GENERAL DATACOMM

Xedge QT LIM

Quad Port Ethernet Interface for ATM Switches

INTRODUCTION

The operational capabilities of an Xedge switch is determined in part by the slot controller in use and the number and type of associated line interface modules (LIMs). The Xedge QTLIM (Quad Twisted-pair Line Interface Module) is a quad port Ethernet 0BASE-T twisted-pair interface using a standard RJ-45 cable interconnect. The QTLIM is used in conjunction with the ETH slot controller module to interface the ATM switch to 10BASE-T Ethernet networks.

The Xedge QTLIM features front panel connectors for easy access, and front panel LEDs for a quick check of the LIM's communication status.

DCE / DTE Versatility

The QTLIM accepts either DCE (Data Communicating Equipment) or DTE (Data Terminal Equipment) connections to its RJ-45 connectors.

- In a DCE to DCE configuration, the cable wiring adapts the transmit and receive signals of each device.

- In a DCE to DTE configuration, the cable wiring is straight through (pin 1 to pin 1 etc.), allowing the DTE equipment to connect the transmit to the receive signals of each device.

Xedge Switch Systems

All Line Interface Modules (LIMs) are the same size and plug into universal slots on the back panel of the Xedge switch. The QTLIM is intended for use with the Xedge Ethernet controller module (Xedge ETH). This controller and LIM combination installs easily in the front and rear slots of the Xedge 6160 4-slot switch, the Xedge 6280 7 slot switch and the 16-slot Xedge 6640/6645 switch.

SQE Test Features

The Signal Quality Error Test (heartbeat) is a means of detecting a transceiver's inability to detect collisions. Without SQE Test, it is not possible to determine if your collision detector is operating properly. SQE Test is implemented by generating a test signal on the collision pair from the transceiver (or its equivalent) following every transmission on the network. It does not generate any signal on the common medium. The SQE test switch can be set to OFF for an interface that is to be attached between a transceiver and an 802.3 repeater.

LIM FEATURES

- Supports 10Base-T twisted pair interfaces via RJ45 front panel connectors

- Supports data rates of up to 10 Mbps at each LAN segment

- Configurable to DTE and DCE modes of operation

- Provides Status LEDs at the front panel for Link Status, Link Activity and Collision at each port.

- Provides a front panel Signal Quality Error (SQE) test for each port.

Status & Alarms

The QTIM provides front panel status indicators and tests that show the operational status of each LAN interface port:

- ST (Link Status)

- AC (Link Activity)

- CO (Collision)

Alarms & Performance

The QTLIM supports alarms and performance monitoring. For diagnostic purposes, the QTLIM has loopback settings from the line and from the controller.
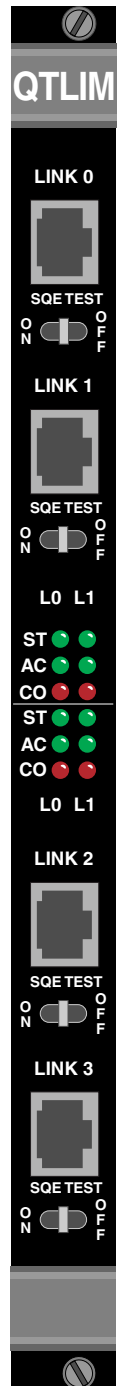

Figure 1: Front Panel Features of the Xedge QTLIM