

## Rugged Removable Flash Disk Module

## ASRFFD35/T

### Product Overview



The **ASRFFD35/T** is a rugged, high capacity Flash Disk drive embedded with Asine *Photon series* technology and designed for use as plug-in unit into Asine family of Rugged Solutions, or in any enclosure for standard 3 1/2" or 5 1/4" Device, customer's enclosure, or any other removable mass storage application. The **ASRFFD35/T** stores up to 2000 Gigabytes of data. The unit has no spin up or seek time.

**RUGGEDIZED** for operation in severe environments - where extreme temperatures, shock, vibration, humidity, and air pressure are common - the **ASRFFD35/T** is field proven in "on-the-move" operation in tracked and wheeled vehicles, as well as airborne application. Since no warm up time is required, near instant readiness is provided at all operating temperatures. The sealed housing encompasses the entire drive enclosure, including electronics. This isolates the drive from shock and vibration, while protecting it from high humidity and changes in altitude.

#### PLUG-IN DESIGN

The interchangeability of Asine plug-in disk cartridges allows for simple removal of secure/classified data, easy changes to hardware or operating system configuration, unlimited data storage capacity, and very fast data backup.

#### COMPATIBILITY

An embedded Ethernet controller and optional eSATA provides interface compatibility with a wide range of host systems.

#### WARRANTY

ASRFFD35/T carries a one year warranty

#### Optional

Capacity, form factor, specific I/F protocol, and more

### Features & Applications

- Up to 2000 GB Capacity.
- Operates in Severe environments.
- Ethernet or eSATA or Interfaces
- Embedded with Asine *Photon series* Technology
- Plug-In Design for Greater Operational Versatility.
- Mechanically Compatible with Standard 3 1/2" or 5 1/4" Device.
- Military & Airborne Systems
- Rugged Storage, Military Recorder
- High-Speed Flight Data Recording
- Cockpit Voice & Data Recording, MIL1553 / Arinc Monitoring
- IT Storage
- Video Surveillance, Video/JPEG2000 Capture
- Telecommunications
- Automotive
- Testing Instrumentation
- Mission-Critical Applications
- JBOD, NAS, SAN, RAID
- Digital Recorders, Factory Automation



## Technical Specifications

- Two mechanical form factor options for cradle – Standard 3.5" and 5.25"
- Gbit Ethernet or eSATA interface connectors
- Up to 2000 Gbytes of SLC or MLC non-volatile Flash memory in cartridge
- Less than 20 µsec access time (internal to Flash Media)
- High data transfer rate – up to 80 MB/Sec Burst or Sustain R/W via Ethernet or 240 MB/Sec Burst or Sustain via eSATA
- Fast erase - 10 sec entire media (typical)
- Reliability - MTBF - Targeted to support 400,000 hours
  - Embedded EDC/ECC, based on 48-bit Reed Solomon Algorithm
  - Built-in power-up self test
  - S.M.A.R.T support
  - Bad Block Mapping out algorithms
  - Dynamic wear leveling
- 3 W to 18W power dissipation (depending on capacity) @ +5 V supply
- 1,000,000 Write/Erase cycles; Read unlimited for SLC media
- Operating temperature – Commercial 0°C to +70°C, Enhanced -25°C to +75°C. Optional -40°C.
- Storage temperature -55°C to +95°C
- Humidity 5% to 95% relative, non-condensing
- Altitude (operating & non-operating) 0 to 55,000 feet
- FTP TFTP CIFS (Samba) NAS or SATA / ATA7 Standard Protocols
- No special drivers - uses existing Windows, Linux, VxWorks® or other OS's native protocols
- Long term product lifecycle support
- MIL 1B31 Conformal coating – optional
- Unit MIL-STD 810F Compliant
  - Shock - Half Sine, 50G, 11ms; Half Sine, 1500G, 0.5ms
  - Vibration - 16.3G RMS (Random, 20Hz to 2000 Hz, 3 vibrations axes)
- Warranty - one Year

## Environmental Characteristics

### Temperature

- Operating temperature – Commercial 0°C to +70°C, Enhanced -25°C to +75°C and Optional -40°C
- Storage temperature -55°C to +95°C

### Humidity

- Operating/Storage MIL-STD-810C
- Method 507.1 Proc. I 95% RH (non condensation)
- VIBRATIONS
- Hard Mount: MIL-STD-810D, Method 514.3,
- Category 1,4,6&9

### Shock and Vibration

- Shock - Half Sine, 50G, 11ms; Half Sine, 1500G, 0.5ms
- Vibration - 16.3G RMS (Random, 20Hz to 2000 Hz, 3 vibrations axes)

### EMI/RFI

- MIL-STD-461, Class 3

### Drip Proof

- MIL-STD-810E

### Altitude

- Operating: 55,000 ft.
- Non-Operating: 80,000 ft.

## PHYSICAL CHARACTERISTICS

### Cradle:

- **5 ¼" type (mm)** 41.80  
H x 148.60 W x 172.60 D
- **Or 3½"**

### Power

- +5 V VDC

### Environment Protection

- MIL Conformal coating

The information contained in this document is subject to change without notice