

MP7500X Series Core Router

Datasheet

Overview

MP7500X series core router further implements "multicore power" on the basis of the leading "dual-core power". Based on the ATCA structure design and meeting the users' high-performance requirements, it provides the most complete dual-redundancy or multi-redundancy design for the whole system, providing users with the high reliability of core-device carrier-class. With unified MyPower-R software, MP7500X series router provides abundant routing, backup, network security services, IP multicast, QoS, network management, and other functions, supports a variety of network layer and link layer protocols, supports BGP border gateway protocol and MPLS function, and can play the PE node or P node function in the network.



MP7500X Series Core Router

As a multi-purpose universal data processing and routing platform, MP7500X series router can cooperate with a full range of Maipu routers to provide operators, government, finance, energy, transportation, education, military and other industrial users and large/medium-sized enterprise users with a full range of WAN solutions, widely applied at the core backbone layer and core aggregation layer of the above industries. MP7500X series core router is the next generation version of MP7500E series which was widely deployed in many countries.

MP7500X series core router has two models. It has two main control slots, two switching fabric slots, 4/8 service slots, adopts the multi-core processor to realize the distributed forwarding architecture, and supports 40G/10G/1G, and other TDM interfaces.

MP7500X-04 supports dual control engine slots, dual switching fabric slots, four service slots, four AC power slots, one fan slot.

MP7500X-10 supports dual control engine slots, dual switching fabric slots, eight service slots, four AC power slots, two fan slots.

Key Features

- **Flexible uplink link**

MP7500X series core router support four kinds of high-performance multi-core SPU module for customers real requirements; meanwhile, MP7500X uplink supports various mainstream WAN access link technologies, such as 1G/10G/40G Ethernet, E1/CE1, POS/CPOS, etc.

- **More than eight expansion slots**

MP7500X series core router is modular design which has rich expansion slots. The whole device supports 4/8 extended slots totally. The strong expansion ability can provide high-density access and protect customer investment. All the modules of MP7500X support hot-swap.

- **High performance**

MP7500X series core router support high performance and the configured ACL, QoS, have small influence for the forwarding performance. And customer can also upgrade the performance by changing SPU service engines.

- **Advanced Secure service**

MP7500X series core router has high performance VPN aggregation function. Meanwhile, the device data can be transmitted in the secure MPLS/VPLS, IPsec, GRE, L2TP tunnel, preventing the data from being accessed and tampered and providing the higher security for the application over the network.

- **Rich software features**

MP7500X series core router provides rich software features; supports various application technologies, such as IPv4/IPv6, VPN, MPLS, multicast, ACL, MAC address binding, access control, bandwidth limitation, MSTP, and NAT; supports RSVP resource reserving protocol and CAR; provides hierarchical QoS function to ensure the high priority of the key services; support the queue management policies, such as FIFO, PQ, CQ, FQ, WFQ, CBWFQ, and LLQ.

- **Rich Management modes**

MP7500X series core router supports complete management modes, including SNMPv1/v2c/v3, CLI, USB drive deployment, MIB, RMON, SYSLOG, TR069, IPFIX, etc. Combine with Maipu SNMP Management Platform, it can provide the simple and easy-to-use remote network management.

Product Specifications

| Hardware specification | MP7500X-10 | MP7500X-04 |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| CPU Processor | 1.5GHZ Dual Core | |
| USB2.0 Port | 1 | |
| Console Port (RJ45) | 1 | |
| USB2.0 Port | 1 | |
| SD Slot | 1 | |
| Memory | 8G | 4G |
| Flash | 8G | 8G |
| Throughput Performance | 15Mpps (SPU10,16 Core) 27Mpps (SPU20,24 Core) 55Mpps (SPU40,48 Core) | 15Mpps (SPU10,16 Core) 22Mpps (SPU20,24 Core) 50Mpps (SPU40,48 Core) |
| MPU Slots | 2 | 2 |
| SFU Slots | 2 | 2 |
| Service Slots | 8 (32 sub slots) | 4 (16 sub slots) |
| Power Supply Slots | 4 | 4 |
| Fan Slots | 2 | 1 |
| Dimension W*D*H (mm) | 444mm*755mm*480mm | 444mm*444mm*480mm |
| Weight (Kg) | ≥47Kg | ≥32Kg |
| Input voltage | AC 100-240V Or DC -48V | |
| Temperature | Work temperature: 0 – 45°C | |
| | Storage temperature: -40 – 70°C | |
| Humidity | Work humidity: 5%-85% | |
| | Storage humidity: 5%-90% | |
| Cooling | Forced air cooling | |
| Software features | | |
| Link-layer protocol | DDR, PPP, Frame-Relay, Bridge, HDLC, PPPoE, Port isolation, VALN, loopback detection, Error-Disable, MSTP, SPAN, LLDP | |
| TCP/IP Protocol | DHCP, DHCPv6, DDNS/DNS, NAT/NAT64 | |
| Routing protocol | Static Route/Static Routev6, RIP/RIPng, OSPFv2/OSPFv3, BGP/BGP4+, IS-IS/IS-ISv6, IRMP, PBR | |
| Security | Support ACL security filtering, PPP encryption, SSH, CPU protection, port security, AAA, IKE, PKI, 802.1X, URFP | |
| VPN | MPLS, LDP, L2VPN, L3VPN, MPLS QoS, MPLS OAM, 6PE, GRE/GREv6, IP/IP, L2TP, L2TPv3, VRF | |
| QoS | FIFO, PQ, FQ, WFQ, CBWFQ, LLQ, RSVP, CAR, H-QoS, traffic shaping, Rate Limitation | |
| Multicast | IGMP, MLD, PIM-SM/SSM, PIM-DM/SDM PIMv6-SM/SSM, MSDP, MVPN, NG-MVPN | |
| Reliability | Backup interface, VRRP/VRRPv3, VBRP, Track, BFD/BFDv6 | |
| Management & Monitoring | Keepalive gateway, NTP, Mirroring, RMON, CWMP, CLI, SSH, WEB, SNMP V1/V2/V3, Telnet, PING, Trace Route, Login, FTP, TFTP, TR069, IPFIX traffic monitoring, IP-SLA | |

Order Information

| Product Model | Description |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| MP7500X-10 | MP7500X-10 supports dual control engine slots, dual switching fabric slots, eight service slots, four AC power slots, two fan slots. |
| MP7500X-04 | MP7500X-04 supports dual control engine slots, dual switching fabric slots, four service slots, four AC power slots, one fan slot. |
| Fan Module | |
| FAN-08A-01B | MP7500X Modular fan |
| Power Module | |
| AD800M-HV0F | MP7500X-04 220V AC power module, 800W |
| AD1600M-HV0F(RoHS) | MP7500X-10 220V AC power module, 1600W |
| Control Engine (MPU) | |
| RM7E-MPU-B | RM7E-MPU-B, MP7500X-10 control engine, one CON/AUX port, one management Ethernet port, one CMM interface, one SD card slot |
| RM7E-MPU-A | RM7E-MPU-A, MP7500X-04 control engine, one CON/AUX port, one management Ethernet port, one CMM interface, one SD card slot |
| Switching Fabric (SFU) | |
| RM7E-SFU-10E | RM7E-SFU-10E Switching Fabric, For MP7500X-10, Advanced Version |
| RM7E-SFU-10C | RM7E-SFU-10C Switching Fabric, For MP7500X-10, Enhanced Version |
| RM7E-SFU-10B | RM7E-SFU-10B Switching Fabric, For MP7500X-10, Basic Version |
| RM7E-SFU-04B | RM7E-SFU-04B Switching Fabric, For MP7500X-04, Basic Version |
| Service Mother Board (SPU) | |
| RM7E-SPU10 | RM7E-SPU10, MP7500X series service processing card |
| RM7E-SPU20 | RM7E-SPU20, MP7500X series service processing card |
| RM7E-SPU40 | RM7E-SPU40, MP7500X series service processing card |
| RM6B module (Need work with SPU Module) | |
| RM6B-8GET | 8-port Gigabit Ethernet electric port |
| RM6B-8GEF | 8-port Gigabit Ethernet optical port |
| RM6B-8GE-H | 8-port Gigabit Ethernet Combo port |
| RM6B-1XGEF | 1-port 10G interface card |
| RM6B-4XGEF | 4-port 10G interface card |
| RM6B-1POS-OC3 | 1-port 155M POS interface |
| RM6B-4POS-OC3 | 4-port 155M POS interface |
| RM6B-4POS-OC12 | 4-port 622M POS interface |
| RM6B-2POS-OC48 | 2-port OC48 non-channelized POS Module |
| RM6B-1POS-OC48 | 1-port OC48 non-channelized POS Module |
| RM6B-4SA | 4-port series port card |
| RM6B-8E1 | 8-port non-channelized interface card |
| RM6B-8CE1 | 8-port channelized interface card |
| RM6B-1ATM-OC3 | 1-port 155M ATM board card |
| RM6B-1CPOS-OC3 | 1-port 155M CPOS interface |
| RM6B-2CPOS-OC3 | 2-port 155M CPOS interface |
| RM6B-20GET-H | 20-Port Gigabit electric ports |

| | |
|----------------------------------------------------|-------------------------------------------------|
| RM6B-20GEF-H | 20-Port Gigabit optical ports |
| RM7E modules (No need work with SPU Module) | |
| RM7E-48GEF | 48-Port Gigabit optical ports |
| RM7E-48GET | 48-Port Gigabit electric ports |
| RM7E-8XGEF | 8-port 10G SFP+ interface card |
| RM7E-1QXGE | 1-port 40G QSFP interface card |
| RM7E-2QXGE | 2-port 40G QSFP interface card (For MP7500X-10) |
| RM7E-2POS-OC192 | 2-port OC192 non-channelized POS Module |

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Maipu Communication Technology Co., Ltd

No.288, Tianfu 3rd Street

Hi-Tech Zone

Chengdu, Sichuan Province

P. R. China

610041

Tel: (86) 28-65544850,

Fax: (86) 28-65544948,

URL: [http:// www.maipu.com](http://www.maipu.com)

Email: overseas@maipu.com

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