

Cisco 7500 and Cisco 7200 Series Router OC-12c/STM-4 Dynamic Packet Transport Port Adapter

The PA-SRP-OC12 Dynamic Packet Transport (DPT) port adapter is a dual-width OC-12c/STM-4 port adapter that provides a shared IP over optical capability in Cisco 7500 Series Routers, Cisco 7200 Series Routers, Cisco uBR7246, Cisco uBR7246VXR, or Cisco 7200 VXR Series routers. The DPT port adapter provides two SC duplex ports. Each SC duplex port allows connection to an adjacent device in a DPT ring.

The DPT port adapter is designed to be deployed in SONET OC-12c/STM-4 DPT rings. DPT rings can also be connected to SONET add drop multiplexers (ADM)s, thus allowing for the creation of small or very large DPT rings. DPT is media independent, capable of operation over dark fiber, SONET/SDH gear, and WDM infrastructure.

Dynamic Packet Transport

DPT rings are dual, counter-rotating fiber rings. Both fibers are concurrently utilized to transport both data and control traffic as depicted in Figure 1.

DPT rings run on a variety of transport technologies including SONET/SDH, wavelength division multiplexing (WDM), and dark fiber. DPT provides carriers with the flexibility to operate packet rings over

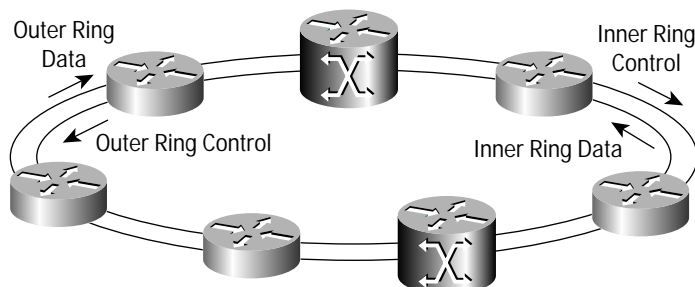
their embedded fiber transport infrastructure and provides an evolution path to packet-optimized transport for high-bandwidth IP networks. The DPT port adapter also provides the choice of multimode or single-mode intermediate reach, single-mode long and single-mode extended reach optics to meet application requirements.

Port Adapter Feature Summary

The DPT port adapter provides the following features:

- Accommodates large-scale network topology
- Leverages fiber-optic capacity at OC-12c/STM-4
- Controls the rate at which new packets are inserted on the media
- Allows data to obtain fair-shared access to the OC-12c/STM-4 rings
- Implements protection mechanisms, including wrap and unwrap in the event of fiber or node failure
- Supports both single-mode (SM) and multimode (MM) fiber transmissions
- Supports access to the SONET DCC channel

Figure 1
 Dynamic Packet Transport





Ordering Information

PA-SRP-OC12MM (multimode fiber)

PA-SRP-OC12SMI
(single-mode fiber, intermediate reach)

PA-SRP-OC12SML
(single-mode fiber, long reach)

PA-SRP-OC12SMX
(single-mode fiber, extended reach)

Minimum Cisco 7500 Hardware and Software Requirements

VIP4-50, VIP4-80, VIP6-80

12.0(21)S or higher

Regulatory Compliance

SONET/SDH

- Telcordia (Bellcore GR-253 as applicable)
- ITU-T G.957 as applicable
- ITU-T G.958 as applicable

SRP Versions 1.0 and 2.0

Safety

- UL 60950
- CSA C22.2, 60950
- EN60950
- IEC60950
- TS001

- AS/NZS3260
- 21 CFR 1040
- EN60825-2

Electromagnetic Emissions

- FCC (CFR 47) Part 15 Class A
- EN55022 Class B
- AS/NZS 3548 Class B
- VCCI Class B
- EN55024

Specifications

LEDs

- Enabled
- Pass-through
- Rx packets
- Rx Carrier
- Active

Physical

- Occupies two horizontally aligned adapter slots
- Width: 13.377 in.
- Depth: 5.596 in.
- Height of the front flange: .960 in.

Environmental

- Operating temperature: 32 to 104 F (0 to 40 C)
- Storage temperature: -4 to 149 F (-20 to 65 C)
- Relative humidity: 10% to 90%, noncondensing

Optics

Table 1 Optics Specifications

	MM-SR	SM-IR	SM-LR	SM-ER
Connector Type	SC duplex	SC duplex	SC duplex	SC duplex
Operating Wavelength	1270–1380 nm	1270–1380 nm	1270–1380 nm	1550 nm
Transmit Power	–14 dBm max –20 dBm min	–8 dBm max –15 dBm min	2 dBm max –3 dBm min	3 dBm max –2 dBm min
Receive Power	–14 dBm max –26 dBm min	–8 dBm max –28 dBm min	–8 dBm max –28 dBm min	–8 dBm max –28 dBm min
Worst-Case Reach	1640.4 ft (500 m)	9.3 mi (15 km)	24.8 mi (40 km)	50 mi (80 km)



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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