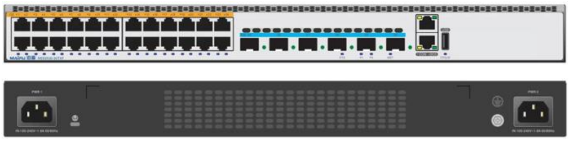
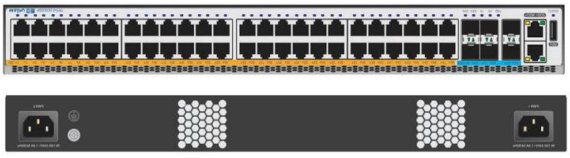
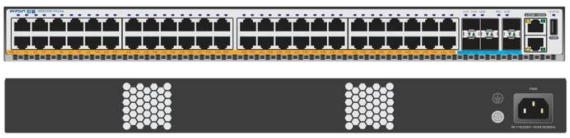
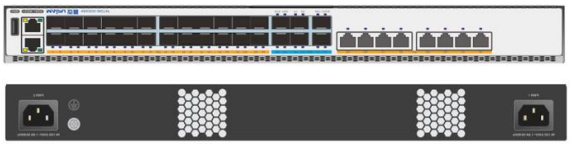
NSS3330 Series Stackable L3 Aggregation Switch Datasheet

Product Overview

NSS3330 series switch is a wire-speed non-blocking high-performance stackable L3 aggregation routing switch developed by Maipu. It is applied in enterprise campus network and easy to deploy Layer2/3 switching solution that offers 6*10GE uplinks and inbuilt power supply, Static/RIP/OSPF/BGP/ISIS, L2/L3 Multicast, VST/M-LAG stacking enabled and flexible management. NSS3330 series switch can be used as L3 access or aggregation devices on campus networks. The switches help build highly reliable enterprise campus networks that are easy to expand and manage.

NSS3330 series switch includes NSS3330-30TXF, NSS3330-30TXP, NSS3330-54TXF, NSS3330-54TXP, NSS3330-38GTXF five models.

Modem Name	Specification
 **NSS3330-30TXF(V1)**	● 24*10/10/100/1000M Base-T + 6*10G SFP+ ● Fixed Dual AC Power Supply ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 168Gbps
 **NSS3330-54TXF(V1)**	● 48*10/10/100/1000M Base-T + 6*10G SFP+ ● Fixed Dual AC Power Supply ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 216Gbps
 **NSS3330-30TXP(S1)**	● 24*10/10/100/1000M Base-T + 6*10G SFP+ ● Fixed One AC Power Supply ● 380W PoE/PoE+ Budget ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 168Gbps

 **NSS3330-54TXP(S1)**	● 48*10/10/100/1000M Base-T + 6*10G SFP+ ● Fixed One AC Power Supply ● 760W PoE/PoE+ Budget ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 216Gbps
 **NSS3330-38GTXF(V1)**	● 24*1G SFP + 8*10/10/100/1000M Base-T ● 6*10G SFP+ ● Fixed Dual AC Power Supply ● RJ45 Console/RJ45 Management/USB2.0 Port ● Switching Capacity: 184Gbps

Key Features

Intelligent stacking technology

NSS3330 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. NSS3330 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

NSS3330 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. NSS3330 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

NSS3330 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

NSS3330 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.

IPv&IPv6 Dual-stack ability

NSS3330 series switch comes with IPv4/IPv6 dual-stack platform which provides hardware-based IPv4/IPv6 wire-speed forwarding and IPv4/IPv6 Layer3 routing protocols. With these IPv6 features, the NSS3330 can be deployed on a pure IPv4 network, a pure IPv6 network, or a shared IPv4/IPv6 network, helping achieve IPv4-to-IPv6 transition.

Zero Touch Implementing

NSS3330 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.

BD-LAN Controller Management

NSS3330 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	NSS3330-30TXF	NSS3330-54TXF	NSS3330-30TXP	NSS3330-54TXP	NSS3330-38GTXF
Hardware specification					
Hardware Version	V1	V1	S1	S1	V1
Physical Ports	24*10/100/1000M Base-T, 6*1/10G SFP+ interfaces	48*10/100/1000M Base-T, 6*1/10G SFP+ interfaces	24*10/100/1000M Base-T, 6*1/10G SFP+ interfaces	48*10/100/1000M Base-T, 6*1/10G SFP+ interfaces	24*1G SFP, 8*10/100/1000M Base-T, 6*1/10G SFP+ interfaces
PoE/PoE+ Consumption	N/A	N/A	380W	760W	N/A
Fixed Power Supply	Dual AC	Dual AC	One AC	One AC	Dual AC
Management Interfaces	One RJ45 Console Port, One Management Ethernet Port（DC0 Port）, One USB2.0 interface				
Input Voltage	AC:100V ~ 240V, 50Hz ~ 60Hz				
Work Temperature	0°C to 45°C (Fan-less)	-5°C to 55°C			
Storage Temperature	-40°C to 70°C				
Humidity	Work Humidity:10% ~ 90%, non-condensing, Storage Humidity:5% ~ 95%, non-condensing				
Performance parameters					
Flash (GB)	8GB	8GB	8GB	8GB	8GB
Memory (GB)	1GB	1GB	1GB	1GB	1GB
Switching capacity	168Gbps	216Gbps	168Gbps	216Gbps	184Gbps
Throughput	125Mpps	160.7Mpps	125Mpps	160.7Mpps	136.8Mpps
MAC Entry	32K	32K	32K	32K	32K
Arp Table	12K	12K	12K	12K	12K
Routing Entry	12K	12K	12K	12K	12K
L3 Multicast Entry	2K	2K	2K	2K	2K
Jumbo Frame	12K	12K	12K	12K	12K
VLAN Entry	4K	4K	4K	4K	4K
Layer 3 Vlan Int	1K	1K	1K	1K	1K
Software Specification					
Standard L2 protocol	Interface	Port Type UNI/NNI, Port Speed, Port MTU, Port Loopback, Loopback interface, Tunnel interface, Null interface			
	Ethernet Swithing	LACP Link aggregation (16 port / 64 group), LACP Port Priority, LACP Load Balance, LACP Rate Monitor, LACP Debug, Port isolation, QinQ, VLAN mapping, Super VLAN, PVLAN, Voice VLAN, STP, RSTP, MSTP, G.8032, Loopback-detection, Error-disable, GVRP, MLAG, VLAN isolation, BPDU Guard, BPDU Filter, Root Guard, Flow Control, DHCP client/relay/server			
Standard L3 protocol	Routing Protocol	Static route, RIP v1/v2, RIPng, OSPFv2, OSPFv3, BGP, BGPv6, ISIS, VRRP, VRRPv3, Policy Route, IP-VRF(MCE)			
Multicast	L2 multicast	IGMPv1/v2/v3 Snooping, MLD Snooping, multicast VLAN			
	L3 multicast	IGMPv1/v2/v3, PIM-SM, PIM-SSM, IPv6 PIM-SM, IPv6 PIM-SSM, PIM-DM, MSDP			
QoS & ACL	QoS	802.1p, DSCP, Diffserv, TOS and other priority mapping, Layer 2 to Layer 4 packet filtering, SP, WRED, WDRR, Tail-drop, RED, WRED, Flow classification,			

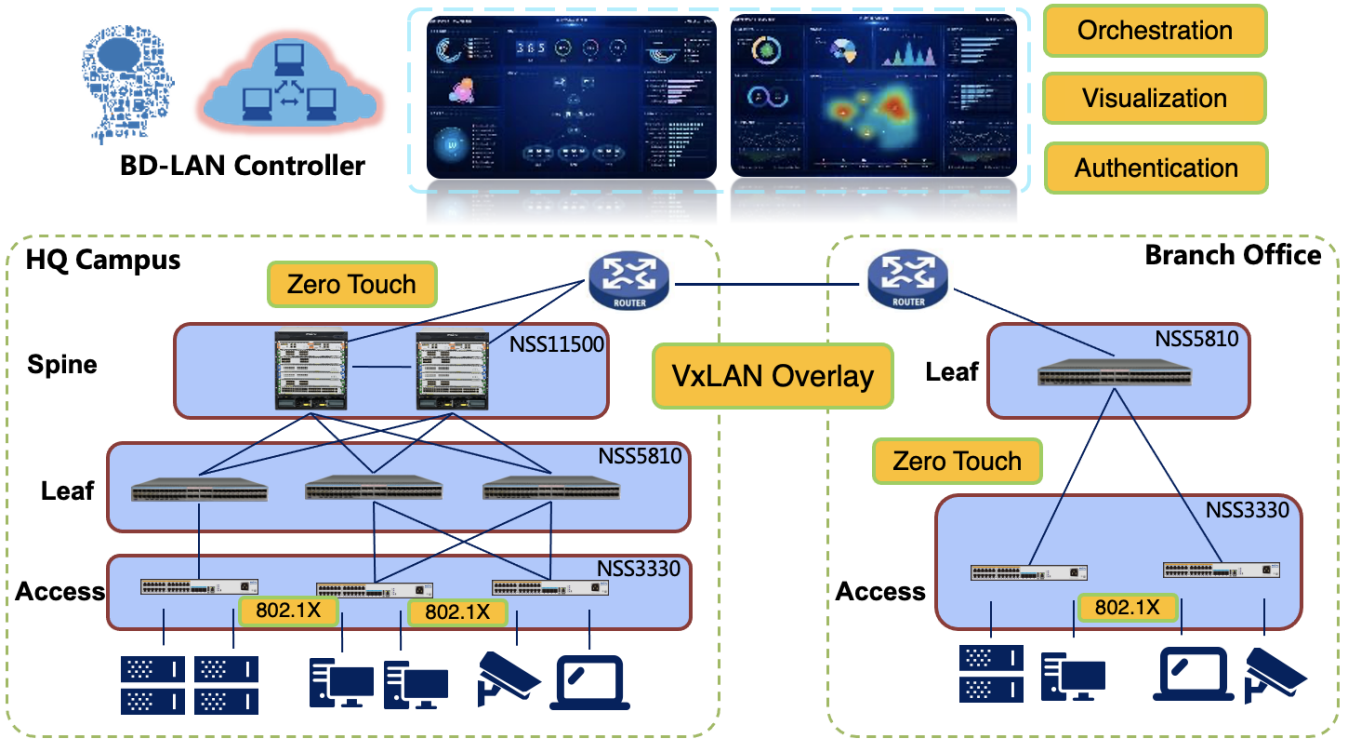
		Traffic monitoring, Rate limiting, Traffic shaping, Congestion management, Congestion avoidance, Flow-based mirroring
	ACL	Standard IP ACL, extended IP ACL, standard MAC ACL, extended MAC ACL, extended Hybrid ACL, Standard IPv6 ACL, extended IPv6 ACL
Virtualization	Stacking	H-VST, M-VST, M-LAG, (up to 8 unit)
	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
Security & Network Reliability	Security	ARP Check, AARF, ARP-Guard, CPU Protection, Port Security, IP Source Guard (ISG), IPv6 Source Guard (ISGv6), ND-Snooping, DHCP Snooping v4/v6, Dynamic ARP Inspection (DAI), Host Guard, PPPoE+, Anti-attack detect|drop|flood|log, URPF
	AAA	Authentication, Authorization, Accounting, Radius, TACACS+, Portal, 802.1x Authentication, MAC Authentication, Portal Authentication, Dynamic VLAN/ACL assignment
	Network Reliability	HA, ULFD, ULPP, Monitor Link
Management	Network Management	SNMP v1/v2/v3, MIB, RMON(alarm, event, and history recording), SYSLOG, DNS, CLI, Telnet, SSHv2, SFTP, FTP/TFTP, Debug, NTP, Keep-alive Gateway, Telemetry, multi-image/config
	Network Monitoring	N:4 SPAN, RSPAN, VLAN SPAN, IPFIX, sFlow, LLDP, LLDP-MED, IP-SLA, Multi image/config file

Order Information

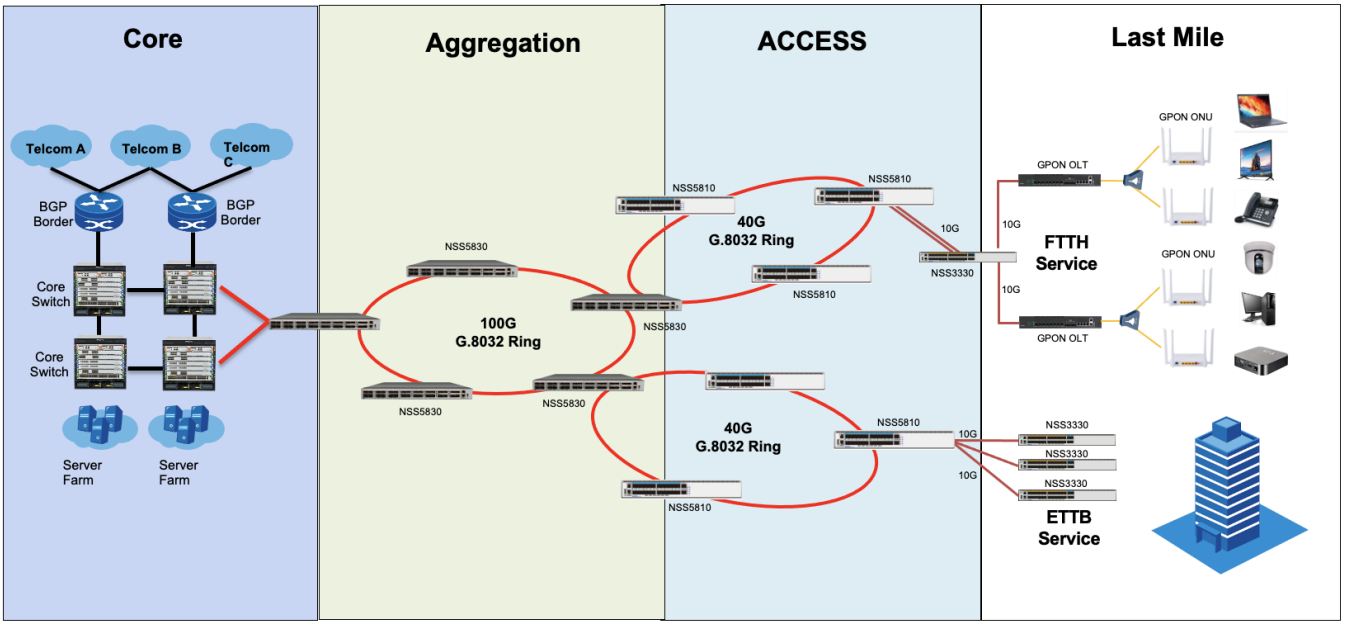
Series	Model	Description
NSS3330 Series Host		
NSS3330 Series	NSS3330-30TXF	V1 Version: 24*10/100/1000M Base-T interfaces, 6*10G SFP+ interfaces, Fixed Dual AC Power Supply
	NSS3330-54TXF	V1 Version: 48*10/100/1000M Base-T interfaces, 6*10G SFP+ interfaces, Fixed Dual AC Power Supply
	NSS3330-30TXP	S1 Version: 24*10/100/1000M Base-T interfaces, 6*10G SFP+ interfaces, 380W PoE&PoE+ enable, Fixed One AC Power Supply
	NSS3330-54TXP	S1 Version: 48*10/100/1000M Base-T interfaces, 6*10G SFP+ interfaces, 760W PoE&PoE+ enable, Fixed One AC Power Supply
	NSS3330-38GTXF	V1 Version: 24*1000M Base-X interfaces, 8*100/1000M Base-T interfaces, 6*10G SFP+ interfaces, Fixed Dual AC Power Supply

Typical Application

SDN Campus LAN Network



ISP Metro Ethernet Network



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