



# V Rose Microsystems, Inc.

www.vrosemicrosystems.com

**VRM-AMC-SSD-XX**

## Product Data Sheet

### Overview:

VRM-AMC-SSD-XX is the industry's first AMC storage designed with *Flash Components Soldered Directly on Board* instead of Solid State Drive mounted on a carrier board.

This integrated design of Flash components, SATA Controller and Intelligent Modular Management Controller (MMC) on the same board provides many distinct advantages not found in other kludge designs. Intelligent Hot Swap (IHS), saving board space, better air flow, improved ruggedness, lighter weight, better shock and vibration are some of inherent benefits of this design. IHS can only be implemented with this integrated approach.

The capacity on VRM-AMC-SSD can be scalable from 32GB to 128GB with reliable Single Level Cell (SLC) or Multi-Level Cell (MLC) NAND Flash. VRM-AMC-SSD is designed to meet the rugged requirements of AdvancedTCA and MicroTCA applications.



### Features:

#### Performance

**Read (continuous)** 100 MB/s

**Write (continuous)** 67 MB/s

**Capacity** 16GB, 32GB, 64GB, 128GB

**NAND Flash On Board** SLC or MLC

**Interface** SATA I and SATA II

**Reliability**1 >3 Million Hours MTBF

#### Endurance

**Read** Unlimited

**Write** 100K Cycle

**Wear Leveling** Dynamic

**Data Retention** >10 years

**Error Correction** 8 bites ECC or more

**IPMI Protocol** PICMG – AMC.0 R2.0 compliance

**Firmware Upgrade** HPM .1 R1.0

**Hot Swappable** Yes

**Form Factor** Compact, Mid, Full Size

#### Front Panel

**Tri-Color LED**

Port 2=Green, Port3=Amber, Activity = Blue, Hot Swap Ready=Green

**Input Voltage** +12V

**Operating Voltage** +3.3V

**Power Consumption** 4W max

#### Temperature

**Storage** -50°C to +125°C

**Shock** 30G, half-sine 11ms

**Vibration** 5-500Hz, 1G, each axis

**Acoustic Noise** 0db

**Lead-Free Compliance** RoHS compliance

**Warranty** Two years limited warranty

**Long Term Availability** 5 – 7 years



### Features:

- Flash On Board SSD Storage
- SATA I and SATA II Compliance
- Integrated MMC
- Intelligent Hot Swap with Highest Reliability
- +3 Million Hrs MTBF (no moving parts)
- Scalable Capacity
- Dual Port Advantage for Multi-Process Access & Saving valuable system slots
- Supports Field Firmware Upgrade (HPM.1 R1.0)
- IPMI V2.0 Management
- AMC Single Width Form Factor
- Available in Compact, Mid and Full Height
- Temperature Ranges:
  - Commercial Temp: 0°C to +85°C
  - Industrial Temp: -40°C to +95°C

### Benefits:

- Fast Access Time for Booting OS
- Low power consumption (Typical 2.5W @ 3.3V)
- Lighter weight
- Lean Profile for better System Air Flow Management

### Applications:

- Single Board Computers
- Embedded Computing Platforms
- Telecommunication Servers
- Networking & Storage Appliances
- Military & Aerospace Systems



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### Ordering:

**VRM-AMC-SSD- - A - A**

#### **Size:**

16: 16GB  
32: 32GB  
64: 64GB  
128: 128GB  
512: 512GB

#### **Interface:**

ST: SATA  
SA: SAS

#### **Width:**

S: Single  
D: Double

#### **Optional Components:**

S: Temperature and Voltage  
T: Temperature only  
V: Voltage Only

#### **NAND Flash Type:**

S: SLC  
M: MLC  
C: 64GB

#### **Height:**

C: Compact Size  
F: Full size  
M: Mid size