Additional References

This appendix describes additional CEM features that are used on the router. This appendix describes the following topics:

Linecode Configuration and Supported Patterns

The following pattern for linecode configuration is supported for T1 or E1.

Table 1: Linecode Configuration and Pattern Supported on T1 or E1 Controllers

Part Number	Linecode Configuration	T1 or E1	Random Pattern
XRT83VSH316 LIU	B8ZS/AMI	T1	QRSS
	HDB3/AMI	E1	PRBS15

Configuration Using AMI Linecodes at Both Ends (UUT (AMI) and TESTER (AMI))

When both sides are configured as AMI, the linecodes match and the T1 or E1 controller is always UP with a smooth traffic flow.

Configuration Using Different Linecodes at Both Ends (UUT (AMI) and TESTER (B8ZS or HDB3))

- The line codes do not match when one side is configured with AMI and other side is configured with non-AMI codes such as B8ZS or HDB3. Based on the pattern that is inserted, there is change in the behavior.

- For 511 QRSS pattern, although the line codes do not match, the controller is UP. The controllers go DOWN for other patterns.

- Each pattern is unique and contains a combination of ones and zeros. Only the pattern 511 QRSS is supported. If patterns other than 511 QRSS are used, then LOS is generated, and controller goes to the DOWN state.

The following table details the configuration using same and different linecodes at both ends and the pattern that is supported on T1 (UUT mode) controller:

Table 2: Configuration Using Linecodes for T1 Controllers

Pattern Mode (ANSI)	Pattern with UUT (AMI) and TESTER (B8zS)	UUT(AMI) and TESTER (AMI)
511 QRSS	Controller is UP. Linecodes do not match.	T1 controller is UP on UUT. Linecodes match.
QRSS	UUT controller is DOWN.	T1 controller is UP on UUT. Linecodes match.
2047 QRSS	UUT controller is DOWN.	T1 controller is UP on UUT. Linecodes match.

The following table details configuration using same and different linecodes at both ends and the pattern that is supported on E1 (UUT mode) controller:

Table 3: Configuration Using Linecodes for E1 Controllers

Pattern Mode (ANSI)	Pattern with UUT (AMI) and TESTER (B8zS)	UUT(AMI) and TESTER (AMI)
$2^{15}-1$	Controller is DOWN.	E1 controller is UP on UUT. Linecodes match.
$2^{15}-1$ INV	Controller is DOWN.	E1 controller is UP on UUT. Linecodes match.