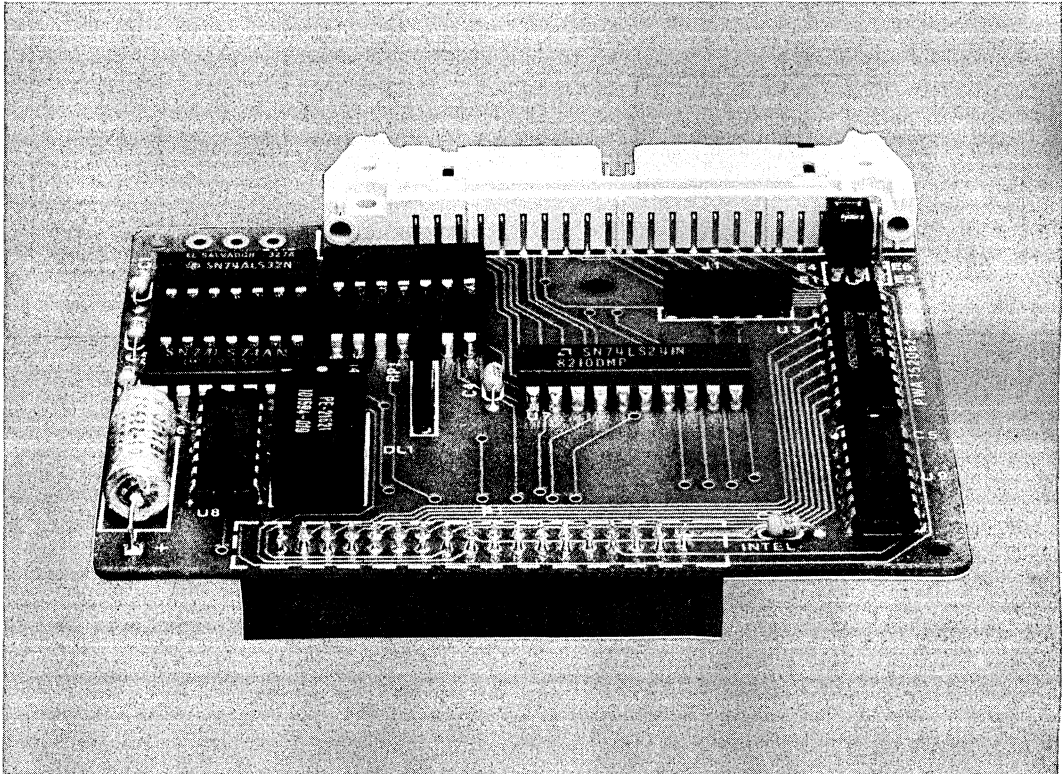


iSBX™ 258 iSBX INTERFACE MULTIMODULE™ FOR INTEL BUBBLE CASSETTE SYSTEM

- Interfaces iBC Bus to iSBX™ Bus
- Single-Wide iSBX™ MULTIMODULE™
- Drives One or Two iBC Systems
- Speeds Design Time with iBC Systems

The iSBX 258 Interface MULTIMODULE for the Intel Bubble Cassette (iBC) System provides an iSBX interface for the iBC system. Each iSBX 258 can interface up to two daisy-chained iBC systems in polled or interrupt data transfer modes, or one in the DMA mode.

The iSBX 258 plugs into Intel iSBC® Single Board Computer products which have iSBX connectors or any other processor boards with iSBX connectors. It is included in the iBCK 12 iBC prototyping kit to facilitate design work on the iBC system.



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FUNCTIONAL DESCRIPTION

The iSBX 258 is a completely assembled and tested iBC bus to iSBX bus interface board. (See Figure 1 for a block diagram of its recommended configuration in an iBC system.) It consists of buffer circuitry mounted on a single-wide iSBX MULTIMODULE card. It is completely iSBX bus compatible and allows easy iSBX interface to an iBC system with up to 18" of ribbon cable.

OPERATION

The operation of the MULTIMODULE is software transparent to the user while maintaining all iSBX bus specifications; +5Vdc \pm 5% is supplied from the iSBX bus.

MOUNTING TECHNIQUE

As shown in Figure 2, the iSBX 258 plugs into a host board via the iSBX connector and is secured by a spacer with a screw. A single-wide iSBX MULTIMODULE is used and one Multibus card slot is occupied in addition to the card slot for the host board. Dimensions of the board and host board/MULTIMODULE height tolerances are given in Figures 3 and 4. Although the iSBX 258 board's male iSBX connector has the standard 36 pins, it will also plug into the expanded 44 pin female iSBX connector.

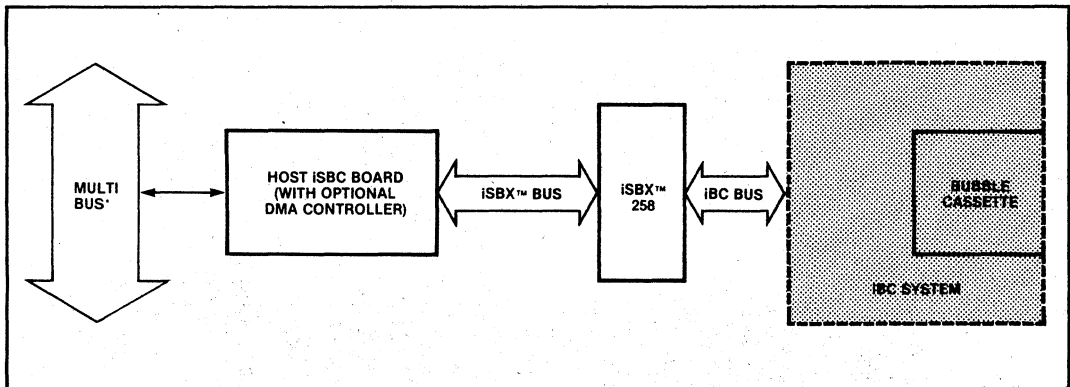


Figure 1. Block Diagram

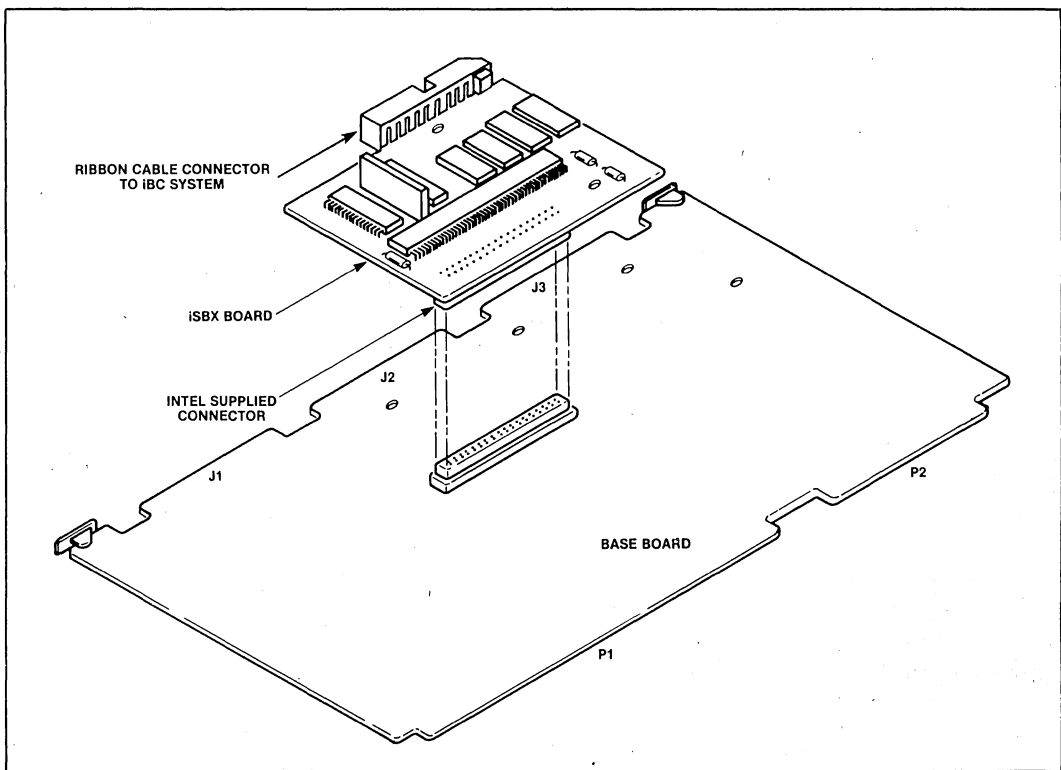


Figure 2. MULTIMODULE™ Mounting

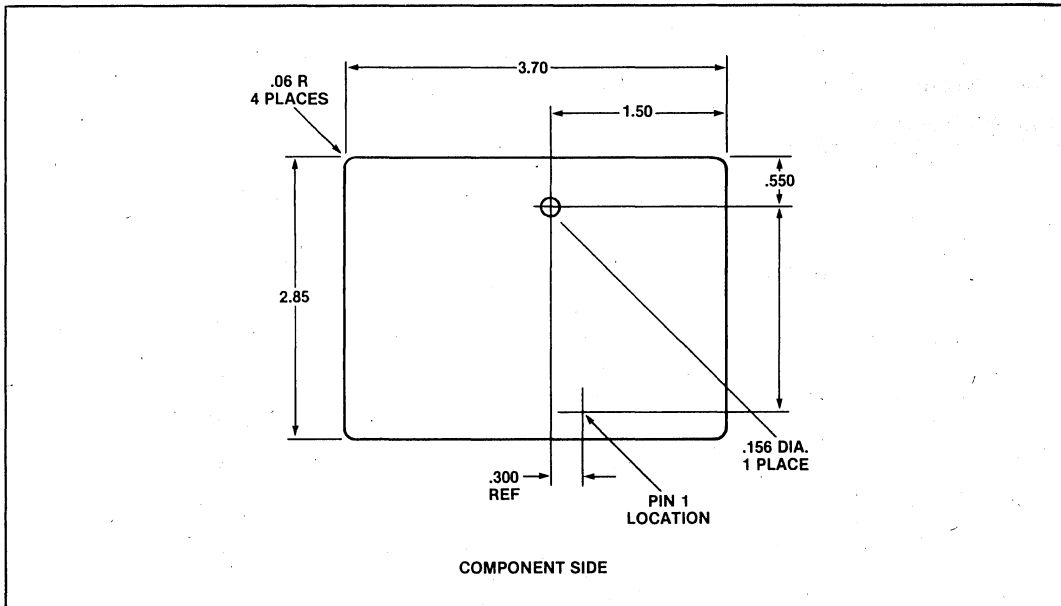
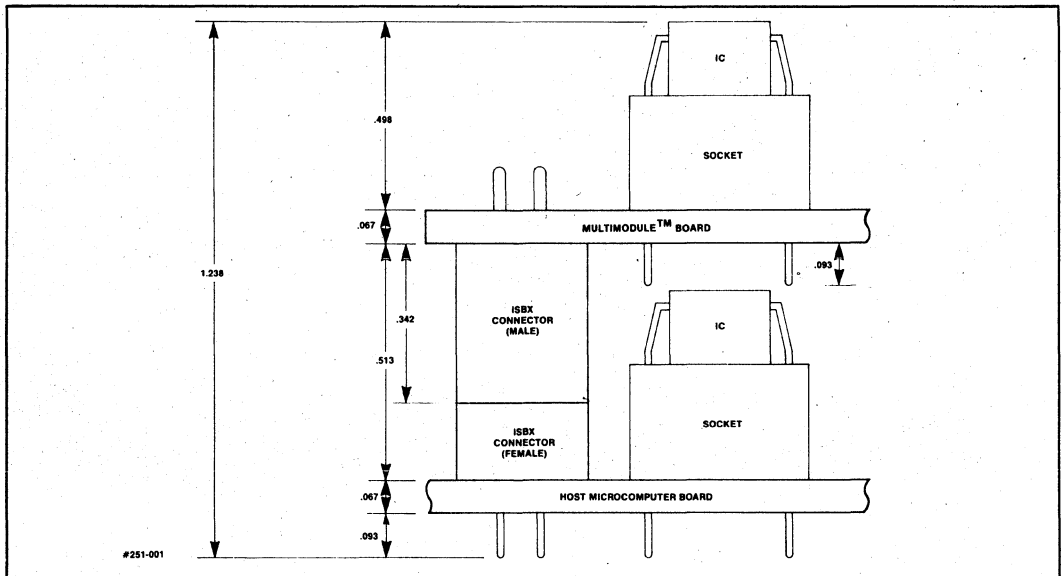


Figure 3. Dimensions


Figure 4. Mounting Clearance

SPECIFICATIONS

Physical Characteristics

Width: 7.24 cm (2.85 in.)
 Length: 9.40 cm (3.70 in.)
 Height: 2.05 cm (0.81 in.)
 Weight: 1.8g

Environment

iSBX 258 Board 0-65°C
 Temperatures are ambient in free moving air.

Operational Modes

Supports Polled, Interrupt-Driven, or DMA (with Host DMA controller) transfers with the iBC system.

Electrical Requirements

D.C. power, supplied through iSBX connector: +5Vdc
 ±5%, 285 mA (max).

Note: Three auxiliary points are provided which supply +5V, +12V and GND. Power available is:

$V_{CC} = 5V @ 2.7A (max)$
 $V_{DD} = 12V @ 1.0A (max)$

Performance in iBC System

Maximum Data Rate: 100KBits/sec
 Average Access Time: 48 msec.
 Average Transfer Rate: 68KBits/sec

Interface Requirements

- TTL compatible
- iSBX 258 male iSBX connector plugs into 36-pin or 44-pin host female connector
- iSBX 258 40-pin male ribbon cable connector plugs into 40-pin female ribbon cable connector cabled to iBC system.

Relative Humidity

0% to 95% without condensation

Additional Documentation

Intel Bubble Cassette System Users' Manual
 (Order #122278-001)
 iSBX Bus Specification (Order #142686)