

# NSR1800X-55 Access Router Datasheet

## Overview

NSR1800X-55 access router developed by Maipu is a new-generation enterprise-class access router, applicable to enterprise and government branch offices. It integrates various modern network technologies, such as routing, switching, QoS, security, and 5G to provide flexible access modes and secure and high-efficiency service experience for the users.

NSR1800X-55 access router supports rich WAN and LAN interfaces, providing the high-speed terminal access capability, and meeting the requirement of the user for integrating the routing and switch to construct the access network. NSR1800X-55 5G and Ethernet WAN ports both can serve as the master port. The master/standby switching supports the failover is based on the link status and peer track IP.

NSR1800X-55 access router includes two hardware version:

NSR1800X-55(V1) supports 1\*RJ45 console port, 1\*USB interface, 1\*10GE SFP+ WAN port, 2\*GE SFP WAN ports, 2\*GE RJ45 WAN ports, 8\*GE RJ45 LAN ports, dual SIM slots and single 5G modem, 1\*12V DC power input.

NSR1800X-55(V2) supports 1\*RJ45 console port, 1\*USB interface, 1\*10GE SFP+ WAN port, 2\*GE SFP WAN ports, 2\*GE RJ45 WAN ports, 8\*GE RJ45 LAN ports, 1\*12V DC power input.



**NSR1800X-55(V1)**

- Fixed 10G WAN Port: 1\*10GE SFP+
- Fixed 1G WAN Ports: 2\*GE SFP and 2\*GE RJ45
- Fixed LAN Ports: 8\*GE RJ45
- 5G Modem: 1 (Compatible with 3G/4G)
- SIM Slots: 2
- 5G NR Band: n1/n28/n41/n77/n78/n79
- 4G LTE Band: B1/B2/B3/B5/B7/B8/B20/B28/B34/B38/B39/B40/B41
- 3G UMTS Band: B1/B5/B8
- Power Supply: 1\*12V DC
- Dimension (L\*D\*H): 240mm\*169mm\*44.2mm



**NSR1800X-55(V2)**

- Fixed 10G WAN Port: 1\*10GE SFP+
- Fixed 1G WAN Ports: 2\*GE SFP and 2\*GE RJ45
- Fixed LAN Ports: 8\*GE RJ45
- Power Supply: 1\*12V DC
- Dimension (L\*D\*H): 240mm\*169mm\*44.2mm

# Key Features

| Highlights          | Benefits                                                                                                                                                                                                                                                                                            |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High Performance    | <ul style="list-style-type: none"><li>● Multi-core high performance processor.</li><li>● 10G SFP+, 1G SFP and 1G RJ45 high-speed WAN ports.</li><li>● 10/100/1000M Base-T high-speed LAN ports.</li></ul>                                                                                           |
| Reliable Hardware   | <ul style="list-style-type: none"><li>● Fanless and Fin heat dissipation design.</li><li>● Metal shell and IP30 protection.</li></ul>                                                                                                                                                               |
| Flexible Deployment | <ul style="list-style-type: none"><li>● Support multiple WAN protocols: DDR, PPPoE, EDP, DHCP, Static, 4G/5G</li><li>● Small Dimension, easy to install and deploy.</li><li>● Support advanced protocols, such as BGP, MPLS, and VPLS.</li><li>● IPv6 Ready, fully support IPv6 features.</li></ul> |
| High Reliability    | <ul style="list-style-type: none"><li>● Provide multiple link backup to ensure connectivity.</li><li>● Fault detection in milliseconds, and support auto roll back.</li></ul>                                                                                                                       |
| 5G NR Access        | <ul style="list-style-type: none"><li>● In-built one 5G modems, easy for installation.</li><li>● Fully compatible with 4G LTE network.</li></ul>                                                                                                                                                    |
| Easy O&M            | Multiple management methods: standard SNMP monitoring and management, Web-based GUI, traditional command-line interface.                                                                                                                                                                            |
| Service Convergence | Integration of functions such as routing, switching, security, firewall, simplifying networking deployment.                                                                                                                                                                                         |
| Security            | Built-in firewall features, Complete VPN access, ACL, NAT...                                                                                                                                                                                                                                        |
| ZTP                 | Zero-Touch (USB, DHCP, EDP...), easy for installation and configuration.                                                                                                                                                                                                                            |

# Technical Specifications

| Hardware specification    | NSR1800X-55(V1)                                                                                                                                |  | NSR1800X-55(V2) |  |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------|--|
| CPU                       | 4-Core ARM CPU                                                                                                                                 |  |                 |  |
| Memory                    | 2G                                                                                                                                             |  |                 |  |
| Flash                     | 8G                                                                                                                                             |  |                 |  |
| Fixed 10GE WAN Interface  | 1*10GE SFP+                                                                                                                                    |  |                 |  |
| Fixed GE WAN Interface    | 2*GE SFP and 2*GE RJ45                                                                                                                         |  |                 |  |
| Fixed GE LAN Interface    | 8*GE RJ45                                                                                                                                      |  |                 |  |
| Console Port/USB Port     | 1*Console and 1*USB                                                                                                                            |  |                 |  |
| 5G Modem                  | 1                                                                                                                                              |  | NA              |  |
| SIM Slots                 | 2                                                                                                                                              |  | NA              |  |
| Antenna Interface         | 4*SMA 5G antennas                                                                                                                              |  | NA              |  |
| Power Supply              | 1*12V DC                                                                                                                                       |  |                 |  |
| IP Security Level         | IP30                                                                                                                                           |  |                 |  |
| Working Temperature       | 0°C-50°C                                                                                                                                       |  |                 |  |
| Working Humidity          | 10%-90%/RH                                                                                                                                     |  |                 |  |
| Dimension (L*D*H)         | 240mm*169mm*44.2mm                                                                                                                             |  |                 |  |
| Software features         |                                                                                                                                                |  |                 |  |
| 5G NR / 4G LTE            | SIM Lock, SIM Switching, Band lock, Auto-recovery, multi-APN profile                                                                           |  | -None           |  |
| WAN Protocol              | DDR, NDIS, PPPoE, Bridge Group, Virtual Ethernet, EDP                                                                                          |  |                 |  |
| LAN Protocol              | STP/RSTP/MSTP, MAC management, 802.1q VLAN, Voice VLAN, LACP, Loopback Detection, SPAN, LLDP, Port-isolate, Error-disable, ULFP, Port Security |  |                 |  |
| TCP/IP Protocol           | DHCP, DNS, DDNS, NAT, NAT64, NAT66, NAT ALG, IPIP                                                                                              |  |                 |  |
| IPv4 Routing protocol     | Static, RIP, OSPFv2, IRMP, IS-IS, BGP, Policy Routing, VRRP                                                                                    |  |                 |  |
| IPv6 Routing Protocol     | IPv6 Static, RIPng, OSPFv3, IS-ISv6, BGP4+, IPv6 Policy Routing, VRRPv3                                                                        |  |                 |  |
| IPv6 Function             | IPv4/IPv6 Dual-Stack, IPv6 ND, IPv6 PMTU, IPv6 ACL, ICMPv6, DNSv6, DHCPv6, GREv6                                                               |  |                 |  |
| IPv6 Transition Tunneling | IPv6 over IPv4, 6to4, ISATAP                                                                                                                   |  |                 |  |
| Multicast Protocol        | IGMP v1/v2/v3, PIM-DM/PIM-SM, SSM, MVPN, NG MVPN, MSDP, MLD, IPv6 PIM, MBGP                                                                    |  |                 |  |
| VPN Protocol              | IPSec, MPLS, VPLS, VPWS, 6PE, VRF, DVPN, GRE, L2TPv2, L2TPv3                                                                                   |  |                 |  |
| MPLS Protocol             | LDP, MPLS L2/L3 VPN, MPLS TE, IP FRR, LDP FRR, TE FRR                                                                                          |  |                 |  |
| Security Protocol         | ACL, SSH, CPU protection, AAA, IKE, PKI, 802.1X, URFP                                                                                          |  |                 |  |
| QoS Protocol              | FIFO, PQ, FQ, WFQ, CBWFQ, LLQ, RSVP, CAR, H-QoS, Traffic Shaping, Rate Limitation                                                              |  |                 |  |
| Reliability Protocol      | Backup interface, VRRP/VRRPv3, VBRP, IPSLA, Track, BFD/BFDv6                                                                                   |  |                 |  |
| Management & Monitoring   | Keepalive, NTP, EEP, RMON, CWMP, CLI, SSH, HTTP/HTTPS, SNMP V1/V2/V3, Telnet, PING, Trace Route, Login, FTP, TFTP, SFTP, TR069, IP-SLA         |  |                 |  |

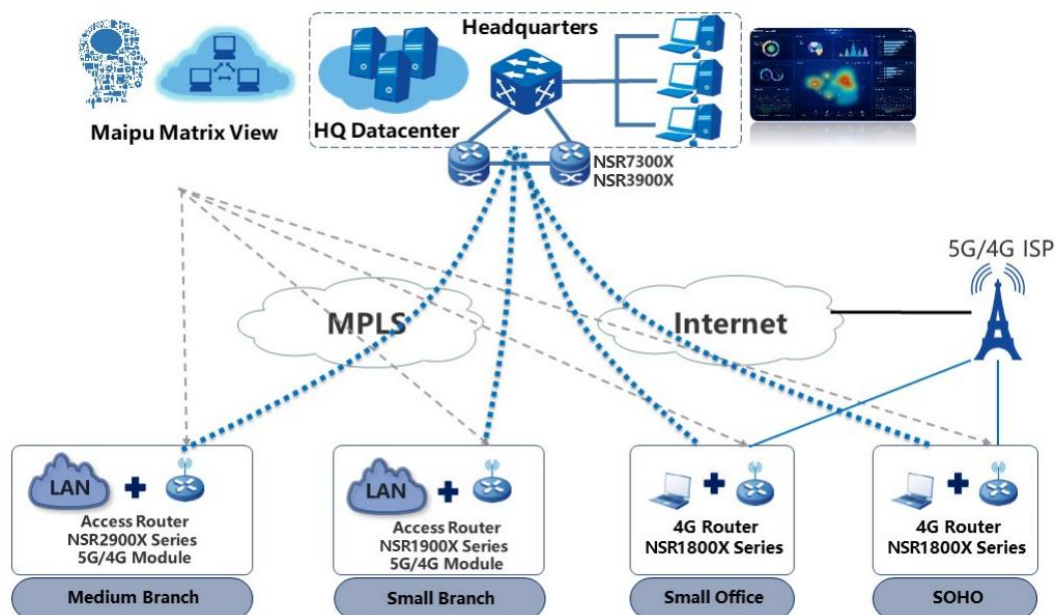
# Order Information

| Host model                                              | Description                                                                                                                                                                                                                                               |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NSR1800X-55                                             | V1 Version: NSR1800X 5G access router, 1*RJ45 console port, 1*USB interface, 1*10GE SFP+ WAN port, 2*GE SFP WAN ports, 2*GE RJ45 WAN ports, 8*GE RJ45 LAN ports, Dual SIM slots and single 5G modem, 1*12V DC power input. (Inbuilt standard 5G antennas) |
| NSR1800X-55                                             | V2 Version: NSR1800X 5G access router, 1*RJ45 console port, 1*USB interface, 1*10GE SFP+ WAN port, 2*GE SFP WAN ports, 2*GE RJ45 WAN ports, 8*GE RJ45 LAN ports, 1*12V DC power input. (Includes DC power Adapter)                                        |
| <b>Extension Antenna (Optional) for NSR1800X-55(V1)</b> |                                                                                                                                                                                                                                                           |
| ANTK-NQ5F-PS03                                          | S1 Version: 5G Extension Antenna, 0.1 ~ 6GHz, Connector: SMA Male, Length:3.0m                                                                                                                                                                            |
| ANTK-NQ5F-PS06                                          | S1 Version: 5G Extension Antenna, 0.1 ~ 6GHz, Connector: SMA Male, Length:6.0m                                                                                                                                                                            |
| ANTK-NQ5F-PS09                                          | S1 Version: 5G Extension Antenna, 0.1 ~ 6GHz, Connector: SMA Male, Length:9.0m                                                                                                                                                                            |

## Typical Application

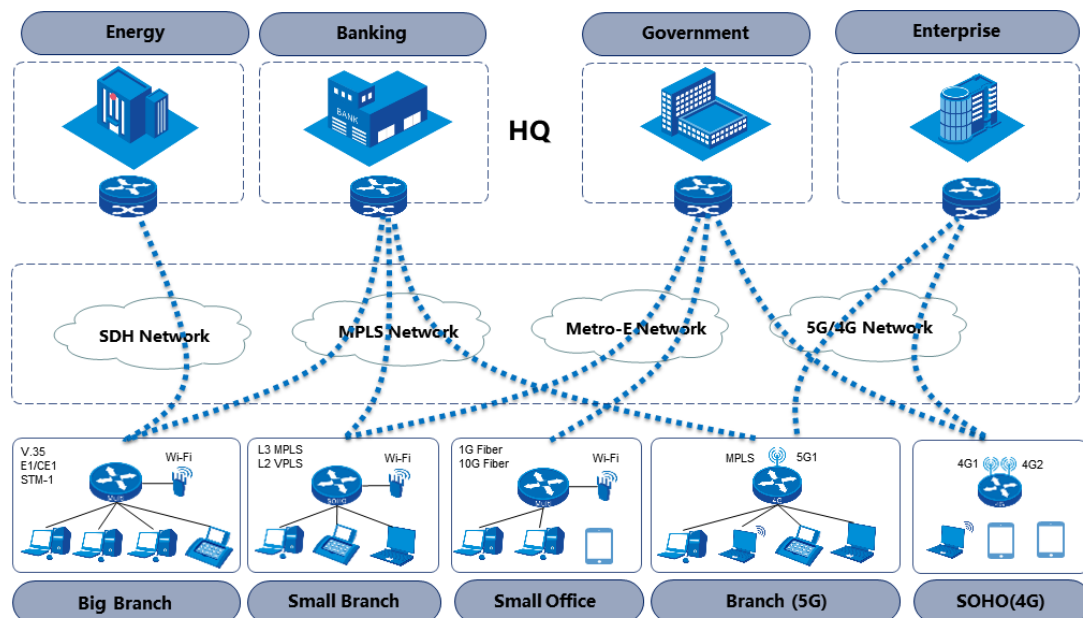
### Enterprise WAN Solution

Maipu can provide total solution of enterprise WAN network, NSR1800X/1900X/2900X series access router is working at enterprise branch offices and supporting 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.



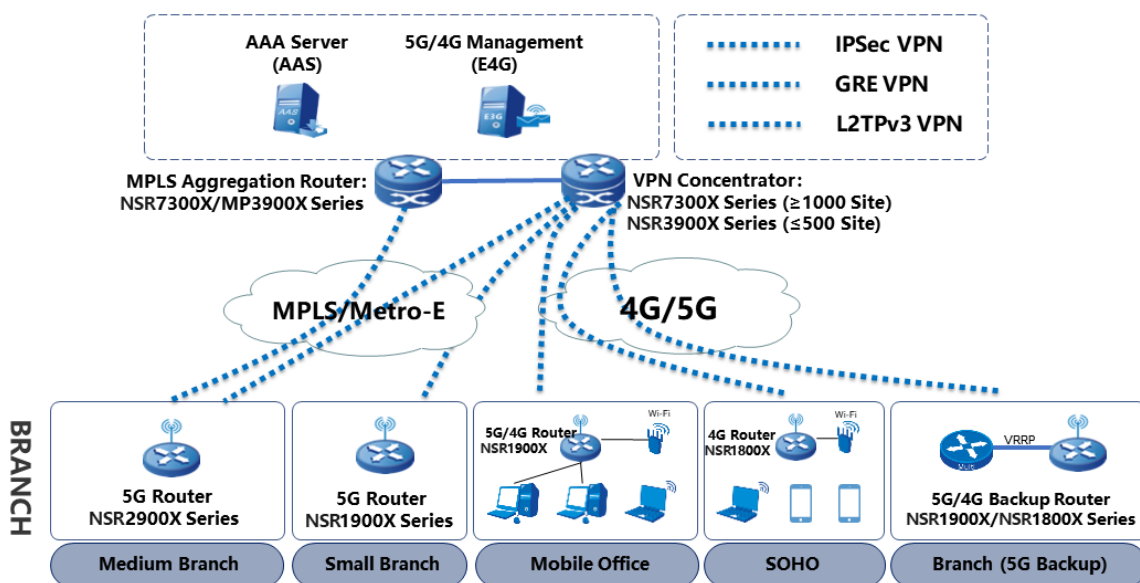
### Telecom Managed Service

In this scenario, Maipu NSR1800X/1900X/2900X series routers are used as enterprise branches egresses and provide flexible WAN access, to support SDH, MPLS, Metro-E, and 5G/4G links, helping the customer reduce the OPEX, CAPEX and improve customer's network experience.



## Enterprise VPN Solution

Maipu NSR1800X/1900X/2900X series provide various VPN access functions for communication between branches and headquarters over multiple physical links. Secure tunnels such as GRE, L2TP, IPSec, and DVPN tunnels can be set up between the HQ and branches for secure data access and transmission.



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