Inspur i48 Server is a high-density server based on modular design concepts that meets ODCC multi-node server standards. It allows the deployment of 8* dual-path compute nodes within a standard 4U rack while providing various configuration options for multiple nodes. Mixed deployment is supported as a common chassis can be used by different nodes, giving the i48 the qualities of high density, high efficiency, high reliability, and high performance. The multiple nodes are well-suited for cloud computing, high-performance computing and clustering, and large-scale storage applications. Therefore, the i48 is specially optimized for integrated solutions.

### Product Features

#### Suitable for large-scale high-density deployments

8*NS5488M5 compute nodes can be deployed within a 4U rack height. This deployment density is twice as high of that of other rackmount servers. The i48 supports the large-scale computing requirements of high-density data centers. It also enables a uniform deployment of 4* compute and storage nodes within a 4U space, which makes it suitable for virtualization and hyper-convergence applications. In addition, it offers a high storage deployment that includes 2* nodes and 72* hard drives within a 4U space. This deployment meets high-density and large-scale storage requirements.

#### Optimized port design

The excellent scalability of the i48 gives it an advantage over other high-density servers. For instance, it supports up to 6* PCIe devices within a 4U8N compute node configuration. The i48 also provides a NUMA-Balanced hardware design for PCIe expansion devices and NVMe devices, which can improve performance by 20% or more. The front-accessible I/O expansion slots further facilitates regular maintenance.

#### Effortless cluster implementation and maintenance

The multi-node and modular design of the i48 allows it to easily achieve the integration of multiple nodes, which can be applied to enable rapid deliveries and rack-mount implementation. The i48 supports CMC redundancy management modules and realizes a unified management of all nodes within the chassis. A 1G network convergence module is configurable to realize a common external network for the entire chassis, thus allowing for the easy management of server clusters.

#### Ideal cooling solution

Inspur i48 Server has an independent cooling channel for the centralized cooling of server hot spots such as CPU storage, power, and external PCIe devices. The cooling system prevents temperature flow between hot spots. The i48 is able to realize the isolation of hot and cold channels for external PCIe devices, which greatly increases cooling efficiency. The server has a backflow prevention design for the system’s fans, so as to prevent high-temperature backflows in the channels.
## Product Specification

<table>
<thead>
<tr>
<th>i48 chassis</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>Specifications</strong></td>
<td>Standard 4U chassis supports 8+ compute nodes, 4+ balance nodes, 2+ storage nodes, or a dual-path 72+ hard drive storage</td>
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<tr>
<td><strong>Fan</strong></td>
<td>5+ rear fan modules with N+1 redundancy, tool-free disassembly, and backflow prevention</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>2+2/3+1 redundancy, 1300W/1600W/2000W platinum power supply 100V-240V AV, 240V HVDC</td>
</tr>
<tr>
<td><strong>System Management</strong></td>
<td>Internal BMC Aspeed2500 chip per node. The entire chassis supports CMC management module, CMC 1+1 redundancy, and one IPMI interface</td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>448mm (W) x 175.5mm (H) x 895.5mm (D)</td>
</tr>
</tbody>
</table>
| **Weight** | Chassis weight: 30 kg  
Gross weight  
78 Kg: server and 8 NS5488M5 nodes  
98 Kg: server and 4 NS5484M5 nodes  
120 Kg: server and 2 NS5482M5 nodes  
120 Kg: server and 1 NS5482M5 nodes + 1 NS5482JD storage enclosure |
| **Operating Temperature** | Storage temperature (packed): -40°C ~ 70°C; Storage temperature (unpacked): -40°C ~ 55°C; Operating temperature: 5°C ~ 40°C.  
Operating temperatures may vary due to configurations. Please contact our technical support for more information. |

### i48 nodes

| Processor | 2× Intel® Xeon® scalable processors 2 UPI interconnected chains with maximum speed of 10.4 GT/s per chain, maximum power of 165 W |
| Chipset | Intel C624/C621 |
| Memory | 16× DDR4 DIMM slots, supports RDIMM/LRDIMM, up to 2933 MT/s  
Up to 4× Intel® Optane™ DC persistent memory |
| Storage Controller | SATA controller on motherboard, supports RAID 0/1/5/10  
3108 RAID card supports RAID 0/1/10/1E/5/6/10/50 |
| Ports | Each node has a SUV connector that expands 2× USB 2.0 ports and 1× USB3.0 port, 1× VGA port, and 1× DB9 serial port |
| Network Port | Each node supports 1× OCP card/PHY card and standard PCIe network cards |

### Storage&I/O Scalable slot

| NS5488M5 (compute node) | 3× front I/O options  
(1) 4× SATA/SAS/NVMe 2.5" drives  
(2) 2× SATA/SAS/SAS/SSD 2.5" drives + 2x PCIe x16 HHLH + 1× PCIe x8 HHLH |
| NS5484M5 (balance node) | 3× front I/O options  
(1) 1× PCIe x16 HHHL + 2× 7mm SAS/SATA/NVMe SSD+12× SATA/SAS 3.5" drives  
(2) 1× PCIe x16 HHHL+1× PCIe x8 HHHL + 12× SATA/SAS 3.5" drives  
(3) 2× SATA/SAS/NVMe 2.5" drives+12× SATA/SAS 3.5" drives |
| NS5482M5 (storage node) | 3× Front I/O options:  
(1) 1× PCIe x16 HHHL + 2× 7mm SAS/SATA/NVMe SSD+36× SATA/SAS 3.5" drives  
(2) 1× PCIe x16 HHHL+1× PCIe x8 HHHL + 36× SATA/SAS 3.5" drives  
(3) 2× SATA/SAS/NVMe 2.5" drives+36× SATA/SAS 3.5" drives |