

25.5 MByte 3½" SCSI Half-Height Disk Drive

JUN 18 1986
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8425S

- Proven rack and pinion, linear stepper motor actuator system
- 68 msec. avg. access time
- Device transfer rate 5.0 Mbits/sec. using RLL 2/7 coding scheme
- Host transfer rate up to 1.0 Mbytes/sec.
- SCSI or Custom interface
- 12.5 watts avg. power requirement
- Single Printed Circuit board utilizing surface mount technology
- Dual Ported Buffer allowing one to one interleave
- Oxide Media
- Head shipping zone
- MTBF 20,000 POH

The new 8425S represents MiniScribe's first disk drive with an on-board Small Computer System Interface controller (SCSI). This oxide media drive features 25.5 MBytes of unformatted storage capacity and an average access time of 68 msec. The incorporation of the SCSI interface technology delivers the complete functionality of a subsystem using the highest level of hardware integration (VSLI) and the latest technology in recording techniques (RLL 2/7). This eliminates the additional hardware that can cause system redesign and added costs.

The most innovative feature provided by the 8425S disk drives is the single printed circuit board utilizing surface mount technology. This design's use of fewer components will increase reliability and decrease power consumption. Incorporated into the logic of the printed circuit board is the industry standard SCSI interface. The 8425S supports the common command set as well as other options. Defect handling and error management is transparent to

the user allowing for higher unit reliability and production yields.

The 8425S disk drive utilizes MiniScribe's field-proven rack and pinion linear actuator system. This provides high density positioning accuracy required throughout temperature extremes in addition to rugged resistance to shock and vibration.

The 8425S, has a mounting configuration identical to the industry standard 3½-inch microfloppy drives. In addition, the 8425S is available with a 5¼-inch bracket which enables the 3½-inch drive to be inserted into a 5¼-inch slot. For shipping and handling, the R/W heads can be positioned over a non-data area of the disk until power is applied.

Like all MiniScribe products, the 8425S undergoes a rigorous testing and burn-in process before shipment.

The MiniScribe line of 3½-inch and 5¼-inch Winchester disk drives begins at 12.75 MBytes and extends to high capacity/high performance models.



 MiniScribe

3 1/2" SCSI Winchester Disk Drive Specifications

8425S

Capacity Unformatted

Per Drive (MBytes)	25.5
Per Track (Bytes)	10,416

Capacity Formatted

(including alternatives)	
Per Drive (MBytes)	21.3
Per Track (Bytes)	8,704
Per Sector (Bytes)	512
Sectors Per Track	17

Functional

Disks	2 Oxide
R/W Heads	4
Cylinders	612
Total Data Tracks	2,448
Track Density (tpi)	804
Recording Density (bpi)	13,412
Areal Density (Mbits/sq.in.)	10.78
Rotational Speed (RPM)	3,600

Data Transfer Rate

Device (Mbits per second)	5.0
Host (MBytes per second)	0 to 1.0

Access Time

(including settling)	
Average (msec.)	68
Track-to-track (msec.)	15
Maximum (msec.)	150
Latency (average, msec.)	8.33

Interface

SCSI/Custom

Reliability

MTBF	20,000 hours
PM	None
MTTR	30 minutes
Component Design Life	5 years

Error Rates

Soft Read Errors	1 per 10 ¹⁰ seeks
Hard Read Errors	1 per 10 ¹² seeks
Seek Errors	1 per 10 ⁶ seeks

Features and specifications subject to change without notice.

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DC Power Requirements

+ 5 VDC ±5%	0.7 amps typical
+12 VDC ±5%	0.7 amps typical
Max. Starting (5 sec.)	2.0 amps

Power Dissipation

12.5 watts avg.

Environmental Limits

Ambient Temperature	40 °F to 122 °F (4 °C to 50 °C)
Relative Humidity	8% to 80%
Maximum Wet Bulb	78 °F (26 °C)

Physical

Height	1.625 in. (41.3 mm)
Width	4.00 in. (101.6 mm)
Depth	5.75 in. (146 mm)
Weight	1.81 lbs. (.82 kg)

Available SCSI Command Sets:

Ready	Rezero
Format	Write
Read	Seek
Verify	Reserve
Release	Inquiry
Start/Stop	Mode Select
Mode Sense	Reassign Blocks
Request Sense	Write Extended
Seek Extended	Receive Diagnostic Results
Read Buffer	Send Diagnostic Results
Write Buffer	Ready Capacity
Read Extended	Write & Verify

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