

# Omada Lite L3 Managed Switch Datasheet

## SG5428XF

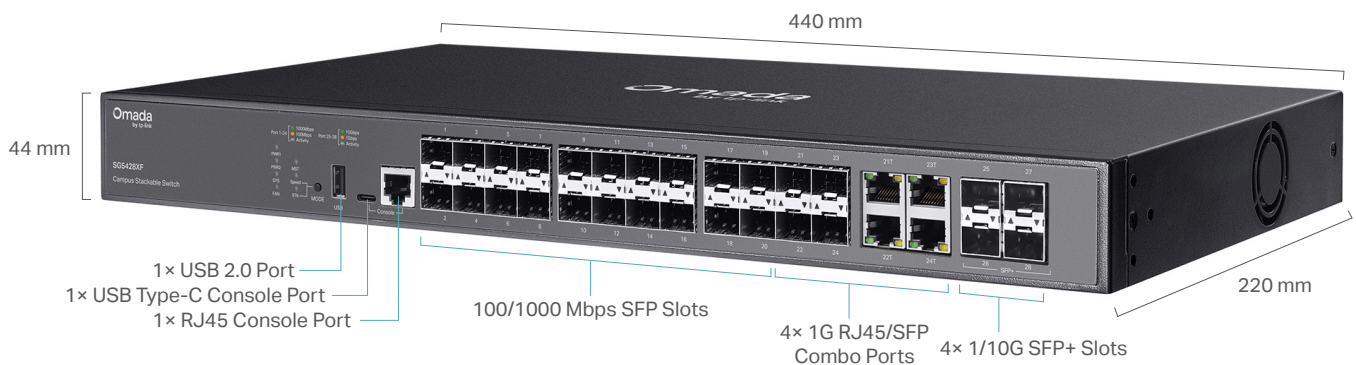
Omada Campus 24-Port SFP Stackable Lite L3 Managed Switch with 4× 10G Slots



## Highlights

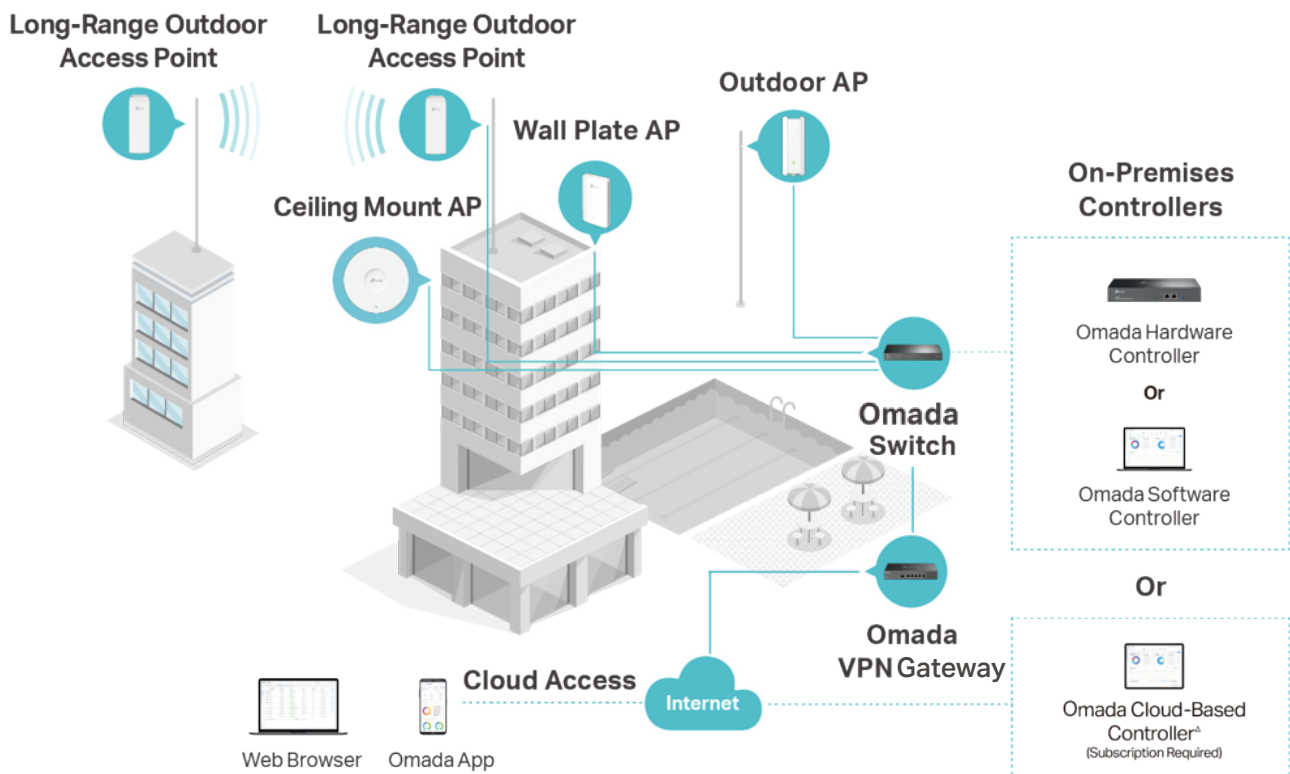
- 20× Gigabit SFP slots and 4× Gigabit RJ45/SFP Combo ports
- 4× 10 Gbps SFP+ slots
- 128 Gbps switching capacity per unit
- Internal two power supplies backing each other up
- Physical stacking up to 4 units for built-in redundancy and performance
- L3 features: RIP, OSPF, Static Routing, and DHCP Server/Relay
- Security strategies: ACL, Port Security, DoS Defend, 802.1X
- ERPS supports rapid protection and recovery in a ring topology
- Centralized cloud management via the Omada SDN controller
- Standalone management via web, CLI, SNMP, and RMON

# Product Pictures



## Omada Solution

Omada's Software Defined Networking (SDN) platform integrates network devices, including access points, switches, and gateways, providing 100% centralized cloud management. Omada creates a highly scalable network—all controlled from a single interface.



Hassle-Free Cloud or On-Premises Controllers



Multi-Site Cloud Management



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



Intelligent Monitoring

# Specifications

| Hardware Features & Performance |                                |                                                                                                    |
|---------------------------------|--------------------------------|----------------------------------------------------------------------------------------------------|
| Model                           |                                | SG5428XF                                                                                           |
| General                         | Interface                      | 20× 100/1000 Mbps SFP Slots<br>4× Gigabit RJ45/SFP Combo Ports<br>4× 1/10 Gbps SFP+ Slots*         |
|                                 | Console Ports                  | 1× RJ45 + 1× USB Type-C                                                                            |
|                                 | USB Ports                      | 1× USB 2.0                                                                                         |
|                                 | Flash                          | 1× 4 MB Nor + 1× 512 MB NAND                                                                       |
|                                 | DRAM                           | 2 GB DDR4                                                                                          |
|                                 | Processor                      | Dual-Core ARM @1.2GHz CPU                                                                          |
| Performance                     | Switching Capacity             | 128 Gbps                                                                                           |
|                                 | Forwarding Bandwidth           | 64 Gbps                                                                                            |
|                                 | Packet Forwarding Rate         | 95.23 Mpps                                                                                         |
|                                 | MAC Address Table              | 16 K                                                                                               |
|                                 | Packet Buffer                  | 12 Mbit                                                                                            |
|                                 | Stacking Port                  | 10G SFP+ slot (all uplink ports can be used as stacking ports)                                     |
|                                 | Stacking Bandwidth             | Up to 80 Gbps (4 stacking ports)                                                                   |
|                                 | Max Stacking Number            | 4                                                                                                  |
|                                 | Compatible Models for Stacking | SG5428XF, SG5428X, SG5428XMPP, SG5452X, SG5452XMPP                                                 |
|                                 | Transmission Method            | Store and Forward                                                                                  |
|                                 | Jumbo Frame                    | 9 KB                                                                                               |
| Physical & Environment          | Power Supply                   | 100-240 V~ 50/60 Hz                                                                                |
|                                 | Max Power Consumption          | 28.3 W (220V/50Hz @ 25 °C)<br>28.98 W (110V/60Hz @ 25 °C)                                          |
|                                 | Max Heat Dissipation           | 96.503 BTU/hr (220V/50Hz @ 25 °C)<br>98.822 BTU/hr (110V/60Hz @ 25 °C)                             |
|                                 | Standby Power Consumption      | 9.51 W (220V/50Hz @ 25 °C)<br>9.45 W (110V/60Hz @ 25 °C)                                           |
|                                 | Fan Quantity                   | 1                                                                                                  |
|                                 | Surge Protection               | Service port: ±6 kV in common mode<br>Power port: ±4 kV in differential mode; ±4 kV in common mode |
|                                 | ESD Protection                 | Air: ±15 kV, Contact: ±8 kV                                                                        |
|                                 | MTBF                           | 428,537 h @ 25 °C<br>393,412 h @ 40 °C                                                             |
|                                 | Dimensions (W x D x H)         | 17.3 × 8.7 × 1.7 in (440 × 220 × 44 mm)                                                            |
|                                 | Installation                   | Rackmount                                                                                          |
|                                 | Operating Temperature          | -5 °C to 45 °C (23 °F to 113 °F)                                                                   |
|                                 | Storage Temperature            | -40 °C to 70 °C (-40 °F to 158 °F)                                                                 |
|                                 | Operation Humidity             | 10% to 90% RH, non-condensing                                                                      |
|                                 | Storage Humidity               | 5% to 90% RH, non-condensing                                                                       |
|                                 | Certification                  | CE, FCC, RoHS                                                                                      |

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

| Software Features |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model             |                 | SG5428XF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 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/USB</li> </ul> </li> <li>• Firmware Upgrade <ul style="list-style-type: none"> <li>- Web: HTTP</li> <li>- CLI: TFTP/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> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>• Stackable Devices: up to 4 devices</li> <li>• Stack MAC Address Switching Delay</li> </ul>                                                                                                                                                                                                                                                                                                                                                                         |
|                   | SDM Template    | <ul style="list-style-type: none"> <li>• Default Template <ul style="list-style-type: none"> <li>- IPv4 ACL Rules: 300 entries</li> <li>- MAC ACL Rules: 600 entries</li> <li>- Combined ACL Rules: 300 entries</li> <li>- IPv6 ACL Rules: 0 entries</li> <li>- IPv4 Source Guard: 127 entries</li> <li>- IPv6 Source Guard: 0 entries</li> </ul> </li> <li>• IPv4 Access <ul style="list-style-type: none"> <li>- IPv4 ACL Rules: 0 entries</li> <li>- MAC ACL Rules: 600 entries</li> <li>- Combined ACL Rules: 600 entries</li> <li>- IPv6 ACL Rules: 0 entries</li> <li>- IPv4 Source Guard: 127 entries</li> <li>- IPv6 Source Guard: 0 entries</li> </ul> </li> <li>• IPv6 Access <ul style="list-style-type: none"> <li>- IPv4 ACL Rules: 0 entries</li> <li>- MAC ACL Rules: 600 entries</li> <li>- Combined ACL Rules: 0 entries</li> <li>- IPv6 ACL Rules: 250 entries</li> <li>- IPv4 Source Guard: 0 entries</li> <li>- IPv6 Source Guard: 127 entries</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Omada <ul style="list-style-type: none"> <li>- IPv4 ACL Rules: 0 entries</li> <li>- MAC ACL Rules: 0 entries</li> <li>- Combined ACL Rules: 400 entries</li> <li>- IPv6 ACL Rules: 200 entries</li> <li>- IPv4 Source Guard: 0 entries</li> <li>- IPv6 Source Guard: 0 entries</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>                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                   | File System     | <ul style="list-style-type: none"> <li>• File Operation</li> <li>• TFTP</li> <li>• USB Storage</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Software Features |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model             |                    | SG5428XF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| L2 Features       | Port               | <ul style="list-style-type: none"><li>• Port config<ul style="list-style-type: none"><li>- Speed and Duplex</li><li>- Flow Control(802.3x)</li><li>- Jumbo Frame: 1518-9216 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>- 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>                                                                                |
|                   | 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</li><li>• LACP (802.3ad)</li><li>• Up to 64 LAGs, up to 8 ports per LAG</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 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: 16K 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: 4K VLANs</li><li>• MAC VLAN: 60 entries</li><li>• Protocol VLAN (IEEE 802.1v)<ul style="list-style-type: none"><li>- 16 Protocol VLAN Template</li><li>- 12 Protocol VLAN Group</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                                                     | <ul style="list-style-type: none"><li>• QinQ(VLAN VPN): 256 entries</li><li>• Private VLAN</li><li>• GVRP</li></ul>                                                                                                                                                                                                                                                                                                                                                     |
|                   | L2 Multicast       | <ul style="list-style-type: none"><li>• Max Multicast Groups: 2000 (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><li>• MVR</li></ul> | <ul style="list-style-type: none"><li>• 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></ul> |
|                   | STP                | <ul style="list-style-type: none"><li>• STP(802.1d)</li><li>• RSTP(802.1w)</li><li>• MSTP(802.1s)</li><li>• MSTI instances: 16</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>                                                                                                                                                                                                                                                                                                                                                                                     |
|                   | 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>• Ring: 16</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                   | Virtual MAC        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                   | Sticky MAC         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Software Features |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model             |                                                                                                                           | SG5428XF                                                                                                                                                                                                                                                                                                                                                                   |
| L3 Features       | IPv4 Interfaces: 128 (shared with IPv6 Interfaces)<br>IPv6 Interfaces: 128 (shared with IPv4 Interfaces)                  |                                                                                                                                                                                                                                                                                                                                                                            |
|                   | IPv4 Static Routes: 512 (shared with IPv6 Static Routes)<br>IPv6 Static Routes: 128 (shared with IPv4 Static Routes)      |                                                                                                                                                                                                                                                                                                                                                                            |
|                   | IPv4 Host Routes: 1024 (shared with IPv4 Host Routes)<br>IPv6 Host Routes: 890 (shared with IPv4 Host Routes)             |                                                                                                                                                                                                                                                                                                                                                                            |
|                   | IPv4 Network Routes: 1796 (shared with IPv6 Network Routes)<br>IPv6 Network Routes: 450 (shared with IPv4 Network Routes) |                                                                                                                                                                                                                                                                                                                                                                            |
|                   | IPv4/IPv6 dual stack                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                            |
|                   | ARP                                                                                                                       | <ul style="list-style-type: none"><li>• Static ARP: 512</li><li>• Dynamic ARP: 3600</li></ul>                                                                                                                                                                                                                                                                              |
|                   | ND: 3600                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                            |
|                   | DHCP                                                                                                                      | <ul style="list-style-type: none"><li>• DHCP Server<ul style="list-style-type: none"><li>- IP Pools: 64</li><li>- Max Leases: 8000</li><li>- Manual Binding Entries: 1000</li><li>- Exclude IP range Entries: 100</li></ul></li><li>• DHCP Relay<ul style="list-style-type: none"><li>• DHCP L2 Relay</li><li>• DHCPv6 Relay</li><li>• DHCPv6 L2 Relay</li></ul></li></ul> |
|                   | OSPF                                                                                                                      | <ul style="list-style-type: none"><li>• OSPFv2<ul style="list-style-type: none"><li>- OSPF Process: 4</li></ul></li><li>• OSPFv3<ul style="list-style-type: none"><li>- OSPFv3 Instance: 1</li></ul></li></ul>                                                                                                                                                             |
| QoS               | RIP                                                                                                                       | <ul style="list-style-type: none"><li>• RIPv1/v2</li><li>• RIPvng</li></ul>                                                                                                                                                                                                                                                                                                |
|                   | Class of Service                                                                                                          | <ul style="list-style-type: none"><li>• Priority Queues: 8 Queues</li><li>• Port Priority</li><li>• 802.1P Priority</li><li>• DSCP/ToS Priority</li><li>• Priority Schedule Mode: SP/WRR per Queue</li><li>• Queue Weight Config: For WRR/SP+WRR Mode</li></ul>                                                                                                            |
|                   | Bandwidth Control                                                                                                         | <ul style="list-style-type: none"><li>• Rate Limit<ul style="list-style-type: none"><li>- Ingress Rate Limit</li><li>- Egress Rate Limit</li><li>- Rate Limit Grade: 64kbps</li></ul></li><li>• Storm Control<ul style="list-style-type: none"><li>- Control Mode: kbps/ratio</li><li>- Broadcast</li><li>- Multicast</li><li>- Unknown Unicast</li></ul></li></ul>        |
|                   | Voice VLAN                                                                                                                | <ul style="list-style-type: none"><li>• OUI entries: 64</li></ul>                                                                                                                                                                                                                                                                                                          |

| Software Features |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model             |                      | SG5428XF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Network Security  | IP-MAC Binding       | <ul style="list-style-type: none"> <li>• Binding entries: 1024 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: 1024 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: 1024 entries</li> <li>• ARP Detect</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: 1024 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</li> <li>- Default SDM Template: 127</li> <li>- IPv4 SDM Template: 127</li> <li>- IPv6 SDM Template: 0</li> </ul>                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>• Security Type</li> <li>- Source IP</li> <li>- Source IP + Source MAC</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                   | IPv6 Source Guard    | <ul style="list-style-type: none"> <li>• IPv6 Source Guard entries</li> <li>- Default SDM Template: 0</li> <li>- IPv4 SDM Template: 0</li> <li>- IPv6 SDM Template: 127</li> </ul>                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>• Security Type</li> <li>- Source IPv6</li> <li>- Source IPv6 + Source MAC</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 1024</li> <li>• Ping Flooding</li> <li>• SYN/SYN-ACK Flooding</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                   | DHCP Filter          | <ul style="list-style-type: none"> <li>• DHCPv4 Filter</li> <li>- Legal Server entries: 200</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>• DHCPv6 Filter</li> <li>- Legal Server entries: 200</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                   | 802.1x               | <ul style="list-style-type: none"> <li>• Control Type</li> <li>- Port Based</li> <li>- MAC Based</li> <li>• Auth Method: PAP/EAP-MD5/EAP-TLS/EAP-TTLS/EAP-PEAP</li> </ul>                                                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>• Radius Authentication</li> <li>• Radius Accounting</li> <li>• Radius Server Load Balancing</li> <li>• RADSEC</li> <li>• Guest VLAN</li> <li>• VLAN Assignment</li> <li>• MAB</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                   | AAA                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                   | ACL                  | <ul style="list-style-type: none"> <li>• Time-Range</li> <li>- Time Slice</li> <li>- Week Time-Range</li> <li>- Absolute Time-Range</li> <li>- Holiday</li> <li>• MAC ACL</li> <li>• IP ACL</li> <li>• Combined ACL</li> <li>• IPv6 ACL</li> <li>• Rule Operation</li> <li>- Permit</li> <li>- Deny</li> <li>• Policy Action</li> <li>- Mirror</li> <li>- Rate Limit</li> <li>- Redirect</li> <li>- QoS Remark</li> <li>• Binding</li> <li>- Port Binding</li> <li>- VLAN Binding</li> </ul> | <ul style="list-style-type: none"> <li>• Default Template</li> <li>- IPv4 ACL Rules: 300 entries</li> <li>- MAC ACL Rules: 600 entries</li> <li>- Combined ACL Rules: 300 entries</li> <li>- IPv6 ACL Rules: 0 entries</li> <li>• IPv4 Access</li> <li>- IPv4 ACL Rules: 0 entries</li> <li>- MAC ACL Rules: 600 entries</li> <li>- Combined ACL Rules: 600 entries</li> <li>- IPv6 ACL Rules: 0 entries</li> <li>• IPv6 Access</li> <li>- IPv4 ACL Rules: 0 entries</li> <li>- MAC ACL Rules: 600 entries</li> <li>- Combined ACL Rules: 0 entries</li> <li>- IPv6 ACL Rules: 250 entries</li> <li>• Omada</li> <li>- IPv4 ACL Rules: 0 entries</li> <li>- MAC ACL Rules: 0 entries</li> <li>- Combined ACL Rules: 400 entries</li> <li>- IPv6 ACL Rules: 200 entries</li> </ul> |

| Software Features    |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                |                                              | SG5428XF                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 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>    |
|                      | MIBs                                         | <ul style="list-style-type: none"><li>• MIB II (RFC1213)</li><li>• Interface MIB (RFC2233)</li><li>• Ethernet Interface MIB (RFC1643)</li><li>• Bridge MIB (RFC1493)</li><li>• P/Q-Bridge MIB (RFC2674)</li><li>• RMON MIB (RFC2819)</li><li>• RADIUS Accounting Client MIB (RFC2620)</li><li>• RADIUS Authentication Client MIB (RFC2618)</li><li>• Remote Ping, Traceroute MIB (RFC2925)</li><li>• Support TP-Link Private MIB</li></ul> |
|                      | 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>                                                                                                                                                                                                                                                                            |
|                      | Device Diagnostics                           | <ul style="list-style-type: none"><li>• Cable Test</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>                                                                                                                                                                                                                                                                                                                        |
| 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                         |                                                                                                                                                                                                                                                                                                                                                                                                                                            |

# Ordering Information

| Host Switch |                                                                             |
|-------------|-----------------------------------------------------------------------------|
| Model       | Description                                                                 |
| SG5428XF    | Omada Campus 24-Port SFP Stackable Lite L3 Managed Switch with 4× 10G Slots |

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

| MC Series Media Converter |                                                                       |
|---------------------------|-----------------------------------------------------------------------|
| Model                     | Description                                                           |
| MC210CS                   | Gigabit Single-Mode Media Converter, up to 20 km, chassis mountable   |
| MC200CM                   | Gigabit multi-mode SC SFP Transceiver, up to 550 m, chassis mountable |
| MC220L                    | Gigabit SFP slot supporting mini-GBIC modules, chassis mountable      |
| MC420L                    | 10G SFP+ slot supporting mini-GBIC modules, 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 |

<sup>†</sup>These functions require the use of the Omada SDN Controller. Zero-Touch Provisioning requires the use of the Omada Cloud-Based Controller.

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

Specifications are subject to change without notice. All the brands and product names are trademarks or registered trademarks of their respective holders. © 2025 TP-Link