

10-Gigabit L2+ Managed Switch Datasheet

MODELS: S5500-8XF / S5500-16XF / S5500-4XHPP2XF / S5500-8MHP2XF / S5500-24MPP4XF / S5500-24F4XF / S5500-24GP4XF / S5500-48GP4XF



Overview

TP-Link | Omada Pro 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 10-gigabit ports ensure high-speed data transfer, and their backward compatility with gigabit products reserves room for network upgrades, therefore guarantees stable and long-term usability. 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 function helps 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 | Omada Pro L2+ 10-gigabit managed switches provide a reliable, secure solution for enterprise, campus and ISP networks.

Switch Product Features

Networking Security

The 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+ features

The 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+ 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+ 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 | Omada Pro 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+ 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 F	eatures & Performar	nce	
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		Pure order III III III III III III III III III	
	Model	S5500-8XF	S5500-16XF
	Interface	8 10GE SFP+ Slots	16 10GE SFP+ Slots
	Console	1 RJ45 Console Port, 1 Micro-USB Console Port	
General	Flash	32 MB	
	DRAM	256 MB	
	Port Standard	IEEE 802.3z: 1000BASE-X Gigabit Ethernet IEEE 802.3ae: 10 Gigabit Ethernet over fibe	
	Switching Capacity	160 Gbps	320 Gbps
	Packet Forwarding Rate	119.04 Mpps	238.08 Mpps
	MAC Address Table	32K	
Performance	Packet Buffer	16 Mbit	24 Mbit
	Transmission Method	Store and Forward	
	Number of Static Routers	48 (IPv4, IPv6)	
	Jumbo Frame	9 KB	
	Dual Redundant Power Supply	-	2 Fixed AC Power Supply
	Power Supply	100-240 V AC~50/60 Hz	
	Max Power Consumption	15.46 W (220 V/50 Hz)	32.74 W (220 V/50 Hz)
	Max Heat Dissipation	52.75 BTU/hr (220 V/50 Hz)	111.71 BTU/hr (220 V/50 Hz)
Physical &	Standby Power Consumption	5.91 W (110 V/60 Hz)	13.33 W (110 V/60 Hz)
Environment	Dimensions (W x D x H)	17.3 × 7.1 × 1.7 in (440 × 180 × 44 mm)	17.3 × 8.7 × 1.7 in (440 × 220 × 44 mm)
	Fan Quantity	Fanless	1
	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	

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Product Picture		Pass values - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Pura colonia del C
	Model	S5500-4XHPP2XF	S5500-8MHP2XF
	Interface	4 100M/1000M/2.5G/5G/10Gbps RJ45 Ports 2 10GE SFP+ Slots	8 100/1000Mbps/2.5Gbps RJ45 Ports 2 10GE SFP+ Slots
	Console	1 RJ45 Console Port, 1 Micro-USB Console Port	
	Flash	32 MB	
	DRAM	256 MB	
General	Port Standard	IEEE 802.3u:100BASE-X Fast Ethernet IEEE 802.3ab:1000BASE-T Gigabit Ethernet IEEE 802.3bz: 2.5GBASE-T Ethernet IEEE 802.3an:10GBASE-T Ethernet IEEE 802.3z:1000BASE-X Gigabit Ethernet (Optical fiber) IEEE 802.3ae: 10 Gigabit Ethernet over fiber	IEEE 802.3u:100BASE-X Fast Ethernet IEEE 802.3ab:1000BASE-T Gigabit Ethernet IEEE 802.3bz:2.5GBASE-T Ethernet IEEE 802.3z:1000BASE-X Gigabit Ethernet (Optical fiber) IEEE 802.3ae: 10 Gigabit Ethernet over fiber
	PoE Standard	802.3af/at/bt	802.3af/at
PoE	PoE Ports	4, up to 60 W	8, up to 30 W
	PoE Power Budget	200 W	240 W
	Switching Capacity	120Gbps	80 Gbps
	Packet Forwarding Rate	89.28 Mpps	59.52 Mpps
	Packet buffer	16 Mbit	12 Mbit
Performance	MAC Address Table	32 K	16 K
	Transmission Method	Store and Forward	
	Number of Static Routers	48 (IPv4, IPv6)	48 (IPv4, IPv6)
	Jumbo Frame	9 KB	
	Power Supply	100-240 V AC~50/60 Hz	
	Max Power Consumption	244.90 W (110V/60Hz) (with 200 W PD connected)	285.9 W (110V/60Hz) (with 240 W PD connected)
Physical & Environmet	Max Heat Dissipation	835.67 BTU/hr (110 V/60 Hz) (with 200 W PD connected)	975.54 BTU/hr (110V/60Hz) (with 240 W PD connected)
	Standby Power Consumption	13.52 W (110 V/60 Hz)	15.6 W (110V/60 Hz)
	Dimensions (W x D x H)	11.6×7.1×1.7 in (294×180×44 mm)	17.3 × 7.1 × 1.7 in (440 × 180 × 44 mm)
	Fan Quantity	2	
	Installation	Rack Mountable / Desktop	Rack Mountable
	Operating Temperature	0 °C to 50 °C (32 °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	

Hardware F	eatures & Performar	nce		
Product Picture		Pro-link Omado (200)		
Model		S5500-24MPP4XF	S5500-24F4XF	
	Interface	24 10/100/1000Mbps/2.5Gbps RJ45 Ports 4 10GE SFP+ Slots	20 Gigabit SFP Slots 4 Gigabit RJ45/SFP Combo Ports 4 10GE SFP+ Slots	
	Console	1 RJ45 Console Port, 1 Micro-USB Console Port		
	Flash	32 MB		
	DRAM	256 MB		
General	Port Standard	IEEE 802.3i:10BASE-T Ethernet; IEEE 802.3u:100BASE-X Fast Ethernet IEEE 802.3ab:1000BASE-T Gigabit Ethernet IEEE 802.3bz:2.5GBASE-T Ethernet IEEE 802.3z:1000BASE-X Gigabit Ethernet (Optical fiber) IEEE 802.3ae: 10 Gigabit Ethernet over fiber	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	
	PoE Standard	802.3af/at/bt	-	
PoE	PoE Ports	8 802.3bt ports, up to 60 W 16 802.3at ports, up to 30 W	-	
	PoE Power Budget	500 W	-	
	Switching Capacity	200 Gbps	128 Gbps	
	Packet Forwarding Rate	148.80 Mpps	95.23 Mpps	
	MAC Address Table	32K	16K	
Performance	Transmission Method	Store and Forward		
	Packet Buffer	16 Mbit	12 Mbit	
	Number of Static Routers	48 (IPv4, IPv6)		
	Jumbo Frame	9 KB		
	Power Supply	100-240 V AC~50/60 Hz		
	Dual Redundant Power Supply	-	2 Fixed AC Power Supply	
	Max Power Consumption	629.1 W (110V/60Hz)	35.7 W (110W/60Hz)	
	Max Heat Dissipation	2153.45 BTU/hr (110 V/60 Hz)	121.81 BTU/hr (110 V/60 Hz)	
Physical & Environmet	Standby Power Consumption	24.2 W (110V/60Hz)	17.6 W (110V/60 Hz)	
	Dimensions (W x D x H)	17.3 × 13.0 × 1.7 in (440 × 330 × 44 mm)	17.3 × 8.7 × 1.7 in (440 × 220 × 44 mm)	
	Fan Quantity	3	1	
	Installation	Rack Mountable		
	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)	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		

S5500-480	GP4XF		
Product Picture			
	Model	S5500-24GP4XF	S5500-48GP4XF
	Interface	24 10/100/1000Mbps RJ45 Ports 4 10GE SFP+ Slots	48 10/100/1000Mbps RJ45 Ports 4 10GE SFP+ Slots
	Console	1 RJ45 Console Port, 1 Micro-USB Console Port	
	Flash	32 MB	
General	DRAM	256 MB 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	
	PoE Standard	802.3af/at	
PoE	PoE Ports	24, up to 30 W	48, up to 30 W
	PoE Power Budget	384 W	500 W
	Switching Capacity	128 Gbps	176 Gbps
	Packet Forwarding Rate	95.23 Mpps	130.94 Mpps
	MAC Address Table	16 K	
Performance	Transmission Method	Store and Forward	
Terrormance	Packet Buffer	12 Mbit	
	Number of Static Routers	48 (IPv4, IPv6)	
	Jumbo Frame	9 KB	
	Power Supply	100-240 V AC~50/60 Hz	
	Max Power Consumption	30.43 W (110V/60Hz) (no PD connected) 486.2 W (110V/60Hz) (with 384 W PD connected)	49.19 W (110V/60Hz) (no PD connected) 635.70 W (110V/60Hz) (with 500 W PD connected)
	Max Heat Dissipation	103.77 BTU/hr (110 V/60 Hz) (no PD connected) 1658.78 BTU/hr (110 V/60 Hz) (with 384 W PD connected)	167.85 BTU/hr (110 V/60 Hz) (no PD connected) 2169.2 BTU/hr (110 V/60 Hz) (with 500 W PD connected)
	Standby Power Consumption	17.6 W (110V/60 Hz)	28.61 W (110 V/60 Hz)
Physical & Environmet	Dimensions (W x D x H)	17.3 × 13.0 × 1.7 in (440 × 330 × 44 mm)	
LIMIOIIIIet	Fan Quantity	2	3
	Installation	Rack Mountable	
	Operating Temperature	0 °C to 45 °C (32 °F to 113 °F)	0 °C to 40 °C (32 °F to 104 °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		500-8MHP2XF / S5500-24MPP4XF / S5500-24F4XF - / S5500-48GP4XF
SDN Support	Support Omada Pro ControllerAutomatic Device DiscoveryBatch ConfigurationBatch Firmware Upgrading	Intelligent Network MonitoringAbnormal Event WarningsUnified ConfigurationReboot Schedule
L3 Features	 16 IPv4/IPv6 Interfaces Static Routing 48 static routes Static ARP 128 static entries 512 ARP Entries 	 Proxy ARP Gratuitous ARP DHCP Server DHCP Relay DHCP interface relay DHCP VLAN relay DHCP L2 Relay
L2 Features	Link Aggregation Static link aggregation 802.3ad LACP Up to 8 aggregation groups and up to 8 ports per group Spanning Tree Protocol 802.1d STP 802.1w RSTP 802.1s MSTP STP Security: TC Protect, BPDU Filter, BPDU Protect, Root Protect, Loop Protect	 Loopback Detection Port based VLAN based Flow Control 802.3x Flow Control HOL Blocking Prevention Mirroring Port Mirroring CPU Mirroring One-to-One Many-to-One Tx/Rx/Both
L2 Multicast	Supports 1000 (IPv4, IPv6) IGMP groups (511 groups for S5500-8MHP2XF & S5500-24MPP4XF) IGMP Snooping IGMP v1/v2/v3 Snooping Fast Leave IGMP Snooping Querier IGMP Authentication IGMP Authentication MVR	 MLD Snooping 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	VLAN Group (802.1q VLAN) - Max 4K VLAN Groups 802.1Q Tagged VLAN MAC VLAN entries: 30 (256 for S5500-8MHP2XF & S5500-24MPP4XF) Protocol VLAN: Protocol Template 16, Protocol VLAN 16 (Protocol Template 16 and Protocol VLAN 12 for S5500-8XF and S5500-16XF)	 Private VLAN (except for S5500-8MHP2XF & S5500-24MPP4XF) GVRP VLAN VPN VLAN Mapping VLAN Replace Voice VLAN OUI-based VLAN
QoS	 8 priority queues 802.1p CoS/DSCP priority Queue scheduling SP (Strict Priority) WRR (Weighted Round Robin) SP+WRR 	 Bandwidth Control Port/Flow based Rating Limiting Smoother Performance Action for Flows QoS remark (802.1P Remark, DSCP Remark)

Software Feature		OFFOO OMUDOVE / OFFOO OMARD WE (OFFOO 2 17 12)	
Model	\$5500-8XF / \$5500-16XF / \$5500-4XHPP2XF / \$5500-8MHP2XF / \$5500-24MPP4XF / \$5500-24F4XF / \$5500-24GP4XF / \$5500-48GP4XF		
ACL	MAC ACL Source MAC Destination MAC VLAN ID User Priority Ether Type IP ACL Source IP Destination IP Fragment IP Protocol TCP Flag	- TCP/UDP Port - DSCP/IP TOS • Combined ACL • IPv6 ACL • Policy - Mirroring - Redirect - Rate Limit - QoS Remark • ACL apply to Port/VLAN • Time-based ACL	
Security	IP-MAC-Port Binding -512 Entries - DHCP Snooping - ARP Inspection - IPv4 Source Guard IPv6-MAC -Port Binding -512 Entries - DHCPv6 Snooping - ND Detection - ND Snooping - IPv6 Source Guard DoS Defend DHCP Filter Static/Dynamic Port Security - Up to 64 MAC addresses per port Broadcast/Multicast/Unknown-unicast Storm Control - kbps/ratio/pps control mode	 802.1X 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 	
ISP Features	802.3ah Ethernet Link OAM L2PT (Layer 2 Protocol Tunneling) PPPoE ID Insertion ERPS	Device Link Detect Protocol (DLDP)sFlowDDM	
Management	Web-based GUI Command Line Interface (CLI) through consoleport, telnet SNMPv1/v2c/v3 Trap/Inform RMON (1, 2, 3, 9 groups) SDM Template DHCP/BOOTP Client 802.1ab LLDP/LLDP-MED	 DHCP Auto Install Dual Image, Dual Configuration CPU Monitoring Cable Diagnostics EEE* (S5500-8XF and S5500-16XF do not support this feature) Password Recovery SNTP System Log Remote Packet Capture 	

Software Features		
Model	\$5500-8XF / \$5500-16XF / \$5500-4XHPP2XF / \$5500-8MHP2XF / \$5500-24MPP4XF / \$5500-24F4XF / \$5500-24GP4XF / \$5500-48GP4XF	
IPv6 Support	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	 IPv6 applications DHCPv6 Client Ping6 Tracert6 Telnet (v6) IPv6 SNMP IPv6 SSH IPv6 SSL Http/Https IPv6 TFTP
MIBs	 MIB II (RFC1213) Interface MIB (RFC2233) Ethernet Interface MIB (RFC1643) Bridge MIB (RFC1493) P/Q-Bridge MIB (RFC2674) RMON MIB (RFC2819) 	 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
S5500-8XF	Omada Pro 8-Port SFP+ L2+ Managed Switch
S5500-16XF	Omada Pro 16-Port SFP+ L2+ Managed Switch
S5500-4XHPP2XF	Omada Pro 4-Port PoE++ 10GE L2+ Managed Switch with 2 SFP+ Slots
S5500-8MHP2XF	Omada Pro 8-Port PoE+ 2.5G L2+ Managed Switch with 2 SFP+ Slots
S5500-24MPP4XF	Omada Pro 24-Port PoE+/PoE++ 2.5G L2+ Managed Switch with 4 SFP+ Slots
S5500-24F4XF	Omada Pro 24-Port SFP L2+ Managed Switch with 4 SFP+ Slots
S5500-24GP4XF	Omada Pro 24-Port PoE+ Gigabit L2+ Managed Switch with 4 SFP+ Slots
S5500-48GP4XF	Omada Pro 48-Port PoE+ Gigabit L2+ Managed Switch with 4 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 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 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.

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