FO-Serial

Fiber optic Modem x21/v11, v35, rs232

EXTENSION OF SERIAL LINK OVER FIBER OPTIC

FO-SE11 : X21/11

FO-SE35 : V35

Synchronous rate n x 64kbps up to 2Mbps, 4, 6 and 8Mbps

FO-SE28 : V28/V24/RS232
Synchronous rate from 1,2 to 128kbps asynchronous from DC to 115,2k

Compatible with E1/T1 modem F-E1T1 or FO80E1 in G704 n 64kbps mode

Compatible with FO8011, FO8035 and FO8028 modems

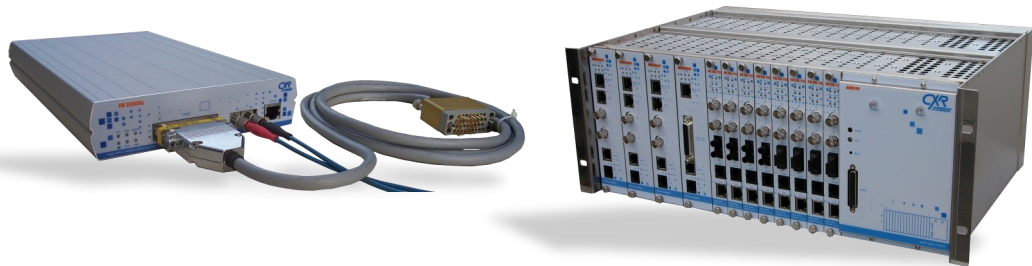## Optical Link for n 64 kbps, 2-4-6-8 mbps signal

The FO-SERIAL is fiber optic modem used by Telco to deploy high rate Leased Line in Local Loop as well by enterprise or administration to extend this line customer premise or to interconnect router or unstructured applications like video codec, data from encrypted serial system in military domain.

The FO-Serial is working in framed mode at x 64Kbps or at fixed rates 2, 4, 6 or 8Mbps. One special software version, the FO-SECD allows a co-directional transmission of flow from DC to 8Mbps mainly used for satellite.

Applications

The installation of **FO-SERIAL** (or FO-SE11 in X21/V11, FO-SE35 in V35, FO-SE28 in V24/RS232) is very easy with the free tools Windows GUI MxCFG. From local device you can administrate the distant equipment on the other side of the fiber..

FO-SE11 is providing a synchronous transmission in X21/V11

FO-SE35 is providing a synchronous transmission in V35

Per default interfaces rate are fixed at 2 048 Kbps, but we can select framed mode with synchronous rate of 64K à 2048Kbps per 64Kbps step, then 4 096, 6 144 and 8 192 Kbps.

In n 64kbps or 2Mbps mode the FO-SERIAL can transmits data to a FO-E1T1 connected to a TDM/PDH or SDH transit network. In framed mode it is possible to select discontinue TS. Le

Both are provide with cable to DTE device DB15F for FO-SE11 and M34F for FO-SE35. Cable to DCE equipment are delivered on order.

FO-SE28 provide a V28/V24/RS232 synchronous interface from 1,2 to 128 kbps and in asynchronous interfaces from DC to 112,5 kbps.

The **FO-SERIAL** can be synchronize by internal clock or from the DTE or the fiber optic line. The free GUI MxCfg is an easy tool to setup quickly the clock source and slope, the rate , the interfaces and permit to run test local loop in local and distant device, distant loop. You can access to the statistics of transmission with a vision of current and previous 15mn, 30mn, 1 and 24 hours. It is possible to create without equipment connected the configurations and send to the installation site through Internet, or to print it with comments.

The **FO-SE11** include IEEE C37.94 specification , speed 64kbps on fiber.
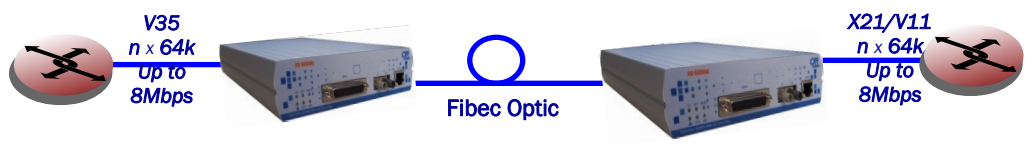

Router or unstructured applications non structurées   FO-SE11   FO-SE35

V35 n x 64k Up to 8Mbps   Fibec Optic   X21/V11 n x 64k Up to 8Mbps

FIXED FO IN-TERFACES

Multimode 820nm
1310nm on demand
connector ST

Singlemode
1310nm or
1550nm, connec-
tors
SC/PC or FC/PC

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OTHER

Mode C37.94 with
V11-64K (SFP-STM1
-MM-850)

Tests V54

Metal box with AC,
DC 48 o DC 24v power
supply.

Card for 19'' AMS4
et AMS16 SNMP
chassis

Windows GUI soft-
ware tools MX-CFG

Specifications

V11/X21, V35 Interfaces	• Synchronous mode, rate selection from 64 à 2048 kbps per step of 64 kbps, 4096, 6144 and 8192 kbps. • Clock mode: internal, external DTE or line • Connector BD25F, delivered with adapted cable
FO-SE11	• Delivered with DB15F (CA601461) cable for X21/V11 DTE interfaces
FO8035	• Delivered with M34F (CA601460) cable for V35 DTE inter-faces, Special cable for V36 interface (CA 601619). • Latency time : 125micro-sec (with standard framed 64k mode) The co-directional interface of **FO-SECD** has a latency time of 600 nsec.
V28/V24/RS232 interface	• Synchronous V24 from 1,2 to 128 kbps • Asynchronous RS232 from 0 to 112,5 kbps • Clock mode: internal, external DTE or line

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FO-SE28 with DB25F is deli-vered without cable. **Fibre Optic Inter-face** Coding : CMI	**Compatibility with:** **FO-E1T1 or FO80E1** E1 G703/G704 **FO8011** X21/V11 n 64kbps synchronous **FO8035** V35 n 64kbps synchronous **FO8028** V28/RS232 Sync./async
Administration	• Consol port RS232 • Per VT100 menu or with free GUI Windows MX-MFG • Per CFIP card from AMS16 • Loop back test: V54, B2, B3 • LED: Power, DTE, FO reception, Error, Test, Data
Physical specifica-tions	• Dimensions : 287 x 175 x 41 mm • Power of desktop: AC 96 to 230V or DC 36 to 72V • Power cunsumption : < 10 W • Metal box : 1,5 kg • Temperature in function : -5 to +50 °C • Hygrometric : 10 – 90% without condensing • MTBF = 120,000 H

CXR Networks

Specifications

FO-SERIAL	M8Tzw	SLCz SLFz	Z3Cz Z3Fz	Z5Cz Z5Fz
Type of transmitter	MM LED	SM ELED	SM LASER	SM LASER DBF
Wavelength	820 nm	1310 nm	1310 nm	1550 nm
Minimum optical Budget available	15 dB	14 dB	23 dB	29 dB
FO typical attenuation	3 dB/ km	0,35 dB/km	0,35 dB/ km	0,23 dB/ km
Distance with a fiber and 2 connectors	2 km	30 km	60 km	117 km
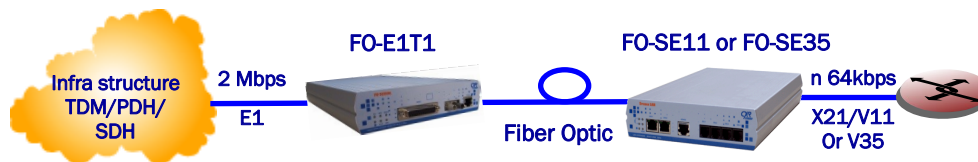
Product range

FO-SEii – XX Y Z

I
i : copper serial DTE interface
11 : X21/V11 synchronous
35 : V35 synchronous
28: RS232 asynchronous, V28 synchronous
CD: X21/V11 co-directional
(see special datasheet)
XX : standard optical interfaces
M8 : LED diode multimode 820nm, distance 2km
M3 : LED diode multimode 1310nm, distance 8km
SL : ELED singlemode 1310, distance 30km
Z3 : Laser singlemode 1310, distance 60km
Z5 : Laser DBF singlemode 1550, distance 110km
SFP : SFP module, either SFP-STM1-MM or SFP-STM1-SM30
SFP-STM1-MM-850 : for C37.94 feature

Y : standard optical connectors
T : ST connector on M8
C : SC/PC connector on SL, Z3 & Z5
F : optional FC/PC connector on SL, Z3 & Z5
Z : conditionnng
I : desktop w internal AC power supply
C : desktop w internal DC 48 V converter
C2 : desktop w internal DC 24 V converter
R : 1 slot card for 19'' AMS4/16 chassis
19'' Chassis
RACK-2-UNIVERSAL rack mount for 2 desktop
AMS4-2 chassis for 4 cards
AMS16-PS16 chassis for 16 card .
Option CFIP-SNMP card for Telnet and SNMP administration.

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