



DESCRIPTION

The MX2820 STS-1 MUX is a multiplexer unit that plugs into an MX2820 chassis. The MX2820 STS-1 MUX interfaces to a standard STS-1 signal from the network to provide 28 DSX-1 or 21 E1 outputs on the terminal side through the demapping of 28 VT1.5s or 21 VT2s. Two MX2820 MUX cards are used together to provide a redundant STS-1 multiplexer circuit. The MX2820 STS-1 MUX provides 1:1 redundancy and meets the requirements for NEBS Level 3.

INSTALLATION

After unpacking the unit, inspect it for damage. If damage is found, file a claim with the carrier and then contact ADTRAN Customer Service. Refer to the *Warranty Statement* on this Job Aid.

This module occupies a MUX slot in the MX2820 chassis. To install the STS-1 MUX in the chassis, perform the following steps:

1. Pull the ejector tab into the down position and gently but firmly push the MUX into the selected MUX slot. Simultaneous thumb pressure at the top and at the bottom of the unit will ensure a good seat of the MUX into the backplane connector.
2. Push the ejector tab up and closed against the front panel.

Upon installation, the MUX will begin a self-test. This is followed with the LEDs reflecting the true state of the hardware.

OPERATIONAL SPECIFICATIONS

- ◆ Operates from A or B -42 VDC to -56 VDC input voltage power feeds
- ◆ Operates over temperature range of 0°C to +50°C with fans
- ◆ Storage -40°C to +85°C; Relative humidity to 95 percent, noncondensing

NOTE: Fans are recommended for MX2820 applications that include STS-1 MUX modules.

PROVISIONING

All provisioning of the MX2820 STS-1 MUX will be handled through the SCU. The menu tree on the reverse of this Job Aid provides the options and default settings for the MX2820 STS-1 MUX.

COMPLIANCE

Refer to the [MX2820 STS-1 MUX Compliance Notice \(P/N 61186005G2-17\)](#) for detailed compliance information.

LED STATUS FOR ACTIVE MUX

Label	Status	Description
ACT	● Green	Normal (All OK)
	●/● Yellow	Normal and console open
	● Yellow	Software update in progress
	●/● Red	Self-test failed and console open
	● Red	Self-test failed
	* Red (Flashing)	Module failed
ALM	● Green	No critical, major, or minor alarms
	● Red	Major or minor alarm in progress
	* Red (Flashing)	Critical alarm in progress
NET STAT	● Green	Normal (STS-1 OK)
	● Red	AIS or LOF alarms
	* Red (Flashing)	STS-1 LOS, LOP, or STS-1 Failure (critical)
	* Red (Flashing once per event)	Single/Burst STS-1 code violations
NET TEST	○ Off	No STS-1 tests in progress
	● Yellow	In test (locally originated)
DS1 STAT	○ Off	All DS1/E1s are disabled
	● Green	Enabled DS1/E1s normal (All OK)
	●/● Green/Red (Alternating)	DS1/E1 XCV threshold exceeded
	● Red	Non-critical DS1/E1 alarm (CAIS, LAIS)
	* Red (Flashing)	LOS on an enabled line (critical DS1/E1 alarm; non-critical system alarm)
	* Red (Flashing once per event)	Single/Burst RX DS1/E1 code violation
DS1 TEST	○ Off	No DS1/E1 tests in progress
	● Yellow	In test (locally originated)
	* Yellow (Flashing)	In test (remotely originated)

LED STATUS FOR STANDBY MUX

Label	Status	Description
ACT	● Green	Normal (All OK)
	● Yellow	Software update in progress
	* Red (Flashing)	Self-test failed
ALM	○ Off	Permanent state during standby
NET STAT	○ Off	Normal (STS-1 OK)
	* Red (Flashing)	Module failed
NET TEST	○ Off	Permanent state during standby
DS1 STAT	○ Off	Normal (DS1s OK)
	* Red (Flashing)	DS1/E1 Failure
DS1 TEST	○ Off	Permanent state during standby

To/from SCU menus	1. Configuration	CLEI Code Part Number Serial Number Code Version Code Checksum Boot Version Boot Checksum Self Test			
	2. Provisioning	1. Network Interface	1. Network Timing 2. VT Mode 3. STS-1 J1 Path Trace	1. Loop 2. Free-Run 3. External 1. VT1.5 (T1) 2. VT2 (E1)	1. Transmitted Received 2. Expected 3. Set Expected Equal to Received 1. Disabled 2. Enabled 3. Auto Enable*
		2. VT/Port Interfaces	1. T1/E1 State 2. T1/E1 Line Coding 3. T1/E1 Line Length 4. T1/E1 Loopback Detection 5. T1/E1 Circuit Protection 6. T1/E1 Line Identification 7. VT Identification 8. T1/E1 XCV Threshold 9. VT Hairpin Loopback 10. Cross-Connect Mapping 11. VT AIS Transmission	1-28. T1/E1 1-28. T1/E1 1-28. T1/E1 1-28. T1/E1 1-28. T1/E1 1-28. T1/E1 (VT #1-28) 1-28. T1/E1 1-28. T1/E1 1. Disabled* 2. Enabled 1. Disabled 2. Enabled (GR-253)*	1. AMI 2. B8ZS/HBD3* T1: 1. 0-133 ft* 2. 133-266 ft 3. 266-399 ft 4. 399-533 ft 5. 533-655 ft E1: 1. 0-6dB Loss 1. Disabled* 2. 1E-3 3. 1E-4 4. 1E-5 5. 1E-6
		3. Service States	1. D Card nA 2. D Card nB 3. VT Path Service States 4. Facility Service States	1-28. 29. STS-1 30. Set Multiple	
		4. Protection	1. Perform Manual Switch 2. Minimum Switching Period (sec.) (10*) 3. Maximum Switch Threshold (3*) 4. Clear Number of Switches		
		5. Save Provisioning			
		6. Restore Factory Defaults			
		7. Card Reset			
		8. Auto Save	1. Disabled 2. Enabled*		
		9. Loopback Timeout	1. Disabled 2. 1 Minute 3. 5 Minutes* 4. 10 Minutes 5. 15 Minutes 6. 30 Minutes 7. 45 Minutes 8. 60 Minutes	T1: 1. Data Mode* 2. Tributary 3. Analog Network 4. Digital Line/Net 5. CODEC Line/Net 6. CSU Loopback 7. CSU LB w/BERT 8. Line BERT 9. VT BERT	
		10. Card Pair ID			
	3. Status	1. Detailed VT/Port Status			
	4. Test	1-28. VT/Port Loopbacks (T1/E1) 29. STS-1 Loopbacks 30. Reset ALL Tests	1. Data Mode* 2. Line 3. Digital	E1: 1. Data Mode* 2. Tributary 3. Analog Network 4. Digital Line/Net 5. CODEC Line/Net 6. Remote Loopback 7. Line BERT	
	5. Performance Monitoring	1. STS-1 Statistics 2. VT/Port Statistics 3. Clear All Statistics			

Note: An asterisk (*) indicates default setting

For more information, refer to the Installation and Maintenance Practice (P/N 61186005G2-5) available online at www.adtran.com.

Warranty: ADTRAN will replace or repair this product within the warranty period if it does not meet its published specifications or fails while in service. Warranty information can be found online at www.adtran.com/warranty.

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