Rear view

QuantaGrid D52BV-2U

Accelerating Supercomputing Performance

- **Compact and Optimized 2U Accelerator Server Architecture**

- **2x 100Gb/s High bandwidth Networking Option to scale out performance efficiently**

- **Quick Deployment and Maintenance**

About QCT

Quanta Cloud Technology (QCT) is a global data center solution provider. We combine the efficiency of hyperscale hardware with infrastructure software from a diversity of industry leaders to solve next-generation data center design and operation challenges. QCT serves cloud service providers, telecoms and enterprises running public, hybrid and private clouds.

Product lines include hyper-converged and software-defined data center solutions as well as servers, storage, switches, integrated racks with a diverse ecosystem of hardware component and software partners. QCT designs, manufactures, integrates and services cutting edge offerings via its own global network. The parent of QCT is Quanta Computer, Inc., a Fortune Global 500 corporation.

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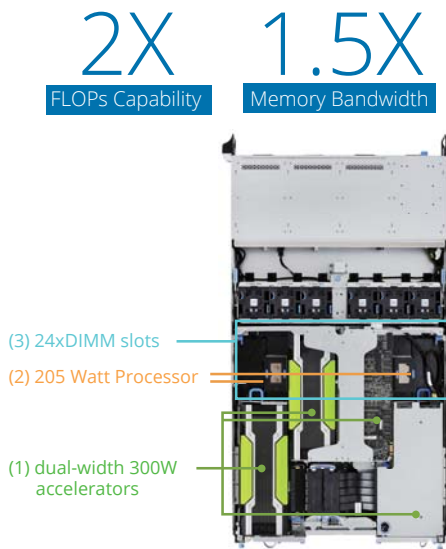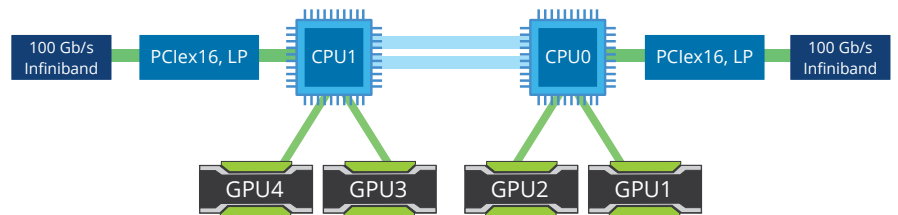
Accelerating Supercomputing Performance

As an optimized parallel computing architecture, the QuantaGrid D52BV-2U breaks hardware configuration limitations in a 2U dual-socket system by supporting up to four accelerator cards, 3TBs of memory, and 8 large form factor storage bays, which makes the D52BV a perfect versatile platform for parallel computing-intensive applications such as VDI, HPC, and AI/Deep learning.

Compact and Optimized 2U Accelerator Server Architecture to Propel Data Center Transformation

With QCT's excellent system designs, the D52BV-2U can accommodate sufficient compute, accelerator, and storage resources by conquering thermal/mechanical challenges due to its high performance processors and dual-width accelerators.

2X
FLOPs Capability

1.5X
Memory Bandwidth

(3) 24xDIMM slots
(2) 205 Watt Processor
(1) dual-width 300W accelerators

- Support dual Intel® Xeon® Scalable Processors of the highest thermal design power (TDP).

- Faster socket interconnect, 1.5x memory bandwidth and 2xFLOPs peak performance capability.

- Up to 112 vCPU per server and 3.9x higher virtualized throughput compared to previous platforms based on the Intel® Xeon® Processor E5 family.

- Support 4 x 300Watt dual-width accelerator cards and 24 x DIMM slots gives the D52BV-2U no limitations when it comes to deploying VDI solutions. Support for up to 128 concurrent users.

- Increase local storage space for rendering applications with support for 8 x 3.5" HDDs.

- Eliminate IO latency to expedite deep learning model training with 4 x U.2 NVMe drives.

- Easily scale out performance with 2 x 100Gb/s Infiniband network options.

| 100 Gb/s Infiniband | PCIex16, LP | CPU1 | CPU0 | PCIex16, LP | 100 Gb/s Infiniband |

GPU4 GPU3 GPU2 GPU1

Quick Deployment and Maintenance

LFF Drive Bay   SFF Drive Bay   PCIe Riser Bracket   Fan Module

- Tool-less HDDs, fans, and PCIe card exchange.

- Optional microSD card to record system health logs without opening the chassis even when powered-off

- Intuitive data center management with QCT System Manager (QSM) via integration with industry standard RESTful API and Intel® Rack Scale Design (RSD).

QuantaGrid D52BV-2U Specifications

Processor	**Processor Type:** Intel® Xeon® Processor Scalable Family **Max. TDP Support:** 205W **Number of Processors:** 2 Processors **Internal Interconnect:** 9.6/10.4 GT/s

Form Factor	2U

Dimensions	W x H x D (inch): 17.3 x 3.4 x 31.4 W x H x D (mm): 440 x 87.5 x 797.9

Chipset	Intel® C621, Intel® C624

Storage	**Default Configuration**: NVMe support, 3.5" Hot-plug, 2.5" Hot-plug

SKU - #1 (8) 3.5"/2.5" hot-plug SATA	**SKU - #2** (8) 3.5"/2.5" hot-plug SATA/SAS	**SKU - #3** (4) 3.5"/2.5" hot-plug SATA + (4) 2.5" hot-plug NVMe

Memory	**Total Slots:** 24 **Capacity:** Up to 3TB (128Gx24) of memory for RDIMM/LRDIMM **Memory Type:** 2666 MHz DDR4 RDIMM **Memory Size:** 64GB, 32GB, 16GB, 8GB RDIMM (Refer to CCL)

Expansion Slot

SKU - #1 **[8x SATA SKU]:** (4) PCIe Gen3 x16 GPU slot (1) PCIe Gen3 x16 OCP 2.0 mezzanine slot or PHY card (2) PCIe Gen3 x 8 LP-MD2 or (1) PCIe Gen3 x16 LP-MD2	**SKU - #2** **[8x SATA/SAS SKU]:** (4) PCIe Gen3 x16 GPU slot (1) PCIe Gen3 x16 OCP 2.0 mezzanine slot or PHY card (1) PCIe Gen3 x 8 LP-MD2 (1) PCIe Gen3 x 8 LP-MD2 SAS mezzanine slot	**SKU - #3** **[4x SATA+ 4x NVMe SKU]:** (4) PCIe Gen3 x16 GPU slot (1) PCIe Gen3 x16 OCP 2.0 mezzanine slot or PHY card	**SKU - #4** **[8x SATA SKU]:** (4) PCIe Gen3 x16 GPU slot (2) PCIe Gen3 x16 LP-MD2

Network Controller	**LOM:** Dedicated (1) GbE management port **Optional NIC:** Quanta Intel® X527 10G SFP+ dual/quad-port OCP PHY mezzanine or Quanta Intel® X557 10G RJ45 dual/quad-port OCP PHY mezzanine or Quanta Intel® I357 1G RJ45 dual/quad-port OCP PHY mezzanine or (more options refer to the CCL)

Front I/O	Power/ID/Reset Buttons Power/ID/Status LEDs (2) USB ports (1) VGA port (Display Priority: First; one device one time)

Storage Controller	**Onboard:** Intel® 621/ 624: 14x SATA 6Gb/s ports SATA RAID 0, 1, 10 **Optional Controller:** Quanta LSI® 3008 12Gb/s SAS mezzanine, RAID 0,1,10 Quanta LSI® 3108 12Gb/s RAID mezzanine, RAID 0, 1, 5, 10; RAID 6 requires additional RAID key

Power Supply	(2) High efficiency hot-plug 1600W/2200W PSU, 80 Plus Platinum (200V-240V), 1+1 redundant depends on configuration

Onboard Storage	(2) SATADOM (option)

Fan	(6) dual rotor fans (11+1 redundant)

Video	Integrated ASPEED AST2500 8MB DDR4 video memory

System Management	Redfish v1.0.2 IPMI v2.0 Compliant, on board "KVM over IP" support QCT System Manager (QSM) v1.8 (Optional)

Rear I/O	(2) USB 3.0 ports (1) VGA port (Display Priority: Second; one device one time) (1) RS232 serial port (1) GbE RJ45 management port (1) ID LED (1) MicroSD slot

Operating Environment	Max.Operating temperature*: 25°C to 35°C (77°F to 95°F) Min. Operating temperature: 5°C (41°F) Non-operating temperature: -40°C to 70°C (-40°F to 158°F) Operating relative humidity: 20% to 85%RH Non-operating relative humidity: 10% to 95%RH *Certain GPU configuration can install SSD only; The performance of the system may be impacted when operating over the maximum temperature limit. Please contact local sales for more detail.

TPM	Yes (With TPM 1.2/ 2.0 option)

Weight (Max. Configuration)	35 KG

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