



MP2800 Series Router Datasheet

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MP2800 Series Integrated Services Router

The MP2800 series integrated services router is designed for large-medium branch offices and the headquarters of large enterprise, it comprises MP2804, MP2806, MP2816, MP2818 and MP2824 five models.

The MP2800 series router adopts fixed and modular structure, integrates routing, switching, security, VoIP, transmission functions and can provide broadband-narrowband, multi-service and intelligent solutions for users. It can be used at large-medium branch offices, and MP2824 can be used at the headquarters of large enterprise as the aggregation device.

The router provides many software features such as SNA/DLSw, VoIP, VPN, MPLS, multicast, access control and bandwidth restriction. The series provides backup schemes and QoS features. It can be applied to multiple services such as data, video and voice.

The MP2800 series router, combined with other Maipu routers, can provide complete WAN network solutions for large-medium scale enterprises, operator, finance, government, energy sources, traffic, education and military industries.



MP2800 series

Key Features

- **Broadband-narrowband integration supports N*64K-100M lines**
MP2800 extends features of Maipu broadband-narrowband routers and provides several high-speed multi-function slots to access N×64K, 2M and N×2M narrowband lines and realize MODEM and ISDN dial backup schemes. The fast-forwarding engine technology developed by Maipu makes WAN 100M line interface reach wire-speed forwarding supporting the extension of WAN line bandwidth to 100M in advance.
- **Intelligent multi-WAN load balance for coexistence of services**
Lower MP2800 series router assigns traffic to balance load by providing two or above lines on access/network nodes to reach one upper server. When some lines become invalid, traffics can be reassigned to other lines.
- **Provides intelligent NMS for automatically diagnosing router faults to realize 'Zero-spot service'**
Inbuilt dial-up modem/console port is connected to an external dial-up modem for remote login. Switch to remote configuration mode via button. Then users and manufacturers can maintain devices anywhere via telephone line dial-up to realize "Zero-spot service". MP2800 supports Maipu intelligent NMS for diagnosing and fixing router faults, automatically generating a record for users to query. In this way, it reduces management and maintenance work of users considerably.
- **Inbuilt hardware encryption technology ensures key services of finance system can be transmitted on IP lines**
The router provides inbuilt and highly efficient hardware encryption engine. The encrypting data does not occupy bandwidth and CPU of the router system realizing that high-speed encryption does not affect data forwarding efficiency. For widely-used IP private line, encrypting data via WAN is the safest method of ensuring the security of important data.
- **Each Ethernet port uses L2/L3 technology to realize flexible support for services**
All Ethernet interfaces of MP2800 support L2/L3 technology to

realize the control for different networking modes and services, avoiding poor control capacity caused by using Layer-2 switch and the problem that adopting routers occupies lots of IP addresses. In this way, we can simplify network configuration and strengthen management and control capacity of network for services.

- **High-density Ethernet port and asynchronous port to access large-capacity Ethernet devices and traditional terminals**
MP2816 and MP2818 models are configured with 2+24 100M Ethernet ports to access network terminals, PC and video terminals. Users do not need to purchase Ethernet switches, saving network investment and reducing faults. Considering there are some dumb terminals to access, MP2800 has extension slots which can be extended to up to 64 asynchronous interfaces to access traditional terminals and large-capacity Ethernet devices in network nodes/branch offices.
- **Hierarchical QoS**
The priorities of various services can be realized on specified bandwidth of MSTP 100M port. MP2800 supports narrowband lines and MSTP/MPLS broadband lines. For MSTP/MPLS, the lines are for 100M interfaces, but in fact, the bandwidth applied by users is only a part such as 2M, 5M, 10M, 20M and 50M. Inconsistency between interface bandwidth and practical bandwidth results in traditional QoS becoming invalid. SO MP2800 router adopts hierarchical QoS on Ethernet ports to realize bandwidth control first, and then secondary bandwidth allocation for different services. The QoS service of MP2800 router supports RSVP, CAR and queue policies such as FIFO, PQ, CQ, FQ, CBWFQ and LLQ to ensure priorities of key services.
- **Supports MPLS and L2TPv3 to provide strict network area division for a single line bearing multiple services**
MP2800 supports MPLS, L2TP and IPsec, which can be used to deploy VPN networks from Layer 2 to Layer 3. When branch offices are inter-connected by various lines, multiple services can be born on a single physical network to ensure the security and save cost.
- **Integrates routing, switching, security, voice, transmission, storage and wireless**
MP2800 integrates routing, switching, transmission, security, local storage and wireless. The series leads ways of edge routers - "Faster, more intelligent, more powerful". The inbuilt intelligent switch, firewall, VPN (including MPLS VPN, IPsec VPN and L2TP VPN), VoIP and transmission service modules construct a powerful intelligent platform for different service applications.
- **Supports secure access control and compatible with**

products of main manufacturers

MP2800 is configured with inbuilt 802.1X and firewall. The series provides access authentication of users and network devices in branch offices and supports ACL packet filtering, NAT, certification audit, routing verification, callback and refusing service protection. The router is the first in China to realize SNA, DLSw and LLC2 protocols. It is compatible with network devices of main manufacturers in the industry.

Technical Specifications

Item	Description					
Product configuration						
Product Model	Console Port	MIM slot(RM2)	MIM slot (RM3B)	VoIP Slot	USB	Ethernet interface
MP2804	1	4	0	0	1	2FE
MP2806	1	2	0	4	1	2FE
MP2816	1	2	0	4	1	2FE(WAN) + 24FE(LAN)
MP2818	1	8	0	0	1	2FE(WAN) + 24FE(LAN)
MP2824	1	4	2	0	1	4GE
Performance						
Processor	High-speed RISC processor					
Flash	MP2804/MP2806: 32Mbytes MP2816/MP2818: 64Mbytes MP2824: 64Mbytes, Expandable to 2GBbytes					
Memory	MP2804/MP2806/MP2816/MP2818: 128M/256Mbytes (optional) MP2824: 256M/512M/1024Mbytes (optional)					
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					
IP phone	H.323 protocol, H.225, H.245, RTP/RTCP, RTP condensation, T.38/T.30, G.711A/μ, G.729, G.729A/B, G.723.1 (5.3/6.3K),SIP					
QoS	FIFO, PQ, CQ, FQ, WFQ, CBWFQ, LLQ, RSVP, CAR, SPD, WRED, Traffic Shaping					
Physical indices						
Dimension (W x D x H)	MP2804/MP2806: 444mm × 320mm × 44.5mm MP2816/MP2818: 444mm × 320mm × 44.5mm MP2824: 444mm×380mm×89mm					
Weight	MP2804/MP2806/MP2816/MP2818 : 5.7 Kg (Maximum) MP2824: 12.5 Kg (Maximum)					
Power supply requirement						
Input voltage (AC)	100~240V, 50-60Hz					

Input voltage (DC)	-40~-57V, 4A
Power consumption	MP2804: 27W MP2806: 35W MP2816: 42W MP2818: 52W MP2824: 200W
Environment	
Operating temperature	0-40°C
Operating humidity	10-90%, Non-condensing

Order Information

Product model	Description
Chassis (mandatory)	
MP2804-AC	MP2804 router, 4 RM2 MIM slots, 2 10/100M Ethernet interfaces, one console port, one USB port, 32Mbytes flash, 128M/256Mbytes memory optional, AC power supply
MP2804-DC48	MP2804 router, 4 RM2 MIM slots, 2 10/100M Ethernet interfaces, one console port, one USB port, 32Mbytes flash, 128M/256Mbytes memory optional, DC power supply
MP2806-AC	MP2806 router, 2 RM2 MIM slots, 4 RM2 VoIP slots, 2 10/100M Ethernet interfaces, one console port, one USB port, 32Mbytes flash, 128M/256Mbytes memory optional, AC power supply
MP2806-DC48	MP2806 router, 2 RM2 MIM slots, 4 RM2 VoIP slots, 2 10/100M Ethernet interfaces, one console port, one USB port, 32Mbytes flash, 128M/256Mbytes memory optional, DC power supply
MP2816-24-AC	MP2816 router, 2 RM2 MIM slots, 4 RM2 VoIP slots, 2 10/100M WAN Ethernet interfaces + 24 10/100M LAN Ethernet interfaces, one console port, one USB port, 64Mbytes flash, 128M/256Mbytes memory optional, AC power supply
MP2816-24-DC48	MP2816 router, 2 RM2 MIM slots, 4 RM2 VoIP slots, 2 10/100M WAN Ethernet interfaces + 24 10/100M LAN Ethernet interfaces, one console port, one USB port, 64Mbytes flash, 128M/256Mbytes memory optional, DC power supply
MP2818-24-AC	MP2818 router, 8 RM2 MIM slots, 2 10/100M WAN Ethernet interfaces + 24 10/100M LAN Ethernet interfaces, one console port, one USB port, 64Mbytes flash, 128M/256Mbytes memory optional, AC power supply
MP2818-24-DC48	MP2818 router, 8 RM2 MIM slots, 2 10/100M WAN Ethernet interfaces + 24 10/100M LAN Ethernet interfaces, one console port, one USB port, 64Mbytes flash, 128M/256Mbytes memory optional, DC power supply
MP2824	MP2824 (fixed 4-port 10/100/1000M Ethernet port, 4 RM2 MIM slots, 2 RM3B MIM slots, 2 power supply slots, 1 Fan slot, one console port, 64Mbytes flash, one memory slot, one USB port, one CF card slot, 1 AIM encryption slot)
Fan Module only for MP2824 (mandatory)	
FAN-2A-01	FAN only for MP2824
Power Supply Module only for MP2824 (mandatory)	
AD150-1D002N	AC power supply module, each MP2824 chassis can support dual modules. (150W)
DD150-5D002N	DC power supply module, each MP2824 chassis can support dual modules. (150W)
AD100-1D002N	AC power supply module, each MP2824 chassis can support dual modules. (100W)

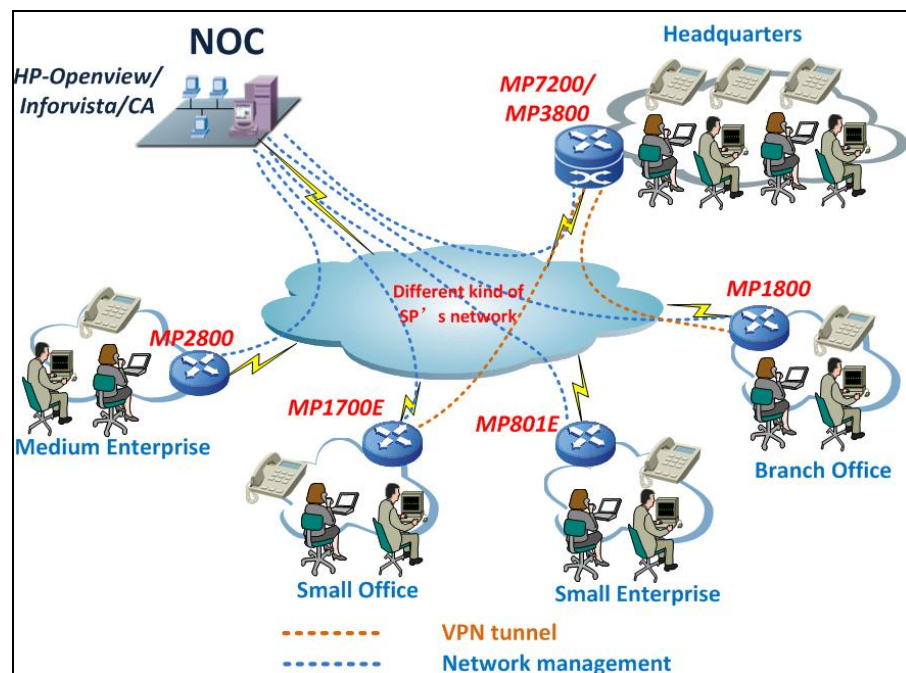
CF Card only for MP2824	
CF-2GB	2G CF card
USB card only for MP2824	
USB2-1GB	1G USB Storage
Memory (mandatory)	
SDR133-128SA	128Mbytes memory only for MP2804/MP2806/MP2816/MP2818
SDR133-256SA	256Mbytes memory only for MP2804/MP2806/MP2816/MP2818
DDR400-256S	256Mbytes memory only for MP2824
DDR400-512S	512Mbytes memory only for MP2824
DDR333-1024S	1024Mbytes memory only for MP2824
RM2 High-speed MIM module	
Module	Description
RM2-1ETE	One-port 10M Ethernet out-built module only for MP2804/MP2806/MP2816/MP2818
RM2-1SAE	One-port high-speed sync/async serial module
RM2-1M336	One-port 33.6Kbps frequency band MODEM module
RM2-1CE1	One-port channelized E1 module
RM2-1E1	One-port non-channelized E1 module
RM2-1U	One-port ISDN U module
RM2-1STA	One-port ISDN S/T module (Suits for RM2 MIM and VoIP slots)
RM2-8AX	Eight-port async serial module (Suits for RM2 MIM and VoIP slots)
RM2-1VOP	One-port FXS module (Suits for RM2 MIM and VoIP slots)
RM2-2VOP	Two-port FXS module (Suits for RM2 MIM and VoIP slots)
RM2-1VOS	One -port FXO module (Suits for RM2 MIM and VoIP slots)
RM2-2VOS	Two-port FXO module (Suits for RM2 MIM and VoIP slots)
RM3B High-speed MIM module only for MP2824	
RM3B-4SAH	Four-port synchronous/asynchronous serial-port module (support hot-swappable)
RM3B-4E1H	Four-port non-channelized E1 module (support hot-swappable, 75Ω BNC interface)
RM3B-4E1BH	Four-port non-channelized E1 module (support hot-swappable, 120ΩRJ45 interface)
RM3B-8E1H	Eight-port non-channelized E1 module (support hot-swappable, 75Ω BNC interface)
RM3B-8E1BH	Eight-port non-channelized E1 module (support hot-swappable, 120ΩRJ45 interface)
RM3B-4CE1H	Four-port channelized E1/ ISDN PRI module (support hot-swappable, 75Ω BNC interface)
RM3B-4CE1BH	Four-port channelized E1/ ISDN PRI module (support hot-swappable, 120ΩRJ45 interface)
RM3B-8CE1H	Eight-port channelized E1/ ISDN PRI module (support hot-swappable, 75Ω BNC interface)
RM3B-8CE1BH	Eight-port channelized E1/ ISDN PRI module (support hot-swappable, 120ΩRJ45 interface)
RM3B-4UH	Four-port ISDN U module
RM3B-1ATM-OC3AH	One-port 155M ATM module (155M SFP optical module is required,

	support hot-swappable)
RM3B-1POS-OC3H	One-port 155M POS module (155M SFP optical module is required, support hot-swappable)
RM3B-1CPOS-OC3H	One-port 155M CPOS module (155M SFP optical module is required, support hot-swappable)
RM3B-4M336H	Four-port frequency band modem module (support hot-swappable)
RM3B-24FETH	24-port 10/100M Ethernet module (support hot-swappable)
RM3B-4GET4GEFH	4-port Gigabit electric port + 4-port Gigabit optical interface (SFP module is required)
Encryption card for MP2824	
AIM2-SEC150	150Mbit/s IPSec Hardware encryption card only for MP2824(must be used with IPSec chip)
IPSec jack for MP2824	
IPSec	IPSec chip
SNA/IPSec jack for MP2804/MP2806/MP2816/MP2818	
RM-B-0001	IPSec chip
RM-B-0002	SNA chip
RM-B-0003	IPSec + SNA chip
SFP Optical module	
SFP-S2-L03P3	155M single mode optical module (transmission distance: 20km, LC interface, PECL interface level, wavelength: 1310nm), adopts to RM3B-1ATM-OC3AH, RM3B-1POS-OC3H, RM3B-1CPOS-OC3H
SFP-M2-L03P8	155M multi mode optical module (transmission distance - 2km, LC interface, PECL interface level, wavelength - 850nm), adopts to RM3B-1ATM-OC3AH, RM3B-1POS-OC3H, RM3B-1CPOS-OC3H
SFP-S2-L24P3	1.25G single mode optical module (transmission distance: 20km, LC interface, PECL interface level, wavelength: 1310nm), adopts to RM3B-4GET4GEFH
SFP-M1-L24P8	1.25G multi mode optical module (transmission distance - 550m, LC interface, PECL interface level, wavelength - 850nm), adopts to RM3B-4GET4GEFH

Typical Applications

Networking for Data Encryption of Branches

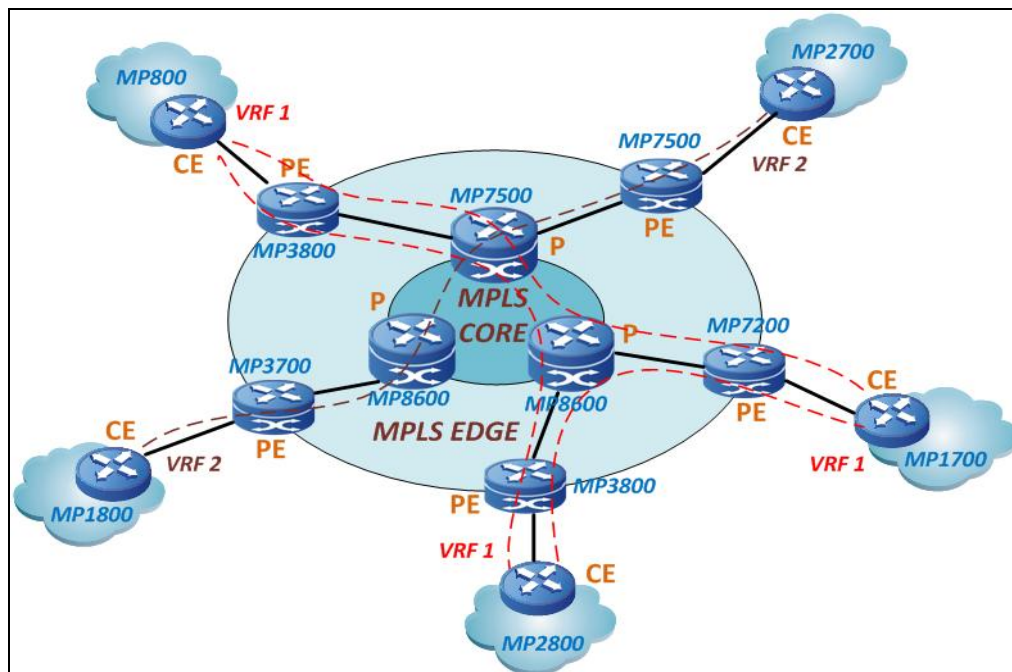
With the business expanding of the group company, the branches and small offices need to exchange information with the headquarters. The medium/low-end routers of Maipu serve as the access devices of the medium/small branches and can set up the security tunnel with the core router in the headquarters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