

## Cisco 7200VXR Series Port Adapter Jacket Card

### General

**Q. What is the Cisco® 7200VXR Series Port Adapter Jacket Card?**

**A.** It is a carrier card that holds a single (selected) port or service adapter that fits into the I/O controller slot of the Cisco 7204VXR and 7206VXR chassis (Figure 1). By taking advantage of the dedicated PCI bus that connects the I/O controller slot to the Cisco 7200VXR Series NPE-G1 and NPE-G2 Network Processing Engines, the Cisco 7204VXR and 7206VXR chassis can increase their slot capacity by one. Although the Port Adapter Jacket Card provides only one more slot, the addition of 600 bandwidth points increases the overall PCI bus capacity by 50 percent, providing up to 1800 bandwidth points for port adapters.

**Figure 1.** Cisco 7200VXR Series Port Adapter Jacket Card



**Q. What are the benefits of using the Port Adapter Jacket Card?**

**A.** Using it provides a cost-efficient way to transparently increase the port and slot capacity of the existing Cisco 7204VXR and 7206VXR chassis with minimal operational impact. The extra port adapter slot allows users to rearrange the chassis to the most optimal configuration that yields the highest number of usable port adapter slots without "oversubscribing" the PCI bandwidth point limit of 600 points per side (the odd-numbered slots and the even-numbered slots).

**Q. Does the Port Adapter Jacket Card replace the Cisco 7200 Series I/O Controller Cards?**

**A.** No. The Port Adapter Jacket Card provides no function other than the ability to install one additional (selected) port or service adapter into the Cisco 7200VXR chassis. Because both, the Cisco NPE-G1 and NPE-G2, provide the same I/O functions that Cisco 7200 Series I/O Controllers do, installing an I/O controller is no longer necessary. Consequently, a Port Adapter Jacket Card can be installed in the I/O controller slot when either network processing engine is used.

**Q. Which network processing engine supports the Port Adapter Jacket Card?**

**A.** The Port Adapter Jacket Card is supported by two network processing engines, the NPE-G1 and NPE-G2.

**Q. Why can I not use the Port Adapter Jacket Card with other network processing engines than the NPE-G1 and NPE-G2?**

**A.** NPE-G1 and NPE-G2 network processing engines provide a dedicated PCI bus for the I/O controller slot, and the increase of the 600 bandwidth points comes directly from the availability of this bus. On systems with other network processing engines (for example, NPE-

225 and NPE-400), the I/O controller slot shares the same PCI bus as the odd-numbered port adapter slots.

**Q. Where can I find the product specifications of the Port Adapter Jacket Card?**

**A.** Product specifications can be found in the data sheet at:

[http://www.cisco.com/en/US/products/hw/routers/ps341/products\\_data\\_sheet0900aecd804419c6.html](http://www.cisco.com/en/US/products/hw/routers/ps341/products_data_sheet0900aecd804419c6.html)

**Port and Service Adapter Support**

**Q. Which port and service adapters can be used with the Port Adapter Jacket Card?**

**A.** Supported port adapters differ slightly between the two network processing engines. Following are the part numbers for the supported port and services adapters in combination with the respective network processing engines:

- Cisco NPE-G1: PA-POS-2OC3, PA-MC-STM1-MM, PA-MC-STM1-SMI, PA-MC-2T3+, SA-VAM2, and SA-VAM2+
- Cisco NPE-G2: PA-POS-2OC3, PA-MC-STM1-MM, PA-MC-STM1-SMI, PA-MC-2T3+, and SA-VAM2+
- Cisco NPE-G1 and NPE-G2 additionally support: PA-A3-T3, PA-A3-E3, PA-A3-OC3MM, PA-A3-OC3SMI, PA-A3-OC3SML, PA-A6-T3, PA-A6-E3, PA-A6-OC3MM, PA-A6-OC3SMI, PA-A6-OC3SML

**Note:** The Cisco Service Adapter VPN Accelerator Module 2 (part number SA-VAM2) is not supported on the Port Adapter Jacket Card in combination with the Cisco NPE-G2.

**Q. How much additional port and slot density does the Port Adapter Jacket Card provide?**

**A.** Using the Port Adapter Jacket Card is most advantageous in systems with a high-bandwidth point port and service adapters such as the VAM2 and VAM2+ service adapters and the OC-3 Packet over SONET/SDH (PoS) port adapter (part numbers SA-VAM2, SA-VAM2+, and PA-POS-2OC3). Each of these three port adapters has 600 bandwidth points, which is the maximum allocation for each PCI bus. Without using the Port Adapter Jacket Card, you cannot use two other port adapter slots on the same side on which any one of these port adapters is installed without "oversubscribing" the PCI bus. However, if you install one of these port adapters with the jacket card in the I/O controller slot, 3 port adapter slots become available for use, providing a net gain of 3 slots.

**Q. What features are supported on the (selected) port/service port adapter installed in the Port Adapter Jacket Card?**

**A.** The Port Adapter Jacket Card itself adds no features. Exactly the same set of features is supported on the port adapter installed with the Port Adapter Jacket Card.

**Q. In what release did the ATM port adapters begin support in the Jacket Card?**

**A.** The PA-A3 and PA-A6 family of enhanced ATM port adapters are supported by the NPE-G1 and NPE-G2 as of 12.4(15)T1 and 12.2(31)SB8.

**Q. Are there any plans to support other port or service adapters in the future?**

**A.** Yes. The third phase of support will include other high-bandwidth point and widely used port adapters such as the 2-port Fast Ethernet port adapters (PA-2FE-TX and PA-2FE-FX).

**Q. Will Multichannel (MIX)-enabled port adapters be supported in the future?**

**A.** No. MIX-enabled port adapters such as the 2-port T1/E1 MIX-enabled port adapter (part number PA-MCX-2TE1) require a connection to the system time-division multiplexing (TDM) bus, and the I/O controller slot does not provide a connection to the this bus.

**Q. Does the Port Adapter Jacket Card increase the performance of a port or service adapter?**

**A.** Although in some cases there may be a slight performance increase, generally a port or service adapter installed with the Port Adapter Jacket Card offers nearly the same performance as the same port or service adapter installed in a port adapter slot offers.

**Q. What is the bandwidth point limit of the PCI bus on which the Port Adapter Jacket Card is installed?**

**A.** It has 600 points. Because only a single port/service port adapter can be installed with the jacket card, users cannot "oversubscribe" the PCI bus.

**Q. Does the Port Adapter Jacket Card support online insertion and removal (OIR)?**

**A.** Although the port adapter installed in the Port Adapter Jacket Card supports OIR, the Port Adapter Jacket Card itself does not. When removing or inserting the Port Adapter Jacket Card, the system must be turned off first.

**Q. What is the interface and slot designator of the port/service adapter installed in the Port Adapter Jacket Card?**

**A.** The port/service adapter installed with jacket cards carry the designator of "7." For example, ports on the 2-port OC-3 PoS port (part number PA-POS-2OC3) are displayed as "POS7/0" and "POS7/1." However, the Port Adapter Jacket Card itself carries the designator of "0" because it is installed in the I/O controller slot.

**Q. Is a Cisco 7200VXR chassis installed with the security module (part number SA-VAM2 or SA-VAM2+) in the Port Adapter Jacket Card compliant with Federal Information Processing Standards (FIPS)?**

**A.** Yes. A system installed with either of these security modules in a Port Adapter Jacket Card is FIPS-compliant.

**Cisco IOS Software Support****Q. What is the minimum required Cisco IOS<sup>®</sup> Software release and feature set that supports the Port Adapter Jacket Card?**

**A.** The Port Adapter Jacket Card requires, as a minimum, Cisco IOS Software Release 12.4(7), 12.4(6)T1, or 12.4(4)XD and 12.2(28)SB for the NPE-G1 and 12.2(31)SB for the NPE-G2. The Port Adapter Jacket Card is supported with the respective feature sets that support the Cisco NPE-G1 and NPE-G2 and the respective port and service adapters. The PA-A3 and PA-A6 family of enhanced ATM port adapters are supported by the NPE-G1 and NPE-G2 as of 12.4(15)T1 and 12.2(31)SB8

**Note:** With reference to Cisco IOS Software Release 12.4(6)T, support for the Port Adapter Jacket Card is offered as of the first rebuild of Cisco IOS Software Release 12.4(6)T, i.e. 12.4(6)T1.

**Ordering Information****Q. What is the product part number of the Port Adapter Jacket Card?**

**A.** Two product part numbers are associated with the Port Adapter Jacket Card:

- C7200-JC-PA: System part number to configure the Port Adapter Jacket Card with a Cisco 7200 VXR chassis.
- C7200-JC-PA=: Spare part number to order the Port Adapter Jacket Card as a spare.

**Note:** When a Cisco 7200VXR chassis is configured with the Port Adapter Jacket Card, a different size packaging is used. If you need to order this packaging as a spare, the part number is C7200-PKG-JC=.

**For More Information**

For more information about the Cisco 7200 Series, visit either the external Cisco Website <http://www.cisco.com/go/7200> or contact your local Cisco Systems® account representative.



**Americas Headquarters**  
Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
[www.cisco.com](http://www.cisco.com)  
Tel: 408 526-4000  
800 553-NETS (6387)  
Fax: 408 527-0883

**Asia Pacific Headquarters**  
Cisco Systems (USA) Pte. Ltd.  
168 Robinson Road  
#28-01 Capital Tower  
Singapore 068912  
[www.cisco.com](http://www.cisco.com)  
Tel: +65 6317 7777  
Fax: +65 6317 7799

**Europe Headquarters**  
Cisco Systems International BV  
Haarlerbergpark  
Haarlerbergweg 13-19  
1101 CH Amsterdam  
The Netherlands  
[www-europe.cisco.com](http://www-europe.cisco.com)  
Tel: +31 0 800 020 0791  
Fax: +31 0 20 357 1100

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