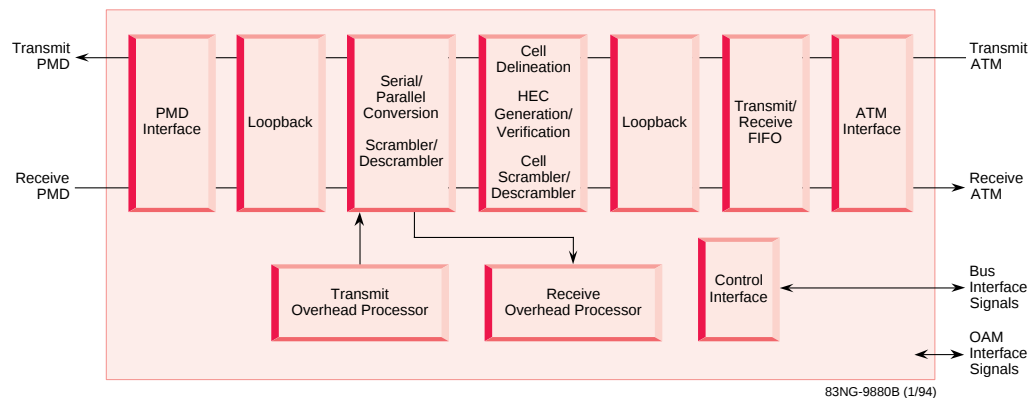


μPD98402 ATM/SONET (STS-3C) FRAMER

The μPD98402 implements the asynchronous transfer mode (ATM) transmission convergence (TC) sublayer function in conformance with the ATM Forum specifications. This device allows for the transporting of ATM cells over SONET/SDH networks at the STS-3c/STM-1 rate of 155.52 Mbps.

BLOCK DIAGRAM



FEATURES

- All functionality required to insert and extract 53-byte ATM cells into and out of SONET frames
- HEC generation, verification, and correction
- Receive/transmit FIFOs for cells buffering
- Scrambling and descrambling, pointer processing, and frequency justification for SONET frames
- Framing of incoming traffic bytes
- Performance monitoring of interleaved parity bits and path status bytes
- Insert/drop registers (SOH: C1#1 to #3, F1, K2) (POH: F2, C2) for writing/reading of SONET overhead data
- Standard operation and maintenance (OAM) function to monitor network performance and provide alarm indication

ATM LAYER INTERFACE

- UTOPIA interface
- Generic 8-bit microprocessor bus interface for configuration, control, and monitoring

MEDIA INTERFACE

- Differential PECL signals for direct interface to an optical driver/receiver module
- Serial data rate of 155.52 Mbps and parallel (byte-wide) data rate of 19.44 Mbps

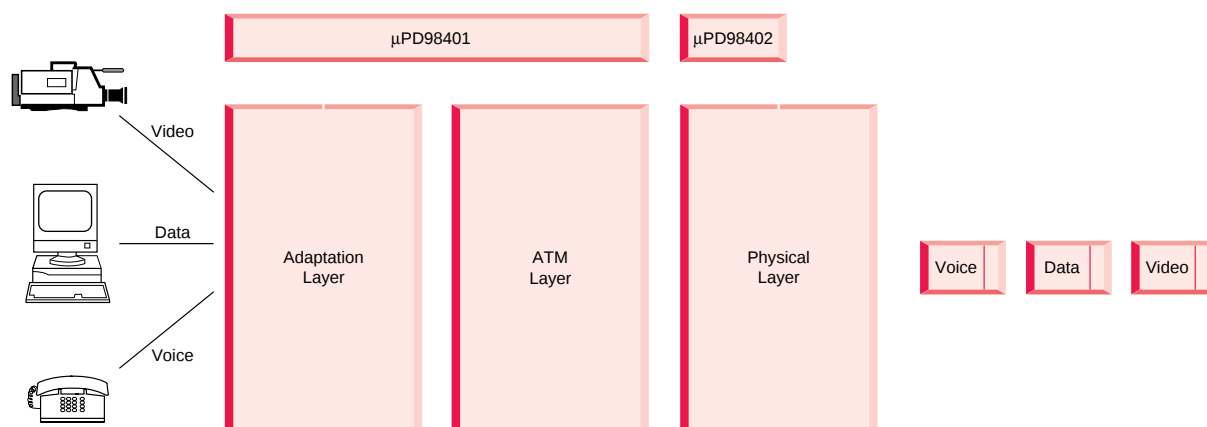
GENERAL

- Internal loopback at the media side and ATM layer side
- Access pins for self-testing
- Low-power CMOS technology (0.8-micron)
- 160-pin PQFP package

APPLICATIONS

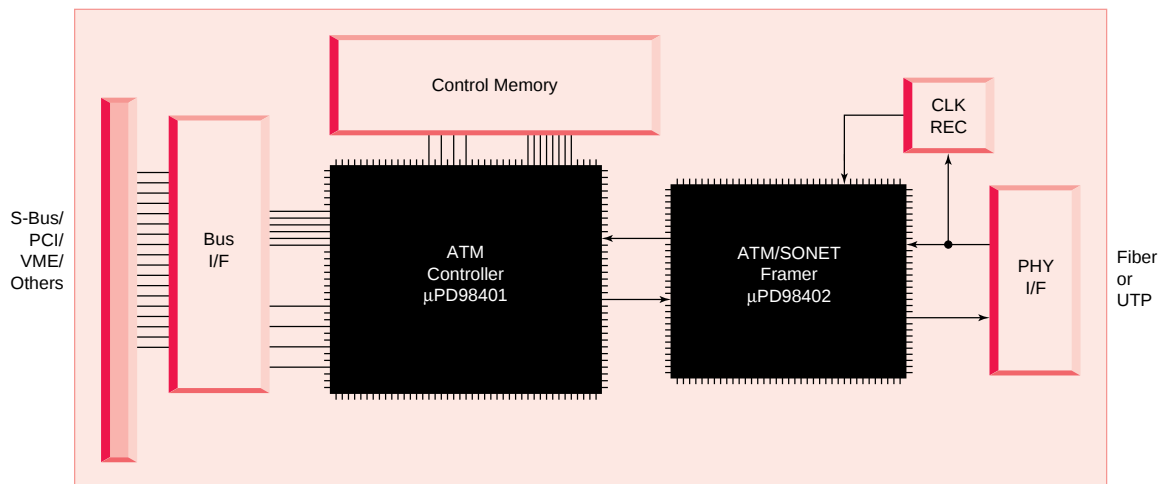
- ATM adapter cards
- Internetworking devices (bridges and routers)
- Workstations and servers
- ATM switches and hubs
- ATM test equipment

ATM SYSTEM ARCHITECTURE



98YL-0168B (6/98)

TYPICAL ATM NETWORK INTERFACE CARD (ATM-NIC)



98YL-0169B (6/98)



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

© 1998 NEC Electronics Inc. NEC is either trademarks or registered trademarks of NEC Corporation in the United States and/or other countries. All other trademarks are the property of their respective owners. No part of this document may be copied or reproduced in any form or by any means without the prior written consent of NEC Electronics Inc. (NECEL). The information in this document is subject to change without notice. ALL DEVICES SOLD BY NECEL ARE COVERED BY THE PROVISIONS APPEARING IN NECEL TERMS AND CONDITIONS OF SALES ONLY, INCLUDING THE LIMITATION OF LIABILITY, WARRANTY, AND PATENT PROVISIONS. NECEL makes no warranty, express, statutory, implied, or by description, regarding information set forth herein or regarding the freedom of the described devices from patent infringement. NECEL assumes no responsibility for any errors that may appear in this document. NECEL makes no commitments to update or to keep current information contained in this document. The devices listed in this document are not suitable for use in applications such as, but not limited to, aircraft control systems, aerospace equipment, submarine cables, nuclear reactor control systems, and life-support systems. "Standard" quality grade devices are recommended for computers, office equipment, communication equipment, test and measurement equipment, machine tools, industrial robots, audio and visual equipment, and other consumer products. For automotive and transportation equipment, traffic control systems, and anti-disaster and anti-crime systems, it is recommended that the customer contact the responsible NECEL salesperson to determine the reliability requirements for any such application and any cost adder. NECEL does not recommend or approve use of any of its products in life-support devices or systems or in any application where failure could result in injury or death. If customers wish to use NECEL devices in applications not intended by NECEL, customers must contact the responsible NECEL salespeople to determine NECEL's willingness to support a given application.

Document # S14197EU2V0PB00