Am7992B

T-75-57

Serial Interface Adapter (SIA)

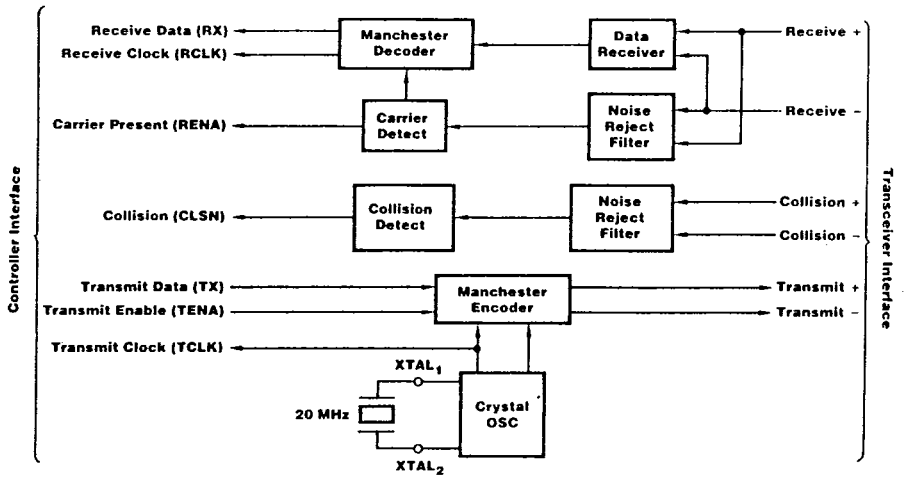
DISTINCTIVE CHARACTERISTICS

- Compatible with Ethernet/Cheapernet/IEEE-802.3 specifications
- Crystal controlled Manchester Encoder
- Manchester Decoder acquires clock and data within four bit times with an accuracy of ±3 ns
- Guaranteed carrier and collision detection squelch threshold limits
  - Carrier/collision detected for inputs greater than −275 mV
  - No carrier/collision for inputs less than −175 mV
- Input signal conditioning rejects transient noise
  - Transients < 10 ns for collision detector inputs
  - Transients < 20 ns for carrier detector inputs
- Receiver decodes Manchester data with worst case ±19 ns of clock jitter (at 10 MHz)
- TTL compatible host interface
- Transmit accuracy ±0.01% (without adjustments)

GENERAL DESCRIPTION

The Am7992B Serial Interface Adapter (SIA) is a Manchester Encoder/Decoder compatible with IEEE-802.3, Cheapernet and Ethernet specifications. In an IEEE-802.3/Ethernet application, the Am7992B interfaces the Am7990 Local Area Network Controller for Ethernet (LANCE) to the Ethernet transceiver cable, acquires clock and data within four bit times, and decodes Manchester data with worst case ±19 ns phase jitter at 10 MHz. SIA provides both guaranteed signal threshold limits and transient noise suppression circuitry in both data and collision paths to minimize false start conditions.

BLOCK DIAGRAM

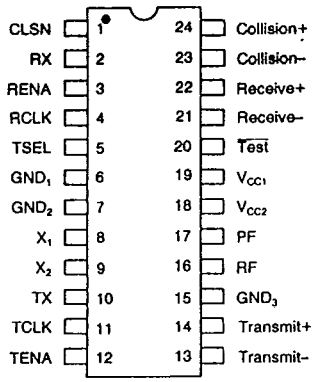


BD002071

RELATED PRODUCTS

Part No.	Description
Am7990	Local Area Network Controller for Ethernet (LANCE)
Am7996	IEEE-802.3/Ethernet/Cheapernet/Transceiver

CONNECTION DIAGRAM

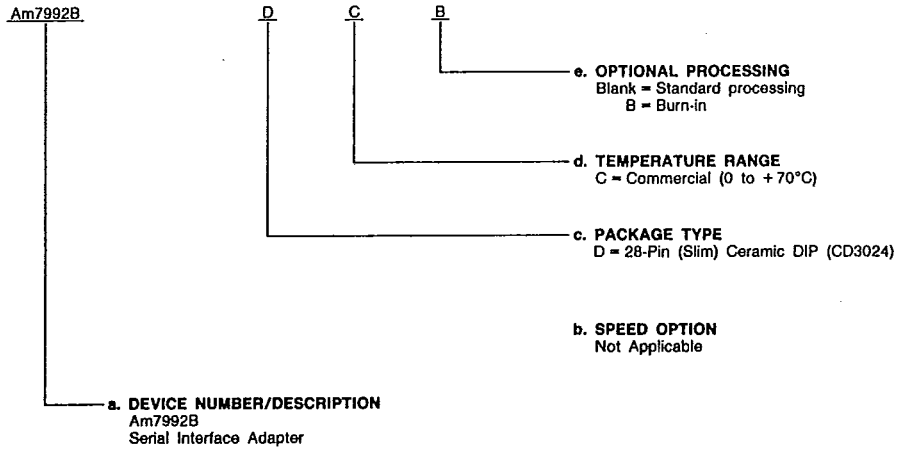


CD001521

Note: Pin 1 is marked for orientation

ORDERING INFORMATION
AMD STANDARD PRODUCTS

AMD products are available in several packages and operating ranges. The order 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	
AM7992B	DC, DCB

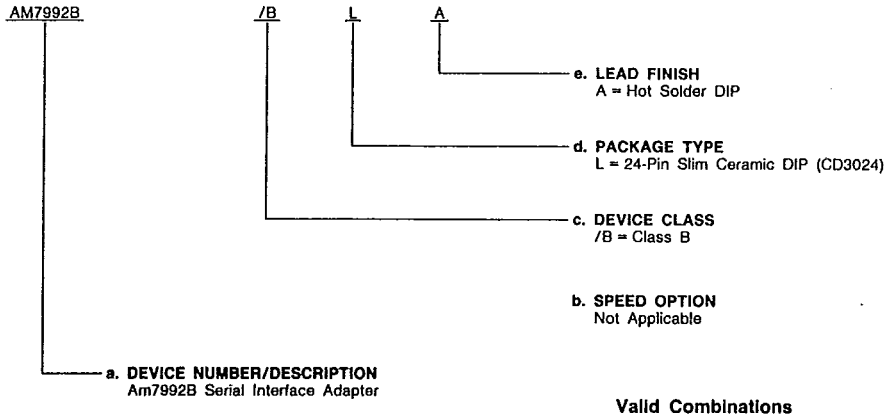
Valid Combinations

Consult the local AMD sales office to confirm availability of specific valid combinations, to check on newly released valid combinations, and to obtain additional data on AMD's standard military grade products.

ORDERING INFORMATION (Cont'd.)

APL Products

AMD products for Aerospace and Defense applications are available in several packages and operating ranges. APL (Approved Products List) products are fully compliant with MIL-STD-883C requirements. The order number (Valid Combination) for APL products is formed by a combination of: **a. Device Number**
b. Speed Option (if applicable)
c. Device Class
d. Package Type
e. Lead Finish



Valid Combinations	
AM7992B	/BLA

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 or to check for newly released valid combinations.

Group A Tests

Group A tests consist of Subgroups 1, 2, 3, 7, 8, 9, 10, 11.