

Ethernet beyond 100 metres over copper pairs

## **Overview**



The ED3011 is a point-to-point Ethernet Extender that efficiently extends 10/100 Ethernet to over 4.4 kilometres (14,400 feet) at 2.3Mbits, (Max distance @6.2km ) using existing straight 2-pair copper wire. The ED3011 will allow Ethernet connectivity in existing facilities without pulling extra cable. This is the perfect solution to Ethernet on the factory floor where systems have been upgraded from slower serial communications to Ethernet networking. ED3011 provides longer reach on transmission distance. Users can also select a fixed data rate for the copper line ranging from 192 Kbps to 10.8 Mbps where the bandwidth is available.

## Features

- Operates transparent to higher layer protocols such as TCP/IP Ethernet Port : 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- Ethernet Extender (RJ-11) Port: Symmetrical on the SHDSL
- Fixed Data Rate Selection from 192Kbps to 10752Kbps for two pair copper wire.
- ⊳ Adaptive Multi Rate from 384Kbps to 9216 Kbps for 2-Pair SHDSL  $\triangleright$ Maximum Distance: 6.2 kilometres

Adaptive Multi Rate from 192Kbps to 4608 Kbps for 1-Pair SHDSL

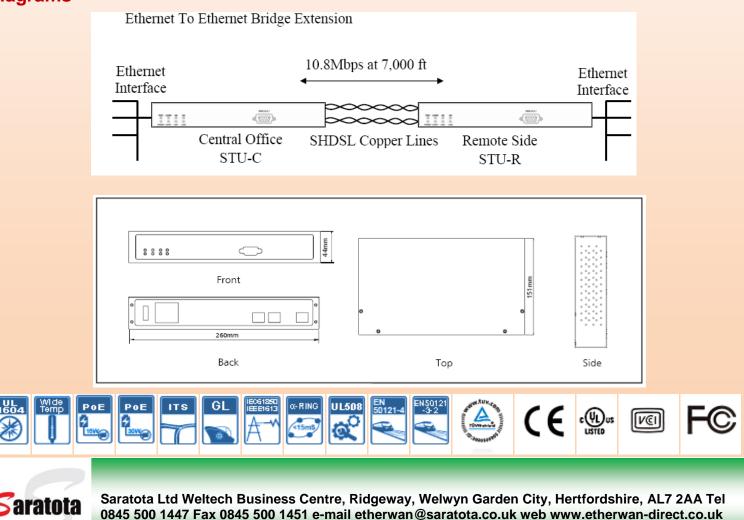
# Ordering Information

ED3011-00Z Managed SHDSL Ethernet Extender

#### **External Power Adapter Options:** (Z) =

- K: With power code for UK
- E: With power code for Europe
- A: With power code for Australia U: With power code for USA
- J: With power code for Japan

# Diagrams





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# **Specifications**

#### Technology Standards:

 IEEE802.3 10Base-T, IEEE802.3u 100Base-T, IEEE802.3x, Ethernet over VDSL
 Protocols:

- Transparent to higher layer protocols
- Processing Type:

Half-duplex back-pressure and IEEE802.3x Full-duplex flow control
Management:

- Console port CLI
- Telnet CLI

Power Input:

• AC : 100 ~ 240VAC, 50 ~ 60Hz Internal Universal PSU Power Consumption:

• 8W

## Mechanical

Metal case / IP20

- Dimensions:
- 261mm (W) x 151mm (D) x 44mm (H) (10.28" (W) x 5.94" (D) x 1.73" (H))

## Weight:

2.5kg (5.51lbs)

Installation:

Desktop
 Interface

#### Ethernet Port

- Port: Two RJ-45 port, 10/100Base-TX Full-duplex, Auto-MDI/MDIX
- Distance: 100meters (328ft.)
- Cable: 10Base-T: UTP CAT. 3, 4, 5 (2-pair wire) 100Base-TX: UTP CAT. 5 (2-pair wire)

# • Port: One RJ-11 Port

- Speed:
- Fixed Data Rate Selection from 128Kbps to 10752Kbps for 2-Pair Copper wire
- Adaptive Multi Rate from 192Kbps to 4608 Kbps for 1-Pair copper Wire
- Adaptive Multi Rate from 384Kbps to 9216 Kbps for 2-Pair copper Wires
- Distance: up to 6800 meters (22,300ft.) Cable: Twisted copper wire 24 or 26 AWG

#### NOTE:

All speed selections are Symmetrical on the DSL link and Full-duplex on the Ethernet.

| 1 pair<br>Data Rate (Kbps) | 2 pair<br>Data Rate (Kbps) | Max. Reach (ft) | Max. Reach (m) |
|----------------------------|----------------------------|-----------------|----------------|
| 4608                       | 9216                       | 6000            | 1828           |
| 3072                       | 6144                       | 9500            | 2895           |
| 2304                       | 4608                       | 11500           | 3505           |
| 2048                       | 4096                       | 12000           | 3657           |
| 1544                       | 3088                       | 13000           | 3962           |
| 1152                       | 2304                       | 14500           | 4419           |
| 768                        | 1536                       | 15000           | 4572           |
| 512                        | 1024                       | 16500           | 5029           |
| 384                        | 768                        | 17500           | 5334           |
| 256                        | 512                        | 19000           | 5791           |
| 192                        | 384                        | 20500           | 6248           |

(The table is based on DSL connection with 1 dB noise margin)

#### LED Indicators:

- Per Unit: Power Status (Power), Test
- Per Port: 10/100TX: Link/Activity, Speed
- Line: Loop1, Loop2

#### Environment

Operating Temperature:

- 0°C to 50°C (32°F to 122°F)
- Storage Temperature:
  -20°C to 70°C (-4°F to 158°F)
- Ambient Relative Humidity:
- 5% to 95% (non-condensing)

### **Regulatory Approvals**

#### ISO:

- Manufactured in an ISO9001 facility
- EMI:
- CE Mark, Class A
   ECC Part 15 Class
- FCC Part 15, Class A
- VCCI, Class A





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