


High scalable GPU supercomputer server S747Q4-A

Product Overview

S747Q4-A is a high scalable supercomputing server newly launched by DCN. The space of 4U can expand 8 pieces of professional GPU computing cards and 24 2.5-inch disks, and provide a single computer with the computing power of trillions of times per second. And adopting the latest AMD epyc™ 7000 series which is based on the latest SOC architecture, provides a new level of cost performance, excellent core density, superior memory bandwidth and unparalleled I/O performance. Up to 128 processing cores and 256 threads are available on a single machine, which is 14% higher than the x86 processor of the same industry. It has "monster level" computing processing capacity, which fundamentally reduces the TCO of the data center. It is designed to speed up scientific and technological computing with high performance, high scalable, high density. It is GPU supercomputing server with equal emphasis on computing and energy consumption.

Application scenarios:

IPFS, AI/AR/VR application, deep learning, face recognition, scientific research field, industrial manufacturing, defense and military industry, financial modeling, medical imaging, virtualization application.

| Appearance | Description |
|---|---|
|  <p data-bbox="108 1823 687 1890">High scalable GPU supercomputer server S747Q4-A</p> | <ul data-bbox="724 1599 1437 1832" style="list-style-type: none"> ● Based on the new AMD EPYC™ 7002 series architecture. ● Single processor up to 64 cores, 128 threads, three-level cache up to 64MB ● The maximum memory capacity can support 8tb, with advanced memory fault tolerance function ● Easy to control and manage the system accurately |

Key Features and Highlights

Advanced architecture

The new architecture of AMD EPYC™ 7002 series breaks through AMD's traditional single core and single thread technology, and adopts advanced hyper thread technology. A single processor has 64 cores, 128 threads, and a three-level cache of 64MB. The memory channel is upgraded to 8, the maximum frequency is 3200 MHz, and the maximum memory capacity is 4 times that of the previous generation; New generation AMD EPYC™ series chipsets are directly embedded in the processor, with more powerful expansion performance, it can expand multiple high-speed interfaces such as sata3.0, USB3.0, m.2, nvme, etc.

Collaborative computing acceleration

It can support up to 24 SATA / SAS (optional) hot swap hard disks, and can expand 6 3.5-inch hot swap hard disks (optional); The maximum memory capacity can support 8TB, with advanced memory fault tolerance function; Two Gigabit data network ports on board, with the characteristics of load balancing, fault recovery and sideband support, can effectively reduce network delay; Support 2 + 2 security redundancy power supply mode, provide higher security guarantee for the server operation

Large scale parallel computing

It has advanced memory fault-tolerant function, multi disk raid backup function and multi NIC redundancy technology. Through the integrated remote management module, it can provide remote management, remote diagnosis and maintenance. It has a number of fault indication functions, which can easily achieve accurate control and management of the system, effectively reduce the risk of user downtime and ensure the reliability of the server; Support AMD virtualization™ (AMD-V 2.0™) Technology, provides higher security for virtual and cloud environments.

Specifications

| | |
|-----------------------------|---|
| Model | S747Q4-A |
| CPU | AMD EPYC™ 7002 series, maximum support 2 Maximum support TDP, please consult DCN technical support |
| Chipset | System on chip |
| System Bus | PCI-E 3.0 x128 |
| Memory properties | 32 DIMM slots, support 3200/2933/2666 /2400 MHz ECC DDR4 memory, up to 8TB RECC memory |
| Hard disk | 24* 2.5" SATA hot-swap hard disks, SAS hard disks are optional 4 U.2 NVME SSDs are optional; Support expansion of 6 3.5-inch hot swap SATA / SAS hard disks |
| Integrated chip | 1.Integrated display chip;2.Integrated 1 1000BASE-T management network port;3.Integrated 2 gigabit network ports;4.Integrated RAID 0,1,10 functions (only for Windows), optional hard raid function |
| Expansion slot | 9* PCI-E 4.0 x16(support GPU cards) Optional support for 10 * PCI-E 4.0 x16 (for non-u.2 NVME SSD) |
| GPU | Support 8 GPU cards Support Nvidia V100/P100/T4/M40/M60/M10/RTX 3080/3090 |
| Peripheral Interface | 1*VGA,2*USB3.0,2*RJ45 network ports, 1*dedicated remote management interface |
| CD drive | USB interface external DVD-RW is optional |
| Power Supply | Standard output power 2000W (2+2) titanium gold (96%), AC power input 100-240V, 50-60Hz |
| Working environment | Operating temperature 10 °C ~ 35 °C, relative humidity 20% ~ 80% (non condensing) Non operating temperature - 40 °C ~ 60 °C, relative humidity 5% ~ 95% (non condensing) |
| Operating system | Microsoft Windows 8.1/10 & Server 2012R2/2016R2 x86-64 RedHat 6.9 /7.3 x86-64, CentOS 6.9 /7.3 x86-64, SUSE SLES 11 SP4/12 SP2 x86-64 Vmware ESXi 6.5, XenServer 7.1 |
| Dimensions | 4U rack,737D * 437 W * 178 H (mm) |