



RK05/DIABLO/ PERTEC Drives Upgraded to Solid State or Hard Disk

FEATURES

- DEC RK05, Rk11
- Pertec D3000 Series
- Diablo 3000, 4000 Series
- Interdata / Perkin & Elmer
- Northern Telecom
- Sperry / Univac
- Xebec Controller
- Digital PDP-8, PDP-11
- Data General Nova, Eclipse
- Boroughs
- Control Data - System 17
- CDC Hawk
- Western Dynex
- Wangco
- Mitra
- Alcatel
- Varian
- Foxboro
- Cyber 1784
- Bull
- Tempo / GTE
- Litton

IMPROVED PERFORMANCE AND CAPABILITIES:

Featuring:

- Solid state ARRAID Flash Drive (AFD) offers both commercial grade (MLC) and industrial grade (SLC) solid state flash technology
- Full-Disk Caching - Seek Times Eliminated.
- Multiple Volumes on a single drive.
- Power Reduced 85%, Weight Reduced - 24 lbs total.
- 300,000 to 1,000,000 Hr drive MTBF.
- Continuous Self-test.

NEW CAPABILITIES FOR DRIVES.

Features:

- Arraid Flash Drive (AFD) - Solid State SCSI Disk replacing traditional mechanical SCSI drives (DAT, QIC, Tape & Magneto Optical Disk)
- Backup to second disk, 4 mm DAT, QIC tape or Optical disk.
- Internal Mirroring and On-line Copy
- Removable Disk Drives or Cartridge for Backup.
- Disk to Disk Image Copy.

Image shown is the AEM-5C with Arraid Flash Drive "AFD" solid state SCSI drive option (SLC & MLC grade flash options available). If required mechanical SCSI drive options can still be supported

NETWORK FEATURE

AFD network feature option offers LAN network (ethernet-based) back-up and restore capability directly from the AFD using the on board RJ45 Network port. No additional software or register changes are required to the legacy host.

Includes FLASH2GUI Software - Optional ethernet support feature for centralised backup and restore capability removing the need to rotate media. Primary data storage is always written to the CF card. Only available on AEM with AFD drive installed.

PLUG COMPATIBLE WITH VINTAGE CARTRIDGE DRIVES

The AEM-5C is an upgraded data storage system to replace hard disk drives using the Diablo/Pertec interface. Merely unplug the existing drive and install the AEM-5C using the same cables.

The AEM-5C can be added to an existing system, along with the present drives. The AEM-5C can be daisy chained to existing drives or to other AEM-5Cs.

MAINTENANCE FREE / DEFECT FREE

The AEM-5C uses Solid State or Hard Disk drives for low maintenance operation. Drives are rated in excess of 300,000 hours MTBF and up to five years of continuous operation. Drives appear defect-free to the host computer.

FULL-DISK CACHING

The AEM-5C includes Full-Disk Caching. The entire drive image is held in cache memory. Changes in the cache memory are continuously transferred to the SCSI storage device, which can be the ARRAID Flash Drive (AFD), hard disk, or MO drive. Full-Disk Caching also provides a faster performing emulation. Seek times, head switching and blocking times are eliminated. Data is available instantly, providing 30% to 50% faster operation than the original drive.

MORE DATA STORAGE

Multi-Volume provides additional storage by creating multiple images in separate volumes on the SCSI device. With sufficient space, 8 or more volumes can be stored on the SCSI device. Internal software allows copying between volumes. The front-panel Multi-Volume thumbwheel switch allows user selection of the active and bootable volume. Changing the thumbwheel switch during operation will spin the drive down, change the "pack", and spin the drive back up, all in less than a second.

OFF-LINE BACKUP, DISK COPY

The Off-line Backup Option allows the user to backup or copy the drive image to a removable SCSI disk or MO drive. Backup to disk is quick at 100 MB/min. An off-line backup to DAT or QIC tape can be done at 15 to 30 MB/min.

DISK MIRRORING

Internal Disk-to-Disk Mirroring Option adds on-line copy to the AEM-5C. Alternating reads continually assure the user of a valid mirror. Disk to disk mirroring provides a continuous, on-line, backup of critical data.

REDUCED POWER, COOLING AND WEIGHT

The AEM-5C uses significantly less power and requires less cooling than the drives it replaces, up to 85% less. Further decreased when integrating the solid state AFD.

The weight of the AEM-5C is just 23 lbs, a 50% or greater reduction!

FIRMWARE CONFIGURABLE

Drive emulation parameters may be changed via serial interface, RS-232 port with a front panel modular connector. Parameters such as number of heads, cylinders, track size, sector size, etc., are easily configurable by the user or maintenance personnel. This flexibility allows the AEM-5C to be reconfigured in the field by the user to emulate other disk drives. Software updates and some optional features can be downloaded and installed in the AEM-5C using an IBM compatible PC.

MEDIA

The CompactFlash (CF) media in the ARRAID FLOPPYFlash Drive (AFFD) is treated exactly the same as the floppy disk media. All drive data is stored on the CF media as if were the original floppy diskette media. Media rotation procedures can be maintained.

MANY CONFIGURATIONS AVAILABLE

The AEM-5C is available with the Arraid Flash drive (AFD) offering fixed or removable drives and numerous options. The combination of highly reliable solid state drives and new capabilities provide a dramatic upgrade to computer data storage.

SPECIFICATIONS

INTERFACE

Diablo/Pertec interface. DEC RK05

Control/Maintenance: RS-232 serial port, ASCII (8, N, 1), front panel RJ-11 modular connector.

DATA TRANSFER RATE

2 to 8 Mbits/sec typical
24 Mbits/sec maximum, controller regulated.

EMULATION

Cylinders	All parameters programmable 203, 406
Heads	2 per platter
Track Length	Programmable
Sector Length	Programmable

CACHE BUFFER

Size	128 to 2048 MBytes
Capacity	1 to 2048 Tracks

SEEK TIMES, TYPICAL *Drive and Emulation Dependent*

Track to Track	0 - 20 ms
Average	4 - 18 ms
Maximum	20 - 30 ms
Average Access	11 - 28 ms
Average Latency	6.2 - 8.4 ms

RELIABILITY

MTBF	200,000+ hrs (The AFD offers 8,000,000+ hrs)
MTTR	15 minutes

POWER

Input Voltage	90 - 135, 180 - 264 VAC (Selectable)
Frequency	47 - 63 Hz
Power	50 - 90 Watts (Maximum)

PHYSICAL

Rack Mount	<i>High x Wide x Deep x Weight</i> 5.25 in. x 19 in. x 17.5 in., 23lbs 133 mm x 483 mm x 445 mm, 10.5 kg
Drive Module	1.7 in. x 4.6 in. x 8.2 in., 3lbs 43.2 mm x 117 mm x 208 mm, 1.4 kg

Specifications subject to change without notice.

COMMON OPTIONS

- Opt-25 - MultiVolume Support
- Opt-51 - Disk to Disk Image Copy/Backup
- Opt-55 - Disk Mirroring and On-line Copy
- Opt-29 - Fixed / Removable Drive Support
- Opt-38*, 39* - Multiple Styles of Interface Connector
- Opt-05 - Mounting Shelf for RETMA Cabinets
- Opt-CE - CE compliance for EU countries

More Options Available.

Arraid Flash Drive (AFD) – Plug & Play Solid State Upgrade

Opt-XX - DRV-ASFD-2-HD

Arraid SCSI Flash Drive/Solid State Disk Drive – (HDD Upgrade)*

Opt-XX - DRV-ASFD-2-MO

Arraid SCSI Flash Drive/Solid State Disk Drive – (Magneto-Optic Upgrade)*

Opt-XX - DRV-ASFD-2-T

Arraid SCSI Flash Drive/Solid State Disk Drive – (Tape Upgrade)*

**A further AFD Network feature option offers LAN network (ethernet-based) back-up and restore capability directly from the AFD. No additional software or register changes are required to the legacy host.*

FLASH2GUI Software - Optional ethernet support feature for centralised backup and restore capability removing the need to rotate media. Primary data storage is always written to the CF card. More details on FLASH2GUI backup & restore software.