

Modular and scalable systems for business flexibility and IT efficiency



Escala M7-700

Designed for virtualized consolidation of business-critical workloads, Escala M7-700 delivers on performance, availability, efficiency and virtualization in a way that is unique in the industry, with unique TurboCore features

Outstanding Price/Performance

The POWER7 processor-based Escala M7-700 mid-range server delivers outstanding price/performance, mainframe-inspired reliability and availability features, flexible capacity upgrades and innovative virtualisation technologies. This powerful 19-inch rack-mount system, which can handle up to 64 POWER7 cores, can be used for database and application serving, as well as server consolidation.

Leading edge virtualization features

PowerVM offers the capability to dynamically adjust system resources based on workload demands so that each partition gets the resources it needs. Active Memory™ Expansion, a new POWER7 technology, enables the effective maximum memory capacity to be much larger than the true physical memory. Innovative compression /decompression of memory content can enable memory expansion up to 100 percent. This can enable a partition to significantly more work or enable a server to run more partitions with the same physical amount of memory.

Superior virtualisation capabilities

The virtualisation capabilities are further enhanced with Partition Mobility, offered as part of the optionally available PowerVM feature. This function is designed to move running partitions from one POWER7 server to another with no downtime.

The TurboCore feature

Escala M7-700 unique feature enables to switch between its standard throughput optimized mode and its TurboCore™ mode, where performance per core is boosted with access to both additional cache and additional clock speed. It allows users to decide how they wish to optimize their system, even after it is installed and operational.

Based on the user's configuration option, any Escala M7-700 system can be booted in standard mode, enabling up to 64 processor cores running at 3.8 GHz or in TurboCore mode, enabling up to 32 processor cores running at 4.1 GHz and twice the cache. Flexibility has once more been redefined.

Bull's competence centers at your service

Bull AIX competence centers were highly involved in the recent hardware and software developments of servers using Power7 and AIX technologies.

Bull's customers are able to take advantage of all of Bull's expertise to define, deploy, implement and monitor their complex infrastructures.

These competence centers offer services ranging from architectural definition and software environment dimensioning to proofs of concept (POC).

These centers intervene more specifically in the fields of the service continuity, middleware and infrastructure rationalization.

PRODUCT SPECIFICATIONS



Architect of an Open World™

Technical specifications – Escala M7-700

ARCHITECTURE	
Building block packaging	19" s – 4U per node
Max no of modules par system / max "U" s	4 / 16U
Number of cores per system	16, 32, 48, 64 at 3.8 GHz / 8, 16, 24, 32 at 4.1 GHz
Processor	64-bit POWER7™
CPU core clock rate	3.8 GHz / 4.14 GHz Turbo Proc card
System Memory per node (min-max)	32GB – 512 GB (1066 MHz DDR3) / 128 GB – 2TB (1066 MHz DDR3)
L2 cache per core	256 KB
L3 cache per core	4 MB (standard mode) / 8MB (TurboCore mode)
VIRTUALIZATION	
Maximum Logical Partitions (10 per core)	160-320(TurboCore mode)/640(standard mode)
Power on Demand (PoD) support	Yes
Advanced Virtualization Features (PowerVM)	Optional
Live Partition Migration	Optional with PowerVM Enterprise Edition
MEDIA BAYS	
Standard per module (DVD RAM)	1
External Tape drive (VXA or DAT)	Yes
DVD RAM	Yes
EXPANDABILITY	
Slots for hot swap PCI-X adapters in base per drawer	6 x PCI express / module
Slots for hot-swap disk drive bays in base per drawer	6 / modules
Extension drawers (disks)	16x 10 PCIe/18 disks
Additional Extension drawers (PCI/disk)	160 PCIe/ 288 disques
Internal disk capacity within system drawer(s)	21,6 TB (48 disk x 450GB)
Bull StoreWay disk subsystems	Optional
Netapp disk subsystems	Optional
EMC2 disk subsystems	Optional
RAS FEATURES	
Chipkill™ ECC, bit-steering memory	Standard
Service processor	Standard (optionally redundant for 16 cores or more)
Hot-plug modules	Standard
Simultaneous repair of all components	Standard
Dynamic Processor Deallocation	Standard
Redundant and hot-plug fans	Standard
Redundant hot-plug power supply	Standard
COMMUNICATIONS CONNECTIVITY	
Ports USB / serial* / HMC	3 / 2 / 2 Standard
4-port 1Gb	Optional
4-port 2x1Gb & 2x10Gb optical	Optional
4-port 2x1Gb & 2x10Gb Copper	Optional
OPERATING SYSTEM	
AIX v5.3/ 6.1	Standard
Linux Red Hat	Optional
HIGH AVAILABILITY	
ARF v5, v6, v7 or HACMP v5.4, PowerHA v5.5	Optional
PERFORMANCE	
Max rPerfs with AIX (number of cores)	3.8 GHz: 195.45 (16), 362.70 (32), 523.89 (48), 685.09 (64) 4.1 GHz: 115.16 (8), 226.97 (16), 326.24 (24), 425.50 (32)
SPECIFICATIONS	
Operating temperature	5 to 35 degrees C
Relative humidity	8% to 80%
Operating voltage	200 to 240V, 80+ compliant
SIZE AND WEIGHT	
Rack module	H 174 mm x W 483 mm x D 863 mm
WARRANTY	
Standard warranty	1 year on site
Warranty extension	Optional

*not available if HMC present

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