

Cisco 7500 Series Routers

Quick Look Guide

The Cisco 7500 Series Router is the premier Cisco high-end, multiprotocol platform, now with twice the performance and enhanced High Availability (HA) features. These systems combine proven Cisco software technology with exceptional reliability, availability, serviceability, and performance features to meet the requirements of today's most mission-critical internetworks. The Cisco 7500 Series Router provides service-provider and enterprise networks with the flexibility they need to meet the constantly changing requirements at the core and distribution points of the internetwork.

Key Features

- High-performance switching—This feature delivers high performance for mission-critical applications by supporting high-speed media and high-density configurations. Using the processing capabilities of the Versatile Interface Processors (VIP) and Cisco Express Forwarding (CEF), the Cisco 7500 Series Router system capacity can exceed two million packets per second.
- Full support for Cisco IOS[®] Software and enhancements for high-performance network services—The Cisco 7500 Series Router performs network services such as quality of service (QoS), and security, at high speed. VIP technology extends the performance of these services through distributed IP services.
- High port density—The Cisco 7500 Series Router provides high port density and an extensive range of LAN and WAN media. This feature dramatically reduces the cost per port and allows a flexible configuration.
- Unmatched interface flexibility—The Cisco 7500 Series supports a broad selection of interface processors (IPs) and port adapters (PAs).
- High Availability—Enhanced HA features and capabilities include redundant route processors, power supplies, and software fault isolation and fail-over capabilities.



Features and Benefits

Feature	Benefit
VIP-based Distributed Switching Architecture	Scales the performance linearly with number of VIPs
Doubled Switching and Forwarding Performance	Provides high-performance switching up to 2.2 mpps
LAN/WAN Interfaces	Lowers cost of ownership by consolidating interfaces in one platform
Most Complete Port Adapter Family	Increases customer's flexibility for various media access
Common PAs with 7200 and FlexWAN	Protects customer's investment
High Port Density (two PAs per VIP)	Reduces the cost per port and allows flexible configuration
Enhanced High Availability Features	Reduces customer's downtime and increases customer loyalty
Advanced IP Network Services	Brings customer new revenue stream by value-added services
Broad Customer Base	Provides market-proven performance, stability, reliability, and serviceability


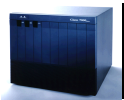

Cisco 7500 Series Router Distributed

Service	Features
Basic Switching	Cisco Express Forwarding
	IP fragmentation
	Fast EtherChannel Technology
Security	ACLs—extended and turbo
	IOS firewall
	Generic route encapsulation (GRE) tunnels
QoS	NBAR
	Traffic shaping (dTS)
	Policing (CAR)
	Congestion avoidance (dWRED)
	Guaranteed minimum bandwidth (dCBWFQ)
	Policy propagation via BGP
	Policy routing
Multiservice	Low-latency queuing
	FRF 11/12



Service	Features
	RTP header compression
	Multilink PPP with link fragmentation and interleaving
Accounting	Output accounting
	NetFlow export
	Precedence and MAC accounting
Load Balancing	CEF load balancing
	Multilink PPP
Caching	WCCP V1
Compression	Layer 2 SW and HW compression
Multicast	Multicast distributed switching

Chassis Specifications

			
Feature	Cisco 7505	Cisco 7507	Cisco 7513
Router/Chassis	1	1	1
Chassis/Rack	5	7	13
IP/VIP Slots	4	5	11
Bandwidth	1 Gbps	2 Gbps	2 Gbps
Max. RSPs	1	2	2
Max. Power Supplies	1	2	2
Dimensions (HxWxD)	10.5 x 17.5 x 17 in.	19.25 x 17.5 x 25 in.	33.75 x 17.5 x 22 in.



RSPs Specifications

Product	Optimal Switching (pps)	Packet Memory (SRAM)	Program Memory (DRAM)	Boot Flash	PCMCIA Card Flash
RSP16	530k	8 MB	128 MB (default)	16 MB	48 MB (default)
			256 MB		128 MB (option)
			512 MB		
			1-GB (option post FCS)		
RSP8	470+k	8 MB	64 MB (default)	16 MB	20 MB (default)
			128 MB		40 MB
			256 MB		
RSP4+	345k	2 MB	64 MB (default)	8 MB	16 MB (default)
			128 MB		20 MB
			256 MB		
RSP2	220k	2 MB	32 MB (default)	8 MB	16 MB (default)
			64 MB		20 MB
			128 MB		

VIPs Specifications

Product	Pkt. Fwd. (pps)	BW	Packet Memory	Program Memory
VIP6-80	~200,000	750+ MB	64 MB (default)	64 MB (default)
			128 MB	
			256 MB	
VIP4-80	~200,000	750+ MB	64 MB (default)	64 MB (default)
			128 MB	
			256 MB	
VIP4-50	~140,000	750+ MB	64 MB (default)	64 MB (default)
			128 MB	
			256 MB	
VIP2-50	~140,000	400 MB	4 MB (default)	32 MB (default)
			8 MB	64 MB
				128 MB



Product	Pkt. Fwd. (pps)	BW	Packet Memory	Program Memory
VIP2-40	~105,000	400 MB	2 MB (default)	32 MB (default)
				64 MB

Cisco 7500 Routers Port Adapters, Interface Processors, and Service Adapters

Part Number	Description
LAN PAs	
PA-4E	4-port Ethernet 10BASE-T PA
PA-8E	8-port Ethernet 10BASE-T PA
PA-FE-FX	1-port Fast Ethernet 100BASE-Fx PA
PA-FE-TX	1-port Fast Ethernet 100BASE-Tx PA
PA-2FEISL-FX	2-port Token Ring ISL 100BASE-Fx PA
PA-2FEISL-TX	2-port Token Ring ISL 100BASE-Tx PA
PA-2FE-TX	2-port Fast Ethernet 100BASE-Fx PA
PA-2FE-FX	2-port Fast Ethernet 100BASE-Tx PA
PA-5EFL	5-port Ethernet 10BASE-FL PA
PA-4R	4-port Token Ring 4/16 Mbps PA
PA-4R-DTR	4-port Dedicated Token Ring, 4/16 Mbps, HDX/FDX PA
PA-4R-FDX	4-port Token Ring 4/16 Mbps, Full Duplex PA
PA-F-MM	1-port FDDI multimode PA
PA-F-SM	1-port FDDI single-mode PA
PA-F/FD-MM	1-port FDDI Full Duplex multimode PA
PA-F/FD-SM	1-port FDDI Full Duplex single-mode PA
Serial PAs	
PA-4T+	4-port serial PA, enhanced
PA-8T-V35	8-port serial, V.35 PA
PA-8T-232	8-port serial, 232 PA
PA-8T-X21	8-port serial, X.21 PA
PA-4E1G/75	4-port E1 G.703 serial PA (75 ohm/Unbalanced)
PA-4E1G/120	4-port E1 G.703 serial PA (120 ohm/Balanced)
HSSI PAs	
PA-H	1-port HSSI PA



Part Number	Description
PA-2H	2-port HSSI PA
PA-T3	1-port T3 serial PA with T3 DSUs
PA-T3+	1-port T3 serial PA enhanced
PA-2T3	2-port T3 serial PA with T3 DSUs
PA-2T3+	2-port T3 serial PA enhanced
PA-E3	1-port E3 serial PA with E3 DSU
PA-2E3	2-port E3 serial PA with E3 DSUs
Multichannel and ISDN PAs	
PA-MC-2T1	2-port multichannel T1 PA with integrated CSU/DSUs
PA-MC-4T1	4-port multichannel T1 PA with integrated CSU/DSUs
PA-MC-8T1	8-port multichannel T1 PA with integrated CSU/DSUs
PA-MC-2E1/120	2-port multichannel E1 PA with G.703 120 ohm interface
PA-MC-8E1/120	8-port multichannel E1 PA with G.703 120 ohm interface
PA-MC-T3	1-port multichannel T3 PA
PA-MC-2T3+	2-port multichannel T3 PA, enhanced
PA-MC-E3	1-port multichannel E3 PA
ATM PAs	
PA-A1-OC3SM	1-port ATM OC-3 Single Mode Intermediate Reach PA
PA-A1-OC3MM	1-port ATM OC-3 Multimode PA
PA-A3-8E1IMA	8-port ATM Inverse Mux E1 (120 ohm) PA
PA-A3-8T1IMA	8-port ATM Inverse Mux T1 PA
PA-A3-E3	1-port ATM enhanced E3 PA
PA-A3-T3	1-port ATM enhanced DS3 PA
PA-A3-OC3MM	1-port ATM enhanced OC-3c/STM1 Multimode PA
PA-A3-OC3SMI	1-port ATM enhanced OC-3c/STM1 Single-mode (IR) PA
PA-A3-OC3SML	1-port ATM enhanced OC-3c/STM1 Single-mode (LR) PA
PA-A3-OC12MM	1-port ATM enhanced OC12/STM4 multimode
PA-A3-OC12SMI	1-port ATM enhanced OC12/STM4 single-mode intermediate reach
SONET PAs	
PA-POS-OC3MM	1-port Packet/SONET OC-3c/STM1 Multimode PA
PA-POS-OC3SMI	1-port Packet/SONET OC-3c/STM1 Single-mode (IR) PA
PA-POS-OC3SML	1-port Packet/SONET OC-3c/STM1 Single-mode (LR) PA

Part Number	Description
Digital Voice Trunk PAs	
PA-VXB-2TE1+	2-port T1/E1 moderate capacity enhanced voice PA
PA-VXC-2TE1+	2-port T1/E1 high capacity enhanced voice PA
DPT Interface Processors	
SRPIP-OC12MM	Dynamic Packet Transport Interface Processor, multimode
SRPIP-OC12SMI	Dynamic Packet Transport Interface Processor, single-mode, intermediate reach
SRPIP-OC12SML	Dynamic Packet Transport Interface Processor, single-mode, long reach
SRPIP-OC12SMX	Dynamic Packet Transport Interface Processor, single-mode, extended reach
GEIP Interface Processor	
GEIP	Gigabit Ethernet Interface Processor
GEIP+	Gigabit Ethernet Interface Processor, enhanced
Service Adapter	
SA-COMP/4	Service Adapter; Compression (256 VCs Stac)
SA-ENCRYPT	Encryption Service Adapter



Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: 31 0 20 357 1000
Fax: 31 0 20 357 1100

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
Capital Tower
168 Robinson Road
#22-01 to #29-01
Singapore 068912
www.cisco.com
Tel: +65 317 7777
Fax: +65 317 7799

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