

2 1/2-INCH RUGGED REMOVABLE MAGNETIC DISK CARTRIDGE
WDA-2120R

AN OEM OFFERING FROM IBM

The OEM version of IBM* WDA-2120R, and adaptation of the IBM WDA-2120 2 1/2-Inch Disk Drive, brings a new level of ruggedization and intelligence to a portable package. This hermetically sealed 2 1/2-inch Winchester drive gives rugged and industrial system integrators and product manufacturers leverage in leading-edge applications.

The WDA-2120R is hermetically sealed in a stainless steel enclosure for survivability under severe environmental conditions. It may be used at temperatures between -55 degrees C and + 71 degrees C, to unlimited altitudes, in environments containing airborne sand and dust particles, and in salt-fog atmosphere. The unit can withstand shocks to 2500 G, non-operating. Its shirt-pocket size allows ease of transportation, once the private domain of optical technology.

In addition to meeting MIL-STD-810 functional shock and crash safety, the disks are designed to exceed bench handling requirements for greater safety when removed.

The WDA-2120R features high reliability, data integrity, and provides exceptional performance while requiring only 5V, 3W. It is available with a formatted capacity of 126 MB.

TECHNOLOGY LEADERSHIP

Over the last 20 years, IBM has developed, adapted and shipped a number of magnetic storage devices for use in severe environments. Typical of these products are the magnetic drum used on the S-3A/B and F-3A AWACS aircraft, the RD-281 Navy Standard Disk, the 8' RASS and SUB/RASS disks, and rugged/mil 3 1/2-inch disks.

Now IBM is offering the OEM market this 126 MB 2 1/2-inch disk drive hermetically sealed for use in harsh environments.

HIGHLIGHTS

- 126 MB formatted capacity
- Self-diagnostics
- Closed loop sector servo
- Mounting in any orientation
- 1:1 interleave
- Low power operation 5V, 3W
- Low power sleep mode 300 mw
- Automatic actuator lock
- 1 Spare sector per 2 tracks
- Extended temperature range operation
- Extended humidity range operation
- Extended attitude range operation
- Optional heater extends low temperature
- Operation with sand and dust
- Operation in salt fog
- Removable disk cartridge

PRODUCT DESCRIPTION

2 1/2" Rugged Removable Magnetic Disk Cartridge	WDA-2120R
Configuration	
Formatted Capacity	126 MB
Sectors per Track	50
User Cylinders	1243
Data Heads	4
Disks	2
Rotational Speed (RPM)	3600
Recording Density RLL (BPI)	59800
Track Density (TPI)	2436
Areal Density	146 Mbits/sq in
Transfer Rate	
Media	15.1 Mbits/sec
Interface	5.7 MB/sec
Average Latency	8.3 ms
Seek Time	
Average	16.5 ms
Trk/Trk	5 ms
Maximum	30 ms
Reliability	
MTBF	> 25000 hrs
Error Rates	
Hard Read Errors	< 10 per 10 to the 13th bits read
Seek Errors	< 1 per 5X10 to the 6th seeks
Environment	
Ambient Temperature	
Operating	-20 to +71 degrees C
(with heater)	-55 to +71 degrees C
Non-operating	-55 to +85 degrees C
Seal Leak Rate	< 1 x 10 to the 6th cc/sec
Humidity	0% to 100%
Altitude	Unlimited
Shock	
Operating	15 G
Non-operating	2500 G
Vibration	
No Isolation	(resp curves available)
Inclination	
Static	No restriction
Salt Fog	5% concentration for 48 hrs
Sand and Dust	Exposure to sand/dust
Power	
Voltage	+5 V
Heat Dissipation	
Average, 25% Duty	2.3 Watts
Sleep Mode	.3 Watts
Physical Size	
Dimensions	
Height	1.0 in
Width	3.0 in
Depth	4.85 in
Weight	1 lb

Specification subject to change without notice

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