

High Reliability Storage Server



GRAND Series

Barebone

» Software RAID Support



Grand Series is using pure software RAID created by operating system. Software RAID is default built-in function in Windows storage system and Windows 10. And it is also easy to access open source support from Linux operating system. The benefit of Software RAID is RAID array can be moved to a new computer with newer, faster CPU without capability constraint. Our powerful storage server system can enhance the read and write speeds incredibly.

» 10GbE Network Support Ready

A 10 Gigabit Ethernet (10GbE) network is the essential feature for business that demand high bandwidth for virtualization, fast backup and restoring ever growing database. IEI provides a series of affordable and reliable 10GbE ready storage server that user can be immediately upgraded by purchasing 10GbE network adapter to build a true 10GbE environments for enterprise.

» Storage Expandable for Enterprise

The GRAND series storage server is a complete product line. The GRAND series created for enterprise storage supports processors from Celeron J3455 to Xeon E5 series, and all servers are compliant with standard rackmount from 1U to 3U. This product line can meet various storage needs and enterprise applications. Storage capacity options from 4 bays to 30 bays are available to achieve your demands. All of our servers are expandable, allowing you to expand storage via SAS 12Gbps expansion card or USB 3.1 Gen 1 (5Gb/s) connector depending on different product lines.

When expanding your total data storage capacity, deploying multiple storage server can increase both management complexity and costs. The expansion enclosures provide an economical solution for expanding the total storage space of your storage server while greatly streamlining management and maintenance tasks.

GRAND-C610

Hyper converged High-performance Computing, Virtualization, Storage, and Application server in one chassis for streamlined efficiency and manageability.



Features

- Double Server, support Intel® Xeon® E5-2600 v3
- 16 x DIMM Slots, up to 1TB memory with 16 x 64GB DIMMs
- 4 x PCIe slot can support 40GbE network card
- Storage expandable, up to 1PB
- IPMI Remote Management
- 10GbE network card support ready



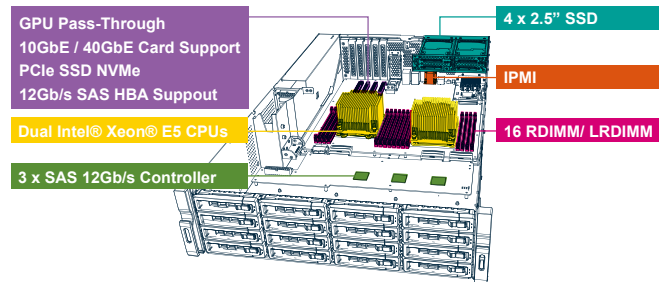
Server-grade Hardware Design Robust, Reliable & Innovative

Suited for enterprise environments which demand the highest performance, simplified IT management, uninterrupted service, and optimized virtualization environments, the GRAND-C610 is designed with high-standard hardware specifications to meet those needs.

Hyperconverged Storage Server

High Computing and Storage Server

- High-performance application server based on dual Intel® E5 CPU
- VMware®, Citrix®, or Windows Hyper-V: for virtualization deployment
- Storage server: This component is used to mount storage using iSCSI/NFS for the application server
- High-speed connection: 10GbE or 40GbE



Specifications

Model	GRAND-C610-20C
CPU	FCLGA2011-3 sockets-support Xeon® E5-2600 v3 family
Memory (RAM)	System memory: RDIMM / LRDIMM Total memory slots: 16 Memory expandable up to: 1 TB (64 GB x 16)
USB 2.0 / 3.0	4 x USB 3.1 Gen 1 (5Gb/s)
Internal Hard Drive and Type	16 x 3.5" SAS (12Gbps/6Gbps) / SATA (6Gbps/3Gbps) HDDs or 2.5" SAS/SATA SSD 4 x 2.5" SAS (12Gbps) SSD or SAS/SATA (6Gbps/3Gbps) SSD
Max. Raw Capacity	128 TB
Interface	SAS 12Gb/s backward-compatible to SAS/SATA 6Gb/s
Ethernet	2 x GbE
PCIe slot	4 (3 x PCIe Gen3 x8, 1 x PCIe Gen3 x16)
Cache	M.2 Gen.2 x4
Form Factor	3U, Rackmount
Dimensions (H x W x D)	88 x 442.5 x 530.5 mm
Power	650W (Redundant)
Fan	Smart Fan 4 (6cm 12V DC)
Weight (Net/Gross) kg	Net (NAS): 22.42 kg / 49.43 lb Gross (with accessories and package): 30.19 kg / 66.56 lb
Noise	Sound Pressure Level (LpAm): 64.8 dB
Power Consumption	Sleep mode: 254.21 W In Operation: 362.86 W

Options

Item	Order P/N	Description
Network card	LAN-40G2SF-MLX	Dual-port 40GbE QSFP+ network expansion card
Network card	LAN-10G2SF-MLX	Dual-port 10GbE SFP+ network expansion card
Network card	LAN-10G2T-X550	Dual-port 10GBASE-T network expansion card
USB card	USB-U31A2P01	USB 3.1 Gen 2 10Gbps Type-A dual-port PCIe card
SAS Card	SAS-12G2E	Dual port storage expansion, SAS 12Gbps
Rail kit	RAIL-A03-57	A03 series (Chassis) slide, Maximum load 57 kg
Cable	CAB-SAS10M-8644	MiniSAS Cable (SFF-8644 to SFF-8644), 1.0m
	CAB-SAS05M-8644	MiniSAS Cable (SFF-8644 to SFF-8644), 0.5m
CPU	Intel® Xeon® Processor E5-2620 v3	Intel® Xeon®, 2.4 GHz, 0.65V~1.30V, 85W, 15MB(L3), FCLGA, 2011pin, 22nm, CM8064401831400 SR207, LGA 2011-3 Socket, R2, Haswell, Intel® Xeon® Processor E5-2620 v3, RoHS
	Intel® Xeon® Processor E5-2630 v3	Intel® Xeon®, 2.4 GHz, 0.65V~1.30V, 85W, 20MB(L3), FCLGA, 2011pin, 22nm, CM8064401831000 SR206, LGA2011-3 Socket, R2, Haswell, Intel® Xeon® Processor E5-2630 v3, RoHS
	Intel® Xeon® Processor E5-2640 v3	Intel® Xeon®, 2.6 GHz, 90W, 20MB(L3), FCLGA, 2011pin, 22nm, CM8064401830901 SR205, LGA2011-3 Socket, R2, Haswell, Intel® Xeon® Processor E5-2640 v3, RoHS

Ordering Information

Part No.	Description
GRAND-C610-20C-R10	3U 16Bay front 3.5", 4bay rear 2.5" HDD or SSD support, rackmount storage server (Barebone), with 650W redundant PSU, RoHS

*Pre-install CPU & Memory by Request

Packing List

Ethernet cable x 2	Flat head screws (for 2.5" HDD)
Power cord x 2	Flat head screws (for 3.5" HDD)

GRAND-BDE

Powered by an advanced 14nm Intel® Xeon® D 64-bit SoC processor, up to 128GB DDR4 ECC RDIMM RAM / 64GB DDR4 non-ECC UDIMM RAM, and the 12Gb/s SAS-enabled GRAND-BDE delivers outstanding performance for data transmission and applications. With a thermal design power of only 20-65W, the GRAND-BDE fulfills demands for both performance and energy saving.



Features

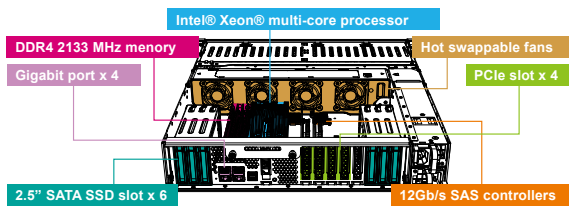
- Intel® Xeon® D processor optimizes performance and efficiency
- 4 x DIMM Slots, up to 128 GB memory with 4 x 32GB DIMMs
- 4 x PCIe slot can support 40GbE network card
- Storage expandable, up to 1PB
- 10GbE network card support ready



Excellent Hardware

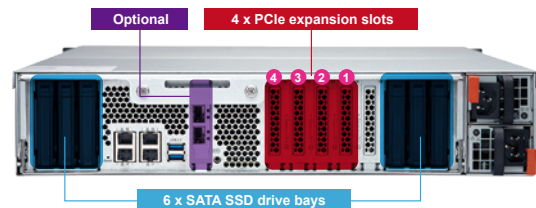
Immensely, Durable & Compact

The GRAND-BDE supports SAS 12Gb/s 2.5" drives, allowing for SAS 12Gb/s and SATA 6Gb/s hard drives and SSDs. Businesses can create the most powerful storage by implementing suitable drives based on their needs.



Expansion Capability

GRAND-BDE provide Five built-in PCIe 3.0 expansion slots provide great expandability options for 10GbE/40GbE network adapters, USB 3.1 Gen 2 (10Gb/s) and 12Gb/s SAS expansion cards, PCIe NVMe SSD - or even a graphics card.



Specifications



Model Name	GRAND-BDE-18B	GRAND-BDE-30B
CPU	Intel® Xeon® Processor D-1521, 4 core 2.4 GHz Intel® Xeon® Processor D-1531, 6 core 2.2 GHz Intel® Xeon® Processor D-1548, 8 core 2.0 GHz (for GRAND-BDE-30B only)	
Memory	Total DIMM slots: 4 Maximum memory: DDR4 128GB (32GB RDIMM x 4)	
Drive Tray SSD drive bay x 6	Front: 2.5" / 3.5" x 12 Rear: 2.5" SSD drive bay x 6	Front: 2.5" x 24 Rear: 2.5" SSD drive bay x 6
Hard Drive	Front: SAS 12Gb/s, SAS 6Gb/s, SATA 6Gb/s and SSD Rear: SATA 6Gb/s and SSD	
Network port	4 x Gigabit ports	
LEDs	10 GbE network, system status, network, drive LED	
Buttons	Power button, Reset button	
Form Factor	2U rack mount	
Dimensions (H x W x D)	88 x 442.5 x 530.5 mm 3.46 x 17.42 x 20.89 inch	88.3 x 439 x 484.5 mm 3.47 x 17.28 x 19.07 inch
Operating Temperature	0°C ~ 40°C	
Relative Humidity	5 to 95% non-condensing, wet bulb: 27°C	
Power Supply	Redundant power: input 90 to 264VAC: 450W x 2 Quantity: 4	
PCIe Expansion Slots	Slot 1: PCIe 3.0 x8 Slot 3: PCIe 3.0 x4 Slot 2: PCIe 2.0 x4 Slot 4: PCIe 3.0 x4 or PCIe 3.0 x8* Note: Slot 4 provides the bandwidth of PCIe 3.0 x8 when Slot 3 is not in use. Slot 4 then provides the bandwidth of PCIe 3.0 x4 only when an expansion board is installed in Slot 3.	
Fan	4 x 6 cm High efficiency fan	
10GbE PCIe Card Slot	Support specific 10GbE network card (P/N: LAN-10G2F-PHY-CS4227)	

Ordering Information

Part No.	Description
GRAND-BDE-18B-D1521-R10	2U 12Bay front 3.5", 6bay rear 2.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Xeon® D-1521, 450W redundant PSU, RoHS
GRAND-BDE-18B-D1531-R10	2U 12Bay front 3.5", 6bay rear 2.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Xeon® D-1531, 450W redundant PSU, RoHS
GRAND-BDE-30B-D1521-R10	2U 24Bay front 2.5", 6bay rear 2.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Xeon® D-1521, with 450W redundant PSU, RoHS
GRAND-BDE-30B-D1531-R10	2U 24Bay front 2.5", 6bay rear 2.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Xeon® D-1531, with 450W redundant PSU, RoHS
GRAND-BDE-30B-D1548-R10	2U 24Bay front 2.5", 6bay rear 2.5" HDD or SSD support, rackmount storage serversystem (Barebone) with Intel® Xeon® D-1548, with 450W redundant PSU, RoHS

*Pre-install Memory by Request

Options

Item	Item	Description
Network card	LAN-40G2SF-MLX	Dual-port 40GbE QSFP+ network expansion card
Network card	LAN-10G2SF-MLX	Dual-port 10GbE SFP+ network expansion card
Network card	LAN-10G2T-X550	Dual-port 10GBASE-T network expansion card
USB card	USB-U31A2P01	USB 3.1 Gen 2 10Gbps Type-A dual-port PCIe card
SAS Card	SAS-12G2E	Dual port storage expansion, SAS 12Gbps
Rail kit	RAIL-A03-57	A03 series (Chassis) slide, Maxmium load 57 kg
Cable	CAB-SAS10M-8644	MiniSAS Cable (SFF-8644 to SFF-8644), 1.0m
	CAB-SAS05M-8644	MiniSAS Cable (SFF-8644 to SFF-8644), 0.5m

Packing List

Ethernet cable x 4	Flat head screws (for 2.5" HDD)
Power cord x 2	Flat head screws (for 3.5" HDD, GRAND-BDE-180B only)

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.

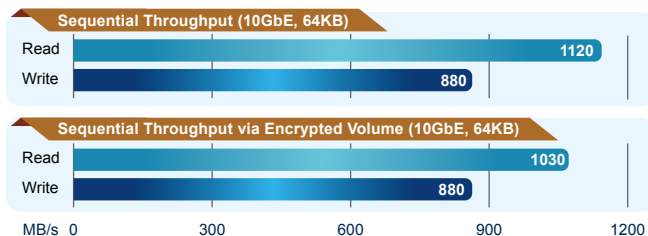


Features

- 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.



Specifications



Model	GRAND-MF-16C-RP	GRAND-MF-16C	GRAND-MF-12B-RP	GRAND-MF-12B	GRAND-MF-08B-RP	GRAND-MF-08B
CPU	AMD R-Series RX-421ND quad-core 2.1 GHz processor, turbo core up to 3.4 GHz					
Encryption Acceleration	AES-NI					
Memory	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.)					
Drive Types	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	
M.2 SSD Slots	2 x M.2 2280/2260 SATA 6Gb/s SSDs					
Gigabit LAN Port	4 x Gigabit RJ45 LAN ports					
PCIe Slot	1 x PCIe Gen 3 x4					
USB Ports	2 x USB 3.1 Gen 1 (5Gb/s) port, 4 x USB 2.0 port					
LED Indicator	Status/Power, LAN, USB, Drive 1 - 16		Status/Power, LAN, USB, Drive 1 - 12		Status/Power, LAN, USB, Drive 1 - 8	
Button	Power/Status, Reset					
Maintenance Port	1 x 3.5 mm console port					
Form Factor	3U Rackmount			2U Rackmount		
Dimension (H x W x D)	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		
Net Weight	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.)
Operating Temperature & Relative Humidity	0 to 40°C (32 to 104°F), 5 ~ 95% RH non-condensing, wet bulb: 27°C					
Power Supply	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
Fan	4 x 92 mm, 12V DC			2 x 70 mm, 12V DC		

Ordering Information

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

*Pre-install Memory by Request

Packing List

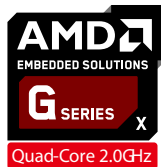
Ethernet Cable x 2	Flat head screws (for 2.5" HDD)
Power cord x 2 (non RP model only one power cord)	Flat head screws (for 3.5" HDD)

Options

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

GRAND-SE

The GRAND-SE is a powerful network storage system powered by a high-performance AMD quad-core processor. It can support 10GbE network card, and doubles the encrypted file transfer performance with the AES-NI hardware-accelerated encryption engine to over 800 MB/s. The GRAND-SE is designed for small and medium-sized businesses looking for backup, restoration, private cloud, storage for virtualization, and to future-proof their IT infrastructure for 10GbE networks.



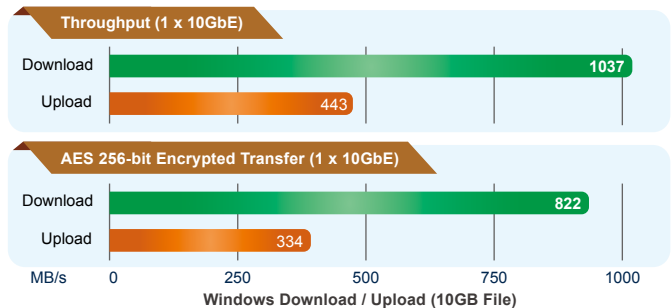
Features

- The power of 64-bit quad-core processor with AES-NI support
- 2 x SODIMM Slots, up to 16 GB memory with 2 x 8GB DIMMs
- Ready to support 10GbE network card
- Storage expandable via USB 3.1 Gen 1 (5Gb/s), up to 200TB



Speedy transfer and hardware-accelerated encryption with AES-NI

The GRAND-SE is equipped with an energy-efficient 64-bit AMD quad-core 2.0GHz processor with maximum 16GB, SATA 6Gb/s, support one SFP+ 10GbE and four Gigabit LAN ports for lightning-fast multi-tasking performance with SSD cache support. The GRAND-SE is a powerful storage server that delivers up to 1,059 MB/s sequential read throughput with expanding one 10GbE configuration. The GRAND-SE's hardware-accelerated encryption engine provides unmatched encryption performance in its class, up to 822 MB/s with AES-256 bit full storage server volume encryption, boosting system performance & security while ensuring the safety of sensitive business data stored in the GRAND-SE.



Specifications



Model	GRAND-SE-04A	GRAND-SE-04A-RP	GRAND-SE-08B	GRAND-SE-08B-RP	GRAND-SE-12B	GRAND-SE-12B-RP
CPU	64-Bit Quad-Core AMD® G-Series 2.0GHz					
Memory	Total memory slots: 2 SODIMM; Memory expandable up to 16GB DDR3L (8GB x 2)					
Max. HDDs/SSDs	4		8		12	
HDDs/SSDs Type	2.5" or 3.5" SATA 6Gb/s, 3Gb/s; hot-swappable					
Expansion Unit Support	Max. 1 expansion unit					
LAN Ports	4 x GbE ports					
USB Ports	USB 3.1 Gen 1 (5Gb/s): 2, USB 2.0: 3		USB 3.1 Gen 1 (5Gb/s): 2, USB 2.0: 2		USB 3.1 Gen 1 (5Gb/s): 2, USB 2.0: 2	
PCIe Slot	1 x PCIe 2.0 x 4 slot					
LED Indicators	Status, LAN, USB, HDD1-4		Power, Status, LAN, USB, HDD1-8		Power, Status, LAN, USB, HDD1-12	
Buttons	Power, Reset, USB Auto Copy		Power, Reset		Power, Reset	
Form Factor	1U Rackmount		2U Rackmount		2U Rackmount	
Dimensions (HxWxD)	1.73 x 17.28 x 19.65 inch		89 x 482 x 534 mm / 3.50 x 18.97 x 21.02 inch			
Weight (Net/Gross)	7.63 / 11.60 kg 16.82 / 25.57 lb		11.02 / 19.26 kg 24.29 / 42.46 lb		16.14 / 19.41kg 35.58 / 41.84 lb	
Temperature and Humidity	0-40°C, 5~95% RH non-condensing, wet bulb: 27°C					
Power Supply Specification	Input: 100-240V AC, 50/60Hz; Output: 250W					
	250W	2 x 250W	250W	2 x 250W	250W	2 x 250W

Ordering Information

Part No.	Description
GRAND-SE-04A-R10	1U 4Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD GX-424CC, 250W single PSU, RoHS
GRAND-SE-04A-RP-R10	1U 4Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD GX-424CC, 250W redundant PSU, RoHS
GRAND-SE-08B-R10	2U 8Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD GX-424CC, 250W single PSU, RoHS
GRAND-SE-08B-RP-R10	2U 8Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD GX-424CC, 250W redundant PSU, RoHS
GRAND-SE-12B-R10	2U 12Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD GX-424CC, 250W single PSU, RoHS
GRAND-SE-12B-RP-R10	2U 12Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with AMD GX-424CC, 250W redundant PSU, RoHS

Options

Item	Order P/N	Description
Network card	LAN-10G2SF-MLX	Dual-port 10GbE SFP+ network expansion card
Network card	LAN-10G2T-X550	Dual-port 10GbE 10GBASE-T network expansion card
Network card	LAN-1G2T-I210	Dual-port Gigabit network expansion card
USB card	USB-U31A2P01	USB 3.1 Gen 2 10Gbps Type-A dual-port PCIe card
Rail kit	RAIL-B02	B02 series slide for 1U,2U chassis

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)

*Pre-install Memory by Request

GRAND-AL

The GRAND-AL is a rackmount storage server that easily fits into a standard 19-inch rack, providing an ideal storage solution in the server room for small and medium businesses. The GRAND-AL also provides a wide range of value-added features: 4K video playback and real-time transcoding; and web automation services with IFTTT.

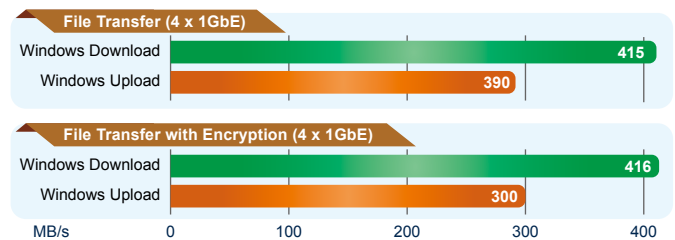


Features

- Intel® Celeron® J3455 quad-core 1.5GHz CPU with AES-NI Encryption
- 2 x SODIMM Slots, up to 8GB memory with 2 x 4GB DIMMs
- Storage expandable via USB 3.1 Gen 1 (5Gb/s), up to 200TB

Intel® Celeron® J3455 quad-core 1.5GHz CPU with AES-NI Encryption

Powered by the latest 14 nm Intel® Celeron® J3455 quad-core 1.5GHz processor (burst up to 2.3 GHz), up to 8GB DDR3L RAM, four Gigabit LAN ports, and SATA 6Gb/s, the GRAND-AL runs tasks smoothly and quickly with up to 415 MB/s read/ write speeds. The GRAND-AL features Intel® AES-NI accelerated encryption to drive transfer speeds of up to 416 MB/s with AES 256-bit encryption for both full storage server volumes and shared folders, boosting system performance while ensuring the confidentiality of sensitive business data stored in the storage server.



Low-cost, Flexible Storage Expansion



Specifications



Model Name	GRAND-AL-04A	GRAND-AL-04A-RP	GRAND-AL-08B	GRAND-AL-08B-RP	GRAND-AL-12B	GRAND-AL-12B-RP
CPU	Intel® Celeron® J3455 4-core 1.5GHz (burst up to 2.3GHz)					
System memory	Total memory slots: 2 SODIMM; Memory expandable up to 8GB DDR3L (4GB x 2)					
Drive Trays	4		8		12	
Drive Types	SATA 6Gb/s, 3Gb/s HDD or SSD; Hot-swappable					
USB	4 x USB 3.1 Gen 1 (5Gb/s) (Rear)					
LAN Ports	4 x GbE					
HDMI Output	1 x HDMI 1.4b					
LED Indicators	System Status, HDD, Expansion, LAN					
Buttons	Power, Reset					
Form Factor	1U, rack mountable		2U, rack mountable		2U, rack mountable	
Dimensions (H x W x D)	44 x 439 x 499 mm 1.73 x 17.28 x 19.65 inch		89 x 482 x 534 mm 3.5 x 18.98 x 21.02 inch		89 x 482 x 534 mm 3.5 x 18.98 x 21.02 inch	
Net Weight	7.63 kg (16.82 lbs.)		11.02 kg (24.29 lbs.)		16.14 kg (35.58 lbs.)	
Temperature	0-40°C					
Relative Humidity	0~95% R.H.					
Power Supply	ATX 250W (single) ATX 250W (redundant x 2)		ATX 250W (single) ATX 250W (redundant x 2)		ATX 350W (single) ATX 250W (Redundant x2)	
Fan	2 x 40mm, 12V		DC 2 x 70mm, 12V		DC 2 x 70mm, 12V DC	

Ordering Information

Part No.	Description
GRAND-AL-04A-R10	1U 4Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Celeron® J3455, 250W single PSU, RoHS
GRAND-AL-04A-RP-R10	1U 4Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Celeron® J3455, 250W redundant PSU, RoHS
GRAND-AL-08B-R10	2U 8Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Celeron® J3455, 250W single PSU, RoHS
GRAND-AL-08B-RP-R10	2U 8Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Celeron® J3455, 250W redundant PSU, RoHS
GRAND-AL-12B-R10	2U 12Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Celeron® J3455, 350W single PSU, RoHS
GRAND-AL-12B-RP-R10	2U 12Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Celeron® J3455, 250W redundant PSU, RoHS

Options

Item	Order P/N	Description
Rail kit	RAIL-B02	B02 series slide for 1U, 2U chassis

Packing List

Ethernet cable x 2	Flat head screw (for 2.5" HDD)
Power cord x2 (non RP model only one power cord)	Flat head screw (for 3.5" HDD)