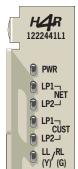


# T200 H4R



## T200 H4R

CLEI: T1R6TJZD\_









#### **LED STATUS**

PWR	Off	No span power is present
	<ul><li>On</li></ul>	Span power is present
LP1/LP2 NET	<ul><li>Solid Green</li></ul>	Synchronized with an SNR margin greater than the user defined SNR Margin Alarm Threshold
	* Fast Blinking Green	(Blinking three times per second) Attempting to synchronize with the $\mbox{\sc H4TU-C}$
	* Slow Blinking Green	(Blinking one time per second) Synchronized with an SNR margin greater than the user defined SNR Margin Alarm Threshold and the pulse attenuation is greater than the user defined Loop Attenuation Alarm Threshold
	<ul><li>Solid Yellow</li></ul>	Synchronized with an SNR margin greater than 0 dB but less than the user defined SNR Margin Alarm Threshold
	* Slow Blinking Yellow	Synchronized with an SNR margin greater than 0 dB but less than the user defined SNR Margin Alarm Threshold and the pulse attenuation is greater than the user defined Loop Attenuation Alarm Threshold
	<ul><li>Solid Red</li></ul>	Synchronized with an SNR margin of 0 dB
	<b>★</b> Slow Blinking Red	(Blinking one time per second) Synchronized with an SNR margin of 0 dB and the pulse attenuation is greater than the user defined Loop Attenuation Alarm Threshold
LP1/LP2 CUST	<ul><li>Solid Green</li></ul>	Synchronized with an SNR margin greater than the user defined SNR Margin Alarm Threshold
	* Fast Blinking Green	(Blinking three times per second) Attempting to synchronize with the $\mbox{\sc H4TU-R}$
	* Slow Blinking Green	(Blinking one time per second) Synchronized with an SNR margin greater than the user defined SNR Margin Alarm Threshold and the

pulse attenuation is greater than the user defined Loop Attenuation Alarm Threshold

Solid Yellow Synchronized with an SNR margin greater than 0 dB but less than the user defined SNR Margin Alarm Threshold

Slow Blinking Synchronized with an SNR margin greater than 0 dB but less than the Yellow user defined SNR Margin Alarm Threshold and the pulse attenuation is greater than the user defined Loop Attenuation Alarm Threshold

Synchronized with an SNR margin of 0 dB Solid Red

\* Slow Blinking (Blinking one time per second) Synchronized with an SNR margin of 0 dB and the pulse attenuation is greater than the user defined Loop Red Attenuation Alarm Threshold

LL/RL

Green Indicates a loopback at the H4R toward the H4TU-R is active Yellow Indicates a loopback at the H4R toward the H4TU-C is active

\* Slow Blinking H4R is armed, but not in loopback Yellow

### LOOPBACK AND CONTROL CODES

Refer to the H4TU-C or H4TU-R Installation and Maintenance Practice for a list of loopback codes.

### CARD EDGE PIN ASSIGNMENTS

Pin No.	Description
1	Chassis Ground
5	HDSL4 Loop Tip (Customer)
7	HDSL4 Loop Tip (Network)
11	Chassis Ground
13	HDSL4 Loop Ring (Network)
15	HDSL4 Loop Ring (Customer)
17	-48 VDC Return (Ground)
27	Chassis Ground
41	HDSL4 Loop Tip (Network)
47	HDSL4 Loop Ring (Network)
49	HDSL4 Loop Ring (Customer)
55	HDSL4 Loop Tip (Customer)

### COMPLIANCE

This product is intended for installation in restricted access locations only and in equipment with a Type "B" or "E" enclosure.

WARNING: Up to -200 VDC might be present on telecommunications wiring. Ensure chassis ground is properly connected.

Code	Input	Output
Power Code (PC)	С	С
Telecommunication Code (TC)	Χ	Χ
Installation Code (IC)	Α	-

This product provides span powering voltage (negative only with respect to ground, -190 VDC nominal, GFI protection < 5 mA) and meets all requirements of Bellcore GR-1089-CORE (Class A2), ANSI T1.418-2002. This product is NRTL Listed to the applicable UL standards.

# TURNUP & TROUBLESHOOTING GUIDE

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# HDSL4 LOOP SPECIFICATIONS FOR OPTIMUM OPERATION

NOTE: The H4TU-Cs P/N 1221401L6, 1221403L6, 1221404L6 support only one H4R in the HDSL4 circuit.

- HDSL4 circuit containing no H4Rs will reach up to 16 kft on the local loop (24 AWG)
- HDSL4 circuit containing one H4R will reach up to 16 kft on the first segment and 15 kft on the second segment (24 AWG)
- HDSL4 circuit containing two H4Rs will reach to 13.5 kft on the first segment, 14 kft on the second segment, and 15 kft on the third segment (24 AWG) \*
- Refer to the H4TU-C or H4TU-R Installation and Maintenance Practice, Section HDSL4 Deployment Guidelines, for other loop parameters including Insertion Loss, Pulse Attenuation, and Resistance Budgets for span powering

\*This is one example of a circuit with two H4Rs. Other loop length configurations are possible in compliance with loop resistance restraints. See the H4R Installation and Maintenance Practice, Section HDSL4 Deployment Guidelines, for resistance budgets.

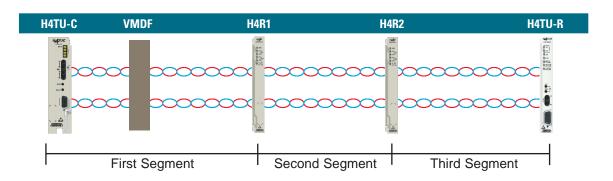
### **UNIT RESISTANCE**

Measurements are with no power applied

The H4R Tip-to-Ring resistance is approximately 6  $\Omega$  for each pair.

### **WARRANTY**

Warranty for Carrier Networks products manufactured by ADTRAN and supplied under Buyer's order for use in the U.S. is ten (10) years. For a complete copy of ADTRAN's *U.S. and Canada Carrier Networks Equipment Warranty* (P/N 60000087-10): (877) 457-5007, Faxback Document 414.



ADTRAN Related Housings			
Part Number	Description		
1150043L1	4-slot, Air-filled		
1150043L2	4-slot, Gel-filled		
1150087L1	T400, single slot (above ground only)		
1150090L1, L2	24-slot, T400 high capacity cabinet (Pad or pole mount)		