

**FABIO4CS** 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 or 8E1 capacity for accessing and transmission with cross-connect capacity is 512x512 64Kbps. 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 & STM1 links.

The flexible, 1U high, 19-inch, 5-slot modular **FABIO4CS** 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 **FABIO4C**'s standards adherence, central office based cross-connect units (DACS) can separate voice and data, sending each to the appropriate carrier or service.

**FABIO4CS** enables carriers to successfully deploy bundled services and Internet access. The integration of a broad range of services makes **FABIO4CS** a cost-effective access device, with reduced deployment and maintenance costs. The equipment conforms to international standards, ensuring compatibility in multi-vendor environments worldwide.

**FABIO4CS** 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 : 4
- Modular construction with four (4) slots for hot-swappable I/O modules
- Max. E1 channels : 4 or 8E1 with (1+1) feature  
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 ~ 40  
Max E&M channels : 24 ~ 32  
Max V.35 channels : 3  
Max FE channels : 3
- Performance Monitor: EMS available to monitor the equipment & configure  
Customer service can be allocated by on-line network operator.  
Flexible network topologies : Point-to-Point , Daisy Chain.
- Local and Remote Telnet support
- STM1 | STM4 : uplink module available

### TECHNICAL SPECIFICATIONS

#### FABIO-4C

|                         |   |
|-------------------------|---|
| I/O modules             | : 4E1, FXO, FXS, Hot-line, 2/4W E&M, RS232/V.24, ETH, 8E1, STM1, C37.94 |
| Chassis(height)         | : 1U, 19-inch wide  |
| Number of Service-slots | : 4 slots for I/O modules   |
| 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 ± 15V AC, 25 ± 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 x 64 Kbps, N=1~31 |

### Ethernet Data Interface

|                |                       |
|----------------|-----------------------|
| Characteristic | : IEEE 802.3          |
| Bit Rate       | : N x 64 Kbps, N=1~31 |

### 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       |

### STM UPLINK

|     |             |
|-----|-------------|
| STM | : STM1 SNCP |
|-----|-------------|

### Disaster Management Communication (IR)

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

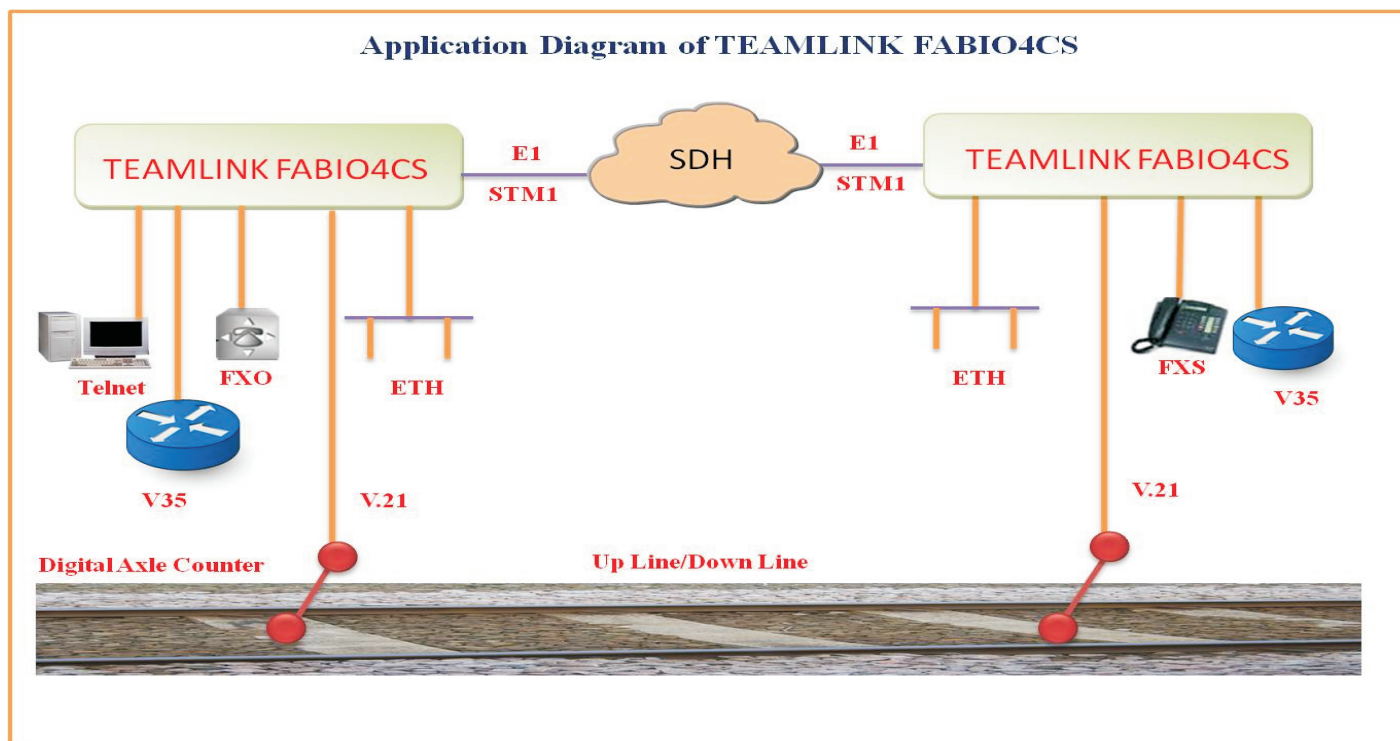
### Power Supply

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 FABIO4CS

|                  |  |
|------------------|--|
| FABIO/4CS/4E1/DC | FABIO4CS PCM Multi Service Multiplexer chassis (1U-high) with 4 E1interface uplink (120 Ohms balance RJ45 connector), 1Telnet port, 4 module slots, with one DC power supply |
| FABIO/4CS/8E1/DC | FABIO4CS PCM Multi Service Multiplexer chassis (1U-high) with 8 E1interface uplink (120 Ohms balance RJ45 connector), 1Telnet port, 4 module slots, with one 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<br>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  |
| FABIO/STM1       | STM1 module uplink supporting standard STM1 interface  |