

The most advanced workspace for fast data

bullion™ S16

By leveraging its unique know-how in mission-critical, highly performant servers design, Bull brings to the market a complete range of x86 servers, bullion™. bullion reaches the highest level of quality of service, performance, availability and scalability, with one goal in mind, be the best answer to meet the 3 big challenges an IT Department is facing: Data Center optimization, IT modernization, Big Data.



Optimize your Data Center

Data Centers have to accompany the rising of Cloud, Big Data and mobility, whilst guaranteeing the right levels of service. bullion is the right answer to consolidate, rationalize and virtualize Data Centers: efficiency generator, designed for the private cloud, targeting next generation Software Defined Data Centers (SDDC), bullion dramatically enhances users' financial equation, providing more performance and agility.

Modernize your IT

Ensuring the continued existence of application environment is a key success factor for any IT modernization project. It has to be based on highly reliable and performant, open and scalable platforms or servers. With bullion, you have it. New usage trends of the digital world are now at your reach: Cloud, BYOD, mobility, Big Data. Along with bullion, Bull proposes Liber, its unique methodology to industrialize migration of legacy applications.

Make sense of your data

Big Data is now in everyone's mind. How shall I properly manage the never ending growth of data volume, velocity, variety, and transform them into an asset for my organization? With its unique memory capacity, bullion, the ideal platform for Big Data, provides unmatched features to analyze data in realtime: you are ready for the In-Memory journey.

A powerful and modular range

The bullion server range consists of 4 complementary models, sharing the same innovative technology, embarking from 2 to 16 Intel® Xeon® E7 v2 processors, with a maximum memory capacity of 24 TB, unmatched on the market. Depending on the needs, the users simply add 3U computing modules, connected via the Connecting Box, developed by Bull engineers to get rid of cabling. For more agility in configuring, bullion servers propose innovative design with hot plug memory and I/O blades.

bullion S16 in brief

The bullion S16 server, with eight 3U modules, perfectly fits in with the range dynamics, thanks to its capacity of up to 16 processors and 24 TB of memory. It provides up to 240 cores and 480 threads to host VM clusters, critical database or In-Memory applications.

Dedicated Bull services

Coming with the bullion range, Bull proposes a full range of added value services, such as Service Assurance, to optimize operations, and Liber, to modernize the application environment. Our best experts provide specific offers, including energy efficiency audits or architecture consulting. Bull's briefing Centers are open to share field experience on real case studies with dedicated workshops and hands-on sessions.

Meet our experts at the Bio Demo Center:

<http://www.biodemocenter.com>

Technical Specification

DESIGN	
Form Factor	19" 24U
PROCESSORS	
Number	From 2 to 16 sockets, max 240 cores and 480 threads
Type	Intel® Xeon® E7 v2 Family Supports 6, 8, 10, 12 or 15 cores
L3 Cache	Up to 37.5MB shared cache
ARCHITECTURE	
Chipset	Intel® C602J Chipset
Quick Path Interconnect	Max 8GT/s
Scalability	From 2 to 16 sockets, via BCS2 (Bull Coherence Switch 2)
Hardware Partitioning	Yes
MEMORY BLADES	
Min/max	Min: 48GB, max config: 24TB
Type	DDR3, RDIMM, LR-DIMM
Memory blades capacity	48GB, 96GB, 192GB, 384GB
Memory blade	Up to 64 blades, 6 slots/blade
Memory availability	Hot plug memory blades
I/O BLADES	
BUS	PCIe Gen3 x8
I/O blades	Up to 56, hot swap
I/O availability	Hot plug blades
I/O BLADE TYPES	
NIC I/O blade	1GbE: 2 or 4 ports per I/O blade 10GbE: 2 ports per I/O blade
HBA I/O blade	8Gb/s: 2 ports per I/O blade 16Gb/s: 2 ports per I/O blade
Flash I/O blade	SSD Flash 1TB
SAS I/O blade	6Gb/s: 2 ext. ports per I/O blade
STORAGE	
Drive bays	HDD: 2, up to 16*, hot plug
Hard drives	300GB, 600GB 2.5" SAS 10Krpm, 146GB, 300GB 2.5" SAS 15Krpm 400GB, 800GB 2.5" SSD SAS
Storage Controller (optional)	I/O blade with RAID0/1/10
SAN	EMC, NetApp, Bull Optima
EMBEDDED I/O PORTS	
NIC	1Gb Ethernet ports: 2, up to 16*
Management port	Up to 8x Ethernet port for System Management*
PS/2port (mouse, keyboard)	USB or iBMC
USB ports	3, up to 24*
VIDEO	
Video Controller	Via iBMC
Memory	8 MB

* by using hardware partitioning

SECURITY	
2-level password	Yes
POWER SUPPLY	
Hot-plug PSU	1+1
Power supply number	Up to 16, redundant Active/passive power-supply solution with ultra-capacitor (UCM)
Power type	Label 80+ Platinum, 94% efficient
Power consumption	750watt or 1600watt w/PFC (PF=0.95)
Auto-sensing	220V 60/50Hz
COOLING	
FAN specifications	Up to 48xHot plug, n+1 redundant
PHYSICAL SPECIFICATIONS	
Size (HxLxP)	1040 (24U) x445mm (19")x820mm (max). <i>Recommended to use Bull racks</i>
Weight	Up to 360kg
Operating constraints	10°C to 35°C, gradient 20°C/h, 20% to 60%, gradient 5%/h
OS & SOFTWARE	
Management Software	Bull System Manager, Bull iCare, Bull Platform Manager
Operating System	Red Hat® Enterprise Linux® (12TB), VMware vSphere® ESXi, Microsoft® Windows Server
SYSTEM MANAGEMENT	
BMC	IPMI 2.0
Remote Management	Standard via on-board iBMC
AVAILABILITY & RAS FEATURES	
Memory RAS features	ECC, Enhanced SDDC, Enhanced DDDC, Memory Sparing, MCA recovery, hot-add memory blade
Hot plug devices	Memory blades, I/O blades, hard drives, power supplies, fans, UCM.
Redundancy	Power supplies, fans, QPI paths, BCS2 connections (XQPI paths)
Serviceability	Hot add memory blades
WARRANTY & SERVICES	
Standard warranty	3 years warranty
Warranty extension	Bull Global Care
Other services	<ul style="list-style-type: none"> •IT infrastructures Advisory, energy audits •Service Assurance •HA, capacity & performance management •Installation & integration services
REGULATORY & SAFETY	
Regulatory compliance	CE, UL/CSA, RoHS