

FO-E1T1 FIBER OPTIC CONVERTER

Benefits

E1 / T1 interface extension over fiber optic

- E1 - 2,048 Mbps : transparent transport of E1 MIC, E1 PRI, G.703 or G.704, voice and data services
- E1 - G704 n x 64 kbps framed with conversion to FO-SE11/35/28 or FO-8011/35/28 or ISDN FO-84BRI or FO-4BRI
- T1 - 1,544 Mbps : transparent transport of T1 or T1 PRI
- T1 clear channel or G704 24 x 64 kbps
- Universal interface : E1/T1, RJ45/RJ48c and BNC, 75/10/120 ohms

Choice of fiber interfaces

- Multi mode 820nm ST transceiver
- Single mode 1310nm SC transceiver
- Single mode SFP modules
 - 1310/1550nm
 - 30 to 117km, LC
 - single fiber : WDM SC
 - CWDM : LC
- Ethernet port for tcp-ip, telnet, ftp, snmp management
- Compatible with the other CXR fiber solutions
- V54 loop test
- Robust metallic enclosure with integrated mains AC power supply or DC/DC converter— 48 or 24 Vdc
- Rack mount card for AMS4 or AMS16 chassis with SNMP management
- MX-CFG : Windows management GUI software

E1/T1 TRANSPORT OVER FIBER

The FO-E1T1 is a new generation, cost effective and highly manageable fiber optic modem or media converter, aimed at transporting an E1 or T1 interface over a fiber optic link. It serves the requirements of telecommunication operators, enterprises and all infrastructures for deploying E1/T1, voice and data services. It can be associated to CXR Nx64K serial modems for providing Nx 64 Kbps subscriber data services.



The **FO-E1T1** is aimed at transporting an E1 or T1 interface over fiber optic line in the range of 3 to 117 km. It is ready to run in most applications that require transparent transport and a few parameters are then set for impedance, sensitivity and line build out selection.

The **FO-E1T1** is a cost effective solution that suits expectations of telecommunications providers, fixed and mobile operators, and the industry.

The **FO-E1T1** is a very new generation product that provides rich management features from an Ethernet / IP interface for SNMP management and alarm reporting.

The **FO-E1T1** is proposed with a choice of optical options : single and multi mode transceivers with various connectors (ST/SC), or SFP modules. The distance range is between 3 km and 117 km through high efficiency laser transceivers. Dual or single fiber can be chosen with a choice of WDM interfaces.

The **FO-E1T1** is compatible with the CXR range of fiber optic solutions for voice and data services with interface conversion (V35/X21/RS232, ISDN) and Nx 64 Kbps rate adaptation.



The **FO-E1T1** comes in either a robust metallic enclosure or a rack mount card for the AMS4 / AMS16, 19" chassis. Both solutions have a choice of 110-230 Vac mains or 48 Vdc power supplies.

Managing the **FO-E1T1** is very easy thanks to its intuitive menus and to the MX-CFG GUI software that sets the configuration up within a few clicks.

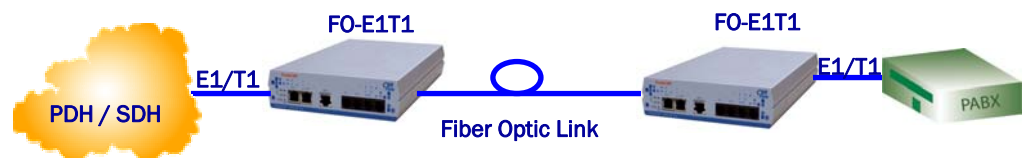
The **FO-E1T1** provides extensive 24 hours statistics and diagnostics, and supports V54 maintenance loop tests.

A large choice of optic interface is available with the **FO-E1T1** :

- Multi mode transceiver: 2km, ST connector
- Single mode transceiver: 30km, SC connector

Modular SFP module with standard or extended temperature range

- Single mode 30/60/100/120 km, dual fiber, 1310 or 1550 nm, LC connector
- Single fiber, WDM 1310/1550, SC
- Dual fiber, 60km, CWDM C9 to C18 or 1430 to 1610 nm wave length



E1/T1 Fibre Optic Extender

SPECIFICATIONS

E1 interface

- G703 E1, 2.048 Mbps, +/- 50 ppm
- Clear channel or framed, G704 32 x 64 kbps
- Impedance : 120 Ohms / RJ45-RJ48c and 75 Ohms / BNC
- Receiver : short / long haul : 300m / 1600 m
- Clock : codirectional, internal
- Coding : HDB3

T1 interface

- T1, 1.544 Mbps, +/- 50 ppm
- Clear channel or G704 24x 64kbps
- Line build out : DSX-1 and CSU
- Impedance 100 Ohms / RJ45–RJ48c
- Receiver sensitivity : short/long haul, 300 / 1200 m
- Clock : internal, codirectional
- Coding : B8ZS, AMI



Fiber Optic interface

- Coding : SMI
- **M8T**: multi mode LED (MM) 820nm, 15 dB budget , 2 km, ST connector
- **SC**: single mode ELED (SM) 1310nm, 14 dB budget, 30 km, SC/PC connector
- Slot for a CXR SFP module
- **SFP-E1-SMx0** : 1310nm or 1550nm module with budgets for 30, 60, 100 and 120 km distances, 2 fibers with LC connectors
- **SFP-E1-SMx0-Wy** : single fiber WDM module, 1310 nm and 1550nm, up to 60 km distance, SC connector
- **SFP-E1-SMx0-Czz** : CWDM module

Compatibility

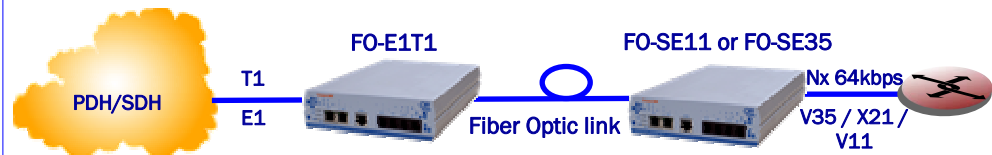
- **F080E1** E1 G703/G704
- **F080E1** E1 G703/G704
- **F0-SE11** X21/V11 Nx64kbps, synchronous
- **F0-SE35** V35 Nx64kbps, synchronous
- **F0-SE28** V28/RS232, 64/128 kbps synchronous
- **F08011, F08035, F08028, F08011,**
- **F084BR** ISDN BRI S0/T0

Management

- Local console, RS232 port
- Ethernet interface : 10/100BT, RJ45, IEEE802.3, TCP-IP, Telnet, SNMP
- Intuitive menus and Windows GUI–MXCFG
- Management card in the AMS16 chassis : SNMP
- V54 loop test : B2, B3 loop
- Light indicators
 - Power, running
 - E1 / T1 synchronization
 - Fiber synchronization
 - Test indicator
 - AIS alarm
 - Error–test

General Characteristics

- Dimensions : 230 x 170 x 40 mm
- Power supply : 110–230 Vac or 48 Vdc (36 - 72 Vdc)
- Power consumption < 10 W
- Weight : 1,5 kg
- Operating temperature : -5 to +50 °C
- Hygrometry : 90%, non condensing
- MTBF = 120,000 H



PRODUCT REFERENCE

FO-E1T1 – XYZ

XX : fiber optic interface

M8 : multi mode 1300nm LED, 2km
 SL : single mode ELED, 30 km
 SFP: SFP slot for CXR SFP-E1T1. SFP module to be ordered separately. Choice of dual fiber or WDM, or CWDM (Lambda)

Y : fiber connector

C : SC/PC connector
 T : ST connector, M8 model only
 F : optional FC/PC connector

Z : packaging and power supply

I : standalone with internal mains power supply
 C : standalone with internal 48 Vdc converter
 C2 : standalone with internal 24 Vdc converter
 R : rack card for 19" AMS4/16 19" chassis

19" Chassis**RACK-2-UNIVERSAL**

chassis de fixation de 2 FO ou MD

AMS4-2

1U, 4 slots, 19" chassis for four FO-E1T1 cards

AMS16-PS16

4U, 16 slots, 19" chassis for 16 FO-E1T1 cards, with SNMP management on option



Rue de l'Ornette
 28410 Abondant
 France

Tel. : +33 (0) 237.628.790
 Fax : +33 (0) 237.628.801
 Email: trans@cxr.fr

This document is not contractual. CXR AJ continuously improves its products. Specifications are subject to change without notice.