**FEATURES**

- Monolithic single-chip quad ATM Physical Layer User Network Interface (UNI) operating at 1.544 Mbit/s or 2.048 Mbit/s.
- Integrates a quad full-featured dualmode T1/E1 framer/transmitter for terminating four duplex 1.544 Mbit/s DS1 or four duplex 2.048 Mbit/s E1 signals. Recovers T1/E1 clock and data using a digital phase locked loop.
- Implements the ATM Forum UNI Specification V3.1 for DS1 and E1 transmission rates.
- Implements the ATM physical layer for Broadband ISDN according to ITU-T Recommendation I.432.
- Implements direct mapping into four T1 or E1 streams according to ITU-T Recommendation G.804.
- Provides UTOPIA L1-compliant, UTOPIA L2-compatible ATM-PHY interface with parity and multi-PHY control signals.
- Software-compatible with the PM4341A T1XC, PM4351 COMET, PM5346 S/UNI®-LITE and PM7345 S/UNI-PDH.
- Application-compatible with the PM8313 D3MX, PM4314 QDSX, and PM7323 RCMP-200.
- Provides an HDLC interface for terminating/generating the ESF datalink.
- Provides a generic 8-bit microprocessor bus interface for configuration, control, and status monitoring.
- Low power, +5 V, CMOS technology.
- Packaged in 128-pin rectangular (14 mm by 20 mm) PQFP package.

**T1 FRAMER/TRANSMITTER**

- Supports SF or ESF format signals using B8ZS or AMI line code.
- Provides Loss Of Signal (LOS) detection and red, yellow and Alarm Indication Signal (AIS) alarm detection. Supports transmission of (AIS) or yellow alarm signal in all formats.
- Detects violations of the ANSI T1.403 12.5% pulse density rule over a moving 192-bit window.
- Supports line and path performance monitoring according to ANSI specifications. Accumulators are provided for counting ESF CRC-6 errors, framing bit errors, LCVs, and LOF, or frame alignment events.
- Provides ESF bit-oriented code detection/generation, and an HDLC interface for terminating/generating the ESF datalink.
- Extracts/inserts the datalink in ESF mode.

**E1 FRAMER/TRANSMITTER**

- Supports G.704 2048 kbit/s format using HDB3 or AMI line coding.
- Supports CRC multiframe alignment or the signalling multiframe alignment.
- Declares red and AIS alarms using 0.516 recommended integration periods. Provides LOS detection, and indicates loss of frame alignment (OOF), loss of signalling, and loss of CRC multiframe alignment.
- Supports line and path performance monitoring according to ITU-T recommendations. Accumulators are provided for counting CRC-4 errors, FEBE, frame sync errors, and LCVs.
- Supports reception and transmission of remote alarm and AIS.
- Provides an HDLC interface for terminating/generating a datalink.
- Supports the timeslot 16 [64 kbit/s] datalink which may be used for common channel signalling, or any combination of the national bits.

**APPLICATIONS**

- ATM Switches Supporting DS1 or E1 UNI Ports
- ATM Switches Supporting DS3 or E3 Ports Carrying Multiplexed DS1 or E1 UNI Signals
- ATM Switches Supporting S0NET/SDH Ports Carrying Tributary Mapped DS1 or E1 UNI Signals
- ATM Customer Premise Equipment Supporting Multiple DS1 or E1 UNI Ports
Typical Applications

**DS3 PORT CARRYING MULTIPLEXED T1 ATM UNI SIGNALS**

![Diagram of DS3 port carrying multiplexed T1 ATM UNI signals]

**T1 OR E1 MULTI-PHY ATM UNI**

![Diagram of T1 or E1 multi-PHY ATM UNI]

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**About PMC**

PMC [Nasdaq:PMCS] is the semiconductor innovator transforming networks that connect, move and store digital content. Building on a track record of technology leadership, we are driving innovation across storage, optical and mobile networks. Our highly integrated solutions increase performance and enable next generation services to accelerate the network transformation. For more information visit www.pmcs.com.

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