

HUAWEI Tecal X8000 High-Density Rack Server



Professional • Trusted • Future-oriented

HUAWEI Tecal X8000 High-Density Rack Server

(X8000)

High density and innovative architecture design

- Provides excellent computing density by deploying up to 80 compute nodes or 40 storage nodes in a fully utilized high-density rack at a height of 44U.
- Supports up to 160 Intel® Xeon® processors when the X8000 is fully configured with compute nodes, providing computing density twice that of a conventional high-density 1U 2-socket rack server and four times that of a 2U 2-socket rack server.
- Supports a storage capacity of up to 2 PB when the X8000 is fully configured with storage nodes, meeting requirements for server storage resource expansion as data increases.

Energy efficiency

- Uses 12 large fan modules in two areas, efficiently cooling the server.
- Adopts intelligent processor frequency and voltage adjustment, hard disk hibernation, and power capping, which reduces energy consumption by 15% compared with conventional rack servers of the same configuration.

Stable and reliable system design

- Provides redundant modules such as N+N or N+M redundant PSUs and N+1 redundant fan modules.
- Uses a highly reliable passive backplane, preventing single point of failures (SPOFs) and ensuring stable system operating.

Quick delivery and accelerated service rollout

- Supports factory installation and integrated rack delivery and greatly improves the onsite delivery efficiency compared with a convention 2U rack server, accelerating service rollout.



The X8000 is a new-generation rack server designed for data centers and Internet applications. Featuring high density, energy efficiency, simple maintenance, and multiple applications, the X8000 is an ideal choice for data centers of large enterprises and groups, governments, energy industries, and Internet enterprises.

Technical Specifications

Form factor	44U high-density rack server
Server node	80 compute nodes or 40 storage nodes
PSU	8 hot-swappable 3000 W AC PSUs in N+N redundancy mode
Fan module	Twelve 172 mm fan modules in N+1 redundancy mode
Management	RMC
Power supply	220 V single-phase AC or 380 V three-phase AC 240 V HVDC
Operating temperature	DH310 V2: 5°C to 40°C DH320 V2 and DH628 V2: 5°C to 35°C
Certification	CE, FCC, VCCI, RoHS
Dimensions (H x W x D)	Height: 2,100 mm (82.68 in.) Width: 600 mm (23.62 in.) Depth: 1,175 mm (46.26 in.)
Installation requirement	Rack power supply: 12,000 W Floor load capacity: 1,200 kg

HUAWEI Tecal DH310 V2 Server Node

(DH310 V2)

Simplified configuration for web applications

- Web access applications do not require high-performance servers. Even a 1U rack server with low configuration may waste rack space and server resources when used for web applications. The DH310 V2 is a cost-efficient solution designed specifically for web applications.

Low energy consumption and high density

- Uses one Intel® Xeon® E3-1200 v2 series processor and supports one 3.5" SATA HDD and four DDR3 DIMMs. It consumes less power than a conventional 2-socket rack server with one processor.
- Deploys two server nodes in 1U space, offering server density twice that of a conventional 1U rack server and four times that of a 2U rack server.

Rich management features and simple O&M

- Provides a built-in BMC that supports IPMI specifications, SOL, and remote KVM, startup, and shutdown, facilitating management and service O&M.



DH310 V2

The DH310 V2 is a new-generation, half-width, single-socket server node of the X8000. It supports one Intel® Xeon® E3-1200 v2 series processor, four DDR3 DIMMs, and one 3.5" SATA hard disk. The DH310 V2 is your best choice for web access servers.

Technical Specifications

Form factor	1U half-width server node
Number of processors	1
Processor	Intel® Xeon® E3-1200 v2 series 4-core processor L3 cache: 8 MB
Memory	4 DDR3 UDIMMs, up to 32 GB
Internal storage	One 3.5" SATA HDD
LOM network port	2 GE ports
USB port	3 (3 USB ports provided by a high-density connector)
Management	Built-in BMC, supporting IPMI, SOL, KVM over IP, and virtual media 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 (50°F to 104°F)
Certification	CE, FCC, VCCI, RoHS
Dimensions (H x W x D)	Height: 41 mm (1.61 in.) Width: 210 mm (8.27 in.) Depth: 540 mm (21.26 in.)

HUAWEI Tecal DH320 V2 Server Node

(DH320 V2)

Massive computing density

- Deploys two half-width 2-socket server nodes in 1U space, providing servers two times that of a conventional 1U rack server.
- Supports 80 DH320 V2 server nodes in a rack, with up to 160 processors, providing excellent computing density. The DH320 V2 applies to cloud computing, data center, and Internet application scenarios with large-scale server deployment and helps customers fully utilize equipment room space.

Outstanding energy efficiency control

- Lowers server operating power consumption by dynamically adjusting the processor frequency and voltage based on service loads.
- Monitors system power consumption in real time and sets energy-saving policies accordingly.
- Adopts power capping to control server node power consumption, achieving industry-leading power efficiency.

Robust scalable system for multiple services

- Supports two Intel® Xeon® E5-2400 series 4-core, 6-core, or 8-core processors, providing powerful computing performance to ensure high-speed system operating.
- Supports twelve DDR3 DIMMs, two 2.5" hot-swappable SAS/SATA HDDs or SSDs, and standard PCIe card expansion, enabling flexible expansion of computing, storage, and I/O resources for multiple service applications.



DH320 V2

The DH320 V2 is a new-generation, half-width, 2-socket server node of the X8000. It uses Intel® Xeon® E5-2400 series processors and supports twelve DDR3 DIMMs and 2 x 2.5" SAS/SATA HDDs or SSDs. Featuring high density and low energy consumption, the DH320 V2 applies to cloud computing, data center, and Internet application scenarios.

Technical Specifications

Form factor	1U half-width server node
Number of processors	1 or 2
Processor	Intel® Xeon® E5-2400 series Core option: 4, 6, and 8 L3 cache: 20 MB
Memory	12 DDR3 DIMMs, up to 384 GB
Internal storage	2 x 2.5" hot-swappable SAS/SATA HDDs or SSDs
RAID support	RAID 0, 1, and 10 RAID cache: 512 MB or 1 GB Optional BBU or supercapacitor
LOM network port	2 GE ports
Expansion slot	Up to 2 PCIe slots 1 processor: • 1 PCIe slot for a RAID controller card 2 processors: • 1 PCIe 2.0 x8 • 1 PCIe slot for a RAID controller card
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, supporting IPMI, SOL, KVM over IP, and virtual media 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 (50°F to 95°F)
Certification	CE, FCC, VCCI, RoHS
Dimensions (H x W x D)	Height: 41 mm (1.61 in.) Width: 210 mm (8.27 in.) Depth: 540 mm (21.26 in.)

HUAWEI Tecal DH628 V2 Server Node

(DH628 V2)

Large storage capacity

- Supports 12 x 3.5" SATA/SAS HDDs or 2.5" SATA/SAS HDDs or SSDs and 2 x 2.5" SATA HDDs, providing a storage capacity of up to 50 TB.
- Provides unique 1/4 width server nodes for massive storage server applications; deploys up to 40 DH628 V2 server nodes in a rack, providing a storage capacity of 2 PB.

Unique system design and high reliability

- Uses the Intel® Xeon® E5-2400 series processor platform. The memory supports error checking and correcting (ECC), ensuring high reliability for system operating.
- Supports RAID 0, 1, 10, 5, 50, 6, and 60, providing a RAID cache of 512 MB or 1 GB; provides a BBU or supercapacitor for power-off protection, ensuring security and reliability for the storage system.
- Supports shipment of the integrated rack with hard disks, facilitating service rollout; supports integrated rack migration, without affecting system reliability after the migration.

Rich management features and simple O&M

- Provides a built-in BMC that supports IPMI specifications, SOL, and remote KVM, startup, and shutdown, facilitating management and service O&M.



DH628 V2

The DH628 V2 is a new-generation 2-socket server node of the X8000. It supports Intel® Xeon® E5-2400 series processors, eight DDR3 DIMMs, twelve 3.5" SATA/SAS HDDs or 2.5" SATA/SAS HDDs or SSDs and two 2.5" SATA HDDs. The DH628 V2 applies to large-capacity distributed storage server applications.

Technical Specifications

Form factor	4U 1/4 width server node
Number of processors	1 or 2
Processor	Intel® Xeon® E5-2400 series Core option: 4, 6, and 8 L3 cache: 20 MB
Memory	8 DDR3 DIMMs
Internal storage	12 x 3.5" hot-swappable SATA/SAS HDDs or 2.5" hot-swappable SATA/SAS HDDs or SSDs 2 x 2.5" SATA HDDs Maximum storage capacity: 50 TB
RAID support	RAID 0, 1, 10, 5, 50, 6, and 60 RAID cache: 512 MB or 1 GB Optional BBU or supercapacitor
LOM network port	2 GE ports
Expansion slot	Up to 2 PCIe slots 1 PCIe slot for a PCIe SSD card 1 PCIe slot for a RAID controller card
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, supporting IPMI, SOL, KVM over IP, and virtual media 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 (50°F to 95°F)
Certification	CE, FCC, VCCI, RoHS
Dimensions (H x W x D)	Height: 170 mm (6.69 in.) Width: 110 mm (4.33 in.) Depth: 809 mm (31.85 in.)

The product specifications are subject to change. Please contact the local sales personnel for details.

Copyright © Huawei Technologies Co., Ltd. 2013. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

Trademark Notice



 , HUAWEI, and  are trademarks or registered trademarks of Huawei Technologies Co., Ltd.

Other trademarks, product, service and company names mentioned are the property of their respective owners.

General Disclaimer

The information in this document may contain predictive statements including, without limitation, statements regarding the future financial and operating results, future product portfolio, new technology, etc. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore, such information is provided for reference purpose only and constitutes neither an offer nor an acceptance. Huawei may change the information at any time without notice.

HUAWEI TECHNOLOGIES CO., LTD.

Huawei Industrial Base

Bantian Longgang

Shenzhen 518129, P.R. China

Tel: +86-755-28780808

Version No.: M3-035260-20130613-C-2.0

enterprise.huawei.com