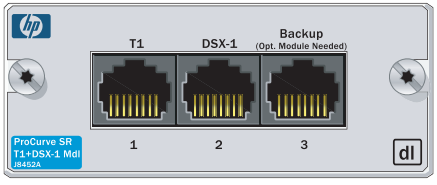
Quick Start Guide 5990-8893

ProCurve Secure Router dl 1xT1 + DSX-1 Module

J8452A

ProCurve Networking
HP Innovation



Specifications

Operating Modes	T1/FT1 Frame Relay, T1/FT1 PPP, T1/FT1 Multilink PPP, T1/FT1 Multilink Frame Relay, T1/FT1 HDLC
T1/FT1 Interface	Supported Standards: AT&T TR 62411, AT&T TR 54016, Bellcore TR 194, ANSI T1.403 Line Rate: 1.544 Mbps ±75 bps Line Code: AMI or B8ZS Framing: D4 (SF) or ESF FT1 Line Rate: DS0 channelized (multiples of 56/64 kbps) Input Signal: 0 to -36 dB (DS1) Line Build-Out: 0, -7.5, -15, -22.5 dB (long), 0 to 655 ft (short) Connector: RJ-48C DS0 Assignment: Programmable
DSX-1 Interface	Supported standards: DSX-1 per ANSI T1.102 Line Rate: 1.544 Mbps DSX Receiver Input Range: -10 dBdsx to +6 dBdsx Capacity: 1 to 24 DS0s Line Codes: AMI, B8ZS DSX-1 interface to PBX Framing: D4 (SF) or ESF Line Length: 0 to 655 ft and -7.5 dB Connector: RJ-48C
Clock Source	Network, internal, and through
Diagnostics	Test Pattern Generation and Detection: QRSS, 511, all ones, all zeros Network loopbacks (local and remote); responds to both inband and FDL loop codes (T1 interface only) Alarm generation and detection Network and user sets of performance data (15 minutes and 24 hours)
Compliance	FCC Part 15 Class A, EN 55022 Class A ACTA/FCC Part 68, IC CS-03, UL/CUL 60950, IEC 60950
Physical	Dimensions: 6.99 cm (2.75 in) W x 10.80 cm (4.25 in) D Operating Temperature: 0°C to 50°C (32°F to 122°F) Relative Humidity: Up to 95 percent, noncondensing at 30°C (86°F) Non-Operating Temperature: -20°C to 70°C (-4°F to 158°F) Non-Operating Relative Humidity: Up to 95 percent, noncondensing at 30°C (86°F) Altitude: Up to 3.05 km (10,000 ft)

Installation Instructions

Warning *For ProCurve Secure Router modules with outside plant connections, ensure that all cables are removed from the module before installing or removing it from the router chassis.*

1. Remove power from the unit.
2. Slide the ProCurve Secure Router dl 1xT1 + DSX-1 Module into the option slot until the module is firmly seated against the chassis.
3. Secure the screws at both edges of the module.
4. Connect the cables to the associated device(s).
5. Complete the installation of the base unit.
6. Restore power to the unit.

Note *For safety information for the routers and all modules, please refer to the safety and ESD precautions in the **ProCurve Secure Router Installation Guide** included in your router shipment.*

T1 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

DSX-1 Network (RJ-48C) Connection Pinout

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

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1xT1 + DSX-1 Module Commands

clock source [line* | internal | through]

Configures the source of the clock for the module. The 1xT1 + DSX-1 module supports a single clock source for both T1 interfaces. Use the **no** form of this command to return to the default value.

line*	Recovers clock from the T1 circuit.
internal	Provides clocking using the internal oscillator.
through	Recovers clock from the circuit connected to the DSX-1 interface.

coding [ami | b8zs*]

Configures the line coding for the T1 physical interface. The settings must match the line coding supplied on the circuit by the service provider (or external equipment).

ami	Configures the line coding for alternate mark inversion.
b8zs*	Configures the line coding for bipolar eight zero substitution.

fdl [ansi* | att | none]

Configures the format of the facility data link (FDL) channel on the T1 circuit.

ansi*	Configures the FDL for ANSI T1.403 standard.
att	Configures the FDL for AT&T TR 54016 standard.
none	No FDL standard configured.

framing [d4 | esf*]

Configures the framing format of theT1 interface. This setting must match the framing format supplied on the circuit by the service provider or external device. Use the **no** form of this command to return to the default value.

d4	Specifies D4 superframe (SF) T1 framing.
esf*	Specifies extended SF T1 framing.

lbo [long <*0 | *-7.5* | *-15* | *-22.5*> | short <*0 to 655*>]**

Sets the line build out (in dB or feet) for the T1 Interface. Use the **lbo long** command for T1 interfaces with a cable length greater than 655 feet. Use the **lbo short** command for T1 interfaces with a cable length less than 655 feet.

line-length [0 – 655 ft | -7.5 dB]

Defines the cable length (in feet) between the DSX-1 interface and the attached equipment. Use the **-7.5 dB** setting for maximum attenuation.

loopback network [line | payload]

Initiates a loopback on the interface toward the network. Use the **no** form of this command to deactivate the loopback.

line	Initiates a metallic loopback of the physical T1 network interface.
payload	Initiates a loopback of the T1 framer (CSU portion) of the T1 network interface.

loopback remote line [fdl | inband]

Sends a loopback code to the remote unit to initiate a line loopback. Use the **no** form of this command to send a loopdown code to the remote unit to deactivate the loopback.

fdl	Uses the facility data link (FDL) to initiate a full 1.544 Mbps physical (metallic) loopback of the signal received by the remote unit from the network.
inband	Uses the inband channel to initiate a full 1.544 Mbps physical (metallic) loopback of the signal received by the remote unit from the network.

loopback remote payload

Sends a loopback code to the remote unit to initiate a payload loopback. Use the **no** form of this command to deactivate the loopback.

remote-alarm rai

Selects the alarm signaling type to be sent when a loss of frame is detected on the T1 receive signal. Use the **no** form of this command to disable all transmitted alarms.

rai*	Sends a remote alarm indication (RAI) in response to a loss of frame. Also prevents a received RAI from causing a change in interface operational status.

remote-loopback

Configures the interface to respond to loopbacks initiated by a remote unit (or service provider). Use the **no** version of this command to disable this feature.

show test-pattern

Displays the results (including error count) from active test patterns.

shutdown

Disables the interface (both physical and virtual) so that no data will be passed through. Use the **no** form of this command to turn on the interface and allow it to pass data. By default, all interfaces are disabled.

signaling mode [message-oriented | none | robbed-bit*]

Configures the signaling mode for the DS0s mapped to the DSX-1 port.

message-oriented	Clears channel signaling on Channel 24 only.
none	Clears channel signaling on all DS0s.
robbed-bit*	Specifies robbed-bit signaling on all DS0s.

snmp trap link-status

Controls the SNMP variable, *ifLinkUpDownTrapEnable* (RFC2863) to enable the interface to send SNMP traps when there is an interface status change. Use the **no** form of this command to disable this trap.

tdm-group <*group#*> **timeslot** <*1-24*> **speed [56 | 64*]**

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

<*group#*>	Number label (1 to 255) to identify this TDM group.
timeslot <*1-24*>	Specifies the timeslots used in the TDM group. Enter as a single number (representing one of the 24 T1 channel timeslots) or as a contiguous group of channels. (For example, 1-10 specifies the first ten channels of the T1.)
56 | 64*	*(Optional)* Specifies a DS0 rate of 56 kbps or 64 kbps.

test-pattern [clear | insert | ones | p511 | qrss | zeros]

Activates the built-in pattern generator and begins sending the specified test pattern. Can be used to verify a data path when used in conjunction with an active loopback. Use the **no** form of this command to cease pattern generation.

clear	Clears the test pattern error count. Display the error count using the **show test-pattern** command.
insert	Inserts an error into currently active test pattern. Display the injected error result using the **show test-pattern** command.
ones	Generates a pattern of continuous ones.
p511	Generates a repeating pattern of ones and zeros.
qrss	Generates a random pattern of ones and zeros.
zeros	Generates a pattern of continuous zeros.

*** Indicates default values**

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