



Installing ONS 15454 SDH MIC-C/T/P Cards

Product Name: 15454E-CTP-MIC48V= (Version for -48 V DC supply)

This document contains a description of MIC-C/T/P card features, installation procedures, removal instructions, and technical specifications. Use this document in conjunction with the *Cisco ONS 15454 SDH Installation and Operations Guide* and the *Cisco ONS 15454 SDH Troubleshooting and Reference Guide* when working with MIC-C/T/P cards.

This document contains the following sections:

- [“MIC-C/T/P Front Mount Electrical Connection Card Description” section on page 1](#)
- [“MIC-C/T/P Card Specifications” section on page 3](#)
- [“Installation Procedures” section on page 4](#)
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This document contains the following procedures:

[“Installation Procedures” procedure on page 4](#)

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[“Removal Procedures” procedure on page 6](#)



Note

For information about circuits and card capacities, see the *Cisco ONS 15454 SDH Installation and Operations Guide*.

MIC-C/T/P Front Mount Electrical Connection Card Description

The MIC-C/T/P card ([Figure 1](#)) provides connection for one of the two possible redundant power supply inputs. It also provides connection for system management serial port, system management LAN port, modem port (for future use), and system timing inputs and outputs. Its position is in slot 24 in the center of the ONS 15454 SDH subrack EFCA area.



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Note

Cisco does not recommend nor support operating the ONS 15454 SDH with only one of the MIC-A/P respectively MIC-C/T/P cards. Besides missing power supply redundancy, additional functions of the other card would be missing. To safeguard your system, always operate in a redundant configuration.

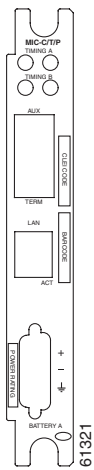


Note

For proper system operation, both the MIC-A/P card and the MIC-C/T/P card must be installed in the shelf.

Figure 1 shows the MIC-C/T/P faceplate. Figure 2 shows the block diagram.

Figure 1 MIC-C/T/P faceplate

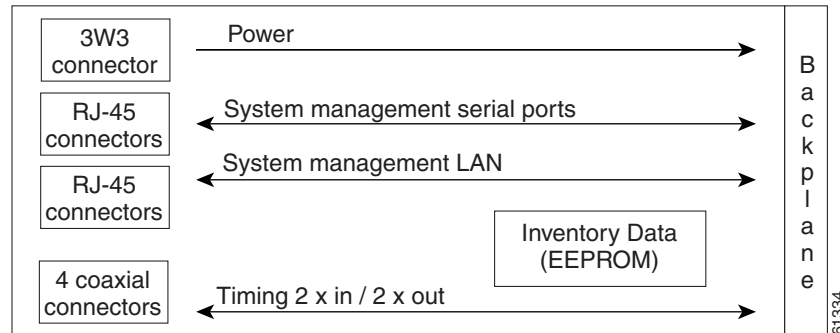


Install the MIC-C/T/P card in slot 24 in the EFCA (Electrical Facility Connector Assy) on the ONS 15454 SDH.

The following list summarizes MIC-C/T/P card features:

- Connection for one of the two possible redundant power supply inputs
- Connection for two serial ports for local craft / modem (for future use)
- Connection for the LAN port
- Connection for two system timing inputs
- Connection for two system timing outputs
- Storage of manufacturing and inventory data

Figure 2 MIC-C/T/P block diagram



MIC-C/T/P Card-Level Indicators

The MIC-C/T/P card has a pair of LEDs, located on the RJ45 LAN connector. The green LED is illuminated when a link is present, and the yellow LED is illuminated when data is being transferred.

MIC-C/T/P Card Specifications

- MIC-C/T/P Power Supply Input
 - System Supply Voltage: Nominal -48 V DC
Tolerance limits: - 40.5 to - 57.0 V DC
 - Connector: 3WK3 Combo-D Power Cable Connector
- MIC-C/T/P Timing Inputs
 - Frequency: 2.048 MHz \pm 10 ppm
 - Signal Level: 0.75 to 1.5 V
 - Impedance: 75 ohms \pm 5% (switchable by jumper to high impedance > 3 k ohms)
(120 ohms Impedance, balanced, possible with external matching cable)
 - Cable Attenuation: up to 6 dB @ 2 MHz
 - Connectors: 1.0/2.3 miniature coax connector
- MIC-C/T/P Timing Outputs
 - Frequency: 2.048 MHz \pm 10 ppm
 - Signal Level: 0.75 to 1.5 V
 - Impedance: 75 ohms \pm 5%
(120 ohms Impedance, balanced, possible with external matching cable)
 - Pulse Mask: ITU-T G.703 Figure 20
 - Connectors: 1.0/2.3 miniature coax connector
- MIC-C/T/P System Management Serial Port Interfaces:
 - System management serial port Craft interface

- (modem port for future use)
- Connectors: 8-pin RJ-45
- MIC-C/T/P System Management LAN Port Interface:
 - Signal: 802.3 10 BaseT
 - Connectors: 8-pin RJ-45
- Environmental
 - Operating Temperature: -5 to +45 degrees Celsius
 - Operating Humidity: 5 - 95%, non-condensing
 - Power Consumption: 0.4 W, (provided by +5V from TCC-I), 1.37 BTU/Hr.
- Dimensions
 - Height: 182 mm, (7.165 in.)
 - Width: 32 mm, (1.25 in.)
 - Depth: 92 mm, (3.62 in.)
 - Depth with backplane connector: 98 mm, (3.87 in.)
 - Weight not including clam shell: 0.2 kg (0.5 lbs.)
- Compliance

ONS 15454 SDH cards, when installed in a system, comply with these standards:

- Safety: IEC 60950, EN 60950, UL 60950, CSA C22.2 No. 60950, TS 001, AS/NZS 3260

Installation Procedures

Use this section if you are installing or removing the MIC-C/T/P card for the first time. After you become familiar with ONS 15454 SDH card installation and boot up, use this section as a reference.



Caution

Always use the supplied electrostatic discharge (ESD) wristband when working with an ONS 15454 SDH. Plug the wristband cable into the ESD jack located on the lower right outside edge of the shelf assembly and ensure the shelf assembly is properly grounded.



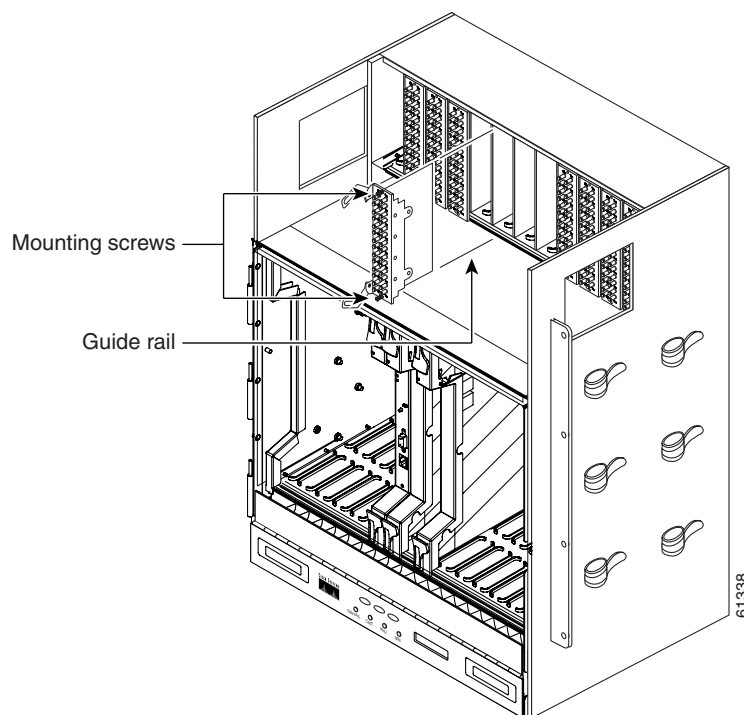
Caution

Hazardous voltage or energy may be present on the backplane when the system is operating. Use caution when servicing.

-
- Step 1** Carefully insert the card into the rails of slot 24 ([Figure 3 on page 5](#)).
 - Step 2** Move the upper ejector down and the lower ejector up to enable the card being inserted into the backplane connectors.
 - Step 3** Gently push the card into the connector on the back plane.
 - Step 4** Tighten the front mounting screws with a Phillips or slot screwdriver.
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MIC-C/T/P cards have electrical plugs that plug into electrical connectors on the shelf assembly backplane. When the ejectors are fully closed and the mounting screws are tightened, the card plugs into the shelf assembly backplane. [Figure 3 on page 5](#) shows general card installation. Connecting the power cable is described in Chapter 1 “Installation” of the *Cisco ONS 15454 SDH Installation and Operations Guide*.

Figure 3 Installing an FMEC card in an ONS 15454 SDH



Card Turn Up

Follow the steps in this section to verify card turn up. If one or more of the Cisco Transport Controller (CTC) software screen conditions according to [“Verify Successful Turn Up of the MIC-C/T/P Card” section on page 5](#) are not met, re-install the card. Replace the unit if the faulty state persists.

Verify Successful Turn Up of the MIC-C/T/P Card

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- Step 1** Verify that power is applied to the shelf assembly.
 - Step 2** Verify that the MIC-C/T/P card has been installed in slot 24.
 - Step 3** Verify that the card appears in slot 24 on the CTC software screen.
 - Step 4** Verify that the card is white on the CTC software screen.

Step 5 Verify that the card is shown in Inventory on the CTC software screen.

Removal Procedures

Use this section if you are installing or removing the MIC-C/T/P card for the first time. After you become familiar with ONS 15454 SDH card installation and boot up, use this section as a reference.



Caution

Always use the supplied electrostatic discharge (ESD) wristband when working with an ONS 15454 SDH. Plug the wristband cable into the ESD jack located on the lower right outside edge of the shelf assembly and ensure the shelf assembly is properly grounded.



Caution

Hazardous voltage or energy may be present on the backplane when the system is operating. Use caution when servicing.

Step 1

If there is traffic on the system, make sure that the redundant power supply input on the MIC-A/P card is properly powered.



Note

Failure to do so will result in loss of traffic.



Caution

To avoid risk of burn, turn off the power source circuit breaker before disconnecting the power cable.

Step 2

Disconnect all the cable connectors from the MIC-C/T/P card to be removed. Do not forget to mark all the connectors or cables for correct reinstallation afterwards.



Note

To disconnect the coaxial cable from the FMEC, first pull the outer ring of the connector, then pull the connector. Pulling the cable without first having pulled the outer ring of the connector to release its locking can result in damage to the cable or the connector or both.

Step 3

Loosen the front mounting screws ([Figure 3 on page 5](#)).

Step 4

Move the upper ejector up and the lower ejector down to extract the card from the backplane connectors.

Step 5

Carefully remove the card from the shelf.

Related Documentation

- DOC-7813038= *Cisco ONS 15454 SDH Installation and Operations Guide*
- DOC-7813037= *Cisco ONS 15454 SDH Troubleshooting and Reference Guide*

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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