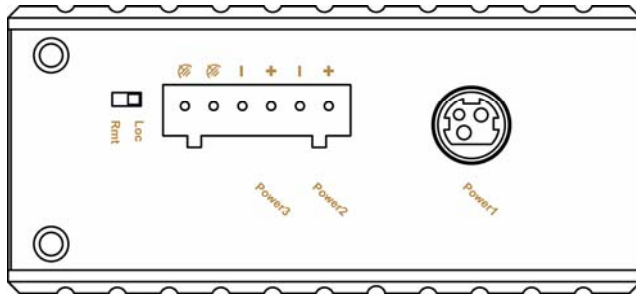


## *Hardened VDSL Ethernet Extender*

This quick installation guide describes how to install and use the Hardened VDSL Ethernet Extender. Capable of operating at temperature extremes of -34°C to +74°C, this is the Hardened VDSL Ethernet Extender of choice for harsh environments constrained by space.

### Physical Description

#### The Terminal Block and Power inputs



Power Input Assignment		
Power1		12VDC
Power2	+	12-30VDC
	-	Power Ground
Power3	+	12-30VDC
	-	Power Ground
		Earth Ground
DC Jack		
Terminal Block		
DIP Switch Assignment		
Loc	The device operates in local mode	
Rmt	The device operates in remote mode	

- DC Terminal Block Power Inputs: There are two pairs of power inputs can be used to power up this media converter. Redundant power supplies function is supported. You only need to have one power input connected to run the media converter.
- DC JACK Power input: 12VDC.

### The 10/100Base-TX and VDSL Connectors

#### The 10/100Base-TX Connection

The following lists the pinouts of 10/100Base-TX RJ-45 port.



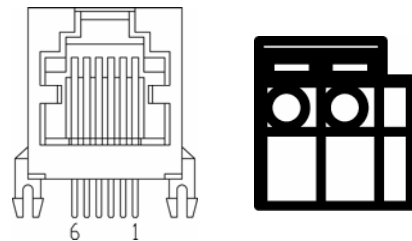
Pin	Regular Ports	Uplink ports
1	Input Receive Data +	Output Transmit Data +
2	Input Receive Data -	Output Transmit Data -
3	Output Transmit Data +	Input Receive Data +
4	NC	NC
5	NC	NC
6	Output Transmit Data -	Input Receive Data -
7	NC	NC
8	NC	NC

#### The VDSL Connection

The VDSL RJ-11 and Terminal Block port pinouts

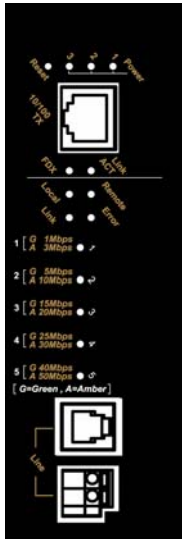
Pin 3: RX, Pin 4: TX.

Use a cross-over cable to connect two VDSL RJ-11 or Terminal Block ports between two Hardened VDSL Ethernet Extenders.



## Hardened VDSL Ethernet Extender

### The Port Status LEDs



LEDs	State	Indication
Power1	Steady	Power on
Power2	Off	Power off
Power3		
Ethernet		
Link/ACT	Steady	Valid network connection established
	Flashing	Transmitting or receiving data ACT stands for ACTIVITY
	Off	Neither valid network connection established nor transmitting/receiving data
FDX	Steady	Connection in full-duplex mode FDX stands for FULL-DUPLEX
	Off	Connection in half-duplex mode

Ethernet over VDSL	
Remote	The device operates in remote mode
Local	The device operates in local mode
Error	Error occurred
Link	A valid VDSL connection established
1	Green, 1Mbps, up to 1900M Amber, 3Mbps, up to 1800M
2	Green, 5Mbps, up to 1600M Amber, 10Mbps, up to 1400M
3	Green, 15Mbps, up to 1200M Amber, 20Mbps, up to 1000M
4	Green, 25Mbps, up to 800M Amber, 30Mbps, up to 700M
5	Green, 40Mbps, up to 600M Amber, 50Mbps, up to 300M

### Functional Description

- Meets NEMA TS1/TS2 Environmental requirements: temperature, shock, and vibration for traffic control equipment.
- Meets IEC61000-6-2 EMC Generic Standard Immunity for industrial environment.
- Operates transparent to higher layer protocols such as TCP/IP.
- Ethernet port: Supports IEEE802.3/802.3u/802.3x. Auto-negotiation: 10/100Mbps, full/half-duplex; Auto MDI/MDIX.
- VDSL port: Symmetrical on the VDSL, high-speed full-duplex 50Mbps communications link over existing copper telephone line.
- One DIP switch for configuring Local (Loc) and Remote (Rmt).
- Ten speeds with speed indicator LEDs on front panel of unit, up to 50Mbps @ about 300meters (984ft.), down to 1Mbps @ about 1,900meters (6,233ft.).
- Operating voltage and Max. current consumption: 0.225A @ 12VDC, 0.113A @ 24VDC. Power consumption: 2.7W Max.
- Power Supply: Redundant 12-30VDC Terminal Block power inputs and 12VDC DC JACK with 100-240VAC external power supply.
- Operating temperature ranges from -34°C to 74°C.
- Supports Din-Rail, Panel, or Rack Mounting installation.

### Assembly, Startup, and Dismantling

- Assembly: Place the Hardened VDSL Ethernet Extender on the DIN rail from above using the slot. Push the front of the Hardened VDSL Ethernet Extender toward the mounting surface until it audibly snaps into place.
- Startup: Connect the supply voltage to start up the Hardened VDSL Ethernet Extender via the terminal block (or DC JACK).
- Dismantling: Pull out the lower edge and then remove the Hardened VDSL Ethernet Extender from the DIN rail.

