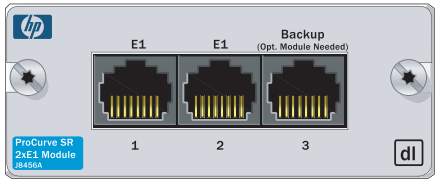
Quick Start Guide

ProCurve Secure Router dl 2xE1 Module

J8456A

5990-8896

ProCurve Networking
HP Innovation



Specifications

Operating Modes
E1/FE1 Frame Relay, E1/FE1 PPP, E1/FE1 HDLC, E1/FE1 Multilink Frame Relay, E1/FE1 Multilink PPP

E1/FE1 Interfaces
Supported Standards: ITU-T G.703, ITU-T G.704 (CRC-4), ITU-T G.797, ITU-T G.823
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: Channelized timeslot (in multiples of 56/64 kbps)
Connector: RJ-48C

Clock Source
Network, internal, and through

Diagnostics
Test Pattern Generation and Detection: QRSS, 2^{15} - 1, all ones, all zeros
Network loopbacks
Alarm generation and detection
Network performance data (15 minutes and 24 hours)

Standards
FCC Part 15 Class A, EN 55022 Class A, EN 55024, EN 61000-3-2, EN 61000-3-3
ACIF S016, ETSI TBR 12/TBR 13
EN 60950, IEC 60950, AS/NZS 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 2xE1 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.*

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

Note *An optional backup module is required for backup applications.*

For a description of the backup connection pinouts, refer to the Quick Start Guide included with your backup module

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2xE1 Module Commands

clock source [line* | internal | through]

Configures the source timing used for both E1 interfaces.

line*	Recovers clock from the primary circuit.
internal	Provides clocking using the internal oscillator.
through	Recovers clock from the circuit connected to the alternate E1 interface.

Note *The 2xE1 module supports a single clock source for both E1 interfaces. Changing the clock source on one E1 interface automatically affects the configuration of the other E1 interface. For example, setting the clock source to* **line** *on the first E1 configures the clock source of the second E1 as* **through**.

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.

ami	Configures the line coding for alternate mark inversion.
hdb3*	Configures the line coding for high-density bipolar 3.

description *<text>*

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

<text>	Shows 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 or external device. Use the **no** form of this command to return to the default value.

crc4	Enables CRC-4 framing.

loop-alarm-detect

Enables detection of loop 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 | 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 E1 network interface.
payload	Initiates a loopback of the E1 framer (CSU portion) of the E1 network interface.

remote-alarm [rai* | ais]

Selects the alarm signaling type to be sent when a loss of frame is detected on the E1 receive signal.

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.
ais	Sends an alarm indication signal (AIS) as an unframed all-ones signal.

remote-loopback

Configures the interface to respond to loopbacks initiated by a remote unit (or service provider). Use the **no** form of this command to disable this feature. This setting is enabled by default.

sa4tx-bit [0 | 1*]

Selects the Tx value of Sa4 on this E1 interface. Use the **no** form of this command to return to the default value of 1.

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.

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

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

<group#>	Number label (1 to 255) to identify this TDM group.
timeslot *<1-31>*	Specifies the timeslots used in the TDM group. Enter as a single number (representing one of the 31 E1 channel timeslots) or as a contiguous group of channels. (For example, 1-10 specifies the first ten channels of the E1.)
56 | 64*	*(Optional)* Specifies a channel rate of 56 kbps or 64 kbps.

test-pattern [clear | insert | ones | p215 | 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.
p215	Generates a 2^{15} - 1 pattern test.
qrss	Generates a QRSS pattern test.
zeros	Generates a pattern of continuous zeros.

ts16

Enables timeslot 16 multiframe to be checked on the receive signal. Use the **no** form of this command to disabled timeslot 16. (Not valid on the G.703 interface.)

*** Indicates default values.**

Note *This command list is an illustration of available commands. For complete command descriptions and default values, refer to the* ***SROS Command Line Interface Reference Guide*** *provided on your ProCurve SROS Documentation CD.*