



Image shows 822R-E4/1P barebones

Chassis: BrontaStor 822R-P04 NAS format enterprise server chassis

Chassis features:

- High quality Japanese steel chassis with black metallic paint slide-back cover
- Transit hand holds built into side of the lid
- Chassis configuration consists of main enclosure with motherboard mezzanine section.
- Main chassis includes 8+2 drive bays, PSU(s), Power distribution board and front panel
- Upper mezzanine section includes motherboard, IO cards and Dual SSD bays
- Mezzanine section can slide back and be released by removing 3 screws for fast on-site swap-out or upgrade.
- Tidy interior with custom cable loom and covered cable bay areas
- Acrylic logo panel can be customised for resellers.

Drive Bays:

8+2+2 Drive Bay Configuration for maximum flexibility

- Bays (R1-R8): 8x Hot-Swap Drive bays supporting SATA/SAS 6Gbps/3Gbps 3.5in/2.5in Connection via 2x SFF8087 cables up to mezzanine area
- Bays (B1-B2): 2x Hot-Swap Drive bays supporting SATA 6Gbps/3Gbps 3.5in/2.5in Connected to Motherboard SATA 6Gb/s ports 3-4
Note: Backplane supports SAS drives when connected to appropriate controller
- Bays (S1-S2): Dual drive caddy, Hot-Swap 2.5in SATA 6Gbps/3Gbps
Support: SSDs or low-power 7mm Notebook HDDs
Connected to motherboard SATA 6Gb/s ports 1-2



822R-E4 Server motherboard Key features:

Intel S1200V3RPL MicroATX Server motherboard (<http://ark.intel.com/products/71384>)

- Intel C224 Server chipset
- Supports Single Intel Xeon E3v3/Core i3-4000 series LGA 1150 processor
- Up to 32GB dual-channel unbuffered DDR3L-1600/1333MHz ECC memory via 4xDIMM slots
- Dual Intel Gigabit LAN: i210 controllers
- On-board headers: RMM4 lite IPMI expansion option (KVM/Remote media over LAN)
- On-board headers: RMM4 NIC expansion option (dedicated 3rd IPMI LAN)
- On-board headers: eUSB SSD, TPM
- On-board headers: 4x SATA3 (6Gb/s), 2x SATA2 (3Gb/s)
- On-board headers: 2x USB 2.0
- On-board headers: 1x USB 3.0 Type-A (for high speed USB memory stick), 9-pin serial
- Front panel: single USB 3.0 (via motherboard 20pin), optional USB 2.0 cable
- Rear I/O: 2xLAN, 2x USB3.0, 2x USB2.0, VGA, 9pin serial
- Dual Hardware RAID BBU mounts (1x LSI CacheVault/Intel RMFBU , 1x Intel AXSRMFBU2)

822R-E4 Standard options:

- HJB** – Intel RMS25JB080, LSI 2308 PCIe3.0 x8 high performance SAS/SATA Hot Bus Adapter
- RCB** – Intel RMS25CB080, LSI 2208 PCIe2.0 x8 Hardware RAID with 1GB DRAM Cache
RCB option also includes AXSRMFBU2 Flash memory with Supercapcitor backup
- KVM** – Intel RMM4 Lite module
- KVL** – Intel RMM4 module and RJ45 Port. IO Shield w/RJ45 connector requires 1 slot (SLOT 7)
- LCD** – Optional 4-button LCD display & control panel (supported under Open-e DSS V6/V7 only)
- P46** – Single 460Watt Gold efficiency PSU module (adding 2nd PSU automatically provides Power redundancy)

S1200V3PRL Motherboard PCI Express Slot configuration:

Note: The motherboard features a 3-way PLX Multiplexor (MUX) which auto configures the 16 PCI express gen 3.0 lanes (1GB/sec) from the processor to either slots 5, 6 or the SAS module slot depending on what it detects has been plugged in.

With no adapters or modules installed, all 16 lanes are switched to Slot6, Config#1 in the table.

Plugging in a PCIe adapter in Slot5 will divide the lanes equally 8/8 between Slots 5 and 6, Config#2.

When a SAS module is installed but no other cards, Config#3 is automatically selected. If an HBA SAS module is installed, the lanes can be further divided 8/4/4 supporting 4 PCIe adapter cards and the HBA module. Installing a SAS RAID module disables the use of Slot5 as it requires all 8 lanes.

- Slot 4 (LEFT) PCI Express 2.0 (x4 in x8) via South Bridge
- Slot 5 PCI Express 3.0 x8 via MUX, see table below
- Slot 6 PCI Express 3.0 x16 via MUX , see table below
- SAS Module PCI Express 3.0 via MUX, see table below
- Slot 7 PCI Express 2.0 (x1 in x8) via South Bridge

	Config #1	Config #2	Config #3	Config #4
PCIe3.0 SLOT 5	-	X8	-	X4
PCIe3.0 SLOT 6	X16	X8	X8	X8
PCIe3.0 SAS Module	-	-	X8	X4

When a PCIe 2.0 Hardware RAID SAS Module is installed (RMS25CB080) Config #3 is chosen

When a PCIe3.0 HBA SAS Module is installed (RMS25JB080) Config #4 is chosen

Power Supply (PSU): Single 460Watts, Gold Efficiency rated, low noise

- Single PSU (cold swap) or Dual Redundant 2x PSUs (Hot-Swap)
Power supply modules report status through the IPMI via PMBUS status cable
There is no audible alarm or PSU failure LED
Users should configure IPMI to send all failure status messages via email

Qualified Memory: Kingston Server premier 4GB DDR3L-1600 1.35v ECC ([KVR16LE11S8/4EF](#))
Kingston Server premier 8GB DDR3L-1600 1.35v ECC ([KVR16LE11/8EF](#))

Cooling:

- 2x 12cm 4-pin PWM fans (0-2100RPM) for storage bays R1-R8,B1-B2 (exhaust)
These are connected to a dedicated thermal management (CMC) controller.
A temperature sensor governs fan speed based on internal chassis air temperature independent of motherboard control.
- 4 x 6cm 4-pin PWM fans (0-4200RPM) for the mezzanine.(2 x intake, 2 x exhaust)
- These Fans are managed through the motherboard BIOS fan control and provide cooling for the processor, memory and IO cards.
- Chassis fans headers SYS_FAN_1-4 can be configured through the BIOS to provided elevated fan speed in order to provide additional cooling to IO slots, CPU or rear exhaust as required.

Dimensions: 22.6cm (H), 34.5cm (D), 35cm (W)

Shipping carton Dimensions: 38.5cm (H), 48cm (D), 50.5cm (W)

Weight Net (barebones without HDDs,CPU,RAM): ~12.6Kg

Weight Gross (without drives): ~15.9Kg

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