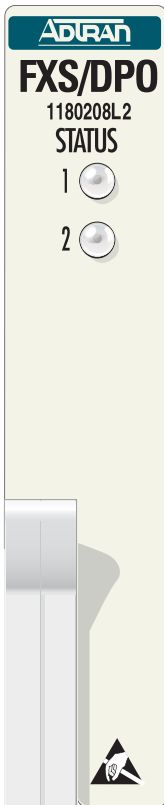


### Total Access 1500 Dual FXS/DPO

P/N: 1180208L2  
CLEI: VAL2CC0A\_



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### DESCRIPTION

The Dual Foreign Exchange Station and Dial Pulse Origination unit (Dual FXS/DPO, P/N 1180208L2) is used for analog voice extension and DID circuits. The Dual FXS/DPO offers private line automatic ringdown. The Dual FXS/DPO has the following features:

- ◆ Dual independent FXS/DPOs on a single card
- ◆ FXS, DPO, PLAR, TR08 SP, TR08 UVG, Tandem, and TO with Sealing Current operating modes
- ◆ Loop Start, Ground Start, and Wink Start signaling modes
- ◆ Custom Local Area Signaling Services (CLASS™) compatibility
- ◆ Digital loopback to network, via site manager or craft interface

### FRONT PANEL LEDS

Label	Status	Description
STATUS 1 / 2	○ Off	Idle
	● Green	Busy
	● Yellow	Test
	● Red	Fault

### INSTALLATION

After unpacking the Dual FXS/DPO, 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.

To install the Dual FXS/DPO, complete the following steps:

1. If present, remove the Access Module Blank (P/N 1175099L1) from the appropriate access module slot of the Total Access 1500 chassis.
2. Pull the ejector latch, located on the lower left-hand side of the Dual FXS/DPO front panel, from its closed position.
3. Hold the Dual FXS/DPO by the front panel while supporting the bottom edge of the module with the ejector latch opened to engage the chassis edge.
4. Align the module edges to fit in the lower and upper guide grooves for any access module slot 1-24.
5. Slide the module into the access module slot. Simultaneous thumb pressure at the top and at the bottom of the module will ensure that the module is firmly positioned against the backplane of the chassis.
6. Secure the Dual FXS/DPO in place by pushing in on the ejector latch.

When the Dual FXS/DPO first powers up it runs a power up self-test. Once the power up self-test is complete, the status LEDs will reflect the operational state of the hardware. Monitor the LEDs for operational status.

*NOTE: The system automatically maps DS0s in the T1 as determined by the LIU operational configuration. Automatic assignment can be overridden by manually changing the T1 mapping in the LIU menu system.*

### PROVISIONING

The Dual FXS/DPO supports remote provisioning only, and is provisioned through the common equipment ADMIN port of the Total Access 1500 System Controller Unit Remote Terminal (SCU RT, P/N 61180008Lx). To connect a VT100-compatible terminal to the ADMIN port for provisioning, testing, and performance monitoring functions, complete the following steps:

1. Connect a DB-9 cable to the DB-9 CRAFT port.
2. Run a terminal emulation program. If using Windows Hyperterminal, open the program by selecting Programs>Accessories>Hyperterminal.
3. Log in and navigate through the ADMIN port menu structure to the Dual FXS/DPO provisioning options and perform the desired function.

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

*NOTE: To traverse through the menus, select the desired entry and press Enter. To work backwards in the menu, press Esc.*

### TESTING

To test the operation of the Dual FXS/DPO, initiate tests through the Total Access 1500 SCU ADMIN port. The table below describes the available tests.

Test	Purpose
Network On-Hook/Off-Hook Test	This test sends on/off hook signaling to the network.
Digital Loopback Test	This test loops back DS0 data coming from the network.
Customer Ring Test	This test activates the unit ring relay in a 2-on / 4-off ring cadence, providing ringing to the customer loop.
1004 Hz DRS Tone Generation Test	This test sends the DRS signal to the loop, to the network, or to both simultaneously.

## CONNECTIONS

All connections are made through the 50-pin amphenol connector on the back panel of the Total Access 1500 chassis.

Dual FXS Total Access 1500 Slot	Port 1 T/R (P1)	Port 2 T/R (P3)	Dual FXS Total Access 1500 Slot	Port 1 T/R (P1)	Port 2 T/R (P3)
1	26/1	26/1	13	38/13	38/13
2	27/2	27/2	14	39/14	39/14
3	28/3	28/3	15	40/15	40/15
4	29/4	29/4	16	41/16	41/16
5	30/5	30/5	17	42/17	42/17
6	31/6	31/6	18	43/18	43/18
7	32/7	32/7	19	44/19	44/19
8	33/8	33/8	20	45/20	45/20
9	34/9	34/9	21	46/21	46/21
10	35/10	35/10	22	47/22	47/22
11	36/11	36/11	23	48/23	48/23
12	37/12	37/12	24	49/24	49/24

## OPERATION

### Operational Modes

- ◆ FXS, DPO, PLAR, TR08 SP, TR08 UVG, Tandem, and TO with Sealing Current
- ◆ Ground Start or Loop Start
- ◆ Immediate or Wink Start (tandem only)
- ◆ Normal or reverse battery (tandem only)
- ◆ Supports PLAR D3, D4, and FXS Ringdown modes

### Attenuation Levels

- ◆ Input TLP range: -7.0 to +9.0 dBm; Transmit Attenuation = Input TLP
- ◆ Output TLP range: -9.0 to +0.0 dBm; Receive Attenuation = Output TLP

### 2-Wire Impedance Settings

- ◆ 600  $\Omega$  + 2.16  $\mu$ F (short loops)
- ◆ 900  $\Omega$  + 2.16  $\mu$ F (long loops)

## Applications

The diagram below illustrates two Dual FXS/DPO applications.

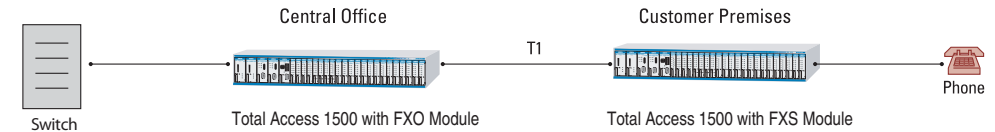


Figure 1. Standard FXO/FXS application

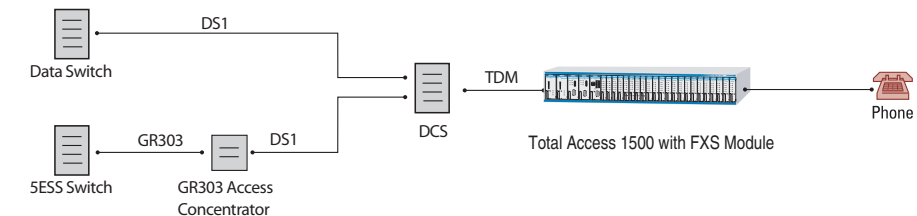


Figure 2. Application using FXS to GR303 Access Concentrator

## COMPLIANCE

The Dual FXS/DPO complies with the requirements covered under UL 60950 and is intended to be installed in a Total Access 1500 Chassis located in a restricted access area.

Code	Input	Output
Power Code (PC)	C	C
Telecommunication Code (TC)	—	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.
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.