

IBM

2305

IBM 2305  
Fixed Head Storage  
Facility

The 2305 is a Fixed Head Storage Facility that provides fast access, high data rate, medium capacity, and modular, direct access storage. This facility consists of a 2835 Storage Control Unit and up to two 2305 Fixed Head Storage Modules.

Two models are available, the 2305 Model 1 which attaches only to the 2835 Model 1, and 2305 Model 2, which attaches only to the 2835 Model 2.

The 2305 Fixed Head Storage Facility attaches to the 2880 Channel. The Model 1 Facility requires a 2880 Channel with the 2 byte interface special feature.

The head/disk environment is maintained by a closed loop air flow system with a self-contained refrigeration unit to provide both temperature and contamination control.

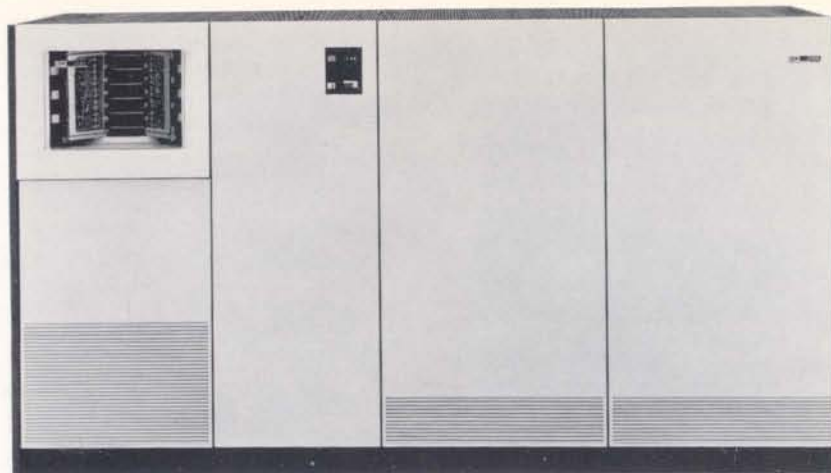
#### General Characteristics:

##### *Model 1*

Capacity per Storage Module  
5.4 Meg Bytes  
Access Time (Average)  
2.5 Millisecond  
Data Rate  
3.0 Meg Bytes/Sec  
Recording Media  
6-14" Disks  
Tracks per Storage Module  
384  
R/W Elements/Track  
2  
Disk Rotation  
6000 RPM

##### *Model 2*

Capacity per Storage Module  
11.2 Meg Bytes  
Access Time (Average)  
5.0 Millisecond  
Data Rate  
1.5 Meg Bytes/Sec  
Recording Media  
6-14" Disks  
Tracks per Storage Module  
768  
R/W Elements/Track  
1  
Disk Rotation  
6000 RPM



The 2305 is a Fixed Head Storage Facility that provides fast access, high data rate, medium capacity, and modular, direct access storage. This facility consists of a 2835 Storage Control Unit and up to two 2305 Fixed Head Storage Modules.

Two models are available, the 2305 Model 1 which attaches only to the 2835 Model 1, and 2305 Model 2, which attaches only to the 2835 Model 2.

The 2305 Fixed Head Storage Facility attaches to the 2880 Channel. The Model 1 Facility requires a 2880 Channel with the 2 byte interface special feature.

The head/disk environment is maintained by a closed loop air flow system with a self-contained refrigeration unit to provide both temperature and contamination control.

#### General Characteristics:

##### Model 1

Capacity per Storage Module  
5.4 Meg Bytes  
Access Time (Average)  
2.5 Millisecond  
Data Rate  
3.0 Meg Bytes/Sec  
Recording Media  
6-14" Disks  
Tracks per Storage Module  
384  
R/W Elements/Track  
2  
Disk Rotation  
6000 RPM

##### Model 2

Capacity per Storage Module  
11.2 Meg Bytes  
Access Time (Average)  
5.0 Millisecond  
Data Rate  
1.5 Meg Bytes/Sec  
Recording Media  
6-14" Disks  
Tracks per Storage Module  
768  
R/W Elements/Track  
1  
Disk Rotation  
6000 RPM

#### New Technology:

The Fixed Head Storage Facility uses circuitry made up of Monolithic Systems Technology. The technology used in the 2835 is a combination of MST 1, 2 and 4. The technology used in the 2305 is MST 1.

The performance differences of MST are the speed or operation of its circuits. The average block delay for MST 4 is 2-5 nanoseconds, MST 2 is 6-8 nanoseconds, and MST 1 is 12-20 nanoseconds.

A new multi-element read/write head called a slider has been developed for this Storage Facility. Each slider contains 8 active read/write elements and one spare. When one element or

track becomes defective it can be temporarily "spared" out under program control. Later during maintenance, the CE can wire out the defective element or track with a spare.

#### Programming:

Programming Systems support will be provided by OS/360 MFT II and MVT systems and will consist of the DASD access methods, systems residence, language and utilities with the exceptions of sort-merge, ISAM, and TCAM.

#### Features:

- A Magnetic Disk Cartridge*—Used to initially load the Writable Control Storage and load maintenance micro-diagnostics.
- Writable Control Storage (WCS)*—4000 4 byte words of WCS for use in micro-programming, micro-diagnostics, and control unit logging.
- Control Unit Retry*—Facilities to recover from many control unit and file errors without requiring intervention at the system level.
- Control Unit Logging*—A collection of Storage Facility error and statistical information, recorded in the control unit's writable control storage, for periodic posting to OBR/SDR.
- Alternate Head Track Sparing*—Under a utility program, a defective head and track can be spared out deferring a maintenance call.
- Error Correction Coding*—ECC hardware is included in the control unit to detect and correct any burst of errors up to 11 bits in length on a single track.
- Multiple Requesting Concept*—Multiple request provides the capability to allow up to eight disconnected command chains per module to be handled by the control unit simultaneously.
- Rotational Position Sensing*—The rotational position sensing function enables the channel to "seek" to an angular track position. It permits channel disconnection during most of the rotational latency period and thus increases channel availability.

IBM World Trade Corporation  
DP Customer Engineering  
821 United Nations Plaza  
New York, N.Y. 10017, U.S.A.

# IBM