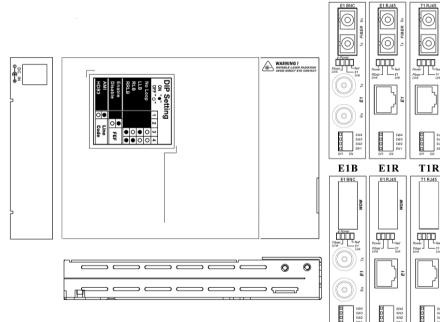
Installation Instructions for DCEFIB1-E1R/E1B/T1R E1/T1 to Fiber Converter Family

Description

The FIB1 Family are standalone fiber media converters available in a number of different models that also act as line cards for placement in the FRM301 Platform Media Converter Chassis. The FIB1-E1 is a fiber media transport for G.703 E1 transmission. The BNC model provides unbalanced 75 Ohm coaxial connections while the RJ-45 model provides balanced 120 Ohm connections over twisted pair wiring. The FIB1-T1 is a fiber media transport for G.703 T1 transmission and features an RJ-45 connector for connection to 100 Ohm twisted pair wiring.

All media converters are available with either multi-mode or single-mode optical transceivers and with connectors for SC, ST, or FC. In single mode, WDM (Wave Division Multiplexing with SC connector) is also available in 20 or 40KM reach which provides the ability to transmit and receive data using only a single optical fiber.

When the FIB1-E1 or T1 card is placed in the FRM301 rack with SNMP management, the card status, type, version, fiber link status, E1 or T1 link status and alarms can all be displayed. Configuration is also available to enable or disable the port, reset the port, do far end fault setting, and initiate local or far end loopback tests.



Front Panel DIP Switch Setting

For use in standalone application (not used when inserted into FRM301)

		SW4
		SW3
		SW2
		SW1
OFF	ON	

witch #1 Line ode Setting	ON – AMI		OFF – E1 – HDB3 – T1 – B8ZS	
witch #2 FEF unction Setting	ON – ON		OFF - OFF	
witch #3 & #4 oopback function etting	#3 ON	#3 ON	#3 OFF	#3 OFF
	#4 ON	#4 OFF	#4 ON	#4 OFF
	RRLB	LLB	RLB	All Off

Specifications

Standard

E1:ITU-T G.703, G.704, G.706, G.732, G.823 T1:ITU-T G.703, G.704, AT&T TR-62411, ANSI T1.403

Twisted-Pair Copper Cable

Attenuation : 2.6dB/100meters @1.0 MHz

RJ-45 Pin Assignment

RRing

RTip

TRing

TTip

Twisted-pair connection required two active pairs. The two active pairs in a E1/T1 network are pins 1 & 2 and Pins 4 & 5. Use only dedicated wire pairs for the active pins.

Category 3 or better twisted-pair copper wire is required. Either shielded twisted-pair (STP) or unshielded twisted- pair (UTP) can be used. The thicker the gauge, the longer the transmission distance.

T1

1

2

4

5

Environment

Gauge:24 ~ 22 AWG Attenuation : 2.6dB/100meters @1.0 MHz Differential Characteristic Impedance : 100 ohm +/- 10% E1 Gauge:24 ~ 22 AWG

Differential Characteristic Impedance : 120 or 75 ohm +/- 10%

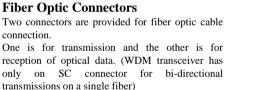
Temperature : 0°C - 70°C Humidity 10-90% non condensing

Dimension

122.6mm x 85.6mm x 20mm $(\mathbf{H} \mathbf{x} \mathbf{W} \mathbf{x} \mathbf{D})$

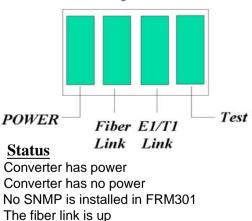
Power

+9V /1A maximum DC Cable Type : Cable with white pattern around is positive Cable in black is negative



LED Indicators

į	LED	Function		State	Stat
i	Power	Power indica	tor	On	Con
ļ				Off	Conv
i				Blinking	No S
ł	Fiber Link	Fiber link		On	The
ļ				Off	No s
				Blinking	Rem
				*This only hap	
	Test	Mode display	/	On	Any
				Off	Norn
	E1/T1 link	Mode display	/	On	E1/T
				Off	E1/T



signal or fiber link is down

- note side fiber Sync loss ppens when FEF is enabled
- loopback test is on
- mal status
- Γ1 signal is ok

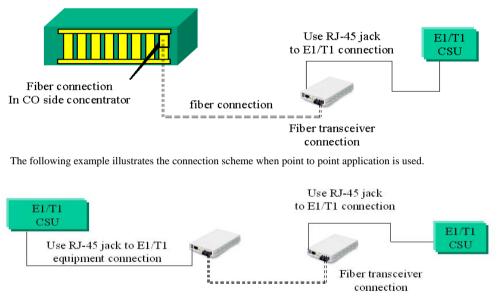
V.: 1.2

Installation

Connect the fiber interface cable to the FIB1-E1/T1 and other fiber converter equipment. Using a twisted-pair cable, connect the RJ-45 connector at one end of the cable to the media converter, connect the RJ-45 connector of E1/T1 CSU equipment at the other end of cable. Follow the connection examples below. Install the fiber converter with the AC/DC power adapter provided.

Connections

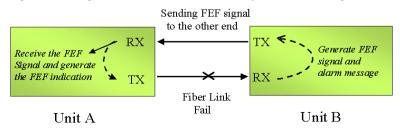
The following example illustrates the connection scheme when connecting from a fiber port of one concentrator to the fiber port of another FIB1-E1/T1 fiber media converter.

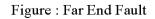


fiber connection

This media converter incorporates a Far End Fault feature which allows the stations on both ends of a pair of fibers to be informed when there is a problem with one of the fibers. Without Far End Fault, it is impossible for a fiber interface to detect a problem that affects only its Transmit fiber.

When Far End Fault is supported and enabled, a loss of receive signal (link) will cause the transmitter to generate a Far End Fault pattern in order to inform the device at the far end of the fiber pair that a fault has occurred. When the local receiver again detects a signal, the local transmitter automatically returns to normal operation.



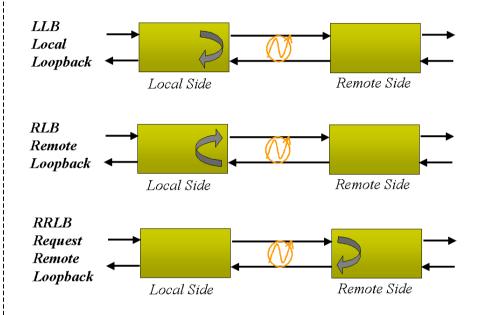


Loop-back Testing(LBT)Note :

(While this feature is operating the fiber side transmission will be halted)

This media converter incorporates Loop-back Testing features that may be used with BERT test equipment. Loopback is enabled by the DIP switch#3&4 on the front panel.

The FIB1 series is compatible with FRM301 rack series on this feature. You may test the whole application with FIB1 & FRM301 rack.



TRADEMARKS

ST® is a registered trademark of AT&T.

WARNING:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference in which case the user will be required to correct the interference at his own expense. NOTICE: (1) The changes or modifications not expressively approved by the party responsible for compliance could void the user's authority to operate the equipment. (2) Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.

CISPR PUB.22 Class A COMPLIANCE: This device complies with EMC directive of the European Community and meets or exceeds the following technical standard. EN 55022 - Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment. This device complies with CISPR Class A.

WARNING: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CE NOTICE

Marking by the symbol CE indicates compliance of this equipment to the EMC directive of the European Community. Such marking is indicative that this equipment meets or exceeds the following technical standards: EN 55022:1994/A1:1995/A2:1997 Class A and EN61000-3-2:1995, EN61000-3-3:1995 and EN50082-1:1997