ADTRAN

> **NOTE**
>
> *Please note that these examples are given for your study and consideration only. They are to help you reach a better understanding of the fundamental concepts before configuring your application. It will be necessary for you to modify these examples to match your network configuration. Please replace all underlined entries (**example**) with your specific parameters.*

> **NOTE**
>
> *Please refer to the **ADTRAN Operating System (AOS) Command Reference Guide** on your **ADTRAN OS System Documentation** CD for detailed information on individual commands and subcommands pertaining to the Total Access 900 Series products.*

PRI Interface

The Primary Rate Interface (PRI) is an Integrated Digital Service Network (ISDN) circuit composed of 23 bearer-channels (B-channels) and 1 data-channel (D-channel). ISDN PRI is an international standard for digital communications, allowing a full range of enhanced services supporting voice and data. The 23 B-channels are used to transmit voice and/or data over an all-digital public switched telephone network. The D-channel is used to transmit out-of-band signaling for the B-channels that controls dialing numbers and features like call waiting.

The Total Access 900 series delivers the PRI over the physical DSX-1 interface. This interface is labeled **DSX-1 T1 0/1** on the ADSL units and **DSX-1 T1 0/2** on all other units.
The TDM group for this interface must include channel 24 (the D-channel) for signaling. If the voice application utilizes a fractional PRI, the channels must be contiguous (i.e., 20 to 24).

Configuring Voice over PRI Interface

The following steps demonstrate configuring the PRI voice application. In the following steps, please substitute **1** (ADSL units) or **2** (all other units) for **x** in **t1 0/x**.

1. Start a VT100 terminal session to connect to your unit. If you need assistance, follow the steps in the *Total Access 900 Series Quick Configuration Guide* (P/N 61210916L1-42.1).

2. Enter **enable** at the initial command prompt to access the Enable mode's priviledged commands.

3. Enter **configure terminal** to access the Global Configuration mode.

4. Enter **interface t1 0/x** to configure the physical interface.

5. Enter **tdm-group <u>2</u> timeslots <u>1-24</u>** to create a TDM group for the interface.

6. Enter **no shutdown** to activate the interface.

7. Enter **exit** to return to the **(config)#** prompt. At the **(config)#** prompt, enter **interface pri <u>1</u>** to access the interface configuration mode for the PRI interface. The number <u>1</u> is an identifier for the PRI interface that is chosen by the administrator.

8. Enter **connect t1 0/x tdm-group <u>2</u>** to connect the PRI interface to the physical T1.

> **NOTE** *The PRI interface functions with the default settings. Skip to Step 12 to activate the PRI interface and proceed with the ISDN group configuration.*

9. *Optional*. Enter **role network b-channel-restart <u>enable</u>** to allow B-channel restarts for protocol-emulate network. The default setting is **network**.

10. *Optional.* Enter **isdn switch-type <u>ni2</u>** to set the network switch type of the PRI. This parameter is assigned by your telephone company. The default setting is **ni2** (National ISDN2).

11. *Optional.* Enter **digits-transfered <u>4</u> prefix <u>555</u>** to allow the unit to accept the digits dialed to reach the end user. The choices are **0**, **3**, **4**, **7**, or **all**. If less than **all** digits are sent, a DID **prefix** must be defined after the digits transferred setting. The default setting is **all.**

12. Enter **no shutdown** to activate the interface.

13. Enter **exit** to return to the **(config)#** prompt; then type **isdn-group <u>1</u>** to create a new ISDN group which ties the PRI interface to the voice trunk and data endpoint.

14. Enter **connect pri <u>1</u>** to connect the PRI interface <u>1</u> to ISDN group <u>1</u>.

> **NOTE** *For voice applications, the default setting will function properly for the ISDN group parameters. The call type is set for voice, all incoming calls will be accepted, and the maximum and minimum channels are set to zero (any available channel in the TDM group will be used).*

15. Enter **exit** to return to the **(config)#** prompt. At the **(config)#** prompt, enter **voice codec-list <u>PRI-Trunk</u>** to create a CODEC list named **PRI-Trunk** for call negotiation.

16. Enter **codec <u>g729</u>** to set g729 CODEC as the primary CODEC for call negotiation. Next, enter **codec <u>g711ulaw</u>** to set the secondary CODEC.

17. Enter **exit** to return to the **(config)#** prompt to configure the voice grouped-trunk.

18. Enter **voice trunk <u>T02</u> type isdn** to configure ISDN voice trunk.

19. Enter **connect isdn-group <u>1</u>** to connect the ISDN voice trunk to the ISDN group.

20. Enter **no reject-external** to allow calls to be routed out the ISDN trunk by the switchboard.

21. Enter **codec-group <u>PRI-Trunk</u>** to apply the CODEC list **PRI-Trunk** to the ISDN trunks.

22. Enter **exit** to return to the **(config)#** prompt to configure the voice grouped-trunk.

23. Enter **voice grouped-trunk <u>PRI</u>** to create a new voice grouped-trunk.

24. Enter **trunk T02** to connect the ISDN trunk.

25. Enter **accept <u>NXX-XXXX</u>** to designate which number(s) to route out to the PBX (usually a subset of the extensions behind the PBX).

26. Enter **end** to exit the Global Configuration mode.

27. At the **#** prompt, enter **copy running-config startup-config** to save the running configuration to the start-up configuration. The configuration must be saved to the unit's nonvolatile random access memory (NVRAM) to prevent the loss of configuration during a power cycle.

28. Proceed with creating the SIP trunk (refer to P/N 61210916L1-29.1, *SIP Trunk Configuration Guide*).