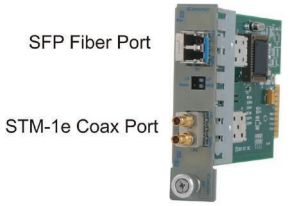
Omnitron Systems Technology, Inc.

iConverter STM 1 Coax to Fiber Media Converter Plug-In 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.



Fiber SFP not included

Installation Procedure

1) Configure DIP-switches

2) Install Module in Chassis 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.

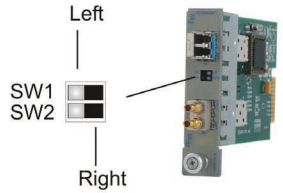


Figure 1: DIP-switch Location

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.

Form 040-8899S-002A 6/09

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

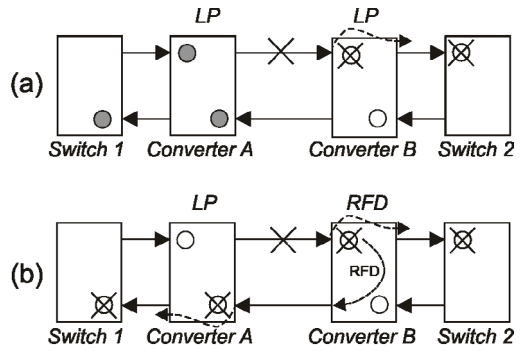

Figure 2: Link Modes

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 MODULE IN CHASSIS AND CONNECT CABLES

a. Carefully slide the module into an open slot in the chassis. Align the module with the installation guides and ensure that the module is firmly seated against the backplane. Secure the module by fastening the front panel thumbscrew (push in and turn clockwise to tighten) to the chassis front. Verify the "Pwr" LED is ON (indicating the chassis is powered).

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 SFP port on 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