S3230 Series Stackable L3 Lite Access Switch Datasheet

Overview

The S3230 series switch is a high-performance stackable L3 Lite access routing switch developed by Maipu. It is applied in enterprise campus 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 flexible management like SDN management and Cloud managed.

The S3230 series switch can be used as access devices on enterprise branch networks. The switches help build highly reliable enterprise campus networks that are easy to expand and manage.

The S3230 series switch includes S3230-28TXF-AC, S3230-28TXP-AC, S3230-54TXF-AC and S3230-54TXP-AC.

Model Name	Specification
 S3230-28TXF-AC	• 24*10/100/1000M Base-T + 4*10G SFP+ • Fixed Single AC Power • RJ45 Console/USB2.0 Port • Switching Capacity: 128Gbps • Reset Button
 S3230-28TXP-AC	• 24*10/100/1000M Base-T + 4*10G SFP+ • Fixed Single AC Power • RJ45 Console/USB2.0 Port • 380W PoE&PoE+ • Switching Capacity: 128Gbps • Reset Button
 S3230-54TXF-AC	• 48*10/100/1000M Base-T + 6*10G SFP+ • Fixed Single AC Power. • RJ45 Console/USB2.0 Port • Switching Capacity: 216Gbps
 S3230-54TXP-AC	• 48*10/100/1000M Base-T + 4*10G SFP+ • One Extension Slot (2-Port 10G Card) • Fixed Single AC Power. • 760W PoE&PoE+ • RJ45 Console/USB2.0 Port • Switching Capacity: 216Gbps

Key Features

- **Intelligent stacking technology**

The S3230 series switch is equipped with Maipu VST stacking function. VST (Virtual Switching Technology) stacking combines multiple switches to form a logical virtual switch via the 10G SFP+ ports, improving device and link reliability, network expansion, and simplifying configuration and management.

- **Software Defined Network**

The S3230 series switch is capable of being managed by Maipu's BD-Campus controller, an integrated SDN platform designed for campus networks. The utilization of software-defined network technologies in this platform simplifies the deployment, management, and security of campus networks, while also enabling network teams to complete the majority of their work directly on the BD-Campus controller platform. When compared with traditional methods, implementing a BD-Campus solution can significantly reduce network deployment times, simplify network maintenance, improve troubleshooting efficiency, and ultimately lead to overall cost savings for customers.

- **Zero Touch Provisioning**

The S3230 series 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 S3230 series switch an ideal choice for scalable and dynamic network environments.

- **High availability**

The S3230 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 S3230 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.

Additionally, the switch supports MAC+IP+VLAN binding, 802.1X authentication, and countermeasures against network storm, DOS/DDOS, ARP, and protocol packet attacks. This makes the S3230 series ideal for large-scale, multi-service, and complex-traffic networks.

- **Advanced QoS**

The S3230 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 effectively manages traffic prioritization and resource allocation.

The switch accommodates diverse priority mapping techniques, including 802.1p, CoS, and DSCP, enabling fine-grained control over traffic classification and prioritization. With granular port traffic rate limiting and time-based controls, network administrators can regulate bandwidth usage as needed.

To optimize network performance and minimize congestion, the S3230 series switch employs advanced congestion management techniques, such as Tail Drop and RED packet loss algorithms. These mechanisms help maintain seamless network operation while ensuring efficient delivery of critical data.

- **Rich Network Management**

The S3230 series switch offers a comprehensive set of management options. These options encompass network management protocols like SNMP and TR-069, configuration and control options like Netconf/Yang and CLI, monitoring and diagnostic tools such as RMON and SYSLOG. These versatile features enable network administrators to effectively manage, monitor, and maintain optimal network performance both locally and via the cloud.

- **Free Licensing Policy**

Maipu consistently adheres to a "One-time investment" free license policy, ensuring that standard and advanced features are not differentiated across versions. This approach guarantees that customers receive new firmware updates without incurring additional charges. In comparison to other manufacturers, Maipu's free license policy safeguards both short-term and long-term user investments, providing an unparalleled value proposition.

Technical Specifications

Model	S3230-28TXF-AC	S3230-28TXP-AC	S3230-54TXF-AC	S3230-54TXP-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 6*10G SFP+ interfaces	48*10/100/1000M Base-T interfaces 4*10G SFP+ interfaces,
Extension Slot	N/A	N/A	N/A	1
Fixed Power Supply	One	One	One	One
Fixed Fan	Yes	Yes	Yes	Yes
Max PoE Power Consumption	N/A	380W	N/A	760W
PoE Standard	N/A	IEEE 802.af/at	N/A	IEEE 802.af/at
Power Consumption (Without PoE)	≤26W	≤29W	≤55W	≤48W
Dimension(W*D*H)mm	442*220*44.2	442*380*44.2	442*320*44.2	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°C to 50°C Storage Temperature: -40°C to 70°C			
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	128Gbps	128Gbps	216Gbps	216Gbps
MAC Address Entry	16K	16K	32K	32K
Jumbo Frame	12K	12K	12K	12K

ARP Entry	2K	2K	8K	8K
ND Entry	1.5K	1.5K	8K	8K
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	6K	6K

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 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

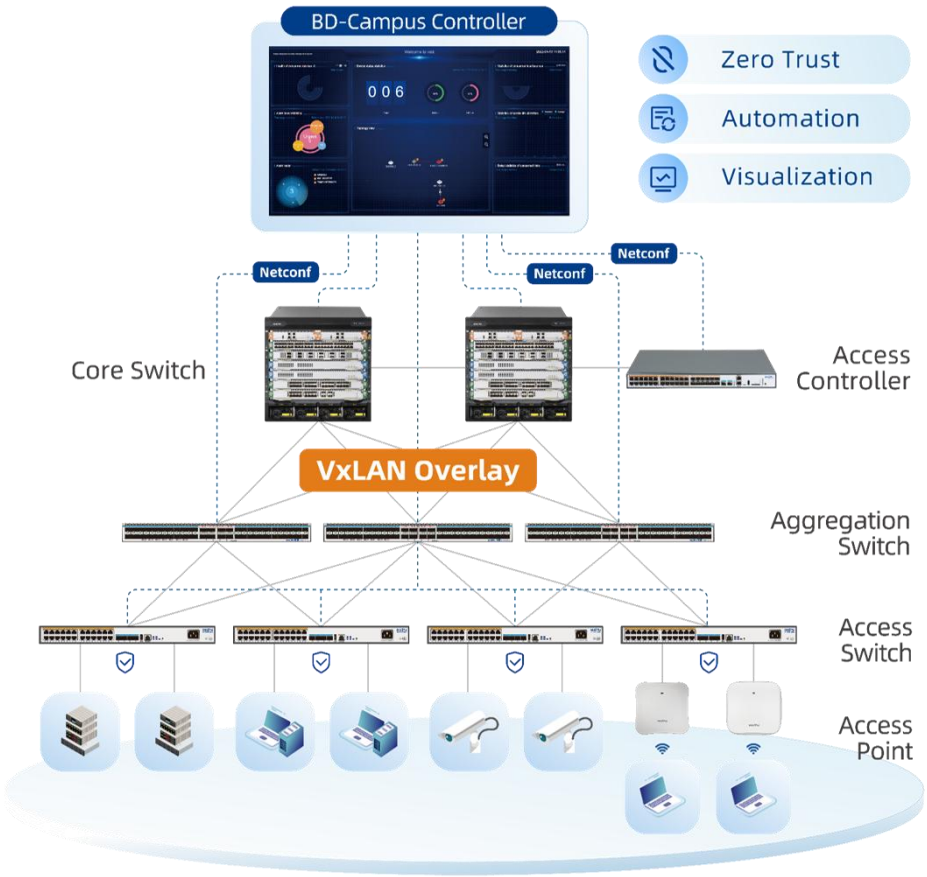
	AAA	AAA, Radius, TACACS+, 802.1x, Portal
High Availability	Device Virtualization	H-VST, M-VST
	Multi-Active Detection	MAD LACP, MAD BFD, MAD Fast-Hello, MAD LACP
	High Availability Protocols	HA, ULFD, UDLD, G.8032, ULPP, Monitor Link, EEP, BFD with Static Route, CPU protection
Configuration and Maintenance	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
Network Virtualization	Software Defined Networking (SDN)	Netconf/Yang
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	
S3230 Series Host		
S3230 Series	S3230-28TXF-AC	24*100/1000M Base-T interfaces, 4*10G SFP+ interfaces, Fixed One AC Power Supply.
	S3230-28TXP-AC	24*100/1000M Base-T interfaces, 4*10G SFP+ interfaces, PoE Enable, Fixed One AC Power Supply.
	S3230-54TXF-AC	48*100/1000M Base-T interfaces, 6*10G SFP+ interfaces, Fixed One AC Power Supply.
	S3230-54TXP-AC	48*100/1000M Base-T interfaces, 4*10G SFP+ interfaces, PoE Enable, One Extension Slot, Fixed One AC Power Supply.
Extension Module		
10G Module	SM4C-2XGEF	2-Port 10G SFP+ Extension Module (For S3230-54TXP-AC)
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

Typical Application

- **SDN Campus Network**



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