Oracle Exalytics X5-4

Oracle Exalytics In-Memory Machine X5-4 is the industry’s first engineered system for in-memory analytics that delivers extreme performance for Business Intelligence and Enterprise Performance Management applications. Built using best-in-class hardware, market-leading business intelligence software and in-memory database technology, Oracle Exalytics is an optimized system that delivers answers to all your business questions with unmatched speed, intelligence, simplicity and manageability. Requiring no application redesign, Oracle Exalytics can be deployed in existing IT environments independently or in conjunction with Oracle Exadata, Oracle Exalogic, Oracle Big Data Appliance and/or Oracle SuperCluster to enable extreme performance and a compelling business user experience. Oracle Exalytics X5-4 is the ideal platform for running and consolidating business analytics applications that require extreme performance coupled with the highest reliability, availability, and serviceability features.

Engineered for Analytics

Oracle Exalytics is a complete solution that includes best-in-class hardware, an enterprise Business Analytics platform and In-Memory analytics software optimized to work together. With its unique features, the Exalytics In-Memory Software delivers in-memory optimizations and features that enables Oracle BI Foundation Suite and Enterprise Performance Management applications to take full advantage of the Exalytics in-Memory Machine. Exalytics In-Memory Software consists of:

1. OBIEE In-Memory Acceleration and advanced In-Memory data caching capabilities
2. Essbase Hardware Specific Acceleration and In-Memory optimizations
3. In-Memory Data Caching
4. BI Publisher Accelerator

Powered by four 18-core, 2.6 GHz Intel® Xeon® Processor E7-8895 v3, uniquely engineered for Oracle, with up to 3 TB of memory, 4.8 TB of solid-state drive NVMe Express (NVMe) flash, and 7.2 TB of hard disk drives, Oracle Exalytics X5-4 provides a perfect balance of compute power, memory density, and I/O footprint. Oracle Exalytics X5-4 continues to deliver elastic computing capabilities that allows for dynamic handling of varying workloads, without changing physical components or the need for a system level reboot. The ability to choose between maximum user concurrency and single-thread performance in a single design makes Oracle Exalytics the most flexible Business Analytics platform on the market, with the highest uptime.

With more than a 100 different products and applications certified to run on Oracle
ORACLE DATA SHEET

- Leading in-memory database for speed of thought analytics
- Adaptive intelligent in-memory caching
- Optimized for Oracle Database 12c In-Memory Option & Oracle Essbase
- Certified for Oracle BI & EPM applications
- Certified for Oracle Big Data Discovery

KEY BENEFITS
- No-Limits, extreme performance for business intelligence and enterprise performance management applications
- Rich visualizations deliver insights at the speed of thought
- First engineered system for analytics delivers unmatched speed, intelligence, simplicity and manageability
- Adaptive in-memory cache intelligently caches the hottest data
- Fast deployment of analytics applications
- Maximize IT productivity and minimize operational expenses by running Oracle software on Oracle Engineered Systems

RELATED PRODUCTS
- Oracle BI Foundation Suite
- Oracle BI Enterprise Edition
- Oracle Essbase
- Oracle Enterprise Business Planning
- Oracle Financial Close and Reporting
- Oracle Big Data Discovery
- Oracle BI Publisher
- Oracle Database In-Memory Option
- Oracle BI Applications
- Oracle Exadata
- Oracle Big Data Appliance

Oracle Exalytics X5-4 Specifications

Exalytics, Oracle Exalytics delivers the widest range of reporting and analysis capabilities on a single, integrated system including hardware, software & storage, making it the best platform for enterprise consolidation and virtualization for business analytics applications.

- Oracle Business Intelligence Foundation Suite provides comprehensive and complete capabilities for business intelligence, including enterprise reporting, dashboards, ad hoc analysis, industry-leading multi-dimensional OLAP server, scorecards, and predictive analytics on an integrated platform.

- Oracle Enterprise Performance Management (EPM) Platform unifies performance management processes and helps bridge the gap between goals and results and enables organizations to break down the barriers to success by linking business goals to results and therefore unlocking business potential.

- Oracle Database 12c In-Memory Option is designed for mixed workloads. Its unique dual-format approach accelerates analytics while ensuring that the most up-to-date data is constantly available without the need to move data out to a separate database.

- Oracle Business Intelligence Applications are complete, prebuilt BI solutions that deliver intuitive, role-based intelligence throughout an organization. These solutions enable organizations to gain more insight and greater value from a range of data sources and applications including Oracle E-Business Suite, PeopleSoft, JD Edwards, Siebel, and third party systems such as SAP.

- Oracle Endeca Information Discovery is a complete enterprise data discovery platform that combines information of any type, from any source, empowering business user independence in balance with IT governance. Now organizations can access the information they need, when they need it, to make business decisions they can trust.

- Oracle Big Data Discovery, a stunningly visual, intuitive product that enables you to leverage the power of Hadoop and turn raw data into business insight in minutes—without learning complex products or relying only on specialists.

The Oracle Exalytics In-Memory Machine hardware is a single server that is optimally configured for in-memory analytics for business intelligence workloads and includes powerful compute capacity, abundant memory, and fast networking options.

For IT, Oracle Exalytics provides scalability and high performance as the business grows and expands. It also ensures the security of critical business information so that confidential information doesn’t end up in the wrong hands or get leaked externally. In addition it integrates with existing IT investments, is cost-effective to operate, and provides flexible deployment options to match the organization’s IT strategy – whether that's on-premise, via the cloud, or a hybrid. Multiple Oracle Exalytics machines can be clustered together to expand available memory capacity and to provide high availability.

The following table describes the specific hardware and software components of the Exalytics In-Memory Machine.
ARCHITECTURE

Processor
- Four Intel® Xeon® processor E7-8895 v3 processors
- 18 cores per processor

Main Memory
- 2 TB of memory with sixty four 32 GB DDR3 ECC registered low-voltage LRDIMMs, upgradable up to 96 DIMMs (24 DIMMs per processor) to a maximum memory capacity of 3 TB

INTERFACES

Networking and Standard I/O
- Four 10 GbE on-board Ethernet copper ports
- Four 10Gbps Ethernet ports based on two Intel 82599 10GbE controller
- Two QDR (40Gb/s) InfiniBand ports
- Two 16Gb Dual-Port Universal Fiber Channel PCI-Express Card (16GB FC or 10GB FCoE)

Standard I/O
- Dedicated 10/100/1000BaseT Ethernet network management port
- RJ-45 serial management port
- VGA 2D graphics controller embedded: 8MB
- Six USB 2.0 ports (two front, two rear, two internal)

Storage
- Six 1.2 TB 2.5” SAS-3 front-accessible, hot-swappable drive bays (7.2 TB total)
- Three 1.6 TB NVMe PCIe Cards (4.8 TB total)
- 12 Gbps RAID HBA supporting levels: 0, 1, 5, 6, 10, 50, 60 with 1 GB of DDR3 onboard memory with flash memory backup via embedded internal SAS3 HBA PCIe Card

Graphics
- VGA 2D graphics controller embedded: 8MB
- Resolution: 1,600 x 1,200 x 16 bits @ 60 Hz via the rear HD15 VGA port (1,024 x 768 when viewed remotely via Oracle ILOM)

SYSTEMS MANAGEMENT

Interfaces
- Dedicated 10/100/1000BaseT Ethernet network management port
- In-band, out-of-band, and sideband network management access via any one of the four main ports on the server or the dedicated port
- RJ-45 serial management port

Service Processor
Oracle Integrated Lights Out Manager (Oracle ILOM) provides:
- Remote keyboard, video, mouse redirection
- Full remote management through command-line, IPMI, and browser interfaces
- Remote media capability (USB, DVD, CD, ISO image)
- Advanced power management and monitoring
- Active Directory, LDAP, RADIUS support
- Dual Oracle ILOM flash
- Direct virtual media redirection
- FIPS 140-2 mode using OpenSSL FIPS certification (#1747)

Monitoring
- Comprehensive fault detection and notification
- In-band and out-of-band SNMP monitoring V1, V2c, V3
- Syslog and SMTP alerts
- Automatically create a service request for key hardware faults with Oracle's automated service request (ASR)

Oracle Enterprise Manager Ops Center
- Deployment and provisioning of server bare metal
• Cloud and virtualization management
• Inventory control and patch management
• OS observability for performance monitoring and tuning
• Automated service request generation
• Connects to Oracle Enterprise Manager Cloud Control application management
• Enables control of native Oracle Solaris, Oracle Linux, Red Hat Linux, SUSE Linux, and Microsoft Windows when running in virtual machines

SOFTWARE

Operating Systems
• Oracle Enterprise Linux

Virtualization
• Oracle VM

ENVIRONMENT

• Operating temperature: 5°C to 35°C (41°F to 95°F) at sea level; 5°C to 31°C (41°F to 88°F) at altitude
• Nonoperating temperature: -40°C to 68°C (-40°F to 154°F)
• Operating relative humidity: 10%–90% relative humidity, noncondensing
• Nonoperating relative humidity: 93% relative humidity, noncondensing
• Acoustic noise: LwAd: 8.9 B (idle and operating, room temp.), 8.9 B (max. ambient); LpAm: 75 dBA (bystander position, max. ambient)

POWER

• Rated line voltage: 200–240 VAC
• Rated input current: 200–240 VAC 10A
• Two hot-swappable rear accessible power supplies with N+N redundancy
• Power Calculator

REGULATIONS

• Product Safety: UL/CSA 60950-1, EN 60950-1, IEC 60950-1 CB Scheme with all country differences
• EMC: Emissions : FCC 47 CFR 15, ICES 003, EN55022, EN61000-3-2, EN61000-3-3
• Immunity: EN55024

CERTIFICATIONS

• North America Safety (NRTL), European Union (EU), International CB Scheme, BIS (India), BSMI (Taiwan), RCM (Australia), MSIP (Korea), VCCI (Japan)
• Other: Altitude:
  • Operating altitude: 0 m to 3,000 m* (0 ft to 9,840 ft) maximum ambient temperature is derated by 1 degree C per 300 m above 900 m, except in China where regulations may limit installations to a maximum altitude of 2,000 m.
  • Nonoperating altitude: 0 m to 12,000 m (0 ft to 40,000 ft)

DIMENSIONS AND WEIGHT

• Height: 129.9 mm (5.1 in.)
• Width: 436.5 mm (17.2 in.)
• Depth: 732.0 mm (28.8 in.)
• Weight: 40 kg (88 lb.) max.

INSTALLATION KITS

• Tool-less rack mounting slide rail kit
• Cable management arm
Warranty

Oracle Exalytics X5-4 comes with a one-year warranty. For more information, visit oracle.com/sun/warranty for Oracle's global warranty support.

CONTACT US
For more information about Oracle Exalytics X5-4, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.

Hardware and Software, Engineered to Work Together

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