


## High performance GPU supercomputer server S721Q3

### Product Overview

S721Q3 is a high-performance supercomputing server newly launched by DCN. The space of 2U can accommodate two professional GPU computing cards, providing a single computing power of trillions of times per second. And using the latest generation of Intel® Xeon Cascade Lake series processors, improves the processor frequency and Turbo boost frequency compared with skylake series processors, and further improves the overall performance. It can be directly upgraded to be compatible with two 4-socket or 8-socket processors, and has up to 56 processing cores. It is designed to speed up scientific and technological computing with high performance price ratio, high density, low cost. It is GPU supercomputing server with equal emphasis on computing and energy consumption.

### Application scenarios:

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

Appearance	Description
 <p data-bbox="145 1861 671 1933">High performance GPU supercomputer server S721Q3</p>	<ul data-bbox="743 1697 1398 1895" style="list-style-type: none"><li>● Based on the new Intel® Xeon series architecture.</li><li>● Single processor has 28 cores and 56 threads</li><li>● Cooperation of Intel's latest Xeon processor core and NVIDIA Tesla accelerated computing technology</li><li>● Powerful intelligent video analysis</li></ul>

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## **Key Features and Highlights**

### **Advanced architecture**

Based on the new Intel® Xeon series architecture, single processor up to 28 cores, 56 threads, channel between the two processors using a new UPI interconnection link, frequency up to 10.4GT/s. The memory channels are upgraded to 6, the maximum frequency is 2933mhz, maximum memory capacity increased by 50% over the last generation, the 2U chassis supports two professional GPU computing cards, and the optimized system cooling scheme not only ensures the reliability of the whole machine operation, but also effectively reduces the noise of the machine operation, providing users with a high-performance and stable supercomputing platform.

### **Collaborative computing acceleration**

With the cooperation of Intel's latest Xeon processor core and NVIDIA Tesla accelerated computing technology, CPU and GPU perform their respective duties. CPU is mainly responsible for serial computing such as logic selection and jump judgment. GPU can execute thousands of threads at the same time. It is full-time computing intensive and highly parallel, and can handle more information flows, It makes the reasonable allocation of computing resources, the computing power is fully released, and the computing performance is improved from several times to hundreds of times.

### **Large scale parallel computing**

AI is changing the way we capture, inspect and analyze data. Powerful intelligent video analysis can transform massive pixels into public security and intelligent city solutions, creating a safer and more intelligent city. S721Q3 supports the latest NVIDIA® Tesla V100, which has up to 5120 computing cores, and the peak single precision floating-point speed is up to 10.6 TF floating-point computing per second. Through the collaborative scalable architecture, it can flexibly increase the number of GPUs according to the computing requirements, and achieve ultra-high computing performance.

## Specifications

<b>Model</b>	<b>S721Q3</b>
<b>CPU</b>	Intel ® Xeon ® Scalable processors (skylake and Cascade Lake CPUs) Maximum support 2, maximum support TDP 205W
<b>Chipset</b>	Intel® C621 Chipset
<b>System Bus</b>	UPI up to 10.4 GT/s
<b>Memory properties</b>	24 DIMM slots, support 2933/2666 /2400/2133 MHz ECC DDR4 memory, up to 9TB RECC memory
<b>Hard disk</b>	8*3.5 "or 2.5" SATA / SAS hot-swap hard disks, two rear 2.5-inch hot-swap hard disks are optional
<b>Integrated chip</b>	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
<b>Expansion slot</b>	2* PCI-E 3.0 x16、 4* PCI-E 3.0 x8
<b>GPU</b>	Up to 2 full height dual width GPU cards
<b>Peripheral Interface</b>	Front: 1*VGA,2*USB3.0,LCDMiniUSB Rear: 1*VGA,2*USB3.0, 2*RJ45 network ports, 1*dedicated remote management interface
<b>CD drive</b>	SATA interface ultra thin DVD-RW is optional
<b>Power Supply</b>	Standard output power 1300W (1 + 1) platinum redundant power supply
<b>Working environment</b>	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)
<b>Operating system</b>	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
<b>Dimensions</b>	2U rack,808D * 447 W * 87 H (mm)