

CYGNUS 811 Cu Copper Ethernet Extender

- Q** What is the function of CYGNUS 811 Cu Copper Ethernet Extender?
A The CYGNUS 811 Cu bridges two 10/100-Base TX compatible ethernet LANs over standard telephone wiring at distances of up to a few kilometres. Its Rate-Range tradeoff feature allows the driving range to be higher at lower speeds.
- Q** What are the typical applications of the CYGNUS 811 Cu Copper Ethernet Extender?
A The CYGNUS 811 Cu is typically used to extend 10/100 Base-T Ethernet networks in-campus, over telephone lines.
- Q** How many switch ports does CYGNUS 811 Cu support?
A The standard model provides 2 ports. An ordering time option for 4 ports is available.
- Q** Where do I connect the 2 wire telephone line to the 811 Cu extender?
A To the RJ-11 socket (labelled "LINE") on the unit's back panel.
- Q** What protection is provided against current and voltage surges on the telephone line?
A PTCs in series for protection against current surges and GD Tube in shunt for protection against voltage surges are provided.
- Q** How do I configure the CYGNUS 811 Cu as LT or NT?
A To configure the unit as LT, set SW2-1 to ON
To configure the unit as NT, set SW2-1 to OFF
Note: For two CYGNUS 811 Cu units to link up one unit must be configured as LT and other as NT.
- Q** How do I know whether the two CYGNUS 811 Cu units are properly connected each other?
A If the LINK indicator is ON, the two units are properly connected to each other over the line.
- Q** What diagnostic facilities are available in CYGNUS 811 Cu?
A Remote loopback and Pattern generation and checking tests are available.
- Q** How do I test whether the end-to-end circuit is OK?
A Start the Pattern Generation test from the local CYGNUS 811 unit. TST and PAT ERR indicators should glow on this unit. Now press RMT LP IN from the same unit. This should result in the remote unit looping the data sent by the unit under test. If the end-to-end link is working properly PAT ERR indication on the local CYGNUS 811 unit should go off.
- Q** What indicators on the CYGNUS 811 Cu will glow if the end to end link with the remote LAN is up?
A PWR, LINK, TXD, RXD, LT (on units configured as LT) LAN speed and Link indicators will glow.

Q How much distance can CYGNUS 811 Cu Ethernet extender drive on the copper pair between them?

A The CYGNUS 811 Cu can offer a tradeoff between driving range and the speed of transmission. At 2304 kbps the driving range is up to 5.0 km on 0.5 mm diameter unloaded copper pair. At 192 kbps the range can be as high as 10 km on the same conductor. The actual range achieved depends on factors such as quality of wire, joints, noise on the line, etc.

Q How do I configure the CYGNUS 811 Cu for framed operation at different line speeds?

A Determine the settings for switches SW2-2, SW2-3 and SW2-4 for the desired speed from the following table, and set these switches accordingly.

<i>SW2-2</i>	<i>SW2-3</i>	<i>SW2-4</i>	<i>Speed</i>
ON	ON	ON	Reserved
ON	ON	OFF	192 kbps
ON	OFF	ON	256 kbps
ON	OFF	OFF	512 kbps
OFF	ON	ON	1024 kbps
OFF	ON	OFF	1536 kbps
OFF	OFF	ON	2048 kbps
OFF	OFF	OFF	2304 kbps