

Cisco 7304 2-Port OC-3 ATM Line Card

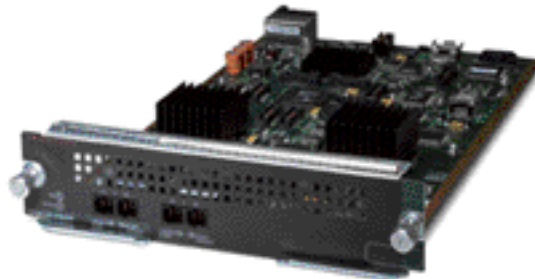
Product Overview

The Cisco® 7304 2-Port OC-3/STM-1 ATM Line Card (Figure 1) is a versatile, high-performance line card that is well suited for a variety of applications. These applications include high-speed WAN uplinks in customer premises equipment (CPE) deployments, high-speed enterprise backbones, and high-speed uplinks for deploying the Cisco 7304 Router as a medium-density, medium-speed, edge-aggregation router in Tier 2 and 3 service provider points of presence (POPs).

Developed for customers that need a combination of performance and deployment flexibility, the Cisco 7304 Router meets current and future requirements for a midrange router. The Cisco 7304 Router delivers high-performance forwarding and hardware-accelerated services in a compact four-rack-unit (4-RU), four-interface slot form factor.

Figure 1

Cisco 7304 2-Port OC-3 ATM Line Card



Powerful and flexible, the Cisco 7304 Router provides multiprotocol support, interface granularity, and high-availability features in a platform that is ideal for deployment in various applications such as high-end enterprise routing, medium-speed and medium-density leased-line aggregation in service provider Tier 2 and 3 POPs, and service provider-managed CPE deployments. Providing WAN connectivity at speeds ranging from DS3 through OC-48/STM-16, and LAN connectivity at speeds up to Gigabit Ethernet (using two 1000 Ethernet ports built into the Cisco NSE-100 route processor), the Cisco 7304 Router supports a wide range of concurrently running applications and lives up to the high standards of the Cisco 7000 Series of midrange routers.

Table 1 lists the features and benefits of the Cisco 7304 2-Port OC-3 ATM Line Card.

Table 1. Features and Benefits

| Features | Benefits |
|--|---|
| Two ports of OC-3 ATM per line card | Enables connectivity options for both enterprise and service provider customers |
| Up to 155.52 Mbps per port | Provides high-performance routing and connectivity |
| Online Insertion and Removal (OIR) | Allows for insertion of the card without rebooting the router |
| Multiprotocol Encapsulation over ATM Adaptation Layer (AAL)5 and classical IP over ATM | Allows flexibility to choose the protocol that best suits customers' needs |
| 2048 virtual circuits per port | Offers high scalability to meet the needs of service providers |

Product Specifications

Line Card

- Full-duplex ATM interface
- Unspecified bit rate (UBR) and non-real-time variable bit rate (VBR-nrt) service classes
- OIR
- 16 virtual channel identifier (VCI)/8 virtual path identifier (VPI) bits
- Support for 16- and 32-bit cyclic redundancy checks (CRCs)
- Synchronous Payload Envelope (SPE) scrambling
- 2048 active connections per port, 4096 active virtual circuits per board
- Per-virtual circuit and per-virtual path traffic shaping
- Classical IP and Address Resolution Protocol (ARP) over ATM (RFC 1577)
- Multiprotocol Encapsulation over AAL5 (RFC 1483)
- AAL5, F4/F5 operations, administration, and maintenance (OAM) cells
- User-Network Interface (UNI) 3.0, 3.1, and 4.0, Integrated Local Management Interface (ILMI) 3.0

Table 2 lists the optical specifications for the Cisco 7304 2-Port OC-3 ATM Line Card.

Table 2. Optical Specifications

| Fiber Interface | Transmit Power | | Wavelength | | Input Power | Input Sensitivity | Loss Budgets | Nominal Distance |
|--|----------------|---------|------------|---------|-------------|-------------------|--------------|------------------|
| Multimode (MM) | -20 dBm | -14 dBm | 1280 nm | 1335 nm | -8 dBm | -23 dBm | 0 to 7 dB | 1.2 mi (2 km) |
| Single mode-intermediate reach (SM-IR) | -15 dBm | -8 dBm | 1280 nm | 1335 nm | -8 dBm | -28 dBm | 0 to 12 dB | 9 mi (15 km) |

Tables 3–5 list the environmental specifications, physical specifications, and line card indicators for the Cisco 7304 2-Port OC-3 ATM Line Card.

Table 3. Environmental Conditions

| Cisco 7304 2-Port OC-3/STM-1 ATM Line Card | |
|--|-----------------------------|
| Operating temperature | 32° to 104°F (0° to 40°C) |
| Storage temperature | –4° to 149°F (–20° to 65°C) |
| Operating humidity | 5 to 90% (noncondensing) |
| Altitude | –500 to 6500 ft |

Performance

- Two ports of OC-3 ATM at 155.52-Mbps full duplex

MIBs

- See Cisco NSE-100 data sheet for more MIB support

Table 4. Physical Specifications

| Cisco 7304 2-Port OC-3/STM-1 ATM Line Card | |
|--|-----------------------------------|
| Height | 1.92 in. (4.87 cm) |
| Width | 8.44 in. (21.43 cm) |
| Depth | 12.94 in. (32.87 cm) |
| Weight | 3.0 lb (1.36 kg) |
| Mean time between failure (MTBF) | 5.5 year for system configuration |

Table 5. Line Card Indicators

| LED Label | Color | State | Function |
|-----------------|--------------|--------|---|
| Status | Green/Yellow | Green | Indicates line card is online |
| | | Yellow | Indicates line card bootstrapping is in progress |
| | | Off | Indicates line card is offline and deactivated |
| OIR | Green | On | Indicates line card is ready to be removed in command-line interface (CLI)-controlled OIR |
| | | Off | Indicates line card is online |
| Carrier/alarm | Green/Yellow | Green | Indicates that a valid SONET ¹ signal has been detected with no alarm conditions |
| | | Yellow | Indicates that an alarm condition is present |
| | | Off | Indicates that no valid SONET signal has been detected |
| Active/Loopback | Green/Yellow | Green | Indicates that the port has been configured and is enabled |
| | | Yellow | Indicates that the port is in diagnostic loopback mode |
| | | Off | Indicates that the port has not been configured |

1. Synchronous

Product Regulatory Compliance

Products bear CE marking, indicating compliance with the 89/366/EEC and 73/23/ECC directives, which include the following safety and EMC standards:

Safety

- UL 60950
- CSA C22.2
- EN60950
- IEC 60950
- TS 001
- AS/NZS 3260

EMC

- FCC Part 15 (CFR 47) Class A
- ICES-003 Class A
- EN55022 Class A
- CISPR 22 Class A
- AS/NZS 3548 Class A
- VCCI Class A
- EN55024
- EN50082-1
- ETS300386

Industry EMC, Safety, and Environmental Standards

- GR-63-Core NEBS Level 3 Requirement
- GR-1089-Core NEBS Level 3 Requirement
- ETS 300-019 Storage Class 1.1
- ETS 300-019 Transportation Class 2.3
- ETS 300-019 Stationary Use Class 3.1

Ordering Information

To order, visit http://www.cisco.com/public/ordering_info.shtml.

Table 6 provides ordering information for the Cisco 7304 2-Port OC-3 ATM Line Card.

Table 6. Ordering Information

| Product Number | Product Description |
|-------------------|---|
| 7300-2OC3ATM-MM | 2-port OC-3 ATM line card for Cisco 7304 Router, MM |
| 7300-2OC3ATM-MM= | 2-port OC-3 ATM line card for Cisco 7304 Router, MM, spare |
| 7300-2OC3ATM-SMI | 2-port OC-3 ATM line card for Cisco 7304 Router, SM-IR |
| 7300-2OC3ATM-SMI= | 2-port OC-3 ATM line card for Cisco 7304 Router, SM-IR, spare |



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For More Information

For more information about the Cisco 7304 routers, visit <http://www.cisco.com/en/US/products/hw/routers/ps352/index.html> or contact your local Cisco account representative.

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