MAIPU

MMC

IS230-54TXP-AC

Stackable L3 Cloud Managed Access Switch



Overview

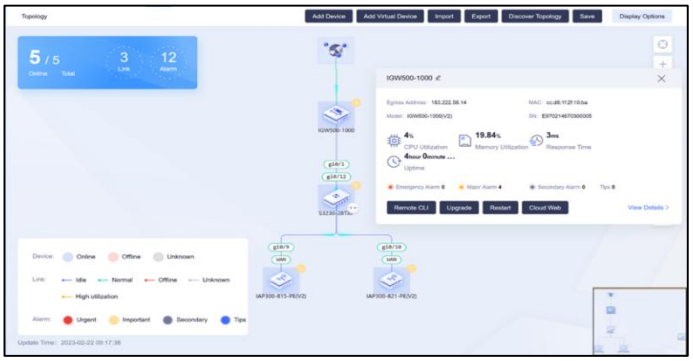
The IS230-54TXP-AC switch is a high-performance stackable L3 access switch developed by Maipu. It is applied in SMB LAN network and easy to deploy Layer2/3 switching solution that offers enhanced security and 10GE uplinks, RIP/OSPF/BGP/IS-IS, L2&L3 Multicast, VST/M-LAG stacking enabled and comprehensive management methods. The IS230-54TXP-AC switch well meets the comprehensive SMB customer requirements such as branch office, hotel, restaurant, school, logistic, chain store, etc.

Model Name	Specification
 **IS230-54TXP-AC**	• 48*10/100/1000M Base-T + 4*10G SFP+ • Fixed Single AC Power • RJ45 Console/USB2.0 Port • 380W PoE&PoE+ • Switching Capacity: 216Gbps

Key Features

- **Cloud Management**

The IS230-54TXP-AC switch support cloud management by the MMC (Maipu Managed Cloud), the switches can be quickly deployed and configured from the cloud, reducing the installation cost. With cloud management, IT staff can remotely access and manage switches from anywhere with an internet connection, making it easier to troubleshoot.



- **Intelligent stacking technology**

The IS230-54TXP-AC switch is equipped with Maipu VST stacking function that allows devices to be stacked into one logical device via the 10G SFP+ ports. VST (Virtual Switching Technology) stacking combines multiple switches to form a logical virtual switch, improving device and link reliability, network expansion, and simplifying configuration and management.

- **High availability**

The IS230-54TXP-AC switch offers advanced redundancy and reliability features, catering to diverse networking requirements. In addition to supporting traditional spanning tree protocols such as STP, RSTP, and MSTP, the switch also complies with the ITU-T G.8032 international standard. This Ethernet Ring Protection Switching (ERPS) protocol enables rapid 50ms failover within Ethernet ring network topologies, ensuring seamless connectivity and minimal downtime.

- **Perfect security policy**

The IS230-54TXP-AC switch offers a comprehensive suite of security features, including user authentication, port security, ACLs, loopback detection, and 802.1X authentication. It also incorporates IP Source Guard, DHCP/ND Snooping, Host Guard, Dynamic ARP Inspection, and PPPoE+ security mechanisms. These robust security functions ensure user access and network protection.

- **Intelligent PoE&PoE+ Detection**

The IS230-54TXP-AC switch support POE/PoE+ function meeting the international 802.11af/at standard. A single port can provide maximum 30W power consumption. The IS230-54TXP-AC switch supports IPDD (Intelligent PoE Dynamic Detection) function. With this function, the switch can dynamically detect whether the terminal device is online or transmitting data normally. If an exception is found, the switch will reset PoE power and restart the terminal device.

- **Advanced QoS**

The IS230-54TXP-AC switch offers sophisticated QoS capabilities for optimal network performance. Supporting eight queues per port and advanced scheduling algorithms such as SP, RR, WRR, and WDRR. The switch accommodates diverse priority mapping techniques, including 802.1p, COS, and DSCP, enabling fine-grained control over traffic classification and prioritization.

- **IPv4&IPv6 Dual-stack Ability**

The IS230-54TXP-AC switch is built on an IPv4/IPv6 dual-stack platform, delivering hardware-based, wire-speed forwarding for both IPv4 and IPv6 traffic. The switch supports IPv4/IPv6 Layer 3 routing protocols,

including RIPng, OSPFv3, BGP4+, and IS-IS for IPv6. These IPv6 capabilities enable seamless deployment on pure IPv4, pure IPv6, or dual-stack networks, facilitating a smooth transition from IPv4 to IPv6 infrastructure.

Zero Touch Provisioning

The IS230-54TXP-AC switch features advanced Zero Touch Provisioning (ZTP) capabilities, streamlining the deployment process for network administrators. With ZTP, the switch can automatically discover and load necessary version files from a file server via a DHCP server or a USB flash disk, eliminating the need for manual intervention during initial setup. This automation reduces configuration errors, accelerates the deployment process, and enhances overall network efficiency, making the IS230-54TXP-AC switch an ideal choice for scalable and dynamic network environments.

Technical Specifications

Model	IS230-54TXP-AC	
Hardware Specification		
Physical Traffic Port	48*10/100/1000M Base-T interfaces 4*10G SFP+ interfaces	
Fixed Power Supply	One	
Fixed Fan	Yes	
Max PoE Power Consumption	380W	
PoE Standard	IEEE 802.af/at	
Power Consumption (Without PoE)	≤50W	
Dimension (W×D×H) mm	442×420×44.2	
Physical Management Port	1*RJ45 Console 1*USB2.0 Port	
Input Voltage	AC:100-240V/50-60Hz	
Temperature	Work Temperature: -5℃ to 50℃ Storage Temperature: -40℃ to 70℃	
Humidity	Work Humidity:10% ~ 90%, non-condensing Storage Humidity:5% ~ 95%, non-condensing	
Anti-Lightning	6KV	
Anti-Static	6KV	
MTBF	>80000 hours	
Performance Parameters		
Switching Capability	176Gbps	
MAC Address Entry	32K	
Jumbo Frame	12K	
ARP Entry	8K	
ND Entry	8K	
VLAN Entry	4K	
LACP Group	64	
LACP Member in Group	8	
MSTP Instance	64	
IPv4 Routing Entry	12K	
IPv6 Routing Entry	4K	
L2 Multicast Entry	6K	
L3 Multicast Entry	6K	
VRF Entry	256	
VRRP Group	255	
Software Specification		
Interface	Physical Interface	Auto MDI/MDIX, Port Type UNI/NNI, Port Speed, Port MTU, Switch Port, Port Loopback, Port Energy Control

	Logic Interface	Loopback Interface, L2/L3 VLAN Interface, L3 Ethernet Interface
	MAC Address Management	Storm Control, Flood Control, MAC Address Aging Time, Mac Address Learning on|off, Mac Address Learning Limitation, Mac Address VLAN Binding, MAC Debug
VLAN	VLAN Management	VLAN, QINQ, Flexible QINQ, VLAN PVID, VLAN Tag/Untag, VLAN Trunk, MAC VLAN, Protocol VLAN, Subnet VLAN, Super VLAN, Voice VLAN, Private VLAN, Guest VLAN, VLAN Debug, GVRP, VLAN Isolation
Ring Protection	Spanning Tree Protocols	STP/RSTP/MSTP, BPDU Guard, Flap Guard, Loop Guard, Root Guard, TC Guard
	Other Ring Protocols	VIST/VIST+, G.8032(ERPSv1&v2)
Link Aggregation	LACP Configuration	LACP Link Aggregation, LACP Port Priority, LACP Load Balance, LACP Rate Monitor, LACP Debug
Error Handling	Error-disable Configuration	Error-disable Based on BPDU guard| DAI| DHCP Snooping| Link-Flap| Loopback-detect| Port Security| Storm Control |Transceiver Power, Error-disable Recovery
Fault Detection	Fault Detection Features	ULFD, Track, Loop-back Detection, CFM (802.1ag)
IP Services	IP Protocol	ARP, DNS, NTP Server/Client, ICMP
	Routing Protocol	Static Routing v4/v6, RIP/RIPng, OSPF v2/v3, BGP/BGP+, ISIS/ISIS v6, VRRP/VRRP v3, VBRP, PBR/PBR v6, IP-VRF
	DHCP Service	DHCP v4/v6 Server, DHCP v4/v6 Client, DHCP v4/v6 Relay, DHCP Snooping, DHCP Option51/82
Multicast Protocols	L2 Multicast Protocols	IGMPv1/v2/v3 Snooping, IGMP Snooping Proxy, MLD Snooping, MVR, MVP
	L3 Multicast Protocols	IGMPv1/v2/v3, PIM v4/v6-SM, PIM v4/v6-SSM, PIM-DM, PIM-SDM
QoS	Priority Mapping	802.1P Priority, DSCP priority
	Traffic Classification	Three Color Marker, Priority Remark, Traffic Redirect, Traffic Meter, Traffic Mirror
	Traffic Control	Rate Limitation, Traffic Shaping
	Scheduling Algorithm	SP, RR, WRR, WDRR, SP+WRR, SP+WDRR
	Congestion Management	Tail-drop, RED, WRED
Security	Port Security	Port Security On aging| deny| permit| violation| ACL
	Network Access Control	IP Source Guard (ISG), DHCP Snooping, ND Snooping, Host Guard
	Threat Prevention	Dynamic ARP Inspection (DAI), ARP Check, AARF ARP-Guard, ARP Speed Limit, ARP Source Suppression, PPPoE+
	Access Control List	Standard IP ACL, Extended IP ACL, Standard MAC ACL, Extended MAC ACL, Standard Hybrid ACL, Extended Hybrid ACL, Standard IPv6 ACL, Extended IPv6 ACL, Time-based ACL
	Anti-Attack	Anti-Attack Detect| Drop| Flood| Log, URPF, White List, Black List
	AAA	AAA, Radius, TACACS+, 802.1x, Portal
High Availability	Device Virtualization	H-VST, M-VST
	Multi-Active Detection	MAD LACP, MAD BFD, MAD Fast-Hello, MAD LACP
	High Availability Protocols	HA, ULFD, UDLD, G.8032, ULPP, Monitor Link, EEP, BFD with Static Route
Configuration and Maintenance	Monitoring and Diagnostics	SPAN, RSPAN, VLAN SPAN, s-Flow, Telemetry, LLDP
	Device Management	TR069, SNMP v1/v2/v3, MIB, RMON, SYSLOG, WEB(HTTP/HTTPS), CLI, Telnet, FTP/FTPS/TFTP/SFTP, Debug,

		Telemetry, ISSU, Hot Patch, Keepalive Gateway, Cloud Management
	Zero Touch Provisioning	ZTP Provisioning Through DHCP Server, ZTP Provisioning Through USB Flash Disk
IEEE Standard	IEEE 802.3 (10BASE-T) IEEE 802.3u (100BASE-T) IEEE 802.3z (1000BASE-X) IEEE 802.3ab (1000BASE-T) IEEE 802.3ae (10G BASE-X) IEEE 802.3ah (Ethernet in the First Mile Operations, Administration, and Maintenance) IEEE 802.1x (Port-Based Network Access Control) IEEE 802.3ad (Link Aggregation) IEEE 802.3x (Flow Control) IEEE 802.3az (Energy Efficient Ethernet) IEEE 802.1d (Spanning Tree Protocol) IEEE 802.1ab (Link Layer Discovery Protocol) IEEE 802.1Q (Virtual LAN) IEEE 802.1w (Rapid Spanning Tree Protocol) IEEE 802.1s (Multiple Spanning Tree Protocol) IEEE 802.1p (Class of Service Priority) IEEE 802.1ag (Connectivity Fault Management)	

Order Information

Model		Description
IS230 Series Host		
IS230 Series	IS230-54TXP-AC	48-Port 100/1000M electric interfaces, 4-Port 1/10G SFP+ interfaces, 380W PoE&PoE+, Single AC Power
Stacking Cable		
Stacking Cable	SFP-STACK-15	High speed stacking cable, SFP+ to SFP+,10Gbps, L=1.5m
	SFP-STACK-30	High speed stacking cable, SFP+ to SFP+,10Gbps, L=3.0m
	SFP-STACK-50	High speed stacking cable, SFP+ to SFP+,10Gbps, L=5.0m
SFP Module		
1.25G Dual-Core SFP	MP-S85123-3CDLM	1.25G SFP 850nm 550m LC DDM Multi-mode
	MP-S31121-3CDL20	1.25G SFP 1310nm 10-20Km LC DDM Single-mode
1.25G BIDI SFP	MP-B35121-3CDL20	1.25G SFP Tx1310/Rx1550nm 10-20Km LC DDM Single-mode
	MP-B53122-3CDL20	1.25G SFP Tx1550/Rx1310nm 10-20Km LC DDM Single-mode
1.25G Copper	SFP-GETB	V2 Version: 10/100/1000M Base-T, RJ45 interface, SGMII
10G Dual-Core SFP+	MP-S851X3-NCLM	10G SFP+ 850nm 300m LC DDM Multi-mode
	MP-S311X2-NCL10	10G SFP+ 1310nm 10Km LC DDM Single-mode
	MP-S311X2-NCL20	10G SFP+ 1310nm 20Km LC DDM Single-mode
10G BIDI SFP+	MP-B231XL-3CD10	10G SFP+ Tx1270/Rx1330nm 10Km LC DDM Single-mode
	MP-B321XL-3CD10	10G SFP+ Tx1330/Rx1270nm 10Km LC DDM Single-mode

MAIPU CLOUD REGISTRATION

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