



Scarab-E: SHDSL-CPE (Ethernet modem)

Ethernet Extension Solution by Using Copper Wires



System Overview:

Scarab-E is a stand alone device which provides an interface between SHDSL and Ethernet network. It provides layer two bridge functionality between SHDSL and Ethernet interface. Local craft terminal (LCT) via RS-232 and LED are used as OAM&P function for maintenance and management personnel.

Figure 1 shows the typical application of Scarab-E. One Scarab-E has to configure as CO (LTU) side and the other as RT (NTU) side, both Scarab-E use local power with external AC to DC power adapter. User can connect PC or server to Scarab-E Ethernet port directly or use Ethernet switch/hub for multiple PC or server connection. This point-to-point architecture provides customer a simple distance extension of Ethernet link via SHDSL using existed twisted pair copper wire. If the carrier use ADSL modem but require longer transmission distance, Scarab-E (Ethernet modem) is a good solution.

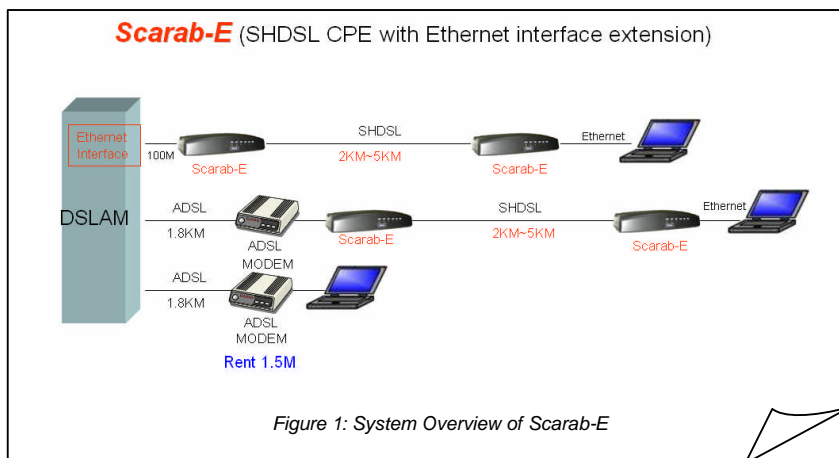


Figure 1: System Overview of Scarab-E

Key Features:

Scarab-E provides the following key features:

- On board DC to DC converters.
- One SHDSL port with remote power feeding
- One Ethernet port.
- Provide layer 2 bridging functions
- Process and response RS-232 port command
- LEDs display status
- Support Power On Self Test (POST).

Specifications:

- **Power Input:**
 - DC input: +12V which is provided from external power adaptor.
 - Power consumption: less than 6 Watts (include efficiency of on board DC to DC converter).
 - Connector: Use normal DC power jack, the rated current is more than 2A, and the rated voltage is more than 12V.
 - Power Switch: Use a locked push button switch or a toggle switch, the rated current is more than 2A, and the rated voltage is more than 36V. This switch is an option.
- **Remote power feeding: (Optional)**
 - 230Vdc ~ 300Vdc (230Vdc typical) input.
 - Feeding current: < 60mA
 - Feeding power: 6 watt per unit at CPE side.
- **SHDSL Interface:**
 - Line code : TC-PAM
 - Transmission rate : up to 2.3M
 - Range : up to 6.0 km at 0.4mm copper wire (depended on rate)
 - AC impedance : 135 ohm
 - Meet ITU-T G.991.2, ETSI TS 101 524 and ANSI T1.422 requirements.
 - Connector : RJ-11

- **Ethernet Interface:**

- Meet IEEE 802.3 requirements
- 10/100M auto negotiation
- Support half and full duplex
- Auto cross over
- AC impedance: 100 ohm
- Loop reach: 100m@(Cat5 or above)
- Connector: RJ-45

- **Operation Environmental Conditions:**

- Temperature: 0 ~ 45°C
- Humidity: 5 ~ 90% (RH)

- **Storage:**

- Temperature: -20 ~ 70 C
- Humidity: 5 ~ 95 %

- **Transportation:**

- Temperature: -20 ~ 70 C
- Humidity: 5 ~ 95%

- **Mechanical:**

- **Dimension:** 160mm (w) x 120 mm (d) x 25 mm (h)
- **Weight:** 180g