

ClearPath Libra Model 400 Server

Specification Sheet



The Unisys ClearPath Libra Model 400 Server is an open mainframe system for organizations with core business solutions that demand uncompromised transaction integrity, impenetrable security, and uninterrupted transaction processing for a broad range of computing environments. This server delivers all of the traditional mainframe attributes, plus valuable new business characteristics such as diverse computing workloads, flexible buying models, popular software standards, powerful integration middleware, and excellent productivity economics.

The Unisys ClearPath Libra Model 400 Server is the fully featured, next-generation entry and mid-range Quad-Core Intel® Xeon® processor-based mainframe system for MCP environments. This Libra Series Server running MCP and Windows operating systems delivers all of the traditional mainframe attributes, a wealth of valuable business characteristics, and a flexible modular design. Object-code compatible with all members of the MCP family of products, the Libra Model 400 Server provides both the high speed and high reliability of a Unisys online transaction processing environment and the ease of use and personnel productivity offered by the Microsoft® Windows® 2003 Enterprise Edition x64 operating environment.

Libra Model 400 Servers support a high level of infrastructure flexibility for the agile enterprise, including a choice of hardware technologies, operating environments and applications, growth options, integration software, and even buying models. The overall design maximizes the return on your current IT investment and gives you the agility to quickly and effectively respond to new challenges and business opportunities.

Product Highlights

- New-generation Intel® Quad-Core processors
- New hardware with high-availability features
- High-performance interoperability
- Performance Redistribution
- Capacity-on-Demand
- Flexible software licensing options

New Levels of Flexibility

ClearPath Libra Model 400 Servers give you an operating environment that is flexible, powerful, and compatible with your existing MCP-based solutions. Unisys has revolutionized the mainframe by combining a business-critical environment with open system capabilities in our ClearPath Servers. ClearPath MCP applications and data can be integrated with external homogeneous servers, databases, and applications using virtually any of the industry's most popular technologies.

The Libra Model 400 Server delivers many new options and features for all businesses:

- Improved growth path through vertical scalability
- Capacity-on-Demand options that help you manage your changing capacity requirements. Designed to revolutionize the way you buy information processing power, Capacity-on-Demand delivers new agility for managing your dynamically changing workloads, including unpredictable spikes in demand and emergency/disaster recovery situations. Several different buying options, licensed on an annual basis, are offered for achieving the most flexibility in your server operations. The ability to enable reserve capacity is key to supporting dedicated or shared disaster recovery systems with remote secondary systems typically used for development. Three Capacity-on-Demand options are available:
 - For Disaster Recovery, you pay only for incremental capacity for a period of 30 days—an option that enables you to easily handle major unplanned operational disruptions.
 - The 12-day Emergency Recovery option helps you address less serious outages.
 - The Temporary Workload option allows you to scale processing capacity up and down. The capacity is provided in daily increments of five to 365 days to meet any unplanned peak load demand.
- Performance Redistribution lets you reallocate system processing power among existing Central Processing Modules (CPMs) and partitions. For maximum processing efficiency, the performance of a Libra Model 400 Server can be easily allocated across the installed CPMs. For maximum processing power, system performance can be allocated to a minimum number of CPMs.
- Many Unisys ClearPath client systems are general-purpose production systems and independent development systems. With the Libra Model 400 Server, you can consolidate your production and development systems into one cabinet and take advantage of specially priced development workloads. This not only reduces the cost of your overall system, but also enables you to operate the environment more efficiently.
- Align your IT with your business requirements with the Unisys Enterprise Application Environment (EAE), which enables you to quickly generate new applications from business rules and definitions. EAE is a rapid application development and deployment environment that gives you a competitive advantage in that you can react quickly to opportunities and beat your competition to market.
- You can run your ClearPath MCP applications on Intel® processors with your Libra Model 400 Server. You do not have to modify or recompile your MCP applications in order to run them on Intel® processors. The Virtual Machine for MCP (MCPvm) software does everything for you simply by isolating your applications from the Intel® processor architecture.
- High availability depends to a great extent on server design. The Libra Model 400 Server features two hot-plug and redundant power supplies, redundant hot-plug fans, and Serial-attached SCSI (SAS) hot-plug hard drives. SAS RAID disk drives notify you if a hard drive is going to fail, so you can proactively replace it. You can also use the embedded dual Gigabit NICs in a redundant, load-balancing configuration while at the same time increasing system throughput.
- Locum SAFESurvey is a security assessment tool developed by Locum Software Services Limited for use with ClearPath MCP systems. Locum SAFESurvey is integrated with the MCP SecurityCenter. Locum SAFESurvey provides security administrators and auditors with a series of detailed reports that analyze and highlight areas where system security might be at risk. Running Locum SAFESurvey on a regular basis helps to keep management informed of the current status of the security environment on each system. This information, which is included in several reports, enables management to take the necessary actions before security breaches occur. The Locum SAFESurvey reports are clear, concise, and presented in a non-technical format.

- Workload Management for ClearPath MCP is a management tool that simplifies the process of managing workloads. Workload Management introduces the concept of managing MCP workloads using business metrics and skills instead of traditional technical operating skills to optimize service-level priorities. By managing MCP workloads using business metrics, ClearPath Servers provide critical new capabilities for alignment of IT resources with key business objectives. The ability for the business to specify the objectives for the infrastructure to deliver insures a more agile response to the dynamic changes in business priorities that are not always immediately visible to IT. Critical applications get resources when they need them; non-critical applications with a lower level of importance get fewer resources insuring that business priorities are continuously sensed and visible.
- Library Maintenance Encryption: The optional Tape Encryption product includes the following encryption capabilities of the MCP Library Maintenance feature:
 - Use of the COPY command to make encrypted tape copies of files that reside on disk or tape
 - Use of the COPY and COMPARE command to encrypt data
 - Use of the SYSOPS (System Options) command to encrypt data by default when copying files to tape
 - Automatic data decryption when copying data from a source tape. This functionality is available only if the appropriate encryption keys are present on the system.
 - Simplified management of tape encryption keys. Provides the ability to export and import encryption keys when sharing of encryption keys is required, such as in disaster and recovery situations.
- TapeStack Encryption: The Tape Encryption product adds encryption capabilities to the existing MCP TapeStack utility. MCP TapeStack's tape encryption features are licensed separately from its tape stacking features. A customer can license one or both of these feature sets. So that data recovery scenarios are not hampered, both the decrypt

functions and unstacking functions of the MCP TapeStack utility are included in the operating environment.

System Attributes

The ClearPath Libra Model 400 Server offers exceptional business value based on these improved mainframe hardware and software attributes:

- High-volume, mission-critical transaction processing
- High-performance interoperability
- Multiple operating system environments
- Capacity-on-Demand options
- Performance Redistribution
- Powerful middleware for application, Internet, message, and data integration in heterogeneous environments using popular industry standards
- Application access via Web, PDA, mobile, etc.
- Extensive MCP software portfolio with true mainframe attributes
- A suite of mainframe application development tools
- Low-cost development environments
- Tape encryption
- Remote management card with continuous video and Active Directory integration for robust remote server management

Four Flexible MCP Licensing Options

- User-based licensing (licensed in 8-packs) for the 729 and 972 RPM performance models
- Traditional MCP licensing based upon performance models
- Software Developers Kit workload licensing with all compilers and application software development tools included
- EAE workload licensing that includes all necessary EAE development tools

Sets a new, lower price point with strong scalability.

Unisys ClearPath Libra Model 400 Server:

System Specifications

Maximum Processors

- Two processor sockets
- One (1) or two (2) quad-core Intel® Xeon® processors
- Maximum total processors is eight (8)

Processor Types

- Intel® Xeon® processors
 - 2.83GHz with 2 x 6MB on-die cache
- Intel®64
- 1,333 MHz Front Side Bus

Operating Environments Supported

- ClearPath MCP
- Virtual Machine for ClearPath MCP (MCPvm)
- Microsoft® Windows® 2003 Enterprise Edition 64-bit

Performance, MCP Virtual Machine (MCPvm). See Table 1.

- Minimum 30 MIPS/729 RPMs with 1 MCP Central Processing Module (CPMs)
- Maximum 350 MIPS/8,505 RPMs with 2 MCP Central Processing Modules (CPMs)

**Unisys ClearPath Libra Model 400 Servers:
Table 1 Performance, MCPvm**

MIPS	RPMs	Minimum # of MCP CPMs	Number of Quad-Core processors (2.66GHz)
30	729	1	1
40	972	1	1
50	1,215	1	1
75	1,823	1	1
100	2,430	1	1
125	3,038	1	1
150	3,645	1	1
175	4,253	1	1
200	4,860	1	Maximum Performance with 1 CPM (1 Quad-Core)
225	5,468	2	1
250	6,075	2	1
275	6,683	2	1
300	7,290	2	1
325	7,898	2	1
350	8,505	2	Maximum Performance with 2 CPMs (1 Quad-Core)

Memory

- Fully-buffered DIMM memory architecture
- Support for up to 48GB of memory (1 to 32GB usable by MCP – 24GB of data and 8GB tag)
- Fully-buffered DIMM (FBD) DDR2 SDRAM-667 MHz memory capacity
- 12 DIMM slots; each supports a 1GB or 4GB DIMM
- Memory Mirroring for selected configurations (all channels must be identically populated)
- Single-bit correction and multi-bit detection
- Memory sparing supported

IO Slots

- IO architecture supports up to six (6) expansion slots (2 PCI-X and 4 PCI-Express slots)
 - 1 x8 PCI Express slot
 - 2 x4 PCI Express slots
 - 1 x4 PCI Express slot
 - 2 PCI-X 133 MHz slots
 - Supports full height and full length PCI cards on all slots
 - Hot-plug PCI is not supported

IO Configuration

The system supports a certain number of add-in PCI-X/PCI-Express cards as specified below:

- 2 embedded RAID controllers for internal disk support
- 2 Fibre Channel host bus adapters (supports external disk such as EMC, Hitachi, CLARiiON, and iQstor)
- 2 SCSI controllers
- 4 add-in PCI-Express or 2 PCI-X Network Interface Cards

Disk Controller and Disk Bays

- 8 hot-plug Serial Attached SCSI (SAS) drives; 10K and 15K RPM
- 2 cabled Serial Attached SCSI (SAS) drives in peripheral bay; 10K RPM

Internal Storage Devices

- Support for an internal tape backup unit (LTO3 internal tape supports MCP backup)
- 1.44MB Floppy Drive (optional)
- DVD/CD-R-W Drive

Rear Ports

- One integrated PCI video with 16MB SDRAM
- Identification push button with its LED
- One 9-pin serial port
- One video port
- Four USB 2.0 ports
- Two RJ-45 embedded Gigabit NICs
- RJ-45 for DRAC5 – dedicated remote management port (optional)

Front Ports on Control Panel

- Two USB 2.0 port
- One video port
- Power button
- System ID button

Manageability and Serviceability

- Unisys OpenManage Server Administrator and Unisys Server Assistant CDs included
- Unisys OpenManage Application software included
- Dedicated Remote management port for DRAC5/I daughter card
- Integrated Base Management Controller (BMC) for system monitoring and management; BMC is IPMI 2.0 compliant
- Highly serviceable (tool-less) 5U chassis
- Power supplies located in the rear of the chassis can be accessed without the need to open the server.

Availability

- Support for hot-plug drives and power supplies
- Redundant Power Supplies (1+1)
- Support for multiple RAID solutions
- Dual-embedded Broadcom Gigabit NICs that support load balancing and failover
- Integrated IPMI 2.0 compliant hardware monitoring circuitry in base management controller
- Advanced memory protection features include SDDC (multi-bit errors), Online Spare Row (selected configurations), and Memory Mirroring (selected configurations)

Physical Dimensions

Tower Orientation

- Without bezel 18.85" (47.89cm) tall with feet, no casters
- 8.92" (22.66cm) wide
- 26.04" (66.13cm) deep without LCD panel; with panel add .51" (1.3cm)

Rack Orientation

- 8.57" (21.77cm) tall
- 17.43" (44.27cm) wide chassis without flanges; 19" or 48.27cm with flange
- 26.04" (66.13cm) deep without LCD panel; with panel add .51" (1.3cm)

Weight

- Maximum weight of 110 pounds (does not include rack cabinet)

Environmental

- The Libra Model 400 Server is RoHS compliant.
- Power Supply
 - Redundant power supplies – each 930-watt
 - Operating Line Voltage: 90-264 VAC, auto ranging 47 – 63Hz
 - Maximum Power: Total output power should not exceed 930W

Cooling

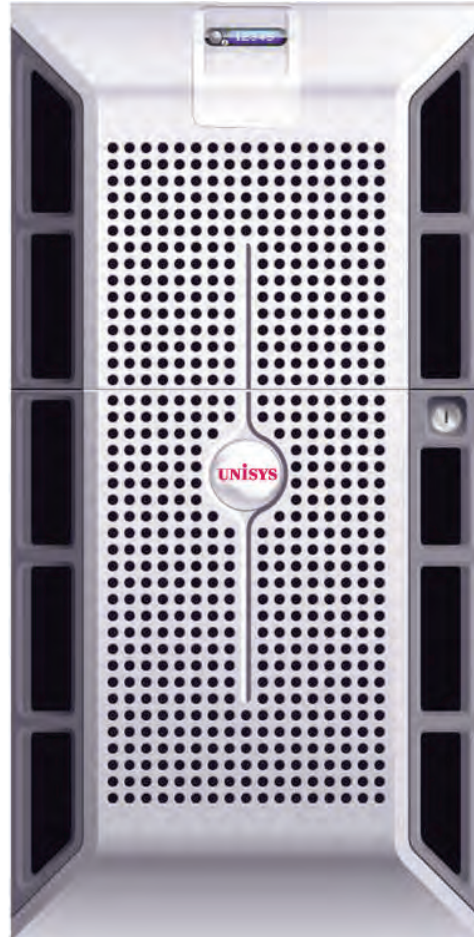
- Six (6) hot-plug fans. Should a malfunction occur, the system management software identifies the problem fan.

Cover Locks

- A locking latch is provided in the top cover to secure the top cover to the chassis.
- The front cosmetic bezel of the system contains a lock. A locked bezel secures the system hard drives.

Cabinets

- 42U and 40U cabinets
- Libra Model 400 chassis is 5U



Unisys ClearPath Libra Model 400 Server Tower Unit

For more information,

contact your Unisys representative.

Or call Unisys today at:

1-800-874-8647, ext. 776 (U.S. and Canada)

001-585-742-6780. ext. 776 (other countries)

In a hurry to learn more? Visit:

<http://www.unisys.com/cp/libra>

For even more details, visit:

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Libra Model 400 Server: Core Business Transformation.

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