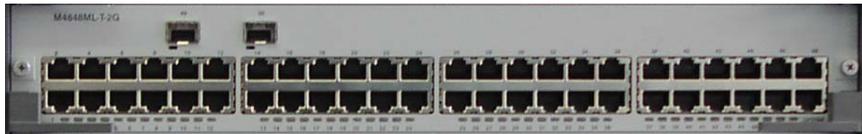


# Avaya™ M4648ML-T-2G Installation Guide

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The Avaya M4648ML-T-2G is a 48 10/100BASE-T + 2 GBIC (SFP) port multilayer I/O module for the Avaya™ C460 switch

*Figure 1 M4648ML-T-2G Front Panel*



## Safety Information



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**Caution:** The Avaya C460 switch and modules contain components sensitive to electrostatic discharge. Do not touch the circuit boards unless instructed to do so.

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**Caution:** Do not leave any slots open. Use the blanking plates supplied to cover empty slots.

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**Caution:** Do not insert any objects into the C460 chassis other than specifically designed Avaya products.

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**Warning:** Keep your fingers and other objects clear of the fan module. The fans are on whenever the power is on in the chassis.

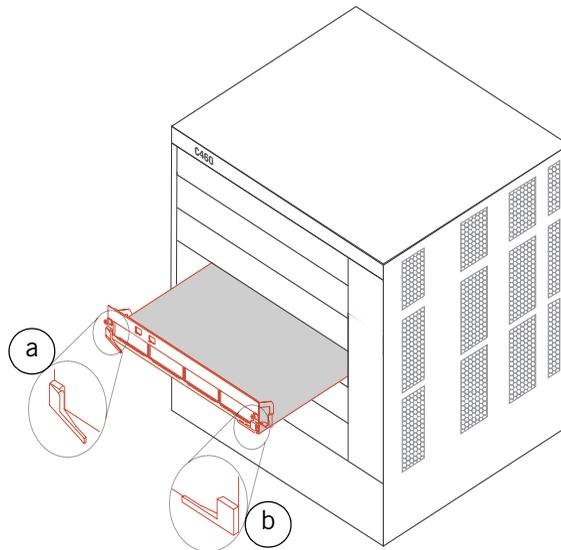
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## Installing the Module in the Avaya C460

① You can install I/O modules in slots 3 to 6 only.

Figure 2 Installing C460 I/O Modules



### Key

- a Open locking handle
- b Closed locking handle

- 1 Remove the existing module or blanking plate (see "Removing the Module from the Avaya C460")
- 2 Open the locking handles at the edge of the front panel.
- 3 Position the module in the slot with the module name towards the top left-hand side of the module.
- 4 Gently slide the module in.
- ① Ensure the hooks on the locking handle are aligned with the matching holes on the chassis.
- 5 Close the locking handles.
- ▶ The module slides back and connects to the backplane.
- 6 Gently tighten the screws.

## Removing the Module from the Avaya C460

- 1 Loosen the screws.
- 2 Open the locking handles.
- ▶ The module is disconnected from the backplane and slides forward.
- 3 Grasp the handles and pull gently but firmly towards yourself.
- 4 Insert another module or a blanking plate.

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# Specifications

## Safety Information

The multimode and single-mode GBIC transceivers are Class 1 Laser products. They comply with EN 60825-1 and Food and Drug Administration (FDA) 21 CFR 1040.10 and 1040.11.

The GBIC transceivers must be operated under recommended operating conditions.

### Laser Classification

CLASS 1  
LASER PRODUCT

- ① Class 1 lasers are inherently safe under reasonably foreseeable conditions of operation.



**Caution:** The use of optical instruments with this product will increase eye hazard.

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## Usage Restriction

When a GBIC transceiver is inserted into the M4648ML-T-2G Module but is not in use, then the Tx and Rx ports should be protected with an optical connector or a dust plug.

## Avaya Approved GBIC Transceivers



**Caution:** All Avaya approved GBICs are 3.3 V. Do not insert a 5 V GBIC.

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Avaya supplies the following two GBIC transceivers. You can order these directly from your local Avaya representative using the PEC or COM Codes:

Type	Description	PEC Code
SX Transceiver	Multimode Fiber 1000BASE-SX (550 m)	4705-150
LX Transceiver	Single-mode Fiber 1000BASE-LX (10 km)	4705-151

In addition, Avaya has tested and approved a number of GBIC transceivers from other manufacturers for use with this Module.

An up-to-date list can be found in Avaya's website at the following address:  
[avaya.com/support](http://avaya.com/support)

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### LX GBIC Transceiver

You can connect a 9 mm or 10 mm single-mode fiber (SMF) cable to a 1000BASE-LX GBIC port. The maximum length is 10 km (32,808 ft.).

You can connect a 50 mm or 62.5 mm multimode (MMF) fiber cable to a 1000BASE-LX GBIC port. The maximum length is 550 m (1,804 ft.) for 50 mm and 62.5 mm cable.

The LX transceiver has a Wavelength of 1300 nm, Transmission Rate of 1.25 Gbps and Input Power of 3.3 V.

### SX GBIC Transceiver

You can connect a 50  $\mu$ m or 62.5  $\mu$ m multimode (MMF) fiber cable to a 1000BASE-SX GBIC port. The maximum length is 500 m (1,640 ft.) for 50  $\mu$ m cable and 220 m (722 ft.) for 62.5  $\mu$ m cable.

The SX transceiver has a Wavelength of 850 nm, Transmission Rate of 1.25 Gbps and Input Power of 3.3 V.

### Agency Approval

The transceivers comply with:

- EMC Emission: US – FCC Part 15, Subpart B, Class A;  
Europe – EN55022 class A
- Immunity: EN50082-1
- Safety: UL for US UL 1950 Std., C-UL (UL for Canada) C22.2 No.950 Std., Food and Drug Administration (FDA) 21 CFR 1040.10 and 1040.11, and CE for Europe EN60950 Std. Complies with EN 60825-1.

### Power Requirement

70 W

### Interfaces

- 2 x GBIC SFP
- 48 x 10/100BASE-T ports (RJ-45)

### Ordering Information

Product	Material Code
Avaya M4648ML-T-2G	700255037

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