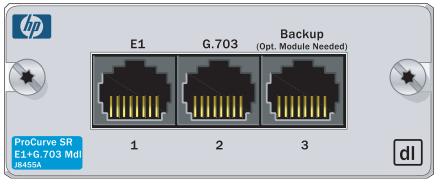
Quick Start Guide 5990-8895

ProCurve Secure Router dl 1xE1 + G.703 Module

J8455A

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 Interface	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 FE1 Line Rate: Channelized timeslot (in multiples of 56/64 kbps) Receiver Sensitivity: -30 dB Connector: RJ-48C
G.703 Interface	Line Interface: Per ITU-T G.703 Line Rate: 2.048 Mbps, ±50 PPM Line Code: AMI or HDB3 Framing: FAS with optional CRC-4 Receiver Sensitivity: -30 dB Capacity: 1 to 31 timeslots If timeslot 16 signaling is used on the G.703 interface, a maximum of 15 timeslots can be mapped to router (1 to 15 or 17 to 31). Connector: RJ-48C
Clock Source	Network, internal, and through
Diagnostics	Test Pattern Generation and Detection: QRSS, 511, all ones, all zeros Network loopbacks Alarm generation and detection Network performance data (15 minutes and 24 hours)
Compliance	FCC Part 15 Class A, EN 55022 Class, EN 55024, EN 61000-3-2, EN 61000-3-3 ACIF S016, ETSI TBR 12/TBR 13 EN60950, 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 1xE1 + G.703 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

G.703 (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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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

1xE1 + G.703 Interface Module Commands

clock source [line* | internal | through]

Configures the clock source for the module. The 1xE1 + G.703 module supports a single clock source for both E1 interfaces.

line*	Recovers clock from the E1 circuit.
internal	Provides clocking using the internal oscillator.
through	Recovers clock from the circuit connected to the G.703 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.

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

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.

loopback remote v54

Initiates an E1 remote loopback test (with a V54 loopback pattern). Use the **no** form of this command to deactivate the loopback.

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 | 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 repeating pattern of ones and zeros. (Not valid on the G.703 interface.)
qrss	Generates a random pattern. (Not valid on the G.703 interface.)
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 disable timeslot 16. If timeslot 16 is used on the incoming E1, do not map timeslot 16 (using the **tdm-group** command) and the 1xE1 + G.703 module will automatically pass timeslot 16 to the G.703 interface.

*** Indicates default values.**

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