HUAWEI Tecal X6000
High-Density Server

HUAWEI

HUAWEI Tecal X6000 High-Density Server

(X6000)

High computing density

- The X6000 is 2U high and features a centralized power supply and cooling. It accommodates four half-width or two full-width server nodes. It offers a density four times that of a conventional 2U rack server, allowing a rack to hold up to 80 half-width server nodes.
- The X6000 enables quick deployment and easy maintenance by using a front-facing maintenance design and hot-swappable server nodes.

Rich server node options

- The X6000 provides four half-width server nodes and one full-width server node. The server nodes support Intel® Xeon® E3-1200 v2 series, Intel® Xeon® E5-2400/E5-2600 series, and Intel® Xeon® E5-2400/E5-2600 v2 series, ensuring optimal performance based on service requirements.
- The X6000 also offers options for customized server nodes, as needed.

Excellent energy efficiency and control

- The 80 Plus® Platinum PSUs provide up to 94% power efficiency under a 50% load, which reduces power losses and optimizes power utilization.
- The X6000 comes with highly efficient fan modules and an optimized cooling architecture that isolates power air ducts from server nodes, increasing cooling efficiency and reducing energy consumption.
- The X6000 uses various energy-saving technologies, such as fan speed control by location, intelligent fan speed adjustment, and intelligent CPU frequency adjustment, which further reduce power consumption. In combination, these features offer a green, energy-saving solution.

X6000

The HUAWEI X6000 server is a high-density server designed for cloud computing, data centers, and Internet applications. With its optimized architecture, the X6000 offers high performance, rich server node options, and better energy efficiency, making the X6000 the ideal choice for large-scale server deployments.

Technical Specifications

Form factor	2U node server
Server node	Half-width server nodes: XH310 V2, XH311 V2, XH320 V2, and XH321 V2 Full-width server node: XH621 V2
I/O module	One removable I/O module with up to four PCIe 2.0 x8 slots
PSU	Two hot-swappable PSUs working in 1+1 redundancy mode Options: • AC: 750 W, 800 W, 1200 W • DC: 800 W
Fan module	Three fan modules working in N+1 redundancy mode
Power supply	110/220 V AC or –48 V DC
Operating temperature	XH310 V2 and XH311 V2: 5ºC to 40ºC XH320 V2, XH321 V2, and XH621 V2: 5ºC to 35ºC
Dimensions	Height: 87.5 mm (3.44 in.), width: 448 mm (17.64 in.), depth: 760 mm (29.92 in.)

HUAWEI Tecal XH310 V2 Server Node

(XH310 V2)

Designed for web applications

- Web access applications do not require high-performance servers. Even a 1U rack server with low-level configuration may waste rack space and server resources when used for web applications. The XH310 V2 is a cost-efficient solution designed specifically for web applications to maximize Return On Investment (ROI).

Low energy consumption and high density

- The XH310 V2 uses one Intel® Xeon® E3-1200 v2 series processor and supports one 3.5-inch SATA HDD and four DDR3 DIMMs. It consumes less power than a conventional single-socket rack server.
- A 2U server can hold four XH310 V2 server nodes, offering computing density four times that of a conventional rack server.

Easy installation and O&M

- The XH310 V2 is easy to install and remove and deploying services on it is a snap.
- The BMC module provides functions such as SOL and remote KVM, startup, and shutdown, facilitating easy management and maintenance.

XH310 V2

The HUAWEI XH310 V2 server node is a new-generation, half-width, single-socket server node for the X6000. The XH310 V2 uses Intel® Xeon® E3-1200 v2 series processors and supports four DDR3 DIMMs and one 3.5-inch SATA HDD. This server node is your best choice for web access servers.

Technical Specifications

Form factor	Half-width server node
Number of processors	1
Processor	Intel® Xeon® E3-1200 v2 series 4-core L3 cache: 8 MB
Memory	4 DDR3 UDIMMs
Internal storage	One 3.5-inch SATA HDD
LOM network port	2 GE ports
Expansion slot	1 PCIe slot
USB port	3 (3 USB ports provided by a high-density connector)
Management	Built-in BMC, which supports IPMI, SOL, KVM over IP, and virtual media features One 10/100 Mbit/s RJ45 management network port
Operating systems supported	• Microsoft Windows Server • Red Hat Enterprise Linux • SUSE Linux Enterprise Server
Operating temperature	5°C to 40°C
Dimensions	Height: 41 mm (1.61 in.), width: 210 mm (8.27 in.), depth: 540 mm (21.26 in.)

HUAWEI Tecal XH311 V2 Server Node
(XH311 V2)

High reliability for web applications
• The XH311 V2 supports four 2.5-inch SAS/SATA HDDs or SSDs. It provides higher reliability than the XH310 V2.

Low energy consumption and high density
• The XH311 V2 uses one Intel® Xeon® E3-1200 v2 series processor and supports four DDR3 DIMMs and four 2.5-inch hard disks. It consumes less power than a conventional single-socket rack server.
• A 2U server can hold four XH311 V2 server nodes, offering computing density four times that of a conventional rack server.

Easy installation and O&M
• The XH311 V2 is easy to install and remove and deploying services on it is a snap.
• The BMC module provides functions such as SOL and remote KVM, startup, and shutdown, facilitating easy management and maintenance.

XH311 V2

The HUAWEI XH311 V2 server node is a new-generation, half-width, single-socket server node for the X6000. The XH311 V2 uses Intel® Xeon® E3-1200 v2 series processors and supports four 2.5-inch SAS/SATA HDDs or SSDs and four DDR3 DIMMs. The XH311 V2 is your best choice when you need access servers with a high degree of data reliability.

Technical Specifications

Form factor	Half-width server node
Number of processors	1
Processor	Intel® Xeon® E3-1200 v2 series 4-core L3 cache: 8 MB
Memory	4 DDR3 UDIMMs
Internal storage	4 hot-swappable 2.5-inch SAS/SATA HDDs or SSDs
RAID support	RAID 0, 1, 10, 5, and 6 RAID cache: 512 MB or 1 GB Power-off protection: BBU or supercapacitor
LOM network port	2 GE ports
Expansion slot	Up to 2 PCIe slots
USB port	3 (3 USB ports provided by a high-density connector)
Management	Built-in BMC, which supports IPMI, SOL, KVM over IP, and virtual media features One 10/100 Mbit/s RJ45 management network port
Operating systems supported	• Microsoft Windows Server • Red Hat Enterprise Linux • SUSE Linux Enterprise Server
Operating temperature	5°C to 40°C
Dimensions	Height: 41 mm (1.61 in.), width: 210 mm (8.27 in.), depth: 540 mm (21.26 in.)

HUAWEI Tecal XH320 V2 Server Node

(XH320 V2)

Industry-leading computing density

- An X6000 server can hold four XH320 V2 server nodes, offering computing density four times that of a conventional 2U rack server.
- A rack can hold 80 XH320 V2 server nodes with up to 160 processors, making it perfect for large-scale server deployment scenarios, such as cloud computing systems and data centers.

Outstanding energy efficiency

- The XH320 V2 dynamically adjusts processor frequency and voltage according to service loads.
- The XH320 V2 supports real-time monitoring of system power consumption, which helps you adjust energy-saving policies in a timely manner.
- The XH320 V2 controls power consumption with power-capping technology.

High scalability

- The XH320 V2 supports up to two Intel® Xeon® E5-2400 or E5-2400 v2 series processors to ensure high performance.
- The XH320 V2 supports up to 12 DDR3 DIMMs, four 2.5-inch hot-swappable SAS/SATA HDDs or SSDs, and standard PCIe cards, allowing you to flexibly expand computing, storage, and I/O resources according to service requirements.

XH320 V2

The HUAWEI XH320 V2 server node is a new-generation, half-width, 2-socket server node for the X6000. The XH320 V2 uses Intel® Xeon® E5-2400 or E5-2400 v2 series processors and supports four 2.5-inch SAS/SATA HDDs or SSDs and 12 DDR3 DIMMs. It is ideal for cloud computing deployment and data centers that require a large number of servers.

Technical Specifications

Form factor	Half-width server node
Number of processors	1 or 2
Processor	Intel® Xeon® E5-2400 or E5-2400 v2 series Core option: 4, 6, 8, or 10 L3 cache: up to 25 MB
Memory	12 DDR3 DIMMs
Internal storage	4 hot-swappable 2.5-inch SAS/SATA HDDs or SSDs
RAID support	RAID 0, 1, 10, 5, and 6 RAID cache: 512 MB or 1 GB Power-off protection: BBU or supercapacitor
LOM network port	2 GE ports
Expansion slot	Up to 2 PCIe slots
USB port	5 (3 USB ports provided by a high-density connector, 1 internal USB port, and 1 built-in USB flash port
Management	Built-in BMC, which supports IPMI, SOL, KVM over IP, and virtual media features One 10/100 Mbit/s RJ45 management network port
Operating systems supported	• Microsoft Windows Server • Red Hat Enterprise Linux • SUSE Linux Enterprise Server • Citrix XenServer • VMware
Operating temperature	5°C to 35°C
Dimensions	Height: 41 mm (1.61 in.), width: 210 mm (8.27 in.), depth: 540 mm (21.26 in.)

HUAWEI Tecal XH321 V2 Server Node

(XH321 V2)

High density

- Deploys four half-width 2-socket server nodes in 2U of space, providing four times the computing density of a conventional 2U two-socket rack server.
- Supports 80 XH321 V2 server nodes in a rack and up to 160 processors for high-density application scenarios.

High performance

- Supports a maximum of two Intel® Xeon® E5-2600 or E5-2600 v2 series processors with up to 10 cores, and 25 MB L3 cache capacity, enhancing performance and accelerating service running.
- Supports a maximum of 16 DDR3 DIMMs and four 2.5-inch SAS/SATA HDDs, or SSDs to provide a large memory capacity and storage capacity, which satisfies requirements for computing resources in various computing scenarios.

High reliability

- Supports multiple RAID levels and uses a supercapacitor to protect cache data from power failures, ensuring reliable data storage.
- Supports Trusted Platform Module (TPM) encryption to prevent viruses and unauthorized operations, improving system reliability and service security.

XH321 V2

The XH321 V2 is a new-generation, half-width 2-socket server node for the Huawei X6000 high-density server. It uses Intel® Xeon® E5-2600 or E5-2600 v2 series processors, and supports sixteen DDR3 DIMMs and four 2.5-inch SAS/SATA HDDs or SSDs. High density, performance, and reliability make the XH321 V2 an excellent choice for various computing scenarios.

Technical Specifications

Form factor	1U half-width server node
Number of processors	1 or 2
Processor	Intel® Xeon® E5-2600 or E5-2600 v2 series Core option: 4, 6, 8, and 10 L3 cache: 25 MB
Memory	16 DDR3 DIMMs
Internal storage	4 hot-swappable 2.5-inch SAS/SATA HDDs or SSDs
RAID support	RAID 0, 1, 10, 5, and 6 RAID cache: 512 MB Optional supercapacitor
LOM network port	2 GE ports
Expansion slot	1 PCIe slot (2 processors)
USB port	5 (3 USB ports provided by a high-density connector, 1 internal USB port, and 1 built-in USB flash port)
Management	BMC, supporting IPMI, SOL, KVM over IP, and virtual media One 10/100M RJ45 management network port
Operating systems supported	• Microsoft Windows Server • Red Hat Enterprise Linux • SUSE Linux Enterprise Server • Citrix XenServer • VMware
Operating temperature	5°C to 35°C
Dimensions	Height: 41 mm (1.61 in.), Width: 210 mm (8.27 in.), Depth: 540 mm (21.26 in.)

HUAWEI Tecal XH621 V2 Server Node

(XH621 V2)

Large memory capacity

- The XH621 V2 supports 24 DDR3 DIMMs with a memory capacity of up to 768 GB, which allows more Virtual Machines (VMs) to run on a server.

Reliable internal storage

- The XH621 V2 supports up to eight 2.5-inch SAS/SATA HDDs or SSDs and various RAID configurations.
- The XH621 V2 uses a battery or supercapacitor for power-off protection.
- The XH621 V2 uses TPM encryption to prevent unauthorized access.

Outstanding performance

- The XH621 V2 supports up to two Intel® Xeon® E5-2600 or E5-2600 v2 series processors, whose 22-nm architecture builds on advanced manufacturing process technology to deliver higher performance.
- The XH621 V2 supports four PCIe cards, providing a large memory capacity and storage capacity for various server applications.

XH621 V2

The HUAWEI XH621 V2 server node is a new-generation, full-width, 2-socket server node for the X6000. The XH621 V2 uses Intel® Xeon® E5-2600 or E5-2600 v2 series processors and supports eight 2.5-inch SAS/SATA HDDs or SSDs and 24 DDR3 DIMMs. It is ideal for High-Performance Computing (HPC) scenarios, such as cloud computing deployment and virtualization.

Technical Specifications

Form factor	Full-width server node
Number of processors	1 or 2
Processor	Intel® Xeon® E5-2600 v2 series Core option: 4, 6, 8, 10, or 12 L3 cache: up to 30 MB
Memory	24 DDR3 DIMMs
Internal storage	8 hot-swappable 2.5-inch SAS/SATA HDDs or SSDs
RAID support	RAID 0, 1, 10, 5, 50, 6, and 60 RAID cache: 512 MB or 1 GB Power-off protection: BBU or supercapacitor
LOM network port	2 GE ports
Expansion slot	Up to 4 PCIe slots
USB port	5 (3 USB ports provided by a high-density connector, 1 internal USB port, and 1 built-in USB flash port)
Management	Built-in BMC, which supports IPMI, SOL, KVM over IP, and virtual media features One 10/100 Mbit/s RJ45 management network port
Operating systems supported	• Microsoft Windows Server • Red Hat Enterprise Linux • SUSE Linux Enterprise Server • Citrix XenServer • VMware
Operating temperature	5°C to 35°C
Dimensions	Height: 41 mm (1.61 in.), Width: 423 mm (16.65 in.), Depth: 540 mm (21.26 in.)

General Disclaimer

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