

Omada Easy Managed Switch | Datasheet

ES220GMP

Omada 20-Port Gigabit Easy Managed Switch with 16-Port PoE+



Highlights

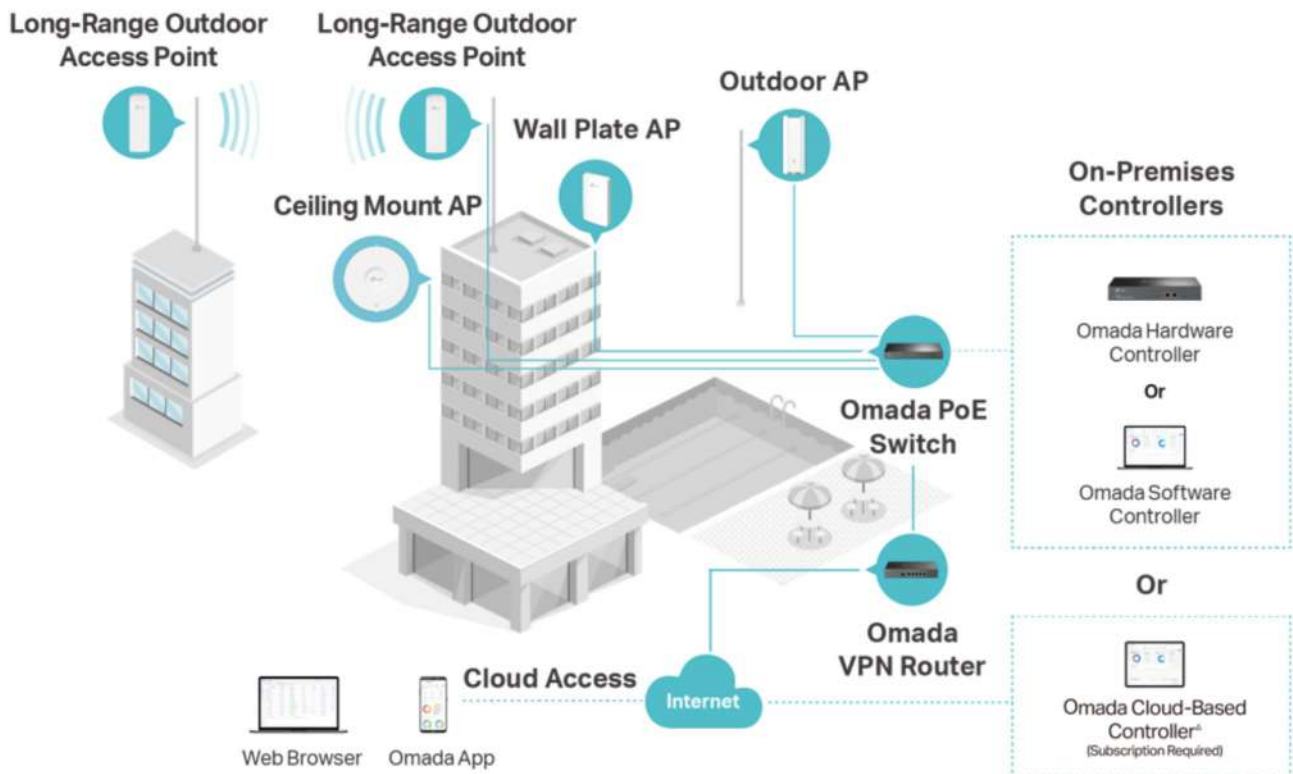
- 16× Gigabit 802.3at/af-compliant PoE+ RJ45 ports
- 2× Gigabit RJ45 port, 2× Gigabit SFP port
- 250W Power Budget, with up to 30W for each PoE port*
- Easy to Use: Supports plug-and-play for instant connectivity and simple configuration for additional features
- Centralized Cloud Management via the web or the Omada app†
- Up to 250m PoE**, QoS^Δ, PoE Auto Recovery[‡], and Port Isolation for reliable surveillance networking
- Automatic Loop Prevention, VLAN, and IGMP Snooping
- Durable metal casing and rack-mountable design

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)[†]



Intelligent Monitoring

Specifications

Hardware Features & Performance

Model		ES220GMP
General	Interface	16× 10/100/1000 Mbps PoE+ RJ45 Ports 2× 10/100/1000 Mbps RJ45 Ports 2× Gigabit SFP Ports
	Flash	64 Mbit
	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 802.3x: Flow Control IEEE 802.1p: Traffic Class Expediting and Dynamic Multicast Filtering IEEE 802.1q: Virtual Bridged Local Area Networks IEEE 802.1ab: Station and Media Access Control Connectivity Discovery (LLDP)
PoE	PoE Standard	802.3af/at
	PoE Ports	16, up to 30 W /per port
	PoE Power Budget	250 W
	Fast PoE	YES
	Perpetual PoE	YES
Performance	Switching Capacity	40 Gbps
	Packet Forwarding Rate	29.76 Mpps
	MAC Address Table	8K
	Packet Buffer	4 Mbit
	Transmission Method	Store and Forward
	Jumbo Frame	15 KB
Physical & Environment	Power Supply	100-240V ~ 50/60Hz
	Max Power Consumption	289.7 W (110V/60Hz) (with 250 W PD connected)
	Max Heat Dissipation	984.88 BTU/hr (110 V/60 Hz) (with 250 W PD connected)
	Standby Power Consumption	12.2 W (110V/60 Hz)
	Surge Protection	±6 kV in common mode for Ethernet Ports ±6 kV in differential mode, ±4 kV in common mode for Power Port
	ESD Protection	Air: ±8 kV, Contact: ±4 kV
	MTBF	310550.7h @ 25°C
	Dimensions (W x D x H)	17.3×7.1×1.7 in (440×180×44 mm)
	Fan Quantity	2
	Noise	Min: 33.4 dBA @ 1m 25 °C Max: 41.5 dBA @ 1m 25 °C
	Installation	Rackmountable
	Operating Temperature	-5 °C to 50 °C (23 °F to 122 °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

Model	ES220GMP
SDN Support	• Support Hardware Controller, Software Controller, Cloud-Based Controller • Automatic Device Discovery • Batch Configuration • Batch Firmware Upgrading • Unified Configuration
L2 Features	• Link Aggregation - Static Link Aggregation - Up to 4 aggregation groups and up to 8 ports per group • Loopback Detection • Flow Control - 802.3x Flow Control • Mirroring - Port Mirroring - One-to-One - Many-to-One - Ingress/Egress/Both • Port Statistics - Port Mirror Status - Traffic Statistics • 802.1ab LLDP
L2 Multicast	• IGMP Snooping - IGMP v1/v2/v3 Snooping - Fast Leave
VLAN	• MTU VLAN • Port-Based VLAN • 802.1Q Tag VLAN - Max 32 VLAN Groups - 4K VID
QoS	• 802.1p DSCP Priority • 8 Priority Queues • Priority Schedule Mode - WRR (Weighted Round Robin) • Queue Weight Config • Bandwidth Control - Port-Based Rating Limit • Storm Control - Multiple Control Modes (kbps/pps) - Broadcast/Multicast/Unknown-Unicast Control
Management	• Web-based GUI • DHCP Client • Cable Diagnostics

Ordering Information

Host Switch

Model	Description
ES220GMP	Omada 20-Port Gigabit Easy Managed Switch with 16-Port PoE+

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

RJ45 SFP Modules

Model	Description
SM331T	1000BASE-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 Media Converter, up to 550 m, chassis mountable
MC220L	Gigabit SFP Media Converter, chassis 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

[†]Centralized cloud management functions require the use of the Omada SDN Controller. Zero-Touch Provisioning requires the use of the Omada Cloud-Based Controller. Go to the Omada Cloud-Based Controller Product List to find all the models supported by the Omada Cloud-Based Controller.

[‡]This switch supports PoE Auto Recovery under Standalone Mode (managed separately without a controller) and supports manual PoE Recovery under Controller Mode (centrally managed with a controller).

[^]QoS and Priority Mode are supported under Standalone Mode.

*PoE budget calculations are based on laboratory testing. The actual PoE power budget is not guaranteed and will vary due to client limitations and environmental factors.

**The speed of the ports that support 250m PoE transmission will be downgraded to 10 Mbps. Actual transmission distance may vary depending on the quality of the cables. Specifications are subject to change without notice. All brands and product names are trademarks or registered trademarks of their respective holders. © 2024 TP-Link