

Hitachi Compute Blade 2000



Hitachi Compute Blade 2000 blade server is an enterprise-class platform. Featuring a balanced system architecture, it eliminates bottlenecks in performance and throughput. Hitachi Compute Blade 2000 embedded logical partitioning feature supports unprecedented configuration flexibility. It extends the benefits of logical partitioning to new areas of the enterprise data center, including mission-critical application servers and database servers, with minimal cost and maximum simplicity.

Take Enterprise-class Blade Computing to New Extremes

Balanced Performance

Hitachi Compute Blade 2000 supports 2 blade server options that can be combined within the same chassis. Compute power on the X55A2 blade module is delivered by Intel Xeon 5600 Series quad-core or 6-core processors, with up to 2 CPUs per blade. Each blade provides 18 slots for high-speed, DDR3-registered ECC memory DIMMs, allowing up to 192GB of shared memory to be installed per blade. Low voltage memory module options are also available for those who want to reduce power consumption, allowing up to 192GB of shared memory to be installed per blade. The X55A2 blade modules also support the installation of small-form-factor, hot-pluggable, front-side-accessible SAS drives, which are controlled by hardware RAID, allowing up to 2TB of local disk storage.

For the ultimate in performance and scalability, a single X57A2 blade supports up to 2 physical sockets, supported by 6-core or 8-core Intel Xeon 7500 Series and/or 8-core or 10-core Intel E7-8800 Series processors. Each blade provides up to 32 memory slots,

which translates to a maximum of 384GB shared memory per blade. Leveraging Hitachi multiblade SMP interconnect technology, you can scale up resources to 4 X57A2 blades to achieve a single 8-socket (64-way) SMP system with 128 memory slots.

Both the X55A2 and X57A2 blade modules support 2 PCI Express mezzanine slots and 2 standard PCI Express 2.0 (x8) slots via the backplane. When combined with the 2 on-board Gigabit Ethernet ports, this totals up to 162Gb/sec I/O bandwidth. This balanced performance makes it possible to use virtualization to consolidate application servers and database servers for backbone systems, areas where effective consolidation has been difficult.

Secure Logical Partitions

The Hitachi Compute Blade 2000 logical partitioning feature, LPAR, is embedded in the firmware of Compute Blade 2000.

Unlike emulation solutions, the embedded virtualization feature does not degrade application performance; and unlike 3rd-party virtualization solutions, it does not require

additional components, keeping total cost of ownership low. The Basic model supports 2 logical partitions included with the system, and the Enterprise model allows for configuration of up to 60 logical partitions. Hitachi Compute Blade 2000 provides additional flexibility: you can use the embedded logical partitioning feature, Microsoft Hyper-V, VMware, or all 3, in a single system.

Integrated Management

Hitachi Compute Systems Manager (HCSM) is provided at no charge with purchase of Hitachi Compute Blade 2000. HCSM provides agentless server management and system monitoring, including power management, asset and configuration monitoring, and operating-system-level management of virtual servers. HCSM also integrates seamlessly with Hitachi Command Suite for a unified view of IT environments with Hitachi storage.

Unprecedented Features

The rack-mountable 10U chassis houses up to 8 server blade modules. For I/O versatility, there are 6 bays for internal switches and,

uniquely for a blade server, up to 16 slots for standard low-profile PCI Express 2.0 cards. With sophisticated, built-in reliability, availability

and serviceability (RAS) features, Hitachi Compute Blade 2000 reduces the risk of unplanned downtime.



CHASSIS

Chassis	Size	10U (rack mountable)
	Dimensions (w x d x h)	447mm x 820mm x 441mm
	Server Blade Modules	Up to 8 server blade modules
	Management Modules	1 standard, 2 maximum (redundant)
	Cooling Fans	8 standard
	Switch Modules	2 standard, 6 maximum
	PCIe I/O Slots	Up to 16 slots
	Power Supplies	Up to 4 power supply modules (N+1 or fully redundant)

GVAX55A2 SERVER BLADES

Processor	6-core Intel Xeon Processor X5690	6-core Intel Xeon Processor X5680	6-core Intel Xeon Processor X5675	6-core Intel Xeon Processor X5670	
Processor Frequency	3.46GHz	3.33GHz	3.06GHz	2.93GHz	
Processor	6-core Intel Xeon Processor E5649	Quad-core Intel Xeon Processor E5640	Quad-core Intel Xeon Processor E5603	Dual-core Intel Xeon Processor E5503	Quad-core Intel Xeon Processor L5630
Processor Frequency	2.53GHz	2.66GHz	1.60GHz	2.00GHz	2.13GHz
Number of Processors per Blade	Min. 1, Max. 2				
Memory Type	DDR3 Registered DIMM, low voltage 4GB and 8GB plus 16GB DIMMs				
Memory Capacity	Max. 192GB (18 DIMM slots)				
Internal Hard Disk	Up to 4 x 600GB, 10krpm, 2.5 in. SAS disks, hot-pluggable				
Network Interface	2 x integrated Gigabit Ethernet (SERDES) ports				
Internal Expansion Slot	2 internal mezzanine expansion slots				
PCIe Expansion Slot	2 PCIe I/O expansion ports				

GVAX57A2 SERVER BLADES

Processor	Intel Xeon Processor E7-8830	Intel Xeon Processor E7-8860	Intel Xeon Processor E7-8870
Processor Frequency	2.13GHz	2.26GHz	2.40GHz
Processors per Blade [4-blade SMP]	2 [8] maximum	2 [8] maximum	
Cores per Blade [4-blade SMP]	16 [64] cores max.	20 [80] cores max.	
L3 Cache Memory	24MB (shared by 8 cores)	24MB (shared by 10 cores)	30MB (shared by 10 cores)
Main Memory	Supported DIMMs	4GB, 8GB, 16GB DDR3 Registered DIMM	
	Capacity	384GB/blade 1.5TB maximum with 4-blade SMP	
Network interface	1Gb/sec Ethernet (SERDES) x 2 [8] ports (x2)		
I/O Board Slot	In CB 2000 Server Chassis (without I/O slot expansion unit)	PCI Express 2.0 (x 8) x 2 [8] slots (mezzanine) (x2) PCI Express 2.0 (x 8) x 2 [8] slots (dedicated card) (x2)	
	In CB 2000 Server Chassis (with I/O slot expansion unit)	PCI Express 2.0 (x 8) x 2 [8] slots max. (mezzanine) (x2) PCI Express 2.0 (x 8) x 8 [32] slots max. (dedicated card) (x2) PCI Express 2.0 (x 4) x 8 [32] slots max. (dedicated card) (x2)	
	In CB 2000fx Server Chassis (with I/O slot expansion unit)	PCI Express 2.0 (x 8) x 64 slots max. (dedicated card) PCI Express 2.0 (x 4) x 64 slots max. (dedicated card)	

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