

H281-PE0

High Density Server - Intel DP 2U 4 Nodes



Features

- Supports 5G network infrastructure
- 2U - 4 nodes with front access to the node trays
- 2nd Gen. Intel® Xeon® Scalable Processors
- 6-Channel RDIMM/LRDIMM DDR4, 96 x DIMMs
- Supports Intel® Optane™ DC Persistent Memory
- 8 x 10Gb/s BASE-T LAN ports (Intel® X550-BT2)
- 1 x CMC global management port
- 8 x 2.5" SAS/SATA hot-swappable HDD/SSD bays
- Ultra-Fast M.2 with PCIe Gen3 x4 interface
- 4 x front side and 8 x rear side low profile PCIe Gen3 x16 expansion slots
- 4 x OCP Gen3 mezzanine slots
- Aspeed® AST2500 remote management controller
- 2200W 80 PLUS Platinum redundant PSU

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.



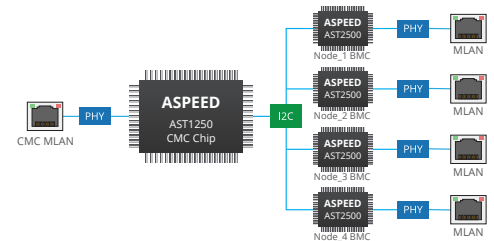
Intel® Optane™ DC Persistent Memory Ready

GIGABYTE's 2nd Gen. Intel® Xeon® Scalable family servers come ready to support Intel Optane DC Persistent Memory, a revolutionary new product that re-defines traditional memory & storage architectures by enabling a large persistent memory tier between DRAM and SSDs, that's higher capacity than DRAM and faster than SSDs, enabling the user to bring more data closer to the CPU for faster time for insight.



CMC for Chassis Management & Multi-Node Monitoring

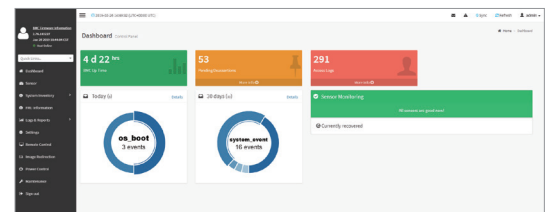
GIGABYTE's H-Series Servers feature an Aspeed CMC (Central Management Controller) for chassis-level management and node-level monitoring (by connecting internally to Aspeed BMCs integrated on each node). This results only in one MLAN connection required to perform monitoring of all four nodes*, resulting in less ToR (Top of Rack) cabling and switch connections.



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.

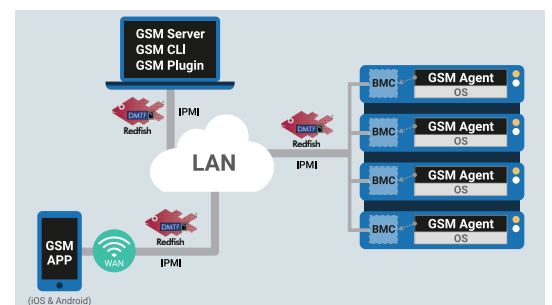
- **RESTful API support** (including the latest DMTF standards of Redfish) allows the administrator to integrate with 3rd party applications for server management
- **HTML5-based iKVM** remote management client included as a standard feature, no additional add-on license required to purchase
- **Detailed 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)	2U 4 Nodes - Front access 447 x 87 x 902.3	Power Supply	2 x 80 PLUS Platinum 2200W redundant PSUs AC Input: - 100-127V~/ 14A, 47-63Hz - 200-240V~/ 12.6A, 47-63Hz DC Output: - Max 1200W/ 100-127V~ +12.12V/ 95.6A +12Vsb/ 3.5A - Max 2200W/ 200-240V +12.12V/ 178.1A +12Vsb/ 3.5A NOTE: * The system power supply requires C19 type power cord * 2000W 80 PLUS Titanium PSU as an option
Motherboard	MH81-LM0	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
CPU	2nd Gen. Intel® Xeon® Scalable and 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 165W NOTE: If only 1 CPU is installed, some PCIe or memory functions might be unavailable	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
Socket	Per node: 2 x LGA 3647 / Total: 8 x LGA 3647 Socket P	Weight	L6 system: 31.5kg
Chipset	Intel® C621 Express Chipset	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)
Memory	Per node: 24 x DIMM slots / Total: 96 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	Packaging Content	1 x H281-PE0, 8 x CPU heatsinks, 1 x Rail kit, 8 x Non-Fabric CPU carrier
LAN	Per node: 2 x 10Gb/s BASE-T LAN ports (Intel® X550-BT2) 1 x Dedicated management port Total: 8 x 10Gb/s BASE-T LAN ports (Intel® X550-BT2) 4 x Dedicated management ports 1 x 10/100/1000 *CMC global management port *CMC: Chassis Management Controller, to monitor all status of computing nodes Omni-Path is supported in option	Part Numbers	Barebone package: 6NH281PE0MR-00 - Motherboard: 9MH81LM0NR-00 - System transfer board: 9CNBH07NR-00 - HDD back plane board: 9CBPH020NR-00 - CMC board: 9CMBH20NR-00 - Riser card board: 9CRSH012NR-00 - Tool-less rail kit: 25HB2-A86102-K0R - CPU heatsink 1: 25ST1-253206-C1R - CPU heatsink 2: 25ST1-253207-C1R - 7mm HDD/SSD tray: 25EK3-H28100-U0R - Fan module: 25ST2-663821-S0S - Power supply: 25EPO-222001-D0S - C19 type power cord 125V/15A (US): 25CP1-018000-Q0R (in option) - C19 type power cord 250V/16A (EU): 25CP3-01830H-Q0R (in option) - C19 type power cord 250V/15A (US): 25CP1-018300-Q0R (in option)
Video	Integrated in Aspeed® AST2500 2D Video Graphic Adapter with PCIe bus interface 1920x1200@60Hz 32bpp, DDR4 SDRAM Management chip in CMC board: Integrated in Aspeed® AST1250	System Fans	10 x 60x60x38mm (21,700rpm)
Storage	Per node: 2 x 2.5" 7mm SATA/SAS hot-swap HDD/SSD bays Total: 8 x 2.5" 7mm SATA/SAS hot-swap HDD/SSD bays SAS card is required for SAS devices support	TPM	1 x TPM header with SPI interface Optional TPM2.0 kit: CTM010
RAID	Intel® SATA RAID 0/1	Backplane I/O	Per node: 2 x SAS/SATA ports
Expansion Slots	Per node: 3 x Half-length low-profile slot with PCIe x16 (Gen3 x16) 1 x OCP mezzanine slot with PCIe Gen3 x16 1 x M.2 slot: M-key, PCIe Gen3 x4, supports NGFF-2280 cards Total: 12 x Half-length low-profile slot with PCIe x16 (Gen3 x16) 4 x OCP mezzanine slot with PCIe Gen3 x16 4 x M.2 slot: M-key, PCIe Gen3 x4, supports NGFF-2280 cards	Rear I/O	CMC module: 1 x MLAN, 1 x MLAN Cascade Port, 1 x Status LED, 1 x Power on LED Expansion module: 1 x Power on LED
Internal I/O	Per node: 4 x SlimSAS connectors, 1 x SATA III 6Gb/s port, 1 x TPM header, 1 x VROC connector, 1 x PMBUS header, 1 x IPMB connector, 1 x Clear CMOS jumper	Front I/O	Per node: 2 x USB 3.0, 1 x VGA, 2 x RJ45, 1 x MLAN, 1 x Power button with LED, 1 x ID button with LED, 1 x Status LED, 1 x NMI button, 1 x Reset button Total: 8 x USB 3.0, 4 x VGA, 8 x RJ45, 4 x MLAN, 4 x Power button with LED, 4 x ID button with LED, 4 x Status LED, 4 x NMI button, 4 x Reset button

* All specifications are subject to change without notice. Please visit our website for the latest information.

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