

Hitachi Compute Blade 2500 server delivers enterprise-class scalability and reliability to the data center. It is the latest in a long tradition of Hitachi servers with the virtualization and flexibility you need for a wide range of enterprise and cloud applications.



Enterprise Blade Computing With Hitachi Compute Blade 2500: Flexibility, Scalability and Outstanding Performance

Hitachi Compute Blade 2500 (CB 2500) delivers top computing power and performance, as well as unprecedented scalability and configuration flexibility, with the latest Intel Xeon E5 and E7 family processors. It extends the benefits of Hitachi logical partitioning to new areas of the enterprise data center and includes a choice of integrated switched-fabric networking options.

We offer standard- and double-width blade models. The standard-width, dual-socket CB520H blade features the E5-2600 processor series. It has 24 slots for high-speed, DDR4-registered ECC memory DIMMs and supports up to 768GB of shared memory when you use 32GB DIMM modules. You also can add up to two hot-pluggable, front-side-accessible, serial-attached SCSI (SAS), or solid-state disk (SSD) drives, with hardware RAID.

You can enhance your CB520H with either of two expansion blades. Expansion blades work with a CB520H to add storage or I/O capability to the blade. These

expansion blade types allow a Hitachi CB 2500 system to support PCI Express-based flash for application acceleration as well as graphics processing units (GPUs) for virtual desktop deployments.

UCP
Overview

READ

Scale Up to Eight Sockets

The CB520X blade has dual E7 series processors and supports Hitachi multiblade SMP interconnect technology. It lets you scale up to four connected CB520X blades to achieve a single eight-socket SMP system with 192 memory DIMM slots. You can combine CB520X blades in two or four blade configurations and grow incrementally by simply adding blades. As you grow, compute, memory and I/O capacity scale together to support larger workloads and higher memory capacity needs.

The CB 2500 chassis is capable of supporting two eight-socket CB520X blade configurations (see Table 1).

Rapid Deployment

A dedicated LCD control panel and simplified USB-enabled configuration setup allow fast implementation and accelerated time-to-value for your application. Simple, tool-free access speeds configuration, setup or upgrades, and allows optional customer replacement of critical modules for lower service cost for basic maintenance.

Flexible, Scalable Networking

Hitachi Compute Blade 2500 offers both high-speed integrated fabric switching, including high-speed IP networking, Fibre Channel and converged switched-fabric architectures, and direct PCIe to host bus adapter (HBA) connectivity. This flexibility

allows you to tailor your CB 2500 configuration to match the I/O requirements of many applications at the lowest possible price point and to reduce cabling and complexity within your data center.

Secure Logical Partitions

Hitachi embeds the logical partitioning feature, LPAR, in CB520H and CB520X server blade firmware. The combination of Hitachi expertise (derived from a long history of virtualization, extending back to the mainframe) with new Intel virtualization technologies delivers improved performance, reliability and security.

The Hitachi logical partitioning feature provides superior secure isolation in multitenant environments, along with high performance and low overhead compared to software-based virtualization solutions. You can run operating systems, applications and other hypervisors designed for “bare metal” without modification. The system supports four logical partitions per blade and can expand to allow for configuration of up to 30 logical partitions per blade.

The CB 2500 virtualization pedigree, integrated systems management, orchestration software and partner support also make it an ideal platform for VMware, Microsoft® Hyper-V® or Red Hat KVM virtualization. A single chassis can accommodate any combination, including Hitachi logical partitioning (see Table 2).



Unprecedented Adaptability

Hitachi Compute Blade 2500 elegantly integrates network, I/O and server resources into a space-efficient, flexible solution. The rack-mountable, 12U chassis houses up to 14 CB520H server blade modules or up to eight full-width CB520X blades, which you can configure in up to two eight-socket configurations. For I/O versatility, there are two bays for internal network switches, and 28 PCIe Gen 3 expansion slots. With sophisticated, built-in reliability, availability and serviceability features, Hitachi Compute Blade 2500 is an ideal data center platform for consolidation of mission-critical applications, virtualization and cloud computing applications.

TABLE 1. CHASSIS

| | |
|------------------------|--|
| Size | 12U (rack mountable) |
| Dimensions (w x d x h) | 447mm x 830mm x 527mm |
| Server blade modules | Up to 14 dual-processor EP server blade modules; Up to 8 dual-processor EX server blade modules |
| Management modules | 1 standard, 2 maximum (redundant) |
| Cooling fans | 10 standard |
| PCI slots | Up to 28 PCIe Gen 3 low profile |
| LCD touch console | Standard |
| Switch modules | 1 standard, 2 maximum |
| Power supplies | Up to 6 power supply modules (N+1 or fully redundant) 80 PLUS Platinum Efficiency Rating |

TABLE 2. CB 2500 SERVER BLADES

| Item | | Description | |
|----------------------|-------------------------|---|--|
| | | CB520H Server Blade | CB520X Server Blade |
| | |  |  |
| CPU | CPU | Intel Xeon E5-2600 series | Intel Xeon E7-8800 series |
| | Number of sockets | 2 | 2 (per blade), 4-8 (SMP mode) |
| Memory | DIMM type | Registered ECC DDR4 | Registered ECC DDR4 |
| | Number of slots | 24 | 48 (single blade), 192 (8S SMP) |
| | Maximum memory capacity | 768GB (32GB DIMM) | 1.5TB (32GB DIMM) (Single Blade), 6.0TB (32GB DIMM), (8S SMP), 12.0TB (64GB LRDIMM) (8S SMP) |
| Management Interface | BMC/rKVM | SH core based | |
| | Management LAN | 1Gb Ethernet | |
| Onboard I/O | NIC | 4x dual-port 10Gb or 1Gb Ethernet | 2x dual-port 10Gb or 1Gb Ethernet |
| Mezzanine | Host bus | PCIe (Gen. 3) | |
| | Number of slots | 2x mezzanine card slots | 4x mezzanine card slots |
| HDD | RAID | Hardware RAID | |
| | HDD bay | Hot-swappable 2x 2.5-inch SAS HDD/SSD (per blade) | |
| Front Port | KVM | USB connector (USB 3.0 for bootable optical drive)/KVM connector (USB 3.0 x2, VGA) | |
| | Indicator | Power, location, failure | |
| Form Factor | | Standard width | Double width |
| Operating System | | Microsoft® Windows Server® 2012, Red Hat Enterprise Linux, VMware ESX; Hitachi Compute Blade logical partitioning feature | |

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