

The MDFS.

A New Range of File Servers

for Econet[®]

SJresearch



The MD5 is a self-contained multi-disc file server and printer server. The system is capable of supporting a very large network with hard discs and tape backup, but offers a low entry-level cost using floppy discs.

Powerful Software

- Compatible with level 2 and level 3 file server protocol
- Space accounting and access control
- Time and date stamping of files
- Extended error messages

Advanced Hardware

- Uses ordinary 80-track double sided disc drives
- Supports hard disc drives
- Fast backup using a 20 Megabyte tape drive
- Two printer channels
- Printer spooling to hard discs prevents waiting for free printer
- 256 Kilobytes of RAM gives high performance
- Large cache RAM speeds disc access
- Releases BBC micros from file serving and printer serving

Easy Management

- Large range of utilities
- Comprehensive and flexible System Management functions
- Free half-day training course

Flexibility

The MDFS has been designed to be as flexible as possible. The file server automatically configures itself whatever combination of floppy or hard disc drives are attached. The MDFS system can easily be expanded to meet your changing requirements.

Floppy Discs

The MDFS can support up to four floppy disc drives. Standard drives have a capacity of 800 Kilobytes, since data is stored in double density format. Larger capacities can be obtained by using 1280 Kilobyte high-density disc drives.

Hard Discs

One or two hard discs can be fitted. The drives are built into a matching case and have a capacity of 20 Megabytes each, giving a total capacity for the largest systems of over 40 Megabytes. The system can use any combination of floppy and hard discs.

Tape Backup

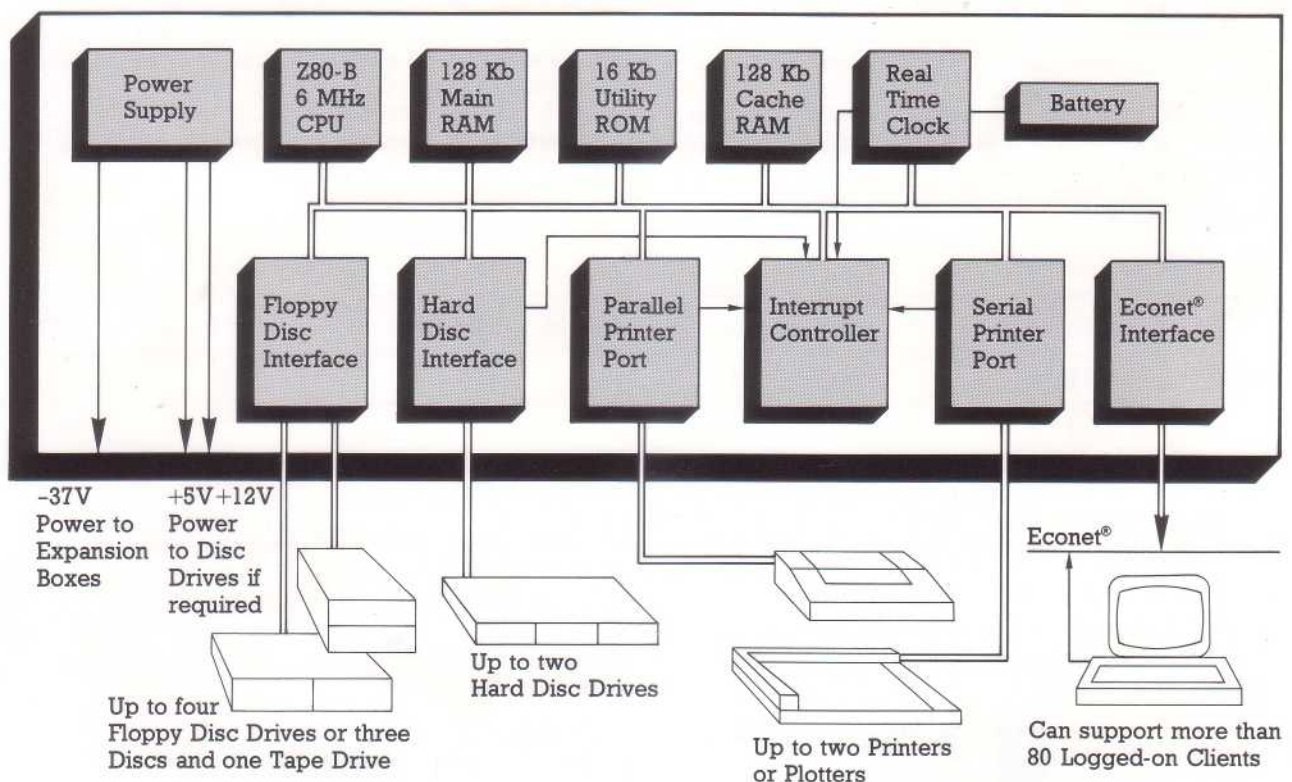
A cartridge tape drive can be added which makes backing up fast and easy. The tape cartridges have a capacity of 20 Megabytes, so each hard disc can be backed up on a single tape. If you use hard discs for important data, we strongly recommend fitting a tape drive, as backing up onto floppies is a time consuming operation which is often neglected.

Simplicity

The MDFS is supplied with a single floppy disc which doubles as the file server boot disc and as your master utilities disc. It is ready for you to boot up and start using immediately. The hard discs come with the software and utilities already mounted on the disc. For other compatible hard discs a software pack is available to allow them to run on the MDFS. Hard disc systems auto-boot on power-up.

Printer Servers

Two printer outputs are available, one parallel and one serial. They may be accessed independently by all network users. The system manager can make the printers generally accessible, or restrict access to particular users. Printer spooling facilities are available on hard disc systems. This allows users to send information to the printer at any time; if the printer is in use then the MDFS stores the output and prints it when the printer is free.



Technical Specification of the MDFS System

452mm wide x 345mm deep x 80mm high

Floppy Disc Drives

The MDFS has two floppy disc connectors which allow drives to be configured as one set of drives A-D, or as two pairs of drives A & B. One or two pairs of standard BBC double disc drives can be used without modification. All drives must be 80-track double-sided floppy disc drives or "quad-density" disc drives. Neither single-sided nor 40-track drives are supported.

Hard Discs

The S.C.S.I. port allows a controller for one or two hard disc drives to be added to the system. It cannot be guaranteed that hard discs or tape drives from other manufacturers will be supported.

Tape Drive

A 20 Megabyte Cartridge Tape Drive can be connected to the system instead of one of the floppy disc drives. The system allows hard discs to be saved to and restored from DC 1000 tape cartridges.

Storage Capacity

Each double density (standard) 80-track double sided disc drive will add 800 Kilobytes of disc space, Each quad-density drive will add 1.28 Megabytes. Each SJ Hard disc will add 20 Megabytes. The table below gives a range of possible combinations.

File Server Mode

On a floppy disc based system the file server software is loaded from a boot disc. A double-density disc suitable for reading on a normal drive is included with the MDFS. The boot disc may be inserted into any appropriate drive for booting. The boot disc may then be used as a data disc of slightly reduced capacity, or other data discs without the boot code may be used. Further details of the file server software are given in The Most Advanced File & Printer Servers for Econet[®] brochure covering the whole range of SJ Research File Servers.

Utility Mode

All normal maintenance tasks are carried out by attaching a network client through the network as a "terminal" to the file server. (This is similar to *REMOTE, but faster). No discs are needed as all the utility mode software is in ROM. This mode allows changing the station number, formatting new discs, copying discs, renaming discs and resetting the password file.

Typical Device Combinations

Capacity in Megabytes	1.6	2.56	3.2	5.12	20	20	20.8	21.28	40	40	40.8	41.28	43.84
Number of Std Drives	2		4				1				1		
Number of QD Drives		2		4				1				1	3
Number of 20 Mbyte Drives					1	1	1	1	2	2	2	2	2
Tape Streamer					1				1			1	

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SJ Research has a policy of continual improvements. Whilst every effort has been made to ensure the accuracy of the information in this brochure, it cannot be guaranteed.

Hardware

The processor is a 6 MHz Z80-B with 256 Kbytes of RAM and 16 Kbytes of ROM. Half the memory is used as cache RAM for disc sectors, which significantly improves the overall performance of the system.

Printers

Two independent printer channels, one parallel and one serial. Both outputs connect to the printers via standard BBC micro printer leads (not supplied)

Serial Output

RS-232 with 5-pin "domino" DIN socket.
Uses RTS/CTS handshake.
Baud rates available: 75,150,300,1200,2400,4800, 9600,19200

Parallel Output

26-way IDC to 8-bit Centronics standard.
Uses STB/ACK handshake.

Printer Spooling

Available when using hard discs. Each printer can be defined as spooling or non-spooling. The users can abort their own queued output, the system manager can adjust the whole queue.

Real-time Clock

This provides date and time which may be read through the network or included in printer banners. It is also used to date and time-stamp files when they are created and updated.

Connectors

All the connections for floppy discs to the file server are identical to those on a BBC microcomputer except that there is no -5 volt power output (this is not needed by disc drives). An additional power connector is provided for the self powered SJ Research expansion units.

Power Requirements

240 volts AC at 1.5 amps (110 volt option selectable with internal link).

Power Outlets

Two 6-pin AMP connectors for floppy disc drive power as used on the BBC micro, providing a total of 2.6 amps at +5 volts and 2.6 amps at +12 volts, Surge capability is suitable for most 5" floppy disc drives.
One 9-pin D-type connector for SJ Research self-powered expansion boxes, providing -37 volts at 4 amps.

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