



MP7500 Series Router Datasheet

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MP7500 Series Core Router

The MP7500 series router is a core aggregation router designed and developed in line with the Advanced Telecom Computing Architecture (ATCA) for efficient large-scale WAN core aggregation and core uplink connection. It provides super large-scale Internet access platform.

The MP7500 router provides two control slots and eight MIM slots. It supports 32-port 155M interface or 256-port E1 interface. MP7500 incorporates four-core processors based on the technology of dual-core processors. The perfect dual-redundant or multi-redundant design guarantees high reliability of the router.

The MP7500 router adopts MyPower-R software providing routing, switching, backup, network security service, IP multi-cast function, QoS, network management function, protocols of network layer and link layer, BGP edge network gateway protocol and MPLS function. It can be used as PE or P node.



MP7500 SERIES ROUTER

Key Features

- **Four-core processing technology**

The router adopts advanced multi-core processing technology for separation of data forwarding platform and protocol control platform via distributed processing. It provides load balance of data forwarding platforms. The MP7500 router can support 32 155M interface and 256 E1 interface to satisfy over 2000 2M network aggregation.
- **Telecom-grade reliability**

The router is the first core router based on ATCA providing telecom grade reliability. The router provides independent system management and the multi-core processing technology for separation of data forwarding platform, protocol control platform and system management platform increasing reliability of system operation. It provides dual-redundancy or multi-redundancy design (dual-control, dual-fan, three power supply, double star data bus, double management bus, double Monitor ROM, double memory and double Flash).
- **Dual-control redundancy & dual-router in single box**

The design facilitates dual-router in single box. One dual-control MP7500 is considered as two independent routers. It realizes dual-link redundancy backup and load balance.
- **320G backboard with distributed & integrated infrastructure**

The router provides 40Gbps backboard bandwidth for each slot, which makes the total bandwidth to 320Gbps and realizes the distributed and integrated infrastructure.
- **Patented virtual routing switching technology**

The router supports Maipu patented routing switching technology. WAN interface such as E1 or channels such as CPOS channel can be divided into virtual Ethernet ports, and the number of channels of single reaches to 252. This provides service hardware isolation and bandwidth guarantee.
- **Low power consumption & stable operation**

The power consumption by router is lower than 400w. The router offers stable operation of high-end equipment.

- **LCD screen and alarming maintenance**

The router provides LCD screen at the top, which displays system temperature, CPU usage and memory occupancy. By using shortcut keys beside LCD, the control card, line card and interface status can be checked.

- **IPV6 protocol & software functions**

The router supports IPV6 protocol, BGP, MPLS and L2TP which can be used for deploying Layer 2 and Layer 3 VPNs. The features include ACL package-filtering, NAT, authentication audit, routing check, callback and service protect refuse. It provides integrated service and division service, supports RSVP, CAR, FIFO, PQ, FQ, CBWFQ, LLQ, SHELL, WEB, SNMP (SNMP V3 protocol). The Maipu Masterplan platform performs network configuration, network monitor, statistic, accounting and maintenance.

- **Radiation system design**

The router provides standard 14U screen electromagnetic radiant chassis, which can be deployed on standard rack with features of anti-shake, anti-high and low temperature and anti-electromagnetic radiation. It provides 200W radiation capability based on ATCA and three power supply interfaces for 1+1 and 2+1 power supply redundancy backup. It supports hot-swap guaranteeing reliability and maintenance.

Technical Specifications

Item	MP7500
Product configuration	
MIM slot	8
Control slot	2
Power supply slot	3
Fan slot	2
Performance	
Processor	High performance multi-core processor
Memory	Fixed 64Mbytes extending to 1Gbytes via CF
Memory	Expandable to 1GB DDR667
Average non-malfunction time	100000h
Bus bandwidth	320Gbps
Maximum routing table capacity	440K (memory is 1Gbyte)
Maximum ACL number	50K (memory is 1Gbyte)
Standards & protocols	
Link protocol	PPP, PPPoE, SLIP, SDLC, FR,ATM, LLC2, ISDN, X.25, HDLC, LAPB, Ethernet_II, Ethernet_SNAP, 802.1Q,MSTP,ISDN
Network protocol	TCP/IP, ICMP, UDP, FTP, TFTP, SNMP, TELNET, RLOGIN, DHCP, DHCPv6,HTTP, DNS, DDNS,ARP, DLSw, DDR,NAT,NTP,IPFIX,IPv6
Routing protocol	Static routing protocol, RIPv1, RIPv2, OSPF,OSPFv3, BGP, ISIS,NDSP, IRMP, SNSP, IGMP, DVMRP,MSDP, PIM-SM/DM/SDM/SSM, Policy route, VBRP, VRRP,MVPN
Network security	PPP encryption, L2TP,L2TPv3, GRE, policy routing,802.1X, AAA, ACL, IPSec, IKE, PKI, CA, LDP, MPLS VPN, MPLS L2/L3VPN,MPLS TE,VPLS,SSH
QoS	FIFO, PQ, CQ, FQ, WFQ, CBWFQ, LLQ, RSVP, CAR, SPD, WRED, Traffic Shaping
Physical index	
Dimension	576 mm × 482.6 mm × 420mm
Weight	50Kg (full slot)
Power supply requirement	
Input voltage (AC)	Voltage: 100~240V Current: 1.2A Frequency: 50~60Hz
Single power	350W

Power (maximum)	3×350W
Input voltage (DC)	Voltage: -40~-57V Current: 4.6A
Single power	350W
Power (maximum)	3×350W
Environment	
Short-term working temperature	0~40°C
Long-term working temperature	15~30°C
Short-term humidity	10~90%. Non-condensing
Long-term humidity	40~65%. Non-condensing

Order Information

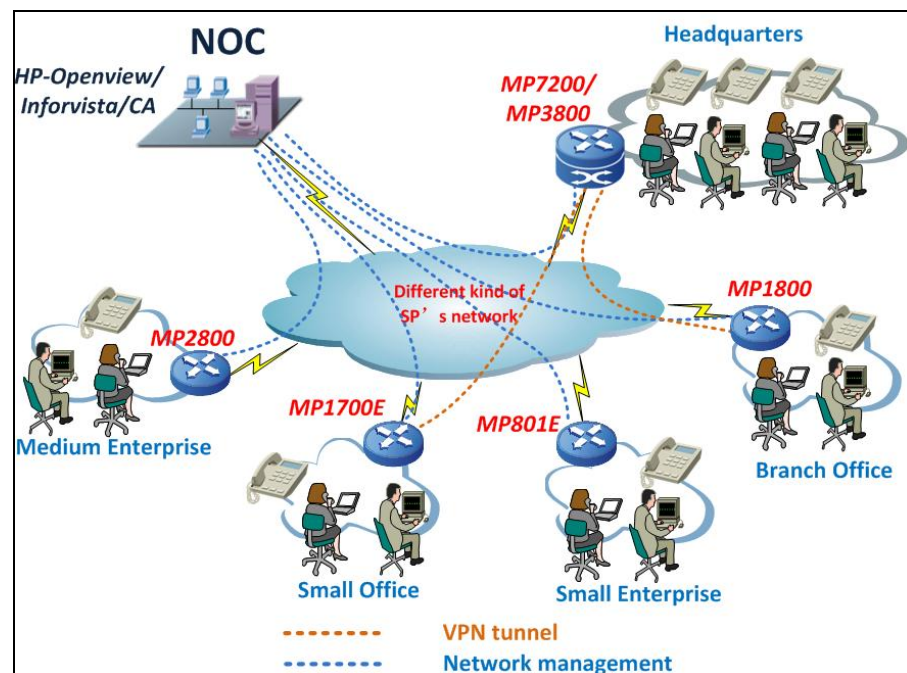
Product model	Description
Chassis	
MP7508-MF	MP7508 router chassis, two console slots, eight service module slots, two fan slots, three power supply slots and LCD screen.
Control module (Mandatory)	
RM7B-MPU408-4GEH	Control module for MP7500, four fixed 10/100/1000M Combo ports. Fixed 64Mbytes FLASH(extending FLASH to 1Gbytes via CF), one CF card slot. two memory slots
Fan module (Mandatory)	
RM7508-FANH	Fan module (suggest adopting dual-fan for backup)
Power supply module (Mandatory)	
DD400-5S005A	DC power supply module (backup supports 1+1 or 2+1 solution, 2+1 Backup is adopted for 4 line card)
AD400-1S005V	AC power supply module (backup supports 1+1 or 2+1 solution, 2+1 Backup is adopted for 4 line card)
Memory (Mandatory)	
DDR667-512S	Memory: 512Mbyte Access speed: 667MHz
CF Card	
CF-1GB	1G CF card
RM7B High-speed MIM module	
RM7B-1POS-OC3H	1-port 155M POS module (155M SFP optical module is required, supports hot-swappable)
RM7B-4CPOS-OC3H	4-port 155M CPOS module (155M SFP optical module is required, supports hot-swappable)
RM7B-2CPOS-OC3H	2-port 155M CPOS module (155M SFP optical module is required, supports hot-swappable)
RM7B-1CPOS-OC3H	1-port 155M CPOS module (155M SFP optical module is required, supports hot-swappable)
RM7B-4ATM-OC3AH	4-port 155M ATM module (155M SFP optical module is required, supports hot-swappable)
RM7B-2ATM-OC3AH	2-port 155M ATM module (155M SFP optical module is required, supports hot-swappable)
RM7B-1ATM-OC3AH	1-port 155M ATM module (155M SFP optical module is required, supports hot-swappable)
RM7B-4SAH	Four-port synchronous/asynchronous serial-port module (supports hot-swappable)
RM7B-32CE1H	32-port channelized E1/ ISDN PRI module (support hot-swappable)
RM7B-16CE1H	16-port channelized E1/ ISDN PRI module (support hot-swappable)
RM7B-8CE1H	8-port channelized E1/ ISDN PRI module (support hot-swappable)

RM7B-32E1H	32-port non-channelized E1 module (support hot-swappable)
RM7B-16E1H	16-port non-channelized E1 module (support hot-swappable)
RM7B-8E1H	8-port non-channelized E1 module (support hot-swappable)
RM7B-2GEH	2-port Gigabit optical interface (support hot-swappable, SFP module is required)
RM7B-4GET4GEFH	4-port Gigabit electric port + 4-port Gigabit optical interface (support hot-swappable, SFP module is required)
MyPower-R-7508-NAT	IOS software with NAT function
IPSec Jack	
RM-D-0001	IPSec chip
Optical module	
SFP-S2-L03P3	155M single optical module (transmission distance: 20km, LC interface, PECL, wave length 1310nm), suitable for RM7B-1/2/4ATM-OC3AH, RM7B-1/2/4CPOS-OC3H
SFP-M2-L03P8	155M multi-module optical module (transmission distance: 2km, LC interface, PECL, wave length: 850nm), suitable for RM7B-1/2/4ATM-OC3AH, RM7B-1/2/4CPOS-OC3H
SFP-S2-L24P3	1.25G single optical module (transmission distance: 2km, LC interface, PECL, wave length: 1310nm), suitable for RM7B-2GEH module
SFP-M1-L24P8	1.25G multi-module optical module (transmission distance: 550m, LC interface, PECL, wave length: 850nm), suitable for control card module, RM7B-2GEH

Typical Applications

Networking for Data Encryption of Branches

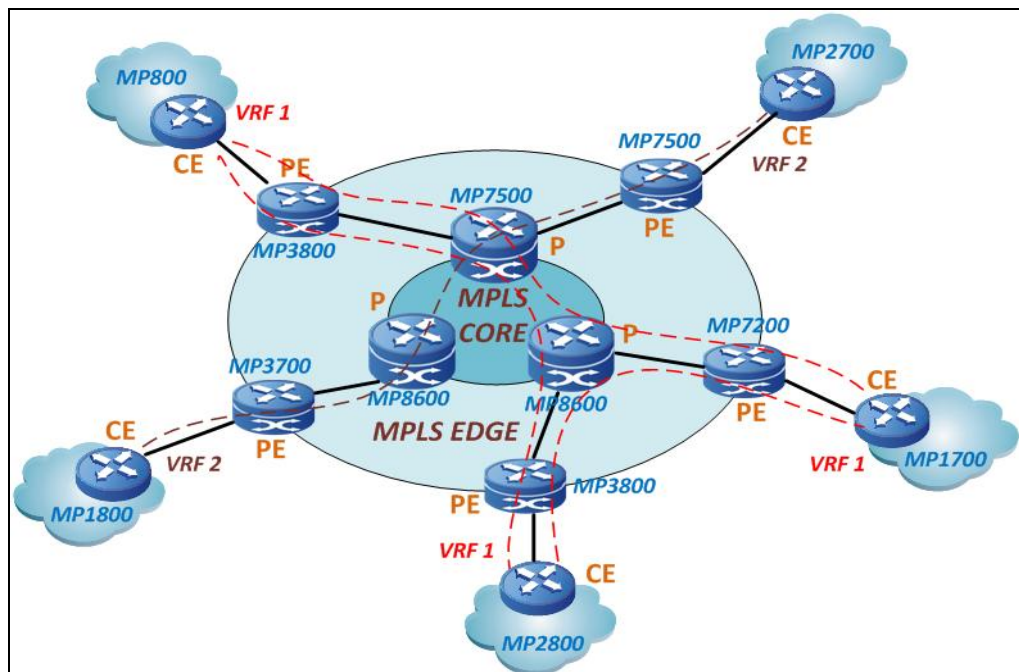
With the business expanding of the group company, the branches and small offices need to exchange information with the headquarters. The medium/low-end routers of Maipu serve as the access devices of the medium/small branches and can set up the security tunnel with the core router in the headquarters via the public network, ensuring the security and reliability of the company information and saving the costs of leased lines.



The headquarters adopts the medium/high-end routers of Maipu. With the high performance and high security of the router, and the VLAN isolation and 802.1X authentication technologies, the security access authentication for the intranet users can be realized.

The branches adopt the medium/low-end routers of Maipu as the access platform of VPN and IPSec.

MPLS VPN Solution



MAIPU routers support MPLS VPN and can be used as CE and PE equipment. MAIPU CE routers include MP800, MP1700, MP1800, MP2700, MP2800, MP3700, MP3800 and MP7200. MAIPU PE routers include MP2800, MP3700, MP3800, MP7200 and MP7500.

In MPLS VPN network, PE runs MPLS and PE router connects to VPN network via VRF. The CE equipments related to the same VPN tunnel can access each other.

MAIPU routers offer various WAN interfaces including E1, CE1, V.35, ISDN, PSTN and Ethernet. The operator can provide primary and secondary lines for enterprise customers simultaneously to enhance MPLS business quality.

Besides, by using MAIPU MPLS access solution, the operator can provide VoIP services without increasing any cost.