GIGABYTE™

G191-H44

HPC Server - 1U 4 x PCIe GPU Server

The G191-H44 provides powerful parallel computing capabilities with a dense capacity of 4 x dual slot active or passive-cooled GPU cards.

- Supports 5G network infrastructure
- Up to 4 x NVIDIA Tesla® PCIe GPGPU cards
- NVIDIA NGC Ready server
- 2nd Gen. Intel® Xeon® Scalable Processors
- 6-Channel RDIMM/LRDIMM DDR4, 24 x DIMMs
- Supports Intel® Optane™ DC Persistent Memory
- Dual 1Gb/s LAN ports (Intel® I350-AM2)
- 2 x 2.5" hot-swap + 2 x 2.5" internal fixed HDD/SSD bays
- 2 x low profi0le PCIe Gen3 expansion slots
- 2+0 2000W 80 PLUS Platinum power supply

Intel® Xeon® Scalable Family Processors

GIGABYTE's Intel® Xeon® Scalable Processor family servers are available in dual socket configurations, and are compatible with the full family of different SKUs (Bronze, Silver, Gold and Platinum) that are workload optimized to support different applications, from enterprise IT database, cloud and storage to the most high-demand HPC workloads.
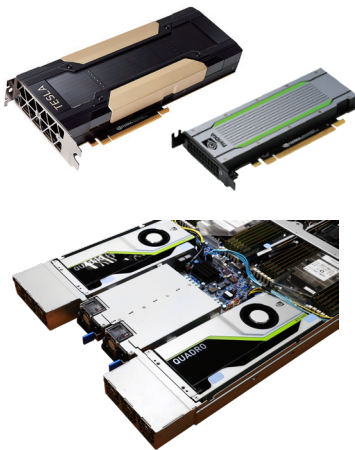
NVIDIA NGC Ready Server

Supercharged with NVIDIA Tesla V100 or T4 accelerator cards, this GIGABYTE server has been fully validated and is ready to be used with NGC. NGC containers can be quickly and easily deployed onto this server to run GPU-accelerated workloads for deep learning, machine learning, and HPC. NGC takes care of all the plumbing so data scientists, developers, and researchers can focus on building solutions, gathering insights, and delivering business value.

NVIDIA RTX™ Server

GIGABYTE servers have been tested and validated across a range of workloads with NVIDIA® Quadro RTX™ GPUs and virtual GPU software to deliver real-time ray tracing and advanced graphics capabilities such as photorealistic rendering, CAE simulation, scientific visualization, AR and VR at the edge and virtual workstation solutions in data center.

GIGABYTE Management Console (AMI MegaRAC SP-X)

This GIGABYTE server product utilizes a AMI MegaRAC SP-X platform for BMC server management, with a feature rich and easy to use browser-based graphical user interface.
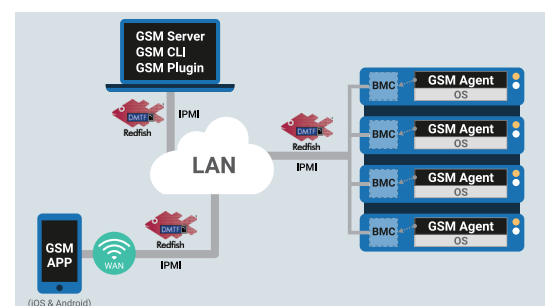
- **RESTful API support** (including the latest DMTF standards of Redfish) allows the administrator to integrate with 3rd party applications for server management
- **HTML5-based iKVM** remote management client included as a standard feature, no additional add-on license required to purchase
- **Detailed FRU information** from SMBIOS
- **Pre-event automatic video recording** feature from 10 to 30 seconds
- **SAS / RAID controller monitoring** feature
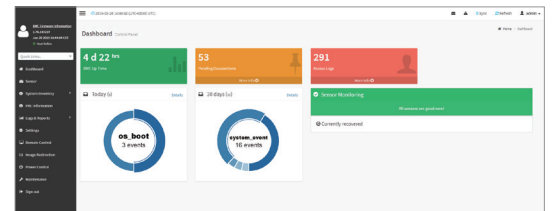
GIGABYTE Server Management (GSM)

GIGABYTE Server Management (GSM) is GIGABYTE's proprietary multiple server remote management software platform, available as a free download from each GIGABYTE server product page. GSM is compatible with either IPMI or Redfish (RESTful API) connection interfaces, and comprises the following sub-programs:

- **GSM Server**
- **GSM CLI**
- **GSM Agent**
- **GSM Mobile**
- **GSM Plugin**

Specification

Dimensions (WxHxD)	1U 430 x 43.5 x 975 mm
Motherboard	MD71-HB1
CPU	2nd Generation Intel® Xeon® Scalable Processors Intel® Xeon® Platinum Processor, Intel® Xeon® Gold Processor, Intel® Xeon® Silver Processor and Intel® Xeon® Bronze Processor CPU TDP up to 205W NOTE: If only 1 CPU is installed, some PCIe or memory functions might be unavailable
Socket	2 x LGA 3647, Socket P
Chipset	Intel® C621 Express Chipset
Memory	24 x DIMM slots DDR4 memory supported only 6-channel memory per processor architecture RDIMM modules up to 64GB supported LRDIMM modules up to 128GB supported Supports Intel® Optane™ DC Persistent Memory (DCPMM) 1.2V modules: 2933(1DPC)/2666/2400/2133 MHz NOTE: 1. 2933MHz for 2nd Generation Intel® Xeon® Scalable Processors only 2. Intel® Optane™ DC Persistent Memory for 2nd Generation Intel® Xeon® Scalable Processors only 3. The maximum number of DCPMM that can be installed is based on a maximum operating (ambient) temperature of 35°C 4. To enquire about installing a greater number of DCPMM, please consult with your GIGABYTE technical or sales representative
LAN	2 x GbE LAN ports (Intel® I350-AM2) 1 x 10/100/1000 management LAN
Video	Integrated in Aspeed® AST2500 2D Video Graphic Adapter with PCIe bus interface 1920x1200@60Hz 32bpp, DDR4 SDRAM
Storage	2 x 2.5" SATA/SAS hot-swappable HDD/SSD bays 2 x 2.5" internal fixed HDD/SSD bays SAS card is required to enable the drive bays
SATA	4 x SATA III 6Gb/s ports
SAS	Depends on SAS add-on Card
RAID	Intel® SATA RAID 0/1/5/10
Expansion Slots	4 x full-length full-height x16 slots (Gen3 x16) for GPU cards 2 x half-length low-profile x16 slots (Gen3 x16)* * PCIe Gen3 x8 shared with 2 x U.2 ports (optional) - System must be operated under 30°C when 4 x Tesla PCIe GPUs are installed with a 173W or higher CPU - System is validated for population with a uniform GPU model - Support is not provided for mixed GPU populations
Internal I/O	2 x CRPS power connectors, 2 x RJ45 LAN connectors, 1 x TPM header, 1 x Front VGA header, 1 x Clear CMOS jumper, 1 x ME update jumper
Front I/O	2 x USB 3.0, 2 x RJ45, 1 x MLAN, 1 x VGA, 1 x Serial, 1 x Power button with LED, 1 x ID button with LED, 1 x Reset button, 1 x NMI button, 1 x System status LED, 1 x HDD activity LED
Rear I/O	-
Backplane I/O	2 x SATA/SAS ports Bandwidth: SATAIII 6Gb/s or SAS 12Gb/s or PCIe Gen3 x4 per port
TPM	1 x TPM header with SPI interface Optional TPM2.0 kit: CTM010
System Fans	10 x 40x40x56mm (25,000rpm) 3 x 40x40x28mm (25,000rpm)
Weight	Net Weight: 15.7 kg Gross Weight: 26.84 kg
Power Supply	2+0 2000W 80 PLUS Platinum power supply AC Input: - 100-120V~/ 12A, 50-60Hz - 180-240V~/ 10A, 50-60Hz DC Input: - 240Vdc/ 10A DC Output: - 1000W@100-120V, +12.2V/ 81.5A, +12Vsb/ 2.5A - 1600W@180-199V, +12.2V/ 131A, +12Vsb/ 2.5A - 1800W@200-220V, +12.2V/ 147.5A, +12Vsb/ 2.5A - 2000W@221-240V, +12V/ 163.5A, +12Vsb/ 2.5A
System Management	Aspeed® AST2500 management controller GIGABYTE Management Console (AMI MegaRAC SP-X) Dashboard JAVA Based Serial Over LAN HTML5 KVM Sensor Monitor (Voltage, RPM, Temperature, CPU Status …etc.) Sensor Reading History Data FRU Information SEL Log in Linear Storage / Circular Storage Policy Hardware Inventory Fan Profile System Firewall Power Consumption Power Control LDAP / AD / RADIUS Support Backup & Restore Configuration Remote BIOS/BMC/CPLD Update Event Log Filter User Management Media Redirection Settings PAM Order Settings SSL Settings SMTP Settings
OS Compatibility	For Cascade Lake processors: Windows Server 2012 R2 with Update Windows Server 2016 Windows Server 2019 Red Hat Enterprise Linux 7.6 (x64) or later Red Hat Enterprise Linux 8.0 (x64) or later SUSE Linux Enterprise Server 12.3 (x64) or later SUSE Linux Enterprise Server 15 (x64) or later Ubuntu 18.04 LTS (x64) or later VMware ESXi 6.0 Update3 or later VMware ESXi 6.5 Update2 or later VMware ESXi 6.7 Update1 or later Citrix Xenserver 7.1.0 CU2 or later Citrix Xenserver 7.5.0 or later Citrix Hypervisor 8.0.0 or later
Operating Properties	Operating temperature: 10°C to 35°C Operating humidity: 8%-80% (non-condensing) Non-operating temperature: -40°C to 60°C Non-operating humidity: 20%-95% (non-condensing)
Packaging Dimensions	1145 x 195 x 748 mm
Packaging Content	1 x G191-H44 2 x CPU heatsink 1 x Rail kit
Part Numbers	Barebone package: 6NG191H44MR-00-200 Spare parts list: - Rail kit: 25HB2-NJ2101-N1R - CPU heatsink: 25ST1-253100-F2R - Back plane board: 9CBPG021NR-00 - Front IO board: 9CFPG013NR-00 - Fan module (40x28): 25ST2-442827-D0R - Fan module (40x56): 25ST2-405620-D0R - Power supply: 25EP0-220009-L0S - NVMe cable for U.2 support: 25CFM-300801-A4R (as an option)

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