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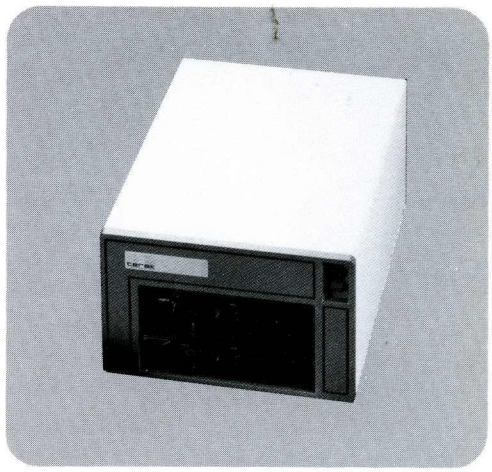
GRAPHICS COMPUTER SYSTEM



HARDWARE MODEL 8515

BUS EXPANSION CHASSIS

The Terak 8515 provides Q-Bus expansion capability in a stand-alone module. It is designed to interconnect with the Terak 8510 Data Processor to provide additional on-line secondary storage and additional Q-Bus slots for adding extra peripheral controllers, memory or Q-Bus compatible devices. The 8515 operates in a "slave" mode with all control signals and bus signals emanating from the 8510 Data Processor.

The 8515 backplane extends from the 8510 via the Q-Bus extender card. The Q-Bus is manufactured by Terak to maintain strict Q-Bus protocol. After installation of the Q-Bus extender, the 8515 has 7 dual height slots or 3½ quad height slots to accommodate controllers for peripheral devices such as additional serial I/O ports, parallel I/O ports, hard disks, tape drives and A/D converters.

The 8515 is available in two configurations:

1. Bus extension only, without disk drives.
2. Optional: Two, two-sided double density disk drives.

A unique Terak feature is that two-sided double density disk drive systems may read all lower density media. No explicit directives concerning the media density are needed from the operator.

The 8515 utilizes flexible magnetic disks as its storage medium in IBM 3740 compatible data format. Recorded disks are 3740/1, 3740/1D, and 3740/2D compatible.

Diskette protection is provided by a mechanical interlock preventing lever closure if the diskette is not properly inserted. Gentle handling of the media is achieved through use of an expandable clutching system. A ceramic read/write/erase head is standard, providing extended head and media life.

Installation of the 8515 consists of simply connecting the AC power line cord, installing the bus and drive extender card in the 8510, and connecting daisy chain flat ribbon cables on the 8510 or 8515.

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Terak Corporation
14151 North 76th Street
Scottsdale, Arizona 85260
602/998-4800

SPECIFICATIONS

Power Supply	
Connector	50-60Hz, 100-120, 220, 240 VAC
Backplane	Strict Q-Bus protocol observed 4 Quad height slots, or 8 Dual height slots
Interface (included)	Two dual-wide, parallel bus extender boards available for connecting 8510 with the 8515 or 8600. Specify Model 2016-EC2 or 2016-EC3.
Disk Storage	
Type	Two (2) two-sided dual density integral flexible (floppy) disk drives, IBM 3740 compatible format

Disk Drive Specifications	**Using Dual Side Double Density Media**
Cylinders	77
Tracks	154
Index tracks	2
Sectors/Tracks	15
Data Bytes/Sector	512[1]
Sectors/diskette	2332
Data Bytes/diskette	1173,344
Recording density (inside track)	6400 bpi
Flux density (inside track)	6400 fci
Encoding Method	MFM
Data Transfer Rates (bits/S)	500K
Access Times	
Track to track	3mS
Head settling time	13mS
DC motor start time	225mS
Rotational speed (±2.5%)	360 RPM
Tracks/inch	48
Average latency	83mS
Average access time	260mS
Maximum error rate	1 recoverable error/10^9 bits 1 non-recoverable error/10^{12} bits

[1]Side 0, cylinder 0 is single density, 128 Bytes/sector, 26 sectors
Side 1, cylinder 0 is double density, 256 Bytes/sector, 26 sectors.

Physical Dimensions	
Width	12.2 inches (31 cm)
Height	7.5 inches (19 cm)
Depth	18.0 inches (46 cm)
Weight	41.5 pounds (18.8 Kg)

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