

## TOTAL REACH DDS-DP

CLEI: VAL2JGAA\_ \_



### LED INDICATION

- STATUS**
- Green Normal synchronized operating condition
  - Yellow OCS or channel loopback test is active
  - Red Indicates one of three conditions:
    - Loss of sealing current
    - Loss of, or no synchronization
    - Poor signal quality (if Quality Monitor enable, SW1-3 ON)
- REM**
- Green Remote provisioning in effect
  - \* Flashing DS-6 control link established

*Note: All LEDs OFF indicates no power or a malfunction.*

### BANTAM JACKS

NEAR and FAR logic level bantam test access jacks. These test points are intrusive into the data stream.

*Note: These jacks are for TPI 108/109, FIREBERD 6000 or other DS0 level test set.*

### INSTALLATION

The Total Reach DDS-DP plugs directly into a Total Access 1500 shelf. The 2-wire loop uses the T/R (Tip and Ring) pair, pins 15 and 35, of the Total Access 1500 backplane.

### REMOTE UNIT SPAN POWER

The Total Reach DDS-DP span powers the remote unit by providing -130 VDC measured from Tip to Ring. Voltage measured from Tip to GND should be -130 VDC or less depending on voltmeter impedance. Voltage from Ring to GND should indicate approximately 0 VDC.

### SYNCHRONIZATION

The Total Reach DDS-DP and DDS-R typically require 30 to 90 seconds to achieve synchronization. Once achieved, the Status LED will turn ON green. If synchronization cannot be achieved, check the T/R pair for open-circuit or short-circuit conditions or load coils present on the 2-wire loop.

### TESTING

The Total Reach DDS-DP is equipped with logic level bantam test access jacks that permit testing in both directions using a portable test set. A bidirectional loopback is executed when performing an OCU loopback at the Total Reach DDS-DP, during which the DDS-R enables test data to pass through the 4-wire interface to the customer site. A loopback may also be initiated in response to the loopback pushbutton on the remote unit.

### PROVISIONING

Remote access to provisioning and status information is accomplished using either ADTRAN Digital System 6 Message protocol or the craft interface on the Total Access 1500 SCU.

All configuration options can be remotely viewed or provisioned. The front panel Remote (REM) LED indicator remains ON after remote provisioning is accomplished. If the unit has been remotely provisioned, the operator can alternate between remote configuration and manual switch settings by pressing the momentary Alternate Provisioning (AP) switch located on the front panel.

### CIRCUIT BOARD SWITCHES – SW1 AND SW4

Select the appropriate Options and Rate using circuit board switches SW1 and SW4.

#### Protected Loopback (PLB) (SW1-1)

- Enables an algorithm to eliminate false latching loopback at 64 kbps.

#### AB Signaling (SW1-2)

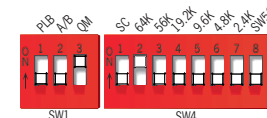
- This switch is typically OFF to allow the unit to search for frames containing signaling bits. (Only applicable for SW56 applications.)

#### Quality Monitor (SW1-3)

- TR DDS-DP monitors incoming 2-wire loop and 4-wire customer interface data for errors. Customer transmit data may be blocked if errors are excessive.

#### Rate Selection (SW4)

- Select only one rate. More than one, or none, defaults to 56 kbps without secondary channel. If either SW56 or 64 kbps is selected, the secondary channel (SC) switch should not be selected.



### COMPLIANCE CODES

This product complies with UL 1950, third edition. It is intended to be installed in a restricted access location in a type “B” or “E” enclosure only. Input current at maximum load is 1 A, and maximum output at overcurrent condition is 160 mA at -188 VDC.

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

### WARRANTY

Warranty for Carrier Networks products manufactured by ADTRAN and supplied under Buyer's order for use in the U.S. is ten (10) years. For a complete faxback copy of ADTRAN's U.S. and Canada Carrier Networks Equipment Warranty, call (877) 457-5007, Document #414.



## DEPLOYMENT GUIDELINES

- All loops must be nonloaded.
- Actual Measured Loss (AML) should not exceed 50 dB at 13.3 kHz (135 Ω termination), the Nyquist frequency of Total Reach DDS.
- Loop length should not exceed 50 kft.
- Product is designed to be bridged tap (BT) tolerant. ADTRAN allows for 12 kft of BT, though further testing has shown no degradation up to 18 kft of BT.
- Background noise level should not exceed 34 dBm.
- Impulse noise should not exceed -40 dBm, (+50 dBm).
- Maximum cable lengths (6 dB margin still available) 50 kft of 22 gauge, 36 kft of 24 gauge, 27 kft of 26 gauge.

### Cable Type and Temperature Loss Data @ 13.3 kHz

Plastic Cable	dB Loss/kft	Paper Cable	dB Loss/kft
19 Gauge PIC (0°F)	0.5302	19 Gauge PULP (0°F)	0.5616
19 Gauge PIC (70°F)	0.6083	19 Gauge PULP (70°F)	0.6415
19 Gauge PIC (120°F)	0.6610	19 Gauge PULP (120°F)	0.6955
22 Gauge PIC (0°F)	0.912	22 Gauge PULP (0°F)	0.9454
22 Gauge PIC (70°F)	1.0258	22 Gauge PULP (70°F)	1.0606
22 Gauge PIC (120°F)	1.1015	22 Gauge PULP (120°F)	1.1370
24 Gauge PIC (0°F)	1.2571	24 Gauge PULP (0°F)	1.2900
24 Gauge PIC (70°F)	1.3982	24 Gauge PULP (70°F)	1.4324
24 Gauge PIC (120°F)	1.4917	24 Gauge PULP (120°F)	1.5268
26 Gauge PIC (0°F)	1.6751	26 Gauge PULP (0°F)	1.6823
26 Gauge PIC (70°F)	1.8469	26 Gauge PULP (70°F)	1.8568
26 Gauge PIC (120°F)	1.9608	26 Gauge PULP (120°F)	1.9718

## WIRING CONNECTIONS

Pair	Terminal Designations	TR PIN#
Tip	T	15
Ring	R	35