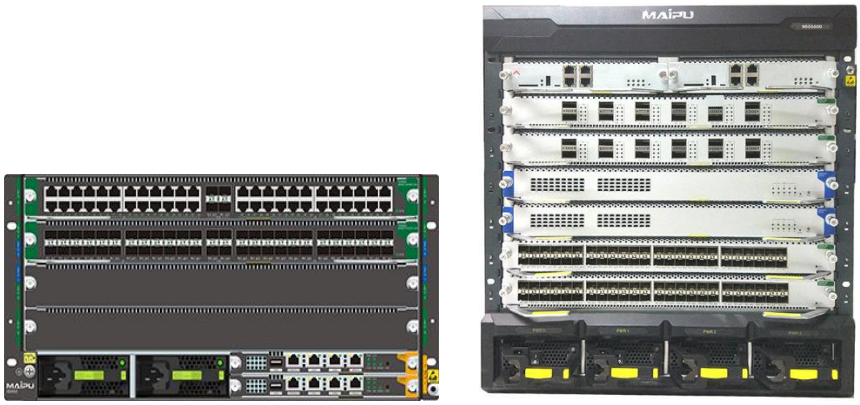
NSS6600 Series 10G Distribution Switch Datasheet

Overview

NSS6600 series all-by-China intelligent campus distribution switch is a new-generation multi-service high-performance Ethernet switching product developed by Maipu for the industry with high security requirement (such as government) based on all-by-China CPU and all-by-China switching chips. It provides the fully secure, controllable, stable and reliable high-performance L2/L3 switching service from the chip, the hardware to the software mainly for the campus network core, data center aggregation, and other scenarios.

NSS6600 series distribution supports high density 1G/10G interfaces. The port density fully meets the high-density access and high-performance forwarding requirements in the construction of the campus network and data center. NSS6600 series supports a variety of security technologies and policies to provide an excellent platform for the user to build the high-performance, high-security and high-intelligence IP networks. Cooperating with Maipu NSS4330 and NSS3330 series Gigabit switches, it can provide all-by-China whole-network solutions for small and medium sized campus networks.



NSS6600 series distribution switch

Key Features

- **Adopt the domestic CPU and domestic switching chip, secure, and controllable**

Maipu adopts the new-generation all-by-China CPU chip and all-by-China high-integrated high-performance switching chip to develop the new-generation high-performance, high-reliability, manageable and controllable Ethernet switch, meeting the needs of the customers with high security requirement (such as government) to deploy a controllable network. It provides users with a multi-service, safe and controllable integrated solution to meet the security requirements of the user network from the chip to the hardware.

- **Advanced distribution architecture design, high performance and high stability**

NSS6600 is an industry-leading independent security distribution switch product designed for campus network. Using advanced orthogonal switching architecture, the control unit and switching unit are independent of each other to realize the physical separation of control plane and forwarding plane. Control board 1+1 redundancy, switching fabric 1+1 redundancy, fan frame 1+1 redundancy, power module N+M redundancy, to ensure the high reliability of the system; adopt the independent switching unit to ensure the continuous upgrading of the bandwidth of subsequent products. Support high-density 1G/10G interface cards.

- **Adopt controllable network operation system and protocol stack software, stable, safe and reliable**

Maipu all-by-China network operation system is mature and stable. It has inherited the finance and operator software technology accumulation of Maipu for more than 20 years, and nearly one million devices have been tested in the network operation. Maipu's all-by-China switch operating system and protocol stack software have independent intellectual property rights, and has passed the vulnerability scanning test of the information security product detection center of public security. The operating system is safe and reliable.

- **High-density 10G access capability**

NSS6600 series all-by-China 10G distribution switch provides the high-density 1G/10G port access capability. One slot can support up to 48*10G interfaces at most. NSS6600 can fully meet the configuration requirements of Gigabit and 10G hybrid access in the construction of small and medium campus networks and data center.

- **Support the encryption of the control plane and the management plane, effectively ensuring the network security**

SSH login supports the encryption algorithm. The switch configuration file supports encryption, preventing the equipment from being cracked and accessed and management data from being stolen and leaked, so as to realize the security and reliability of the switch management plane. The device supports the common control protocols, such as MSTP, RIP, OSPF and BGP. It supports encrypting the protocol packets, ensuring that the network topology protocol is not leaked. It supports the authentication for the trustable equipment. Adopt the 802.1X authentication for the switch devices connected to the network to judge the validity of the connected devices and prevent the invalid devices from accessing the network, ensuring the security and reliability of the control plane of the switch.

Product Specifications

Product model	NSS6600-04	NSS6600-06
Hardware specifications		
Slots of control engine	2	2
Slots of service Card	4	4/6
Switching Fabric	N/A	2
Power slots	2	4
Fan slots	1	2
Management interface	One Console interface, one CMM debugging interface, one RJ45 Ethernet interface	
hot swap design	Control board, switching fabric, service card, power, fan	
Dimension (W×D×H)	441x435x222mm	441×434×488mm
Power	Input voltage (AC): 100-240V, 50/60Hz	
Temperature	Work temperature: 0°C to 50°C Storage temperature: -40°C to 70°C	
Humidity	Work humidity: 10% to 90%, no-condensing Storage humidity: 5% to 95%, no-condensing	
Air duct type	Front and back ventilation	
Software feature		
Link-layer protocol and technology	Link-layer feature	Support port aggregation, port isolation
	MAC address management	Support the static MAC configuration
	VLAN	Support the VLAN based on port, MAC, IP address, protocol port number
	QinQ	Support basic QinQ and selective QinQ
	Spanning tree protocol	Support STP/MSTP/RSTP
	Link aggregation	Support IEEE 802.3ad (link aggregation)
	Port mirror	Support port mirror
Network protocol	IPv4 protocol	TCP, UDP, Ping, TraceRoute, Telnet, FTP, TFTP, ICMPv4, DNS, UDP Helper, DHCP, DHCP server, DHCP Delay, DHCP Snooping, NTP, support ARP, ARP Proxy
	Routing protocol	RIPv1/v2, OSPFv2, BGP, IPv4 static route
Multicast function	L2 multicast protocol	IGMPv1/v2/v3 Snooping, multicast VLAN
	L3 multicast	Support PIM-SM/SSM, PIM-DM
MPLS	MPLS L3 VPN	Support two kinds of cross-domain MPLS VPN modes (Option A/Option B)
	MCE	MCE
Flow control	QOS	Support Mark/ReMark, CAR (Ingress/Egress), traffic shaping (Egress), congestion management, queue management

	Flow suppression	Port-based broadcast traffic suppression; port-based unknown multicast traffic suppression; port-based unknown unicast traffic suppression; traffic suppression based on the absolute bandwidth of the port, suppress by PPS and BPS
	Traffic statistics	Support egress queue statistics; support ACL Statistics (EACL/IACL).
	Security protection	Control plane protection, protocol encryption, configuration file encryption
Security function	ACL	Ingress/Egress ACL, basic ACL, extended ACL, VLAN ACL, global ACL
	Device security	Prevent packet attack, prevent protocol packet attack, support attack detection function, protocol packet protection, message sending and receiving diagnosis
	Network security	Packet validity check, URPF check, packet filtering function, ARP anti-attack, protocol classification flow restriction
	User security	Device management security, network user binding, AAA, SSH2.0
Virtualization	Virtualization	Support H-VST (stacking), M-VST
SDN	SDN feature	Support OpenFlow1.3 protocol
Device management	Device management mode	Console port login, support Telnet to the local device, support SSH V1/V2, manage devices via CLI
	Network maintenance	Ping, TraceRoute, LSP Ping/Tracert function, port loop monitoring
	Network management	SNMP V1/V2/V3, RMON, MIB, SSH V1/V2
	Maintenance mode	Support local Console configuration
		Support Telnet, SSH remote maintenance
		Support CLI
		Support FTP loading upgrade
High-reliability	HA	VRRP
		BFD for VRRP/BGP/RIP/OSPF/static route

Order Information

Order information	Description
NSS6600 all-by-China distribution switch	
Frame	
NSS6600-04	NSS6600-04 chassis, provide two control card slots, four service card slots, two power slots, one fan slots
NSS6600-06	NSS6600-06 chassis, provide two control card slots, two switching fabric slots, four service card slots, four power slots, two fan slots
Control Engine	
NSM66-MPUB	Control card, one is mandatory, and you can configure two. (For NSS6600-04)
NSM66-MPUC	Control card, one is mandatory, and you can configure two. (For NSS6600-06)
Switching Fabric (For NSS6600-06)	
NSM66-SFUA	Switching Fabric Card. (For NSS6600-06)
NSM66-24GET24GEF-S-EB	Switching Fabric Card. (For NSS6600-06)
Service Module (For NSS6600-04)	
NSM66-16XGEF-EA	16-port 10G SFP+ optical interface
NSM66-24GET24GEF4XF-EA	24-port 1000M Base-T electrical interface, 24-port 1000M SFP optical interface, 4-port 10G SFP+ optical interface
NSM66-48GEF4XGEF-EA	48-port 1000M SFP optical interface, 4-port 10G SFP+ optical interface
NSM66-48GET4XGEF-EA	48-port 1000M Base-T electrical interface, 4-port 10G SFP+ optical interface
Service Module (For NSS6600-06)	
NSM66-16XGEF-EB	16-port 10G SFP+ optical interface
NSM66-24GET24GEF4XF-EB	24-port 1000M Base-T electrical interface, 24-port 1000M SFP optical interface, 4-port 10G SFP+ optical interface
NSM66-48GEF4XGEF-EB	48-port 1000M SFP optical interface, 4-port 10G SFP+ optical interface
NSM66-48GET4XGEF-EB	48-port 1000M Base-T electrical interface, 4-port 10G SFP+ optical interface
Power Module	
AD500M-HS0F	500W AC power module, support hot-swap. (For NSS6600-04)
AD800-1D005M	800W AC power module, support hot-swap. (For NSS6600-06)
Fan Module	
FAN-05C-01B	Fan module, For NSS6600-04, one is mandatory.
FAN-11A-01	Fan module, For NSS6600-06, two are mandatory.

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