Huawei TaiShan Server

Supercharge Data Center Computing with Kunpeng Processors

Leading a New Computing Era with Kunpeng

Efficient Computing   **Secure & Trusted**   **Open Ecosystem**

TaiShan Server Solutions

Multi-core and high concurrency processing for massive volumes of data

8-channel memory technology offers ultra-high memory bandwidth, accelerating memory-bound HPC applications

Processor with a built-in Rivest-Shamir-Adleman (RSA) accelerator improves HTTPS encryption/decryption performance

TaiShan Big Data Solution

TaiShan SDS Solution

TaiShan HPC Solution

Kunpeng

TaiShan Database Solution

TaiShan Web Solution

TaiShan Native Application Solution

Built-in hardware acceleration engine, unlocking computing potential and slashing TCO

RDMA over converged Ethernet (RoCE), multi-core scheduling optimization algorithm, and non-uniform memory access (NUMA) technologies for database acceleration

Homogeneous deployment to support mobile application cloudification with zero performance loss

TaiShan Server Portfolio

TaiShan is a next-generation data center server powered by Huawei Kunpeng processors. Efficient computing, high security, and an open ecosystem make TaiShan the choice for accelerating big data, software-defined storage (SDS), native, high-performance computing (HPC), and database applications. Taishan servers make computing in data centers greener and more diverse.

TaiShan 100 and TaiShan 200 are powered by Huawei Kunpeng 916 and 920 processors respectively. The TaiShan family features balanced, storage, and high-density models.

Efficient Computing
» Kunpeng processor with superior compute power
» Multi-core computing architecture for application acceleration

Secure & Trusted
» In-house developed processor cores and server chips
» 17 years of computing engineering to build quality

Open Ecosystem
» Compatible with mainstream software
» Build a new computing ecosystem with partners for shared success

2280 - Balanced model
2U 2-socket rack server

5280 - Storage model
4U 2-socket rack server

X6000 - High-density
2U/4-node server

Kunpeng Processor Family

Low Power Consumption

Kunpeng 916
» 32-core, 2.4 GHz, 16nm, 75 W
» 4-DDR4-channel controller
» PCIe 3.0 and 10GE
» Supports 2-socket interconnects

Energy-Efficient

Kunpeng 920-3226/4826
» 32-/48-core, 2.6 GHz, 7nm, 120/150 W
» 8-DDR4-channel controller
» PCIe 4.0, 100GE, and CCIX
» Supports 2-/4-socket interconnects

Superior Performance

Kunpeng 920-6426
» 64-core, 2.6 GHz, 7nm, 180 W
» 8-DDR4-channel controller
» PCIe 4.0, 100GE, and CCIX
» Supports 2-/4-socket interconnects

TaiShan 100 Server Technical Specifications

Model	2280	5280
Form Factor	2U 2-socket rack server	4U 2-socket rack server
Processors	2 Kunpeng 916 processors	2 Kunpeng 916 processors
Internal Storage	Up to 16 x 3.5-inch or 27 x 2.5-inch SAS/SATA HDDs or SSDs	Up to 40 x 3.5-inch SAS/SATA HDDs or SSDs
RAID	Up to 16 x 3.5-inch or 27 x 2.5-inch SAS/SATA HDDs or SSDs	Up to 40 x 3.5-inch SAS/SATA HDDs or SSDs
RAID	RAID 0, 1, 5, 6, 10, 50, 60; supercapacitor for power failure protection	
PCIe Expansion	Up to 5 standard PCIe 3.0 x8 slots	Up to 5 standard PCIe 3.0 x8 slots
(LOM) Network Ports	2 x GE electrical ports + 2 x 10GE optical ports	2 x GE electrical ports + 2 x 10GE optical ports
Power Supply Units	2 x 460 W or 750 W hot-swappable AC PSUs, supporting 1+1 redundancy	2 x 1200 W hot-swappable AC PSUs, hot-swap, supporting 1+1 redundancy
Power Supply	100–240 V AC; 240 V DC	
Fan Modules	4 hot-swappable fan modules, supporting N+1 redundancy	
Operating Systems	SUSE Linux Enterprise Server (SLES), Ubuntu, and CentOS	
Operating Temperature	5ºC to 40ºC (41ºF to 104ºF)	5ºC to 35ºC (41ºF to 95ºF)
Heat Dissipation	Air cooling	Air cooling
Dimensions (H x W x D)	86.1 mm x 447 mm x 748 mm (3.39 in. x 17.60 in. x 29.45 in.)	175 mm x 447 mm x 748 mm (6.89 in. x 17.60 in. x 29.45 in.)

TaiShan 200 Server Technical Specifications

Model	2280	5280	X6000
Form Factor	2U 2-socket rack server	4U 2-socket rack server	2U/4-node high-density serve
Processors	2 Kunpeng 920 processors	2 Kunpeng 920 processors	2 Kunpeng 920 processors
Memory	32 DDR4-2933 DIMMs	32 DDR4-2933 DIMMs	16 DDR4-2933 DIMMs
Internal Storage	Up to 16 x 3.5-inch or 27 x 2.5-inch SAS/SATA HDDs or SSDs, or 16 x 2.5-inch NVMe SSDs	Up to 40 x 3.5-inch SAS/SATA HDDs or SSDs, and 4 x 2.5-inch NVMe SSDs	Up to 6 x 2.5-inch SAS/SATA HDDs, SSDs, or NVMe SSDs
RAID	RAID 0, 1, 5, 6, 10, 50, 60; supercapacitor for power failure protection		
PCIe Expansion	Up to 8 PCIe 4.0 x8 or 3 PCIe 4.0 x16 + 2 PCIe 4.0 x8 slots	Up to 8 PCIe 4.0 x8 or 3 PCIe 4.0 x16 + 2 PCIe 4.0 x8 slots	Up to 1 PCIe 4.0 x16 slot + 1 PCIe 4.0 x8 slot
(LOM) Network Ports	2 LOM NICs (each NIC: 4 GE electrical ports, 4 x 10GE optical ports, or 4 x 25GE optical ports)	2 LOM NICs (each NIC: 4 GE electrical ports, 4 x 10GE optical ports, or 4 x 25GE optical ports)	2 x GE electrical ports + 1 x 100GE optical port
Power Supply Units	2 x 900 W or 2000 W hot-swappable AC PSUs, supporting 1+1 redundancy	2 x 2000 W hot-swappable AC PSUs, supporting 1+1 redundancy	2 x 3000 W hot-swappable AC PSUs, supporting 1+1 redundancy
Power Supply	100–240 V AC; 240 V DC		
Fan Modules	4 hot-swappable fan modules, supporting N+1 redundancy		
Operating Systems	SUSE Linux Enterprise Server (SLES), Ubuntu, and CentOS		
Operating Temperature	5ºC to 40ºC (41ºF to 104ºF)	5ºC to 35ºC (41ºF to 95ºF)	5ºC to 35ºC (41ºF to 95ºF)
Heat Dissipation	Air cooling	Air cooling	Air cooling and liquid cooling* *Liquid cooling occupies one PCIe x16 slot.
Dimensions (H x W x D)	86.1 mm x 447 mm x 790 mm (3.39 in. x 17.60 in. x 31.10 in.)	175 mm x 447 mm x 790 mm (6.89 in. x 17.60 in. x 31.10 in.)	X6000 chassis: 86.1 mm x 436 mm x 819 mm (3.39 in. x 17.17 in. x 32.24 in.) XA320 node: 40.5 mm x 177.9 mm x 545.5 mm (1.59 in. x 7.00 in. x 21.48 in.)

For more information

To learn more about Huawei servers, contact Huawei sales representatives or business partners, or visit:

https://e.huawei.com/en/products/cloud-computing-dc/servers/taishan-server

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