µPD98405 ATM CONTROLLER WITH ABR

The µPD98405 is a highly integrated, single-chip ATM controller that performs all user-to-network interface (UNI) functions from the system bus to the physical media dependent (PMD) interface for cells over SONET applications. The µPD98405 complies with the lastest ATM industry standards, supports all classes of service (including ABR), and provides assist functions in hardware for LAN emulation.

FEATURES

- ATM layer and adaptation layer functions with SONET/SDH (STS-3c/STM-1) TC layer and clock recovery circuitry integrated into a single chip
- ABR as well as CBR, VBR, and UBR classes of service in compliance with the latest ATM industry standards
- UTOPIA interface for connectivity to a variety of PHY layer devices (25-Mb/s, DS3, E3)
- 64K VCs/VPs with up to 30K connections active simultaneously (30K packets processed simultaneously)
- LAN emulation assist functions in hardware that relieve the host processor from many tasks and lead to higher system performance
- Single-cell and multicell burst transfers over the PCI bus for optimal host bus utilization and improved overall system performance
- 96-cell receive FIFO to prevent cell loss in high-latency system bus environments
- Extremely flexible buffer management scheme for efficient host memory utilization
- On-chip multiple transmit buffer queues for per-VC queueing applications

HOST INTERFACE

- 32-/64-bit PCI bus interface with 3.3- or 5-volt power supply and clock speeds to 33 MHz
- Optional 32-bit generic bus interface with 3.3-volt power source, clock speeds to 33 MHz, and 5-volt tolerant input signals

ATM LAYER INTERFACE

- Optional UTOPIA interface for connectivity to external PHY circuitry

GENERAL

- MIB counters to aid in network management
- Three loopback modes to isolate problems
- JTAG boundary scan option for automatic testing
- Low-power, 0.35-µm CMOS technology, 3.3-volt supply, and 5-volt tolerant inputs
- 304-pin plastic QFP package

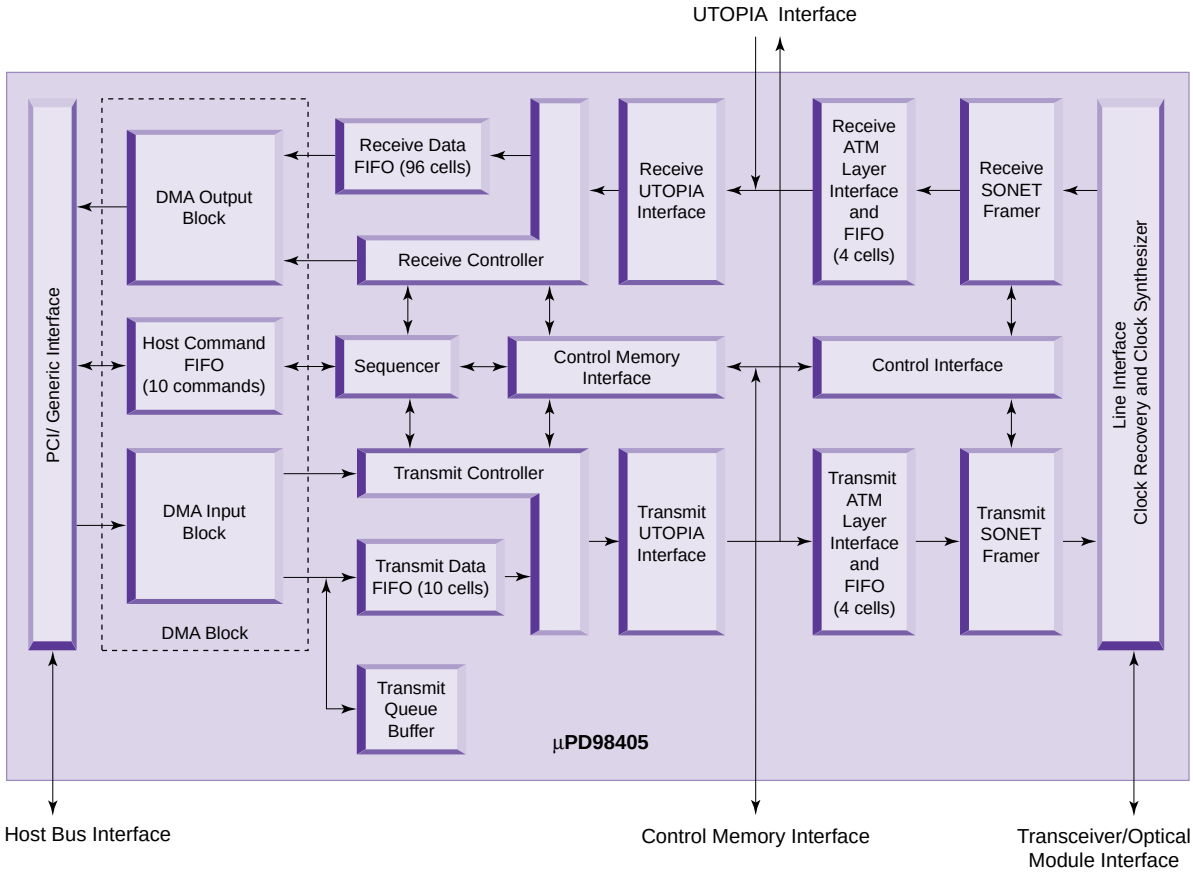
MEDIA INTERFACE

- Differential PECL signals for direct interface to an optical or electrical transceiver

APPLICATIONS

- ATM adapter cards for servers and workstations
- ATM uplink modules for routes and LAN switches
- ATM switches/hubs
- Concentrators and remote access devices

BLOCK DIAGRAM



97NI-0055C (2/97)

NEC

For literature, call 1-800-366-9782 7 a.m. to 6 p.m. Pacific time
or fax your request to 1-800-729-9288
or visit our Web site at www.necel.com

Document # S12435EU2V0PB00