ORACLE DATA SHEET

Oracle Database Appliance X6-2L

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DATABASE APPLIANCE

The Oracle Database Appliance saves time and money by simplifying deployment, maintenance, and support of database solutions for organizations of every size. Optimized for the world's most popular database—Oracle Database—it integrates software, compute, storage, and network resources to deliver database services for a wide range of custom and packaged online transaction processing (OLTP), in-memory database, and data warehousing applications. All hardware and software components are engineered and supported by Oracle, offering customers a reliable and secure system with built-in automation and best practices. In addition to accelerating the time to value when deploying database solutions, the Oracle Database Appliance offers flexible Oracle Database licensing options and reduces operational expenses associated with maintenance and support.

KEY FEATURES

- Fully integrated and complete database appliance
- Oracle Appliance Manager
- Web Console User Interface
- Oracle Database Enterprise Edition
- Single-instance Oracle databases
- Oracle Automatic Storage Management
- Oracle ASM Cluster File System
- Oracle Linux
- Intel® Xeon® E5-2630 v4 CPUs
- 10GBase-T and 10GbE SFP+ network connectivity
- NVM Express (NVMe) solid-state drives

Fully Integrated System Optimized for Oracle Database

The Oracle Database Appliance X6-2L is engineered as a single 2U rack-mountable server that provides the performance benefits associated with the latest generation Intel® Xeon® processors and NVM Express (NVMe) flash storage. The Oracle Database Appliance X6-2L offers two 10-core Intel® Xeon® processors E5-2630 v4 and 256 GB of main memory, expandable up to 768 GB. The appliance comes configured with 19.2 TB of high-bandwidth NVMe flash for data storage and offers the option to expand the raw storage capacity to 28.8 TB of NVMe flash, making it an optimal choice for large databases and database consolidation. The appliance also comes standard with 10GBase-T and 10GbE SFP+ network connectivity.

The Oracle Database Appliance X6-2L has Oracle best practices built-in and is optimized for Oracle databases. The number of processor cores, amount of main memory, and NVMe flash storage capacity in the fully integrated appliance is balanced to provide optimal database performance for a wide range of enterprise applications. Oracle Database sizing templates ensure that the system resources are properly allocated for database workloads running on the appliance. The Oracle Database Appliance X6-2L also incorporates NVMe flash storage to increase database performance and system reliability. Database workloads can realize a significant improvement in input/output operations per second (IOPS) and bandwidth while achieving extremely low latency and CPU overhead with NVMe flash storage over similar systems configured with conventional SAS solid-state drives.

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KEY BENEFITS

- Oracle Engineered Systems for every organization
- World's #1 database
- Simple, optimized, and affordable
- Integrated hardware and software
- Built-in automation and best practices
- Ease of deployment, patching, management, and diagnostics
- Oracle's NVMe design to accelerate database performance
- Cost-effective consolidation platform
- Capacity-on-demand licensing
- Single-vendor support

Ease of Deployment, Management, and Support

To help customers easily deploy and manage their databases, the Oracle Database Appliance features the Appliance Manager software to simplify the provisioning, patching, and diagnosis of the system. The Appliance Manager feature greatly simplifies the deployment process and ensures that the database configuration adheres to Oracle's best practices. A web-based deployment console quickly gathers all the configuration parameters to streamline provisioning with a few easy steps. The Appliance Manager also drastically simplifies maintenance by patching the entire appliance, including all firmware and software, using an Oracle-tested patch bundle engineered specifically for the appliance. Simply select the appropriate patch bundle in the web-based patching console to update the entire system. Built-in diagnostics continually monitor the appliance and detect component failures, configuration issues, and deviations from best practices. In addition, the Oracle Database Appliance Auto Service Request (ASR) feature can automatically log service requests with Oracle Support to help speed resolution of issues.

Capacity-On-Demand Licensing

The Oracle Database Appliance X6-2L supports Oracle Database Enterprise Edition and offers customers a unique capacity-on-demand database software licensing model to quickly scale from 2 to 20 processor cores without any hardware upgrades. Customers can deploy the system and license as few as 2 processor cores to run their database servers, and incrementally scale up to the maximum of 20 processor cores. This enables customers to deliver the performance and reliability that enterprise business users demand, and align software spending with business growth.

Oracle Database Appliance X6-2L Specifications

System Architecture

- *One server per system*

Processor

- *Two Intel® Xeon® processors*
- *E5-2630 v4 2.2 GHz, 10 cores, 85 watts, 25 MB L3 cache, 8.0 GT/s QPI, DDR4-2133*

Cache

- *Level 1: 32 KB instruction and 32 KB data L1 cache per core*
- *Level 2: 256 KB shared data and instruction L2 cache per core*
- *Level 3: 25 MB shared inclusive L3 cache per processor*

Main Memory

- *256 GB (8 x 32 GB)*
- *Optional memory expansion to 512 GB (16 x 32 GB) or 768 GB (24 x 32 GB)*

INTERFACES

Standard I/O

- *Four onboard auto-sensing 100/1000/10000 M Base-T Ethernet ports*
- *USB: six 2.0 USB ports (two front, two rear, and two internal)*
- *Expansion bus: six PCIe 3.0 slots*
  - *PCIe slot 1: dual-port 10GbE SFP+ PCIe card*
  - *PCIe slot 2: NVMe Switch PCIe card*
  - *PCIe slot 3: dual-port internal SAS HBA*
  - *PCIe slot 4: empty slot*
  - *PCIe slot 5: NVMe Switch PCIe card*
  - *PCIe slot 6: NVMe Switch PCIe card*
  - *No additional cards may be added*

Storage

- *Two small form factor rear hot-swappable 480 GB SATA SSDs (mirrored) for Operating System and Oracle Database software*
- *Six small form factor front NVM Express (NVMe) SSDs for data storage*
  - *19.2 TB raw capacity, 9.6 TB (double-mirrored) or 6.4 TB (triple-mirrored) usable capacity*
- *Optional expansion to nine small form factor front NVM Express (NVMe) SSDs for data storage*
  - *28.8 TB raw capacity, 14.4 TB (double-mirrored) or 9.6 TB (triple-mirrored) usable capacity*

Graphics

- *VGA 2D graphics controller embedded with 8 MB of dedicated graphics memory*
- *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 10/100/1000 Base-T network management port*
- *In-band, out-of-band, and side-band network management access*
- *RJ45 serial management port*

Service Processor

Oracle Integrated Lights Out Manager (Oracle ILOM) provides:

- *Remote keyboard, video, and mouse redirection*
- *Full remote management through command-line, IPMI, and browser interfaces*
- *Remote media capability (USB, DVD, CD, and ISO image)*
- *Advanced power management and monitoring*
- *Active Directory, LDAP, and 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, out-of-band, and side-band SNMP monitoring v1, v2c, and v4*
- *Syslog and SMTP alerts*
- *Automatic creation of a service request for key hardware faults with Oracle automated service request (ASR)*

SOFTWARE

Operating Systems

- *Oracle Linux (Pre-Installed)*
- *Oracle Appliance Manager (Pre-Installed)*

Oracle Database Software (Licensed Separately)

- *Choice of Oracle Database software*
  - *Oracle Database 11g Enterprise Edition Release 2 and Oracle Database 12c Enterprise Edition*
- *Support for:*
  - *Oracle Database Enterprise Edition database options*
  - *Oracle Enterprise Manager Management Packs for Oracle Database Enterprise Edition*

ENVIRONMENT

- *Operating temperature: 5°C to 35°C (41°F to 95°F)*
- *Nonoperating temperature: -40°C to 70°C (-40°F to 158°F)*
- *Operating relative humidity: 10% to 90%, noncondensing*
- *Nonoperating relative humidity: up to 93%, noncondensing*
- *Operating altitude: up to 9,840 feet (3,000 m*) maximum ambient temperature is derated by 1°C per 300 m above 900 m (*except in China where regulations may limit installations to a maximum altitude of 6,560 feet or 2,000 m)*
- *Nonoperating altitude: up to 39,370 feet (12,000 m)*
- *Acoustic noise: 8.1 Bels A-weighted operating, 5.8 Bels A-weighted idling*

POWER

- *Two hot-swappable and redundant power supplies, rated 91% efficiency*
- *Rated line voltage: 100 to 240 VAC*
- *Rated input current 100 to 127 VAC 12 – 8.5 A and 200 to 240 VAC 5.7 A*

For more information on power consumption, go to: Oracle Server X6-2L Power Calculator

REGULATIONS

- *Product Safety: UL/CSA-60950-1, EN60950-1-2006, IEC60950-1 CB scheme with all country differences*
- *EMC*
  - *Emissions: FCC CFR 47 Part 15, ICES-003, EN55022, EN61000-3-2, and EN61000-3-3*
- *Immunity: EM55024*

CERTIFICATIONS[1]

- *North America Safety (NRTL)*
- *European Union (EU)*
- *International CB Scheme*
- *BIS (India)*
- *BSMI (Taiwan)*
- *RCM (Australia)*
- *CCC (PRC)*
- *MSIP (Korea)*
- *VCCI (Japan)*

[1] All standards and certifications referenced are to the latest official version. For additional detail, please contact your sales representative. Other country regulations/certifications may apply.

EUROPEAN UNION DIRECTIVES

- *2006/95/EC Low Voltage Directive*
- *2004/108/EC EMC Directive*
- *2011/65/EU RoHS Directive*
- *2012/19/EU WEEE Directive*

DIMENSIONS AND WEIGHT

- *Height: 87.6 mm (3.5 in.)*
- *Width: 445.0 mm (17.5 in.)*
- *Depth: 737.0 mm (29.0 in.)*
- *Weight: 29.0 kg (64.0 lb.) fully populated*

INCLUDED INSTALLATION KITS

- *Tool-less rackmounting slide rail kit*
- *Cable management arm*

CONTACT US

For more information visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.