

## Unisys ClearPath Plus Libra Model 180 Server.

The Libra Model 180 is a high-end ClearPath Plus server. It is a Unisys Modern Mainframe that 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, autonomic systems management, and excellent productivity economics.

# THE UNISYS CLEARPATH PLUS LIBRA FAMILY OF SERVERS.



The ClearPath Plus Libra Model 180 system is a member in the family of ClearPath Plus Libra Series Servers that has been enhanced with the availability of the new high-performance Unisys CMOS processor and I/O subsystem introduced with the Libra Model 185 server. As successors to the highly successful ClearPath NX6800 Series, the Libra Model 180 and 185 servers deliver the latest state-of-the-art software and a platform based on the Unisys Cellular MultiProcessing (CMP) architecture.

The ClearPath Plus Libra Model 180 server features a modular design that supports a new 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. These high-end servers offer extraordinary power and capacity with new high-performance Unisys CMOS processor technology

and a new and highly advanced input/output subsystem. The overall system is designed to maximize the return on your current IT investment and give you the agility to quickly and effectively respond to new challenges and business opportunities.

### **New enhancements.**

- ▶ New high-performance MCP CMOS processors
- ▶ New high-performance I/O subsystem
- ▶ Reserve MCP processors
- ▶ Increased memory
- ▶ New Intel® processors
- ▶ Up to 8 additional MCP CMOS-based native partitions
- ▶ 16-processor-image capability
- ▶ Performance redistribution

➤ **Systems Integration.**

➤ **Outsourcing.**

➤ **Infrastructure.**

➤ **Server Technology.**

➤ **Consulting.**

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### **New levels of flexibility.**

The Libra Model 180 server delivers 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. ClearPath MCP applications and data can be integrated with external heterogeneous servers, databases, and applications using virtually any of the industry's most popular technologies.

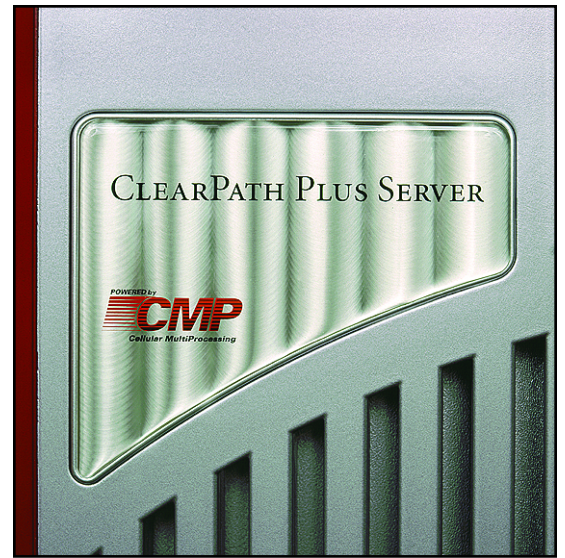
#### **The Libra Model 180 server delivers many new features for the agile corporation:**

- ▶ Improved growth path through horizontal and vertical scalability.
  - ▶ Expanded application offerings through multiple operating system environments. The Libra Model 180 platform supports up to eight independent partitions concurrently running Unisys MCP, Virtual Machine for ClearPath MCP (MCPvm), Microsoft® Windows® 2000 Advanced Server, Windows® 2000 Datacenter Server, Windows® Server 2003, Enterprise Edition, Windows® Server 2003, Datacenter Edition, and/or SCO® UnixWare® operating systems—making it possible to choose the environments that best meet your specific processing requirements. You can dedicate these partitions to production, development, testing, disaster recovery, CRM and ERP solutions, the Enterprise Application Environment, and many others.
  - ▶ The wide choice of concurrently running operating systems enables you to consolidate multiple servers on a single platform: NX, A Series, Windows, and UnixWare environments. Consolidation brings centralized control of multiple servers with potential savings in both system and operational costs.
- ▶ Capacity on Demand helps you better manage your changing capacity requirements. Designed to revolutionize the way you buy ClearPath 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 are offered for the most flexibility in your server operations. Temporary incremental system capacity is key to supporting dedicated and shared disaster recovery systems with remote secondary systems typically used for development. You pay only for the incremental capacity for a period of 30 days—an option that enables you to handle major unplanned operational disruptions. Shorter periods can be addressed with a 12-day emergency recovery option. And a temporary workload option gives you daily incremental capacity for 5 to 365 days to meet any unplanned peak load demand.
  - ▶ Performance redistribution allows you to distribute processing performance across multiple partitions within your system at any time. Performance continuity is maintained in a dual-domain environment where you can utilize the maximum contracted system performance in one domain when the other domain is unavailable for processing. It also allows you to distribute performance over processors within a partition, accommodating applications written for single- and multi-processor configurations.

▶ Many Unisys ClearPath Plus clients use general-purpose production systems and independent development systems. One attraction of the Libra Model 180 server is the ability to consolidate production and development systems on one platform thus taking advantage of specially priced development workloads. This not only reduces the cost of your overall system, but it also enables you to operate the environment more efficiently.

▶ You can run your ClearPath MCP applications on both Unisys MCP CMOS processors and Intel processors in the new Libra 180 server. If you want to run an MCP application on both types of processors, you don't have to change or recompile the program. The Virtual Machine for ClearPath Plus MCP software does everything by isolating your application from the different processor architectures.

▶ Unisys Server Sentinel for ClearPath Plus servers gives you a single point of access to your Windows and MCP partitions; centralized, Web-based, GUI access to all of its management tools; and an "at-a-glance" view of the system's overall health. Server Sentinel also provides self-healing capabilities for the Windows-based partitions of your ClearPath Plus MCP servers and integrates with Unisys Application Sentinel and NetIQ AppManager software for application management. For the enterprise management layer of your data center, Server Sentinel provides an integration path to enterprise management systems such as Tivoli NetView, HP OpenView, BMC Patrol, and CA Unicenter for managing your networked hardware and software. Server Sentinel includes functionality previously provided by the System Management Center product for ClearPath MCP systems.



### **System attributes.**

The ClearPath Plus Libra Model 180 server offers exceptional business value based on improved mainframe hardware and software attributes:

- ▶ High volume, mission-critical transaction processing
- ▶ Unparalleled scalability, particularly in Symmetrical MultiProcessing (SMP) mode
- ▶ Unisys Server Sentinel for simplified systems management
- ▶ High performance interoperability
- ▶ Multiple operating system environments
- ▶ Capacity on Demand options
- ▶ Performance redistribution
- ▶ Consolidation options
- ▶ 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

## **Unisys ClearPath Plus Libra Model 180 Server: System specifications.**

### **Maximum processors.**

- ▶ Up to 40 processors configured in 4-processor modules
- ▶ Up to 40 Unisys MCP CMOS processors
- Up to 32 Unisys Libra Model 185 MCP CMOS processors in the main cabinet
- Up to 8 Unisys MCP CMOS processors in an expansion cabinet
- ▶ Up to 24 Intel® processors concurrently running Virtual Machine for ClearPath MCP (MCPvm), Microsoft® Windows® 2000 Advanced Server and Datacenter Server, Microsoft® Windows® Server 2003, Enterprise Edition and Datacenter Edition, and/or SCO® UnixWare®

### **Processor types.**

- ▶ Unisys MCP CMOS processors: the system must have at least one of these processors:
- ▶ Unisys Libra Model 185 MCP CMOS processors
- ▶ Intel® Pentium® III Xeon™ 900 MHz with 2 MB on-die cache OR
- ▶ Intel® Xeon™ processor MP
  - 1.5 GHz with 1 MB on-die cache OR
  - 2 GHz with 2 MB on-die cache

### **Performance.**

- ▶ 40 – 1400 MIPS<sup>1</sup> per MCP partition (970 – 34,000 RPMs)
  - ▶ 21 – 185 MIPS<sup>1</sup> per MCPvm partition (500 – 4,500 RPMs)
- New enhanced performance:
- ▶ 40 – 1,910 MIPS<sup>1</sup> per MCP partition (970 – 46,400 RPMs) using Libra Model 185 MCP CMOS processors

### **Memory.**

#### **Main cabinet:**

- ▶ 64 GB of memory maximum
- ▶ 4 GB minimum per partition
- ▶ 32 GB of memory per power domain

#### **Expansion cabinet:**

- ▶ 4.6 GB of memory per Unisys CMOS power domain / 9.2 GB of memory maximum

### **Domains.**

- ▶ Four (4) power domains

### **Partitions.**

- ▶ A maximum of ten (10) partitions
- ▶ Up to ten (10) MCP partitions
- Up to eight (8) MCP native partitions in the main cabinet
- Up to two (2) MCP partitions in an expansion cabinet
- ▶ A single MCP partition with up to eight (8) MCP processors
- ▶ Up to six (6) Windows, Virtual Machine for ClearPath MCP, and/or UnixWare partitions (in Intel 4-CPU increments)
- ▶ A single Microsoft Windows partition of up to 24 Intel processors

1. MIPS values are based on an IDC analysis

**I/O slots.**

- ▶ CS-bus: Up to 40
- ▶ PCI: Up to 96 at 33/66 MHz with 64-bit data and addressing

**Architecture.**

- ▶ Unisys Cellular MultiProcessing (CMP)
- Four-way, non-blocking, crossbar inter-connect
- SMP-based programming model (applications run without change)

**Operating environments supported.**

- ▶ ClearPath MCP
- ▶ Virtual Machine for ClearPath MCP (MCPvm)
- ▶ Microsoft® Windows® 2000 Advanced Server
- ▶ Microsoft® Windows® 2000 Datacenter Server
- ▶ Microsoft® Windows® Server 2003, Enterprise Edition
- ▶ Microsoft® Windows® Server 2003, Datacenter Edition
- ▶ SCO® UnixWare®

**Cooling method.**

- ▶ Up to six cabinet impellers (N+1) in the main cabinet
- ▶ Up to four cabinet impellers (N+1) in an expansion cabinet

**Access area.**

- ▶ Front and rear, 42" full-width

**Dimensions.****Main and expansion cabinet:**

- ▶ 49.3" W x 46.5" D x 69.0" H

**Main, expansion, and auxiliary cabinet:**

- ▶ 71.6" W x 46.5" D x 69.0" H

**Estimated weight.**

- ▶ Main and expansion cabinet: 2250 lbs. max
- ▶ Main, expansion, and auxiliary cabinet: 3300 lbs max

**Power sectors.**

- ▶ Up to two (2) per cabinet
- ▶ Main cabinet: 30A, 50/60hz, single phase, 200-240 VAC
- ▶ Expansion and auxiliary cabinet (assuming two (2) APCs in the auxiliary cabinet):
- ▶ 200-240 VAC, single phase (four (4) circuit breakers required)
- ▶ Two (2) 15-amp circuits with 15-amp delayed-trip circuit breakers for dual-domain cabinet expansion
- ▶ Two (2) 30-amp circuits for two APCs in the auxiliary cabinet
- ▶ Fifth and sixth circuits requiring a dedicated circuit for UPS-to-SCP connections may be needed if there is no on-site UPS

**Power total.**

- ▶ 11.3 KW

**Thermal.**

- ▶ 38,580 BTU/hr

**Noise level.**

- ▶ 7.5 Bels re: 1pW

**Shock.**

- ▶ Operating: 3.0g, 15ms
- ▶ Non-operating: 8.0g, 15ms

**Vibration.**

- ▶ Operating: .01 in. 5-22Hz; .25 g 22-300Hz
- ▶ Non-operating: .10 in. 5-10Hz; .5g 10-70Hz;  
.002 in. 70-99Hz; 1.0g 99-300Hz

**Temperature.**

- ▶ Operating temperature: 13 C to 35 C  
(55°F to 95°F)
- ▶ Shipping temperature: -40 C to 65 C  
(-40°F to 149°F)

**Relative humidity.**

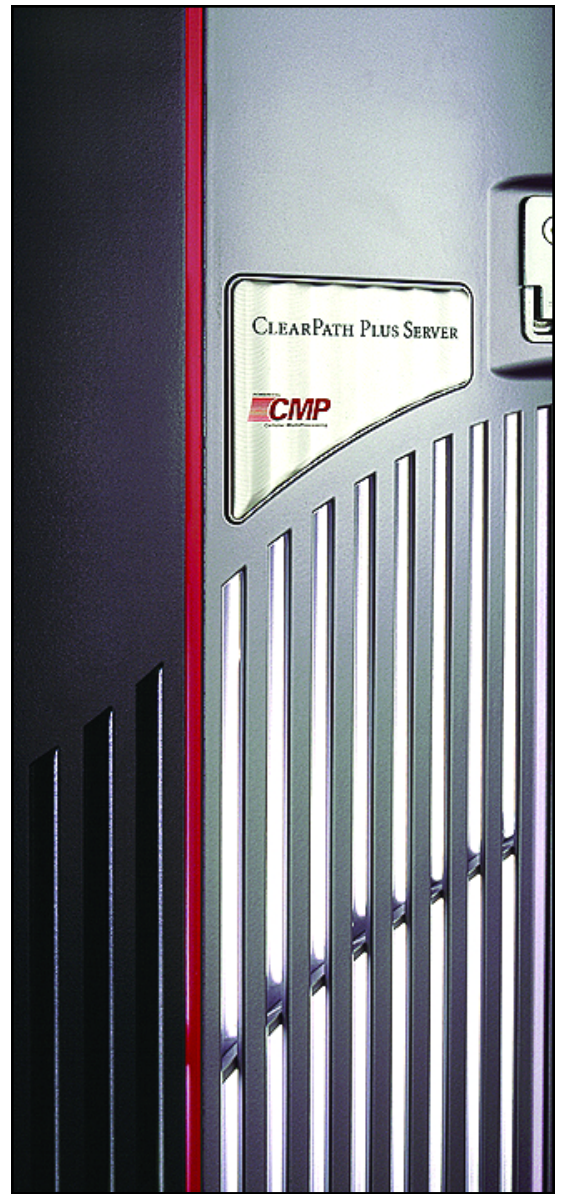
- ▶ Operating: 10-80% (non-condensing)
- ▶ Non-operating: 95% maximum  
(non-condensing)

**Altitude.**

- ▶ 0-8,000 ft (0 - 2,436 m)

**Systems management.**

- ▶ Unisys Server Sentinel
- ▶ Dedicated service processor



**For more information, please contact your Unisys representative.**

**Or call Unisys today at:  
1-800-874-8647, ext. 776 ( U.S and Canada)  
00-1-585-742-6780, ext. 776 (From other countries)**

**You can also contact us by email at:  
[cic@unisys.com](mailto:cic@unisys.com)**

**For up-to-date ClearPath Plus Libra Series and Libra Model 180 server information, visit our website at:  
[www.unisys.com/cp/libra](http://www.unisys.com/cp/libra)**

**You'll find even more details and documents at our community of ClearPath users at:  
[www.unisys.com/cp/community](http://www.unisys.com/cp/community)**

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