



# NSS5810 Series L3 Aggregation Switch Datasheet

## Product Overview

NSS5810 series switch is a high-performance stackable L3 aggregation routing switch developed by Maipu. It is applied in enterprise campus network and easy to deploy Layer3 switching solution that offers enhanced security and 1G/10G/25GE/40GE uplinks, RIP/OSPF/BGP/IS-IS, L2&L3 Multicast, VST/M-LAG stacking enabled and flexible management.

NSS5810 series switch can be used as L3 aggregation devices on large-sized campus networks. They can also be used as core devices on small and medium-sized campus networks. The switches help build highly reliable enterprise campus networks that are easy to expand and manage.

NSS5810 series switch includes NSS5810-50TXFP, NSS5810-26XF two models.

Modem Name	Specification
 <p><b>NSS5810-50TXFP</b></p>	<ul style="list-style-type: none"> <li>● 24*100/1000M Base-T + 18*10G SFP+ and 8*25G SFP28</li> <li>● Dual Power Slots</li> <li>● RJ45 Console/RJ45 Management/USB2.0 Port</li> <li>● Switching Capacity: 808Gbps</li> </ul>
 <p><b>NSS5810-26XF</b></p>	<ul style="list-style-type: none"> <li>● 24*10G SFP+ and 2*40G QSFP+</li> <li>● Dual Power Slots</li> <li>● Dual FAN Slots</li> <li>● RJ45 Console/RJ45 Management/USB2.0 Port</li> <li>● Switching Capacity: 640Gbps</li> </ul>

# Key Features

## Intelligent stacking technology

NSS5810 series switch supports Maipu VST stacking function. Multiple switches supporting stacking feature are combined to form a virtual switch logically. VST stacking system improves the device-class reliability by redundant backup among multiple member devices, and improves the link-class reliability by the link aggregation function across devices. VST provides a powerful network expansion capability. By adding member devices, it can easily expand the number of ports, bandwidth and processing capacity of the stacking system. VST simplifies the configuration and management. After stacking is formed, many physical devices become a virtual device, and users can log into the master switch to configure and manage all member devices of the stacking system in a unified manner.

NSS5810 series also support multi-chassis link aggregation group (M-LAG), which enables links of multiple switches to aggregate into one to implement cross-device link backup. The rest of switches in the M-LAG group are working actively regardless any switch failure. During the upgrade, other switches in the system take over traffic forwarding to ensure uninterrupted services.

## High availability

NSS5810 series switch not only supports the traditional STP/RSTP/MSTP spanning tree protocol, but also supports the G.8032 international standard G.8032 protocol issued by ITU-T. This standard can realize 50ms millisecond fast protection switching of Ethernet ring network.

The NSS5810 also supports Virtual Router Redundancy Protocol (VRRP), which implement backup of uplinks. One switch can connect to multiple aggregation switches through multiple links, significantly improving the reliability of access devices.

## Perfect security policy

NSS5810 series switch provides various security policies such as user authority/identity authentication, port security, port rate limitation, port monitoring, ACL, loopback detection, and 802.1X authentication; provides various protect mechanisms for user access and network security. It has perfect security function design and supports MAC+IP+VLAN binding and 802.1X authentication security policies, and anti-network storm attack, anti DOS/DDOS attack, anti ARP attack, and anti-network protocol packet attack security technologies. In this way, the attacks and virus can be prevented and it is more suitable for large-scale, multi-service and complicated-traffic networks.

## Advanced QoS

NSS5810 series switch supports eight queues per port and the queue scheduling policies such as SP, RR, WRR, and WDRR; rich priority mappings including 802.1p, COS, DSCP; Kbps-level port traffic rate restriction and carriers can limit the rate according to the time period; Tail Drop and RED packet loss algorithm.

## Zero Touch Implementing

NSS5810 series support Zero Touch Provisioning (ZTP). It enables the switch to automatically obtain and load version files from file server through DHCP server or USB flash disk.

## IPv4&IPv6 Dual-stack ability

NSS5810 series switch comes with IPv4/IPv6 dual-stack platform which provides hardware-based IPv4/IPv6 wire-speed forwarding and IPv4/IPv6 Layer3 routing protocols (RIPng, OSPFv3, BGP4+ and IS-IS for IPv6). With these IPv6 features, the NSS5810 can be deployed on a pure IPv4 network, a pure IPv6 network, or a shared IPv4/IPv6 network, helping achieve IPv4-to-IPv6 transition.

## BD-LAN Controller Management

NSS5810 can be managed by Maipu BD-LAN controller, which is an integrated SDN platform for campus network. It simplifies campus network security, deployment, and management with the latest software-defined network technologies. It helps the network team complete most of the work on the BD-LAN controller platform. Compared with

traditional methods, BD-LAN solution can make the network deployment faster, maintain the network easier, troubleshoot much more efficient, and save customer's overall cost.

## Free Licensing Policy

Maipu always insists on “One-time investment” free license policy, the standard features and advanced features will be never divided to different version. For any new firmware version, Maipu will share to customers without extra charge. Compared with other manufacturers, Maipu free license policy can better protect users' short-term and long-term investment.

## Technical Specifications

Product model	NSS5810-50XTFP	NSS5810-26XF
<b>Hardware specification</b>		
Hardware Version	V1	V1
Physical ports	24 100/1000M electric interfaces,18*10G SFP+ interfaces, 8*25G SFP28 interfaces	24-Port SFP+ interfaces, 2-Port 40G QSFP+ interfaces
Switching capacity	808Gbps	640Gbps
Power slots	Dual	Dual
FAN slots	N/A	Dual
Management interface	One Console port, one management Ethernet port, one USB interface	
Dimension (W×D×H)	442mm*420mm*44.3mm	
Flash	8G	
Memory	2G	
Jumbo Frame	12K	
MAC Address Entry	128K/256K	
IPv4 Routing Entry	64K/80K	
IGMP Snooping Entry	5K	
PIM Entry	3K/6K	
ARP Entry	24K/48K	
MSTP Instance	64	
VRF Entry	1K	
VRRP Group	255	
Input voltage (AC)	Input voltage (AC): 100V ~ 240V, 50Hz ~ 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	
<b>Software Specification</b>		

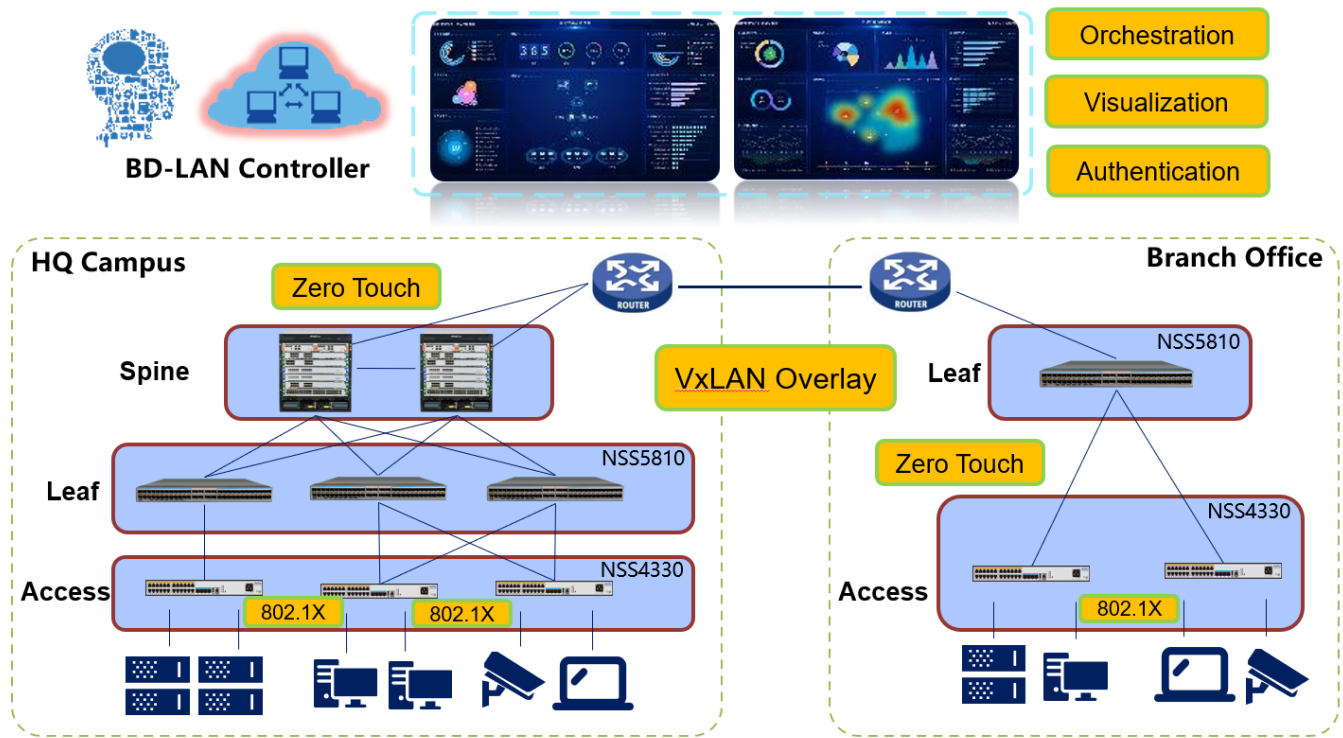
Standard L2 protocol	Interface	Port Type UNI/NNI, Port Speed, Port MTU, Port Loopback, Loopback interface, Tunnel interface, Null interface, VXLAN interface
	Ethernet Swithing	LACP Link aggregation, LACP Port Priority, LACP Load Balance, LACP Rate Monitor, LACP Debug, Port isolation, QinQ, VLAN mapping, Super VLAN, PVLAN, Voice VLAN, STP, MSTP, G.8032, Loopback-detection, Error-disable, GVRP, MLAG, VLAN isolation
Standard L3 protocol	IP Protocol	ARP, DHCP, DHCPv6, DHCP Server, DHCPv6 Server, DHCPv6 Client, DHCP Relay, DHCPv6 Relay, DHCP Option82, DNS, GRE, IPv4, IPv6 over IPv4, ISATAP, IPv4 over IPv6, IPv6 over IPv6
	Routing Protocol	Static route for IPv4&IPv6, RIPv1/v2, RIPng, OSPFv2, OSPFv3, IS-IS, IS-ISv6, BGP, BGPv6, Policy Route
Multicast	L2 multicast	IGMPv1/v2/v3 Snooping, multicast VLAN
	L3 multicast	IGMPv1/v2/v3, PIM-SM, IPv6 PIM-SM, IPv6 PIM-SSM, PIM-DM, MSDP, MLD-snooping
QoS & ACL	QoS	802.1p, DSCP, and other priority mapping, SP, WRED, WDRR, Flow classification, Traffic monitoring, Traffic shaping, Congestion management, Congestion avoidance, Flow-based mirroring
	ACL	Standard IP ACL, extended IP ACL, standard MAC ACL, extended MAC ACL, extended Hybrid ACL, Standard IPv6 ACL, extended IPv6 ACL
Virtualization	Stacking	H-VST, M-VST, M-LAG
	MAD	MAD LACP, MAD BFD, MAD Fast-hello
Zero Touch Provisioning	ZTP mode A	ZTP provisioning through DHCP server
	ZTP mode B	ZTP provisioning trough USB flash disk
MPLS VPN	L3 BGP MPLS	MPLS LDP, MPLS L3 VPN, MPLS Option-A & Option-B, MPLS Ping/traceroute
	MCE	Multi-VRF
Data Center	VxLAN	Static VxLAN, EVPN VxLAN
Security & Network Reliability	Security	ARP Check, AARF, AARF ARP-Guard, CPU Protection, Port Security, IP Source Guard, IPv6 Source Guard, ND-Snooping, DHCP Snooping, DHCPv6 Snooping, Dynamic ARP Inspection, Host Guard, PPPoE+, AAA, 802.1x, Portal, Anti-attack detect drop flood log, URPF, AARF
	Network Reliability	HA, ULFD, G.8032, ULPP, Monitor Link, VRRP, VRRPv3, VBRP, BFD, EEP
Management	Network Management	SNMP v1/v2/v3, MIB, RMON, SYSLOG, DNS, CLI, Telnet, FTP/TFTP, Debug, NTP, Keepalive Gateway
	Network Monitoring	SPAN, RSPAN, IPFIX, Netconf, sFlow, LLDP, IP-SLA, CWMP, NDSP, Telemetry, OAM

# Order Information

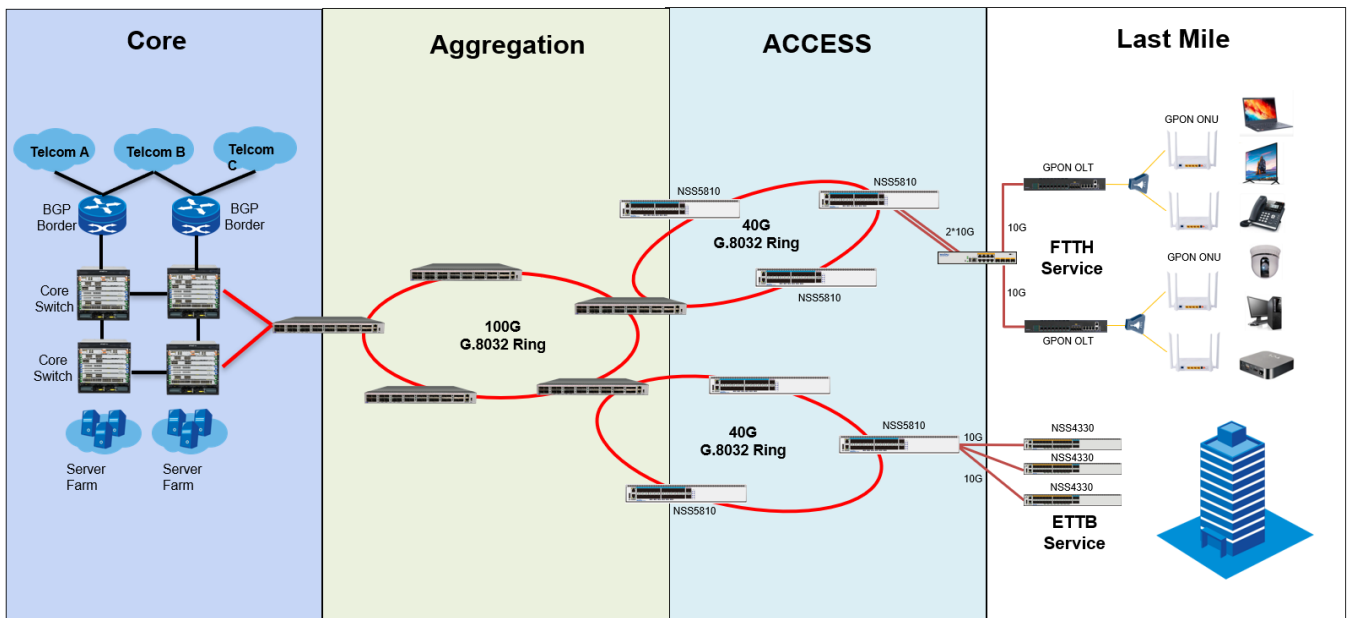
Series	Model	Description
<b>NSS5810 Series Host</b>		
NSS5810 Series	NSS5810-50TXFP	24 100/1000M electric interfaces, 18*10G SFP+ interfaces, 8*25G SFP28 interfaces, Dual Power Slots
	NSS5810-26XF	24-Port SFP+ interfaces, 2-Port 40G QSFP+ interfaces, Dual Fan Slots, Dual Power Slots
<b>FAN Module</b>		
FAN Module	FAN-01C-01B	V2 Version: FAN-01C-01B Fan Module for NSS5810-26XF
<b>Power Module</b>		
Power Module	AD120-1S005E	120W Power Module, AC 100V~240V For NSS5810-50TXFP
	AD120M-HSON	120W Power Module, AC 100V~240V For NSS5810-26XF

# Typical Application

## Campus LAN Network



## ISP FTTH Network



All rights reserved. Printed in the People's Republic of China.

No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise without the prior written consent of Maipu Communication Technology Co., Ltd.

Maipu makes no representations or warranties with respect to this document contents and specifically disclaims any implied warranties of merchantability or fitness for any specific purpose. Further, Maipu reserves the right to revise this document and to make changes from time to time in its content without being obligated to notify any person of such revisions or changes.

Maipu values and appreciates comments you may have concerning our products or this document. Please address comments to:

*Maipu Communication Technology Co., Ltd*

Maipu Mansion, No.16, Jiuxing Avenue

Hi-Tech Zone

Chengdu, Sichuan Province

P. R. China

610041

Tel: (86) 28-65544850,

**Fax:** (86) 28-65544948,

**URL:** [http:// www.maipu.com](http://www.maipu.com)

**Email:** [overseas@maipu.com](mailto:overseas@maipu.com)

All other products or services mentioned herein may be registered trademarks, trademarks, or service marks of their respective manufacturers, companies, or organizations.