MAIPU

IS420 Series

Cloud Managed L3 Aggregation Switch

Product Overview

The IS420 series switch is a high-performance stackable L3 Aggregation 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, Static Route/RIP/OSPF/BGP/ISIS, L2/L3 Multicast, VST/M-LAG stacking enabled and comprehensive management methods. The IS420 series switch well meets the comprehensive SMB customer requirements such as branch office, hotel, restaurant, school, logistic, chain store, etc.

The IS420 series switch includes IS420-30TXF-AC, IS420-36GTXF-AC.

Modem Name	Specification
IS420-30TXF-AC	● 24*10/100/1000M Base-T + 6*10G SFP+ ● Fixed Dual AC Power ● RJ45 Console/USB2.0 Port ● Switching Capacity: 168Gbps
IS420-36GTXF-AC	● 24*1G SFP + 8*10/100M/1000M Base-T ● 4*10G SFP+ ● Fixed Dual AC Power ● RJ45 Console/USB2.0 Port ● Switching Capacity: 144Gbps

Key Features

Cloud Management

The IS420 series 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 IS420 series switch is equipped with Maipu VST stacking function that allows four 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 IS420 series 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 IS420 series 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.

Advanced QoS

The IS420 series 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.

Hardware Specifications

Model	IS420-36GTXF-AC	IS420-30TXF-AC
Hardware Specification		
Physical Traffic Port	24*1G SFP interfaces 8*10/100M/1000M Base-T interfaces 4*10G SFP+ interfaces	24*10/100/1000M Base-T interfaces 6*10G SFP+ interfaces
Switching Capability	144 Gbps	168 Gbps
Throughput	107 Mpps	125 Mpps
CPU	Integrated CPU 2Core 1.0 Ghz	
Flash	256 MB	
Memory	1 GB	
Fixed Power Supply	Dual	Dual
Fixed Fan	Yes	Yes
Power Consumption	≤60W	≤37W
Dimension (W×D×H)mm	442×320×44.2	442×380×44.2
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		
MAC Address Entry	32K	32K
Jumbo Frame	12K	12K
ARP Entry	8K	8K
ND Entry	8K	8K
VLAN Entry	4K	4K
LACP Group	64	64
LACP Member in Group	8	8
MSTP Instance	64	64
IPv4 Routing Entry	12K	12K
IPv6 Routing Entry	4K	4K
L2 Multicast Entry	6K	6K
L3 Multicast Entry	6K	6K
VRF Entry	256	256
VRRP Group	255	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, Tunnel Interface, Null Interface
	MAC Address Management	Storm Control, Flood Control, MAC Address Aging Time, Mac Address Learning on|off, Mac Address Learning Limitation, Mac Address VLAN Bunding, 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 bpduguard|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, ECMP, GRE, IPIP, IPv6 over IPv4, ISATAP, IPv4 over IPv6, IPv6 over IPv6
	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 Limit, 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 Guard, 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, VRRP, VRRPv3, VBRP, EEP, BFD with Static|RIP|OSPF|BGP|ISIS

Configuration and Maintenance	Monitoring and Diagnostics	SPAN, RSPAN, VLAN SPAN, sFlow, Telemetry, LLDP, IP-SLA
	Device Management	TR069, SNMP v1/v2/v3, MIB, RMON, SYSLOG, WEB(HTTP/HTTPS), CLI, Telnet, SSH, FTP/SFTP/TFTP/FTPS, 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
IS420 Series Host		
IS420 Series	IS420-30TXF-AC	Advanced Gigabit Layer 3 Stackable Switches 24-Port 10/100/1000M electric interfaces, 6-Port 10G SFP+ interfaces, Dual AC Power
	IS420-36GTXF-AC	Advanced Gigabit Layer 3 Stackable Switches 24-Port 1G SFP interfaces, 8-Port 10/100/1000M electric interfaces, 4-Port 10G SFP+ interfaces, Dual 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

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