



# Quad T1/PRI

## ATLAS 800 Series Module

### Product Features

- Four T1/PRI interfaces
- Built-in CSUs
- Configurable for DS-1, PRI, or DSX-1 operation
- Maximum distance 6,000 ft
- AT&T 54016, 62411 and ANSI T1.403 compliant
- D4 and ESF framing formats
- AMI and B8ZS line coding
- D-Channel to robbed bit signaling conversion
- ESF performance monitoring
- Local and remote loopback support
- Generates and detects QRSS test pattern
- Compliant with Lucent 4ESS/5ESS, Nortel DMS100 and National ISDN
- Lightning protection
- Occupies a single slot in the ATLAS 800 series chassis
- Hot swappable
- Industry-leading five-year North American warranty

**The ADTRAN® Quad T1/PRI module combines with other ATLAS™ components to implement a variety of WAN access products, including a T1 Bandwidth Manager, an ISDN Access Switch, and a Digital Access Cross-connect System (DACS).** The module provides four network ports, each of which can be independently configured to operate in T1 (DS-1 or DSX-1) or Primary Rate ISDN (PRI) modes.

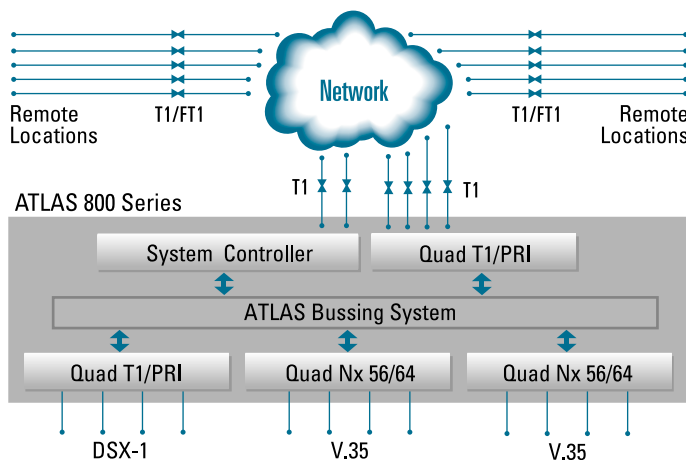
The Quad T1/PRI module can perform T1-to-PRI conversion, translating between the robbed-bit signaling presented in a channelized T1 circuit and the D-channel signaling of a PRI circuit. When using the Quad T1/PRI module, ATLAS operates in a DACS mode supporting DS0 time slot interchange and DS0 grooming while preserving robbed bit signaling. ATLAS can be fully populated with Quad T1/PRI modules to support a pure DACS application of 34 T1 circuits.

Configuration of the Quad T1/PRI module can be accomplished through a variety of mechanisms, including Telnet or VT100

emulation. SNMP management is supported for alarm and event reporting.

Extensive T1 circuit monitoring is standard with the Quad T1/PRI module, including the ability to detect, store, and report all performance parameters specified in AT&T Technical Reference 54016. The module detects and reports alarm conditions associated with the circuit, including Loss of Signal, Red Alarm, Blue Alarm, Yellow Alarm, and for PRI circuits, D-Channel Synchronization.

The Quad T1/PRI module responds to standard loopback commands from the telephone company central office—both in-band commands and those sent through the Facilities Data Link. In addition, local and remote loopbacks (both line and payload) can be initiated from ATLAS. When testing the T1 circuit, the Quad T1/PRI module allows the user to select from a variety of test patterns, including all 1s, all 0s, and a standard QRSS pattern. When sending the QRSS pattern, the Quad T1/PRI module records and reports the results of the testing to the user.





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## ATLAS 800 Series Module

### Product Specifications

#### Physical Interface

- 8-Pin modular RJ-48C

#### Line Rate

- 1.544 Mbps

#### Framing

- D4, ESF

#### Line Coding

- AMI, B8ZS

#### Line Length

- 6,000 feet 24 gauge (DS-1); 655 feet (DSX-1)

#### LBO

- 0, 7.5, 15, 22.5 dB; 266, 399, 533, 655 feet

#### System Timing

- Network, Internal, External

#### T1 Signaling Methods

- E&M Immediate, E&M Wink, Ground Start, Loop Start, Feature Group D

#### Conversion

- Robbed Bit Signaling to ISDN D-Channel, AMI to B8ZS, D4 to ESF

#### Switch Compatibility

- **PRI Mode:** Lucent 4ESS/5ESS, Nortel DMS-100, National ISDN

#### Switch Emulation

- **PRI Mode:** Lucent 4ESS/5ESS, Nortel DMS-100, National ISDN

#### Diagnostics

- Local Loopback - Line and Payload
- Remote Loopback - Line and Payload

#### Test Patterns

- QRSS, All 1s, All 0s

#### Alarms

- Loss of Signal, Red, Yellow, Blue, D-Channel

#### Performance Monitoring

- ES, BES, SES, SEFS, LOFC, CSS, UAS, LCV, PCV, LES

#### Signal Monitoring

- AB signaling bits for all DS0s, individual monitor jacks for each port

#### Agency Approvals

- FCC Part 15, Class A 1950, UL 1950, and Canadian UL (CUL)

#### Environment

- **Operating:** 0 to 45°C (32 to 113°F)
- **Storage:** -20 to 70°C (-4 to 158°F)
- **Relative Humidity:** Up to 95%, non-condensing

#### Power

- 6.5 watts

#### Product Includes

- Four RJ-48 to RJ-48 cables (15 feet)
- Two RJ-48 to RJ-48 crossover cables (15 feet)
- Two RJ-48 to DB-15 adapters
- User manual

### Ordering Information

Equipment	Part #
Quad T1/PRI Module	1200185L3



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