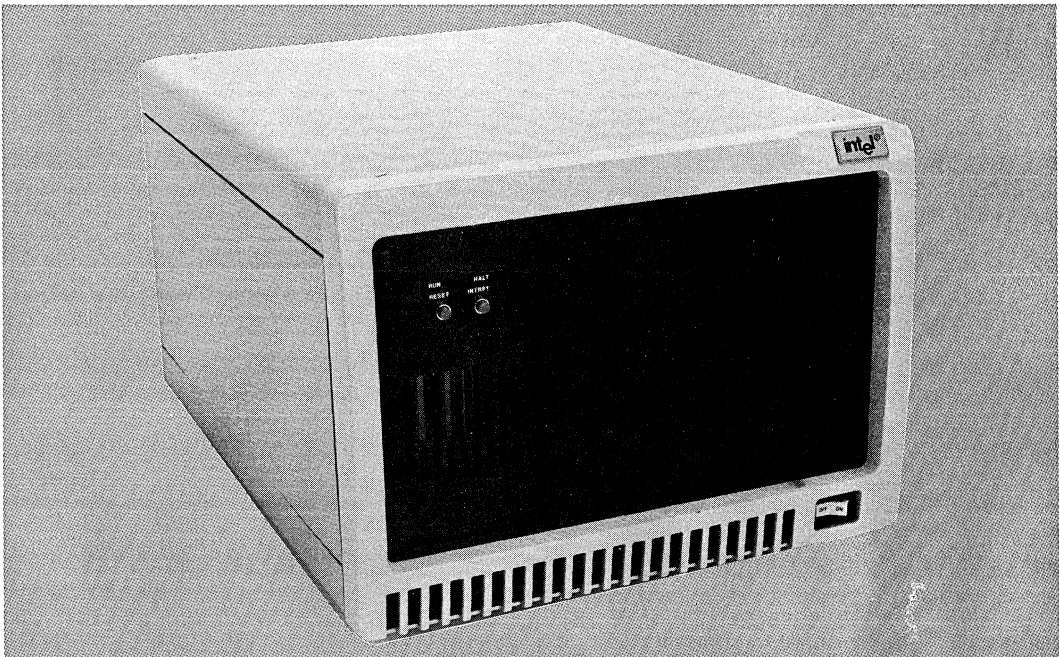




iSBC™ 680/iSBC 681 MULTISTORE™ USER SYSTEM PACKAGE

- Complete system package for user-selected Intel® iSBC boards and up to two 8" peripheral drives
- Available in table-top (iSBC 680 package) or rack-mount (iSBC 681 package) configurations
- Holds up to six iSBC boards compatible with the MULTIBUS® system bus
- Designed to meet UL safety requirements and FCC/VDE EMI limits
- Supplies ± 5 , ± 12 , ± 24 VDC to power boards and peripheral drives
- Power supply provides 8 ms of power-fail warning, plus a real-time clock

The iSBC 680/iSBC 681 Multistore User System Package products make available to the OEM a new way to assemble his systems for those applications requiring rotating memory or other peripherals built in the 8" industry-standard form factor. The Multistore package allows the OEM to select the iSBC boards required for the job, and to independently choose from a wide variety of peripherals to complete the system. The switching power supply provides sufficient current at all voltage levels to power most manufacturers' drives, as well as furnishing the standard MULTIBUS system bus voltages to the iSBC boards in the package's cardcage. The appearance of the packages provides an attractive addition to the OEM's system, while the construction allows easy access to the interior for service.



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FUNCTIONAL DESCRIPTION

Physical Packaging

PACKAGE CONSTRUCTION — The Multistore package is constructed entirely of metal, and all cover pieces are gasketed to completely contain high-frequency noise from the power supply and the system boards within the package.

MOUNTING OPTIONS — The iSBC 680 package is a table-top structure; the iSBC 681 package is the rack-mount version with slides attached to the side panels and a wider trim bezel to cover the mounting rails.

COOLING — The boards and peripherals installed in the package are cooled by air brought in at the bottom of the front panel and drawn through the power supply, with the heated air discharged to the rear of the package.

CARDCAGE/BACKPLANE — The cardcage/backplane accepts up to six iSBC boards compatible with the Intel MULTIBUS system bus (Figure 1).

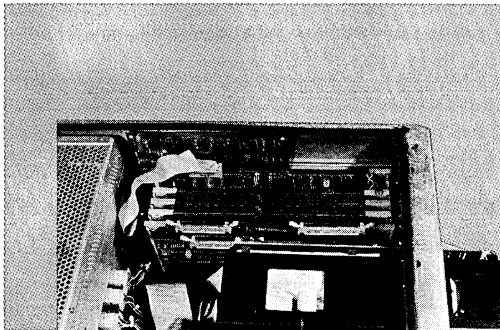


Figure 1. Boards Mounted in the Cardcage of the iSBC 680 Package

PARALLEL PRIORITY — Up to six bus masters may be installed in the package because of the parallel priority logic which is an integral part of the backplane.

ENHANCED NOISE IMMUNITY — The integrity of the package is enhanced by a new backplane for the system boards, which offers improved noise immunity through advanced design techniques.

PERIPHERAL MOUNTING — Two positions are provided for mounting of peripheral drives conforming to the de facto industry standard for size and mounting points on 8" peripherals. The mounting system provides slides for the bases of the

drives, allowing the drives to be installed/removed from the front of the package (Figure 2).

Blank covers with ventilation slots are provided with the package for the unused peripheral positions and for those peripherals not furnished with a cosmetic cover.

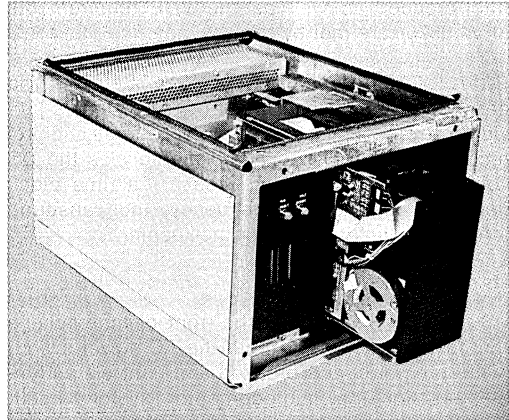


Figure 2. iSBC 680 Package with Winchester Drive Pulled Out for Servicing

System Power

BASIC POWER SUPPLY — The supply provided with the package is an advanced-technology switching power supply, offering large current capabilities over the six DC voltages supported. Sockets for drive power are located on the power supply bulkhead at the rear of the peripheral cavity (Figure 3).

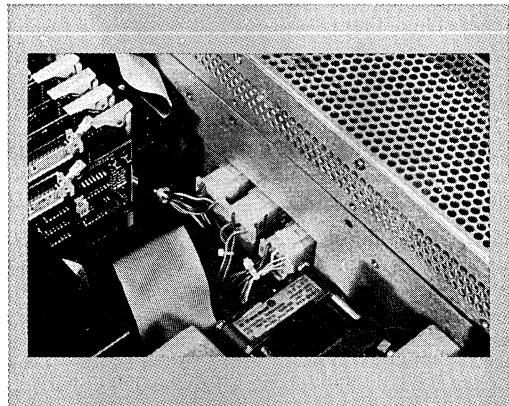


Figure 3. Power Supply Showing Three Power Connectors (Two for Peripherals, One for the Cardcage/Backplane)

INTERNATIONAL ACCEPTANCE — The package is a UL-recognized component, and it has been designed to meet the safety requirements of CSA and VDE.

MEETS EMI STANDARDS — The FCC standards for conducted and radiated EMI (electromagnetic interference), as well as the VDE requirements (0871/0875), are met by the package.

POWER-FAIL/AUTO-RESTART SYSTEM — The package gives the user a set of logic signals providing advanced warning of power failures and protection for battery backed-up memory as the DC voltages fall. It also furnishes a real-time clock derived from the line frequency, thus ensuring long-term stability in user time-keeping.

User Interface

USER CONTROLS — At the front of the package the user has access to both the AC power switch (with integral circuit breaker) and controls and indicators for the microcomputer system itself. "RESET" and "INTERRUPT" switches are provided, along with "RUN" and "HALT" LED indicators.

DEVICE INTERFACE — With the package designed for maximum suppression of both EMI and ESD (electrostatic discharge) the preferred interface between the installed boards and external devices is with shielded cables isolated through user-supplied connectors installed in the panel provided at the rear of the package (Figure 4). The six cut-outs, sized for 50-pin connectors, are furnished with individual cover plates.

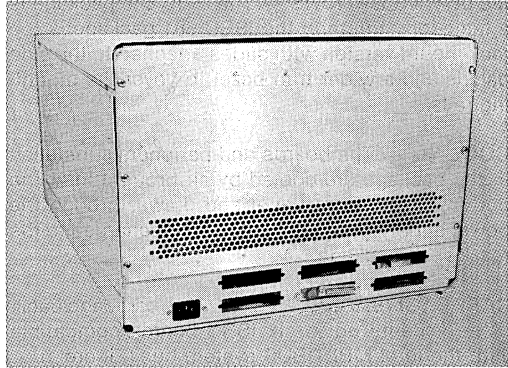


Figure 4. iSBC 680 Package Showing External Device Connection Panel

SPECIFICATIONS

Input Power

Frequency — 47-66 Hz

Voltage — 90-126 VAC/180-252 VAC, single phase (user-selectable).

Periodic and Random Deviation (PARD) — 50 mV peak-to-peak, all outputs.

Output Regulation (Combined Line and Load) — $\pm 1\%$ under any conditions of AC input voltage variation (within operational range) and output load change.

Line Transient Tolerance — A signal of up to 1000 VDC, with a pulse width of up to 50 μ s, will have no affect on system operation.

Output Power

Power Fail Indication — PFIN/ is generated approximately 8 ms after the input drops below 90/180 VAC. PFIN/ is available on the P2 connector of the cardcage/backplane for generation of an interrupt. The ± 24 VDC outputs will go to zero within

1 ms of issuance of PFIN/; the ± 5 and ± 12 VDC outputs will remain within specification for at least 8 ms, after which MPRO/ will go true to protect non-volatile memories from being written into as DC power fails.

System Clock — The power supply provides a 2 \times line frequency clock output, available on the P2 connector of the cardcage/backplane.

Nominal Voltage	Current ¹ (Max Amps)	Typical Peripheral Power Requirements ²	
		8" Winchester	Diskette Drive
+ 5	30.0	5.1	1.0
- 5	2.0	0.25	0.07
+ 12	2.9	—	—
- 12	3.0	0.7	—
+ 24	7.8	4.0	1.8
- 24	1.6	—	—

NOTES:

1. The maximum power available from the supply, from all outputs, is 300 watts.
2. These are worst-case data, drawn from manufacturers' data sheets.

Physical Characteristics (Figure 5)

- Width** — 16.8/19.0 in. (42.5/48.3 cm)
iSBC 680/iSBC 681 Packages
- Length** — 21.5 in. (54.6 cm)
- Height** — 12.2 in. (31.1 cm)
- Weight** — 40 lb (18.2 kg) (approximate)

Board Slots — Six @ 0.665 in. on centers between boards. The board in the top slot may contain any iSBX and/or iSBC MULTIMODULE boards.

Peripheral Size — The drives must fit within an envelope 8.55 in. high by 14.25 in. deep by 4.65 in. wide.

Data Separator Board Location — A space is provided within the package to secure a Winchester drive data separator board, if required.

Environmental Characteristics

Ambient (Inlet) Air Temperature — The inlet air temperature, with peripheral drives installed, may not exceed 35°C. This is for the protection of the peripherals, as both diskette and Winchester drives have ambient maximums of 40°C in most instances.

Humidity — 20% to 80% RH, non-condensing for the chassis and typical peripheral content.

NOTE: The photos of the Multistore packages in this data sheet show boards, an 8" Winchester hard disk drive, and an 8" flexible disk drive installed. The packages *do not* include these boards and peripherals; they are shown in the photographs to illustrate physical arrangements in the Multistore package.

Equipment Supplied

iSBC 680 Chassis — Includes table-top package with aluminum sheet metal, 6-slot cardcage/backplane, combination On/Off switch and circuit breaker, peripheral mounting hardware (user must supply power and signal cabling for peripherals), and power supply with AC power cord.

iSBC 681 Chassis — Same as iSBC 680 chassis, plus rack-mount chassis slides and wider bezel.

Reference Manual

162432 — iSBC™ 680/681 Multistore™ Chassis Hardware Reference Manual (NOT SUPPLIED)

Manuals may be ordered from any Intel sales representative, distributor office or from Intel Literature Department, 3065 Bowers Avenue, Santa Clara, CA 95051.

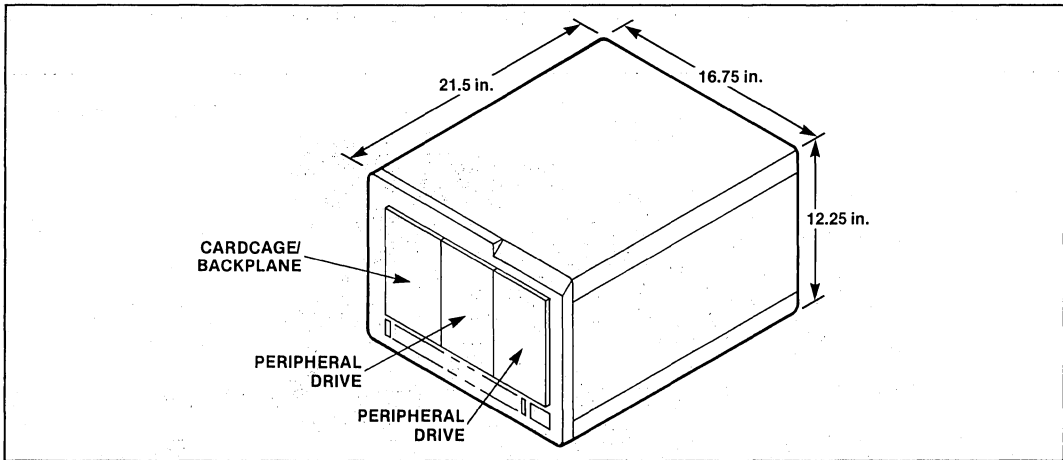


Figure 5. Physical Dimensions of the iSBC 680 Multistore User System Package

ORDERING INFORMATION

Part Number	Description
SBC 680	Multistore User System Package (Table-Top)
SBC 681	Multistore User System Package (Rack-Mount)