

iConverter STM-1 Coax to Fiber Media Converter Standalone User Manual

Product Overview

The *iConverter* STM-1 coax to fiber media converter converts 155.52 Mbps STM-1e coax to STM-1 fiber.

The coax port provides two mini-BNC 75Ω coax connectors that comply with the ITU-T G.703 and Telcordia GR-253 standards for CMI coded 155.52 Mbps electrical interfaces.

Installation Procedure

- 1) Configure DIP-switches
- 2) Install Standalone Module and Connect Cables
- 2) Verify Operation

1) CONFIGURE DIP-SWITCHES

SW1 - LINK SEGMENT / LINK PROPAGATE “LS / LP”

This DIP-switch has no effect. The LS function of this DIP-switch has been disabled to enhance compatibility with third-party fiber optic devices. The STM-1 media converter operates in LP mode.

SW2 - REMOTE FAULT DETECT “Norm / RFD”

When the DIP-switch is in the “RFD” position, the module is configured for Remote Fault Detection. When the DIP-switch is in the “Norm” position (factory setting), Remote Fault Detection is disabled and operates in LP mode.

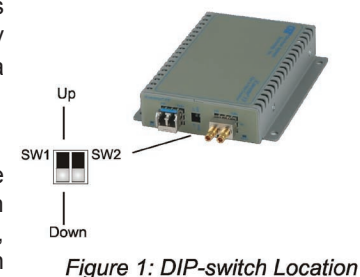
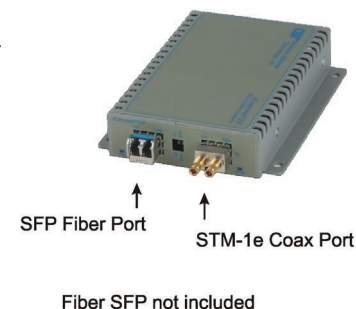
LINK MODES

Link Propagate (LP)

The LP mode transmits a link signal only when a link signal is detected. Utilizing this configuration, a loss of a receive link signal will continue to propagate forward to the next port in the network. Figure 2(a), on the following page, indicates a loss of link on the fiber port. This fault condition is ‘propagated’ forward causing the coax port to drop its link due to the propagated fault. This setting allows the loss of a link to be detected by SNMP or other managed network devices.

Remote Fault Detect (RFD)

The RFD mode transmits a link signal only when a link signal is detected. When a loss of link is detected, this mode will perform both a loop back and propagate forward. Figure 2(b), indicates a loss of Rx fiber. The fault is looped back in the opposite direction causing the port on the other media converter to lose its fiber link. It also propagates the fault forward toward the coax port causing the coax port to lose its link. Because the other unit is configured for Link Propagate, the loss of fiber link causes the coax port to drop its link due to the propagated fault condition.



Note: It is not permitted to set both media converters to any RFD mode. A lockup condition will occur.

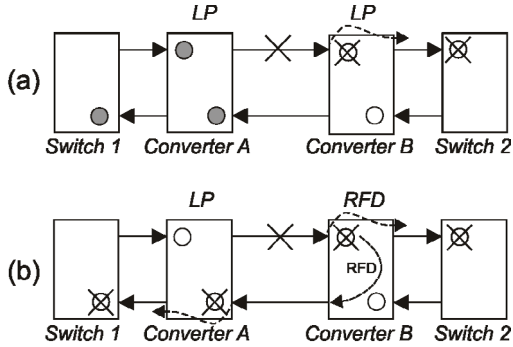


Figure 2: Link Modes

For detailed information on the operation of the different Link Modes, download the application note “iConverter Link Modes” available on Omnitron’s web page:

http://www.omnitron-systems.com/downloads_iconverter.php

2) INSTALL STANDALONE MODULE AND CONNECT CABLES

- a. The STM-1 converter is available in tabletop and wall-mount models. For wall-mounting, attach the STM-1 converter to a wall, backboard or other flat surface. For tabletop installations, place the unit on a flat level surface. Attach the rubber feet to the bottom of the STM-1 converter to prevent the unit from sliding. Make sure the unit is placed in a safe, dry and secure location.

To power the unit using the AC/DC adapter, connect the AC/DC adapter to an AC outlet. Then connect the barrel plug at the end of the wire on the AC/DC adapter to the 2.5mm DC barrel connector (center-positive) on the unit. Confirm that the unit has powered up properly by checking the power status LED located on the front of the unit.

To power the unit using a DC power source, prepare a power cable using a two conductor insulated wire (not supplied) with a 14 AWG gauge minimum. Cut the power cable to the length required. Strip approximately 3/8 of an inch of insulation from the power cable wires. Connect the power cables to the unit by fastening the stripped ends to the DC power connector.

Connect the power wires to the DC power source. The Power LED should indicate the presence of power.

WARNING: Note the wire colors used in making the positive and negative connections. Use the same color assignment for the connection at the DC power source.

NOTE: If mounting with a safety ground attachment, use the safety ground screw at the rear of the unit.
- b. Insert the 155Mbps OC-3 SFP into Port 1 SFP receptacle on the STM-1 converter.

NOTE: The release latch of the fiber transceiver must be in the closed position before insertion.
- c. The STM-1e interface on the converter utilizes mini BNC connectors. When connecting to full size BNC connectors use the supplied adapter cables.

- d. Connect an appropriate multimode or single-mode fiber cable to the fiber transceiver port on the STM-1 converter. It is important to ensure that the transmit (Tx) is attached to the receive side of the device at the other end and the receive (Rx) is attached to the transmit side.

WARNING: Do not attempt to remove the STM-1e device from the module. This will cause damage to the module and the STM-1e device.

3) VERIFY OPERATION

Once the module has been installed and configured per steps 1 and 2, verify the module is operational by viewing the LED indicators.

Legend	Color	OFF State	ON State
Pwr	Amber	No power applied	Unit is powered
P1 Lk	Green	Port is not linked	Port is linked
P2 Lk	Green	Port is not linked	Port is linked

Table 3: LED Indicators