40 Megabyte 5¹/4" Winchester Disk Drive From Computer Memories

CM 6000 features:

- Capacities of 13.34, 26.67 and 40 megabytes unformatted.
- 40 millisecond average access time
- Closed loop servo positioner
- 10.5 megabytes formatted data per platter
- Proven Winchester technology
- Identical mounting to standard 5¹/₄" floppy drives
- Interface compatible with readily available controllers
- Internal microprocessor
- Step-pulse buffering
- Head velocity profile control
- Optimized temperature compensation
- High output, high resolution heads
- All electronics and motors located outside clean area
- Head parking zone

CM 6000 disk drive, product infor-

mation. The Computer Memories series of Winchester technology disk drives offers high storage capacities in a minifloppy size package. The CM 6000 series is available in 13.34, 26.67 and 40 M Byte versions, all with average access time of only 40 Msec. By means of a combination of Winchester technology and proven design techniques, the OEM is assured of the ultimate in quality and reliability.

In order to ease system integration, the CM 6000 has the same physical dimensions and mounting hole locations as a standard 5¹/4" floppy disk drive. DC voltage requirements are also the same as a mini-floppy drive thus enabling the use of a single power supply for both types of drives.

The high capacities of the CM 6000 are achieved by the utilization of a closed loop servo positioning system, on-board microprocessor, and manganese-zinc heads — unique in such a small device. The combination of the swing-arm actuator, associated electronics, and head allow the CM 6000 to achieve a track density of 720TPI and bit density of 9275 BPI.



CM 6000 Specifications

Performance Specifications:

Capacity Unformatted	CM-6213	CM-6426	CM-6640
Per Drive	13.34 Mbytes	26.67 Mbytes	40 Mbytes
Per Surface	6.67 Mbytes	6.67 Mbytes	6.67 Mbytes
Per Track	10.4 Kbytes	10.4 Kbytes	10.4 Kbytes
Formatted			
Per Drive	10.5 Mbytes	21 Mbytes	31.5 Mbytes
Per Surface	5.24 Mbytes	5.24 Mbytes	5.24 Mbytes
Per Track	8.2 Kbytes	8.2 Kbytes	8.2 Kbytes
Per Sector	256 bytes	256 bytes	256 bytes
Sectors/Track	32	32	32
Transfer Rate	5.00 Mbits/sec	5.00 Mbits/sec	5.00 Mbits/sec
Access Time (inclue	des settle time)		
Track to Track	10 msec	10 msec	10 msec
Average	40 msec	40 msec	40 msec
Maximum	80 msec	80 msec	80 msec
Average Latency	8.3 msec	8.3 msec	8.3 msec

Functional Specifications:

Rotational Speed	3573 rpm	3573 rpm	3573 rpm
Recording Density	9275 bpi	9275 bpi	9275 bpi
Flux Density	9275 fci	9275 fci	9275 fci
Track Density	720 tpi	720 tpi	720 tpi
Cylinders	640	640	640
Tracks	1280	2560	3840
R/W Heads	2	4	6
Disks	1	2	3

Physical Specifications:

Environmental Limits		
Ambient Temperature	$= 50^{\circ}$ E to 115° E (10°C	

Ambient Temperatur	$tre = 50^{\circ}F$ to 115°F (10°C to 46°C)	
Relative Humidity	= 8% to $80%$	
DC Power Requirement	ents	
+12VDC±5% typic	cal: 3A seeking, 1A on track max: 3.5A	
+5 VDC±5%0.9A	typical, 1.0A max	

Mechanical Dimensions:

Height	= 3.25 in. (82.6 mm)	
Width	= 5.75 in. (146.1 mm)	
Depth	= 8.00 in. (203 mm)	
Weight	= 5 lbs. (2.3 Kg)	
Heat Diss	ipation = 100BTU/hr. typical (28.5 watts)	
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Reliability Specifications:

MTBF: 12,000 POH typical usage	
PM: Not required	
MTTR: 30 minutes	
Component Life: 5 years	
Error Rates:	
Soft Read Errors: 1 per 10 ¹⁰ bits read	
Hard Read Errors: 1 per 1012 bits read	
Seek Errors: 1 per 10 ⁶ seeks	

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