Model GS7000 Hub/Node Local Control Module to Status Monitor Upgrade Instructions

Introduction

The Model GS7000 Node, Hub Node, and Optical Hub can be optionally equipped with a either a Status Monitor (SM) or a Local Control Module (LCM). For complete instructions on installing and operating the SM/LCM refer to *Model GS7000 Hub/Node Status Monitor/Local Control Module Installation and Operation Guide*, part number 4030703.

A Local Control Module can be field upgraded to a Status Monitor through the addition of a transponder core module. The transponder core module plugs directly onto the Local Control Module's main PWB. The mechanical housing for the Status Monitor and the Local Control Module are the same.

This document explains the LCM to SM field upgrade procedure.

The Status Monitor Upgrade Kit, part number 4025881, contains the following items:

- Transponder core module (1)
- Plastic stand-offs (2)
- Upgrade instructions (1)

Status Monitor/Local Control Module Description

Local Control Module Description

The local control module locally monitors the following node voltages and signals:

- Receiver optical input level (all receivers)
- Transmitter optical output level (all transmitters)
- AC power presence and peak voltage (for split AC powering cases, AC power from both sides of node housing is monitored)
- DC voltages from both primary and redundant power supplies
- Optical amplifier operating parameters
- Optical switch operating parameters

The local control module communicates serially with the RF amplifier module to control the optional forward band redundancy switches on the forward configuration module. It is a low-cost module that plugs into the status monitor connectors on the optical interface board.

The local control module is equipped with a USB port to allow local control of the optional forward band redundancy switches, the reverse band 6 dB (wink) attenuators, the reverse band on/off switches, the optical switch, and optical amplifiers through the PC-based GS7000 ViewPort software. All parameters monitored by the local control module can be displayed and reviewed using ViewPort.



Note: The local control module can be upgraded to a status monitor through the addition of a transponder core module. The transponder core module plugs directly onto the local control module's PWB. The mechanical housing for the status monitor and the local control module are the same. The Heart Beat, Receive, and Error indicator LEDs are only present if the transponder module is installed.

Status Monitor Description

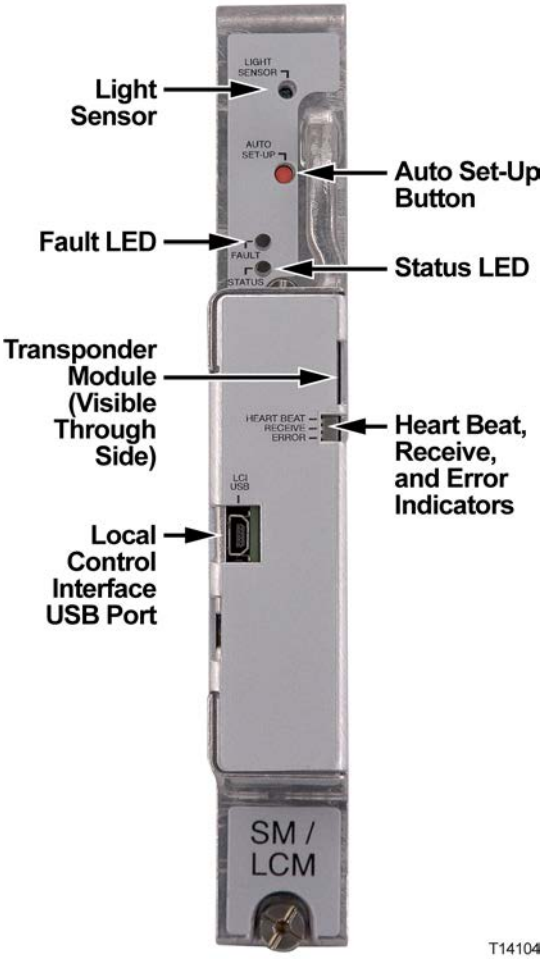
The status monitor is HMS compliant and provides node monitoring and control capability at the cable plant's headend. The following node voltages and signals are monitored and their status reported to the headend by the status monitor.

- Receiver optical input level (all receivers)
- Transmitter optical output level (all transmitters)
- AC power presence and peak voltage (for split AC powering cases, AC power from both sides of node housing is monitored)
- DC voltages from both primary and redundant power supplies
- Optical amplifier operating parameters

- Optical switch operating parameters

Commands are sent from the headend to the status monitor. The status monitor communicates serially with the RF amplifier module to control the optional forward band redundancy switches on the forward configuration module, the reverse band 6 dB (wink) attenuators on the reverse amplifier PWB, and the reverse band on/off switches on the reverse amplifier PWB.

Note: Configuration parameters for the transponder core module, such as IP address, can be changed using the PC-based GS7000 ViewPort software.

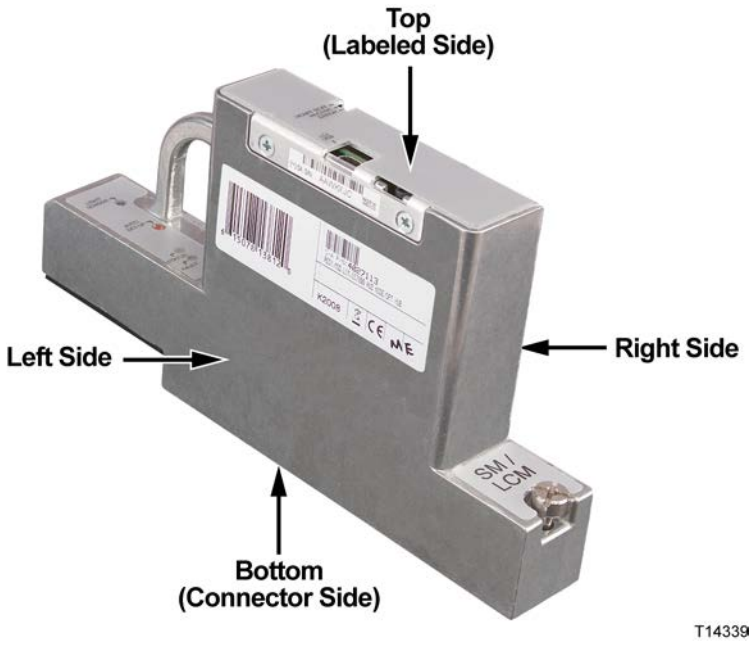


Note: The transponder core module can be seen through the Heart Beat/Receive/Error indicator cutout in the cover.

LCM to SM Upgrade Procedure

Upgrading the LCM to an SM

These upgrade instructions refer to the various sides of the LCM by the names shown in the following illustration.



Complete the following steps to upgrade the Local Control Module to a Status Monitor.

CAUTION:

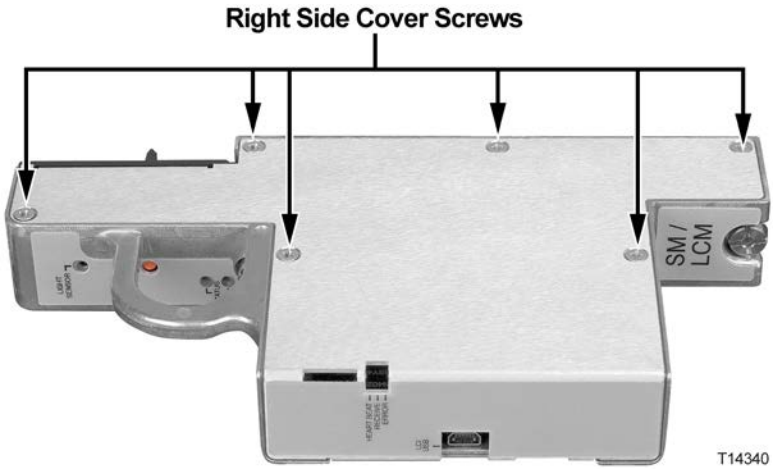
To prevent electrostatic damage to electronic equipment, take ESD precautions, including the use of an ESD wrist strap.

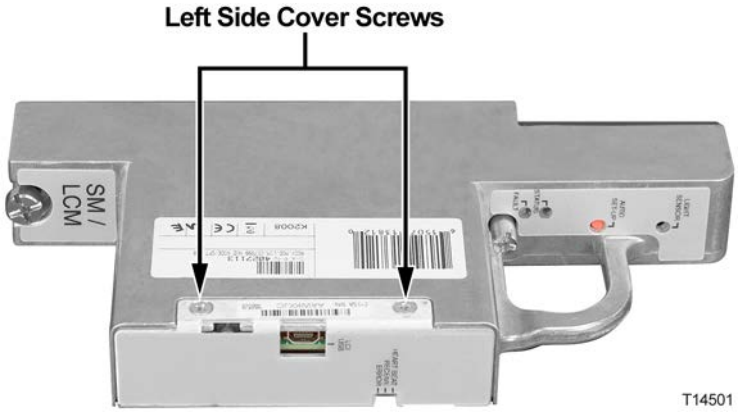
1 Open the node, hub node, or optical hub housing and remove the Local Control Module.

Note: Follow the instructions in the product's Installation and Operation Guide.

2 Remove the eight screws that hold the cover on the LCM housing.

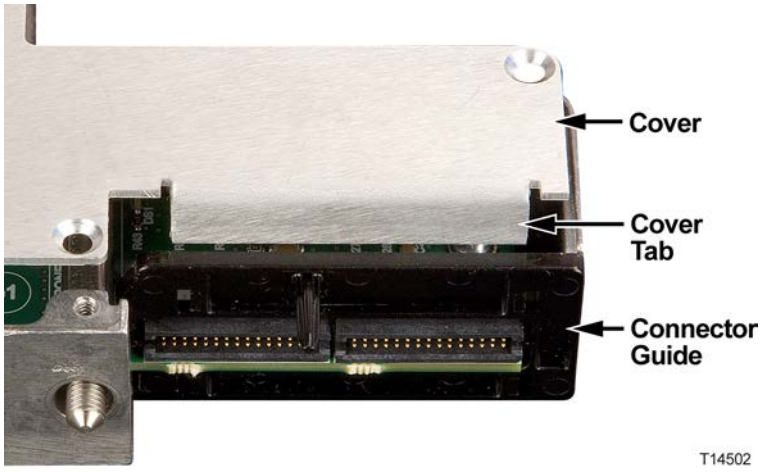
Note: Six screws are on the right side and two screws are on the left side, as shown in the following illustrations.





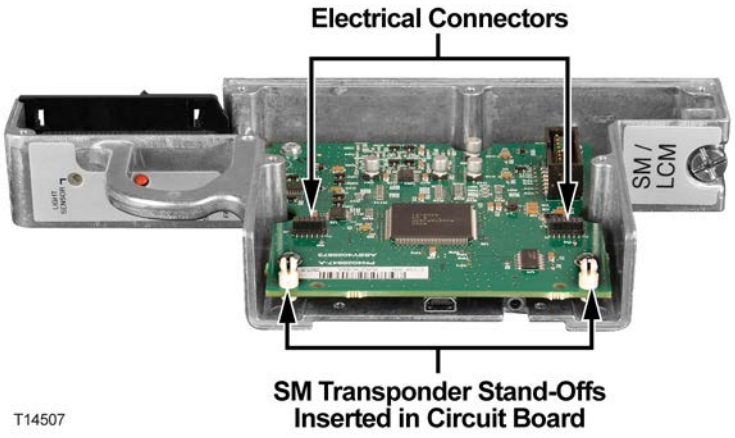
3 Remove the cover as follows:

a Tilt the bottom (connector side) of the cover up about 1/2 inch until the cover's metal tab clears the plastic connector guide as shown in the following illustration.

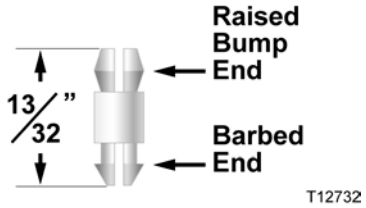


b Slide the cover toward the top (labeled side) of the housing and remove it.

4 Insert the two plastic stand-offs into the mounting holes in the main board as shown in the following illustration. See the following note first!

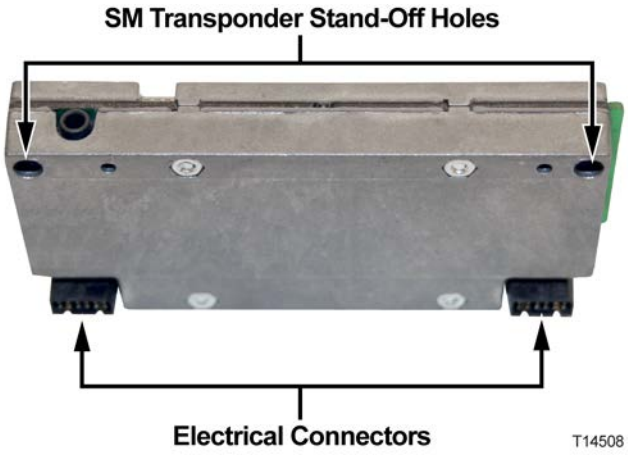


Note: The plastic stand-offs have two different shaped ends. One end has a barbed arrow head, while the other end has a raised bump. Be sure to insert the barbed end of the stand-offs into the main board.



5 Install the SM transponder module as follows:

a Note the locations of the electrical connectors and plastic stand-offs on the main board as shown in the illustration in step 4, and on the transponder module as shown in the following illustration.



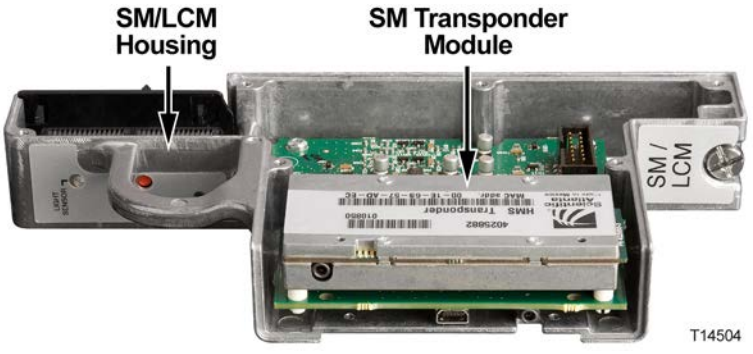
b Set the module in place by positioning the two electrical connectors on the bottom of the transponder module onto the two main board electrical connectors, making sure the connectors mate.

Note: The back edge of the module will drop down into place slightly when the electrical connectors are properly aligned.

c Make sure that the two plastic stand-offs are partially inserted into the two mating holes in the bottom of the transponder module at this point.

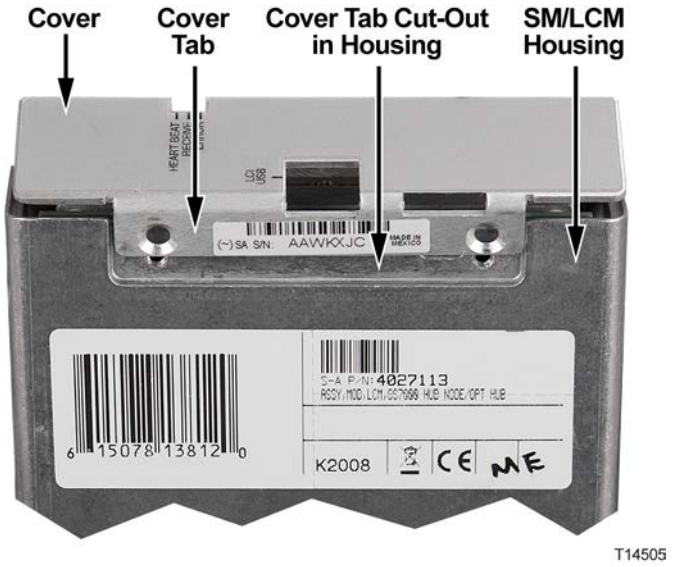
d Push down on the two corners of the transponder module directly over the electrical connectors to snap the connectors into place.

Result: The SM transponder module is installed on the main board as shown in the following illustration.

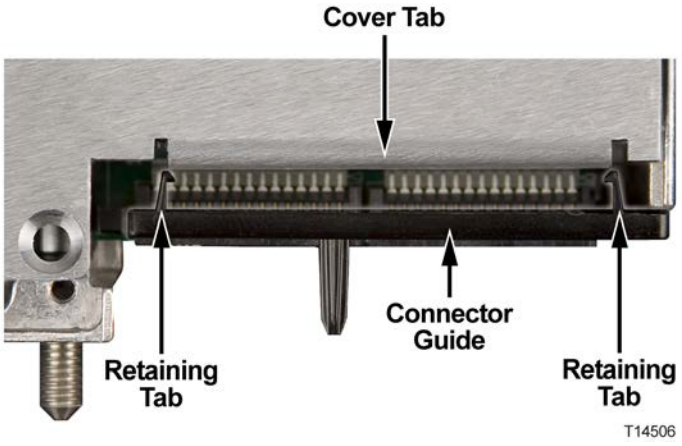


6 Re-install the cover as follows:

a Place the metal tab on the top left side of the cover in the matching cut-out for the tab on the housing as shown in the following illustration.



b Tilt the bottom (connector side) of the cover down and insert the cover's metal tab into the two small retaining tabs on the back of the plastic connector guide as shown in the following illustration.



7 Re-install the eight screws that were removed during step 2 to secure the cover on the housing.

Result: The Local Control Module is upgraded to a Status Monitor.

8 Install the Status Monitor in the node, hub node, or optical hub and close the housing.

Note: Follow the instructions in the *Model GS7000 Hub/Node Status Monitor/Local Control Module Installation and Operation Guide*, part number 4030703.

For Information

If You Have Questions

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.



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