

HUAWEI FusionServer X6800 Data Center Server



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As the IT infrastructure changes with the emergence and popularization of cloud computing and business models change with big data, high performance computing (HPC) has garnered intense interest. IT vendors are making efforts to provide more professional and flexible solutions and agile services. IT is becoming easy to obtain for IT users.

IT Infrastructure for Service Optimization

The world is embarking on an era of ICT convergence, which eliminates the computing upper limit, network boundaries, and storage limit to ensure efficient and agile applications and optimal user experience. By leveraging years of expertise in the IT industry and continuous innovation, Huawei has launched the new-generation FusionServer X6800. The X6800 features integrated high-density architecture, large storage capacity, and highly reliable management. It is an optimal choice for cloud computing, big data, and HPC applications.

In cloud computing, big data, and HPC applications, large-scale deployment, distributed storage and processing, and virtualization are distinguished features of IT. In addition, IT is mired in a constant battle to provide high performance, large storage capacity while attempting to control operational costs and hardware expenses.

The X6800 offers flexible configuration of a wide range of server nodes, meeting differentiated requirements for computing, storage, and I/O. The X6800 features high density and simplified system management and O&M. It is an optimal choice for enterprise IT infrastructure.

High Versatility

- Supports a variety of high-density server nodes in a 4U chassis.
- Allows flexible configuration of compute, storage, and GPU acceleration nodes to meet different service requirements.
- Provides large local storage space and supports SSD technologies, meeting requirements for high performance and large capacity.
- Offers two or four GE ports or two 10GE ports.

High Energy Efficiency

- Uses centralized power supply and heat dissipation and supports high-voltage DC, which minimizes the number of internal cables and heat loss.
- Uses 80 Plus Platinum power supply units (PSUs), which provide 94% power efficiency at 50% load.
- Uses optimized cooling design to maximize heat dissipation efficiency. The air intake vents on the panel increase cool air flows, and the air ducts isolate server nodes from power supplies, ensuring optimal heat dissipation.

Outstanding Stability and Reliability

- Uses a passive backplane to eliminate single points of failure (SPOFs).
- Supports long-term stable operating at 40°C.
- Implements server management using iBMC and HMM.
- Uses modular design and hot-swappable fan modules and PSUs in redundancy configuration.
- Allows cable-free installation and maintenance of server nodes.

Technical Specifications

Form factor	4U multi-node server
PCIe expansion	8 rear PCIe slots
PSU	Four 750 W or 1200 W AC(HVDC) or 800 W DC redundant PSUs
Fan	5 fan modules in N+1 redundancy
Management	Uses the HMM and iBMC to perform server management complying with Intelligent Platform Management Interface (IPMI) V2.0. Server management includes remote startup, shutdown, and restart of the server, log management, hardware monitoring, SOL, KVM over IP, virtual media, fan status monitoring, and power supply monitoring.
Power supply	110 V to 220 V AC -48 V DC 240 V HVDC 380 V HVDC
Operating temperature	5°C to 40°C (41°F to 104°F)
Certifications	CE, UL, FCC, CCC, and RoHS
Dimensions (H x W x D)	170 mm x 447 mm x 898 mm

HUAWEI FusionServer XH622 V3



The XH622 V3 is a full-height dual-socket server node occupying two slots in an X6800 server. It uses the Intel® Xeon® E5-2600 v3 series processors and supports 16 DDR4 memory slots and four 2.5-inch SSDs or SAS or SATA HDDs. An XH622 V3 provides up to two dual-slot GPGPUs or Xeon-Phi cards. The XH622 V3 server nodes can be used in Huawei ES3000 storage acceleration solution and apply to applications, such as HPC, graphics processing, and online games.

High Density

- The server nodes share the fan modules and PSUs in the chassis, minimizing space requirements.
- The 4U high-density architecture occupies 50% less space than a traditional 2U rack server.

Outstanding Performance

- Each XH622 V3 supports up to two Intel® Xeon® E5-2600 v3 series processors, 36 cores, 72 threads, and two 9.6 GT/s QuickPath Interconnect (QPI) links between processors.
- A 4U server can hold four XH622 V3 nodes and 8 high-performance GPGPUs or Xeon-Phi cards, offering 12 Tera-FLOPS and calculation peak performance of 12 trillion times.

High Energy Efficiency

- Hard disks can be powered on at different times to reduce startup power consumption.
- Dynamic energy conservation and power capping are used to minimize power consumption.
- The 1.2 V DDR4 DIMMs consume 20% less energy than DDR3 DIMMs.

Technical Specifications

Form factor	Full-height dual-socket server node occupying two slots
Number of processors	1 or 2
Processor model	Intel® Xeon® E5-2600 v3 series processor
Number of memory slots	16 DDR4 DIMM slots
Local storage	Four 2.5-inch SSDs or SAS or SATA HDDs Two Mini SSDs (SATA DOMs) One USB flash drive
Network ports	Two or four GE ports or two 10GE ports or two 10GBase-T ports
PCIe expansion	Up to 5 PCIe slots
Management	The on-board iBMC module supports IPMI, SOL, KVM over IP, and virtual media, and provides one 10/100/1000 Mbit/s RJ45 management network port.
Supported OSs	Citrix XenServer Microsoft Windows Server Oracle Enterprise Linux Oracle Server VM Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware ESXi
Operating temperature	5°C to 40°C (41°F to 104°F)
Certification	CE, UL, FCC, CCC, and RoHS
Dimensions (H x W x D)	166 mm x 109 mm x 670 mm

HUAWEI FusionServer XH628 V3



The XH628 V3 is a full-height dual-socket server node occupying two slots in an X6800 server. It uses the Intel® Xeon® E5-2600 v3 series processors and supports 16 DDR4 memory slots. An XH628 V3 server node can be configured with twelve 3.5-inch SAS or SATA HDDs or 2.5-inch SSDs or SAS or SATA HDDs and two 2.5-inch SSDs or SATA HDDs. The XH628 V3 server nodes can be used in Huawei ES3000 storage acceleration solution and apply to applications, such as cloud computing, data centers, and big data applications.

High Density

- The server nodes share the fan modules and PSUs in the chassis, minimizing space requirements.
- The 4U high-density architecture occupies 50% less space than a traditional 2U rack server.

Large Capacity

- An XH628 V3 supports up to four Huawei ES3000 PCIe storage cards and offers 1.56 million IOPS, which is equivalent to 1500 mainstream SAS HDDs.
- A 4U server can hold four XH628 V3 server nodes, which offer a maximum capacity of 296 TB.
- An XH628 V3 supports RAID 0, 1, 1E, 10, 5, 50, 6, and 60 and a wide range of RAID controller cards. It provides a RAID cache and uses a supercapacitor to protect cache data from power failures.

Efficient O&M

- Provides an iBMC web management interface and UID/HLY indicators to help maintenance personnel quickly locate faults.
- Supports remote maintenance functions, such as SOL, KVM over IP, virtual media, and WebUI, to implement remote deployment and maintenance.
- Supports alarm notifications via email and short messages and performs automatic service restoration to minimize system risks.
- Supports Network Controller Sideband Interface (NC-SI), which allows a network port to provide functions of both a management network port and a service port. This feature reduces the number of ports and cables and simplifies the management system.
- Uses modular design and allows cable-free installation and maintenance, increasing deployment and O&M efficiency.

Technical Specifications


Form factor	Full-height dual-socket server node occupying two slots
Number of processors	1 or 2
Processor model	Intel® Xeon® E5-2600 v3 series processor
Number of memory slots	16 DDR4 DIMM slots
Local storage	Twelve 3.5-inch SAS or SATA HDDs or 2.5-inch SSDs or SAS or SATA HDDs Two 2.5-inch SSDs or SATA HDDs (optional) Two Mini SSDs (SATA DOMs) One USB flash drive
Network ports	Two or four GE ports or two 10GE ports or two 10GBase-T ports
PCIe expansion	Up to 5 PCIe slots
Management	The on-board iBMC module supports IPMI, SOL, KVM over IP, and virtual media, and provides one 10/100/1000 Mbit/s RJ45 management network port
Supported OSs	Citrix XenServer, Microsoft Windows Server, Oracle Enterprise Linux, Oracle Server VM, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, VMware ESXi
Operating temperature	5°C to 40°C (41°F to 104°F)
Certification	CE, UL, FCC, CCC, and RoHS
Dimensions (H x W x D)	166 mm x 109 mm x 745 mm

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Version No.: M3-035260-20141126-C-2.0

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