

T025-Z12

ORv3 Compute Node - 20U 2Nodes



Features

- AMD EPYC™ 9004 Series processors
- AMD EPYC™ 9004 Series processors with AMD 3D V-Cache
- Single processor, 5nm technology
- 12-Channel RDIMM DDR5, 12 x DIMMs
- Dual ROM Architecture
- 1 x Dedicated management port
- 4 x E1.S NVMe hot-swappable bays
- 1 x M.2 slot with PCIe Gen4 x4 interface (optional)
- 2 x FHFL PCIe Gen5 x16 slots for GPUs
- 1 x LP PCIe Gen5 x16 slot on bottom side
- 1 x OCP 3.0 Gen5 x16 slot on bottom side
- 48V DC Bus Bar power solution

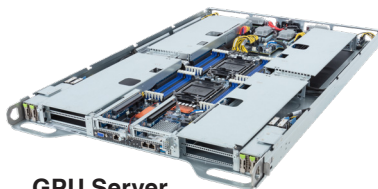
GIGABYTE OCP ORV3 Compliant Solutions

GIGABYTE is an active member of the OCP, regularly attending the OCP's annual summits and continuously designing and releasing new compute, storage and GPU server hardware based on the OCP Open Rack Standard specifications and providing the best performing mezzanine cards for your OCP solution. GIGABYTE's latest OCP server product line is based on OCP Open Rack V3 specification. The products are designed for a 21" OCP rack and feature a separate PSU system, with power supplied to each server node by a bus-bar system running along the rear of the rack.

Compute Node



GPU Server



JBOD



OCP 21" Rack



GIGABYTE OCP ORV3 Compliant Solutions Advantages

Efficient Rack Density

- Optimal design (20U 2nodes / 20U 3nodes) - balanced consideration between density and power consumption.

Thermal Optimization

- Best thermal consideration to develop Rack and Nodes based on Cold Aisle/Hot Aisle concept.
- Reduce power consumption of cooling.

Greater Power Efficiency

- Low PUE helps reduce data center operating expense.
- Central power shelf design to enhance power efficiency and optimize power consumption.

Easy Maintenance

- Easier maintenance in front cold aisle instead of hot aisle.
- Tool-less design for easy replacement and repair.
- Less PSU quantities in whole rack to minimize maintenance efforts.

Higher MTBF

- Centralizing power supplies and removing unnecessary components to enhance MTBF (Mean Time Between Failures).
- Avoids system downtime caused by component failure and minimizes maintenance efforts.

The Future of Open Source Ecosystem

The Open Compute Project (OCP) is a collaborative community focused on redesigning hardware technology to efficiently support the growing demands on compute infrastructure. In 2011, the OCP Foundation was initiated with a mission to apply the benefits of open source and open collaboration to hardware and rapidly increase the pace of innovation. Its collaboration model is now being widely applied in fields like data centers, telecom industry, and edge infrastructure.



Flexible Node Configuration

GIGABYTE's OCP Open Rack Version 3 compliant solutions maintain the cost-efficient designs created in version 2, yet these new solutions provide even more power to each node. GIGABYTE TO23-BT0, a 2OU node tray, supports three nodes and up to six CPUs in a single tray. And a similar node tray, TO25-BT0, is designed for more PCIe expansion slots with each tray supporting up to four dual-slot GPUs or eight full-height full-length single slot cards for growing HPC and AI needs in data centers.



Specification

Dimensions	2OU 2-Node (W262.7 x H90 x D740 mm)	Front I/O	2 x USB 3.2 Gen1 1 x VGA 1 x MLAN 1 x ID LED 1 x ID button with LED 1 x Power button with LED 1 x System status LED
Open Rack Version	ORv3	TPM	1 x TPM header with SPI interface Optional TPM2.0 kit: CTM010
Motherboard	MZ13-HD0	System Management	Aspeed® AST2600 management controller GIGABYTE Management Console
CPU	AMD EPYC™ 9004 Series processors AMD EPYC™ 9004 Series processors with AMD 3D V-Cache™ Technology Single processor, 5nm technology cTDP up to 240W at ambient 35°C	Packaging Content	1 x TO25-Z12 1 x CPU heatsink 2 x GPU power cables
Socket	1 x LGA 6096, Socket SP5	OS Compatibility	Windows Server 2019 / 2022 RHEL 8.6 / 8.7 / 8.8 / 9.0 / 9.1 / 9.2 (x64) SLES 15 SP4 / 15 SP5 (x64) Ubuntu 20.04.6 / 22.04 / 22.04.1 / 22.04.2 LTS (x64) VMware ESXi 7.0 Update 3i / 8.0 Citrix Hypervisor 8.2 LTSR CU1
Chipset	System on Chip	Power Supply	Supports up to 1600W
Memory	12-Channel DDR5 memory, 12 x DIMM slots RDIMM modules up to 96GB supported 3DS RDIMM modules up to 256GB supported Memory speed: Up to 4800 MHz	No. of Bus Bars	1 x 48V Bus Bar
LAN	1 x 10/100/1000 management LAN	Part Numbers	Barebone package: 6NTO25Z12DR000AA01*
Storage	12 x 9.5mm E1.S NVMe hot-swappable bays		
Expansion Slots	2 x PCIe Gen5 x16 FHFL slots for GPUs 1 x LP PCIe Gen5 x16 slot 1 x OCP 3.0 slot with PCIe Gen5 x16 bandwidth Optional 1 x M.2 slot: PCIe Gen4 x4, 2280/22110		



Learn more at <https://www.gigacomputing.com>

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