



## SPECIFICATIONS

<b>E1/FE1 Interface</b>	Line Rate: 2.048 Mbps +/- 50 PPM Line Code: AMI or HDB3 Framing: FAS with optional CRC-4 Receiver Sensitivity: -30 dB FE1 Line Rate: Timeslot, channelized (in multiples of 64 kbps) Connector: RJ-48C
<b>Clock Source</b>	Network, Internal
<b>Diagnostics</b>	Test pattern generation and detection (QRSS, 511) Network loopbacks Alarm generation and detection Network performance data (15 minutes and 24 hours)

## INSTALLATION INSTRUCTIONS

1. Remove power from the unit.
2. Slide the Network Interface Module (NIM) into the option slot until the NIM is firmly seated against the front of the chassis.
3. Secure the pins at both edges of the NIM.
4. Connect the cables to the associated device(s).
5. Complete the installation of the base unit.
6. Restore power to the unit.

## WAN-E1 NETWORK (RJ-48C) CONNECTION PINOUT

Pin	Name	Description
1	R1	Receive data from the network
2	T1	Receive data from the network
3	—	Unused
4	R	Transmit data toward the network
5	T	Transmit data toward the network
6-8	—	Unused

## DBU (RJ-48C) CONNECTION PINOUT

Pin	Name	Description
1-2	—	Unused
3	R1	Network-Ring1
4	R	Network-Ring
5	T	Network-Tip
6	T1	Network-Tip1
7-8	—	Unused



*An optional Dial Backup Interface Module (DIM) is required for dial backup applications.*

#### E1/FE1 NIM COMMANDS

##### clock source {*line* | *internal* | *through*}

Configures the source timing used for the interface.

<b>line*</b>	Recovers clock from the primary circuit.
<b>internal</b>	Provides clocking using the internal oscillator.
<b>through</b>	Recovers clock from the circuit connected to the DSX-1 interface.

##### coding {*ami* | *hdb3*}

Configures the line coding for the E1 physical interface. The settings must match the line coding supplied on the circuit by the service provider.

<b>ami</b>	Alternate Mark Inversion
<b>hdb3*</b>	High Density Bipolar 3

##### description <*text*>

Comment line to provide an identifier for this interface (for example, circuit ID, contact information, etc.).

<*text*> Up to 80 alphanumeric characters

##### framing {*crc4*}

Configures the framing format of the E1 interface. This setting must match the framing format provided by the service provider.

**crc4** CRC4 framing enabled

##### loopback-alarm-detect

Enables detection of loopback alarms on the E1 interface. Use the **no** form of this command to disable loop alarm detection. This setting is enabled by default.

##### loopback network {*line*}

Initiates a loopback on the interface toward the network. Deactivate using the **no loopback network** command.

**line** Initiates a metallic loopback of the physical E1 network interface.

##### loopback remote v54

Initiates an E1 remote loopback test (with a V54 loopback pattern). Deactivate using the **no loopback remote v54** command.

##### remote-alarm {*rai\** | *ais*}

Selects the alarm signaling type to be sent when a loss of frame is detected on the E1 receive signal. Choices are **RAI** (remote alarm indication) and **AIS** (alarm indication signal).

##### remote-loopback

Enables acceptance of remote loopback requests on this E1 interface. Deny acceptance using the **no remote-loopback** command. This setting is enabled by default.

##### sa4tx-bit {*0* | *1\**}

Selects **0** or **1** as the transmit value of Sa4 on this E1.

##### shutdown

Turns off the interface. The **no** version of this command turns the interface on and allows it to pass data.

##### snmp trap {*line-status* | *link-status*}

Enables the interface to send SNMP traps when there is an interface status change.

##### t dm-group <*group#*> timeslots <*1-31*> speed [*56* | *64*]

Creates a group of contiguous DS0s on this interface to be used during the **cross-connect** process.

<*group#*> Number label to identify this TDM group  
<*DS0 range*> DS0s in this group in the form: <*starting DS0* - *ending DS0*>

##### test-pattern {*ones* | *zeros* | *511* | *qrss*}

Initiates sending the specified test pattern.

**ones** Generates continuous ones  
**zeros** Generates continuous zeros  
**511** Generates repeating pattern of ones and zeros  
**qrss** Generates a QRSS pattern test

##### test-pattern clear

Clears the test pattern error count.

##### test-pattern insert

Inserts an error into currently active test pattern.

##### test-pattern {*show 511* | *show QRSS*}

Displays current pattern error count.

##### ts16

Enables timeslot 16 multiframe to be checked on the receive signal.

\* *Indicates default values.*