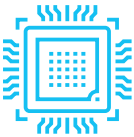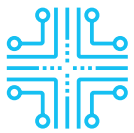# X6000 High-Density Server



X6000

The Huawei FusionServer X6000 is a high-density server positioned for data centers with the scale-out architecture. It has been thoroughly optimized to deliver new levels of density that addresses the space and investment restrictions of data centers, and enables better space utilization as well as cost-benefits. The FusionServer X6000 is ideal for service scenarios such as cloud computing, web-based applications, and high-performance computing (HPC).

## High-Density Computing and Ultimate Performance

- Supports up to four 1U half-width 2-socket server nodes in a 2U chassis, delivering 2x computing density compared with traditional 1U rack servers
- Supports up to 24 NVMe SSDs, with over 10x boost to I/O acceleration capabilities

## Simplified Management and Easy O&M

- Manages multiple nodes in aggregated mode, reducing cables and improving management efficiency
- Integrates an out-of-band fault diagnosis system and expert prewarning library, enabling over 93% locating accuracy

## Shared Architecture and High Energy Efficiency

- Leverages patented Dynamic Energy Management Technology (DEMT) to drive down energy consumption by an average of 13%
- Efficient, reliable liquid cooling, slashing cooling energy consumption and decreasing TCO by 30%

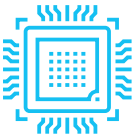| | |
|---|---|
| Form factor | 2U 4-node chassis |
| Server nodes | Four 1U half-width 2-socket servers |
| Power supply units | 2 hot-swappable AC PSUs (1,500 W enhanced, 2,000 W, or 3,000 W), with support for 1+1 redundancy* |
| Power supply | 100 V to 240 V AC; 240 V DC |
| Fan modules | 4 hot-swappable fan modules, with support for N+1 redundancy |
| Operating temperature | 5ºC–35ºC (41ºF–95ºF) |
| Certification | CE, UL, FCC, CCC, VCCI, and RoHS |
| Dimensions (H x W x D) | Universal chassis for 1,500 W enhanced or 2,000 W PSUs: 86.1 mm x 436 mm x 805 mm (3.39 in. x 17.17 in. x 31.69 in.) Chassis for 3,000 W PSUs: 86.1 mm x 436 mm x 819 mm (3.39 in. x 17.17 in. x 32.24 in.) (2.5-inch drives) 86.1 mm x 436 mm x 867 mm (3.39 in. x 17.17 in. x 34.13 in.) (3.5-inch drives) |

* Regarding PSUs, support for 1+1 redundancy depends on the power consumption calculated according to the actual configurations of X6000.

The FusionServer XH321 V5 is a Huawei latest-generation 1U half-width 2-socket server node. Powered by Intel® Xeon® Scalable Processors, it supports up to 16 DDR4 DIMMs and is ideal for applications such as cloud computing, web-based applications, and high-performance computing (HPC).

XH321 V5

## Superior Computing Performance

- Supports up to 2 Intel® Xeon® Scalable processors with up to 205 W TDP in a 1U half-width chassis
- Supports all NVMe SSDs for acceleration, eliminating I/O bottlenecks
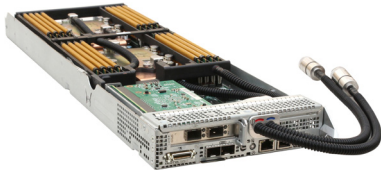
## Flexible Deployment

- Supports InfiniBand EDR and Omni-path high-speed network fabric
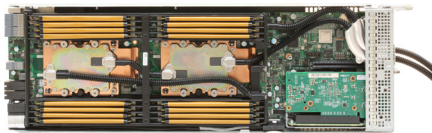- Air or liquid cooling for different deployment scenarios

| | |
|---|---|
| Form factor | 1U half-width 2-socket server |
| Processors | 1 or 2 Intel® Xeon® Scalable processors with up to 205 W TDP |
| Memory | 16 DDR4 DIMM slots; supports up to 1 TB memory capacity when confgured with 64 GB DIMMs |
| Internal storage | Up to 6 x 2.5-inch SAS/SATA/SSD/NVMe drives or 3 x 3.5-inch SAS/SATA/SSD drives<br>Up to 2 x M.2 2280 or 2242 SATA SSDs |
| RAID support | RAID 0, 1, 5, 6, 10, 50, or 60; supercapacitor for power failure protection<br>M.2 SSDs can be used to build RAID 0 or 1 |
| LOM network ports | 2 x GE + 2 x 10GE |
| PCIe expansion | 2 PCIe x16 half-height half-length standard expansion slots |
| Management | Supports standard management interfaces such as SNMP and IPMI.<br>Provides management features such as virtual KVM, virtual media, SOL, remote control, hardware monitoring, and intelligent power supply.<br>Supports power capping, independent management network port, and NC-SI management. |
| Operating systems | Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, CentOS, Citrix XenServer, and VMware ESXi |
| Operating temperature | 5°C to 35°C (41°F to 95°F) |
| Certification | CE, UL, FCC, CCC, VCCI, and RoHS |
| Dimensions (H x W x D) | 40.5 mm x 177.9 mm x 545.5 mm (1.59 in. x 7.00 in. x 21.48 in.) |

XH321L V5

FusionServer XH321L V5 is Huawei's latest 1U half-width 2-socket liquid-cooled server node. It supports liquid cooling for CPU and memory modules and 50°C warm water cooling. The heat dissipation ratio reaches 80% and the PUE is equal to or smaller than 1.1.

## High Energy Efficiency and Reliability

- CPU microchannels and memory Inter-DIMM water flow design, enabling board-level liquid cooling ratio of up to 80%
- 50°C warm-water cooling enables cooling PUE ≤ 1.1 and TCO down by 30%
- Isolated design for system water flows and circuits, with status monitoring. 217 system test items, ensuring high reliability

## Cabinet-level Deployment

- Fits FusionServer liquid-cooled cabinets with integrated liquid cooling manifold, which can be quickly connected to the main pipe.
- Each liquid-cooled cabinet supports up to 49 kW and 64 XH321L V5 liquid-cooled nodes.

| | |
|---|---|
| Form factor | 1U half-width 2-socket liquid-cooled server |
| Processors | 1 or 2 Intel® Xeon® Scalable processors with up to 205 W TDP |
| Memory | 16 DDR4 DIMM slots; supports up to 1 TB memory capacity when confgured with 64 GB DIMMs |
| Internal storage | Up to 6 x 2.5-inch SAS/SATA/SSD/NVMe drives or 3 x 3.5-inch SAS/SATA/SSD drives Up to 2 x M.2 2280 or 2242 SATA SSDs |
| RAID support | RAID 0, 1, 5, 6, 10, 50, or 60; supercapacitor for power failure protection M.2 SSDs can be used to build RAID 0 or 1 |
| LOM network ports | 2 x GE + 2 x 10GE |
| PCIe expansion | 1 PCIe x16 half-height half-length standard expansion slots |
| Management | Supports standard management interfaces such as SNMP and IPMI. Provides management features such as virtual KVM, virtual media, SOL, remote control, hardware monitoring, and intelligent power supply. Supports power capping, independent management network port, and NC-SI management. |
| Operating systems | Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, CentOS, Citrix XenServer, and VMware ESXi |
| Operating temperature | 5°C to 35°C (41°F to 95°F) |
| Certification | CE, UL, FCC, CCC, VCCI, and RoHS |
| Dimensions (H x W x D) | 40.5 mm x 177.9 mm x 545.5 mm (1.59 in. x 7.00 in. x 21.48 in.) (not include liquid cooling inlet and outlet pipes) |

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