NSR7300X-08 MPLS Aggregation Router Datasheet

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 NSR7300X-08.

NSR7300X-08 aggregation router is the next-generation version of the MP7300X-08. The NSR7300X-08 is purpose-built for high-performance and integrated services. It provides higher WAN port density and a redundant power supply capability. NSR7300X-08 supports 2*Control Engine Slots, 1*Service Engine Slot, 8*Line Card Slots, 1*Fan Slot, and 2*Power Supply Slots.

Model Name	Specification
 NSR7300X-08(V5)	● Control Engine Slots: 2*NRM3-MPU slots. ● Service Engine Slots: 1*NRM3-SPU slot. ● Extension Slots: 8*NRM3 Line card slots. ● Power Supply Slots: 2*Power modular module slots, AC or DC power supply. ● FAN Slot: 1*Fan module slot. ● Management Ports: 1*USB2.0, 1*Console Port, 1*DC0 Port (NRM3-MPU Engine). ● Dimension (L*D*H): 440mm*436mm*222mm(5U).

Key Features

- **Flexible Wan Links**

NSR7300X-08 integrates fixed one 100G QFP fiber, four 10G SFP+, four 1G SFP fiber, and eight 1G Base-T RJ45 WAN ports on the NRM3-SPU05 service engine card. And has eight NRM3 extension slots to support various WAN links such as SDH, TDM and Ethernet networks. NSR7300X uplink supports different mainstream WAN access link technologies like Ethernet, E1, POS, and CPOS lines.

- **Extensible Modular Slots**

NSR7300X-08 aggregation router is a modular design that has eight NRM3 extension slots. The strong expansion ability can provide high-density access and protect customer investment. All the modules of NSR7300X-08 support hot-swap.

- **High Performance**

NSR7300X-08 aggregation router uses a multi-core high-performance processor. It has high-density WAN ports that support Ethernet and E1/OC3/OC12 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**

NSR7300X-08 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**

NSR7300X-08 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**

NSR7300X-08 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**

NSR7300X-08 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	NSR7300X-08
Version	**V5**
CPU	2.3GHz 8 Core (NRM3-SPU05)
Memory	8GB (NRM3-SPU05)
Flash	4GB (NRM3-MPU)
Control Engine	2*NRM3 MPU slots, two redundant MPU control engines
Fabric	1*NRM3 SPU slot
Fixed WAN interfaces	NRM3-SPU05: 1*40/100GE QSFP28, 4*1/10GE SFP+, 4*1GE SFP, 8*1GE RJ45
Extension slots	8*NRM4 WAN extension slots
Throughput (1400Bytes)	35Gbps
IPSec VPN Tunnel	2000-3000
USB Ports	NRM3-MPU: 1*USB2.0
Console port	NRM3-MPU: 1*RJ-45 console port
Out of Band	NRM3-MPU: 1*100/1000Mbps DC0 port
Power supply	2 slots, two redundant hot-swapable DC or AC power supplies
Power consumption	450Watts (Full load)
FAN	1*FAN slot, support one pluggable fan module
Working Temperature	0°C～45°C
Humidity	Work humidity: 5%-85%/RH
Dimension(L*D*H)	440mm*436mm*222mm(5U)
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

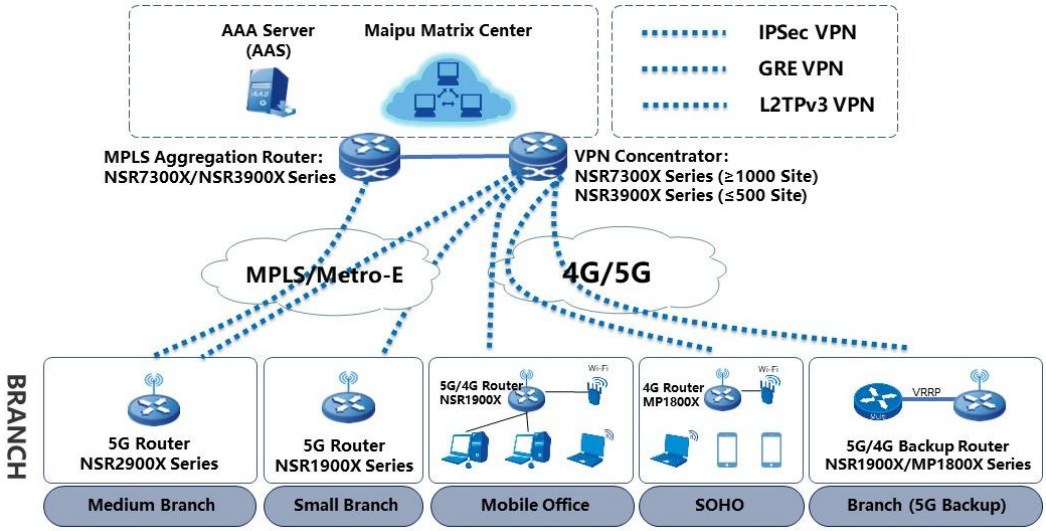
Item	Description
NSR7300X-08 Chassis	
NSR7300X-08	V5 Version: NSR7300X-08 chassis, two control engine slots, one service engine slot, eight-line card slots, one fan slot, two power slots.
Control Engine Module	
NRM3-MPU	V5 Version: NRM3-MPU control engine, one Condole port, one management LAN port, one USB port.
Service Engine Module	
NRM3-SPU05	V5 Version: NRM3-SPU05 Standard Service Engine Module. Integrated 1-Port 40/100G QSFP28 interface, 4-Port 10G SFP+ interfaces, 4-Port gigabit SFP interfaces, 8-Port Gigabit electric interfaces.
FAN Module	
FAN-4B-01	V5 Version: FAN-4B-01, Fan Module for NSR7300X-08
Power Module	
AD500-1S005E	V5 Version: AC Power Module, 500W, AC Input, 100~240V
DD800M-5V0B	V1 Version: DC Power Module, 800W, DC Input, -40~-72V
Line cards Module	
NRM4-H-4XGEF	V5 Version: 4-port 10G SFP+ WAN module
NRM4-H-10GEF	V5 Version: 10-port gigabit ethernet fiber WAN module
NRM4-H-10GET	V5 Version: 10-port gigabit ethernet electrical WAN module
NRM4-H-8E1	V5 Version: 8-port non-channelized E1 WAN module
NRM4-H-8CE1	V5 Version: 8-port channelized E1 WAN module
NRM4-H-2POS-OC48	V5 Version: 2-port 2.5G OC48 POS WAN module
NRM4-H-4POS-OC12	V5 Version: 4-port 622M OC12 POS WAN module
NRM4-H-4POS-OC3	V5 Version: 4-port 155M OC3 POS WAN module
NRM4-H-2CPOS-OC3	V5 Version: 2-port 155M Channelized POS WAN module

NRM4-H-1CPOS-OC3	V5 Version: 1-port 155M Channelized POS WAN module
POS Transceivers	
SFP-M2-L03P3	155M POS SFP Module, Dual core,1310nm,2km
SFP-S2-L03P3	155M POS SFP Module, Dual core,1310nm,20km
SFP-S2-L12T3	622M POS SFP Module, Dual core,1310nm,15km
SFP-S4-L12T3	622M POS SFP Module, Dual core,1310nm,40km
SFP-S8-L12T5	622M POS SFP Module, Dual core,1550nm,80km
SFP-S1-L48P3	2.5G POS SFP Module, Dual core,1310nm,2km
SFP-S2-L48P3	2.5G POS SFP Module, Dual core,1310nm,15km
SFP-S4-L48P3	2.5G POS SFP Module, Dual core,1550nm,40km

Typical Application

Enterprise WAN Solution

The Maipu NSR1900X/2900X series routers provide a variety of WAN 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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