



# S3330 Series Industrial Access Switch

## Datasheet

### Product Overview

The S3330 series industrial switch is a high-performance stackable L3 Lite access switch developed by Maipu. It is applied in harsh environments of enterprise network and easy to deploy Layer2/3 switching solution that offers enhanced security and 10GE uplinks, Static Route/RIP/OSPF, L2 Multicast, VST/M-LAG stacking enabled and flexible management. The S3330 series industrial switch is designed to provide reliable performance in demanding applications, with features such as redundant DC power supplies inputs, Fanless passive cooling and DIN-rail installation, etc.

The S3330 series industrial switch includes S3330-12TXF-DC48, S3330-12TXP-DC48 two models.

Model Name	Specification
 <p style="text-align: center;"><b>S3330-12TXF-DC48(E1)</b></p>	<ul style="list-style-type: none"> <li>● 8*10/100/1000M Base-T + 4*10G SFP+</li> <li>● Fixed Single AC Power</li> <li>● Fanless Design</li> <li>● RJ45 Console/USB2.0 Port</li> <li>● Switching Capacity: 96Gbps</li> <li>● Reset Button</li> <li>● -20~60°C Long-term Working Temperature</li> <li>● Dual -48V DC Input</li> <li>● DIN-Rail Installation</li> </ul>
 <p style="text-align: center;"><b>S3330-12TXP-DC48(E1)</b></p>	<ul style="list-style-type: none"> <li>● 8*10/100/1000M Base-T + 4*10G SFP+</li> <li>● Fixed Single AC Power</li> <li>● Fanless Design</li> <li>● RJ45 Console/USB2.0 Port</li> <li>● 125W PoE&amp;PoE+</li> <li>● Switching Capacity: 96Gbps</li> <li>● Reset Button</li> <li>● -20~60°C Long-term Working Temperature</li> <li>● Dual -48V DC Input</li> <li>● DIN-Rail Installation</li> </ul>

# Key Features

## ● Wide range working temperature and fanless design

The S3330 series industrial switch with wide temperature range is designed to operate in extreme temperature, making them ideal for use in harsh environments such as Pipeline well, industrial facilities, and transportation or power systems. Fanless design makes the switch without moving parts, which means they require less maintenance and have a longer lifespan than other switches with fans.

## ● Intelligent stacking technology

The S3330 series industrial switch is equipped with Maipu VST stacking function that allows a minimum of 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.

## ● Zero Touch Provisioning

The S3330 series industrial 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 S3330 series industrial 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 S3330 series industrial 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 S3330 series industrial 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 S3330 series industrial 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 S3330 series industrial 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	S3330-12TXF-DC48		S3330-12TXP-DC48	
Version	E1		E1	
<b>Hardware Specification</b>				
Physical Traffic Port	8*10/100/1000M Base-T interfaces 4*10G SFP+ interfaces		8*10/100/1000M Base-T interfaces 4*10G SFP+ interfaces	
Fixed Power Supply	Dual DC Input		Dual DC Input	
Fanless Design	Yes		Yes	
Max. PoE Power Consumption	N/A		125W	
PoE Standard	N/A		IEEE 802.af/at	
Power Consumption (Without PoE)	≤16W		≤20W	
Dimension(W*D*H) mm	275*230*44		275*230*44	
Physical Management Port	1*RJ45 Console 1*USB2.0 Port			
Input Voltage (DC)	-36V~-75V/0.6A		-48V~-57V/8A	
Temperature	Long-term Work Temperature: -20°C to 60°C Storage Temperature: -40°C to 70°C			
Humidity	Working Humidity:10% ~ 90%, non-condensing Storage Humidity:5% ~ 95%, non-condensing			
Anti-Lightning	6KV			
Anti-Static	6KV			
MTBF	>80000 hours			
<b>Performance Parameters</b>				
Switching Capability	96Gbps			
MAC Address Entry	16K			
Jumbo Frame	12K			
ARP Entry	2K			
ND Entry	1.5K			
VLAN Entry	4K			
LACP Group	64			
LACP Member in Group	8			
MSTP Instance	64			
L2 Multicast Entry	3K			
<b>Software Specification</b>				
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 Bundling, 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, RIP/RIPng, OSPF v2/v3
	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
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
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	
<b>S3330 Industrial Series Host</b>		
S3330 Series	S3330-12TXF-DC48	E1 Version: 8*10/100/1000M Base-T interfaces, 4*10G SFP+ interfaces, Dual DC Power Input, -20~60°C working temperature, DIN-Rail.
	S3330-12TXP-DC48	E1 Version: 8*10/100/1000M Base-T interfaces, 4*10G SFP+ interfaces, 125W PoE&PoE+ Consumption, Dual DC Power Input, -20~60°C working temperature, DIN-Rail.
<b>Stacking Cable</b>		
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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