC           | Omada 900W AC Power Supply Module |

| 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 |

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

<sup>§</sup>The Dynamic SDM Template provides dynamic resource allocation for ACLs, IPv4 Source Guard, and IPv6 Source Guard, allowing these features to be configured directly without adjusting the template settings.

Some models featured in this guide may be unavailable in your country or region. Visit TP-Link website for local sales information: [www.omadanetworks.com](http://www.omadanetworks.com).

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