

S6600A-03&04 Series L3 Distribution Switch Datasheet

Overview

S6600A series is Maipu new multi-service distribution routing switch developed by Maipu. It adopts the ASIC architecture design, provides the stable, reliable, and secure L2/L3 data wire-speed switching services for the next generation network, owns the advanced 1G/10G Ethernet technology, supports various high-density interface board, and meets the high-density, high-throughput requirements of the distribution devices at the distribution layer.

S6600A-03 supports 2 control engine and 3 service slots. S6600A-04 supports 2 control engine and 4 service slots.



S6600A-04

S6600A series adopts the carrier-class reliability design and passive backplane technology and supports the control engine redundancy, switching engine redundancy, power and fan redundancy. All the modules support hot-swappable. Besides, it supports the STP/RSTP/MSTP/ERPS protocols to realize the link redundancy and ensure that the services are not disconnected when the network fails in various networking modes. S6600A provides rich functions. For example, the hardware supports IPv6; provides various IPv6 networking modes and service applications; supports L2/L3/star/ring/tree Metro-E networking technologies; provides complete QoS and multicast supporting technologies.

As the network distribution data switching platform, S6600A-04 can cooperate with the other series switches of Maipu to provide LAN solutions for the sectors of large and medium-sized enterprises.

Key Features

Advanced hardware structure to ensure 1Tbps backplane and switching capacity

S6600A series switch adopts the ASIC structure, provides passive copper backplane, realizes the intra-board and inter-board L2/L3 wire-speed distributed forwarding via switching matrix, and performs high-speed route searching via powerful ASIC chip, thereby improving the forwarding performance and expanding capability greatly, reaching the higher backplane bandwidth and switching capacity, and providing advanced 1G/10G/40G Ethernet supporting, as well as high-density interface board to meet the high-density and high-throughput requirements of the devices at the distribution layer.

Separated switching and control plane, ensuring no packet loss

S6600A series adopts the technology of separating the control engine. When the control card fails and performs the redundant switching, it does not affect the data forwarding of the switching card and the data of the service cards is still forwarded normally on the switching card, so as to reach the high-reliability requirement of no packet loss.

Virtualization technology, achieve unified deployment and management

S6600A series supports VST management plane virtualization technology, including horizontal virtualization H-VST and virtualized deployment M-VST, it can realize high performance logical switch virtualized by more than one hundred different series of switches, for unified management and deployment.

Easy management: The entire virtualization architecture shares one management IP address, simplify network topology and management, improve maintenance efficiency, highly reduce OPEX;

Strong architecture: With distributed cross-device link aggregation technology, multiple uplinks share load and backup each other, to improve redundancy in the network structure and link resource utilization;

High stability: Stacking to achieve local or remote function supports cross-device link bundling functionality to meet the core network links high-speed seamless switching needs.

IPv4 & IPv6 dual stack

S6600A series supports IPv4/IPv6 dual protocol stack, supports multiple tunnel technologies, supports IPv6 static routing, RIPng, OSPFv3, BGP+, IS-ISv6, and IPv6 multicast, and satisfies IPv6 independent networking and IPv4/IPv6 Hybrid networking requirements.

Stable core guarantee mechanism and the redundancy for key components to ensure the carrier-class reliability of the distribution devices

All key components of S6600A series provide the dual-redundancy or multi-redundancy. It supports power redundancy, management module redundancy, switching matrix redundancy, and link redundancy. The power module, fan module, and all service cards of S6600A series are hot-swappable, ensuring that the services are not interrupted forever. The special dual-engine backup design ensures the carrier-class reliability of the core switching platform.

Perfect network security features ensure that the core devices can provide the complete anti-attack and anti-virus capability

S6600A series adopts excellent security design; supports SNMP V1/V2/V3 based on user security policy, MAC+IP+VLAN binding, and 802.1X authentication; supports the security policies such as anti-network storm attack, anti DOS/DDOS attack, anti ARP attack, anti-scan pry attack, anti-freaky packet attack,

anti-network protocol packet attack to prevent attacks and virus efficiently. It is suitable for large-scale, multi-service, and complicated-flow networks.

Low-power consumption and lead-free ROHS design

According to 10°C rule, the reliability and life of semiconductor chip are related with working temperature. The working temperature increases 10°C and the reliability of semiconductor reduces a half, while the working temperature and power consumption are in direct proportion. The maximum power consumption of S6600A series 10G distribution routing switch is lower than 800W, while the lower-power consumption design of S6600A series makes the temperature of the board card semiconductor chip lower. Therefore, the low-power consumption design improves the use life and stable running of high-end devices, saves the running energy consumption of devices, and meets the green environmental protection requirements.

Technical Specifications

Product model	S6600A Series Switch (N1)	
Frame model	S6600A-03	S6600A-04
Product configurations		
Hardware Version	N1	N1
Device Structure	Chassis & Modular Design	
Physical Port	Rack/modular distributed structure design	
Control Engine Slots	2	2
Service Slots	3	4
Power Slots	4	2
Fan Slots	2	1
Console Port	2 (RJ45+USB)	
Out-band Interface	1*RJ45	
Hot Swap	Yes	
MTBF	>200000 hours	
Physical index		
Dimension (W×D×H)	441x430x266(mm)	441x435x222(mm)
Power supply		
Power Input	AC 100-240V, 50-60Hz	
Power Supply	AD800-1D005M: 800W Power	AD500M-HS0F: 500W Power
Environment		
Working Temperature	0°C~45°C	
Power Surge	±6KV@1.2/50us	
Anti-Static	Contact Electrostatic: ≥6KV Air Electrostatic: ≥8KV	
Humidity	10~90%, non-condensing	
Software Features		
Standard L2 protocol	LAN Features	Port Type UNI/NNI, Port Speed, Port MTU, Switch Port, Port Loopback, Port Energy Control, Port Isolation, Loopback interface, Null interface
		MAC address aging time, Mac address learning on off, Mac address learning limitation, Mac address VLAN bunding, MAC debug
		VLAN, VLAN PVID, VLAN interface, VLAN Tag/Untag, VLAN Trunk, MAC VLAN, Protocol VLAN, Subnet VLAN, Super VLAN, Voice VLAN, VLAN Debug, QinQ, Selective QinQ, VLAN Mapping
		STP/RSTP/MSTP, BPDU Guard, Flap Guard, Loop Guard, Root Guard, TC Guard

		G.8032(ERPSv1&v2)
		Static Multicast, IGMP Snooping, IGMP Snooping Proxy, MVR, MLD Snooping
		LACP Link aggregation, LACP Port Priority, LACP Load Balance, LACP Rate Monitor, LACP Debug
		ULFD, Track, Loop Detection
VPN Technology	MPLS L3 VPN	LDP, MPLS BGP L3 VPN, MPLS OAM
Standard L3 protocol	Routing Protocol	Static Route, Static Route v6, RIP v1/v2, RIPng, OSPFv2, OSPFv3, BGP, BGP4+, ISIS, ISISv6, VRRP, Policy Route, IP-VRF, Route Map
	BFD	BFD with Static RIP OSPF BGP ISIS
	L3 Multicast	IGMPv1/v2/v3, PIM-SM, PIM-SSM
	DHCP	DHCP Server, DHCP Client, DHCP Relay, DHCP Snooping, DHCP Option43/60/82, DHCP Per VLAN
Stacking	VST	VST Member, VST Domain, VST Member Priority, VSL Channel
	MAD	MAD LACP, MAD Fast-hello
Network security	Port Security	Port Security On aging deny permit violation ACL
	Network Security	IP Source Guard, DHCP Snooping, Host Guard, Dynamic ARP Inspection
	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
	Anti-attack	Anti-attack detect drop flood log, CPU Protection
	AAA	Authentication, Authorization, Accounting, Radius, TACACS, 802.1x, Portal
QoS	Flow Classification	802.1P priority, DSCP priority
	Traffic Speed Control	Rate Limit, Traffic Shaping
	Congestion Management	SP, RR, WDRR, SP+WRR
	Congestion Avoidance	Tail-drop, RED, WRED
Management	Network Management	SNMP v1/v2/v3, MIB, RMON, SYSLOG, DNS, CLI, Telnet, FTP/TFTP, Debug
	Network Monitoring	SPAN, sFlow, LLDP, IP-SLA

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 802.1x (port authentication)
	IEEE 802.3ad (Link Aggregation)	IEEE 802.3x (Flow Control)
	IEEE802.3az (Energy Efficient Ethernet)	
	IEEE 802.1d (STP)	IEEE 802.1Q (Virtual LAN)
	IEEE 802.1w (RSTP)	IEEE 802.1s (MSTP)
	IEEE 802.1p (Cos priority)	

Order Information

Model	Description
S6600A-03 L3 Distribution Switch Series	
Chassis and power supply	
S6600A-03	S6600A-03 chassis, 2 control engine slots, 3 service slots, 2 fan slot, 4 power slots.
Control Engine	
SM66A-MPUA	SM66A-MPUA Control Engine, supporting active/standby backup function (one is mandatory, 1+1 redundancy is optional)
Fan Modules	
FAN-7C-01	FAN-7C-01 Fan Module for IS660-03
Power Modules	
AD800-1D005M	AD800-1D005M ,800W AC power module
Service Modules (Standard L2&L3 Features)	
SM66A-48GET-EB	48 port 10/100/1000M Base-T electric interface
SM66A-48GEF-EB	48 port 100/1000M SFP optical interface
SM66A-24XGEF24GEF-EB	24 port 100/1000M SFP optical interface ,24-port 10G SFP+ optical interface
SM66A-24GET12GEF12XF-EB	24 port 10/100/1000M Base-T electric interface, 12 port 100/1000M SFP optical interface, 12-port 10G SFP+ optical interface
SM66A-24XGEF-EB	24 port 10G SFP+ optical interface
SM66A-48XGEF-EB	48 port 10G SFP+ optical interface
SM66A-12QXGE-EB	12 port 40G QSFP optical interface

S6600A-04 L3 Distribution Switch Series	
Chassis and power supply	
S6600A-04	S6600A-04 chassis, two control engine slots, 4 service slots, one fan slot, two power slots.
Control Engine	
SM66A-MPUD	SM66A-MPUD Control Engine, supporting active/standby backup function (one is mandatory, 1+1 redundancy is optional)
Fan Modules	
FAN-05C-01B	FAN-05C-01B Fan Module for IS660-04
Power Modules	
AD500M-HS0F	AD500M-HS0F, 500W AC power module
Service Modules (Standard L2&L3 Features)	
SM66A-16XGEF-FB	16-port 10G SFP+ optical interface
SM66A-24GET24GEF4XF-FB	24-port 1000M Base-T electric interface, 24-port 1000M SFP optical interface,4-port 10G SFP+ optical interface
SM66A-48GEF4XGEF-FB	48-port 1000M SFP optical interface,4-port 10G SFP+ optical interface
SM66A-48GET4XGEF-FB	48-port 1000M Base-T electric interface,4-port 10G SFP+ optical interface

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