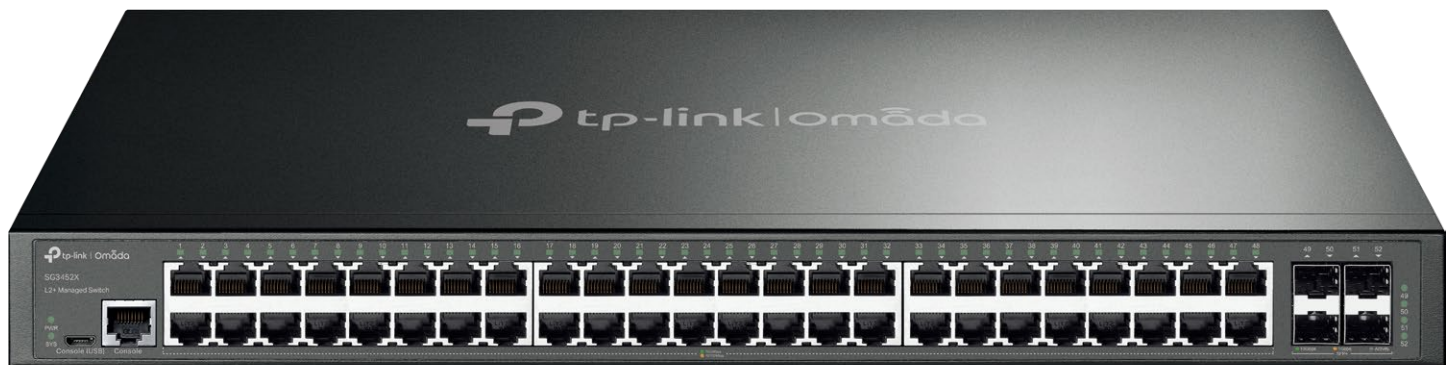


10-Gigabit L2+ Managed Switch Datasheet

SG3452X V1.20

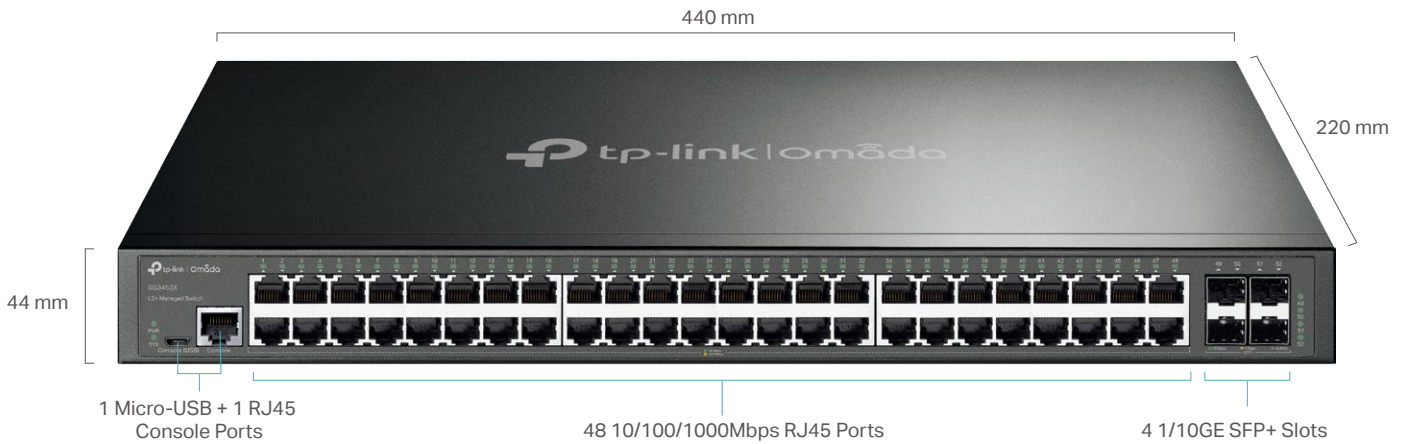
Omada 48-Port Gigabit L2+ Managed Switch with 4 10GE SFP+ Slots



Highlights

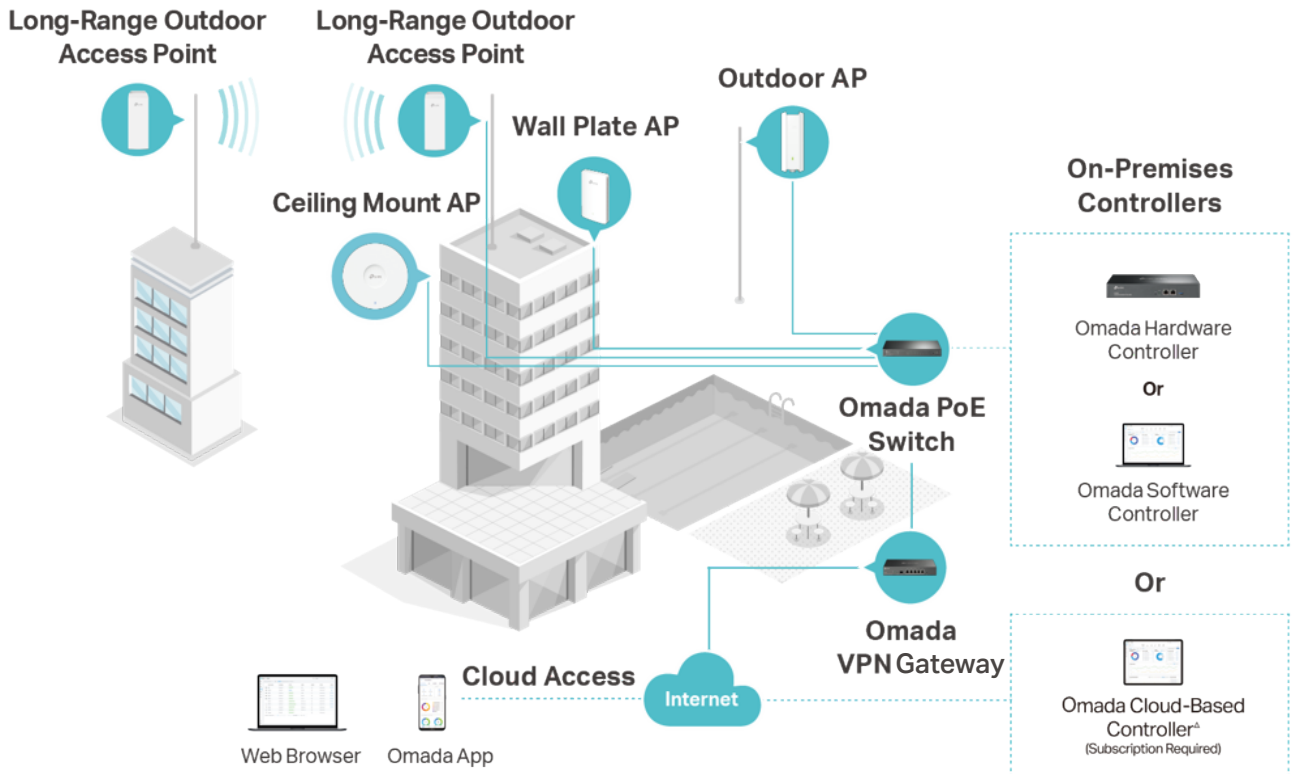
- 4× 10 Gbps SFP+ slots enable high-bandwidth connectivity
- 48× Gigabit RJ45 ports
- 176 Gbps Switching Capacity
- Centralized cloud management via the web or the Omada app[†]
- Standalone management via web, CLI, SNMP, and RMON
- Static Routing helps route internal traffic for higher efficiency
- VLAN, ACL, QoS, IGMP Snooping, OAM, and DDM
- ERPS supports rapid protection and recovery in a ring topology
- Fanless design for silent operation
- Durable metal casing and rack-mountable design

Product Picture



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



Zero-Touch Provisioning (ZTP)*



Multi-Site Cloud Management



Intelligent Monitoring

Specifications

Hardware Features & Performance

Model		SG3452X V1.20
General	Interface	48 10/100/1000Mbps RJ45 Ports 4 1/10GE SFP+ Slots
	Console	1 RJ45 Console Port, 1 Micro-USB Console Port
	Flash	32 MB
	DRAM	512 MB
	Port Standard	IEEE 802.3i:10BASE-T Ethernet; IEEE 802.3u:100BASE-X Fast Ethernet; IEEE 802.3ab:1000BASE-T Gigabit Ethernet; IEEE 802.3z:1000BASE-X Gigabit Ethernet (Optical fiber) IEEE 802.3ae: 10 Gigabit Ethernet over fiber IEEE 802.3az
Performance	Switching Capacity	176 Gbps
	Packet Forwarding Rate	130.94 Mpps
	Packet Buffer	12 Mbit
	MAC Address Table	16 K
	Transmission Method	Store and Forward
	Number of IP Interfaces	16
	Number of Static Routers	48 (IPv4, IPv6)
	Jumbo Frame	9 KB
Physical & Environmet	Power Supply	100-240 V AC~50/60 Hz
	Max Power Consumption	32.72 W (110V/60Hz)
	Max Heat Dissipation	111.65 BTU/hr (110 V/60 Hz)
	Standby Power Consumption	13.38 W (110 V/60 HZ)
	Dimensions (W x D x H)	17.3 × 8.7 × 1.7 in (440 × 220 × 44 mm)
	Fan Quantity	0
	Surge Protection	±6 kV in common mode at service port
	MTBF	380,229 h @ 25 °C
	Installation	Rack Mountable
	Operating Temperature	0 °C to 45 °C (32 °F to 113 °F)
	Storage Temperature	-40 °C to 70 °C (-40 °F to 158 °F)
	Operation Humidity	10% to 90% RH, non-condensing
	Storage Humidity	5% to 90% RH, non-condensing
Certification	CE, FCC, RoHS	

Software Features

SDN Support	<ul style="list-style-type: none"> • Support Omada Hardware Controller • Automatic Device Discovery • Batch Configuration • Batch Firmware Upgrading 	<ul style="list-style-type: none"> • Intelligent Network Monitoring • Abnormal Event Warnings • Unified Configuration • Reboot Schedule
L3 Features	<ul style="list-style-type: none"> • 16 IPv4/IPv6 Interfaces • Static Routing <ul style="list-style-type: none"> - 48 static routes • Static ARP <ul style="list-style-type: none"> - 128 static entries • 512 ARP Entries 	<ul style="list-style-type: none"> • Proxy ARP • Gratuitous ARP • DHCP Server • DHCP Relay <ul style="list-style-type: none"> - DHCP interface relay - DHCP VLAN relay • DHCP L2 Relay
L2 Features	<ul style="list-style-type: none"> • Link Aggregation <ul style="list-style-type: none"> - Static link aggregation - 802.3ad LACP - Up to 8 aggregation groups and up to 8 ports per group • Spanning Tree Protocol <ul style="list-style-type: none"> - 802.1d STP - 802.1w RSTP - 802.1s MSTP - STP Security: TC Protect, BPDU Filter, BPDU Protect, Root Protect, Loop Protect 	<ul style="list-style-type: none"> • Loopback Detection <ul style="list-style-type: none"> - Port based - VLAN based • Flow Control <ul style="list-style-type: none"> - 802.3x Flow Control - HOL Blocking Prevention • Mirroring <ul style="list-style-type: none"> - Port Mirroring - CPU Mirroring - One-to-One - Many-to-One - Tx/Rx/Both
L2 Multicast	<ul style="list-style-type: none"> • Supports 1000 (IPv4, IPv6) IGMP groups • IGMP Snooping <ul style="list-style-type: none"> - IGMP v1/v2/v3 Snooping - Fast Leave - IGMP Snooping Querier - IGMP Authentication • IGMP Authentication • MVR 	<ul style="list-style-type: none"> • MLD Snooping <ul style="list-style-type: none"> - MLD v1/v2 Snooping - Fast Leave - MLD Snooping Querier - Static Group Config - Limited IP Multicast • Multicast Filtering: 256 profiles and 16 entries per profile
VLAN	<ul style="list-style-type: none"> • VLAN Group (802.1q VLAN) <ul style="list-style-type: none"> - Max 4K VLAN Groups • 802.1Q Tagged VLAN • MAC VLAN entries: 30 • Protocol VLAN: Protocol Template 16, Protocol VLAN 16 	<ul style="list-style-type: none"> • GVRP • VLAN VPN <ul style="list-style-type: none"> - VLAN Mapping - VLAN Replace • Voice VLAN
QoS	<ul style="list-style-type: none"> • 8 priority queues • 802.1p CoS/DSCP priority • Queue scheduling <ul style="list-style-type: none"> - SP (Strict Priority) - WRR (Weighted Round Robin) - SP+WRR 	<ul style="list-style-type: none"> • Bandwidth Control <ul style="list-style-type: none"> - Port/Flow based Rating Limiting • Smoother Performance • Action for Flows <ul style="list-style-type: none"> - QoS remark (802.1P Remark, DSCP Remark)
ACL	<ul style="list-style-type: none"> • MAC ACL <ul style="list-style-type: none"> - Source MAC - Destination MAC - VLAN ID - User Priority - Ether Type • IP ACL <ul style="list-style-type: none"> - Source IP - Destination IP - Fragment - IP Protocol - TCP Flag 	<ul style="list-style-type: none"> - TCP/UDP Port - DSCP/IP TOS • Combined ACL • IPv6 ACL • Policy <ul style="list-style-type: none"> - Mirroring - Redirect - Rate Limit - QoS Remark • ACL apply to Port/VLAN • Time-based ACL

Software Features

<p>Security</p>	<ul style="list-style-type: none"> • IP-MAC-Port Binding <ul style="list-style-type: none"> - 512 Entries - DHCP Snooping - ARP Inspection - IPv4 Source Guard • IPv6-MAC <ul style="list-style-type: none"> -Port Binding - 512 Entries - DHCPv6 Snooping - ND Detection - ND Snooping - IPv6 Source Guard • DoS Defend • DHCP Filter • Static/Dynamic Port Security <ul style="list-style-type: none"> - Up to 64 MAC addresses per port • Broadcast/Multicast/Unknown-unicast Storm Control <ul style="list-style-type: none"> - kbps/ratio/pps control mode 	<ul style="list-style-type: none"> • 802.1X <ul style="list-style-type: none"> - Port base authentication - Mac base authentication - VLAN Assignment - MAB - Guest VLAN - Support RADIUS authentication and accountability • AAA (including TACACS+) • Port Isolation • Secure web management through HTTPS with SSLv3/TLS 1.2 • Secure Command Line Interface (CLI) management with SSHv1/SSHv2 • IP/Port/MAC based access control
<p>ISP Features</p>	<ul style="list-style-type: none"> • 802.3ah Ethernet Link OAM • L2PT (Layer 2 Protocol Tunneling) • PPPoE ID Insertion • ERPS 	<ul style="list-style-type: none"> • Device Link Detect Protocol (DLDP) • sFlow • DDM
<p>Management</p>	<ul style="list-style-type: none"> • Web-based GUI • Command Line Interface (CLI) through consoleport, telnet • SNMPv1/v2c/v3 <ul style="list-style-type: none"> - Trap/Inform - RMON (1, 2, 3, 9 groups) • SDM Template • DHCP/BOOTP Client • 802.1ab LLDP/LLDP-MED 	<ul style="list-style-type: none"> • DHCP Auto Install • Dual Image, Dual Configuration • CPU Monitoring • Cable Diagnostics • Password Recovery • SNTP • System Log • IEEE802.3az Energy Efficient Ethernet (EEE)
<p>IPv6 Support</p>	<ul style="list-style-type: none"> • IPv6 Dual IPv4/IPv6 • Multicast Listener Discovery (MLD) Snooping • IPv6 ACL • IPv6 Interface • Static IPv6 Routing • IPv6 neighbor discovery (ND) • Path maximum transmission unit (MTU) discovery • Internet Control Message Protocol (ICMP) version 6 • TCPv6/UDPv6 	<ul style="list-style-type: none"> • IPv6 applications <ul style="list-style-type: none"> - DHCPv6 Client - Ping6 - Tracert6 - Telnet (v6) - IPv6 SNMP - IPv6 SSH - IPv6 SSL - Http/Https - IPv6 TFTP
<p>MIBs</p>	<ul style="list-style-type: none"> • MIB II (RFC1213) • Interface MIB (RFC2233) • Ethernet Interface MIB (RFC1643) • Bridge MIB (RFC1493) • P/Q-Bridge MIB (RFC2674) • RMON MIB (RFC2819) 	<ul style="list-style-type: none"> • RMON2 MIB (RFC2021) • RADIUS Accounting Client MIB (RFC2620) • RADIUS Authentication Client MIB (RFC2618) • Remote Ping, Traceroute MIB (RFC2925) • Support TP-Link Private MIB

Ordering Information

Host Switch

Model	Description
SG3452X V1.20	Omada 48-Port Gigabit L2+ Managed Switch with 4 10GE SFP+ 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

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
MC200L	Gigabit SFP slot supporting mini-GBIC modules, chassis mountable
MC1400	14-slot power supply chassis for TP-LINK MC Series Media Converter, 19-inch rack-mountable

FC Series Media Converter

Model	Description
FC111A-20	100Mbps Single-Mode WDM Media Converter, up to 20 km, TX:1550nm, RX:1310nm, chassis mountable
FC111B-20	100Mbps Single-Mode WDM Media Converter, up to 20 km, TX:1310nm, RX:1550nm, chassis mountable
FC311A-2	Gigabit Single-Mode WDM Media Converter, up to 2 km, TX:1550nm, RX:1310nm, chassis mountable
FC311B-2	Gigabit Single-Mode WDM Media Converter, up to 2 km, TX:1310nm, RX:1550nm, chassis mountable
FC311A-20	Gigabit Single-Mode WDM Media Converter, up to 20 km, TX:1550nm, RX:1310nm, chassis mountable
FC311B-20	Gigabit Single-Mode WDM Media Converter, up to 20 km, TX:1310nm, RX:1550nm, chassis mountable
FC1400	14-slot power supply chassis for TP-LINK FC Series Media Converter, 19-inch rack-mountable

[†]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.

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