

**FABIO-4C** is a modular integrated Access TDM multiplexer with 512 x 512 cross connect ability, which integrates multiple dedicated data, voice and LAN channels over multiple main (network) links. It can provide maximum 4E1 capacity for accessing and transmission with cross-connect capacity is 512x512 64K. It provides full range of voice and digital data services to subscribers located at different locations require to interconnect and establish a voice and data network over E1 link.

The flexible, 1U high, 19-inch, 3-slot modular **FABIO-4C** Chassis with a wide choice of I/O (user interface) modules is designed for applications ranging from small campus networks to multi-site corporate networks or extensive carrier access solutions. Due to **FABIO-4C**'s standards adherence, central office based cross-connect units (DACS) can separate voice and data, sending each to the appropriate carrier or service.

**FABIO-4C** enables carriers to successfully deploy bundled services and Internet access. The integration of a broad range of services makes **FABIO-4C** a cost-effective access device, with reduced deployment and maintenance costs. The equipment conforms to international standards, ensuring compatibility in multi-vendor environments worldwide.

**FABIO-4C** is designed to carry Various Original Equipment Manufacturer's Digital Axle Circuits over optical fiber (STM).

### Key Features

- Compact 1U high, 19-inch chassis
- Number of uplink-slots : 1
- Number of service-slots : 3
- Modular construction with three (3) slots for hot-swappable I/O modules
- Max. E1 channels : 4, Cross-connect capacity 512x512 64K  
Frame structure : Supports optional CRC-4 and PCM 30/31 settings.  
Timing : Internal Crystal Oscillator clock, Clock received from any link (loopback)
- Versatile 64Kbps User interface : Supports FXO/FXS Voice modules with caller number display, E&M 2/4-wire module with adjustable voice gain, hotline with standard signaling tone and V.24/RS-232 low speed module  
Max. FXO/FXS channels : 30  
Max E&M channels : 24  
Max V.35 channels : 3  
Max FE channels : 3
- Performance Monitor: Control panel provides ample control and alarm function. When an E1 channel occurs errors, sound alarm will be activated and LOS/LOF warning message of each E1 channel will be displayed.  
Customer service can be allocated by on-line network operator.  
Flexible network topologies : Point-to-Point , Daisy Chain.
- Local and Remote Telnet support

### TECHNICAL SPECIFICATIONS

#### FABIO-4C

I/O modules	: 4E1, FXO, FXS, Hot-line, 2/4W E&M, RS232/V.24, ETH
Chassis(height)	: 1U, 19-inch wide
Number of Service-slots	: 3 slots for I/O modules
Console port	: 1 (RJ-45), Serial
Telnet port	: 10/100Mbps (RJ-45), Ethernet

### Voice Interfaces

Channel sampling rate	: 8 KHz
Companding law	: A-law
Voice Interface	: 2W, 4W, Signalling, FXO, FXS, E&M
Frequency	: 300 to 3400 Hz
Impedance	: 600 Ohms
Ring current voltage	: $75 \pm 15V$ AC, $25 \pm 3$ Hz

### Data Interfaces

Low speed data interface	: RS232, V.24
Characteristic	: ITU-T V.24
Data Format	: Asynchronous, Synchronous
Asynchronous data	: upto 19.2 Kbps
Synchronous data	: 64 Kbps ~ 128 Kbps

### V35 Data Interface

Characteristic	: ITU-T V.35
Bit Rate	: $N \times 64$ Kbps, $N=1\sim 31$

### Ethernet Data Interface

Characteristic	: IEEE 802.3
Bit Rate	: $N \times 64$ Kbps, $N=1\sim 31$

### Uplink Interfaces(E1)

Supports 512×512 cross connect ability based on 64K with signaling	
Bit rate	: 2048 +/- 50 ppm
Code	: HDB3
Impedance	: 120 Ohms Balanced
Electrical characteristics	: ITU-T G.703
Transfer characteristics	: ITU-T G.823
Jitter performance	: ITU-T G.823

### Disaster Management Communication (IR)

FABIO series devices are suitable for disaster communication for extending various services to mid-section in Indian Railways

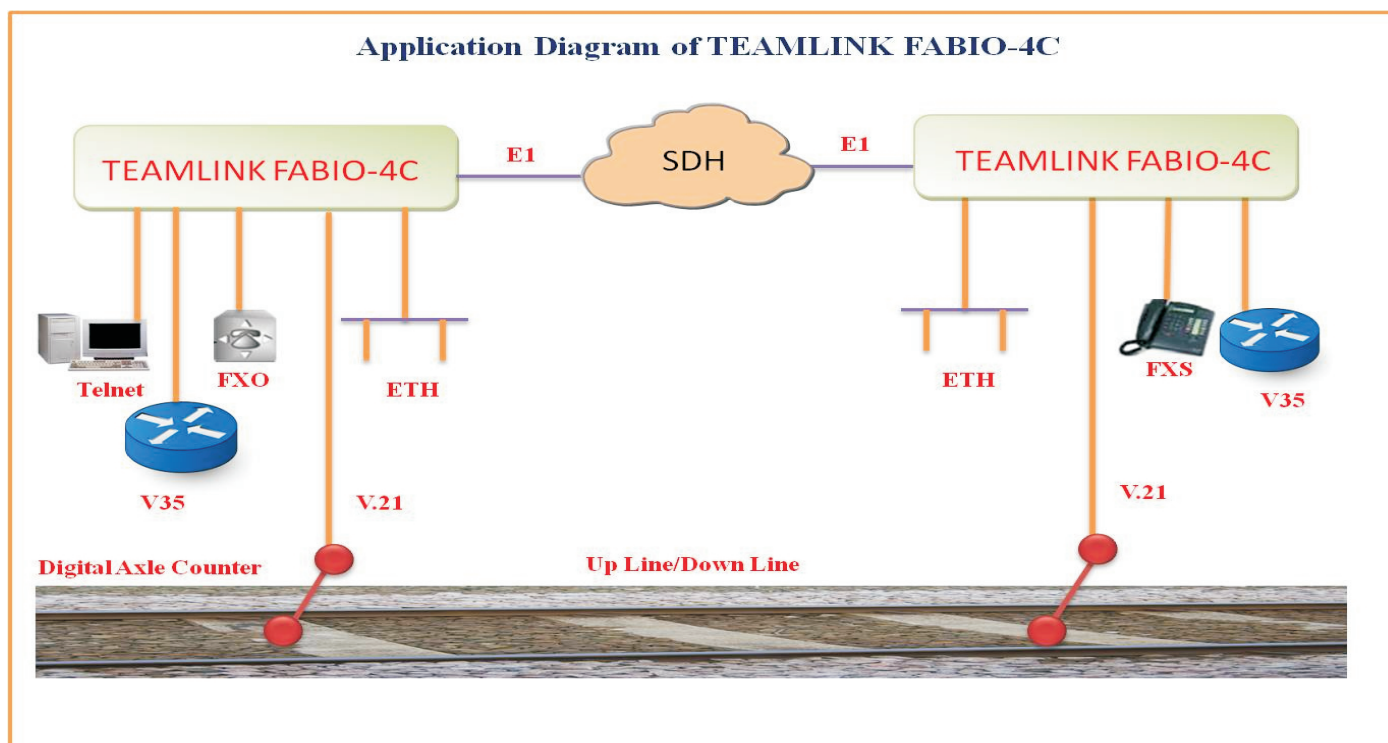
### Power Supply

AC : 100V ~ 240V AC (220V nom) DC to AC adaptor and DC : -36V ~ -72V (nom : -48V DC)

### Environment

Operating Temperature	: -5 to +55°C
Operating Humidity	: 5% to 99 %
Air pressure	: 86 to 106 KPa

### APPLICATION DIAGRAM



### Ordering FABIO-4C

FABIO/4C/4E1/AC/DC	FABIO-4C PCM Multi Service Multiplexer chassis (1U-high) with 4 E1 interface uplink (120 Ohms balance RJ45 connector), 1 Telnet port, 1 Console port, 3 module slots, with one AC/DC power supply
FABIO/4/M/10FXO	Audio interface card for user, providing 10 FXO links per card
FABIO/4/M/10FXS	Audio interface card for user, providing 10 FXS links per card
FABIO/4/M/8E&M	2/4 wire E&M trunk interface card, 8 interfaces per card, one SCIC female connector Adapter cable :Voice cable ( CBL-VOICE-SCSI50M (40)/NC-3m )
FABIO/4/M/8RS232	RS232 interface card, providing 8 links RS-232 Asynchronous channels, RJ45 connector
FABIO/4/M/2FE	High speed Ethernet interface card, providing two 10/100 Base-T Ethernet port, RJ45 connector