



# Am7984A

## FDDI ENcoder DECoder (ENDEC)

### DISTINCTIVE CHARACTERISTICS

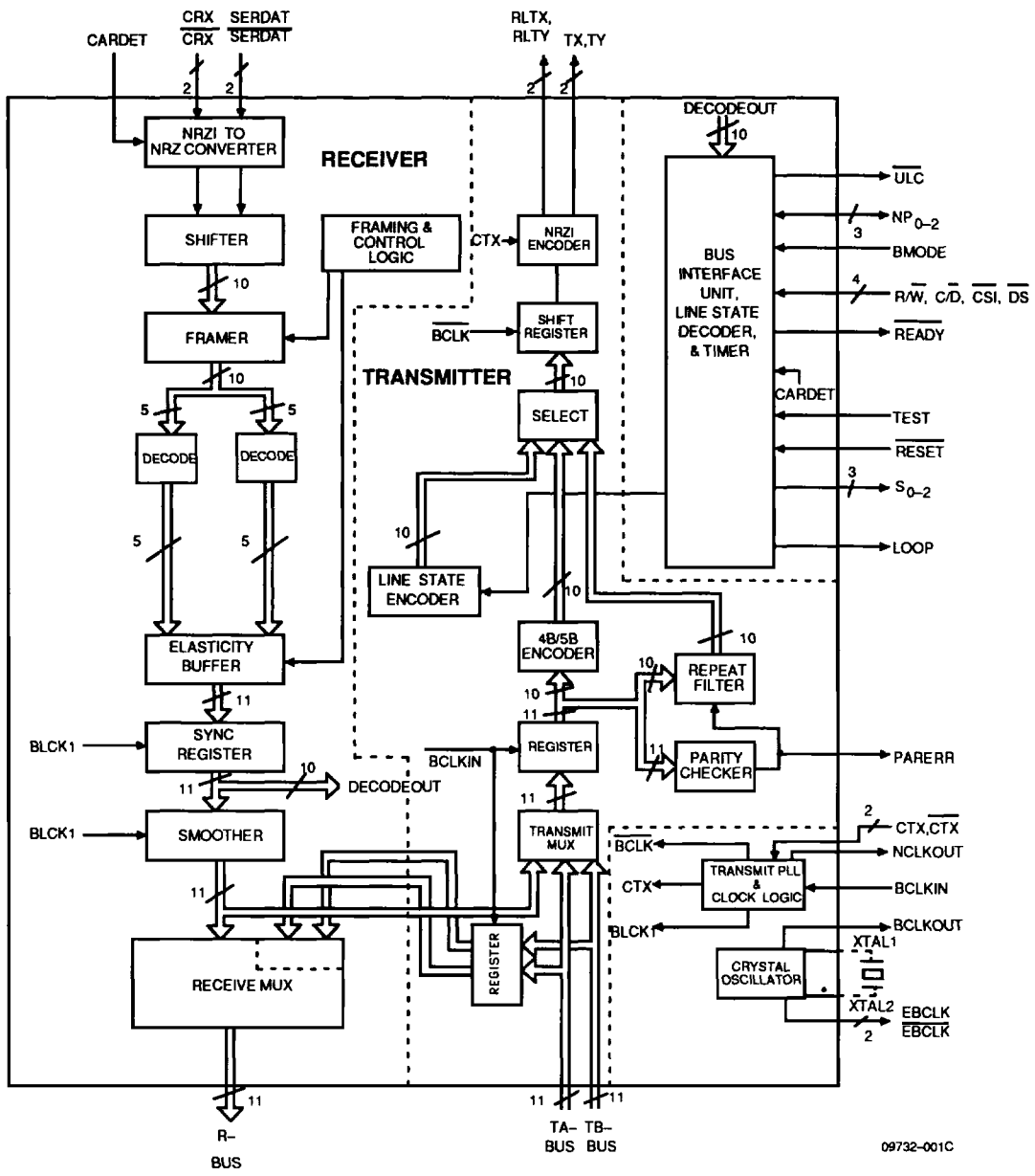
- Implements 4B/5B encoding/decoding as specified by the ANSI X3T9.5 Fiber Distributed Data Interface (FDDI) standard
- 100 Mbps, 125 MBaud serial data-rate
- Byte-clock and nibble-clock output
- Selectable loopback and repeat modes
- Elasticity Buffer
- Smoother
- Repeat filter
- Single +5-V supply

### GENERAL DESCRIPTION

The Am7984A ENDEC (ENcoder DECoder) performs 4B/5B encoding on data to be transmitted from an FDDI station. The chip also performs 4B/5B decoding of received data. It has an elasticity buffer which allows a station to compensate for small differences between receive and transmit clock frequencies. There is a smoother present in the receive path to ensure with a very high probability that a minimum of 6 bytes of IDLE are received before a frame. It also decodes line state information from data that has been received from the network media, and enables line states to be forced onto

the media for connection management purposes. A repeat filter replaces any invalid symbols with other symbols that are determined by the repeat filter state machine. The ENDEC interfaces to the FORMAC through two 11-bit transmit buses and one 11-bit receive bus. Data is serially transferred to an optical transmitter by a differential driver. The ENDEC interfaces to the Node Processor (NP) through a 3-bit bus and associated handshake lines. It also supplies the master clock for the network interface of the station.

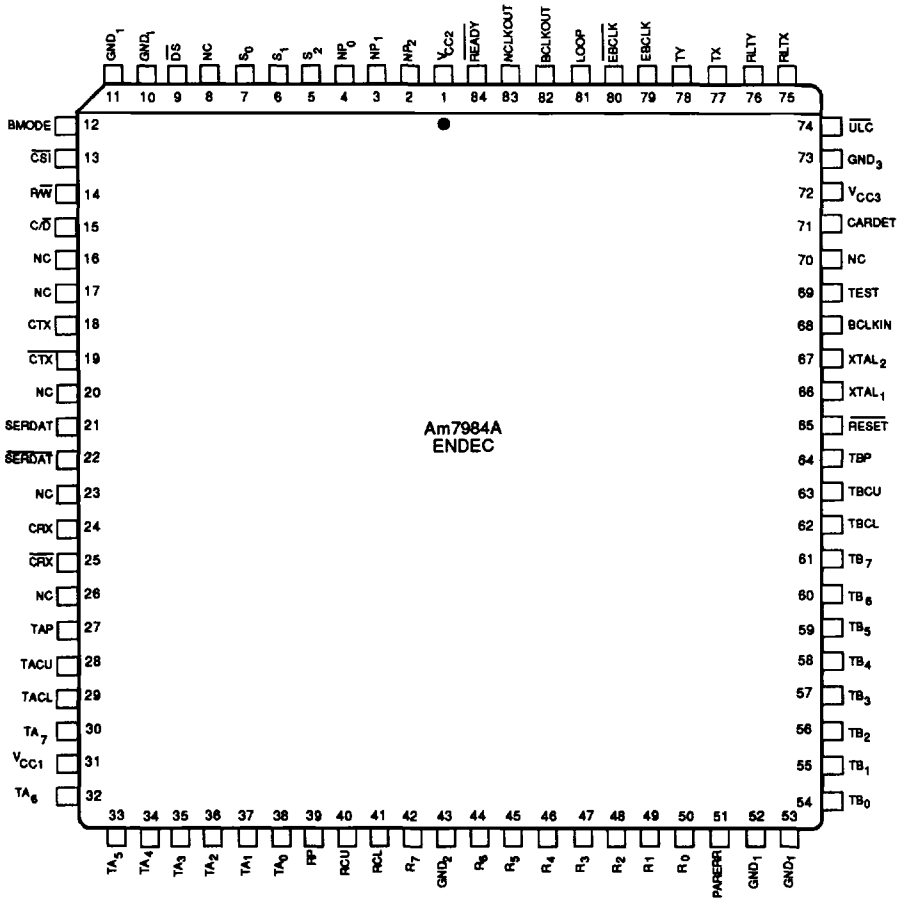
# BLOCK DIAGRAM



09732-001C

# CONNECTION DIAGRAM (Top View)

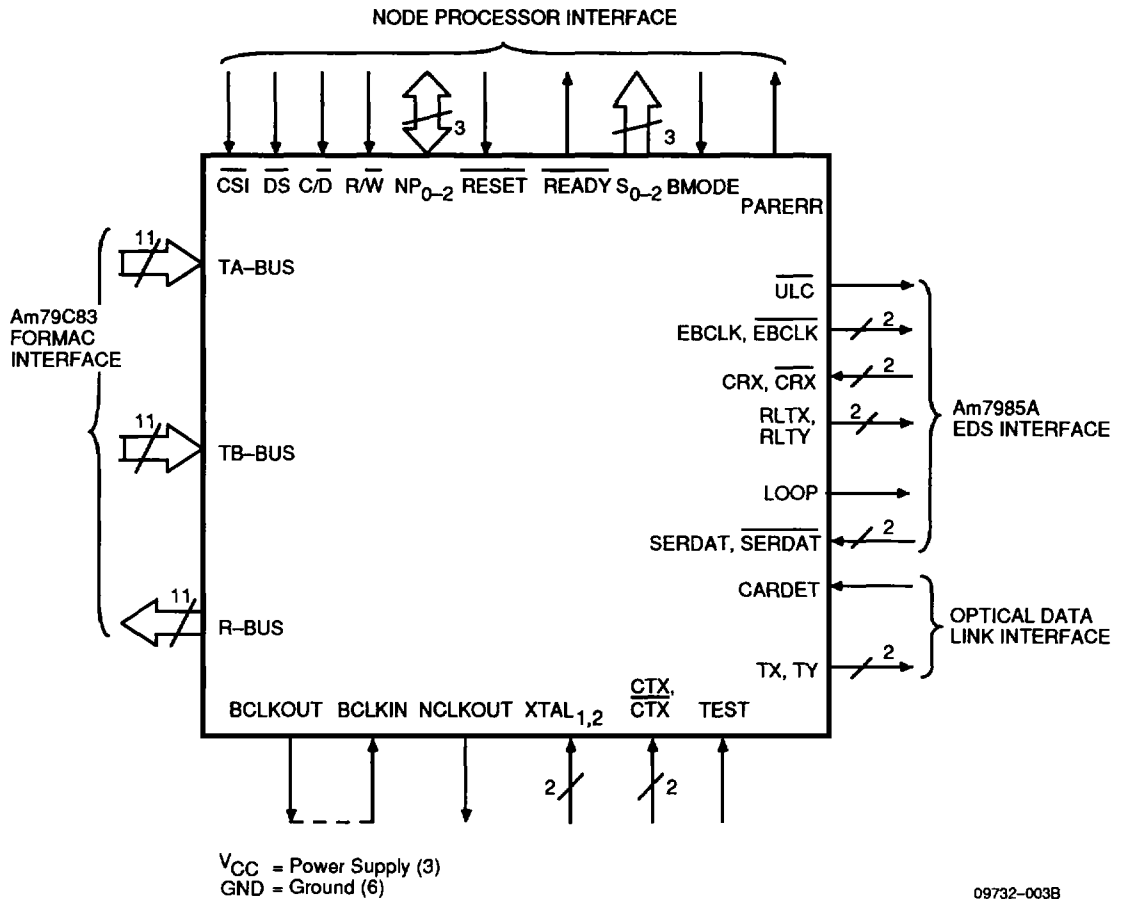
## PLCC 084



09732-15

09732-002C

# LOGIC SYMBOL

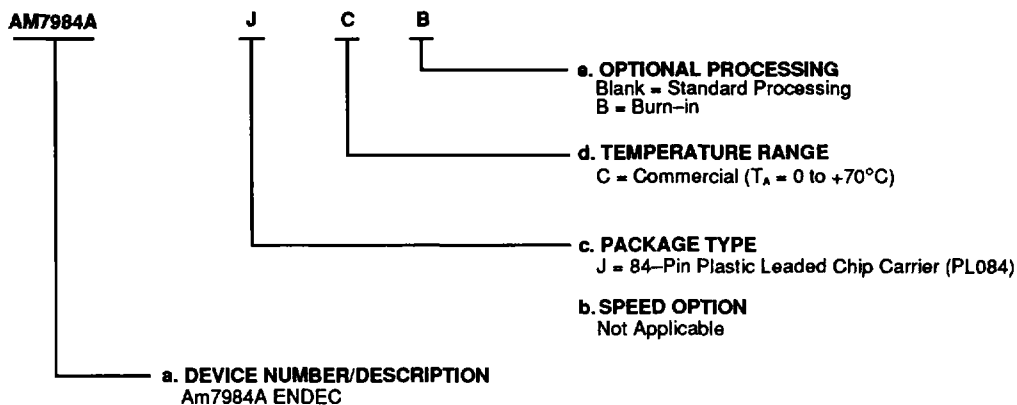


## ORDERING INFORMATION

### Standard Products

AMD standard products are available in several packages and operating ranges. The ordering number (Valid Combination) is formed by a combination of:

- a. Device Number
- b. Speed Option (if applicable)
- c. Package Type
- d. Temperature Range
- e. Optional Processing



Valid Combinations	
AM7984A	JC, JCB

#### Valid Combinations

Valid Combinations list configurations planned to be supported in volume for this device. Consult the local AMD sales office to confirm availability of specific valid combinations, to check on newly released combinations, and to obtain additional data on AMD's standard military grade products.