Extreme consolidation, optimized TCO

bullion®, the world's fastest x86 enterprise server

bullion is the world's fastest x86 enterprise server, designed specifically for the virtualization of business-critical applications. The technical alliance between Bull and VMware offers a unique quality of service and an optimal flexibility.

bullion
instruments for business

vmware®

intel inside™ XEON®

Meeting the challenges of virtualization

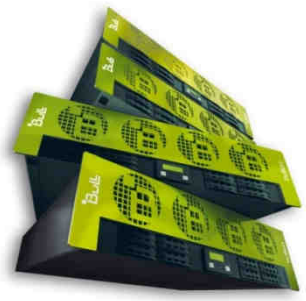
bullion is designed specifically for data center consolidation – even of business-critical applications – enabling organizations to make a major step-change in the evolution of their information systems. As the most powerful x86 enterprise server in the world, **bullion** makes it easy to manage resources and seamlessly adapt systems to changing business needs. Resulting from Bull's know-how in designing mainframe servers, it combines the best available components with an architecture designed to deliver the very best service levels available. Moreover, the technology collaboration between VMware, the world leading business virtualization infrastructure provider, and Bull, guarantees the most trusted and reliable platform for building private clouds and federating to public clouds. Thanks to its native virtualization capabilities, **bullion** offers the flexibility you need to deploy applications of all types quickly and securely.

Reducing the cost of the datacenter

At a time when demanding and business critical applications are a source of high infrastructure cost and low agility, **bullion** reconciles operational excellence with cost of use, increasing significantly the flexibility, availability and quality of service. Besides being the most powerful server in its class, **bullion** offers a competitive TCO, simplifying the datacenter administration and reducing the cost ot the software part. And with its ultra-compacity, its modularity and its low energy consumption design, the benefits of **bullion** go beyond infrastructure rationalization.

Unrivalled features

- **bullion** is a unique platform, designed specifically for the virtualization of business-critical applications:
- At least, twice as powerful as any other x86 server
- Total linear performance, from four to 16 CPUs, offering guaranteed application workload scalability even in the most demanding environments
- 100% memory reliability, backed by Bull's experience in mainframe development and Unix environments
- Quick, secure deployment of business-critical applications and service continuity backed by the flexibility of VMware tools
- Ultra-compact design and high levels of with an "Active/Passive" PSU developed by Bull, making **bullion** the essential choice for organizations looking to drive down their electricity consumption
- Optimized TCO, with VM concentration and **bullion**'s outstanding energy performance and "Pay as you grow" approach, with **bullion**'s scalability.



Unrivalled scalability and performance capabilities

DESIGN	
Form Factor	19" 3U/ module Max 4 modules/system (12U)
PROCESSEURS	
Number	2-16 sockets, max 160 cores and 320 threads
Type	Intel® Xeon® series E7-4800, Supports 6, 8 or 10 cores
L2 Cache	Up to 30MB shared cache
ARCHITECTURE	
Chipset	Intel® 7510 Chipset. •Bull Coherence Switch (BCS) for extension from 4 to 16 sockets •X-QPI protocol between BCS modules •Intel® QPI protocol between CPU sockets
Quick Path Interconnect	Max 6,4GT/s
MEMORY	
Min/max	min: 64GB, max configuration: 2TB for ESX, 4TB for Memory Mirroring. (with 16 GB DIMM's).
Type	DDR3-1066MHz, RDIMM
Memory slots	256x slots in max. configuration, 64x per module
I/O SLOTS	
BUS slots	•4x PCIe Gen2 x16 and 20x PCIe Gen 2x8 in max configuration • 1x PCIe Gen2 x16 and 5x PCIe Gen2x8 per module
STORAGE	
Drive bays	Up to 8x HDD's /system
Hard drives	300GB, 600GB, 900GB 2.5" SAS 10Krpm, 146GB 2.5" SAS 15Krpm 120GB, 250GB 2.5" SSD SATA
Storage Expansion Unit	EMC, NetApp, or other connected SAN support
STORAGE CONTROLLER	
Controller for internal storage SAS/SATA RAID	Optional: SAS RAID 0,1,5,10 controller - 512MB cache & BBU
Controller for external storage SAS/SATA	LSI SAS 9200-8e, for Optima 1600
COMMUNICATIONS	
Embedded NIC	Intel® 82576 Gigabit Ethernet, 8x dual ports (4 ports/module)
Optional NICs	1GbE :Intel I350-T2, I350-T4 10GbE: Intel X520-SR2, X520-T2,
Optional HBAs	8Gb/s: Emulex LPE1250,LPE12002
Optional IO Accelerators	PCIe SSD Flash: sTec s1100 series
VIDEO	
Video Controller	Via iBMC
Memory	8MB

SECURITY	
2-level password	Yes
Front door/Intrusion protection	Yes
Trusted Platform Module	Yes
PORTS ENTRÉES/SORTIES	
USB ports	2
PS/2port (mouse, keyboard)	USB or iBMC
Ethernet port	1x Ethernet port for System Management, with : -remote KVM over IP -remote redirect CD/DVD over IP -control over system at any state.
ALIMENTATION	
Hot-plug PSU	1+1 standard
Power supply number	2, redundant Passive/active power-supply solution with ultra-capacitor
Power type	Label 80+ Platinum 94% efficient
Power consumption	1600watt w/PFC
Auto-sensing	220V 60/50Hz
VENTILATION	
FAN specifications	8xHot plug 1+1 redundant per module
PHYSICAL SPECIFICATIONS	
Size (HxLxP)	520 (12U) x440mm (19") x750mm (max). *Recommend to use Bull racks*
Weight	180kg for max configuration (45kg per module)
Operating constraints	15°C to 30°C, gradient 5°C/h, 35% to 60%, gradient 5%/h
OS & SOFTWARE	
Management Software	Bull System Manager and iCare
VMware Hypervisor	ESXi embedded or Vsphere
SYSTEM MANAGEMENT	
BMC	IPMI 2.0
Remote Management	Standard via on-board iBMC
WARRANTY & SERVICES	
Standard warranty	3 years on site at day+1 with CRU components
Warranty extension	Optional
Other services	•IT infrastructures Advisory, energy audits, •Server consolidation, VMware HA & DRS implementation, back-up in VMware environment, •HA, capacity & performance management, •Installation & integration services
REGULATORY & SAFETY	
Regulatory compliance	CE (FCC, UL)

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