U-BR1TE WITH POWER

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0307

U-BR1TE
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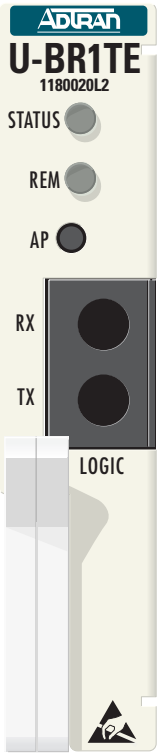
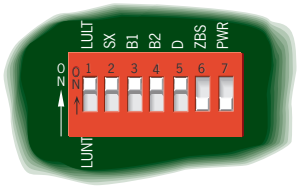


DESCRIPTION

The U-BR1TE with power plugs into a single channel slot of a Total Access® 1500 chassis. It provides an ISDN U-interface and allows the transport of Basic Rate 2B+D information over T1 carriers. The U-BR1TE features:

- 18kft nominal range in mixed gauge wire
- ISDN 2B1Q interface
- Internal testing of individual B channels
- All Layer 1 maintenance functions
- Provides repeater powering and DDS IDSL support



INSTALLATION AND TURN-UP

1 **Unpack the Total Access 1500 U-BR1TE access module and inspect for damage. If damage is has ocurred, file a claim with the carrier and then contact ADTRAN.**

2 **Verify SW1 is provisioned properly for the intended application. Refer to the table below for default provisioning and other provisioning options. Make changes to SW1 options as necessary.**

SW SETTINGS

Switch	Label	Function/Description			
SW1-1	LULT/LUNT	Termination Mode			
		***ON…LULT Mode (RT Typical)**			
		OFF…LUNT Mode (COT Typical)			
SW1-2	SX	Sealing Current			
		***ON…DC sealing current provided** (Adjacent to switch or customer)			
		OFF…DC sealing current not provided (Tandem office installation)			
SW1-3	B1	Service Level Station (Enables B1 Channel)			
SW1-4	B2	(Enables B2 Channel)			
SW1-5	D	(Enables D Channel)			
		Service Option	SW1-3 (B1)	SW1-4 (B2)	SW1-5 (D)
		2B+D	***ON**	***ON**	***ON**
		2B	ON	ON	OFF
		B1+D	ON	OFF	ON
		B2+D	OFF	ON	ON
		B1	ON	OFF	OFF
		B2	OFF	ON	OFF
		D	OFF	OFF	ON
SW1-6	ZBS	Zero Byte Substitution			
		ON....Enable ZBS			
		***OFF…Disable ZBS**			
SW1-7	PWR ON	Enables Repeater Powering			

*** Factory Default**

3 **Insert U-BR1TE access module into a Total Access 1500 chassis slot 1-24. To insert, hold the U-BR1TE access module by the front panel while supporting the bottom edge of the module. Align the access module edge with the guide groove in the Total Access 1500 chassis. Insert into chassis until the edge module connector seats firmly into the chassis backplane. Lock the access module in place by pushing in on the locking lever.**

4 **Monitor Status LED for operational status.**

LED STATUS

STATUS	○	**Off**	Indicates both loop and carrier synchronization have been established
	●	**Red**	Solid indicates neither loop nor carrier synchronization has been established.
	✳	**Flashing**	Once every two seconds indicates loop synchronization has been established, but carrier synchronization has not.
	✳✳	**Flashing**	Twice every second indicates carrier synchronization has been established, but loop synchronization has not.
	●	**Green**	Indicates that Layer 1 is established from the ISDN switch to the customer ISDN terminal equipment.
	●	**Yellow**	Solid when a front panel test has been initiated or when responding to 2B+D loopback request.
	✳	**Flashing**	Flashes once every two seconds when responding to a B1 loopback request.
	✳✳	**Flashing**	Flashes twice every two seconds when responding to B2 loopback request.
REM	●	**Green**	Indicates the unit has been provisioned by the SCU.

AP PUSHBUTTON

AP	**Pushbutton**	Alternative provisioning switch. Changes provisioning source from remote to manual.

PROVISIONING

5 **The Total Access 1500 supports two types of provisioning modes, local and remote. Local provisioning results in the unit operating as defined by the onboard switches. Remote provisioning, if chosen, results in the unit operating as defined by the system controller menu settings (onboard switches are ignored). The operational mode is indicated by the REM LED and can be changed by activating the AP (Alternate Provisioning) front panel switch**

6 **Connect VT100 compatible terminal to SCU front panel ADMIN port. The ADMIN port issued for provisioning, testing, and performance monitoring functions.**

- Connect DB-9 cable
- Run terminal emulation program
- If using Windows HyperTerminal, open by selecting Programs/Accessories/Hyperterminal
- Login and navigate through ADMIN port menu structure

NOTE: To ensure proper display background, select VT100 Terminal Emulation under settings.

CAUTION!
SUBJECT TO ELECTROSTATIC DAMAGE OR DECREASE IN RELIABILITY.
HANDLING PRECAUTIONS REQUIRED.

■ For a complete Installation and Maintenance Practice (P/N 61180020L2-5): 877-457-5007, Faxback Document 942. Please have your fax number ready. ■

7 **Navigate through the menus to perform the desired function.**

NOTE: To traverse through the menus, select the desired entry, and press Enter. To work backward in the menu, press Esc (escape key).

8 **Test functions can be activated through front panel bantam jacks, the ADMIN port, or in-band loopback sequences.**

TESTING

- Loopback tests – initiated from either the ISDN switch or the front panel via the local craft interface in the Network-to-Customer direction
- Point-to-point test – initiated via the local craft interface toward either the U-interface or the T1 carrier interface
- Local Loopback – initiated from the local craft interface for either bearer channel
- Leased Mode Testing – responds to independent network-issued OCU and CSU latching loopback sequences for B1 and B2, when configured Adjacent-to-Customer and the D channel is disabled
- DS0 DP Latching Loopback sequences in B1 when D channel is off (B1, 2B)
- EOC remapping of subsequent DS0 DP Latching Loopbacks to downstream elements

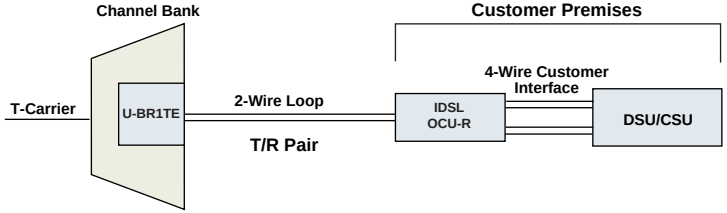
CONNECTIONS

- All connections are made through the 50-pin amphenol connector on the Total Access 1500 backplane

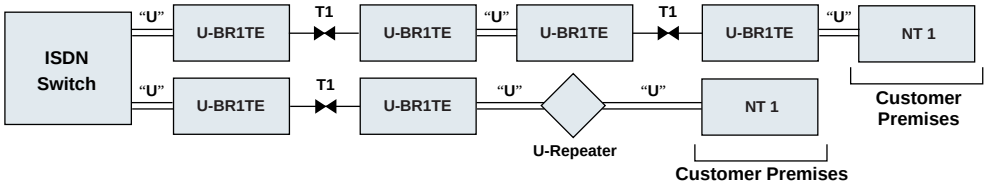
SPAN POWER

The U-BR1TE span powers the IDSL OCU-R or a U-Repeater. Voltage measurements from Tip to Ring is –120 VDC (with no termination). Tip to GND is 0. Ring to GND is –120 VDC (with no termination) or less depending on voltmeter impedance.

DDS APPLICATION



ISDN APPLICATIONS



MLT3.0/ISDN CHANNEL TEST

Channel Test (LUNT Mode)

Upon detection of the Test Initiative Voltage (116 VDC behind 8kΩ applied to Tip with Ring open) the LUNT does the following:

- Sends a Channel Test mp-eoc message downstream to the LULT, signaling the request for a MLT channel test
- Notifies the SCU that an MLT test is underway
- Sends a 333.3 Hz tone between the Tip and Ring leads. This tone is compliant with TR-TSY-00465
- When the Test Initiative Voltage is removed, the active test status indication to the SCU is removed, a Return to Normal mp-eoc message is sent to the LULT, and the U-Interface attempts re-synchronization.

Channel Test (LULT Mode)

Upon receipt of the Channel Test mp-eoc message, the LULT does the following:

- Notifies the SCU that an MLT test is underway
- Connects the bypass pair. This connects the customer drop to the common equipment through TEST_R and TEST_T. The setup sequence is complete.
- Upon completion of the automatic test the bypass relay de-energizes
- Attempts to re-synchronize the U-interface between the LULT and the NT1.

BANTAM TEST JACKS

- Accommodate DS0 Logic Testers such as the TPI 108/109 RT II or an equivalent test set to perform upstream and downstream testing.

COMPLIANCE

This product is intended to be installed in products providing a Type "B" or "E" enclosure, and in a Restricted Access Location.

- NEBS Level 3 compliant
- Operating temperature range of –40°C to +65°C

Code	Input	Output
Power Code (PC)	F, C	C
Telecommunication Code (TC)	X	X
Installation Code (IC)	A	–

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by ADTRAN could void the user's authority to operate this equipment.

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 at www.adtran.com/warranty. U.S. and Canada customer Faxback: 877-457-5007, Document 414