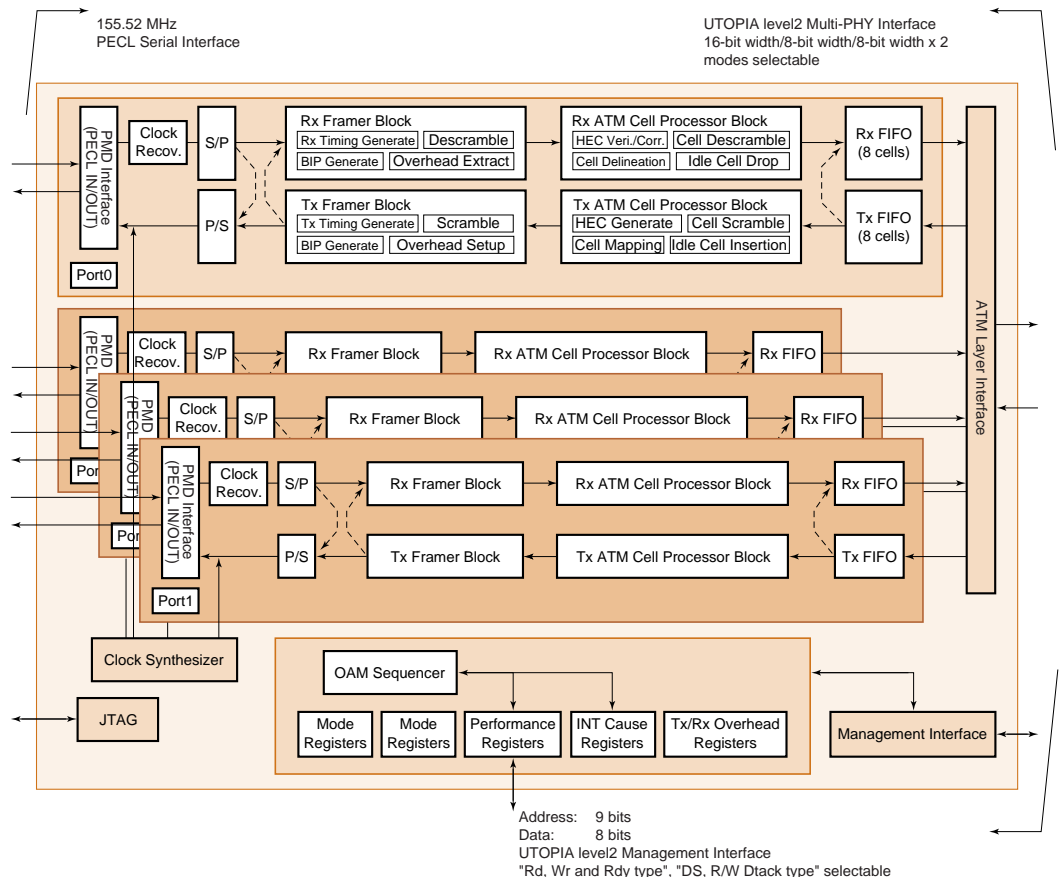


μPD98411 ATM QUAD SONET FRAMER (NEASCOT-P40™)

The μPD98411 integrates the quad TC sublayers function of ATM over SONET STS-3c/SDH-STM-1 frames, as specified by the ATM Forum specifications. The μPD98411 maps an ATM cell passed from an ATM layer to the payload of a 155-bps SONET/SDH frame and then transmits the cell to the Physical Media Dependent (PMD) sublayer, a reception function that first separates ATM cells of the SONET/SDH frame received from the PMD device and then transmits them to the ATM layer. The μPD98411 combines transmission and reception functions of four ports into a single chip ideally suited for use in ATM multiplexers, ATM switches, and other equipment used to configure the ATM network. In addition, the μPD98411 incorporates independent clock recovery functions for each port to extract a synchronous clock for reception of receive data from the bit stream and a clock synthesis function to generate a clock for transmission.

BLOCK DIAGRAM



APS: Automatic Protection Switching
UTOPIA: Universal Test and Operation PHY Interface for ATM
OAM: Operation, Administration, Maintenance

FEATURES

- Four channels on one chip for ATM user network interface TC sublayer function
- 155.52 Mbps SONET STC-3c/SDH STM-1 frame format
- Compliance with ATM Forum Specifications (version 3.1)
- Three selectable modes on the cell interface
 - Single 16-bit bus: 1TCLAV/1RCLAV
 - Single 8-bit bus: direct status indication
 - Dual 8-bit buses: multiplexed status polling
- Two selectable modes on the UTOPIA 2 management interface (version 1.0)
 - RD/WR/RDY styles
 - DS/RW/ACK styles

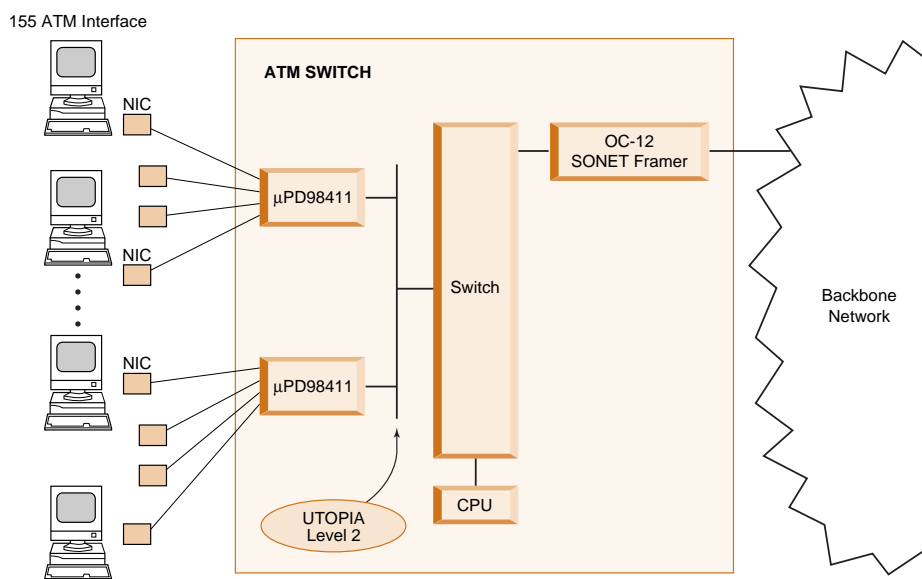
- Abundant OAM functions
 - Error detection interrupts
 - Like monitor counters
 - APS byte monitoring
 - Bit error rate threshold control
- Loopback function and pseudo error frame transmission for testing
- JTAG boundary scan test (IEEE 1149.1)
- 0.35- μ m CMOS process
- 3.3-volt power supply (with option to connect directly to 5.0-volt TTL level)
- 240-pin PQFP package (32 x 32 mm)

APPLICATIONS

- ATM switches
- ATM multiplexers
- ATM routers
- ATM multichannel servers

APPLICATION EXAMPLE

<ATM SWITCH>



98YL-0161B (6/98)

NEC

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