



## Cabling the Optical (ATM) Line Cards

This chapter provides information on physical interfaces and instructions for installing the cables on the Optical Line Card (OLC2).

This chapter includes the following sections:

- [Optical \(ATM\) Line Card Interfaces, page 1](#)
- [Cabling the Optical SFP Interface, page 3](#)

## Optical (ATM) Line Card Interfaces

The OLC2 has four optical fiber interfaces (ports) that support IP or Broadband-SS7 over ATM (Asynchronous Transfer Mode). These ports connect our SGSN products via IuPS interfaces to other elements in the packet data network.

The type of optical fiber interface on the line card is dictated by the Small Form-factor Pluggable (SFP) transceiver modules installed on the line card. The OLC2 supports two versions of SFP modules. SFP modules are hot-pluggable.

**Table 1: SFP Modules Supported by the OLC2 Optical (ATM) Line Card**

Module Type	Card Identification	Interface Type	Cable Specifications
Single-mode Optical Fiber	ATM/POS OC-3 SM IR-1	Single-mode Fiber, LC duplex female connector	<p><b>Fiber Types:</b> Single-mode optical fiber</p> <p><b>Wavelength:</b> 1310 nm</p> <p><b>Core Size:</b> 9 micrometers</p> <p><b>Cladding Diameter:</b> 125 micrometers</p> <p><b>Range:</b> Intermediate/21 kilometers</p> <p><b>Attenuation:</b> 0.25 dB/KM</p> <p><b>Min/Max Tx Power:</b> -15 dBm/-8 dBm</p> <p><b>Rx Sensitivity:</b> -28 dBm</p>

Module Type	Card Identification	Interface Type	Cable Specifications
Multi-mode Optical Fiber	ATM/POS OC-3 Multi-Mode	Multi-mode Fiber, LC duplex female connector	<b>Fiber Types:</b> Multi-mode optical fiber <b>Wavelength:</b> 1310 nm <b>Core Size:</b> 62.5 micrometers <b>Cladding Diameter:</b> 125 micrometers <b>Range:</b> Short/2 kilometers <b>Min/Max Tx Power:</b> -19 dBm/-14 dBm <b>Rx Sensitivity:</b> -30 dBm

**Important**

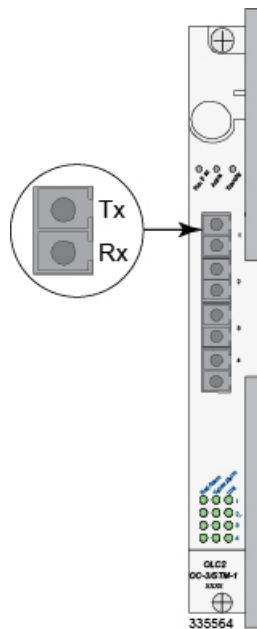
The SFP interface is only certified to work with SFP transceiver modules purchased from Cisco for use with the OLC2.

**Important**

Because of the optical SFP interface, this product has been tested and found to comply with the limits for Class 1 laser devices for IEC825, EN60825, and 21CFR1040 specifications.

The following figure shows the optical interface, labelled ATM/POS OC-3, for the optical (ATM) line card. Each SFP fiber interface is equipped with a transmit (TX) port and a receive (RX) port.

**Figure 1: OLC-Optical (ATM) Line Card Fiber Interfaces**



# Cabling the Optical SFP Interface

To use the optical SFP interfaces on the OLC2 (ATM), follow the instructions below.



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**Important**

Be sure to label the interface cables with their destination prior to connecting them to the OLC/OLC2. This will assure proper reconnection should the card need to be serviced.

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Only trained and qualified personnel should install, replace, or service this equipment.

Invisible laser radiation may be emitted from the aperture of the port when no cable is connected. Avoid exposure to laser radiation and do not look into open apertures. **Be sure to keep the cover on the interface when it is not in use.**

Laser Klasse 1 - nur speziell ausgebildetes Personal darf dieses Geraet warten.

Nicht in den Laser schauen, um Augenverletzungen zu vermeiden.

Nicht genutzte Buchsen mit der entsprechenden Kappe verschliessen.

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- Step 1** To ensure full connectivity, use your thumb to firmly press the SFP transceiver module into its socket on the front panel of the card.
- Step 2** Remove the cover from the SFP interface.
- Step 3** Inspect and clean the connector's fiber-optic end-faces.
- Step 4** Insert the optical cable from a network device into the interface and ensure that it is securely in place.
- Step 5** Repeat step 1 through step 4 to connect a fiber-optic cable to other ports.
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