

NSS5820 Series L3 10G/40G/100G TOR Switch Datasheet

Overview

With the rapid pace of information construction in various industries in recent years, the information construction has gradually shifted from the era of the original basic network construction to a new-generation data center deployment era with large data concentration as the main purpose. With the rapid development of data center and cloud computing technology, the data communication network as the basis of the data center and cloud computing, presents new technical requirements. The development and launching of the new generation data center switching products presented by the implementation of high-bandwidth data forwarding, high-density 10G/40G/100G interface for access, high burst flow, virtualization technology become very important.

NSS5820 series switch is developed by Maipu on basis of closely tracking the development of data center technology for many years and combining with the actual situation of the new-generation data center construction in China, making the high-density access of the 10G/40G/100G server become possible. Meanwhile, NSS5820 support complete enterprise level features, perfect security control policy, full-port line-speed forwarding, and other features, meeting the challenges of the data center for the scalability, reliability, management, security, and other aspects of the device.



NSS5820 Series ToR Switch

NSS5820-30XQFP supports 24*10G SFP+ optical interfaces, 2*40G QSFP optical interfaces, 4* 100G QSFP28 optical interface, and dual-modular power.

NSS5820-54XQFP supports 48*10G SFP+ optical interfaces, 2*40G QSFP optical interfaces, 4* 100G QSFP28 optical interface, and dual-modular power.

NSS5820 realize large buffer of the interface data, meeting the data forwarding of the data center network burst flow without packet loss; provide the VST technology of multi-machine management plane, realizing the high-reliability operation under the deployment environment of various complex virtual technologies; provide the modular power and fan design. The key components adopt various "overvoltage" designs to ensure that the product has the strong capability of high-reliability operation, maintenance, and continuous operation. NSS5820 series with NSS8900E and NSS6600A core switches can provide the comprehensive, high-guarantee, and multi-series integrated new-generation data center construction solutions for the construction of data centers in various industries, such as finance, government and enterprise.

Key Features

High-density Interfaces

With the popularity of the application server network card rate from 10G, 40G to 100G, new requirements are put forward for the port bandwidth and access density of the network access layer switches. NSS5820 series data center access switch can provide fixed 24/48*10G, 2*40G QSFP and 4*100G SFP28 optical interfaces. The port combination fully satisfies the interface combination and density requirement of data center construction for access-layer switches.

Support H-VST/M-VST technology

NSS5810 series with NSS8900, NSS6600 and other core switches realizes "vertical virtualization". Inserted with 40G/100G fiber, it can automatically realize virtual management, and the site installation is convenient. A maximum of 128 devices can be virtualized to a virtual device without the need to plan the interconnection address and management address. Telnet a core device is equivalent to logging into more than 100 switches at the same time. There is no need to maintain and memorize the complex password. Through the global configuration command, a command is also effective on more than 100 devices at the same time, which greatly improves the daily maintenance efficiency of customers.

Large-capacity port buffer technology

NSS5820 series uses the large-capacity port buffer design, and a single port can have 200ms data buffer capacity. With the VoQ hardware virtual queue traffic control technology, it can fully adapt to the application model of the new-generation data center with large data flow and frequent instantaneous flow burst.

Comprehensive green environmental protection and energy saving design

The advanced power management mechanism of switching chips can reduce the power consumption of the standby Ethernet ports, saving 25% power consumption of the whole device. Temperature monitoring and fan stepless speed regulation effectively reduce the environmental noise and extend the life of the hardware card, meeting the green energy saving requirements of the data center room.

Technical Specifications

Product model	NSS5820-30XQFP	NSS5820-54XQFP
Hardware specifications		
Physical ports	Fixed 24 10G SFP+ optical interfaces, two 40G QSFP optical interfaces, four 100G QSFP28 optical interface, two Power slots	Fixed 48 10G SFP+ optical interfaces, two 40G QSFP optical interfaces, four 100G QSFP28 optical interface, two Power slots
Switching capability (bps)	1.44Tbps	1.92Tbps
Modular Power Slots	2	2
Dimension (W×D×H)	440mm×560mm×44.2mm	440mm×560mm×44.2mm
Management interface	One Console port, one DC0 management Ethernet interface, one USB interface	
Input voltage (AC)	Input voltage (AC): 100-240V, 50/60Hz	
Temperature	Work temperature: -5℃ to 55℃ Storage temperature: -40℃ to 70℃	
Humidity	Work humidity: 10% to 90%, no-condensing Storage humidity: 5% to 95%, no-condensing	
Software Features		
Ethernet Interfaces	Ethernet Interface, VLAN L3 Interface, Loopback Interface, Port Isolation, Loop Detection;	
L2 Features	VLAN, PVLAN, Super VLAN, MSTP, ERPS(G.8032), Q-in-Q, LACP, IGMP Snooping, IGMP Snooping Proxy, MVLAN Plus, L2 Static Multicast, MLD Snooping, PPPoE+, ULPP/UDLD, LLDP	
L3 Features	IP Protocol	TCP/IP, DNS, DHCP, FTP, TFTP, NTP, Telnet, VRF
	IPv4 Routing Protocol	Static Route, RIPv1/v2, OSPFv2, BGP, IS-IS, Policy Route
	IPv6 Routing Protocol	Static Routev6, OSPFv3, BGP+, IS-ISv6
	L3 Multicast	IGMPv1/v2/v3, PIM-SM, PIM-SSM, Controllable Multicast
Virtualization (Stacking)	H-VST	
	M-VST	
MPLS	LDP, MPLS L3 VPN, MPLS OAM	
Security	802.1X, AAA, ACL, SPAN, DHCP Snooping, Dynamic ARP Inspection, Port Security, Attack-Detection, CPU Guard, LAND/SYN Flood/Smurf/Ping Flood/TearDrop Attack Detection	
QoS	802.1P, DSCP, Rate Limitation, CAR, SP, WDRR, SP+WDRR, WRED	
HA	VRRP, Track, HA Management	
Maintenance	SNMP, ROM, DDMI, SSH, WEB, Telnet, Syslog	

Order Information

Product model	Description
MyPower S5820 series host	
NSS5820-30XQFP	Fixed 24 10G SFP+ optical interfaces, two 40G QSFP optical interfaces, four 100G QSFP28 optical interface, dual modular power slots.
NSS5820-54XQFP	Fixed 48 10G SFP+ optical interfaces, two 40G QSFP optical interfaces, four 100G QSFP28 optical interface, dual modular power slots.
Power modules	
AD250-1S005E-B	AC power module, 250W, AC input 100-240V, support hot-swap, draw air outward

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