

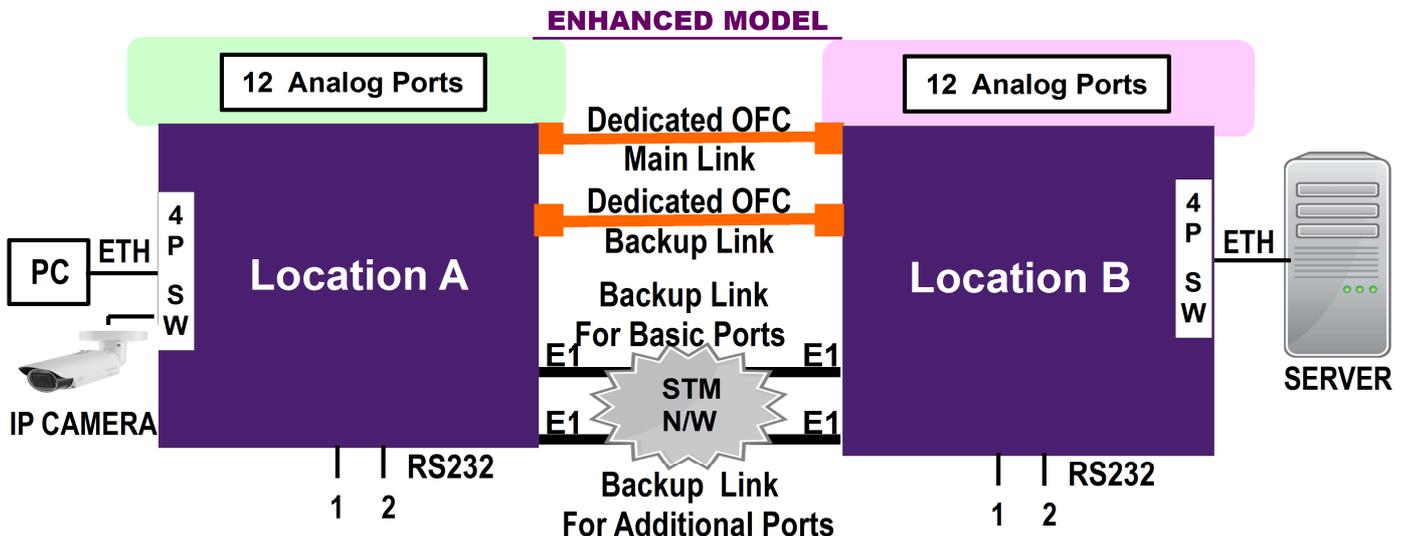
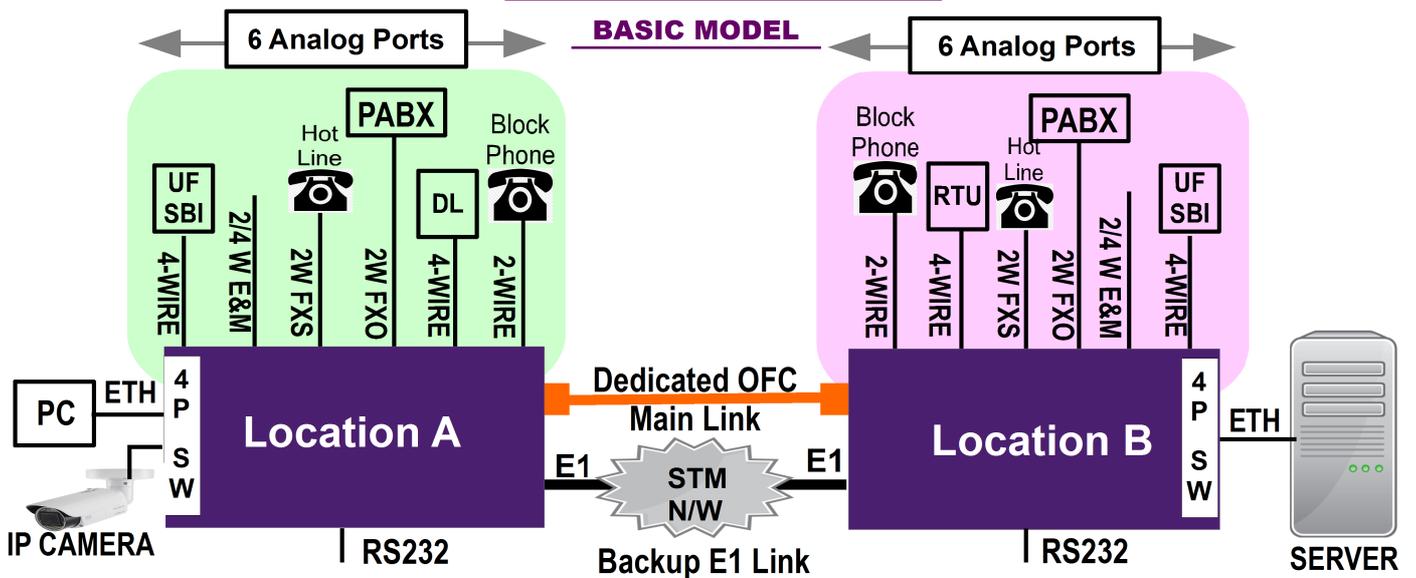
**Cost effective and Optimized solution  
for Voice, Analog, and Digital connectivity over shared and dedicated OFC**

**CYGNUS 844  
MULTI SERVICE FIBER MULTIPLEXER**

**FEATURES**

- **Application:** Facilitates multiplexing of several applications such as Control Phone, Hot Line, Auto Phone, RTU, Ethernet devices such as IP cameras, client-server access, dumb serial terminal access etc. over dedicated and shared OFC media.
- **Connectivity:** Point-to-Point fashion over dedicated OFC link with option of backup OFC media and shared media via E1.
- **Redundant E1 Link:** In addition to OFC links the units may also be interconnected using upto two redundant E1 links. In this configuration user communication automatically shifts to the E1s link if fiber links are unavailable. Alternatively in case no OFC media is provided upto two E1 can be used in a pre-determined fashion.
- **Auto Changeover:** If any of the OFC link fails traffic automatically switches to the other available OFC link or E1.
- **User interfaces:** Ethernet, 2/4 wire with E&M signalling, V.21/V.23 analog modems line, FXS, FXO and RS232
- **Power Supply:** Dual power supply units operating in hot standby mode are provided. Both power supply units can operate from 24 VDC or 48 VDC, or one can operate on 230 VAC. If the power supply unit in use fails, uninterrupted operation continues using the other power supply.
- **Event logs:** Unit maintains time stamped event logs of up to 1000 important events, such as Unit Power On/Off, Fiber Link Up/Down, E1 Link Up/Down etc. This log is accessible via Console Port or by using Telnet over an Internet Protocol (IP) compliant network.
- **Potential Free Relay Contacts (PFCs):** 4 PFCs are provided to indicate alarms such as Unit Power Down, Fiber Link Down, E1 Link Down. These PFCs may be connected to the Data Logger network for centralised monitoring of alarms.
- **Unit Management:** May be done using RS232 based Console Port or Ethernet based Telnet/SNMP management port.
- **Form factor:** 19 inch Rack Mountable.

**TYPICAL APPLICATIONS**



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ISO 9001 : 2015  
Registered

## SPECIFICATIONS

### MAIN LINK: DEDICATED FIBER PORT

No. of Fiber Ports	Upto 2
Type of fiber	Single Mode
Range	Up to 20 km* (Standard model)
Connector	SC Bi-Di
Connector	Std. model provides SC Bi-Di ports. Ordering option for LC Duplex in lieu of SC Bi-Di.
Mounting	SFP (pluggable)
Network Topology	Point-to-Point

### MAIN LINK: E1 PORT

Number of ports:	Upto 2
Interface type:	4-wire balanced 120 ohm G.703
Connector:	RJ45 socket
Protection:	Surge voltage protection in shunt; resettable current limiting fuses in series
Network Topology	Point-to-Point

### USER INTERFACES: ANALOG

#### UPTO 12 ANALOG CHANNELS WITH OPTION OF FXO, FXS, E&M

##### I. 2/4 Wire with E&M Signaling

No. of Ports:	Upto 4
Connector:	RJ45 socket
Interface type:	2-wire/ 4-wire analog voice band interface, Type V signalling interface, impedance: 600 ohm (nominal), (note : signalling interface voltage is -24V)
Protection:	Surge voltage protection in shunt as option, resettable current limiting fuses in series

##### II. V.21/V.23(E&M)

No. of ports:	Upto 6 (out of this upto four in lieu of as many 2/4 Wire E&M ports with signalling)
Connector:	RJ45 socket
Interface type:	2-wire/4-wire analog voice band interface compatible with ITU-T V.21/V.23 standards (E&M). 600 ohm characteristic impedance. Transformer coupled. Gain/Loss adjustment facility provided.
Protection:	Surge voltage protection in shunt as option, resettable current limiting fuses in series

##### III. FXS

No. of ports:	Upto 2
Connector:	RJ45 socket
Impedance	600 ohm (nominal)
Ringing voltage	40 VAC (typical, no load)
Loop length	Current feed
Connector	RJ45 socket

##### IV. FXO

No. of ports:	Upto 2 (in lieu of as many 2/4 wire V.21/V.23 ports)
Connector:	RJ45 socket
Impedance	600 ohm (nominal)
Connector	RJ45 socket

### USER INTERFACES: DIGITAL

#### I. ETHERNET

No. of ports	4 port switch
Compliance	IEEE 802.3 compliant 10/100 Base-T auto-sensing
Connector	RJ45 socket
Functionality	Self learning bridge when paired with other CYGNUS 844 unit
Facility provided:	Ethernet bridging at 20 Mbps (on fiber) or at 1 Mbps (on E1)

#### II. ASYNCHRONOUS RS232

Number of RS232 ports	Upto 2 Nos. on RJ45 socket
Async Protocol	Full duplex
RS232 port speed	Up to 9600 bps
Signals supported	Transmit, Receive, Ground. (Signals are electrically isolated from unit's power supply ground for

fault prevention)	
Facility provided:	Transport of Async RS232 data stream upto 115 kbps (on Fiber only) or 9600 bps on E1

### MAIN LINK CHANGEOVER FUNCTIONALITY

Basic functionality:	Automatic changeover between Main Fiber, Backup Fiber (Enhanced model) and on one E1 (two E1 for Enhanced model)
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### CONSOLE PORT

ITU-T V.24/RS232 compatible interface on RJ45 socket. Asynchronous; 8 data bits, 1 stop bit, no parity. Default speed 9600 bps.

### MANAGEMENT PORT (TELNET/SNMP)

10/100 Base-T Ethernet on RJ45 socket. SNMP Traps for important events. Telnet access for configuration and monitoring.

### EVENT LOGS

The unit can record the time of occurrence of up to 1000 specified critical events and store them in non volatile memory. These events may be viewed through a supervisory terminal connected to the console port or via Telnet.

### POTENTIAL FREE CONTACTS (PFCs)

Number:	4
Functionality:	Alarms for Power off, E1 Link down, Fiber Link down
Connector:	Terminal block

### AUDIBLE ALARM (BUZZER) - (Ordering time option)

When enabled the buzzer sounds whenever an E1/Fiber link goes down. A switch is provided to acknowledge the alarm and silence the buzzer.

### LED INDICATORS

Unit related:	Power, Test/Default, Master/Slave, Alarm
E1 Link related:	E1 Link Status, E1 AIS Status.
Fiber Link related:	Fiber Link Status.
FXO/FXS related	Call on / Ringing status
V.21/V.23(E&M) related	2/4 wire selection
Ethernet related:	Link/Activity, Speed
Optional RS232 related:	Receive, Transmit
Power supply related:	DC i/p Polarity Reversal

### GENERAL

Power	Dual Hot Standby power supplies, capable of operating from 48 or 24 VDC (one can be 230 VAC)
Box Dimensions	19 inch rack mountable, 1 or 1.5U height
Operating Temp	-5° C to +55° C

### -ORDERING OPTIONS-

#### CYGNUS 844 BASIC MODEL:

- 2 Main Links: 1xFiber + 1xE1 Port (Automatic changeover between Fiber and E1 main links based on link status)
- 6 Analog User Interfaces: 2x2/4 wire E&M, 3xV.21/V.23, 1xFXS, Ordering time option for 1 FXO in lieu of one V.21/V.23 port
- Other User Interfaces: 1xRS232 & 4 Port Ethernet Bridge
- Dual Hot Standby 24VDC/48VDC as power supplies.

#### CYGNUS 844 ENHANCED MODEL:

- 4 Main Links: 2xFiber + 2xE1 Port (Automatic changeover between Fiber 1, Fiber 2 and E1 (1+1))
- 12 Analog User Interfaces: 4x2/4 wire E&M, 6xV.21/V.23, 2xFXS, Ordering time option for upto 2 FXO in lieu of V.21/V.23)
- Other User Interfaces: 2xRS232 & 4 Port Ethernet Bridge
- Dual Hot Standby 24VDC/48VDC as power supplies.

#### Following option also are available for fiber connector:

Duplex Single Mode fiber (20 km range) on LC connector in lieu of SC Bi-Di connector. \*[Models with higher driving ranges on fiber are also available. Contact Cygnus for details]

*(Note: Features and Specifications are subject to change without notice)*

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