

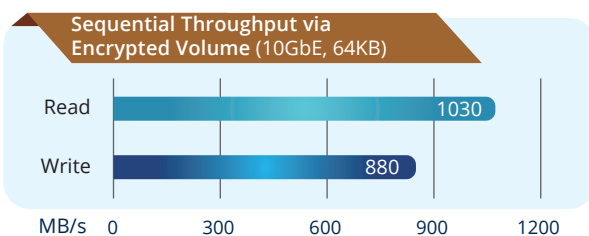
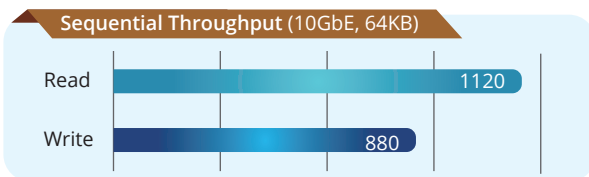
# GRAND-MF



Powered by a high-performance AMD R-Series quad-core processor with up to 64GB DDR4 RAM, the GRAND-MF provides two M.2 SATA 6Gb/s SSD slots that allows the greatest flexibility in tiered storage configuration and enables cache acceleration. This powerful hardware can also double the encrypted file transfer performance with AES-NI encryption acceleration. The GRAND-MF is designed for small and medium-sized businesses looking for private cloud, cross-platform file sharing and collaboration, efficient backup/restoration, storage for virtualization, and to future-proof their IT infrastructure with maximized ROI.



- » IAMD R Series RX-421ND quad-core 2.1 GHz CPU (Turbo Core up to 3.4 GHz)
- » 4 x DIMM Slots, up to 64 GB memory with 4 x 16GB DIMMs
- » Ready to support 10GbE network card
- » Storage expandable, up to 1PB

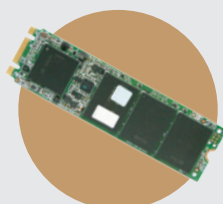


## AMD R-Series quad-core CPU, up to 64GB RAM, and AES-NI encryption acceleration

The GRAND-MF is equipped with a next-gen AMD R-Series RX-421ND quad-core 2.1 GHz processor (burst up to 3.4 GHz), dual channel 8GB/16GB/64GB DDR4 RAM (upgradable to 64GB), and four Gigabit LAN ports for lightning-fast multi-tasking with low power consumption and the ability to deliver up to 1531 MB/s throughput with a 10GbE configuration. The GRAND-MF's accelerated encryption engine with AES-NI provides unmatched encryption performance in its class (up to 1315 MB/s with AES 256-bit full storage server volume encryption) to boost system performance, security, and ensure the safety of sensitive business data stored in the storage server.

## M.2 SSD support

The GRAND-MF supports 2.5" SSD for caching to increase IOPS performance, and provides higher transfer speeds and reliability with support for two additional M.2 2280/2260SATA 6Gb/s SSDs. Using an SSD cache boosts overall system performance, and is perfect for improving the overall workflow of random IOPS demanding applications such as virtualization. The GRAND-MF combines M.2 SATA SSD, 2.5" SATA SSD and high-capacity 3.5" HDD in one box to effectively realize tiered storage for exceptional application performance and lower TCO of storage at the same time.



M.2



SSD



HDD



## Specifications

Model	GRAND-MF-16C-RP	GRAND-MF-16C	GRAND-MF-12B-RP	GRAND-MF-12B	GRAND-MF-08B-RP	GRAND-MF-08B
<b>CPU</b>	AMD R-Series RX-421ND quad-core 2.1 GHz processor, turbo core up to 3.4 GHz					
<b>Encryption Acceleration</b>	AES-NI					
<b>Memory</b>	Maximum 64GB (4 x 16GB) 4 x UDIMM DDR4, up to 2400MHz (For dual- or quad-DIMM configurations, you must use a pair of identical DDR4 modules.)					
<b>Drive Types</b>	16 x 3.5"/2.5" SATA 6Gb/s HDDs/SSDs		12 x 3.5"/2.5" SATA 6Gb/s HDDs/SSDs		8 x 3.5"/2.5" SATA 6Gb/s HDDs/SSDs	
<b>M.2 SSD Slots</b>	2 x M.2 2280/2260 SATA 6Gb/s SSDs					
<b>Gigabit LAN Port</b>	4 x Gigabit RJ45 LAN ports					
<b>PCIe Slot</b>	1 x PCIe Gen 3 x4					
<b>USB Ports</b>	2 x USB 3.0 port, 4 x USB 2.0 port					
<b>LED Indicator</b>	Status/Power, LAN, USB, Drive 1 - 16		Status/Power, LAN, USB, Drive 1 - 12		Status/Power, LAN, USB, Drive 1 - 8	
<b>Button</b>	Power/Status, Reset					
<b>Maintenance Port</b>	1 x 3.5 mm console port					
<b>Form Factor</b>	3U Rackmount			2U Rackmount		
<b>Dimension (H x W X D)</b>	130 x 481 x 536 mm 5.12 x 18.94 x 21.10 inch			89 x 482 x 534 mm 3.5 x 18.98 x 21.02 inch		
<b>Net Weight</b>	15.42 kg (34 lbs.)	14.25 kg (31.42 lbs.)	11.81 kg (26.04 lbs.)	10.71 kg (23.62 lbs.)	10.96 kg (24.16 lbs.)	9.86 kg (21.74 lbs.)
<b>Operating Temperature &amp; Relative Humidity</b>	0 to 40°C (32 to 104°F), 5 ~ 95% RH non-condensing, wet bulb: 27°C					
<b>Power Supply</b>	500W (x2), 100-240V AC, 50/60 Hz	350W, 100-240V AC, 50/60 Hz	300W (x2), 100-240V AC, 50/60 Hz	350W, 100-240V AC, 50/60 Hz	250W (x2), 100-240V AC, 50/60 Hz	250W, 100-240V AC, 50/60 Hz
<b>Fan</b>	4 x 92 mm, 12V DC			2 x 70 mm, 12V DC		

## Options

Item	Order P/N	Description
Network card	<b>LAN-10G2SF-MLX</b>	Dual-port 10GbE SFP+ network expansion card
Network card	<b>LAN-10G2T-X550</b>	Dual-port 10GbE 10GBASE-T network expansion card
Network card	<b>LAN-1G2T-I210</b>	Dual-port Gigabit network expansion card
USB card	<b>USB-U31A2P01</b>	USB 3.1 Gen 2 10Gbps Type-A dual-port PCIe card
M.2 SSD	<b>SSD-M2080-256GB-A01</b>	SSD module
Heatsink	<b>HS-M2SSD-01</b>	Heatsink for M.2 SSD module, 14 x 14mm
SAS Card	<b>SAS-12G2E</b>	Dual port storage expansion, SAS 12Gbps
Rail kit	<b>RAIL-A03-57</b>	A03 series (Chassis) slide, Maximum load 57 kg
Cable	<b>CAB-SAS10M-8644</b>	MiniSAS Cable (SFF-8644 to SFF-8644), 1.0m
	<b>CAB-SAS05M-8644</b>	MiniSAS Cable (SFF-8644 to SFF-8644), 0.5m

## Ordering Information \*Pre-install Memory by Request

Part No.	Description
<b>GRAND-MF-08B-R10</b>	2U 8Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD RX-421ND, 250W single PSU, RoHS
<b>GRAND-MF-08B-RP-R10</b>	2U 8Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD RX-421ND, 250W redundant PSU, RoHS
<b>GRAND-MF-12B-R10</b>	2U 12Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD RX-421ND, 350W single PSU, RoHS
<b>GRAND-MF-12B-RP-R10</b>	2U 12Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD RX-421ND, 350W redundant PSU, RoHS
<b>GRAND-MF-16C-R10</b>	3U 16Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD RX-421ND, 350W single PSU, RoHS
<b>GRAND-MF-16C-RP-R10</b>	3U 16Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD RX-421ND, 500W redundant PSU, RoHS

## Packing List

Ethernet Cable x 2	Flat head screws (for 2.5" HDD)
Power cord x 2 (non RP model only one power cord)	Flat head screws (for 3.5" HDD)

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