Total Access 832

## SHDSL EFM

## NTU

P/N: 1200718L2 CLEI: SIM5Z10B_


## DESCRIPTION

The Total Access 832 SHDSL EFM NTU is a Metro-Ethernet Forum (MEF) compliant, EFM bonded NTU designed for cost-effective deployment of voice and data services to small and medium size businesses supporting up to two 2 -wire SHDSL loops. The Total Access 832 accepts SHDSL or eSHDSL and delivers 10/100 Ethernet for customer LAN extension. The Total Access 832 terminates the SHDSL loops in a RJ-48C connector and supports data rates from 192 kbps to 5.7 Mbps per copper pair. The Total Access 832 provides an aggregate data rate up to 11.4 Mbps over a single EFM bonded group.

## FEATURES

- One integrated EIA-232 configuration port (DCE)
- One integrated 10/100Base-T Ethernet port
- Two 2-wire eSHDSL loops
- WAN Protocol: IEEE 802.3ah Ethernet in the First Mile (EFM) bonding
- Command Line Interface (CLI)
- Remote Management - EOC/CLI using Virtual Terminal, Telnet by way of Management VLAN
- Front panel LEDs

- Wall mounting hardware included
- MEF Compliant as a UNI Type 1.2


## INSTALLATION AND TURN-UP

After unpacking the unit, inspect it for damage. If damage is noted, file a claim with the carrier and then contact ADTRAN. For more information, refer to the warranty.
Before installing the SHDSL EFM NTU, be sure to have the following items:

- VT100 Terminal or PC (with VT terminal emulation software)
- Straight-through Serial Cable with a DB-9 (male) connector on one end and the appropriate interface for the terminal (or PC) on the other end
Follow the steps listed below to install the SHDSL EFM NTU.

1. Connect power to rear 12 VDC power port labeled POWER.
2. Connect network SHDSL to rear network port labeled NETWORK as shown in the WAN-SHDSL Network Pinout (RJ-45) table on reverse side.
3. Connect customer Ethernet to rear Ethernet port labeled ETHERNET as shown in the 10/100Base-T Ethernet Port Pinout table on reverse side.


CAUTION! SUUJECT TO LEEGTROSTATIC DAMAG: or dechease in relablitr. handing precautions reauired.
4. Connect to the rear panel RS-232, DB-9 connector labeled CONSOLE to $\log$ on and provision the Total Access 832 by way of VT100 terminal or VT100 terminal emulation software such as HyperTerminal or ProComm Plus.
Craft port defaults are as follows:

- Data Rate: Auto
- Asynchronous Data Format: 8 data bits, no parity, 1 stop bit, and no flow control

5. Press Enter to activate the Command Line Interface (CLI).

NOTE: The default username and password are "ADMIN" and "PASSWORD" in all capital letters.
FRONT PANEL LEDS

| Label | Status | Description |  |
| :--- | :--- | :--- | :--- |
| PWR | O | Off | No power present |
|  | $\bullet$ | Green | Power present |
| NET LOOP1 | O | Off | SHDSL loop 1 is disabled |
|  | $\bullet$ | Green | SHDSL loop 1 is trained up and EFM group is established |
|  | * | Green Flashing (slow) | SHDSL loop 1 is currently training |
|  | * | Green Flashing (fast) | SHDSL loop 1 is acquiring EFM synchronization |
|  | * | Red | Red Flashing |

## REAR PANEL LEDS

| Label | Status | Description |  |
| :--- | :--- | :--- | :--- |
| ETHERNET | $\bullet$ | Green | 10/100Base-T Ethernet link is up |
|  | $\bullet$ | Yellow | Ethernet activity |

## Total Access 832

## SHDSL EFM NTU (Annex A)

## SPECIFICATIONS

| Specification Description |
| :---: |
| Electrical |
| DC Input Power: $\begin{aligned} & 12 \mathrm{VDC} \text { nominal (Minimum: } 11 \mathrm{VDC} ; \\ & \text { Maximum: } 13 \mathrm{VDC} \text { ) }\end{aligned}$ |
| Environmental |
| Operating Temperature: $0^{\circ} \mathrm{C}$ to $+50^{\circ} \mathrm{C}$ <br> Storage Temperature: $-60^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ <br> Humidity: $95 \%$, noncondensing |
| Physical |
| Dimensions: Width: 9.3 inches Height: 2.1 inches Depth: 6.1 inches |
| Compliance |
| EMC Emissions: EN 55022 Class A; FCC Part 15 Class A <br> EMC Immunity, Power Fault, and Lightning: EN 55024; EN 61000-3-2; EN 61000-3-3; <br> NEBS Level 1  |
| Electrical Safety: EN 60950; IEC 60950; UL 60950 <br> Telecom: AS/ACIF S043.2; ITU-T G.991.2 Annex A |
| Connectors |
| SHDSL Port: RJ-45; 135 ohms <br> 10/100Base-T Ethernet: RJ-45 <br> Console Port: DB-9 female <br> Power Input: Kycon KPJ-3S snap and lock or equivalent |
| Diagnostics and Test |
| Self-diagnosis |

## COMPLIANCE

For detailed compliance information, refer to the Total Access 832 SHDSL EFM NTU Compliance Notice (P/N 61200718L2-17).

## CONSOLE PORT PINOUT

| Pin | Name | Description |
| :---: | :---: | :--- |
| 1 | - | No Connection (NC) |
| 2 | RD | Receive Data (Output) |
| 3 | TD | Transmit Data (Input) |
| 4 | DTR | Data Terminal Ready |
| 5 | SG | Signal Ground |
| $6-9$ | - | NC |

## 10/100BASE-T ETHERNET PORT PINOUT

| Pin | Name | Description |
| :---: | :---: | :--- |
| 1 | TX1 | Transmit Positive |
| 2 | TX2 | Transmit Negative |
| 3 | RX1 | Receive Positive |
| 4,5 | - | NC |
| 6 | RX2 | Receive Negative |
| 7,8 | - | NC |


| RESOURCES |  |
| :---: | :---: |
| Resource | Maximum |
| EVCs | $32^{*}$ |
| Maps | 64 |
| Profiles | 64 |
| EFM Groups | 1 |

* Includes EVCs used for management VLAN.

WAN-SHDSL NETWORK PINOUT (RJ-45)

| Pin | Name | Description |
| :---: | :---: | :--- |
| 1 | Tip 2 | Loop 2 Pair Tip |
| 2 | Ring 2 | Loop 2 Pair Ring |
| 3 | - | NC |
| 4 | Tip 1 | Loop 1 Pair Tip |
| 5 | Ring 1 | Loop 1 Pair Ring |
| $6-8$ | - | NC |

## DEPLOYMENT GUIDELINE

| Rate (kbps) | Length (ft)* $^{*}$ |
| :---: | :---: |
| 5696 | 2800 |
| 5056 | 3100 |
| 3840 | 4500 |
| 3392 | 4900 |
| 2560 | 5700 |
| 2304 | 6300 |
| 2048 | 6800 |
| 1536 | 7900 |
| 1024 | 9800 |
| 768 | 11000 |
| 384 | 14800 |

* Maximum 26 AWG

Warranty: ADTRAN will replace or repair this product within the warranty period if it does not meet its published specifications or fails while in service.
Warranty information can be found online at www.adtran.com/warranty.

