Inventec
Inventec Data Center Solutions
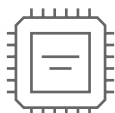
Rhyperior

Powerful 4U GPU Accelerator System

Highlights

- **The optimal combination of GPU and CPU**
- **Optional cooling system**
- **Saving the cost of maintenance**
- **Efficient management system controlled and monitored remotely**

Rhyperior is a powerful 4U GPU accelerator system based on NVIDIA A100 Tensor Core GPU and Intel Xeon 3rd Gen (Whitley platform). The optimal combination of GPU and CPU can fully support the demands of AI, Gaming, Medical, and Machine Learning. Also, Rhyperior equips NVIDIA NVSwitch to enhance performance dramatically, and its powerful process performance can be an effective tool for the modern workload.

The Highest Specification in a Generation

By adopting solutions of leaders in the field which are Nvidia and Intel, Inventec presents a high standard product to our customers. Through the Inventec-designed PCIe switchboard, Rhyperior combinesNVIDIA A100 Tensor Core GPU and Intel Xeon 3rd Gen (Whitley platform) perfectly, also it can support more PCIe devices, such as network cards and NVME SSDs. Furthermore, to enhance the performance, Rhyperior adopts NVIDIA NVSwitch for communication of 8 GPUs and reserves 6 NVLINK ports to expand the system.
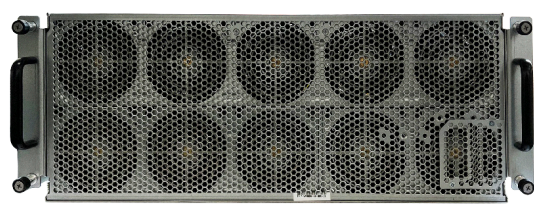
Flexible Cooling System

The cooling system is an important function in a server, especially for thermal design power (TDP) above 350W. The whole system will shut down if the cooling system fails to protect internal components. Therefore, Rhyperior provides 2 cooling solutions to solve this problem; forced air, and liquid cooling, based on customers' demands.

| GPGPU | Efficient Management System | Hot-Pluggable Fans | Highly Flexible |

Front View

Rear View

Easy for Maintenance

To reduce maintenance costs, Rhyperior improves assembly by modulating each part for simple disassembly and fix saving time and cost.

Management and Monitoring

The current pandemic has shown is that managing and monitoring the system remotely is a necessary requirement. Rhyperior provides an efficient system's health status monitoring through the baseband management controller.

Rhyperior |

Form Factor	4U
Chassis Dimension	W x H x D: 448mm x 175mm x 920mm
Power Bank/Shelf	4x 3000W/3600W Redundant Power Supplies Support AC to DC and DC to DC
Fan	10x 8080 Fan
NVMe	Support 8x PCIe U.2 NVMe SSD
HGX-A100 Baseboard	• A100 product SKU: • Up to 4000W • 8x SXM4 modules • NVLink interface (between two baseboards) • Reserved 4x Tx/Rx pairs per NVLink interface, 1x Tx/Rx for physical link • 8x PCI Express 4.0 x16 for SXM4 • System management interface: 2x I2C • Baseboard weight: 21.1 kg includes all heat sinks and handles
PCIe Switchboard	• Design by Inventec • PCI Express Gen 4 Switch • Expansion slot: 8x PCIe Gen4 x16 support • Four groups with 4x external Mini-SAS HD for host • Dedicated Gigabit MGMT with RJ45 • Bi-LED indicators for 8x GPU (SXM4) • Power on button with Bi-LED • Reset button connect to CPLD for system reset • UID Button with blue LED • System Healthy Bi-LED (Red vs. Green) • Debug COM with RJ45 type port
Server Management	• Aspeed AST2520 Integrated Remote Management Processor • 2Gb DDR4 SDRAM • IPMI 2.0 compliant • Support 1 management LAN port, 100BASE-T/1000BASE-T compliant • Optional Serial port (Baud rate: 115200 bps)

Inventec

Inventec Data Center Solutions

Rhyperior |

Positioning	CPU System Features (Host Node)
Chassis Dimension	W x H x D: 447.6mm (top)/438mm(bottom) x 87mm x 780mm
Processor	Dual Processors, Intel 3rd Gen Xeon Scalable Processors • Intel Socket P+ LGA 4189 • Up to 48 Cores (Cooper lake MCP) • Up to 300W • Up to 4 UPI at 11.2 GT/s • Up to PCIe Gen 4 64 Lanes • Support two (or one) Processors
Memory	32x DDR4 DIMM slots • 8 Channel Per CPU, Total 16 Channel • RDIMM LRDIMM,3DS DIMM, BPS support
Chipset	PCH: Intel C620 Lewisburg (LBG-R)
Storage	NVME: • NVME SSD (PCIe gen4) support M.2: • M.2 SSD support SATA from PCH
Expansion Slot	Standard PCIe slots 4x PCIe Gen4 x16 (Half-Height Half-Length) (Retimer card)
Networking	• OCP3.0 NIC card support • 1000M manage networking from BMC(MAC1) • NCSI support
Server Management	Aspeed AST2500 BMC • 4Gb DDR4 SDRAM • IPMI 2.0 compliant. • Support 1 management LAN port, 10BASE-T/100BASE-T/1000BASE-T compliant • VGA, Max display resolution: 1920x1200@60Hz 32bpp
Rear I/O	• UID BTN/LED • System Health LED • 2x USB3.0 x2 • 1x VGA Port • 1x 1000M RJ45 NIC Port
Front I/O	Left ear: • 1x VGA port Right ear: • 1x UID BTN with LED (BMC Reset share this Button) • 1x PWR BTN with LED • 1x Reset BTN • 2x USB 3.0 Port • 1x SYS health LED
Power Supply	2x 800W or 2x 1300W PSUs at rear, Support 1+1 redundancy
Fan	6x6056 FAN at rear, Support N+1 redundancy

About Inventec Data Center Solutions (Inventec EBG)

Inventec Data Center Solutions (Inventec EBG) was established in 1998 and has been focusing on the design and manufacturing of server systems in Inventec Corporation. Over decades, Inventec EBG has been the key server system supplier of the global branding clients.

Inventec Corporation (TAO)

No.88, Dazhi Rd., Taoyuan Dist., Taoyuan City 33068, Taiwan
Tel: 886-3-390-0000   Fax: 886-3-376-2370
Email: TAOproductsupport@inventec.com

Learn more at **https://ebg.inventec.com/**