

# Xedge DS1-2CS/4CS LIMs

## T1 LIMs for ATM, Frame Relay & Circuit Emulation Applications

### INTRODUCTION

In the Xedge switch, operational capabilities are determined by the type of slot controllers and line interface modules (LIMs) in use. The dual port or quad port Xedge DS1 LIM can be used with a number of Xedge slot controllers for a variety of network applications:

#### CE over Packet Application (IP/VLAN)

Controller: PCE

LIM: DS1-2CS/DS1-4CS

Ports: Up to 4 per LIM, up to 8 per controller

#### ATM Cell Switching Application (ATM)

Controller: PCX, ACP

LIM: DS1-2CS

Ports: Up to 2 per LIM, up to 4 per PCX

#### ATM Cell Switching over PWE3 Application (MPLS, VLAN, IP, Ethernet)

Controller: PCX

LIM: DS1-2CS

Ports: Up to 2 per LIM, up to 4 per PCX

#### CE over ATM Application

Controller: CE

LIM: DS1-2CS/DS1-4CS

Ports: Up to 4 per controller

#### Nx64Kpbs CE over ATM Application

Controller: VSM

LIM: DS1-2CS/DS1-4CS

Ports: Up to 4 per controller

#### Voice over ATM Application

Controller: VSM

LIM: DS1-2CS/DS1-4CS

Ports: Up to 4 per controller

### Specifications

Applies to the DS1-2CS and DS1-4CS LIMs.

- Standards: ANSI T1.102, T1.107, T1.408, ITU-T G.703, G.804, I.432, ATM Forum UNI 3.1
- Interface: T1
- Connector Type: DB15, 100 ohms
- Line Encoding: AMI or B8ZS
- Framing: SF, T1DM, SLC96, ESF4K, ESF2K 1, ESF2K 3
- Transmit Line: 0 dB to over 655 ft in eight ft increments.
- Transmit Timing: From RCV clock, internal oscillator, primary or secondary system reference (line of NTM).

### LIM FEATURES

- Dual or Quad port versions.
- Comprehensive alarm reporting and performance monitoring
- Meets international ITU-T transmission standards

### Diagnostics & Alarms

#### Loopbacks

The T1 LIMs support Transmit, Receive, and Payload Loopbacks

#### Status Indications

- IS (In Service)
- LS (Loss of Signal)
- AL (Alarm Loopback or Loss of Frame)

#### Alarms & Performance

The T1 LIMs support the physical layer alarms and performance monitoring statistics, such as:

- Loss Of Signal, Loss Of Frame
- Alarm Indication Signal
- Alarm Indication Signal Seconds
- Errored Seconds
- Severely Errored Seconds
- Unavailable Seconds
- Line Coding Violations
- Line Errored Seconds
- Line Severely Errored Second
- Loss of Cell Delineation
- Yellow Alarm, PLCP Yellow Alarm
- PLCP Code Violations
- PLCP Loss of Frame
- PLCP Errored Seconds
- PLCP Unavailable Seconds
- PLCP Severely Errored Seconds
- PLCP Far End Code Violations
- PLCP Far End Errored Seconds
- PLCP Far End Severely Errored Seconds
- PLCP Far End Unavailable Seconds

