

# T025-S12-AA01

ORv3 Compute Node - 20U 2-Node UP



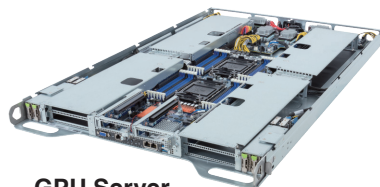
## Features

- Supports 1 x Dual slot Gen5 GPU
- Single 5th/4th Gen Intel® Xeon® Scalable Processors
- 8-Channel DDR5 RDIMM, 8 x DIMMs
- Dual ROM Architecture
- 2 x E1.S NVMe hot-swappable bays
- 1 x M.2 slot with SATA interface
- 1 x FHFL PCIe Gen5 x16 slot for GPUs
- 1 x FHFL PCIe Gen5 x16 slot
- 2 x FHHL PCIe Gen5 x16 slots
- 1 x LP PCIe Gen5 x8 slot
- 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

<b>Dimensions</b>	2OU 2-Node (W262.7 x H90 x D740 mm)	<b>Front I/O</b>	USB 3.2 Gen1 (Type-C) 1 x Mini-DP 1 x MLAN
<b>Open Rack Version</b>	ORv3	<b>TPM</b>	1 x TPM header with SPI interface Optional TPM2.0 kit: CTM010
<b>Motherboard</b>	MS13-HD0	<b>System Management</b>	ASPEED AST2600 management controller GIGABYTE Management Console web interface
<b>CPU</b>	5th Generation Intel® Xeon® Scalable Processors 4th Generation Intel® Xeon® Scalable Processors Single processor, TDP up to 250W	<b>Packaging Content</b>	1 x TO25-S12-AA01, 1 x CPU heatsink, 3 x Carriers, 1 x GPU power cable (12VHPWR, 350mm)
<b>Socket</b>	1 x LGA 4677 (Socket E)	<b>OS Compatibility</b>	Windows Server Red Hat Enterprise Linux Server SUSE Linux Enterprise Server Ubuntu Server VMware ESXi Citrix Hypervisor
<b>Chipset</b>	Intel® C741 Chipset	<b>Power Supply</b>	Supports up to 1600W
<b>Memory</b>	8-Channel DDR5 memory, 8 x DIMM slots RDIMM modules up to 96GB supported 3DS RDIMM modules up to 256GB supported 5th Gen Intel® Xeon®: Up to 5600 MT/s 4th Gen Intel® Xeon®: Up to 4800 MT/s	<b>No. of Bus Bars</b>	1 x 48V Bus Bar
<b>LAN</b>	1 x 10/100/1000 management LAN	<b>Part Numbers</b>	Barebone package (5th/4th Gen): 6NTO25S12DR000AB01* Barebone package (4th Gen): 6NTO25S12DR000AA01* - Motherboard: 9MS13HD0UR-000 - CPU heatsink: 25ST1-453207-C1R - GPU power cable: 25CRI-350006-Y4R
<b>Storage</b>	2 x 9.5mm E1.S NVMe hot-swappable bays 1 x M.2 slot: SATA, supports 2242/2260/2280/22110		
<b>Expansion Slots</b>	1 x FHFL PCIe Gen5 x16 slot for GPUs 1 x FHFL PCIe Gen5 x16 slot 2 x FHHL PCIe Gen5 x16 slots 1 x LP PCIe Gen5 x8 slot		



Learn more at <https://www.GIGABYTE.com/enterprise>

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