

L2/L2+ Gigabit Managed Switches Datasheet

MODELS: TL-SG3428 V2.20 / TL-SG3428MP V6 / TL-SG3452 / TL-SG3452P V3.20 / TL-SG3210 V3



Overview

TP-Link's JetStream L2/L2+ managed switches provide high performance, powerful L2 and L2+ features like static routing, enterprise-level QoS, advanced security strategies and a bundle of ISP features. The IP-MAC-Port Binding (IMPB) and Access Control List (ACL) functions protect against broadcast storm, ARP and Denial-of-Service (DoS) attacks, etc. Quality of Service (QoS, L2 to L4) provides enhanced traffic management capabilities to move your data smoother and faster. The OAM and DDM functions help facilitate network management. Moreover, the easy-to-use web management interfaces, along with CLI, SNMP and Dual Image mean faster setup and configuration with less downtime. TP-Link JetStream L2/L2+ managed Switches provide a reliable, secure solution for enterprise, campus and ISP networks.

Omada Solution



Hospitality High Quality and Full Coverage Wi-Fi



Education High-Density Wi-Fi



Retail Social Marketing for O2O



Office

Wireless and Wired

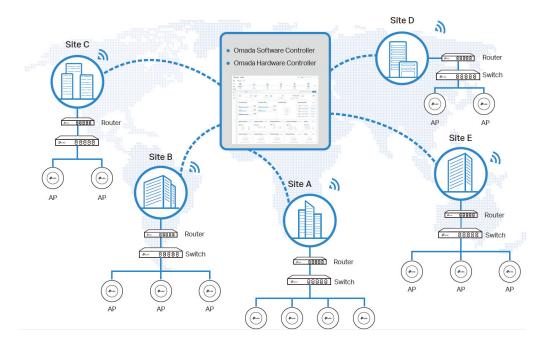
Connections



Catering Full Wi-Fi Coverage in High-Density Environment

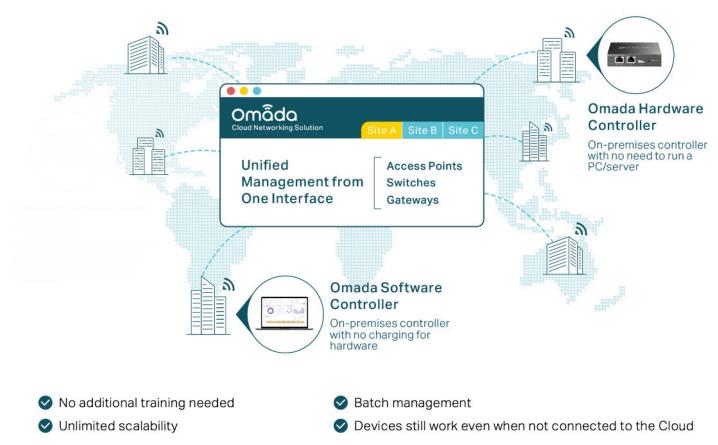
Software Defined Networking (SDN) with Cloud Access

Omada 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. Seamless wireless and wired connections are provided, ideal for use in hospitality, education, retail, offices, and more.



Hassle-Free Centralized Cloud Management

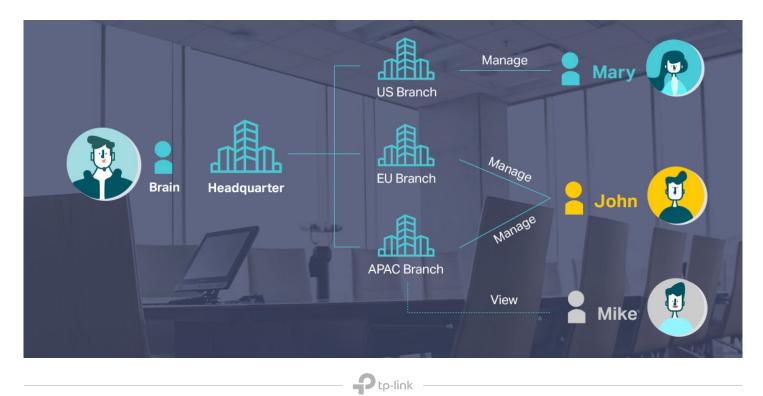
100% centralized cloud management of the whole network from different sites——all controlled from a single **interface anywhere, anytime.**



Assign Different Management Roles

Multi-user privilege assignment is available to increase management efficiency and security. Multi-person management, multi-level permissions, and the ability to add admins as needed, enable flexible network **operation and maintenance.**

1

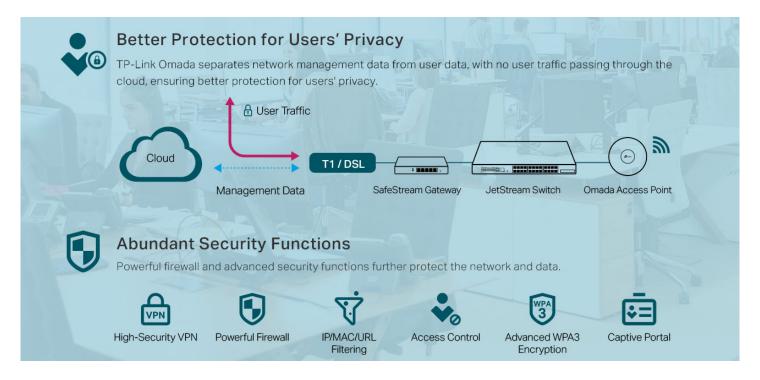


Easy and Intelligent Network Monitoring

The easy-to-use dashboard makes it easy to see your real-time network status; check network usage and traffic distribution; receive network condition logs, abnormal event warnings, and notifications; or even track key data for better business results. Network topology helps IP admins quickly see and troubleshoot connection at a glance.



Comprehensive Protection for the Whole Network



Switch Product Features

Networking Security

The L2/L2+ managed switches provide IP-MAC-Port Binding, Port Security, Storm control and DHCP Snooping which protect against broadcast storms, ARP attacks, etc. It integrates some typical DoS attacks to select. You can protect these attacks more easily ever than before. In addition, the Access Control Lists (ACL, L2 to L4) feature restricts access to sensitive network resources by denying packets based on source and destination MAC address, IP address, TCP/ UDP ports and even VLAN ID. Moreover, the switch supports 802.1X authentication, which is used in conjunction with a RADIUS/TACACS+ server to require some authentication information before access to the network is allowed.

Advanced QoS features

To integrate voice, data and video service on one traffic based on a variety of means including IP or MAC address, TCP or UDP port number, etc. to ensure that voice and video are always clear, smooth and jitter free. In conjunction with the Voice VLAN the switch supporting, the voice applications will operate with much smoother performance.

Abundant L2 and L2+ features

The L2/L2+ managed switches support a complete lineup of L2 features, including 802.1Q VLAN, Port Mirroring, STP/ RSTP/MSTP, Link Aggregation Control Protocol and 802.3x Flow Control function. Any more, the switch provides advanced features for network maintenance. Such as Loopback Detection, Cable Diagnostics and IGMP Snooping. IGMP snooping ensures the switch intelligently forward the multicast stream only to the appropriate subscribers while IGMP throttling & filtering restrict each subscriber on a port level to prevent unauthorized multicast access. Moreover, L2/L2+ managed switches support L2+ feature-static routing, which is a simple way to provide segmentation of the network with internal routing through the switch and helps network traffic for more efficient use.

ISP Features

The L2/L2+ managed switches support a bundle of ISP features such as 802.3ah OAM, DDM, sFlow, QinQ, L2PT PPPoE ID Insertion, IGMP authentication etc. 802.3ah OAM and Device Link Detection Protocol (DLDP) functions improve monitor and troubleshoot Ethernet networks, help facilitate network management. DDM(Digital Diagnostic Monitoring) function helps view the status of SFP modules inserting to the Switch and to configure alarm settings, warning settings, temperature threshold settings, voltage threshold settings, bias current threshold settings, TX power threshold settings, and Rx power threshold settings.

Enterprise Level Management Features

TP-Link's new L2/L2+ managed switches are easy to use and manage. It supports various user-friendly standard management features, such as intuitive web-based Graphical User Interface (GUI), industry-standard Command Line Interface (CLI), SNMP (v1/v2c/v3), and RMON. This allows the switch to provide valuable status information and send reports on abnormal events. It also supports Dual Image and Dual Configuration to provide improved reliability and network uptime.

IPv6 Support

The L2/L2+ managed switches support various IPv6 functions such as Dual IPv4/IPv6 Stack, MLD Snooping, IPv6 ACL, DHCPv6 Snooping, IPv6 Interface, Path Maximum Transmission Unit (PMTU) Discovery and IPv6 Neighbor Discovery, which guarantees your network is ready for the Next Generation Network (NGN) without upgrading your network equipment.

Specifications

Hardware Features & Performance

Product Picture				
Model		TL-SG3428 V2.20	TL-SG3428MP V6	
	Interface	24 10/100/1000Mbps RJ45 Ports 4 Gigabit SFP Slots		
General	Console	1 RJ45 Console Port, 1 Micro-USB Console Port		
	Flash	32 MB		
	DRAM	256 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)		
	PoE Standard	-	802.3af/at	
PoE	PoE Ports	-	24, up to 30 W	
	PoE Power Budget	-	384 W	
	Switching Capacity	56 Gbps		
	Packet Forwarding Rate	41.66 Mpps		
	MAC Address Table	16К		
	Packet Buffer	12 Mbit		
Performance	Transmission Method	Store and Forward		
	Number of IP Interfaces	16		
	Number of Static Routers	48 (IPv4, IPv6)		
	Jumbo Frame	9 KB		
	Power Supply	100-240 V AC~50/60 Hz		
	Max Power Consumption	20.6 W (220 V/50 Hz)	480.1 W (110 V/60 Hz) (with 384 W PD connected)	
	Max Heat Dissipation	70.30 BTU/hr (220 V/50 Hz)	1637.14 BTU/hr (110 V/60 Hz) (with 384 W PD connected)	
	Standby Power Consumption	10.3 W (220 V/50 Hz)	15.7 W (110V/60 Hz)	
Physical &	Dimensions (W x D x H)	17.3 × 7.1 × 1.7 in (440 × 180 × 44 mm)	17.3 × 13.0 × 1.7 in (440 × 330 × 44 mm)	
Environment	Fan Quantity	Fanless	2	
	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		

Hardware F	eatures & Performance	2		
Product Picture				
Model		TL-SG3452	TL-SG3452P V3.20	
	Interface	48 10/100/1000Mbps RJ45 Ports, 4 Gigabit SFP Slots		
General	Console	1 RJ45 Console Port, 1 Micro-USB Console Port		
	Flash	32 MB		
	DRAM	256 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)		
	PoE Standard	-	802.3af/at	
PoE	PoE Ports	-	48, up to 30 W	
	PoE Power Budget	-	384 W	
	Switching Capacity	104 Gbps		
	Packet Forwarding Rate	77.38 Mpps		
	MAC Address Table	16K		
	Packet Buffer	12 Mbit		
Performance	Transmission Method	Store and Forward		
	Number of IP Interfaces	16		
	Number of Static Routers	48 (IPv4, IPv6)		
	Jumbo Frame	9 КВ		
	Power Supply	100-240 V AC~50/60 Hz		
	Max Power Consumption	34.86 W (220 V/50 Hz)	464.2 W (110 V/60 Hz) (with 384 W PD connected)	
	Max Heat Dissipation	118.94 BTU/hr (220 V/50 Hz)	1584.08 BTU/hr (110 V/60 Hz) (with 384 W PD connected)	
	Standby Power Consumption	11.65 W (220 V/50 Hz)	27.9 W (110V/60 Hz)	
Physical &	Dimensions (W x D x H)	17.3 × 8.7 × 1.7 in (440 × 220 × 44 mm)	17.3 × 13.0 × 1.7 in (440 × 330 × 44 mm)	
Environment	Fan Quantity	Fanless	3	
	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		

Product Picture			
	Model	TL-SG3210 V3	
General	Interface	8 10/100/1000Mbps RJ45 Ports 2 Gigabit SFP Slots	
	Console	1 RJ45 Console Port, 1 Micro-USB Console Port	
	Flash	32 MB	
	DRAM	256 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)	
	PoE Standard	-	
PoE	PoE Ports	-	
	PoE Power Budget	-	
	Switching Capacity	20 Gbps	
	Packet Forwarding Rate	14.89 Mpps	
	MAC Address Table	8К	
	Packet Buffer	4.1 Mbit	
Performance	Transmission Method	Store and Forward	
	Number of IP Interfaces	16	
	Number of Static Routers	48 (IPv4, IPv6)	
	Jumbo Frame	9 KB	
	Power Supply	100-240 V AC~50/60 Hz	
	Max Power Consumption	6.84 W (220 V/50 Hz)	
	Max Heat Dissipation	23.33 BTU/hr (220 V/50 Hz)	
	Standby Power Consumption	1.91 W (220 V/50 Hz)	
Physical &	Dimensions (W x D x H)	11.6 × 7.1 × 1.7 in (294 × 180 × 44 mm)	
Environment	Fan Quantity	Fanless	
	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	

Model	TL-SG3428 V2.20 / TL-SG3428MP V6 / TL-SG3452 /	/ TL-SG3452P V3.20 / TL-SG3210 V3
	Support Omada Hardware Controller (OC200/	Intelligent Network Monitoring
SDN Support	OC300), Software Controller	Abnormal Event Warnings
	Automatic Device Discovery	Unified Configuration
	Batch Configuration	Reboot Schedule
	Batch Firmware Upgrading	
	• 16 IPv4/IPv6 Interfaces	• Proxy ARP
	Interface Loopback Static Routing	Gratuitous ARP
	- 48 static routes	DHCP Server
L3 Features	Static ARP	• DHCP Relay
	- 128 static entries	- DHCP interface relay
	• 316 ARP Entries (512 ARP Entries for TL-SG3428	- DHCP VLAN relay
	V2.0 & TL-SG3428MP V4.0)	• DHCP L2 Relay
	Link Aggregation	Loopback Detection
	- Static link aggregation	- Port based
	- 802.3ad LACP	- VLAN based
	- Up to 8 aggregation groups and up to 8 ports	Flow Control
	per group	- 802.3x Flow Control
L2 Features	Spanning Tree Protocol	- HOL Blocking Prevention
	- 802.1d STP	• Mirroring
	- 802.1w RSTP	- Port Mirroring
	- 802.1s MSTP	- CPU Mirroring
	 STP Security: TC Protect, BPDU Filter, BPDU Protect, Root Protect, Loop Protect 	- One-to-One - Many-to-One
	Hotect, hoot Hotect, Loop Hotect	- Tx/Rx/Both
	Supports 511 (IPv4, IPv6) IGMP groups IGMP Secondary	MLD Snooping
	IGMP Snooping	- MLD v1/v2 Snooping - Fast Leave
	- IGMP v1/v2/v3 Snooping - Fast Leave	- MLD Snooping Querier
L2 Multicast	- IGMP Snooping Querier	- Static Group Config
	- IGMP Authentication	- Limited IP Multicast
	IGMP Authentication	Multicast Filtering: 256 profiles and 16 entries
	• MVR	per profile
	• VLAN Group	• Private VLAN
	- Max 4K VLAN Groups	• GVRP
	• 802.1Q Tagged VLAN	• VLAN VPN (QinQ)
	• MAC VLAN:	- Port-Based QinQ
VLAN	- 12 Entries for TL-SG3210	- Selective QinQ
VEAN	- 30 Entries for TL-SG3428 V2.0 & TL-SG3428MP	• Voice VLAN
	V4.0	
	- 48 Entries for TL-SG3452 & TL-SG3452P V2.0	
	Protocol VLAN: Protocol Template 16, Protocol	
	VLAN 16	
	• 8 priority queues	Smoother Performance
	• 802.1p CoS/DSCP priority	Action for Flows
	Queue scheduling	- Mirror (to supported interface)
QoS	- SP (Strict Priority)	- Redirect (to supported interface)
	- WRR (Weighted Round Robin)	- Rate Limit
	- SP+WRR	- QoS Remark
	Bandwidth Control	

oftware Features		
Model	TL-SG3428 V2.20 / TL-SG3428MP V6 / TL-SG3452 /	TL-SG3452P V3.20 / TL-SG3210 V3
	• MAC ACL	- TCP/UDP Port
	- Source MAC	- DSCP/IP TOS
	- Destination MAC	- User Priority
	- VLAN ID	Combined ACL
	- User Priority	• IPv6 ACL
	- Ether Type	• Policy
ACL	• IP ACL	- Mirroring
	-Source IP	- Redirect
	- Destination IP	- Rate Limit
	- Fragment	- QoS Remark
	- Protocol	
		ACL apply to Port/VLAN Time-based ACL
	- TCP Flag	• Hime-based ACL
	• IP-MAC-Port Binding	Broadcast/Multicast/Unicast Storm Control
	-512 Entries	- kbps/ratio/pps control mode
	- DHCP Snooping	• 802.1X
	- ARP Inspection	- Port base authentication
	- IPv4 Source Guard: 100 Entries	- Mac base authentication
	IPv6-MAC-Port Binding	- VLAN Assignment
	-512 Entries	- MAB
	- DHCPv6 Snooping	- Guest VLAN
Security	- ND Detection	- Support RADIUS authentication and
Security	- ND Snooping	accountability
	- ND Shooping - IPv6 Source Guard: 100 Entries	AAA (including TACACS+)
	DoS Defend	Port Isolation
	DOS Defend DHCP Filter	
		Secure web management through HTTPS with
	Static/Dynamic Port Security	SSLv3/TLS 1.2
	- Up to 64 MAC addresses per port	Secure Command Line Interface (CLI)
		management with SSHv1/SSHv2
		IP/Port/MAC based access control
		Device Link Detect Protocol (DLDP)
ISP Features	L2PT (Layer 2 Protocol Tunneling)	PPPoE ID Insertion
isi reatures	• DDM (for TL-SG3428 V2.0 & TL-SG3428MP V4.0	• sFlow (for TL-SG3428 V2.0 & TL-SG3428MP
	& TL-SG3210)	V4.0)
	• Web-based GUI	DHCP Auto Install
	Command Line Interface (CLI) through	Dual Image, Dual Configuration
	consoleport, telnet	• CPU Monitoring
	SNMPv1/v2c/v3	Cable Diagnostics
Management	- Trap/Inform	• EEE
management	- RMON (1, 2, 3, 9 groups)	Password Recovery
	SDM Template	SNTP
	DM lemplate DHCP/BOOTP Client	System Log
	BO2.1ab LLDP/LLDP-MED	- System LOg
	IPv6 Dual IPv4/IPv6	IPv6 applications
	 Multicast Listener Discovery (MLD) Snooping 	- DHCPv6 Client
	• IPv6 ACL	- Ping6
IPv6 Support	• IPv6 Interface	- Tracert6
	Static IPv6 Routing	- Telnet (v6)
	• IPv6 neighbor discovery (ND)	- IPv6 SNMP
	Path maximum transmission unit (MTU) discovery	- IPv6 SSH
	Internet Control Message Protocol (ICMP)	- IPv6 SSL
	version 6	- Http/Https
	• TCPv6/UDPv6	- IPv6 TFTP
	• MIB II (RFC1213)	• RMON2 MIB (RFC2021)
MIBs	Interface MIB (RFC2233)	• RADIUS Accounting Client MIB (RFC2620)
	• Ethernet Interface MIB (RFC1643)	• RADIUS Authentication Client MIB (RFC2618)
	• Bridge MIB (RFC1493)	Remote Ping, Traceroute MIB (RFC2925)
	D/O Dridge MID (DEC2(74))	 Support TP-Link Private MIB
	 P/Q-Bridge MIB (RFC2674) RMON MIB (RFC2819) 	• Support re-Link envate wib

Ordering Information

Host Switch	
Model	Description
TL-SG3428 V2.20	JetStream 24-Port Gigabit L2+ Managed Switch with 4 SFP Slots
TL-SG3428MP V6	JetStream 28-Port Gigabit L2+ Managed Switch with 24-Port PoE+
TL-SG3452	JetStream 48-Port Gigabit L2 Managed Switch with 4 SFP Slots
TL-SG3452P V3.20	JetStream 52-Port Gigabit L2+ Managed Switch with 48-Port PoE+
TL-SG3210 V3	JetStream 8-Port Gigabit L2+ Managed Switch with 2 SFP Slots

SFP Modules	
Model	Description
TL-SM311LS	Gigabit SFP module, Single-mode, LC interface, Up to 20km distance
TL-SM311LM	Gigabit SFP module, Multi-mode, LC interface, Up to 550m distance
TL-SM321A	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1550 nm/RX: 1310 nm, 20 km
TL-SM321A-2	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1550 nm/RX: 1310 nm, 2 km
TL-SM321B	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1310 nm/RX: 1550 nm, 20 km
TL-SM321B-2	Gigabit WDM Bi-Directional SFP Module, single-mode, LC connector, TX: 1310 nm/RX: 1550 nm, 2 km

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
TL-MC1400	14-slot power supply chassis for TP-LINK MC Series Media Converter, 19-inch rack-mountable

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

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

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.

PoE budget calculations are based on laboratory testing. Actual PoE power budget is not guaranteed and will vary as a result of client limitations and environmental factors.

Specifications are subject to change without notice. All the brands and product names are trademarks or registered trademarks of their respective holders. © 2022 TP-Link