



## Solid State Drive replacement for HP MAC, 79xx Disk Drives Replacement

### FEATURES

#### Form, Fit, Function Upgrade for the HP1000 M/E/F-Series, 79xx Disk Drives.

##### Featuring:

- Multi-Access Controller Interface.
- 13037 MAC Disk Controller Plug-compatible.
- No Changes to Hardware or Software.
- Coexists with HP 79xx Series Drives.
- FAST Solid State Disk - Fully-Cached with write-thru to solid state SCSI ARRAID Flash Drive (AFD) configured as a Hard Drive or MO Disk.
- 5 msec. Seek Time.
- Removable Media for Fixed Disk.
- Multiple Volumes on a single disk - Thumbwheel Selectable.

##### Replaces HP 79xx Disk Drives:

7905A	15 MB
7906A-M	20 MB
7920A-S	50 MB
7925A-S	120 MB

##### NEW Capabilities Upgrade HP MAV Drives. Optional Features:

- The latest AFD offers 100% Verified Backup to solid state fixed disk, and solid state MO removable disk drives
- Internal Mirroring and On-line Copy
- Multiple Volumes on a single drive.

Image shown is the AEM-6C 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

##### PLUG-COMPATIBLE & COEXISTS WITH HP DRIVES

No hardware or software modifications are required to use the SCSI based AFD drives on the AEM-6C. The solid state data storage solution is an upgraded data storage system to replace HP 79xx Disk Drives using the 13037 Multi- Access Controller (MAC) interface. Merely unplug the existing drive and install the AEM-6C using the same data and multi-unit cables.

The AEM-6C can be added to an existing system, along with the present drives. The AEM-6C supports simultaneous operation with the existing drives, or with other AEM-6Cs.

##### FIXED / REMOVABLE DISK EMULATION

79xx Series drives with fixed platters and removable disk cartridges can be replaced, while adding features and capabilities not available to the original drives. In fact the AEM-6C can be setup to store data sent to the original fixed and removable platters in two different ways. The data can be stored on two ARRAID Flash Drives (AFD), one for the fixed portion and a second for the removable cartridge data. Each drive can be removed and stored as a backup, independently. This "Separate Image" setup mimics the original drive's operation, but has the added benefit of larger capacity, reliability, and removability of the data.

##### 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.

## 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.



*Rack Mount AEM-6C with two Magneto Optical Drives emulating a disk drive with both fixed media and removable cartridge.*

In cases where the fixed and removable data can be stored as a set, the images can be combined on a single ARRAID Flash Drive (AFD) – configured as a hard drive, or MO disk for example. The “Combined Image” mode offers the benefit of keeping the removable data and fixed-platter data together on one disk, allowing simple copies and backups of all data with less chance for error. With fixed and removable data stored on one disk, TPSs or classified data are easily removed for storage.



*The AEM-6C emulator for the HP 1000 with MAC (Multi-Access Controller) interface includes removable solid state ARRAID Flash Drive (AFD) configured as a hard drive and disk to disk copy/backup to the secondary solid state AFD disk*

## MORE DATA STORAGE - FEWER DISKS

Multi-Volume provides additional data storage by creating multiple volumes on the ARRAID Flash Drive (AFD) configured as hard drive, MO, or Jaz drive. One to 80 volumes can be stored on the disk, limited by disk capacity. The panel-mounted thumbwheel switch allows operator selection of the active volume. Changing the thumbwheel switch during operation has the effect of spinning the drive

down, removing the disk, exchanging it with another, and spinning the drive up. ARRAID Flash Drives (AFD) configured as a Magneto-Optic drive are available in 230 MB and 540 MB capacity with a secondary ARRAID Flash Drive (AFD) configured as a hard disk providing additional capacity for more volumes and larger disk drives.

## SOLID STATE DISK - FULL-DISK CACHING

The AEM-6C includes Full-Disk Caching. The entire drive image is held in cache memory. Changes in the cache memory are continuously transferred to the ARRAID Flash Drive (AFD) configured as hard drive, MO, or Jaz. 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.

## MANY CONFIGURATIONS AVAILABLE

The AEM-6C is available with the Arraid Flash drive (AFD) offering fixed or removable drives and numerous options.



*Rear panel of the AEM-6C showing the PC Board Edge “Control” connector and “Data” connector. Connectors are plug-compatible with the original cables.*

## MAINTENANCE FREE

The AEM-6C carries a 1 year warranty and uses the SCSI based Solid State AFD technology for low maintenance operation. The AFD carry a 1 year warranty, plus the remaining manufacturer's warranty. Many drives are rated in excess of 4,000,000 hours MTBF.

## REDUCED POWER, COOLING, AND WEIGHT

The AEM-6C uses significantly less power and requires less cooling than the original. A modern switching power supply replaces the original, heavy analog supply. Power consumption is reduced from over 400 Watts to 29 Watts, weight of the drive is reduced to 29 lbs!

## SPECIFICATIONS

### INTERFACE

Multi-Access Controller (MAC) compatible with 13037A-D Disk Controller interface.

- Control - 50-contact male card-edge connector, mates with OEM cable. (MAC Interface)
- Data - 3-pin keyed connector mates with standard OEM
- Control/Maintenance - RS-232 serial port, ASCII (8, N, 1), RJ-11 modular and DB-9 connectors.

### DATA TRANSFER RATE

100% of existing drive transfer rate.

### CACHE BUFFER

Size 32 to 256 MBytes  
Capacity Full drive capacity

### SEEK TIMES, TYPICAL

Track to Track 5  
ms Access, max5 ms 5

### 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

*High x Wide x Deep x Weight*  
Rack Mount/Table Top 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.*

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

**DRV-ASFD-2-HD** Arraid SCSI Flash Drive/Solid State Disk Drive – (HDD Upgrade)\*

**DRV-ASFD-2-MO** Arraid SCSI Flash Drive/Solid State Disk Drive – (Magneto-Optic Upgrade)\*

**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.