155 Mb/s SATURN User Network Interface

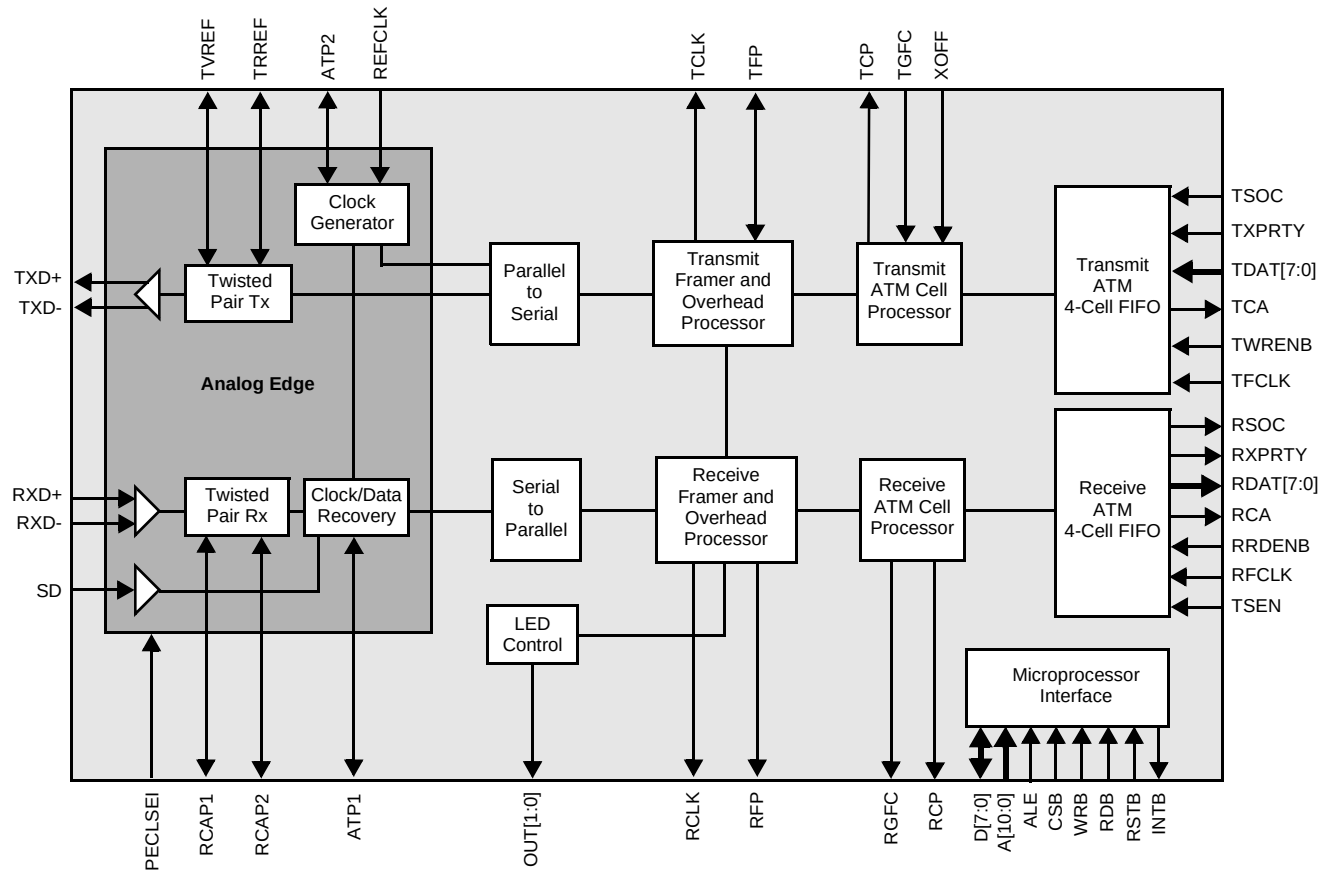
FEATURES

- Low-cost, monolithic SATURN® SONET/SDH ATM User Network Interface (UNI) for category-5 (UTP-5), Shielded Twisted Pair (STP) and optical applications.
- Implements the ATM Transmission Convergence (TC) sublayer according to ATM Forum specifications using the SONET/SDH 155.52 Mb/s STS- 3c/ STM-1 and 51.84 Mb/s STS-1 formats.
- Provides on-chip UTP/STP drivers, receivers, and line equalizers to allow direct connection to 155 Mb/s UTP-5 or STP twisted pair wiring facilities using line coupling transformers.
- Provides a selectable UTP/STP or Pseudo-ECL (PECL) interface to allow direct connection to Optical Data Links (ODLs).
- Includes clock recovery and clock synthesis with on-chip loop filters.
- Operates in timing master or timing slave (loop timed) modes.
- Frames to SONET/SDH framing bytes (A1, A2), processes the section and line Bit Interleaved Parity (B1, B2) and the Far-End Block Error (Z2) bytes.
- Interprets the H1, H2, and H3 payload pointer bytes.
- Processes the SONET path overhead BIP-8 (B3), signal label (C2) and path status (G1) bytes.
- Inserts and extracts ATM payloads using ATM cell delineation.
- Provides on-chip FIFO buffers in both transmit and receive paths.
- Provides on-chip support for GFC and XOFF flow control.
- Provides a synchronous 8-bit plus parity SATURN-Compliant Interface for PHYsical layer devices (SCI-PHY™) bus operating at 50 MHz.
- Compatible with ATM Forum UTOPIA interface format.
- Provides a generic 8-bit microprocessor bus interface for configuration, control, and monitoring.
- Provides TTL-compatible inputs and outputs and differential PECL inputs.
- Low power, +5 V CMOS technology.
- Packaged in a 128-pin, 14 mm by 20 mm Plastic Quad Flat Pack (PQFP) with 0.5 mm lead pitch.

APPLICATIONS

- 155.52 or 51.84 Mb/s twisted pair or optical ATM LANs
- Workstations and Personal Computer NIC Cards
- Switches, Hubs, and Router Port Cards
- SONET- or SDH-Compliant ATM UNIs

BLOCK DIAGRAM

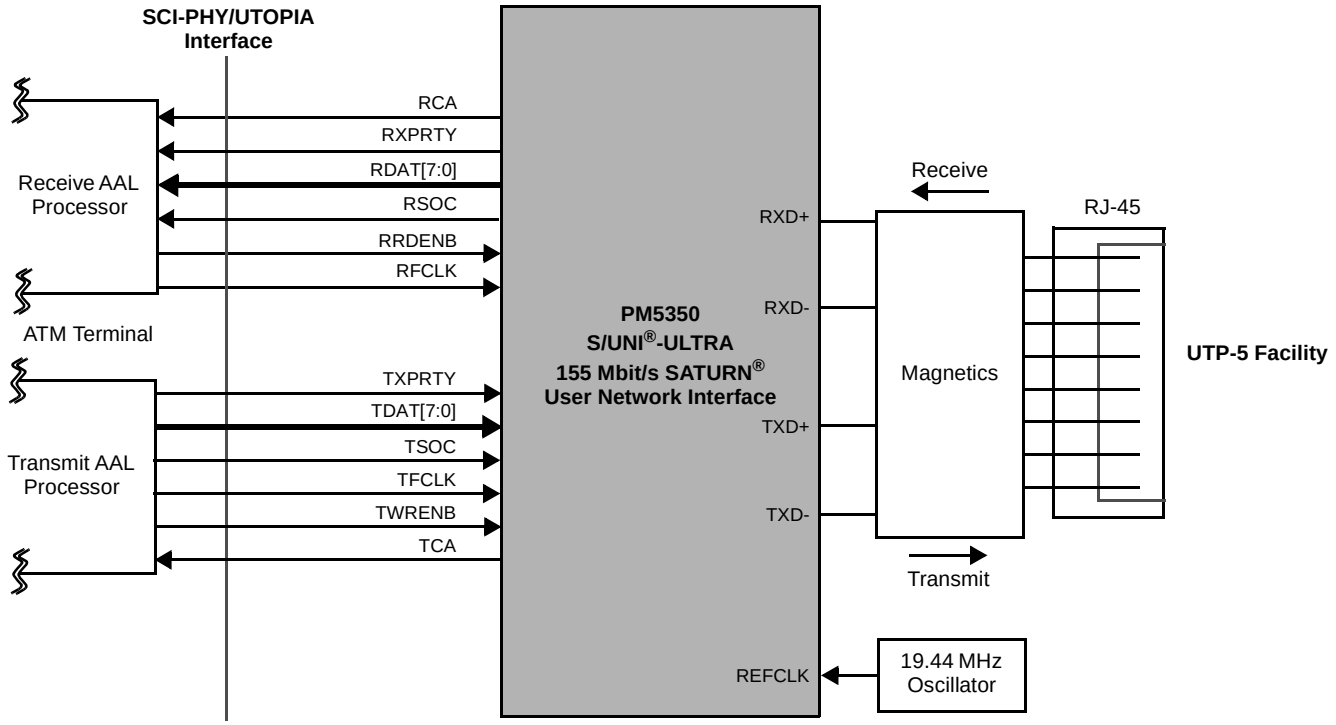


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155 Mb/s SATURN User Network Interface

TYPICAL APPLICATION

ATM ADAPTER INTERFACE



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