NSR3900X-X4 MPLS Aggregation Router Datasheet

Product Overview

With the rapid growth of business traffic, the development trend of customer service diversifying and network flatting makes the aggregation capability requirement of the network for the router higher. High reliability, high performance, high density, high security, and green are the customer's urgent requirements for the aggregation router. Based on the customer requirements, Maipu launched the new-generation centralized service aggregation router NSR3900X-X4.

NSR3900X-X4 aggregation router is the next-generation version of the MP3900X series. The NSR3900X-X4 is purpose-built for high-performance and integrated services. It provides higher WAN port density and a redundant power supply capability. NSR3900X-X4 supports 8*25Gbps SFP28 ports, 8*10Gbps SFP+ ports, 24*1Gbps RJ45 copper ports, and 4 NRM2 extension slots for flexible WAN connectivity. NSR3900X-X4 has two redundant power slots.

Model Name	Specification
 **NSR3900X-X4**	● Fixed WAN/LAN interfaces: 8*25G SFP28 ● Fixed WAN/LAN interfaces: 8*10G SFP+ ● Fixed WAN/LAN interfaces: 24*GE RJ45 ● WAN and LAN interface switchable ● Extension Slots: 4*NRM2 extension slots. ● 2*Modular power supply (RPS), AC 100V-220V 50Hz-60Hz. ● 1*RJ-45/Micro-USB console port. ● 1*100/1000Mbps DC port for Out-of-Band Management (OOBM) ● Dimension (L*D*H): 442mm*420mm*44.2mm(1U).

Features

- **Flexible Wan Links**

NSR3900X-X4 integrates fixed eight 10G SFP+ WAN ports and 4 NRM2 slots to support various WAN links such as SDH, TDM, Ethernet, and 5G/4G mobile networks. NSR3900X uplink supports different mainstream WAN access link technologies like Ethernet, 3G/4G/5G, E1/CE1 and serial lines.

- **Extensible Modular Slots**

NSR3900X-X4 aggregation router is a modular design that has four NRM2 extension slots. The strong expansion ability can provide high-density access and protect customer investment. All the modules of NSR3900X-X4 support hot-swap.

- **High Performance**

NSR3900X-X4 aggregation router uses a multi-core high-performance processor. It has high-density WAN ports that support Ethernet and E1/CE1/OC3 high-speed TDM ports. The router has a built-in hardware acceleration engine and supports Maipu Express Forwarding technologies to speed up the forwarding and processing of data packets, to provide high forwarding performance.

- **Rich Software Features**

NSR3900X-X4 aggregation router provides rich software features, supports various application technologies, such as IPv4/IPv6, VPN, multicast, ACL, MAC address binding, access control, bandwidth limitation and NAT; provides H-QoS function to ensure the high priority of the key services, supports the queue management policies, such as FIFO, PQ, CQ, FQ, WFQ, CBWFQ, and LLQ.

- **Complete VPN Technologies**

NSR3900X-X4 aggregation router has the VPN function and can be connected to the VPDN private channel of the enterprise based on fiber network. Meanwhile, the device data can be transmitted in the secure MPLS/VPLS, IPSec, GRE, L2TPv3, DMVPN tunnel, preventing the data from being accessed and tampered and providing the higher security for the application over the network.

- **High Availability**

NSR3900X-X4 aggregation router has redundant power supplies (RPS) and supports dual AC or DC power supplies. The router also supports redundant WAN connections for failover protection and load balancing. Additionally, it has many dynamic failover protocols including VRRP/VBRP, backup interface, and track IP.

- **Easy O&M**

NSR3900X-X4 aggregation router supports complete management modes, including SNMPv1/v2c/v3, CLI, USB drive deployment, MIB, RMON, SYSLOG, TR069, IPFIX, etc. Built-in Embedded Event Platform (EEP), allow the customer to monitor critical event, and automatic execute pre-defined actions. Combine with Maipu SNMP Management Platform, it can provide the simple and easy-to-use remote network management.

Product Specifications

Hardware Specification

Model Name	NSR3900X-X4
Hardware Version	**V1**
CPU	2.3GHz 8 Core
Memory	8GB
Flash	8GB
Fixed interfaces	8*25GE fiber SFP28, 8*10GE fiber SFP+, 24*GE copper RJ-45 (can be configured as WAN or LAN)
Extension slots	4*NRM2 WAN extension slots
Throughput (1400Bytes)	18Gbps
IPsec Performance (1400Bytes)	5Gbps
SD-WAN performance (1400Bytes)	2Gbps
IPSec VPN Tunnels	1000-2000
USB Ports	1*USB2.0
Console port	1*RJ45 console port
Out of Band	1*100/1000Mbps RJ45 DC0 port
Power supply	2 * Power Supply Slots AC: 100V-220V, 50/60Hz DC: -40~-57V
Power consumption	⩽90W(without sub-card)
Working Temperature	0°C～45°C
Humidity	Work humidity: 5%-85%/RH
Dimension(L*D*H)	442mm*420mm*44.2mm(1U)

Software Specification

Software Features	
WAN Protocols	HDLC, PPP, Frame Relay, Ethernet, Virtual Ethernet, QinQ Termination, Link-aggregation, Bridge, PPPoE Server/Client, DDR
IP Services	Basic IPv4 forwarding, IPv4 MEF (Maipu Express Forwarding), mGRE, IPIP, DHCP Server/Client/Relay, DNS, DDNS, NAT, Bandwidth Limitation, Connection Limitation, TPC (Transport Payload Compression), FEC (Forward Error Correcting), VxLAN, EVPN, Sub-interface, VRF

IPv6 Services	Basic IPv6 forwarding, IPv6 MEF (Maipu Express Forwarding), Transition Tunnel (IPv6 over IPv4, 6to4, 6in4, ISATAP), IPv6 Tunnel, DHCPv6 Server/Client/Relay, DNS64, NAT64, NAT66
High-Availability	Interface Backup, MPU HA, VRRP/VRRPv3, VBRP, Track, BFD, EEP (Embedded Event Platform), ULFD (Unidirectional Link Fault Detect), FMM (FAULT MANAGE MODULE)
Routing	Route Load Balancing, IPv4/IPv6 Static Route, RIP/RIPng, OSFP/OSPFv3, IRMP, IS-IS/IS-ISv6, BGP, IPv4/IPv6 Policy-Based Route, Route-map Tool
Multicast	IGMP, PIM-DM, PIM-SM, PIM-SMv6, MVPN, NG MVPN, MSDP, MLD
VPN	PKI, IKE, IPSec VPN, DVPN, L2TP, L2TPv3, GRE VPN
MPLS	MPLS LDP, MPLS L3VPN, IPv6 MPLS L3VPN, MPLS TE, MPLS OAM, 6PE, MPLS VPLS, MPLS VPWS
Segment Routing	Segment Routing MPLS, Segment Routing IPv6
QoS	Rate-Limit, Traffic-Shape/GTS, Queue management, WRED, RSVP, QPPB,
Security	AAA, Access List (ACL), DPI (Deep Packet Inspect), ASFP (Advanced Stateful Packet Filter), SECP (Security Policy), Anti-attack, ARP Security
Log Management	Local log, Remote log, Syslog, Log color, Log filtering
Network Monitoring and Management	IPSLA, ZTP, Gateway Keepalive, IPFIX, LLDP, SNMP, RMON, Port-Mirror, Packet Capture, CWMP/TR069, Netconf, EDP (Ethernet Discovery Protocol), BSM (Business Sensibility Measure), Telemetry
System Management	Login Control, Telnet/SSH, Console Login, HTTP/HTTPS (SSL Encryption), FTP/TFTP/FTPS/SFTP, Configuration File Backup/Restore, Configuration File Encryption, NTP/SNTP, System Upgrade

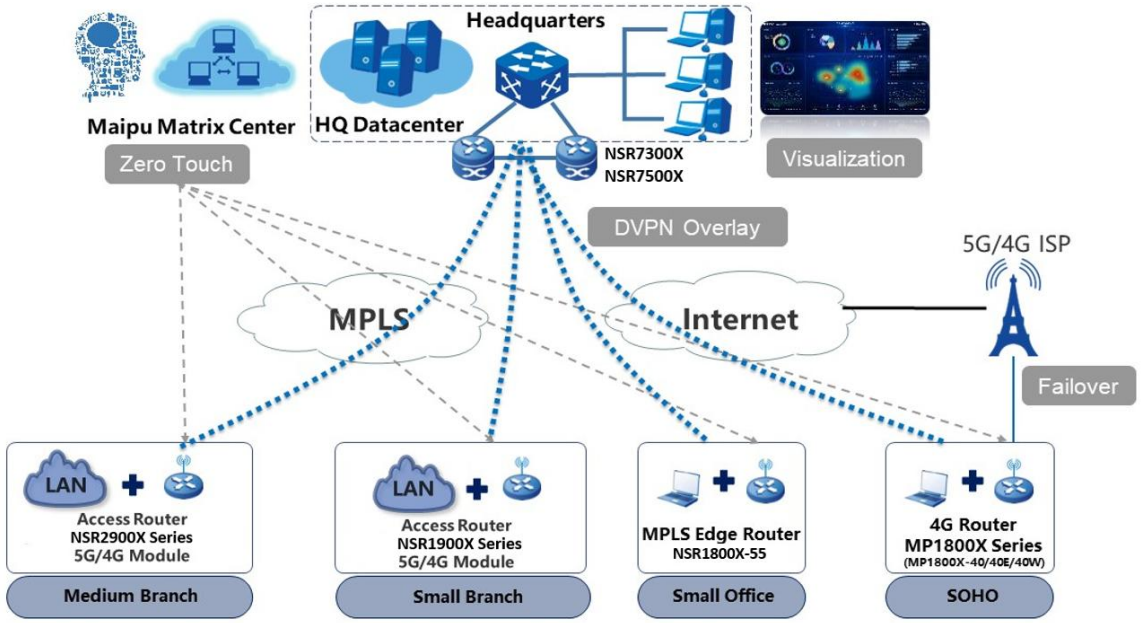
Order Information

Item	Description
NSR3900X-X4 Host	
NSR3900X-X4	V1 Version: NSR3900X-X4, 1*RJ-45 console port, 1*GE DC port, 1*USB port. 8*25GEF, 8*10GEF, 24*GET Interfaces, 4*NRM2 extension slots, two modular power slots.
NSR3900X-X4 Power Module	
AD150M-HS0N	V1 Version: AC Power Module, 150W, 100-240V
DD250M-5S0N	V10 Version: DC Power Module, 120W, DC Input, -40~-57V
NRM2 WAN Module	
NRM2-4E1	V7 Version: Four-port non-channelized E1 WAN module.
NRM2-4CE1	V3 Version: Four-port channelized E1 WAN module
NRM2-4GEF	V1 Version: Four-port gigabit ethernet fiber WAN module
NRM2-4GET	V3 Version: Four-port gigabit ethernet electrical WAN module

Typical Application

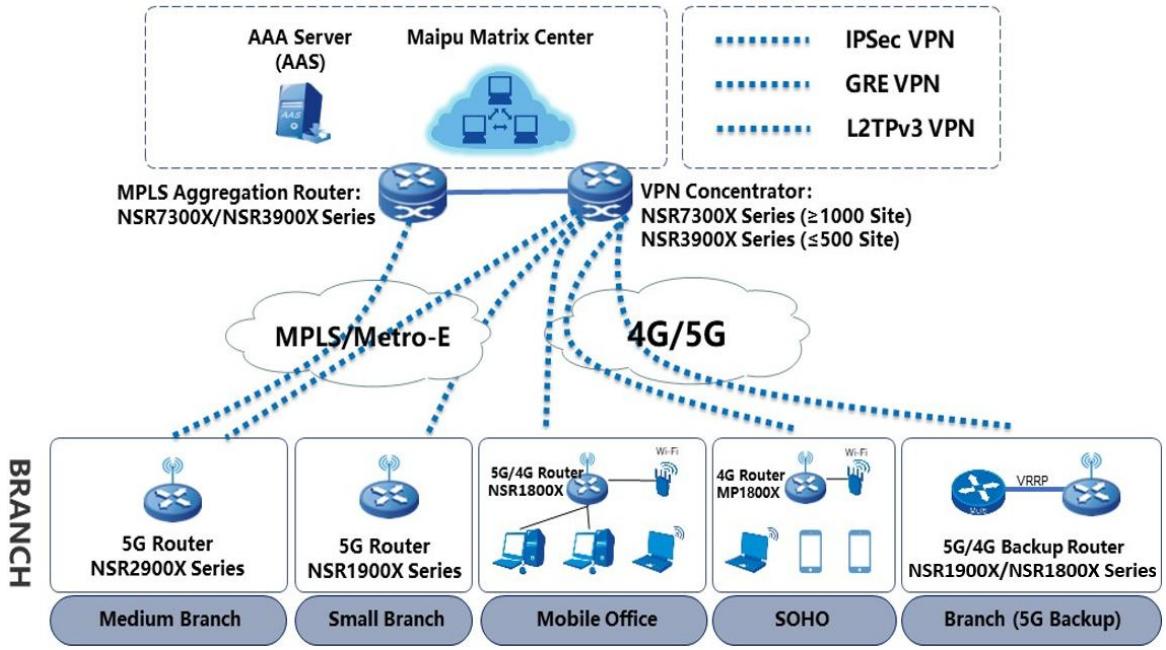
Enterprise WAN Solution

Maipu can provide total solution of enterprise WAN network. NSR1800X/1900X/2900X series access router is working at enterprise branch offices and supports multiple physical links, such as MPLS links, Internet links, and 5G/4G mobile network links. NSR3900X/NSR7300X/NSR7500X series aggregation router is working at enterprise HQ. Maipu Matrix View is SNMP centralized managed platform.



Enterprise VPN Solution

The Maipu NSR1800X/1900X/2900X series routers provide a variety of VPN access functions, which can realize the secure communication between branch offices and headquarters through multiple physical links. Secure tunnels such as GRE, L2TPv3, IPSec, and DMVPN can be established between the NSR3900X/NSR7300X at the headquarters and the branch offices for secure data access and transmission.



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