

# MP1900X Series 5G MPLS Access Router

## Datasheet

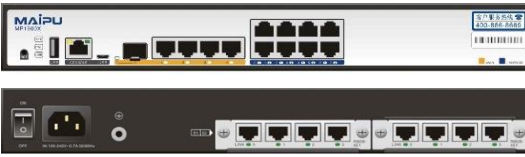
### Overview

MP1900X series modular access router developed by Maipu is one new-generation enterprise-class 5G MPLS access router, applicable to enterprise and government customers, for their small and medium sized branch offices. It integrates various WAN network technologies, such as Ethernet, SDH, 5G/4G/3G to provide the flexible access modes for enterprise users.

MP1900X series router integrates routing, switching and security functions, supports rich encryption algorithms, and fully protects data security. The LAN L2/L3 switching function has greatly enhanced the flexibility of the fixed interface.

MP1900X series router is the next generation version of MP1800-35E series which was widely deployed in many countries. It includes one model which is MP1900X-22-AC.

MP1900X-22-AC supports One RJ45 Console port, one USB interface, Five Gigabit WAN ports (One SFP + Four RJ45), and eight Gigabit Ethernet LAN ports, dual expansion slots, 100V-220V AC power input.

 <p style="text-align: center;"><b>MP1900X-22</b></p>	<ul style="list-style-type: none"> <li>● Fixed WAN Port: 1*GE fiber WAN port + 4*GE RJ45 WAN ports</li> <li>● Fixed LAN Port: 8*GE RJ45 LAN ports</li> <li>● Extension Slots: 2*RM2B extension slots.</li> <li>● Power: 1*AC power, 100V-220V 50Hz-60Hz</li> <li>● Dimension (L*D*H): 340mm*260mm*44.2mm(1U)</li> </ul>
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# Highlights

Highlights	Benefits
Flexible uplink	MP1900X integrates fixed WAN and LAN interface, WAN uplink supports various mainstream WAN access link technologies, such as ethernet, 5G/4G, E1/CE1, POS and V.35 serial line.
Extensible modular slots	MP1900X series aggregation router is modular design which has enough expansion slots. The whole device supports 2 extended slots totally.
High performance	<ul style="list-style-type: none"> <li>● Multi-core high performance processor.</li> <li>● 10/100/1000M high-speed ethernet WAN/LAN port.</li> <li>● Built-in hardware acceleration engine, high encryption performance.</li> <li>● Maipu Express Forwarding (MEF) technologies, speeding up forwarding and processing of data packets.</li> </ul>
5G Ready	The MP1900X/2900X/MP3900X series routers are built for future 5G networks, with higher throughputs with 5G NR. WAN networks are looking at wireless WAN as primary transports for different use cases for improved throughputs and latency.
Rich software features	<ul style="list-style-type: none"> <li>● Support multiple WAN protocol: DDR, PPPoE, EDP, DHCP, Static, 5G/4G</li> <li>● Support typical TCP/IP services: DHCP, DNS, NAT, GRE, L2TP..</li> <li>● Support advanced protocol, such as BGP, MPLS, VPLS.</li> <li>● IPv6 Ready, fully support IPv6 features.</li> </ul>
High reliability and business continuity	<ul style="list-style-type: none"> <li>● Redundant WAN connection for failover protection and load balancing.</li> <li>● Dynamic failover protocols such as VRRP/VBRP, backup interface, track IP.</li> </ul>
Easy O&M	<p>Multiple management methods: standard SNMP monitoring and management, Web-based GUI, SD-WAN based management, traditional command line interface.</p> <p>In-built Embedded Event Platform (EEP), allow the customer to monitor critical event, and automatic execute pre-defined action.</p>
Service convergence	<ul style="list-style-type: none"> <li>● Provide network security with integrated application inspection firewall.</li> <li>● High-performance VPNs: IPSec, DVPN, L2TP over IPSec.</li> </ul>
Security	Built-in firewall features, stateful IPS, URL Filtering, DPI, Complete VPN access.
ZTP	Zero-Touch (USB, DHCP, EDP...), easy for installation and configuration.

# Product Specifications

## Hardware Specification

Hardware specification	MP1900X-22
CPU	1.6GHz Dual Core
Memory (Default)	1G
Flash (Default)	128M
Dual IOS	Yes
Fixed WAN interface	1*GE Fiber, 4*GET RJ45
Fixed LAN interface	8*GET RJ45
Extension slots	2*RM2B
USB	1
Console port/AUX	1
Dimension (L*D*H)	340mm*260mm*44.2mm(1U)
Power supply	1*AC power, 100V-220V, 50Hz-60Hz
Power consumption	≤26W
Working Temperature	0°C ~ 45°C
Humidity	Work humidity: 5%-85%/RH
Weight	≤3KG

## Software Specification

Software features	
WAN Protocol	DDR, NDIS, PPPoE, Bridge Group, EDP
LAN Protocol	STP/RSTP/MSTP, MAC management, 802.1q VLAN, LACP, Loopback Detection, SPAN, LLDP, Port-isolate, Error-disable, ULFD, Port Security
TCP/IP Protocol	DHCP, DNS, DDNS, NAT, NAT64, NAT66, NAT ALG, IPIP, GRE, L2TP/L2TPv3
IPv4 Routing protocol	Static, RIP, OSPFv2, IS-IS, BGP, Policy Routing
IPv6 Routing Protocol	IPv6 Static, RIPng, OSPFv3, IS-ISv6, BGP4+, IPv6 Policy Routing
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	IGMP v1/v2/v3, PIM-DM/PIM-SM, SSM, MVPN, NG MVPN, MSDP, MLD, IPv6 PIM, MBGP
VPN	IPSec, PKI, MPLS, VPLS, VPWS, L3VPN, OAM, 6PE, VRF, DVPN, VxLAN
MPLS	LDP, MPLS L3VPN, MPLS L2VPN, MPLST TE, IP FRR, LDP FRR, TE FRR
Security	ACL, SSH, CPU protection, Firewall, IPS, URL Filter, AAA, IKE, PKI, 802.1X, URFP
QoS	FIFO, PQ, FQ, WFQ, CBWFQ, LLQ, RSVP, CAR, H-QoS, traffic shaping, Rate Limitation
Reliability	Backup interface, VRRP/VRRPv3, VBRP, IPSLA, Track, BFD/BFDv6

SDN Ready	ZTP, IPFIX, Telemetry, Netconf
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

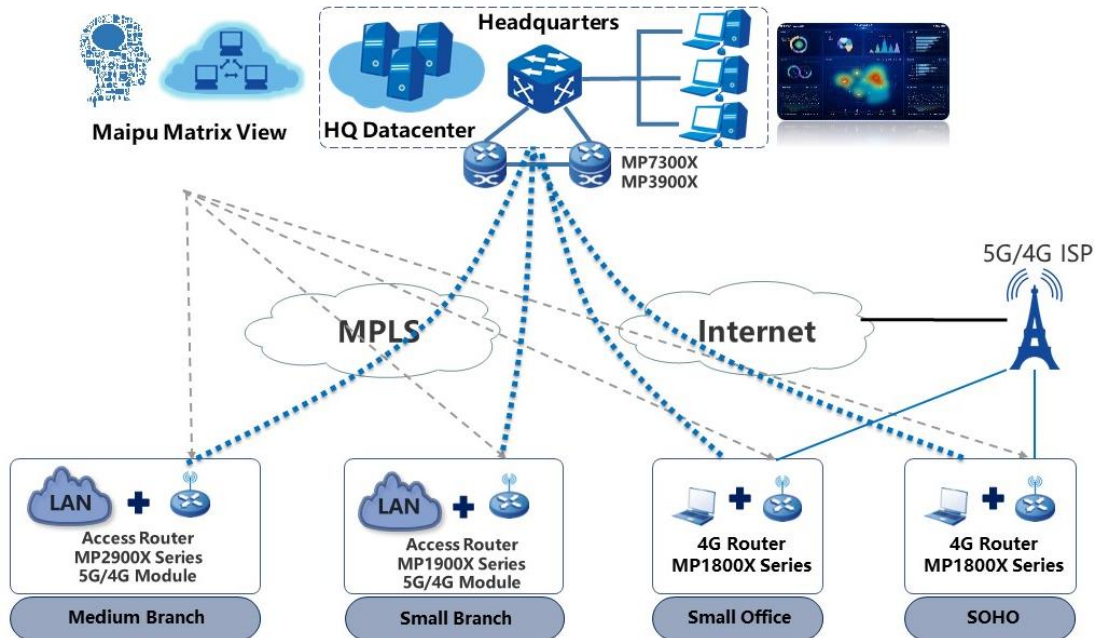
## Extension Modules

RM2B WAN Module	
Modules	Description
RM2B-1E1	Single-port non-channelized E1 WAN module
RM2B-4E1	Four-port non-channelized E1 WAN module
RM2B-1CE1	Single-port channelized E1 WAN module
RM2B-4CE1	Four-port channelized E1 WAN module
RM2B-1SA	Single-port high-speed V35/24 serial WAN module
RM2B-2SA	Dual-port high-speed V35/24 serial WAN module
RM2B-1POS-OC3	Single-port 155M non-channelized OC3 WAN module
RM2B-4GET	Single-port gigabit ethernet combo WAN module
RM2B-4GEF	Four-port gigabit ethernet electrical WAN module
RM2B-1GE	Single-port gigabit ethernet combo WAN module
RM2B-4G-LTE	Single 4G module, 1 sim slot, LTE-FDD (band: 1/3/5/7/8/20), TD-LTE (band: 40), WCDMA (band 1/5/8), EDGE/GPRS/GSM
RM2B-4G-LTE-A	Single 4G module, 1 sim slot, LTE-FDD (band: 1/3/5/8), TD-LTE (band: 38/39/40/41), WCDMA/EDGE/GPRS/GSM
RM2B-5G-M	Single 5G module, 2 sim slots, full standard 5G card, support 5G NSA and SA networking, 5G NR (band: n28/n41/n78/n79), compatible with 4G LTE-FDD (band: 1/3/5/7/8/18/19/20/26/28/32) and 4G LTE-TDD (band: 34/38/39/40/41/42/43)

# Application Scenario

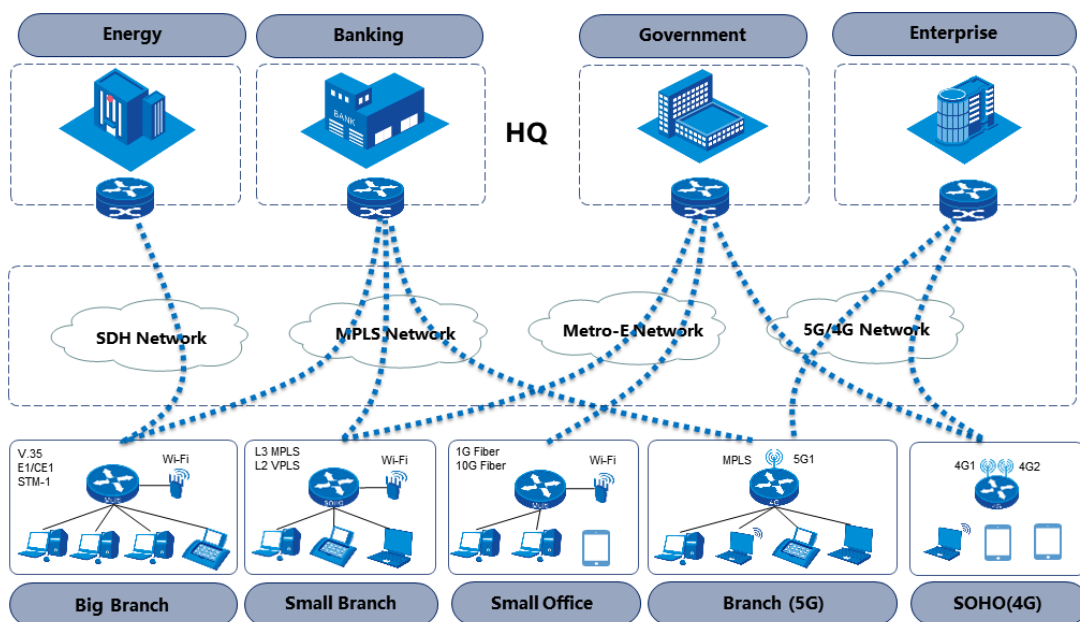
## Enterprise WAN Solution

Maipu can provide total solution of enterprise WAN network, MP1800X/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. MP3900X/MP7300X/MP7500X series aggregation router is working at enterprise HQ. Maipu Matrix View is SNMP centralized managed platform.



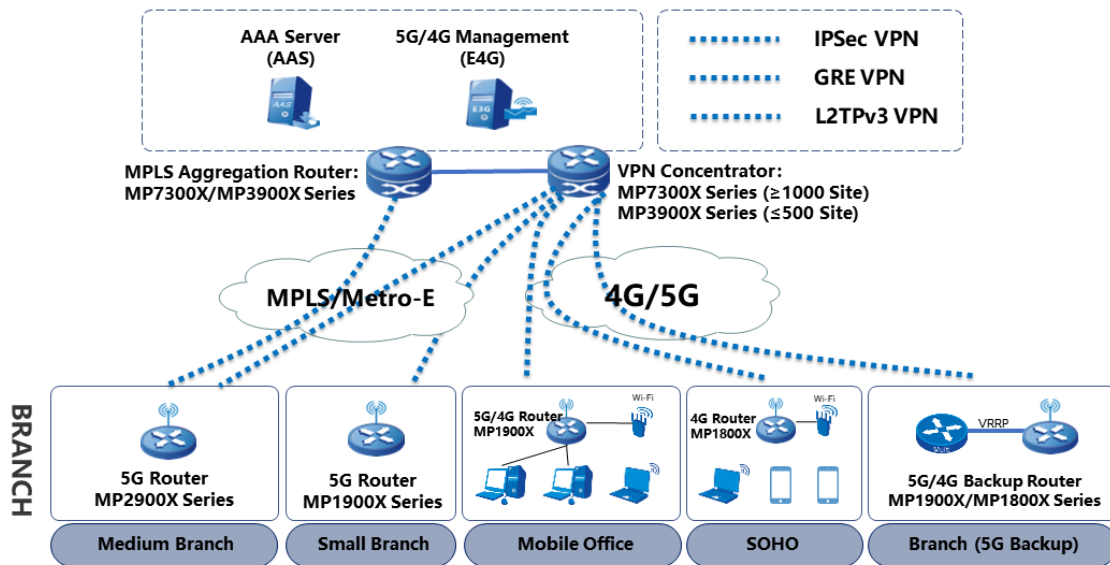
## Telecom Managed Service

In this scenario, Maipu MP1800X/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 MP1800X/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.



## Order Information

Router Host	
Host model	Description
MP1900X-22-AC	MP1900X-22-AC router, one console port, one USB interface, one GEF+ Four GET WAN port, eight 1000M LAN ports, two RM2B expansion slots, one AC power supply
RM2B WAN Module	
Modules	Description
RM2B-1E1	Single-port non-channelized E1 WAN module
RM2B-4E1	Four-port non-channelized E1 WAN module
RM2B-1CE1	Single-port channelized E1 WAN module
RM2B-4CE1	Four-port channelized E1 WAN module
RM2B-1SA	Single-port high-speed V35/24 serial WAN module
RM2B-2SA	Dual-port high-speed V35/24 serial WAN module
RM2B-1POS-OC3	Single-port 155M non-channelized OC3 WAN module
RM2B-4GET	Single-port gigabit ethernet combo WAN module
RM2B-4GEF	Four-port gigabit ethernet electrical WAN module
RM2B-1GE	Single-port gigabit ethernet combo WAN module
RM2B-4G-LTE	Single 4G module, 1 sim slot, LTE-FDD (band: 1/3/5/7/8/20), TD-LTE (band: 40), WCDMA (band 1/5/8), EDGE/GPRS/GSM
RM2B-4G-LTE-A	Single 4G module, 1 sim slot, LTE-FDD (band: 1/3/5/8), TD-LTE (band: 38/39/40/41), WCDMA/EDGE/GPRS/GSM

RM2B-5G-M	Single 5G module, 2 sim slots, full standard 5G card, support 5G NSA and SA networking, 5G NR (band: n28/n41/n78/n79), compatible with 4G LTE-FDD (band: 1/3/5/7/8/18/19/20/26/28/32) and 4G LTE-TDD (band: 34/38/39/40/41/42/43)
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