

3850

Mass Storage System

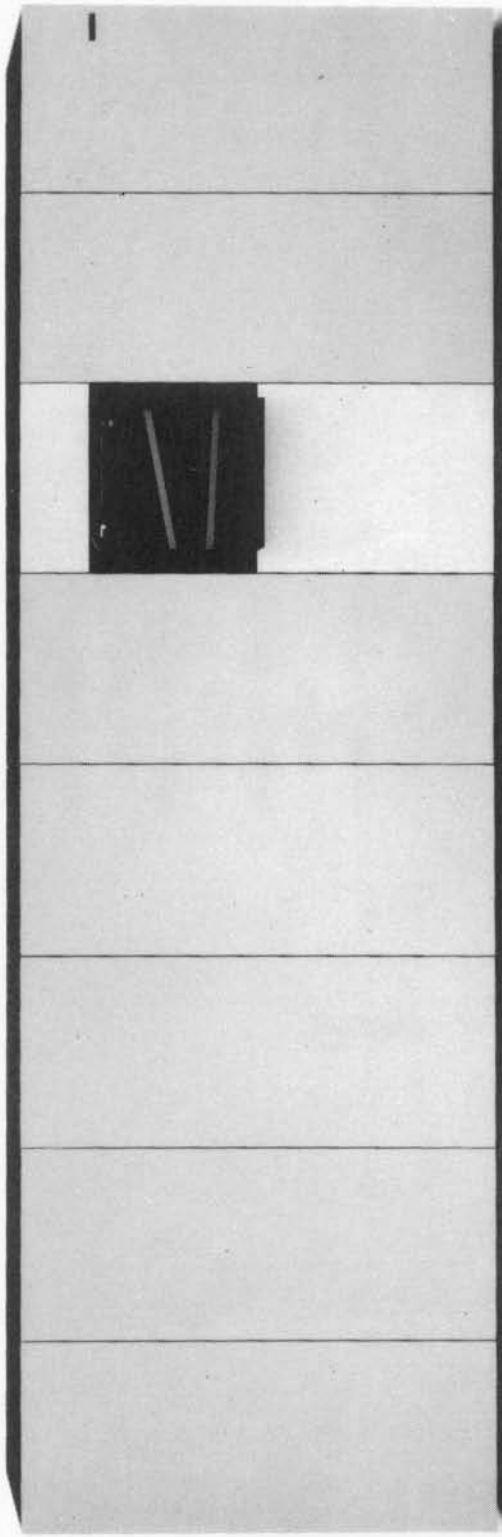


Photo is of a design model

Product Description

The IBM 3850 Mass Storage System extends the virtual storage concept to direct access devices. It enables a large amount of data to be available to the System/370.

The 3850 attaches to System/370 Models 145, 155II, 165II, 158 and 168. Up to 4 Systems/370 can be attached to same Mass Storage System. The 3850 Mass Storage System consists of the following units:

- 3851 Mass Storage Facility
- 3830 Model 3 Storage Control or 3158 ISC or 3168 ISC with Staging Adapter Feature.
- 3333/3330 Disk Storage

The data is written on a new magnetic tape medium which is contained in a compact cartridge. The cartridges are stored in storage cells within the 3851 Mass Store Facility. The data contained in the cartridges is transferred to the 3330 Disk Drive through a Data Recording Device in the 3851. The data, if modified, is transferred back to the cartridge in the 3851 under control of the MSC.

3330-1 and 3330-11 are used for data staging. Program management uses the 3336 mod 1 Volume characteristics.

Two cartridges are required to represent one 3336 mod 1 Volume

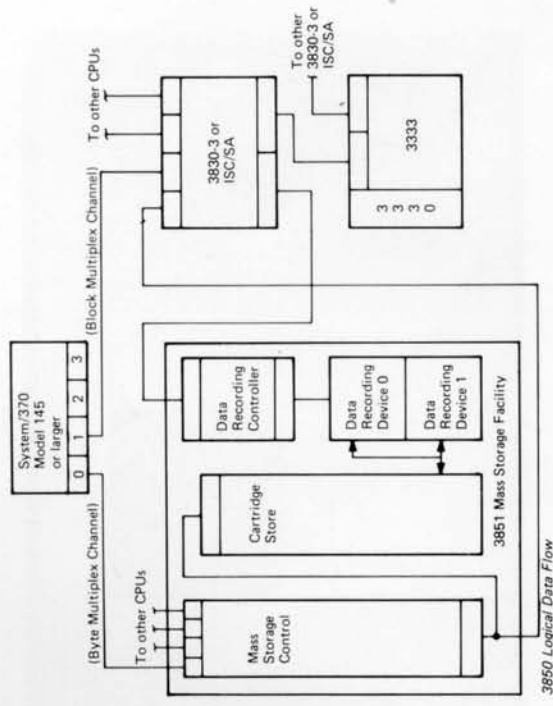
3851 Mass Storage Facility

DESCRIPTION

The 3851 provides the storage facility for the data. It contains the following functional units:

- Cartridge Store
- Storage Cells
- 2-Cartridge Accessors
- 1-Cartridge Access Station
- Data Recording Devices
- Data Recording Controller(s)
- Mass Storage Control(s)

Eight models of the 3851 Mass Storage Facility are described in the following chart. The A-series models contain one Mass Storage Control, the B-series models contain two Mass Storage Controls. Only one Mass Storage Control is active at a time, the second is an alternate. Two A-series models may be included in the 3850 Mass Storage System.



3851 Mass Storage Facility

	A1,B2	A2,B2	A3,B3	A4,B4
Cartridge Capacity	706	2044	3382	4720
Byte Capacity	35.3×10^9	102.2×10^9	169.1×10^9	236.0×10^9
Data Recording Devices	2	4	6	8
Data Recording Controllers	1	2	3	4
Cartridge Accessors	2	2	2	2

Two A models can be installed to provide us up to 472×10^9 bytes data capacity.

STORAGE CELLS

The Cartridge Store is an array of cells where the cartridges are stored.

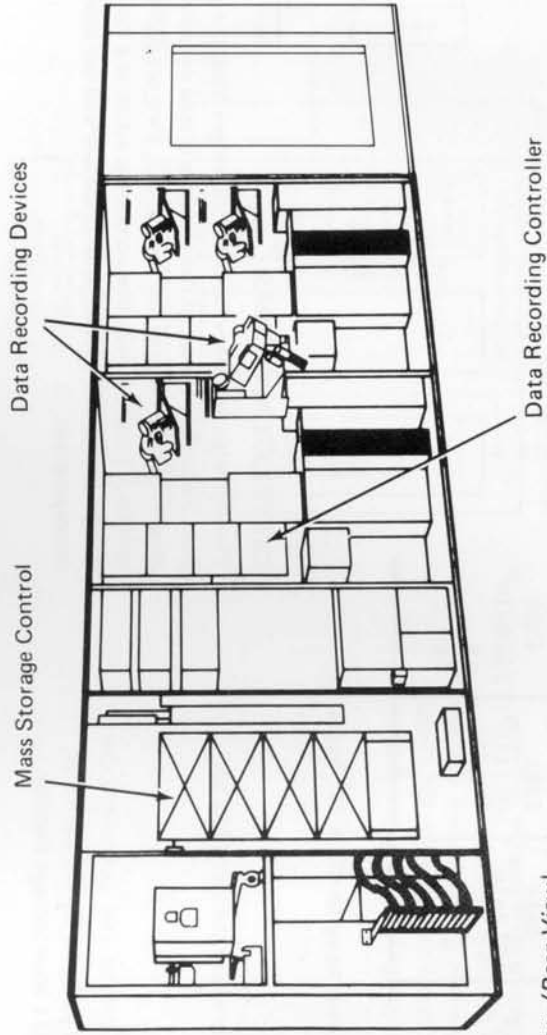
Each cell has a unique address.

CARTRIDGE ACCESS STATION

Manual entry and exit of cartridges is provided by the Cartridge Access Station on the front of the 3851 Mass Storage Facility.

CARTRIDGE ACCESSORS

The cartridge accessor moves the cartridges from the storage cell to the Data Recording Device. After the data is read or written the accessor returns the cartridge to the storage cell. Two accessors are standard. In models A1 and B1 only one accessor is active at a time, on the other models both can function simultaneously and are controlled by microprogram.



3851 Mass Storage System (Rear View)

MASS STORAGE CONTROL

The Mass Storage Control manages the entire 3850 Mass Storage System.. It maintains tables specifying where each volume is located and directs the execution of all commands affecting the movement of volumes.

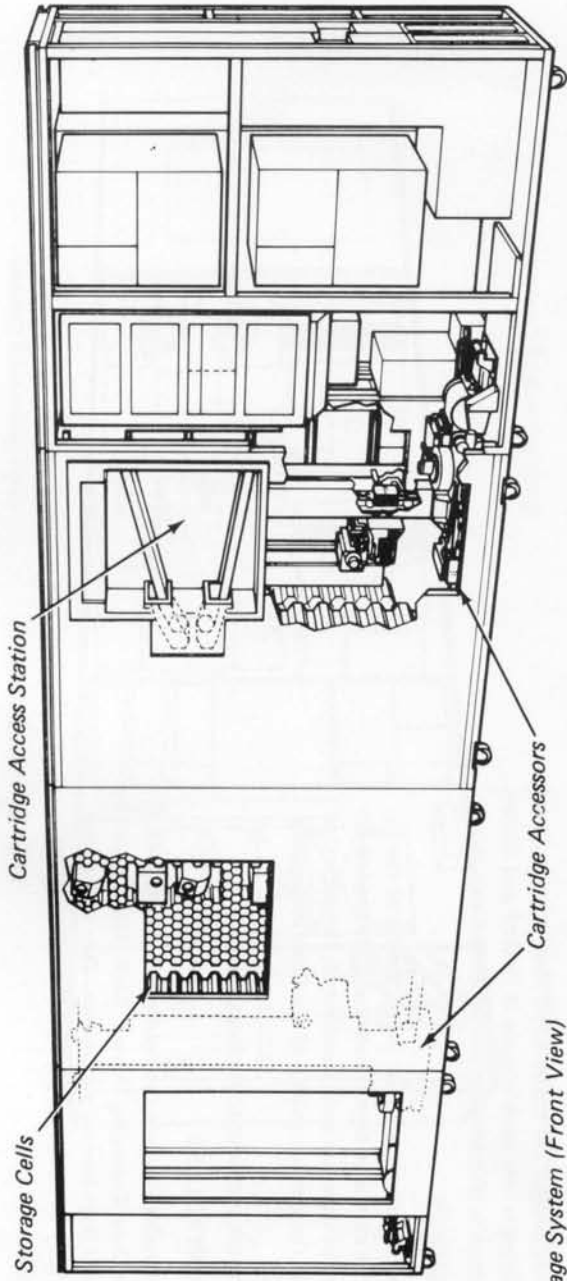
DATA RECORDING DEVICES

After the accessor moves the cartridge to the input station of the Data Recording Device the cartridge tape is automatically loaded for reading or writing. After the data has been transferred, the cartridge is unloaded and moved to the output station of the Data Recording Device.

The accessor then returns the cartridge to its storage cell.

DATA RECORDING CONTROLLER

The Data Recording Controller controls the reading and writing of the cartridge tape by the Data Recording Device. Each Data Recording Controller can control two Data Recording Devices. Two additional Data Recording Devices may be connected to the Data Recording Controller as alternate paths.



3851 Mass Storage System (Front View)

DATA CARTRIDGE

The movement of cartridges is fully automatic within the 3851, that is, no customer handling is required to use the cartridge.

- Width of tape 2.7 inches (6.8 cm)
- Length of tape 770 inches (19,56 meter)
- Encoding method Extended Group Coded Recording
- Capacity of one Cartridge 50 million bytes



Cartridge and Tape

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