



VANGUARD



VRCE-4U-4

FC/SCSI Solid State RAID

Link Speed: 2 Gbit/sec.

Write Rate (sustained) = 69 MByte/sec.

Read Rate (sustained) = 106 Mbyte/sec.

Capacity: Scalable from 1 GByte to 2800 GByte



Vanguard Rugged Storage
6525 Gunpark Drive
Boulder, CO 80301
303-527-3003
www.vanguard-rugged.com

Rugged, Scalable Mass Storage Unit (MSU), Designed for High Performance (F/A-18 E/F) Tactical Aircraft Environments:



- 1) Capacity: Scalable 1 GByte to 2800 GBytes (2.8 TBytes). Quoted at 500 GByte as requested.
- 2) Memory Organization: Supports 6 (standard) to 7 (optional) docking bay slots for rugged removable solid state (flash) drives (cartridges). These rugged removable solid state (flash) drives are available in 1 slot, 2 slot and 3 slot configurations.
- 3) Non-Volatile Memory Technology: Flash Solid State (true Random Access).
- 4) External Interface: Dual (Redundant) Fibre Channel, 2 Gbit/sec. link speed, per FC-AL-2, FC-PH, FC-PLDA, FC-FLA, SCSI-FCP. Copper or Optical Connections Available.
- 5) Internal Interface: FC/SCSI (Ultra, 16 bit) RAID. Four (4) parallel SCSI channels, RAID 1 (data striping) implementation standard.
- 6) Data Rates: Sustained Sequential Read: 106 MByte/sec.
Sustained Sequential Write: 69 Mbyte/sec.
- 7) Erase Capabilities / Options:
 - a) On Board Hardware Erase.
 - b) Sanitization per DoD 5220.22-M.
 - c) Sanitization per NSA Manual 130-2.
 - d) Sanitization per US Air Force AFSSI 5020.
 - e) Sanitization per US Army Regulation 380-19.
 - f) Sanitization per US Navy NAVSO P-5239-26
- 8) Power Requirements: +28 V DC, Dual (redundant) internal power supplies.
- 9) Connectors: 2X Mil-38999, Power and Interface Standard.
- 10) Operating Temperature: -40 C to +75 C.
- 11) Operating Altitude: >= 50,000 ft.
- 12) Flight Loading: Designed to meet F-18 E/F Ultimate Flight Loads with Factor of Safety = 2.
- 13) Operating Vibration: 13.6 Grms per Boeing Specification: "Figure 3-4.2 Vibration (Non-Gunfire) – Random test Levels Region V-FF-2".
- 14) Size: 13.6" W. X 6.25" H X 13.4" D
- 15) Weight: 40 to 60 pounds depending on the number of removable drives installed.
- 16) Blind Mate Connector System: Rated at 5,000 insertions and removals of Removable Drives.
- 17) Electromagnetically Sealed Enclosure and Front Door, designed to meet Mil-Std-461.
- 18) Removable Solid State Drives may be hermetically sealed against corrosive environments (salt spray, flight deck vapors).
- 19) Internal PCBAs of Removable Solid State Drives and Chassis may be conformally coated.



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