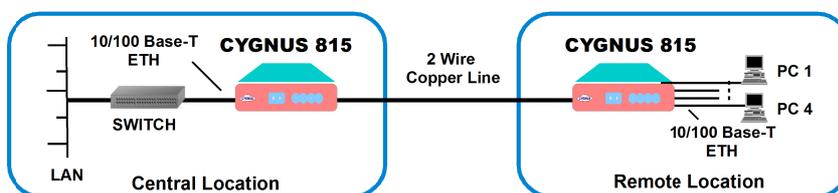# CYGNUS 815
High Throughput LAN Extender (HTLE)

FEATURES

- High speed Ethernet LAN Extender - extends ethernet LANs on a single 0.5 mm diameter telephone pair
- Offers trade off between speed and driving range. On unloaded copper telephone wires of 0.5 mm diameter, the maximum driving range can be over 10.5 km at 192 kbps, over 7 km at 2 Mbps, over 4 km at 5 Mbps on error-free line
- Offers automatic adaptive speed negotiation over G.SHDSL *bis* range
- Additional fixed speed option of 2 km at 10 Mbps and 1.2 km at 12 Mbps on error free shielded line
- Avoids need for additional equipment at small sites -
  - offers 4-port 10/100 Base-TX ethernet switch with VLAN support
  - offers built-in transparent bridging functionality

- Can be optionally ordered with a built in audible buzzer for indicating failure of a line
- Comprehensive front panel indicators for dynamic display of unit status
- Convenient diagnostic tests which can be initiated through front panel switches.
- Facility for testing line quality using PRBS pattern generation and checking
- Variety of configuration and monitoring options:
  - DIP switches, Console port, LCD-keypad (in some models) SNMP/Telnet/HTTP over the TCP/IP network (in some models), EOC over G.SHDSL line
- Can be ordered with AC , DC or both power supplies

Extending Central site LAN using CYGNUS 815 HTLE

SPECIFICATIONS

LINE INTERFACE

Line type:	2 wire (1-Pair)
Line Impedance:	135 ohms
Line code:	TCPAM as per ITU-T G.991.2 (G.SHDSL *bis*) with proprietary enhancements
Line speed:	192 kbps to 12 Mbps
Distance:	Depends upon line speed
	10.5 km at 192 kbps DSL speed, 7 km at 2.Mbps DSL speed error free line; additionally 2 km at 10 Mbps DSL speed, 1.2 km at 12 Mbps DSL speed if the line is shielded
Connector:	RJ-45 socket & Two way terminal block
Protection:	As per ITU-T K.20, K.21

ETHERNET PORT INTERFACE

No. of ports:	4 port inbuilt ethernet switch
Interface compatibility:	IEEE 802.3 10/100 Base-TX half or full-duplex autosensing, autonegotiate speed with 10/100 Base-T devices
Connector:	RJ45 socket
Functionality:	Transparent, auto learning ethernet bridge with VLAN support

CONSOLE PORT

Interface	ITU-T V.24/RS232
Speed:	Selectable from 4.8, 9.6, 19.2 or 38.4 kbps
Connector:	RJ-45 socket

CLOCKING OPTIONS

Recovered clock:	Clock is derived from E1 port receive signal to both send and receive data on it
Internal clock:	Clock is derived from internal crystal oscillator to send and receive data on E1 port

SUPPORT FOR CENTRALISED NETWORK MANAGEMENT

Interface:	10/100 Base-T ethernet on RJ-45 socket
Software functionality:	SNMP Traps for important events
	Telnet access for configuration and monitoring
	HTTP compatible web based configuration

DIAGNOSTIC

Digital loopback (DL), Pattern Generation(PAT) and Checking on E1 port

INDICATORS

Power, Link status, Link Error, Pattern Error, LTU/NTU status, negotiated speed indicator, TXD, RXD, Alarm off, Test/DFLT
For each ethernet port: 10/100 Mbps Link T/R & Speed

AUDIBLE ALARM (ORDERING TIME OPTION)

- Resettable audible alarm which sounds on failure of DSL link

LCD-KEYPAD (ORDERING TIME OPTION)

LCD:	16 characters x 2 lines, with backlight
Keypad:	Four keys (Next, Back, Select and Exit)
Function:	Parameter selection for framed/unframed mode

GENERAL

Power: Option for 230 VAC, -48 VDC, -24VDC or both 230VAC & -48VDC
Operating Environment: 0-50°C. Up to 95% RH (non condensing)

ORDERING INFORMATION

Order Code: CYGNUS 815/4EP//W/X/Y
W: Specify "LCD" if LCD-keypad is required
X: Specify "AC" for 230 VAC supply input, "DC48" for -48 VDC supply input, "DC24" for -24 VDC supply input, "AC&DC" for both 230VAC & -48VDC supply
Y: Specify "BZR" if provision for audible alarm is required; else leave blank

Note: Specifications are subject to change without notice
Ref.: 221122