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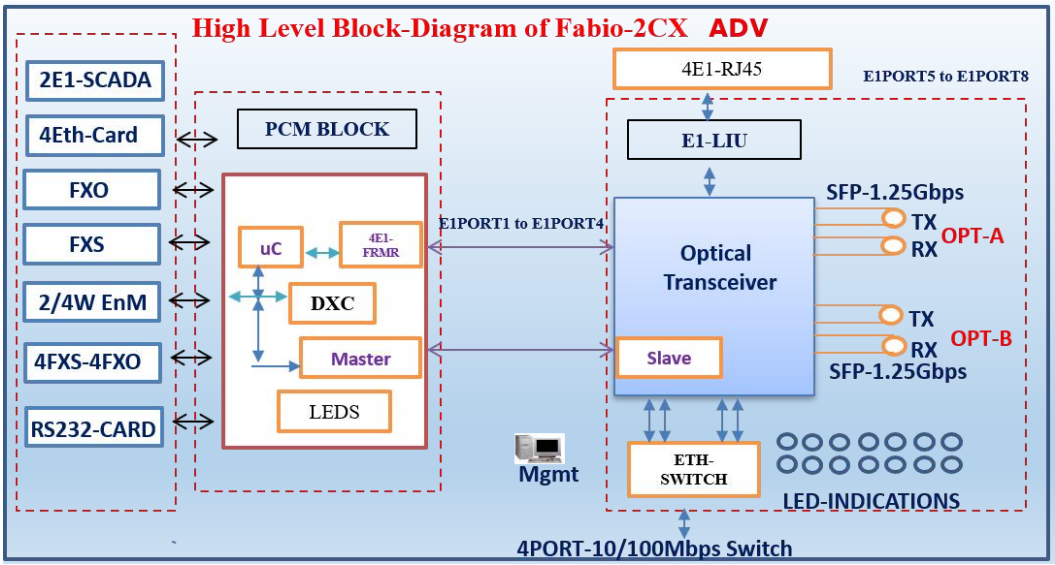
TEAMLINK FABIO 2CX - ADV

FEATURES

- Compact 1U Size with the 19-inch rack module
- Three Slots for connecting the various Interfaces for downlink services
- Four E1 ports Physically driven Out for connecting the various service cards on this E1 ports
- Four E1 Ports are Directly Connected to the Optical Interfaces for mapping the Service cards into the Optical stream
- All the TDM ports supports, Unframed, Framed PCM31, Framed PCM30 for Voice and Data transmissions
- 512x512 timeslots Digital Cross connection for connecting the service cards voice channels to different directions
- Includes the Add drop multiplexer provides 1.25Gbps dual optical interfaces for connecting the services in chain or ring networks
- Supports loopback towards the Equipment side for checking the Services and E1 channels
- Supports performance monitoring
- Provides the 4 10/100 Mbps Ethernet switch can operate like ring or point to point network
- Supports Point to point, point to multipoint, chain and ring fashion
- When connected in ring fashion detects the Ethernet Loopback and stops the ethernet traffic when line is looped back
- Supports the Out of band management for monitoring the traffic
- Provided the RJ45 interface for the serial management interface. Supported 9.6Kbps and 8N1 format (standard interface pin configuration for easy connectivity with any console cable
- Supports Self-healing for the point to point and ring applications
- Supports Ethernet fast protection for the point to point and ring applications
- Detects remote fiber fault problem and switches the traffic accordingly to the redundant path in ring networks based on optical port failure / AIS reported in the E1 stream
- Needs to configure the Device Addresses for each and every device and One unit should be in Master mode for getting the Ethernet ring protection
- Optical Self-healing for protection within 30 milli seconds or less so that service side data will not affect in machine critical applications. (Mainly in signal and telecommunication of Indian Railways)
- LED indications for both the optical interface like LOS and optical mismatch for ring connectivity and also BER, loss of optical frame
- From E1-PORT1 to E1-PORT4 are logically connected directly to the optical interface
- From E1-Port 5 to E1-PORT 8 LOSS as well as loss of frame
- For SLOT1 and SLOT2 (QUAD health status and also the QUAD working status Indication)
- Four 10/100 Mbps Ethernet PORTS LINK and SPEED Indications
- Needs to configure one device as a master and rest of the devices in slave for getting the Ethernet ring data and also needs to have the address for each device. The address are from 1 to 125 (max)
- For ring mechanism we can connect max 125 devices



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FRONT PANEL

BACK PANEL

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SPECIFICATIONS

Four E1 interfaces supports the G703, G704 framed operations	
Supports CRC enable and disable	
Four physical E1 interfaces can be mapped to service cards or optical interfaces to get end to end e1 traffic transparently	
3 Service Slots for connecting the various user interfaces	
Can accommodate the 30 FXO / FXS channels using the three user interface slots	
24E&M channels with the 4 slots	
User interfaces for the V35/X21	
Provides 8 numbers of RS232 user interfaces	
RSTP Ethernet card with the 2E1 ports for existing SCADA Applications	
Ethernet Interface card with 3 Numbers of switching FE ports	
OPTICAL INTERFACE	Supports 2 SFP optical interfaces
	2 Optical interfaces support for Point to point and point to multi point and ring networks
	Self-healing for the e1 traffics and ethernet traffic redundancy with in 30 milli seconds.
	Supports 1Gbps ethernet traffic in a ring (optional)
	switching time is 30 milli seconds between optical ports in point to point or chain or ring networks
MANAGEMENT	Command Line interface provided on RS232 RJ45 Connector
	The RS232 Console/ Supervisory is compliant with the ITU-T V.24 / EIA RS232 Asynchronous Format with the 115.2Kbps speeds with the 8 N 1 formats
	Telnet Interface
	Supports the SNMPv1, SNMPv2, SNMPv3 Protocols. Supports the SNMP traps for the Service and Network events
	HTTP for the configuration of the PCM slots and status getting from web interface
	DHCP Client for acquiring the IP address Automatically
SERVICE INTERFACE	Four Numbers of copper ethernet Interfaces
	Four Ethernet copper ports are having the 10/100 Mbps speeds with the Auto MDI-X facility (Auto cross Over)
	Four E1 Interfaces of the PCM Block is Directly connected to the 4 Physical ports of the Optical transreciver and rest of the 4 Ports in the optical transceivers are terminated externally as from E1-PORT5 to E1 PORT 8
	Number of the PCM interfaces in the Unit is 8 numbers 4 will be directly connected the Optical circuit and Four are terminated externally, we can map these four external E1 ports to any of the Optical channels
	There are 1 to 80 Optical channels like 0 to 63 in STM we can map the External E1 Ports 5 to 8 into any optical channels from 1 to 80
	E1 Ports 1 to 4 are directly connected to the PCM side so we can map these E1 ports to Optical channels from 1 to 80 or we can map to E1 PORT 5 to E1 PORT8 for bringing the Device as a FABIO-4C
	Supports the Ethernet in a ring and do not required to map any channels in the Ethernet (Ethernet will always carry the Gigabit channel But 4 Dedicated 10/100 Mbps switch is directly connected to Gigabit channel uplik and Downlink are four 10/100 Mbps ethernet ports
INTERFACE CARDS	10FXS Interface Card
	10FXO Interface Card
	4FXS and 4FXO interface card
	4E&M Quad Interface Card which is having the Quad connectivity and Quad Health Status, Quad switching if the Primary E1 Fails, can be switched to Standby Primary on PCM / MPLS, Standby Secondary on E1-PCM/MPLS if both the Standby Primary and Secondary are not UP then the E&M circuit will be connected to the QUAD Interface port.
	8 number of 2 wire or 4 Wire E&M Interface Card
	2 E1 Interface RSTP card for the Scada applications
	2 Port Ethernet Interface card which will supports up to 2Mbps speeds on the WAN Interface either in E1 channel or Optical channel.
	RS232 Card which will supports 8 channels with the 9.6Kbps / 19.2 Kbps speeds.

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	Single channel RS422, RS485 or RS232 Card which will supports up to 230Kbytes of speeds
	4 Port E&M channel with the auto media change over facility which will switch the E&M channel E1/ Optical E1 interface to the QUAD mode in less than 5 milli seconds
SERVICE SIDE ETHERNET INTERFACE	Number of ports 4
	Supports 10 Mbps and 100 Mbps speeds According to the ITU-T 802.3 u
	10Mbps / 100Mbps Half Duplex / Full Duplex Flow Control Operation
	Compliant to IEEE802.3 and IEEE802.3 u, IEEE802.3x standards
	Supports Auto Cross Over and Auto MDI-X Option
	RJ 45 Connector
	Supports Jumbo Frame
FXS USER INTERFACE SPECIFICATIONS	Feeding voltage -48V
	Loop current is 20milli amps
	TIP / RING Reversal checking
	Ringing voltage 65vrms
	Return Loss 16dB at 300-500Hz
	Tip Ring Reversal Setting time is 50 milli seconds
	Connector Type RJ45 Interface
FXO USER INTERFACE SPECIFICATIONS	Return Loss 16dB at 300-500Hz
	Tip Ring Reversal Setting time is 50 milli seconds
	Return loss 600Ohms is 18 to 35dB.
	ON hook reception
	Transformer isolation providing the high common-mode rejection CMRR for use in un grounded systems.
	Connector Type RJ45 Interface
8 CHANNEL E&M INTERFACE CARD SPECIFICATIONS	Supports 2 wire and 4 wire channel configurations each part
	2 wire / 4 wire selection is software configurable not required to plug out the interface card
	E and M signals transmission for each channel
	50 pin SCSI Female connector
	50Pin SCSI Male connector with the cable is provided for connecting the E&M channels
4 CHANNEL E&M with the QUAD INTERFACE CARD SPECIFICATIONS	Supports 2 wire and 4 wire channel configurations.
	2 wire / 4 wire selection is software configurable not required to plug out the interface card.
	E and M signals transmission for each channel
	Switching from network interface E1 / Optical to the QUAD is for each channel
	Switching time is less than 5 milli seconds.
	QUAD interface health checking.
	Each E&M channel present working interface LED indication E1/Optical / QUAD
2 CHANNEL E1 RSTP INTERFACE CARD SPECIFICATIONS	Support 2 E1 Interface
	2 E1 Interfaces can be connected to two different directions for SCADA.
	Logical ethernet interface with the RSTP facility
	Each E1 Link UP and the DOWN checking.
	Routing the SCADA interface traffic on working E1 Interface.
	Supports UNFRAMED/FramedPCM31/PCM30 Operations.
	Supports HDLC and GFP on E1 interface
	Compatible with the Teamenginners standalone E1 to ethernet converter.
DIGITAL CROSS CONNECTION	512 x 512 Channels Digital cross connection at 64Kbps level
	The cross connection is at the E1 2Mbps channels only.
	Number of the Ethernet interfaces three

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DATA INTERFACE V35	Supports RSTP protocol on this ethernet interfaces
	STP and RSTP as per the IEEE802.w, IEEE802.d
	Supports up to 2Mbps speeds on E1 / Optical logical interface in steps of 64Kbps speeds
DATA INTERFACE ETHERNET	Number of the Ethernet interfaces three
	Supports RSTP protocol on this ethernet interfaces
	STP and RSTP as per the IEEE802.w, IEEE802.d
	Supports up to 2Mbps speeds on E1 / Optical logical interface in steps of 64Kbps speeds
DATA INTERFACE RS232	Number of ports 8
	Supports 9.6Kbps to 19.6 kbps on each timeslot and if 2 timeslots are configured for each RS232 port then the baud rate will support upto115.2kbps speeds
DATA INTERFACE RS422, 485 or RS232 single channel	Number of ports 1
	Supports 9.6Kbps to 230 kbps
DIAGNOSTICS	E1 Remote Loop back on each E1 Port From Starting 1 to 8
	Optical loopback checking
	Optical BER checking
	Label Error for Optical mismatch checking Optical PORT-A or optical PORT-B working mode checking.
	ITU-T V.51 test patten generation and checking (511)
	Ethernet interface LINK UP and DOWN checking.
	2E1 RSTP SCADA Interface card link UP and DOWN checking.
	Test Pattern generation and checking on the 2E1 RSTP card on each direction.
CLOCKING MODES OF PDH MUX	Internal or Free running clock which will operates on internal 2.048Mhz crystal oscillator
	Recovers from One of 8E1 ports.
	Recover clock form Network
INDICATIONS	E1LOS, E1 remote alarm, E1 All one's indication, E1 frame LOSS, E1 multi frame loss indications.
	QUAD health status and the QUAD working status on each port.
	Four numbers of QUAD interfaces health checking with the 4 LED indications
	Optical Signal LOSS, Optical Frame loss, Optical error status
	All Four ports ethernet interface link, speed, TX, RX activity status.
	working line status for each E&M channel
INBUILT GSM MODEM FOR ALARMS	Inbuilt GSM -GPRS modem for transmitting the Alarms to the Server as well as registered mobile
	E1 Link Failure and E1 Link Restored Alarms messages
	Optical Link failure checking alarm message.
	QUAD health checking alarm messages
	E&M working mode messages
POWER SUPPLY	230VAC and 48V DC
	230VAC and 230VAC
	48V DC and 48V DC
	230VAC supports 190V AC to 270V AC with the 50Hz to 60Hz
	-48V supply will supports from 18 ~ 72V
ENVIRONMENT	Operating Temperature : -5 to +55°C
	Operating Humidity : 5% to 99%
CASING	Rugged Metallic Aluminum Casing as for the Field Conditions
	19" Rack Mountable system 1U Height
LED INDICATIONS	E1PORT: LOS, AIS, RAL, FLOS, QUAD Interface Status: Quad Health and QUAD Status for SLOT1, SLOT2
	Optical PORTS (A and B): LOS, SFP Status, LOF, Label ERROR, BER (10e3 /10e6)

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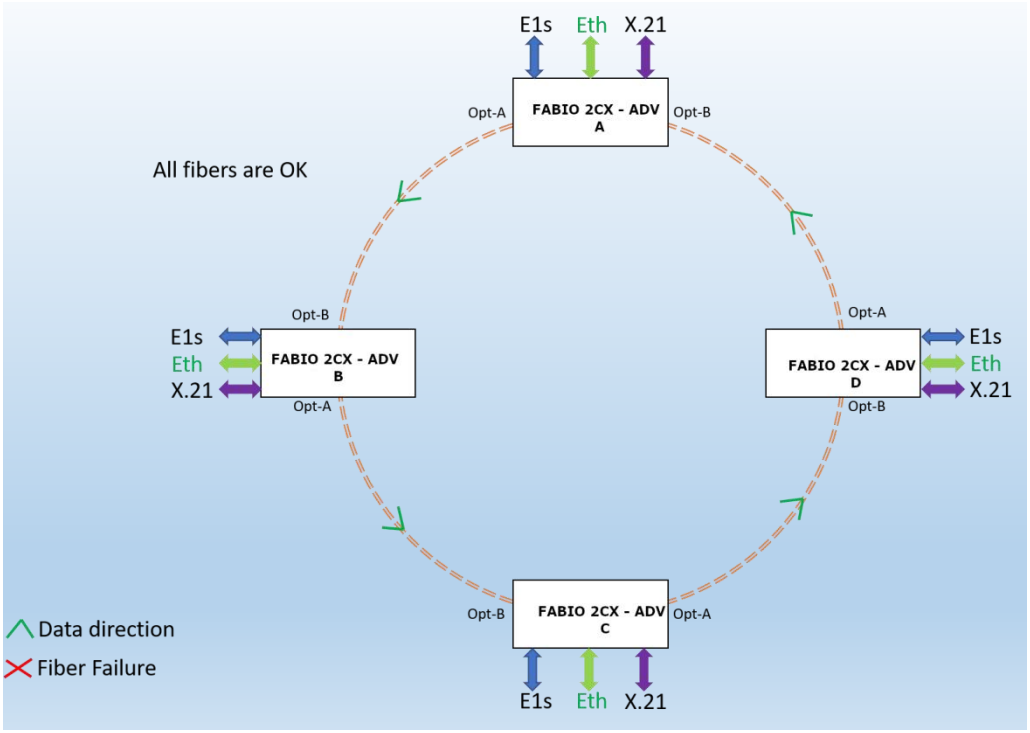
APPLICATION DIAGRAM



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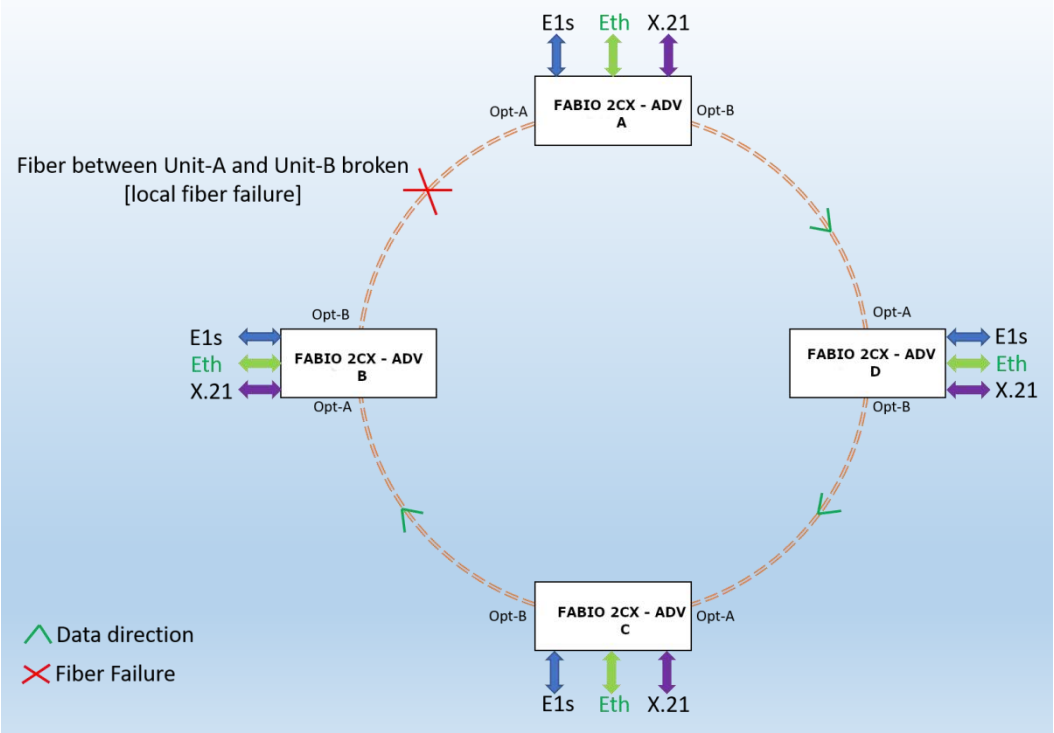

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