

Cisco 7200 Series High-Performance Channel Port Adapter

THE HIGH-PERFORMANCE ESCON CHANNEL PORT ADAPTER VERSION 4 (ECPA4) IS AN EXTENSION OF CISCO'S FAMILY OF CHANNEL-ATTACHED PRODUCTS. THE ECPA4 JOINS THE CHANNEL INTERFACE PROCESSOR (CIP), PARALLEL AND ESCON CHANNEL PORT ADAPTERS (CPAs), AND CHANNEL APPLICATIONS SOFTWARE—IP DATAGRAM, CISCO SNA (CSNA), TN3270 SERVER, AND TCP/IP OFFLOAD—TO MAKE THE MOST POWERFUL AND WIDE RANGING FAMILY OF CHANNEL-ATTACHED ROUTER PRODUCTS IN THE INDUSTRY. THE COMBINATION OF INCREASED MEMORY CAPACITY AND A MORE POWERFUL PROCESSOR GIVES THE ECPA4 THE BEST PRICE/PERFORMANCE RATIO AMONG ALL CHANNEL-ATTACHMENT SOLUTIONS.

Features

As customers implement larger networks, incorporating processor-intensive features such as Secure Sockets Layer (SSL) encryption for TN3270 sessions and Cisco MultiPath Channel Plus (CMPC+) for high-speed TCP/IP throughput, they have highlighted a need for a channel-attachment solution for the Cisco 7200 Series platform with more memory and processing power. The high-performance ECPA4 answers this need by providing the following features:

- Single-width port adapter for Cisco 7200 Series routers
- Support for up to five CPA modules per Cisco 7200 Series platform
- ESCON channel interface support
- Onboard 266-MHz MIPS RISC processor, 256 KB cache memory, 128 MB system DRAM
- IP Datagram, TCP/IP Offload, TN3270 Server, TCP Assist, CMPC, CMPC+, and CSNA software support

Figure 1 High-Performance ECPA4



Standard ESCON Interface

The ECPA4 uses standard channel technology from IBM to ensure compatibility with the mainframe. The ECPA4 actually implements the IBM ESCON chip set and microcode. Cisco has worked closely with IBM to ensure that the CPA is fully compatible with the IBM channel protocol standard.

Cisco 7200 Series Router Network Interfaces and Scalability

A critical benefit of the CPA is that it enables mainframe connectivity from a Cisco 7200 Series router. The Cisco 7200 Series platform supports a wide variety of LAN and WAN network interfaces, including Ethernet, Fast Ethernet, Token Ring, Fiber Distributed Data Interface (FDDI), High-Speed Serial Interface (HSSI), serial, Asynchronous Transfer Mode (ATM), T1/E1, and other interfaces—all of which are now available to the mainframe customer. And because the Cisco 7200 Series is optimized for high port density, a Cisco 7200 Series router and CPA solution is both scalable and cost effective.

Onboard Processing and Cache for High Performance

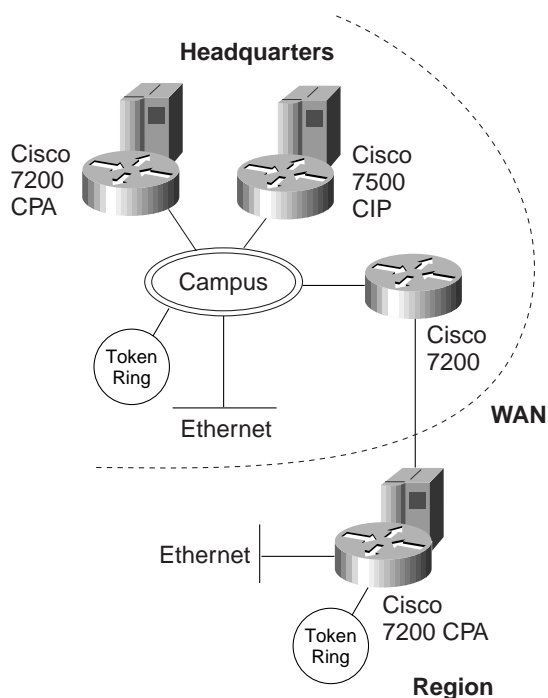
The ECPA4 supports an impressive array of onboard processing capabilities that enable high performance of the mainframe channel without impacting the overall Cisco 7200 Series router performance. The ECPA4 supports a 266-MHz RISC processor for high-throughput channel performance, 256 KB Level 2 cache for rapid access of application data, and 128 MB RAM to support an increased

number of user sessions and 64-bit Direct Memory Access (DMA) transfer capability to speed data in and out of the network.

Comprehensive SNA and IP Application Support

Cisco's ECPA4 supports the most comprehensive set of channel software applications in the industry. Customers have the flexibility to integrate both SNA and IP data over their mainframe channel. IP traffic is supported via Cisco's IP Datagram software using Common Link Access Workstation (CLAW) and the high-performance CMPC+ protocols. IP customers can also take advantage of TCP/IP Offload, TN3270 Server, and TCP Assist software on the ECPA4 to reduce the processing load on—and increase the efficiency of—the mainframe. SNA customers are fully supported via CSNA, CMPC, and CMPC+ for Enterprise Extender software. All CPA software applications are fully compatible with software applications running on Cisco's CIP platform.

Figure 2 Cisco 7200 Series Router-to-Mainframe Connectivity



Specifications

- Single-width port adapter with single ESCON channel attachment
- Protocol control information (PCI) interface to Cisco 7200 Series router
- 128 MB memory

- 17-Mbps ESCON mainframe channels
- Supports standard ESCON channel connections on IBM or plug-compatible mainframes
- System components and processors
 - 266-MHz MIPS RISC processor
 - 256 KB Level 2 cache memory
 - 128 MB system DRAM
 - IBM bit-slice engine
- Support for a wide range of software applications
 - IP Datagram
 - CSNA
 - TCP/IP Offload
 - TN3270 Server
 - CMPC
 - CMPC+
 - TCP Assist
- LED status indicators for the ESCON channel
 - *Enabled*—The ECPA4 has been enabled for operation by the system
 - *Present*—The ESCON channel has been detected by the ECPA4
 - *Loaded*—The ECPA4 firmware has been completely loaded
 - *Signal*—The Sync signal for the ESCON channel has been detected
 - *Online*—An establish-logical-path request has been received from the channel (for the ESCON channel)
- Cisco 7200 Series network interfaces
 - Ethernet
 - Fast Ethernet
 - Ethernet Switch
 - 100VG-AnyLAN
 - Token Ring (half and full duplex)
 - FDDI
 - Serial
 - ATM (single and multimode)
 - ATM CES
 - HSSI
 - Channelized T1/E1
 - T3/E3
 - Basic Rate Interface (BRI)
 - Compression Service Adapter
 - Encryption Service Adapter
 - Packet over Synchronous Optical Network (SONET)

- Network management
 - Simple Network Management Protocol (SNMP)
 - Channel Management Information Base (MIB)
 - CiscoWorks
 - CiscoWorks Blue Internetwork Status Monitor
- Physical specifications
 - Single-width port adapter available on Cisco 7200 Series router
 - 1 x 7 x 6 in (H x W x D)



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