SATURN User Network Interface for PDH Applications

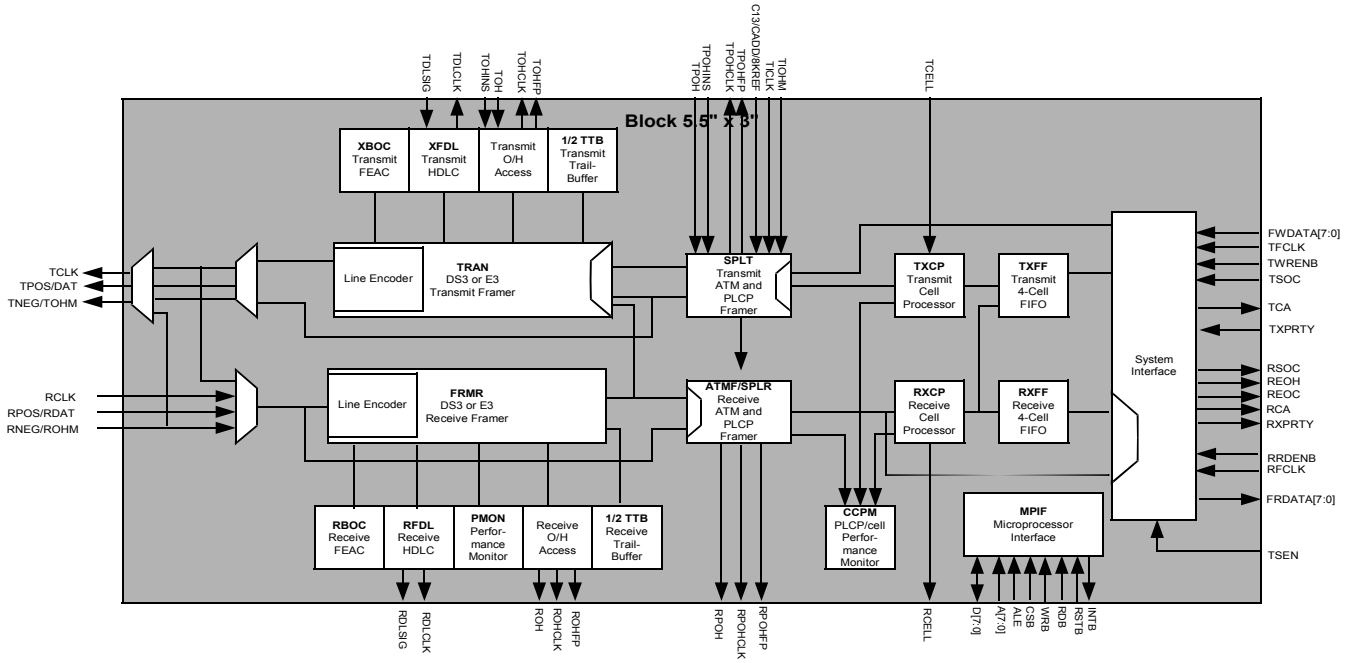
FEATURES

- Monolithic single-chip ATM User-Network Interface (UNI) for DS3, E3, DS1, and E1 Plesiochronous Digital Hierarchy (PDH) applications.
- Provides on-chip DS3 (M23 or C-bit parity) and E3 (G.751 and G.832) framers.
- Implements the ATM direct cell mapping into DS1, DS3, E1, and E3 transmission systems according to ITU-T Recommendation G.804.
- Implements the ATM physical layer for Broadband ISDN according to ITU-T Recommendation I.432.
- Implements the Physical Layer Convergence Protocol (PLCP) for DS1 and DS3 transmission systems according to the ATM Forum User Network Interface Specification and ANSI TA-TSY-000773, TA-TSY-000772 and E1 and E3 transmission systems according to ETSI 300-269 and ETSI-270.
- Provides UTOPIA L1-compliant ATM-PHY interface.
- Supports DS3 FEAC code insertion/ detection and provides an integral HDLC transceiver for path maintenance datalink processing.
- Supports G.832 Trail Trace and provides an integral HDLC transceiver that supports the Network Requirement or General Purpose datalinks.
- Provides detection of DS3/E3 Loss Of Frame (LOF) and yellow alarm.
- Accumulates BIP-8, framing and FEBE events.
- Provides ATM cell scrambling/ descrambling, HCS error detection and correction, HCS insertion, idle/ unassigned ATM cell filtering and insertion, and accumulates counts of transmitted and received cells.
- Provides DS3/E3 diagnostic loopback, line loopback, payload loopback and ATM cell loopback.
- Provides support for an arbitrary rate external transmission line interface up to a maximum rate of 52 Mbit/s.
- Uses PMC-Sierra PM4341A T1XC T1, PM6341 E1XC E1, or PM4351 COMET framer/line interface devices for DS1, E1, and J1 ATM UNI applications.
- Software-compatible with the PM4341A T1XC, PM6341 E1XC, PM4351 COMET, PM5346 S/UNI®-LITE, and PM7344 S/UNI-MPH.
- Application-compatible with the PM8313 D3MX, PM4314 QDSX, and PM7323 RCMP-200.
- Provides an 8-bit microprocessor interface for configuration, control, and status monitoring.
- Low power CMOS technology.
- Available in a high density 100-pin PQFP package (14 by 14 mm).

APPLICATIONS

- ATM Switches
- ATM Routers
- ATM Network Interfaces
- DSLAMs
- ATM / SMDS Test Equipment

BLOCK DIAGRAM



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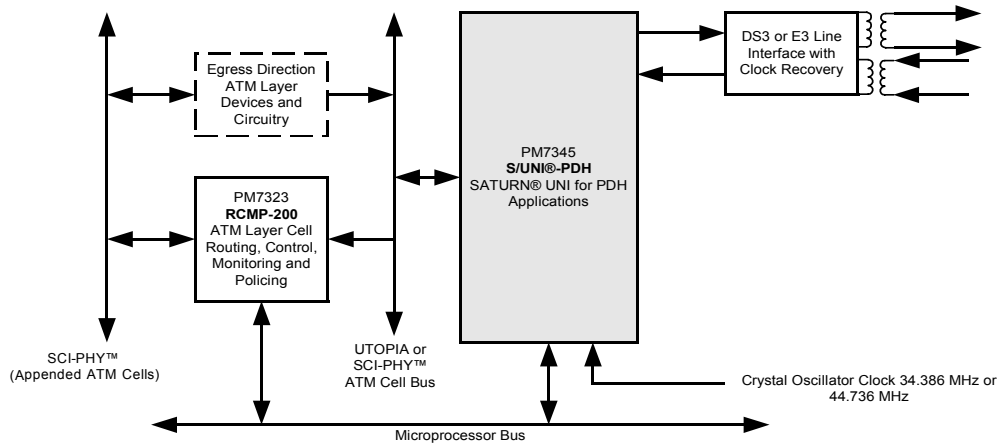
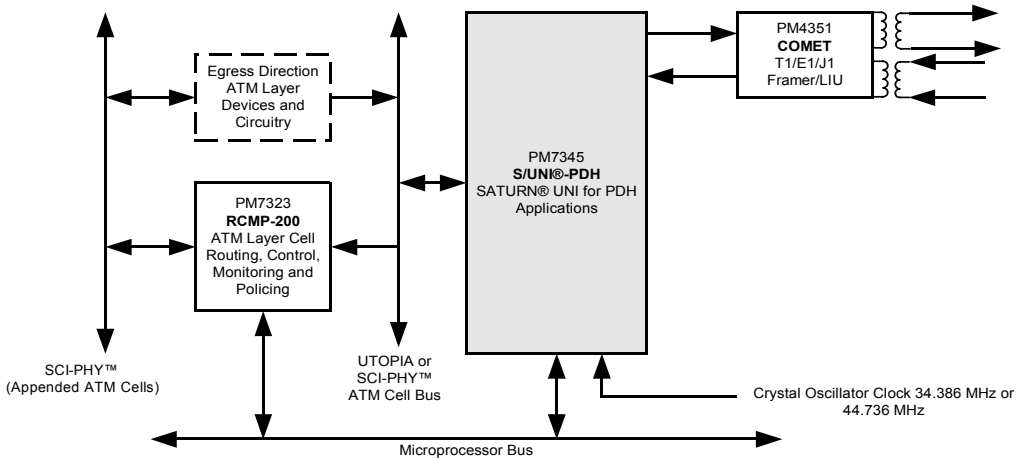
TYPICAL APPLICATIONS

DS3 OR E3 ATM USER NETWORK INTERFACE



DS1 OR E1 ATM USER NETWORK INTERFACE



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