

# 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.

## » Storage Expandable for Enterprise

The GRAND series storage server is a complete product line. The GRAND series created for enterprise storage supports processors with Celeron J4125, AMD steppe eagle and Ryzen embedded, and all servers are compliant with standard rackmount from 1U to 2U. This product line can meet various storage needs and enterprise applications. Storage capacity options from 4 bays to 12 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 3.2 Gen 1 (5Gb/s) connector depending on different product lines.



# GRAND-RE

With its powerful AMD Ryzen™ V1000 series V1500B Quad-core processor, the GRAND-RE is capable of boosting virtual machine performance with up to 4 cores/8 threads at 2.2GHz. The GRAND-RE includes two 2.5GbE ports and a PCIe Gen 3 slot, providing you with fast network connectivity and the ability to add extra functionality and additional application potential. The GRAND-RE also features a redundant power supply to ensure maximum system uptime. Cutting-edge hardware integrated with comprehensive software solutions makes the GRAND-RE the preeminent choice to tackle resource-demanding applications and tasks.



## Features

- AMD Ryzen™ Embedded V1500B quad-core 2.2 GHz processor
- 2 x DIMM Slots, up to 32 GB memory (2 x 16GB)
- Support one PCIe Gen3 x8 slot
- Storage expandable via USB port or HBA expansion card

## Upgrade to 2.5GbE networking

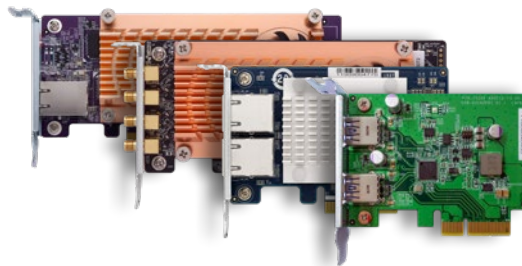
The GRAND-RE comes with two 2.5GbE RJ45 LAN ports that allow you to use existing CAT5e cables to upgrade network speeds from 1 Gigabit to 2.5 Gigabit. 5GbE speeds can also be attained by using Port Trunking. To upgrade your laptops and desktops to take advantage of high-speed network.

### 2.5GbE Windows File Transfer (10GB file)



## Extend Functionality with a PCIe Card

The GRAND-RE has a PCIe expansion slot, providing flexibility in extending storage server functionality and potential applications. Install a QNAP QM2 card to provide M.2 SSD caching/10GbE connectivity, or use the GRAND-RE as a wireless access point by installing a compatible wireless network card, or boost the USB connectivity of the GRAND-RE by installing a USB 3.2 Gen2 10Gbps card.



## Specifications

Model	GRAND-RE-08B-RP	GRAND-RE-08B
CPU	AMD Ryzen™ Embedded V1500B quad-core 2.2 GHz processor	
Encryption Acceleration	AES-NI	
Memory	Maximum 32GB (2 x 16GB) 2 x Long-DIMM DDR4 For dual-DIMM configuration, you must use a pair of identical DDR4 modules.	
Drive Types	8 x 3.5"/2.5" SATA 6Gb/s HDDs/SSDs	
Gigabit LAN Port	2 x 2.5GbE LAN port	
PCIe Slot	1 x PCIe Gen 3 x8	
USB Ports	1 x USB 3.2 Gen1 Type-A port 2 x USB 3.2 Gen2 Type-C port 1 x USB 3.2 Gen2 Type-A port	
LED Indicator	Status/Power, LAN, USB, Drive 1 - 8	
Button	Power/Status, Reset	
Form Factor	2U Rackmount	
Dimension (H x W x D)	89 x 482 x 425 mm	
Net Weight	9.15 kg	8.04 kg
Operating temperature & Relative Humidity	0 to 40°C (32 to 104°F), 5 ~ 95% RH non-condensing, wet bulb: 27°C	
Power Supply	300W (x2), 100-240V AC, 50/60 Hz	250W, 100-240V AC, 50/60 Hz
Fan	2 x 80 mm, 12V DC	

## Ordering Information

Part No.	Description
GRAND-RE-08B-R10	2U 8Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone), AMD Ryzen V1500B 4C 2.2GHz, 2x 2.5GbE, PCIe slots, 250W PSU
GRAND-RE-08B-RP-R10	2U 8Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone), AMD Ryzen V1500B 4C 2.2GHz, 2x 2.5GbE, PCIe slots, 2x 300W PSU

## Options

Item	Order P/N	Description
RAM	79E00-G004-003-RS	4GB DDR4 RAM, 2400 MHZ, U-DIMM, 288-PIN
	79E00-G008-015-RS	8GB DDR4 RAM, 2400 MHZ, U-DIMM, 288-PIN
	79E00-G016-009-RS	16GB DDR4 RAM, 2400 MHZ, U-DIMM, 288-PIN
Rail kit	RAIL-B02	B02 series slide for 1U,2U chassis

## Packing List

Ethernet cable x 1
Power cord x 2 (non RP model only one power cord)
Flat head screws (for 2.5" HDD)
Flat head screws (for 3.5" HDD)

# GRAND-GL

Powered by an Intel® Celeron® J4125, quad-core 2.0 GHz processor, the GRAND-GL features two 2.5GbE RJ45 ports, providing up to 2.5 times the speed of Gigabit Ethernet and enabling smoother multimedia playback and everyday usage. With a PCIe Gen 2.0 x 2 slot, the GRAND-GL provides flexibility in extending NAS functionality, allowing you to install various cards for extra network ports, M.2 SSD caching/tiering, or Wi-Fi connectivity. The GRAND-GL ensures data security with AES 256-bit encryption, boosting system performance while ensuring the safety of sensitive business data stored.



## Features

- Intel® Celeron® J4125 quad-core 2.0 GHz processor with AES-NI Encryption
- 2 x SODIMM Slots, up to 8GB memory with 2 x 4GB DIMMs
- 1 x PCIe x2 slot can support PCIe expansion card
- Storage expandable via USB 3.2 Gen1 port

## Use the existing wiring infrastructure to support 2.5GbE

	CAT 5e	CAT 6	CAT 6A
100M	✓	✓	✓
1G	✓	✓	✓
2.5G	✓	✓	✓
5G	✓	✓	✓
10G	✗	✓ (55m)	✓

No more bandwidth restriction by 1GbE interface! No more DIY to install the 2.5GbE driver to your system from other vendors!! GRAND-GL is equipped with 2 independent 2.5GbE NICs for faster and smoother multi-device networking experience. The available PCIe expansion slot is ready for the future business growth.



## Accelerate IOPS performance with SSD Caching

Adding an SSD cache to the GRAND-RE is an easy way to increase IOPS performance and reducing storage volume latency. It is perfect for IOPS-demanding applications (including databases and virtualization) and can significantly improve overall workflows.



## Specifications

Model	GRAND-GL-04A	GRAND-GL-04A-RP
CPU	Intel® Celeron® J4125 quad-core 2.0 GHz processor (burst up to 2.7 GHz)	
System memory	Memory Slots SODIMM x 2 (MAX. 8GB)	
PCIe Slot	1 x PCIe Gen 2 x2 slot	
Drive Trays	4	
Drive Types	SATA 6Gb/s, 3Gb/s HDD or SSD; Hot-swappable	
USB	2 x USB 2.0 (Rear) / 2 x USB 3.2 Gen 1	
LAN Ports	2 x 2.5GbE	
HDMI Output	1 x HDMI 1.4b	
LED Indicators	System Status, HDD, Expansion, LAN	
Buttons	Power, Reset	
Form Factor	1U, rack mountable	
Dimensions	43.3 (H) x 482.6 (W) x 483.9 (D) mm	
Net Weight	6.6 kg	8.12 kg
Temperature	0-40°C	
Relative Humidity	5~95% R.H.	
Power Supply	ATX 250W (single)	2 x ATX 250W (redundant)
Fan	2 x 40mm, 12V	

## Ordering Information

Part No.	Description
GRAND-GL-04A-R10	1U 4Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Celeron® J4125 4C 2.0GHz, 250W PSU
GRAND-GL-04A-RP-R10	1U 4Bay front 3.5" HDD or SSD support, rackmount storage server system (Barebone) with Intel® Celeron® J4125 4C 2.0GHz, 2 x 300W PSU

## Options

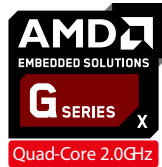
Item	Order P/N	Description
RAM	79F00-G004-014-RS	4GB DDR4-2666, SO-DIMM, 260 PIN
Rail kit	RAIL-B02	B02 series slide for 1U,2U chassis

## Packing List

Ethernet cable x 1
Power cord x 2 (non RP model only one power cord)
Flat head screws (for 2.5" HDD)
Flat head screws (for 3.5" HDD)

# 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.



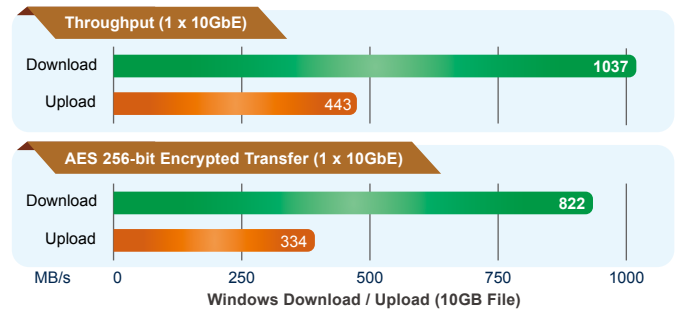
## Features

- 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 3.2 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 3.2 Gen 1 (5Gb/s): 2, USB 2.0: 3		USB 3.2 Gen 1 (5Gb/s): 2, USB 2.0: 2		USB 3.2 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
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