

## Unisys ClearPath Plus Libra Model 580 Server.

The ClearPath Plus Libra Model 580 server is the most powerful MCP based system ever built. This Unisys Modern Mainframe 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 580 mainframe is the newest and most powerful member of the ClearPath Plus Libra Family of Servers, the successor to the highly successful ClearPath Plus Libra Model 185 Series. The Libra Model 580 Series servers offer an ideal infrastructure that delivers extraordinary power and capacity with their high-performance Unisys CMOS processor technology and highly advanced IO subsystem. These high-end servers offer a mainframe platform based on the Unisys Cellular MultiProcessing (CMP) architecture, with the latest state-of-the-art software.

### Product highlights.

- ▶ Module-based, next generation ClearPath architecture
- ▶ Independent, self-contained modules
- ▶ High-performance Unisys MCP CMOS processors
- ▶ High-performance IO subsystem
- ▶ Up to 8 MCP CMOS-based native partitions
- ▶ 16-processor-image capability
- ▶ Performance Redistribution
- ▶ Reserve MCP processors
- ▶ 48 GB of memory
- ▶ New-generation Intel® processors

- > Consulting.
- > Systems Integration.
- > Outsourcing.
- > Infrastructure.
- > Server Technology.

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Libra Model 580 servers feature a new modular design that supports 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.

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

The Libra Model 580 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 Plus servers. 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 580 server delivers many new options and features for the agile corporation:**

- ▶ Improved growth path through horizontal and vertical scalability.
- ▶ Application offerings are expanded through multiple operating system environments. The platform supports up to eight (8) 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 and Windows®

Server 2003, Datacenter Edition 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 and Windows environments. Consolidation gives you centralized control of multiple servers with potential savings in both your system and operational costs.
- ▶ Capacity on Demand options help 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. 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 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 5 to 365 days to meet any unplanned peak load demand.
- ▶ Performance Redistribution lets you distribute processing performance across multiple partitions and over diverse workload types within your system at any time. Performance continuity is maintained in a dual-module environment, where you can use the maximum contracted system performance in one module when the other module is unavailable for processing. It even 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 580 system is the ability to consolidate your production and development systems on one platform and take advantage of specially priced development workloads. This not only reduces the cost of your overall system, but also enables you to operate your environment more efficiently.
  - ▶ Independent and self-contained “plug and play” modules allow you to easily add and remove a module without disturbing workloads running on other modules. For example, you can add a new workload and module without disturbing your production workload.
  - ▶ 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 both the next-generation Unisys MCP CMOS processors and Intel processors in your Libra Model 580 server. You do not have to modify or re-compile your MCP applications in order to run them on either type of processor. The Virtual Machine for ClearPath Plus MCP operating system software does everything for you simply by isolating your applications from the different processor architectures.

- ▶ Enjoy a single point of access to your Windows and MCP partitions using centralized, Web-based, GUI access to all of its management tools and an “at-a-glance” view of your Libra Model 580 system's overall health. That's what you get using Unisys Server Sentinel for ClearPath Plus servers—and more. Server Sentinel also provides self-healing capabilities for the Microsoft 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 580 server offers exceptional business value based on these improved mainframe hardware and software attributes:

- ▶ High-volume, mission-critical transaction processing
- ▶ Unparalleled scalability 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
- ▶ Choice of hardware and software for 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 580 Server:

#### System specifications

#### Maximum processors.

- ▶ Up to eight (8) modules total
- ▶ Up to 32 Unisys MCP CMOS processors configured in 4-processor modules
- MCP images:
  - ▶ Single module: four (4) processors
  - ▶ Dual module: eight (8) processors
  - ▶ Up to eight (8) MCP CMOS images
- ▶ Up to 56 Intel® processors configured in 4- or 8-processor modules
- Open server images:
  - ▶ Up to 16 Intel® processors per image in any combination of 4, 8 or 16 processors for any of the supported open server operating environments: Virtual Machine for ClearPath MCP (MCPvm), Microsoft® Windows® 2000 Advanced Server and Datacenter Server and Microsoft® Windows® Server 2003, Enterprise and Datacenter Editions
  - ▶ Up to seven (7) Intel® based images

#### Processor types.

- ▶ Unisys MCP CMOS processors
- ▶ Intel® Xeon™ processors MP
  - 2.0 GHz with 1 MB on-die cache OR
  - 2.8 GHz with 2 MB on-die cache
- ▶ Next generation of Intel® processor technology

#### Operating environments supported.

- ▶ ClearPath MCP AND
- ▶ 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

#### Performance.

- ▶ 50 to 2,000 MIPS per MCP native partition (1215 to 48,600 RPMs)
- ▶ 20 to 300 MIPS per MCPvm partition (500 to 7,300 RPMs)

#### Memory.

- ▶ 3 GB of MCP memory minimum per module (requires 4 GB physical memory)
- ▶ 24 GB of MCP memory maximum per partition (requires 32 GB physical memory)
- ▶ 48 GB of MCP memory maximum per system (requires 64 GB physical memory)

#### Power domains.

- ▶ Minimum: one (1) per module. Maximum: four (4) per cabinet

#### Partitions.

- ▶ A maximum of eight (8) partitions (expansion cabinet required for more than four (4) partitions)
- ▶ Up to eight (8) MCP CMOS partitions
- ▶ A single MCP partition with either four (4) or eight (8) MCP processors
- ▶ Up to seven (7) Windows and/or Virtual Machine for ClearPath MCP partitions
- ▶ Up to seven (7) partitions with any combination of Libra Model 520, Libra Model 590 and open partitions

#### IO slots.

- ▶ Nine (9) PCI slots per module including eight (8) 32-bit 66 MHz and one(1) 32-bit 33 MHz, all with 64-bit data addressing capabilities

**Architecture.**

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

**Environmental.**

The Libra 580 system is designed for a Class B, commercial open office environment

- ▶ Cooling
  - Seven fans per module (N+1)
- ▶ Power
  - 790 Watts per module
- ▶ Power domains
  - Single Phase, 100-120/200-240 VAC, 50/60 Hz, 6 Amps per line cord
- ▶ Thermal
  - 300 cfm of air per module

**Access area.**

- ▶ Front and rear, 42-inch full-width

**Weight and dimensions.**

- ▶ See Table 1.

**Noise level.**

- ▶ 6.6 Bels re: 1pW

**Shock.**

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

**Vibration.**

- ▶ Operating: 0.01 in. 5-22Hz; 0.25 g 22-300Hz
- ▶ Non-operating: 0.10 in. 5-10Hz; 0.5g 10-70Hz; 0.002 in. 70-99Hz; 1.0g 99-300Hz

**Temperature.**

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

**Relative humidity.**

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

**Altitude.**

- ▶ Operating: 0-8,000 ft (0 - 2,436 m)
- ▶ Shipping: 0-14,000 ft (0 - 4,263 m)

**Unisys ClearPath Plus Libra Model 580 Servers:**

Table 1 Weights and Dimensions

| <b>Style Number</b> | <b>Description</b>  | <b>Weight pounds (kilograms)</b> | <b>Width* inches (meters)</b> | <b>Depth* inches (meters)</b> | <b>Height* inches (meters)</b> |
|---------------------|---|----------------------------------|-------------------------------|-------------------------------|--------------------------------|
| LM580-140           | Single module, single 1 x 4 native MCP partition; 4GB memory              | 497 (226)                        | 22 (0.6)                      | 47 (1.2)                      | 69 (1.8)                       |
| LM580-242           | Redundant dual module, single 1 x 8 native MCP partition; 8 GB memory     | 790 (359)                        | 22 (0.6)                      | 47 (1.2)                      | 69 (1.8)                       |
| LM580-442           | Two (2) redundant dual modules, 1 x 8 native MCP partitions; 16 GB memory | 1,370 (623)                      | 22 (0.6)                      | 47 (1.2)                      | 69 (1.8)                       |

\* Outside dimension

**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 (Other countries)

**You can also contact us by email at:**

cic@unisys.com

**For the most up-to-date ClearPath  
Plus Libra Model 580 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 through our community of  
ClearPath users at:**

[www.unisys.com/cp/community](http://www.unisys.com/cp/community)

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