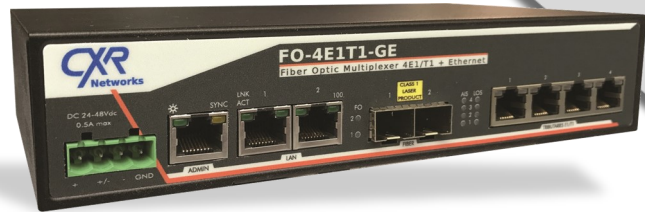


# FO-4E1T1-GE

## OPTICAL MULTIPLEXER



### FLEXIBLE

4x E1-T1 over Fiber  
TDM over Eth / IP

### HIGH SPEED

2 Gigabit Ethernet  
bandwidth

### LOWER TCO

Optimized design

### TURN KEY

Fast deployment

### RUGGEDIZED

Fanless  
24 - 48 Vdc

## Overview

The **FO-4E1T1-GE** emulates and transports four E1 or T1 TDM interfaces over Ethernet - IP. The TDM interfaces are transported in clear channel and they support any G703 or framed application requirement. The packet flow can be directed to either an optical SFP or copper RJ45 uplink interface.

The **FO-4E1T1-GE** works as a Fiber Optic modem to transport both the 4x E1 or T1 TDM interfaces and up to 2x Gigabit Ethernet bandwidth over the fiber link. It provides low end-to-end latency required by TDM networks.

The **FO-4E1T1-GE** has two 10/100/1000 BaseT Ethernet interfaces and two Gigabit Ethernet SFP slots for optical modules. Several products can be chained to increase the TDM interface capacity. Any user equipment can connect to the network through the copper or optical interface thanks to the high connectivity density of the FO-4E1T1-GE.

The **FO-4E1T1-GE** comes in a robust metallic enclosure. It can connect to two DC power sources with wide 24-48 Vdc input range, isolated power.

The **FO-4E1T1-GE** is controlled from an intuitive and powerful web management interface with secured https protocol. User friendly menus make it easy to configure and run the product. A full set of IP, ftp, snmp protocols serve the integration into a global network management system.

## Applications

The **FO-4E1T1-GE** is aimed at serving many applications such as

- Customer Premise equipment for Telecoms Pseudowire Emulation Services over a IP Packet Network to deliver 4x E1 or T1 and Ethernet services
- Enterprise connection for both legacy TDM and Ethernet IP Internet access
- 3G/4G base station connection with up to 2 Gigabit of Ethernet bandwidth and 4x E1/T1 TDM interfaces
- Campus private networks with both TDM and high bandwidth Ethernet connection over a single fiber link
- Utility and Transportation networks for both TDM and Ethernet services

## Technical Characteristics

TDM interfaces		General Characteristics	
<b>E1</b>	<ul style="list-style-type: none"> <li>G.703, 2.048 Mbps</li> <li>HDB3</li> <li>RJ45 120 Ohms</li> <li>BNC 75 Ohms</li> <li>Short / Long Haul : -12 / -45 dB</li> </ul>	<b>Format</b>	<ul style="list-style-type: none"> <li>Compact metallic enclosure</li> <li>IP-40 protection</li> <li>19" kit on option</li> </ul>
<b>T1</b>	<ul style="list-style-type: none"> <li>1.544 Mbps</li> <li>AMI, B8ZS</li> <li>RJ45 100 Ohms</li> <li>Short / Long Haul : 0 / -20 dB</li> <li>Line Build Out : DSX-1, CSU</li> </ul>	<b>Dimensions</b>	<ul style="list-style-type: none"> <li>218 x 124 x 44 mm</li> </ul>
<b>Packet encapsulation</b>	<ul style="list-style-type: none"> <li>CES or SAT over Ethernet, IP</li> <li>&lt; 1ms end to end latency in P2P mode</li> <li>Clock accuracy : 200 ppm</li> </ul>	<b>Weight</b>	<ul style="list-style-type: none"> <li>0.7 kg</li> </ul>
Ethernet Interfaces		<b>Operating temperature</b>	<ul style="list-style-type: none"> <li>-10 to +60 °C</li> <li>10 to 90% HR</li> </ul>
<b>Optical SFP</b>	<ul style="list-style-type: none"> <li>2x Gigabit Ethernet SFP</li> <li>1+1 protection or Link Aggregation</li> <li>WDM option</li> <li>Distance up to 120 km</li> </ul>	<b>Hygrometry</b>	<ul style="list-style-type: none"> <li>-20 to +80°C stocking temperature</li> </ul>
<b>Copper RJ45</b>	<ul style="list-style-type: none"> <li>2x 10/100/1000BT</li> <li>Auto MDI/MDIX</li> </ul>	<b>Power supply</b>	<ul style="list-style-type: none"> <li>24-48 Vdc , isolated power</li> <li>2x power inputs on terminal screw bloc</li> <li>8 W max</li> </ul>
<b>Ethernet control</b>	<ul style="list-style-type: none"> <li>Bridge 802.1D</li> <li>Link Aggregation 802.3ad</li> <li>QoS : DSCP, 802.1P, 4x priority queues</li> <li>VLAN: per port, 802.1Q, 4,096 VLAN</li> <li>2,000 MAC address memory</li> <li>Frame size : 1,536 bytes</li> </ul>	<b>Environment</b>	<ul style="list-style-type: none"> <li>EN-61000-6-2</li> <li>EN-61000-6-4</li> <li>EN-60950</li> </ul>
		<b>Misc</b>	<ul style="list-style-type: none"> <li>MTBF 200,000 Hours</li> <li>ROHS, DEEE, REACH</li> <li>.</li> </ul>
		Administration	
		<b>Management</b>	<ul style="list-style-type: none"> <li>Web interface, CLI</li> <li>Telnet, ssh, snmp, http, https, syslog</li> </ul>
		<b>Light indicators</b>	<ul style="list-style-type: none"> <li>System</li> <li>4x E1/T1 : AIS, LOS</li> <li>2x Ethernet : Link / Activity, 100 Mbps</li> <li>2x Ethernet SFP : Link FO</li> <li>Power supply</li> <li>Local management &amp; Test</li> </ul>
		<b>Local interface</b>	<ul style="list-style-type: none"> <li>1x RS232 console port</li> </ul>

## Ordering Information

Reference	E1 / T1	24-48 Vdc power inputs	External AC power adapter
FO-4E1T1-GE-R-C1	4x RJ45	Y	-
FO-4E1T1-GE-R-V	4x RJ45	Y	1
FO-4E1T1-GE-B-C	4x BNC	Y	-
FO-4E1T1-GE-B-V	4x BNC	Y	1
FO-OPT-ALM	External Alarm relay option		
RACK19-FO4E1T1GE	Kit of two brackets and screws to install a FO-4E1T1-GE in a 19 inch rack		



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