# MAIPU

# IS320 Series

## Cloud Managed L3 Lite Access Switch

# Product Overview

The IS320 series switch is a high-performance stackable L3 Lite 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, Static Route, L2 Multicast, VST/M-LAG stacking enabled and comprehensive management methods. The IS320 series switch well meets the comprehensive SMB customer requirements such as branch office, hotel, restaurant, school, logistic, chain store, etc.

The IS320 series switch includes IS320-12TXF-AC, IS320-28TXF-AC, IS320-28TXP-AC, IS320-52TF-AC four models.

| Model Name | Specification |
|---|---|
| IS320-12TXF-AC | • 8*10/100/1000M Base-T + 4*10G SFP+ <br> • Fixed Single AC Power <br> • RJ45 Console/USB2.0 Port <br> • Switching Capacity: 96Gbps <br> • Reset Button |
| IS320-28TXF-AC | • 24*10/100/1000M Base-T + 4*10G SFP+ <br> • Fixed Single AC Power <br> • RJ45 Console/USB2.0 Port <br> • Switching Capacity: 128Gbps <br> • Reset Button |
| IS320-28TXP-AC | • 24*10/100/1000M Base-T + 4*10G SFP+ <br> • Fixed Single AC Power <br> • RJ45 Console/USB2.0 Port <br> • 380W PoE&PoE+ <br> • Switching Capacity: 128Gbps <br> • Reset Button |
| IS320-52TF-AC | • 48*10/100/1000M Base-T + 4*1G SFP <br> • Fixed dual AC Power <br> • RJ45 Console/USB2.0 Port <br> • Switching Capacity: 104Gbps |

# Key Features

## Cloud Management

The IS320 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 IS320 series 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 IS320 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 IS320 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.

## Intelligent PoE&PoE+ Detection

The IS320 series switches support POE/PoE+ function meeting the international 802.11af/at standard. A single port can provide maximum 30W power consumption. The IS320 series PoE switches support 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 IS320 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.

# Technical Specifications

| Model | IS320-28TXF-AC | IS320-28TXP-AC | IS320-52TF-AC | IS320-12TXF-AC |
|---|---|---|---|---|
| **Hardware Specification** | | | | |
| Physical Traffic Port | 24*10/100/1000M Base-T interfaces  4*10G SFP+ interfaces | 24*10/100/1000M Base-T interfaces  4*10G SFP+ interfaces | 48*10/100/1000M Base-T interfaces  4*1G SFP interfaces | 8*10/100/1000M Base-T interfaces  4*10G SFP+ interfaces |
| Switching Capability | 128Gbps | 128Gbps | 104Gbps | 96Gbps |
| Fixed Power Supply | One | One | Dual | One |
| Fixed Fan | Yes | Yes | Yes | Yes |
| Max PoE Power Consumption | N/A | 380W | N/A | N/A |
| PoE Standard | N/A | IEEE 802.af/at | N/A | N/A |
| Power Consumption (Without PoE) | ≤30W | ≤40W | ≤55W | ≤25W |
| Dimension (W×D×H)mm | 442×350×44.2 | 442×380×44.2 | 442×320×44.2 | 275×230×44.2 |
| 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 | 16K | 16K | 16K | 16K |
| Jumbo Frame | 12K | 12K | 12K | 12K |
| ARP Entry | 2K | 2K | 2K | 2K |
| ND Entry | 1.5K | 1.5K | 1.5K | 1.5K |
| VLAN Entry | 4K | 4K | 4K | 4K |
| LACP Group | 64 | 64 | 64 | 64 |
| LACP Member in Group | 8 | 8 | 8 | 8 |
| MSTP Instance | 64 | 64 | 64 | 64 |
| L2 Multicast Entry | 3K | 3K | 3K | 3K |
| **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 | Storm Control, Flood Control, MAC Address Aging Time, Mac Address | | |

| | Management | 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 |
| | Routing Protocol | Static Routing v4/v6 |
| | DHCP Service | DHCP v4/v6 Client, DHCP Snooping, DHCP Option51/82 |
| Multicast Protocols | L2 Multicast Protocols | IGMPv1/v2/v3 Snooping, IGMP Snooping Proxy, MLD Snooping, MVR, MVP |
| 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, sFlow, 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 |
|---|---|---|
| **IS320 Series Host** | | |
| IS320 Series | IS320-28TXF-AC | 24*10/100/1000M Base-T interfaces, 4*10G SFP+ interfaces, Fixed One AC Power Supply. |
| | IS320-28TXP-AC | 24*10/100/1000M Base-T interfaces, 4*10G SFP+ interfaces, PoE Enable, Fixed One AC Power Supply. |
| | IS320-52TF-AC | 48*10/100/1000M Base-T interfaces, 4*1G SFP interfaces, Fixed Dual AC Power Supply. |
| | IS320-12TXF-AC | 12*10/100/1000M Base-T interfaces, 4*10G SFP+ interfaces, Fixed One AC Power Supply. |
| **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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