

PRODUCT MARKETING GUIDE

June 1998

Compaq Computer Corporation

CONTENTS

Executive Summary	1
Introduction.....	3
Product Overview	4
Performance and Scalability	5
7x24 Availability	7
Expansion-Optimized.....	9
Open Industry Standards.....	11
Tight Integration.....	11
Most Manageable Server	13
Testing.....	15
Why ProLiant 7000 with Pentium® II Xeon™ Processors is Superior	18
Product Specifications.....	22

Compaq ProLiant 7000



**NOW AVAILABLE WITH INTEL
PENTIUM® II XEON™
PROCESSORS**

**ENTERPRISE PC SERVER
AWARD WINNER: 1998
NETWORK MAGAZINE
PRODUCT OF THE YEAR**

EXECUTIVE SUMMARY

The Compaq ProLiant 7000 is the ultimate standards-based server delivering the most scalable performance and highest levels of availability and expansion for 7 x 24 environments. The ProLiant 7000 is the ideal server for large business-critical databases, OLTP, ERP, messaging, and web applications.

WHAT'S NEW

- 4-way Pentium® II Xeon™ processing for superior power and performance.
- 8 GB ECC-protected EDO memory for the highest performance in memory-intensive applications (i.e., SAP R/3, Baan, Microsoft Exchange, etc.)
- Next-generation cable-free 3-channel Wide-Ultra SCSI RAID Controller, offering high performance and contiguous RAID across all 3 internal hot plug drive cages.
- 3 PCI buses and 64-bit PCI Hot Plug for improved performance bandwidth.
- New, easy-to-use push button PCI Hot Plug technology provides slot power control directly at the server, independent of the PCI Hot Plug software utilities to simplify and speed maintenance and installation of PCI cards.
- Investment protection to future Pentium® II Xeon™ processors and to 8-way Pentium® II Xeon™ processing.
- Optional Remote Insight Board now PCI-based for faster remote access.
- Compaq Insight Manager 4.1 for the broadest management and systems software integration and the best pre-failure alerting, with web-enabled agents.
- Rack-ready design for ease of expansion, upgrade, and service, with 3 servers fitting in an industry-standard 19" x 42U (7-ft.) rack.

COMPAQ

ECG087/0698

NOTICE

The information in this publication is subject to change without notice and is provided "AS IS" WITHOUT WARRANTY OF ANY KIND. THE ENTIRE RISK ARISING OUT OF THE USE OF THIS INFORMATION REMAINS WITH RECIPIENT. IN NO EVENT SHALL COMPAQ BE LIABLE FOR ANY DIRECT, CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE OR OTHER DAMAGES WHATSOEVER (INCLUDING WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION OR LOSS OF BUSINESS INFORMATION), EVEN IF COMPAQ HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES IN ADVANCE.

The limited warranties for Compaq products are exclusively set forth in the documentation accompanying such products. Nothing herein should be construed as constituting a further or additional warranty.

Compaq, Contura, Deskpro, Faststart, Compaq Insight Manager, LTE, PageMarq, Systempro, Systempro/LT, ProLiant, TwinTray, ROMPaq, LicensePaq, QVision, SLT, ProLinea, SmartStart, NetFlex, DirectPlus, QuickFind, RemotePaq, BackPaq, TecDECaq, SpeedPaq, QuickBack, PaqFax, Presario, SilentCool, CompaqCare (design), Aero, SmartStation, MiniStation, and PaqRap, registered United States Patent and Trademark Office.

Netelligent, Smart Uplink, Extended Repeater Architecture, Scalable Clock Architecture, Armada, Cruiser, Concerto, QuickChoice, ProSignia, Systempro/XL, Net1, LTE Elite, Vocalyst, PageMate, SoftPaq, FirstPaq, SolutionPaq, EasyPoint, EZ Help, MaxLight, MultiLock, QuickBlank, QuickLock, UltraView, Innovate logo, Wonder Tools logo in black/white and color, and Compaq PC Card Solution logo are trademarks and/or service marks of Compaq Computer Corporation.

Microsoft, Windows, Windows NT, Windows NT Advanced Server, SQL Server for Windows NT are trademarks and/or registered trademarks of Microsoft Corporation. Pentium is a registered trademark and Xeon is a trademark of Intel Corporation.

Other product names mentioned herein may be trademarks and/or registered trademarks of their respective companies.

©1998 Compaq Computer Corporation. All rights reserved. Printed in the U.S.A.

Product Marketing Guide: Compaq ProLiant 7000

First Edition (June 1998)

Document No. ECG087/0698



**Businesses
Everywhere Put
Their Trust in
Compaq**

- Compaq is the global leader in industry-standard servers, holding a 34.2% market share – more than double the share held by our nearest competitor. *
- Compaq is the worldwide volume platform leader for Microsoft Windows NT Server.
- Compaq is the largest worldwide supplier of systems running SCO UNIX.
- 57% of Windows NT customers running SAP/R3 entrust their business-critical applications to Compaq servers.
- Boeing and GE, with two of the world's largest Microsoft Exchange environments, run on Compaq servers.

*IDC Commercial Systems and Servers, 6/2/98.

**RAISING THE BAR FOR
POWER AND
RELIABILITY
IN 7X24 ENVIRONMENTS**



**INTRODUCING THE PROLIANT 7000
WITH PENTIUM® II XEON™ PROCESSORS**

**ENTERPRISE COMPUTING
BY COMPAQ**

Compaq combines cutting-edge performance and reliability with the benefits of industry standards for flexibility, unrivaled partnerships and a company wide commitment to deliver the highest quality and lowest cost of ownership.

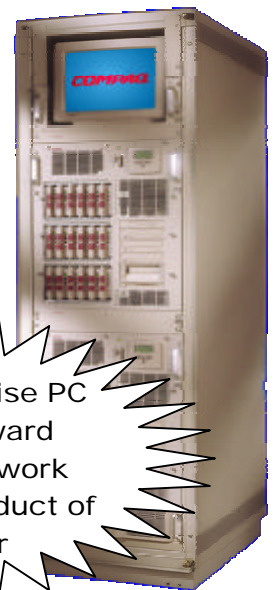
Evolving enterprises need a server that takes change in stride, and the Compaq ProLiant 7000 is designed to evolve with you. The ProLiant 7000 offers the highest levels of scalability to meet changing IT needs and protect your investment over time. The ProLiant 7000 was engineered with technology foresight, delivering an innovative design that allows customers to easily take advantage of future eight-way computing.

The ProLiant 7000 is ideal for large business-critical databases, messaging and web databases, high-availability OLTP, and ERP. You can trust Compaq ProLiant 7000 to run your business.

"The ProLiant server with the Pentium II Xeon processor provides a significant performance increase over servers with the Pentium Pro processor and has been extremely stable and reliable," said Britt Mayo, Director, Information Technology for Pennzoil Company.

NetworkWorld, Inc.

**1998 Enterprise PC
Servers Award
Winner: Network
Magazine Product of
the Year**



PRODUCT OVERVIEW

The Compaq ProLiant 7000 is the ultimate standards-based server delivering the most scalable performance and highest levels of availability and expansion for 7 x 24 environments. Compaq continues to set new standards for server power and customer confidence.

Highest Performance and Scalability – The ProLiant 7000 delivers next-generation technology with up to 4 Pentium® II Xeon™ processors starting at 400MHz. Additional performance enhancements include a 100MHz system bus and 1MB L2 cache, 3-channel Wide-Ultra SCSI RAID Controller, 8GB ECC-protected EDO memory, and 10 I/O expansion slots, with room for large amounts of integrated disk storage with the flexibility to choose 18x1” or 12x1.6” disks. Clustering is supported in a variety of cluster configurations and operating systems. Investment protection is maximized with upgradability to future Pentium® II Xeon™ processors and future 8-way Pentium® II Xeon™ processor technology.

7 x 24 Critical Availability with the first industry-standard push button **PCI Hot Plug** platform, redundant hot plug power supplies, redundant hot plug fans, redundant processor power modules, redundant hot plug NICs, RAID-protected hot plug drives, OSCRO (Online Storage Controller Recovery Option), and cluster support. OSCRO is an automatic failover option that allows controllers to back each other up.

Open Industry Standards – With the growing demand for industry-standard solutions the ProLiant 7000 is more cost effective than RISC-based platforms in today’s market. Customers benefit from unrivaled interoperability, heterogeneous integration, and freedom of choice, harnessing the power of the entire industry.

Tight Integration with Leading Applications and Solutions – Compaq and its partners work together through every stage, from product development and engineering to product delivery and support – delivering systems that have been tested and optimized with the leading business-critical applications. Compaq has established 24 SAP Competency centers worldwide dedicated to testing and optimizing SAP R/3 solutions exclusively on Microsoft Windows NT. Compaq is the reference development platform for Oracle products on Microsoft Windows NT and the sole development and deployment platform for Baan’s Windows NT clustering. In fact, Compaq is the number one platform for the leading standards-based solutions, including Microsoft Windows NT, Novell NetWare, SCO Unix, as well as Oracle, SAP R/3, Lotus, Citrix, Siebel, and PeopleSoft, and Baan on Windows NT.

Leading Manageability for Reduced TCO – Superior manageability with SmartStart, Compaq Insight Manager 4.1, Integrated Remote Console, Integrated Management Display, Remote Insight Board (now PCI-based), new push button PCI Hot Plug, WBEM, and easy access enable customers to recognize a 20-41% reduction of time spent on management tasks.¹ This adds up to significant annual savings in system administration. Compaq provides an unbeaten 3-Year Pre-Failure Warranty for servers using Compaq Insight Manager covering memory, drives, and processors.



¹ *The Business Case for Investing in Manageable Systems*, IDC White Paper, 1997.

**SUPERIOR
PERFORMANCE AND
SCALABILITY**

**HIGH AVAILABILITY
FOR
7X24 ENVIRONMENTS**

**ULTIMATE
EXPANDABILITY
WITHOUT
COMPROMISING YOUR
INVESTMENT**

**OPEN INDUSTRY
STANDARDS FOR
FLEXIBILITY AND
HIGHER RETURN ON
INVESTMENT**

**TIGHTEST INTEGRATION
FOR FASTEST
DEPLOYMENT**

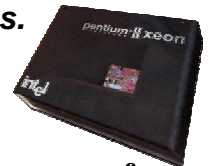
**MOST MANAGEABLE
SERVER – LOWER
TOTAL COST OF
OWNERSHIP BUILT-IN**

**DESIGNED TO DELIVER THE HIGHEST PERFORMANCE AND
SCALABILITY TO MEET BUSINESS-CRITICAL DEMANDS**

The ProLiant 7000 delivers mission-critical optimized performance to meet the demands of today’s business-critical applications.

Designed for Balanced System Performance

Compaq delivers balanced system architecture to maximize performance of processor, scalable memory, and Compaq’s I/O subsystem, minimizing bottlenecks.



Next-Generation Processor Performance²

- The ProLiant 7000 with 4-way Pentium® II Xeon™ processors raises performance to the next level for applications requiring 4-way scalability and beyond.

Enhancements	Pentium® II Xeon™ vs. Pentium® Pro Processors
Faster processing speeds	400MHz vs. 200MHz
Larger L2 cache size	1-2MB (450MHz) vs. 1MB
Faster bus speeds	100MHz vs. 66MHz
Higher peak memory transfer rate	1.6GB/s vs. 1.07GB/s
Higher peak PCI transfer rate	532MB/s vs. 266MB/s
Concurrent CPU to Memory and PCI to Memory transfers	

Enhanced Memory Architecture

- The ProLiant 7000 has double the memory capacity of the Pentium® Pro model with up to 8 GB ECC-protected memory using industry-standard EDO DIMMs.
- The memory architecture provides parallel memory access for increased performance support. The ProLiant 7000 has two memory boards, each with its own memory controller. This allows for overlapping memory accesses providing longer sustained peak transfer rates.



² For Performance Data (TPC-C, TPC-D, SPECWeb96, SAP R/3 SD) see the following site:
<http://www.compaq.com/products/servers/benchmarks/index.html>.

**SUPERIOR
PERFORMANCE AND
SCALABILITY**

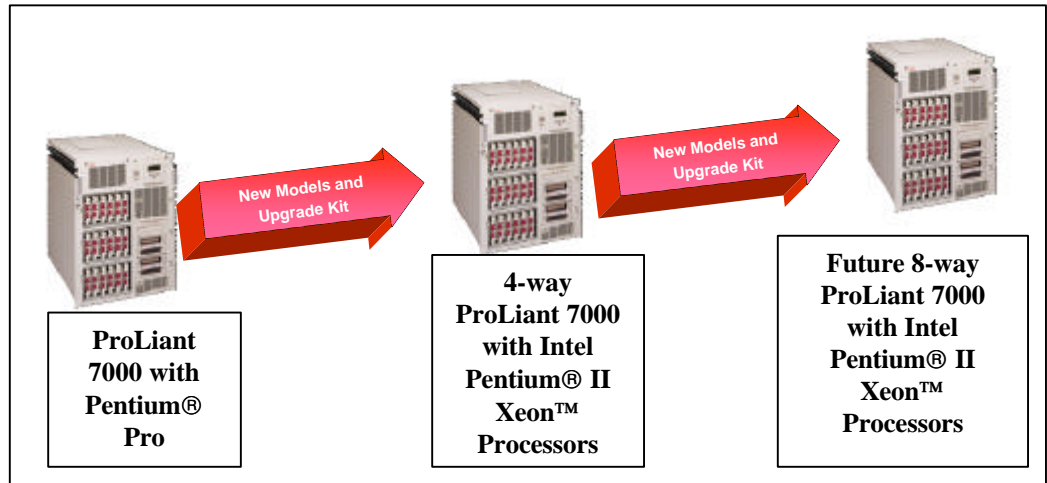
**HIGH AVAILABILITY
FOR
7X24 ENVIRONMENTS**

**ULTIMATE
EXPANDABILITY
WITHOUT
COMPROMISING YOUR
INVESTMENT**

**OPEN INDUSTRY
STANDARDS FOR
FLEXIBILITY AND
HIGHER RETURN ON
INVESTMENT**

**TIGHTEST INTEGRATION
FOR FASTEST
DEPLOYMENT**

**MOST MANAGEABLE
SERVER – LOWER
TOTAL COST OF
OWNERSHIP BUILT-IN**



Ultimate Industry-Standard Scalability

- Uncompromising investment protection is provided to future generations of the Pentium II Xeon processor and 8-way in-chassis upgradability.
 - For future performance needs, the ProLiant 7000 will offer processors at 450MHz with 2MB cache, and beyond.

Advanced I/O Scalability with Higher Bandwidth

- Three PCI buses for faster I/O throughput.
- New 64-bit PCI. Twice the bandwidth of current PCI, the 64-bit PCI doubles bandwidth to storage, networks, and peripherals.
- Ten total I/O expansion slots: five 64-bit PCI slots, four 32-bit PCI slots, all nine hot-pluggable, and one ISA modem slot will meet growing I/O requirements for the most demanding environments.
- New High Performance Internal 3-channel RAID Controller provides a major new concept in internal drive expandability.
 - ◆ A single controller supports all three internal hot plug drive cages. These can be configured as three sets of RAID-protected drives or as one contiguous array. All internal hot plug disk drives can be configured as one 218.4GB array (12x18.2GB) for optimum application performance or as three 72.8GB arrays. The ProLiant 7000 offers the flexibility of up to 18 x 1” or 12 x 1.6” hot plug disk drives, mixing allowed.
 - ◆ Cable-free design allows the disk drive cages to be connected to the I/O board itself, not the array controller, which means easier use of PCI Hot Plug slots. Installation is a snap, and there are no complex cable configurations.
 - ◆ Compaq’s advanced array technology allows on-line capacity expansion, monitors key parameters with Compaq Insight Manager, and provides information for proactive system planning.
 - ◆ A new larger 64MB cache board (56MB ECC-protected and battery-backed removable read/write cache) maximizes I/O performance without sacrificing data integrity.
 - ◆ There will be future support for redundant controllers.



**SUPERIOR
PERFORMANCE AND
SCALABILITY**

**HIGH AVAILABILITY
FOR
7x24 ENVIRONMENTS**

**ULTIMATE
EXPANDABILITY
WITHOUT
COMPROMISING YOUR
INVESTMENT**

**OPEN INDUSTRY
STANDARDS FOR
FLEXIBILITY AND
HIGHER RETURN ON
INVESTMENT**

**TIGHTEST INTEGRATION
FOR FASTEST
DEPLOYMENT**

**MOST MANAGEABLE
SERVER – LOWER
TOTAL COST OF
OWNERSHIP BUILT-IN**

Up to Six SCSI Channels

- Two internal integrated Wide-Ultra SCSI-3 controllers are used for internal media or internal storage, and one integrated Wide-Ultra SCSI-3 is used for external storage.
- A three-channel RAID controller is standard, allowing flexible expansion.

Support for the Industry’s Highest Performing Storage Devices

- 10,000-RPM Hot Plug Drives providing 26% higher performance than 7200 RPM drives.
- 35/70 DLT tape drives for faster performing, efficient backup for massive storage, optimally configured with individual SCSI channels to reduce load on the network.
- 24X CD-ROM for faster access to programs.

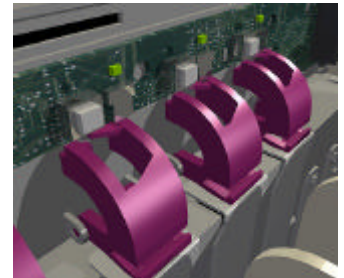
Dual Auto-Sensing Netelligent 10/100 TX PCI UTP in a PCI slot

- The Dual Auto-Sensing Netelligent 10/100 TX PCI UTP enables higher bandwidth requirements and redundancy between ports.

HIGHEST AVAILABILITY FOR 7 X 24 ENVIRONMENTS

New Push Button PCI Hot Plug

- **New push button design provides full PCI Hot Plug capabilities for all 9 PCI Hot Plug slots.** A single button at each PCI Hot Plug slot enables rapid replacement, upgrade, and addition of PCI cards. The button operates in conjunction with software utilities, and LED notification provides easy-to-read PCI Hot Plug status. The push button capability includes the feature of intelligent software shut-off during transitions, eliminating the need for software utility shutdown at a keyboard or console.



Redundant and Hot Plug Components

- **Hot-Pluggable Redundant Power Supplies** provide maximum system availability.
 - ◆ **Load-sharing** between the 2-3 power supplies saves critical time in the event of redundant takeover, **auto sensing** for 750-watt/220 volt or 500-watt/110 volt.
 - ◆ **Independent power** cords eliminate single points of failure and provide more power to the system.
 - ◆ **Security bar** with user-supplied key lock further ensures availability and security.
 - ◆ **Power Supply Fans** provide individual cooling of each power supply, and continue to cool the system even in the event of a power supply failure.
- **Hot-Pluggable Redundant System Fans** continue to provide cooling in the event of a failure, as long as power is available. Intelligent system fans sense the ambient temperature in the server and automatically increase fan speed as needed. Hot-pluggable system fans are easy to replace without system downtime.



SUPERIOR
PERFORMANCE AND
SCALABILITY

HIGH AVAILABILITY
FOR
7x24 ENVIRONMENTS

ULTIMATE
EXPANDABILITY
WITHOUT
COMPROMISING YOUR
INVESTMENT

OPEN INDUSTRY
STANDARDS FOR
FLEXIBILITY AND
HIGHER RETURN ON
INVESTMENT

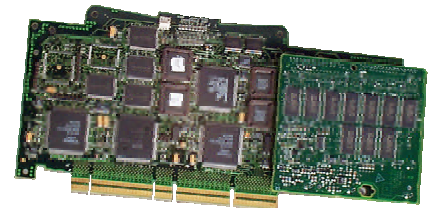
TIGHTEST INTEGRATION
FOR FASTEST
DEPLOYMENT

MOST MANAGEABLE
SERVER – LOWER
TOTAL COST OF
OWNERSHIP BUILT-IN

- **Redundant NIC support** eliminates the network connection as a single point of system failure. One NIC is operational while another is ready as a hot standby.
- **Redundant Processor Power Modules** go beyond regulating power to the processors. The Compaq design monitors power currents to proactively detect and prevent potential problems.
- **OSCRO**, an automatic failover option, allows controllers to back each other up for increased redundancy.

Next-Generation 3-Channel Internal Smart Array Controller

The same RAID engine can operate all 3 drive cages. Cable-free design provides easier PCI Hot Plug usage. 64MB cache (56MB of ECC-protected and removable battery-backed read/write cache) provides superior performance. On-board battery backup of cached memory (for up to four days), protects data in the event of a power failure. Support for RAID 0, 1, 4, & 5 provides flexibility.



Internal Array 3100ES Controller

Clustering for Even Higher Levels of Availability

The Compaq ProLiant 7000 has been tested by Compaq to support both Compaq's Recovery Server Option (RSO) clustering solution and industry-standard Microsoft Cluster Server (MSCS). The Compaq Recovery Server Option runs with Microsoft Windows NT, Novell NetWare, and SCO UnixWare. The ProLiant 7000 will soon be certified by Microsoft for MSCS clustering and once available can be seen on the Microsoft Hardware Certification List (HCL) web site at www.microsoft.com/hwtest/hcl. Using the ProLiant 7000, MSCS can be configured in matched-pair or mixed-pair configurations (e.g. ProLiant 7000-ProLiant 6000), which provides industry-leading protection of existing server investments. Similarly, using Compaq ProLiant F100 or S100 cluster kits, the ProLiant 7000 can be configured with either Compaq Fibre Channel Storage Systems or ProLiant SCSI Storage Systems, providing configuration flexibility and a choice of storage technologies to users. Compaq is working closely with Novell and SCO to certify the Compaq ProLiant 7000 for Novell's upcoming Orion Clustering and for SCO's soon-to-be-released SCO UnixWare NonStop Clusters.

Engineered Fault-Tolerant Features

- **ECC memory, Automatic Server Recovery-2, and Smart Array 3100ES controllers with RAID** work together to prevent errors, correct faults, and bring the server back online quickly.
- **Remote Management Capabilities** with Integrated Remote Console and the host-independent features of the optional Compaq Remote Insight Board lets businesses stay in touch with their servers wherever they are, even if the server or network is down.
- **Industry-Leading Three-Year Limited Pre-Failure Warranty** for servers using Compaq Insight Manager. **Pre-Failure Alerts and Warranties** proactively detect and provide free, fast replacement of critical components, which may prevent costly unexpected downtime.³



³ Certain restrictions and exclusions apply. Contact the Compaq Product Information Center at 1-800-345-1518 for details.

- Thousands of hours of quality assurance, integration, optimization, and testing for maximum reliability.



SUPERIOR
PERFORMANCE AND
SCALABILITY

HIGH AVAILABILITY
FOR
7X24 ENVIRONMENTS

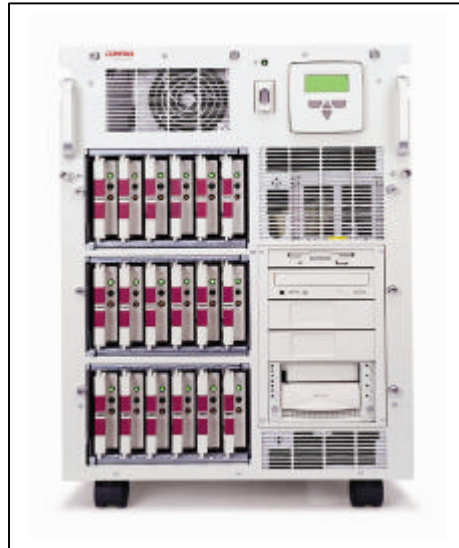
ULTIMATE
EXPANDABILITY
WITHOUT
COMPROMISING YOUR
INVESTMENT

OPEN INDUSTRY
STANDARDS FOR
FLEXIBILITY AND
HIGHER RETURN ON
INVESTMENT

TIGHTEST
INTEGRATION FOR
FASTEST DEPLOYMENT

MOST MANAGEABLE
SERVER – LOWER
TOTAL COST OF
OWNERSHIP BUILT-IN

**EXPANSION-OPTIMIZED CHASSIS TO MEET CHANGING NEEDS
WITHOUT COMPROMISING YOUR INVESTMENT**



Specifically designed to meet growing demands without compromising your investment – provides future support of industry-standard 8-way computing.

The ProLiant 7000 was designed with technology foresight, providing an in-chassis upgrade from Pentium® Pro to Pentium® II Xeon™ processors, and beyond, with next-generation industry-standard 8-way processing. When customers are ready to upgrade to next-generation 8-way technology, the ProLiant 7000 allows an upgrade within the original server chassis and serial number, reducing needs for software re-licensing while providing significant tax benefits.

Within-Chassis Upgrade

- The ProLiant 7000 can be upgraded from 4-way Pentium® II Xeon™ capability to 8-way capability at a later time.
 - **Compaq Corollary/Joint Development Partners** –The combination of Compaq’s I/O design with Corollary’s Profusion 8-way crossbar switch technology and Intel’s Pentium® II Xeon™ processor achieves a balanced, highly scalable system architecture for the future.
- Delivering on the promise to upgrade your 4-way Pentium® Pro™ server to next-generation 4-way Pentium® II™ Xeon processing, Compaq offers an upgrade for current owners to the new ProLiant 7000 with Pentium® II Xeon™ processors.



SUPERIOR PERFORMANCE
AND SCALABILITY

HIGH AVAILABILITY FOR
7X24 ENVIRONMENTS

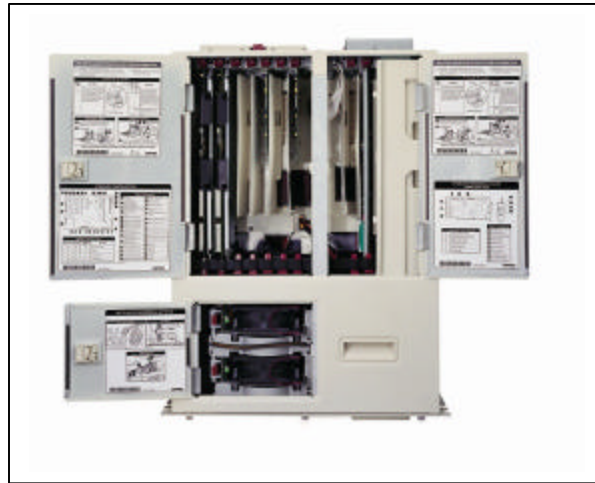
ULTIMATE
EXPANDABILITY
WITHOUT COMPROMISING
YOUR INVESTMENT

OPEN INDUSTRY
STANDARDS FOR
FLEXIBILITY AND HIGHER
RETURN ON INVESTMENT

TIGHTEST INTEGRATION
FOR FASTEST
DEPLOYMENT

MOST MANAGEABLE
SERVER – LOWER TOTAL
COST OF OWNERSHIP
BUILT-IN

Nine PCI Hot Plug Slots, Introducing 64-bit PCI Technology



Ten total I/O slots, including nine PCI Hot Plug slots and one ISA modem slot.

- Compaq was the first to introduce industry-standard PCI Hot Plug, and is now bringing the customer new levels of performance with 64-bit PCI slots providing double the bandwidth of 32-bit PCI.
- Ten total slots provide plenty of headroom for growing I/O requirements.

18x1" or 12x1.6" Hot Plug Disk Drives in Flexible Configuration

- Up to 218.4GB internal storage is achieved with twelve 1.6" 18.2GB hard drives.
- 1.87 TB RAID combined internal/external storage using eight SMART-2 Array Controllers and ProLiant Storage Systems.
- Over 6TB SCSI external storage using external ProLiant Storage Systems.

Six Removable Media Bays

- Four 5.25" media bays are available in addition to the standard 1.44MB floppy and 24X IDE CD-ROM. The four removable media bays are ideal for DLTs, additional CD-ROM drives, or other removable media devices.

Standard Rack Model

- The Compaq fully integrated rack solution includes a rack-mounted server, a rack enclosure, switch box, rack-mounted storage, keyboard and monitor shelving, and cable management. These components work physically and electrically together for seamless setup and operation. For incredible ease of upgrade and service, the serviceable design provides quick access to critical components like expansion cards, processors, memory, and media devices, drastically reducing the time needed for upgrades or maintenance.
- Vast amounts of storage can stack on a 5.6 square-foot footprint with 3 servers fitting in a 42U (7-ft.) industry-standard 19" rack. Customers can use an optional kit to convert the ProLiant 7000 to a 19" tower now and redeploy as a rack in the future.



SUPERIOR
PERFORMANCE AND
SCALABILITY

HIGH AVAILABILITY
FOR
7X24 ENVIRONMENTS

ULTIMATE
EXPANDABILITY
WITHOUT
COMPROMISING YOUR
INVESTMENT

OPEN INDUSTRY
STANDARDS FOR
FLEXIBILITY AND
HIGHER RETURN ON
INVESTMENT

TIGHTEST INTEGRATION
FOR FASTEST
DEPLOYMENT

MOST MANAGEABLE
SERVER – LOWER
TOTAL COST OF
OWNERSHIP BUILT-IN

**OPEN INDUSTRY STANDARDS FOR FLEXIBILITY
AND HIGHER RETURN ON INVESTMENT**

Compaq open platforms integrate with a broad range of options, solutions, and services to enable customers to build tailored powerful and standards-based server solutions. The ProLiant 7000 has all the *power* of RISC systems and all the *advantages* of industry standards.

- For easy enhancement and upgrade, the ProLiant 7000 integrates with a comprehensive family of compatible storage, options, and networking products.
- The broadest range of software choices is possible with Compaq, for increased accommodation of layered applications.
- Compaq brings the benefit of standards-based solutions for enterprise computing: Internet/Intranet, clustering, E-Commerce, and management.
- Compaq drives new technologies and solutions to open standards, allowing the customer to take advantage of rapid industry development for a more sustainable business advantage over time.

The power of the entire industry is harnessed through a broad array of packaged applications and solutions.

- The best minds in the industry work with Compaq to drive the best solutions. Compaq partners with powerful industry leaders to give customers the flexibility to select optimal solutions for specific needs. Customers are saved the inconvenience of expensive, single-vendor solutions, and can select optimal solutions for their changing needs.

**TIGHT INTEGRATION WITH INDUSTRY-LEADING
APPLICATIONS FOR FASTEST DEPLOYMENT WITH
THE MOST RELIABLE SOLUTION**

Partnerships: Compaq and its partners work together through every stage, from product development and engineering to product delivery and support delivering systems that are powerfully optimized and tested with leading business-critical applications.

- Leading software has been optimized, tested for, and often developed on Compaq servers for the highest levels of performance and reliability.
 - ◆ Compaq is a reference development platform for Oracle products on Microsoft Windows NT.
 - ◆ Compaq is the choice of platform for development on Microsoft Windows NT.
 - ◆ Compaq servers are the development and deployment platform for Baan products on Microsoft Windows NT and the sole development platform for Baan's Windows NT clustering.



SUPERIOR
PERFORMANCE AND
SCALABILITY

HIGH AVAILABILITY
FOR
7X24 ENVIRONMENTS

ULTIMATE
EXPANDABILITY
WITHOUT
COMPROMISING YOUR
INVESTMENT

OPEN INDUSTRY
STANDARDS FOR
FLEXIBILITY AND
HIGHER RETURN ON
INVESTMENT

TIGHTEST INTEGRATION
FOR FASTEST
DEPLOYMENT

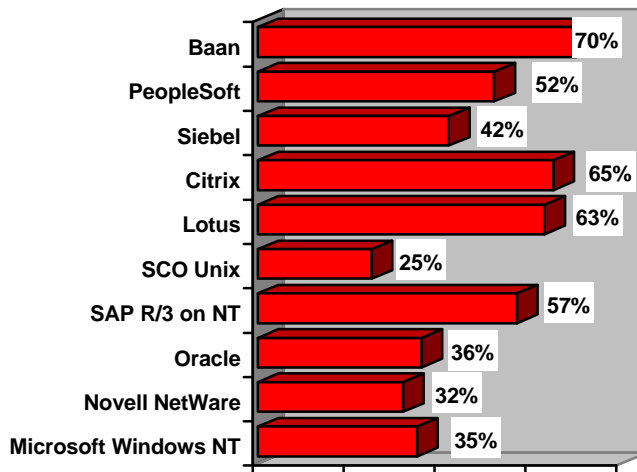
MOST MANAGEABLE
SERVER – LOWER
TOTAL COST OF
OWNERSHIP BUILT-IN

- ◆ Compaq onsite engineers at PeopleSoft labs are dedicated to testing and optimizing PeopleSoft solutions on Compaq servers.

Certified partner solutions reduce complexity and lower overall risk.

- Compaq has established worldwide SAP Competency Centers in Houston, Munich, Waldorf, and Tokyo, all dedicated to testing and optimizing SAP R/3 solutions exclusively on Windows NT.
 - ◆ This unique and powerful integration delivers fully integrated, optimized enterprise tools and solutions to increase speed and reduce risk in the planning and deployment process. SAP on Compaq is the fastest time to success with Compaq customers implementing SAP in as few as 15 months versus 36 months on average for RISC/Unix solutions.
 - ◆ More than 2000 customers trust Compaq to run their SAP R/3 solutions.

Compaq is the #1 platform for the leading standards-based solutions, holding the following marketshare worldwide:



Enterprise Solution Center Enhances Customer Productivity

- Customers interested in the ProLiant 7000 can preview how a proposed system of desktops, networking equipment, servers, and software will perform under real-life operating conditions.

Compaq opened its Enterprise Solution Center (ESC) in Houston, designed to provide full-scale, proof-of-concept testing resources to North America and global customers. As Compaq’s primary solution center, the new and improved facility is the largest of a group of labs located around the country. Satellite facilities are located in New York City and San Francisco, with additional centers scheduled to open in Atlanta and Chicago⁴.

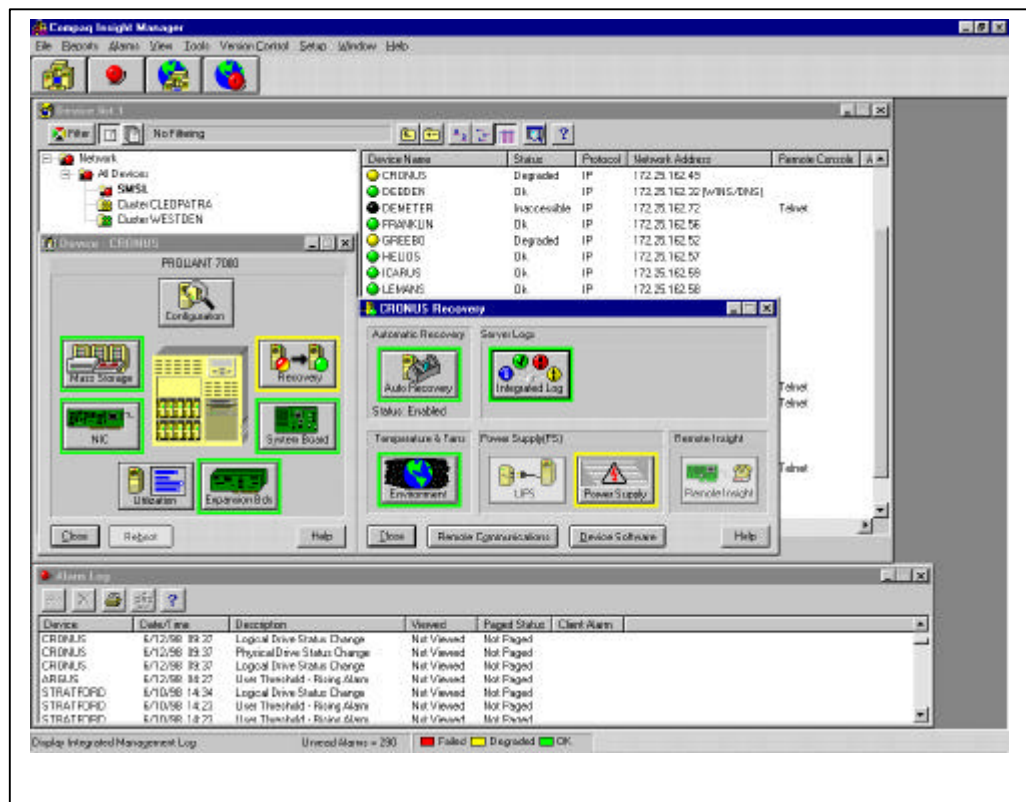
⁴ For customer success stories see <http://www.compaq.com/newsroom/pr/pr171297a.html>.



**THE MOST MANAGEABLE SERVER
FOR LOWER TOTAL COST OF OWNERSHIP**

From hardware to software, everything about the ProLiant 7000 is engineered for ease of management and decreased resource utilization.

COMPAQ INSIGHT MANAGER – ONE OF THE INDUSTRY’S BROADEST MANAGEMENT APPLICATIONS



SUPERIOR
PERFORMANCE AND
SCALABILITY

HIGH AVAILABILITY
FOR
7x24 ENVIRONMENTS

ULTIMATE
EXPANDABILITY
WITHOUT
COMPROMISING YOUR
INVESTMENT

OPEN INDUSTRY
STANDARDS FOR
FLEXIBILITY AND
HIGHER RETURN ON
INVESTMENT

TIGHTEST INTEGRATION
FOR FASTEST
DEPLOYMENT

**MOST MANAGEABLE
SERVER – LOWER
TOTAL COST OF
OWNERSHIP BUILT-IN**



Remote Insight Board
PCI-Based

COMPAQ

Best Managed Systems in the World

The unrivalled suite of management tools simplifies deployment, maintenance and updating – saving resources and time.

- **SmartStart Integration tool** allows customers to roll out new systems reliably optimized for the job and replicated to other new systems with confidence.
- **Compaq Integration Server** allows update of multiple servers more consistently and accurately, while saving time and resources.
- **Compaq Insight Manager 4.1** monitors and controls critical hardware components with unique features like pre-failure alerts with detailed diagnosis and help files to reduce costly downtime.
- **New Web-Based Compaq Insight Manager** allows flexible enterprise management of Compaq systems, networking devices, and third party systems, from all points, not just a centralized single console.
- **Compaq Insight Manager for OpenView and TME 10 NetView** for heterogeneous NT/UNIX environments makes it easy to manage Compaq hardware from UNIX-based management platforms.
- **Compaq Info Messenger**, a proactive Internet information tool, delivers product information customized to a customer's specific computing environment, such as software and firmware updates, to help prevent and quickly resolve problems.
- **Remote Management capabilities**, with **Integrated Remote Console** and host-independent features of **Compaq Remote Insight Board – now PCI** – lets businesses keep their fingers on the heartbeat of the server, even if the server or network is down.
- **Power Down Manager**, available under the NT OS, allows users to define the behavior of the power switch (if running Compaq Remote Monitor Service).
- **Power Supply Viewer**, available under the NT OS, reviews power supply redundancy and scenarios.
- **Integrated Management Log Viewer** allows a view of the Integrated Management Log for details, with filtering, printing, and saving.

Innovative Design – Speeds and Simplifies Access and Maintenance

- **New, easy-to-use individual push button PCI Hot Plug technology** at each PCI Slot communicates directly with the server and operates independently of PCI Hot Plug software utilities, and allows slot power control directly at the server.
- **Integrated Management Display** gives quick at-a-glance LCD monitoring right on the server.
- **Highly serviceable chassis** enables easy servicing in a rack or as a tower.
 - ◆ Easy access panels and board release levers for quick access to modular, removable, hot plug components.
 - ◆ Internal cabling for improved reliability and manageability.
 - ◆ Key-locking chassis and power supply security bar to enhance serviceability and security.

SUPERIOR PERFORMANCE
AND SCALABILITY

HIGH AVAILABILITY FOR
7x24 ENVIRONMENTS

ULTIMATE
EXPANDABILITY
WITHOUT COMPROMISING
YOUR INVESTMENT

OPEN INDUSTRY
STANDARDS FOR
FLEXIBILITY AND HIGHER
RETURN ON INVESTMENT

TIGHTEST INTEGRATION
FOR FASTEST
DEPLOYMENT

**MOST MANAGEABLE
SERVER – LOWER TOTAL
COST OF OWNERSHIP
BUILT-IN**

Compaq and System Partners Offer the High Level Systems Service Critical for Global Support of 7 x 24 Systems and Applications

- Compaq and its service partners work together to ensure access to applications and data anytime, everywhere.
- A full suite of services allows a customized global service and support solution.
 - ◆ *Planning and Design services:* IT architectural planning and network design.
 - ◆ *Integration services:* migration services, project management, and interoperability testing.
 - ◆ *Life cycle system support services:* 7x24 hardware and software support, remote monitoring, asset management, and business recovery services.
- System Service Provider program (SSP) co-developed with recognized service partners to provide best-in-class services for enterprise class customers.

TESTING, INTEGRATION, AND MANUFACTURING



Compaq servers, including the ProLiant 7000, run the gauntlet of the most rigorous real-world testing procedures, from design to design validation and certification to manufacturing.

Design

Compaq designs entire systems to address customer needs.

Compaq investigates customer requirements and future needs, and optimizes system architecture, chassis, power supplies, and software utilities to create complete systems addressing these needs.

Compaq designs its products for dependable use in some of the harshest business environments imaginable.

The ProLiant 7000, like other ProLiant servers, began its life in simulation testing, and underwent thorough repeat simulation testing after prototypes were built to verify the proposed design before actual production began. Each phase of the design process involves extensive resimulation and design verification builds.

The ProLiant 7000 was specifically designed for high reliability. To achieve this goal, Compaq designed the spacing between processor slots to optimize trace lengths, signal quality, and power supply regulation. The processor heat sink, using heat pipe technology, uses a critical element in



optimizing the system reliability while providing room necessary for an upgrade to 8-way architectures.

Design Validation

The ProLiant 7000, like all Compaq ProLiant servers, is tested in standalone and connected environments to verify the design. Compaq designed and used unique systems for testing the ProLiant 7000 to ensure rigorous and thorough test environments for producing a mission-critical server. As mockups are built, they are subjected to different phases of testing. If at any point in the process a problem is detected, the design is reworked and again subjected to the same testing.

- **Compaq test fixtures are designed to stress systems far beyond normal usage. The ProLiant 7000 was tested with numerous hardware and software test tools, including stress testing, testing with third party devices and Compaq options, and real-world environment testing to achieve the highest possible reliability in the ProLiant 7000.**
 - ◆ DOS-based tests analyze specific sub-systems as soon as they are created.
 - ◆ The entire systems are stress tested under multiple operating systems at 100% capacity for months. New technologies, such as 64-bit PCI, are tested with Compaq test cards and software test suites designed to exercise the limits of the specifications.
 - ◆ Compaq tests all widely used business software applications and third party hardware devices to ensure compatibility. Also, Compaq optional enhancement products are tested on past and future models of the ProLiant 7000 to ensure all upgrades bring the same high quality to any solution.
 - ◆ The ProLiant 7000, like all other Compaq products, is designed and tested to be Year 2000 compliant. Compaq is proud to be the first in the industry to offer customers a tool to measure Year 2000 product compliance, free of charge.
 - ◆ Finally, the ProLiant 7000 undergoes Enterprise System Verification (ESV), which represents harsh real-world tests of applications on multiple operating system environments.
- **Compaq and Intel were validation partners for the Pentium® II Xeon™ processor.**
- **Compaq also puts new product designs such as the ProLiant 7000 with Pentium® II™ Xeon processors through demanding design verification, reliability, and functionality tests. Some of these tests include:**
 - ◆ Mechanical “wear-out” testing to simulate long-term wear and tear.
 - ◆ Thermal extremes testing.
 - ◆ Video characterization.
 - ◆ AC power interruption and variation stress testing.
 - ◆ Keyboard force displacement characterization.
 - ◆ Shock and vibration testing.
 - ◆ Acoustical characterization.
 - ◆ All required safety agency (UL, CSA) and FCC tests on all new products.

Integration

Compaq believes that understanding the customer's total environment and ensuring that all the required components work well together is a key responsibility of any systems vendor. The Compaq commitment to integration is evident in the thorough testing undertaken to ensure the tightest integration with a spectrum of software and hardware.

- Interoperability tests are performed with local area networks, communications connectivity, operating systems, applications, and third-party hardware. These tests ensure that the customer can deploy the ProLiant 7000 confidently, reducing set-up time as well as downtime due to system incompatibilities.
- Each ProLiant 7000 is validated and measured for performance in configuration. Compaq validates its servers as compliant with industry standards and with leading third party devices, including drive array controllers, network interface cards, video controllers, and more. Servers are tested for proper operation under the leading network topologies: 10baseT, 100baseT, Token Ring (4Mbps and 16Mbps), FDDI, CDDI, and ATM. Secondary storage solutions are incorporated into many of the customer platform test stations to ensure superior customer satisfaction.
- Compaq's extensive integration labs that provide the foundation for extensive certification testing with leading operating systems, network operating systems, and applications. Compaq's experience led to the development of Compaq's SAP Competency Centers in both Waldorf, Germany, and Houston. These centers deliver superior integration value to our SAP customers.
- Integration Management, which stems from Compaq partnerships with leading developers of operating systems and applications, ensures that customers can easily deploy Compaq systems from the time of installation through optimization. Compaq SmartStart offers customers easier integration, better performance, and lower support costs. SmartStart lowers initial set-up costs by providing one-stop integrated installation for drivers, operating systems and applications: all optimized for Compaq hardware. SmartStart also allows the deployment of an Integration Server. Using these tools, MIS managers achieve consistency and uniformity in how servers are set up and maintained. With the Integration Server, a single, definitive repository can be established on the network and used to set up other servers in an enterprise.

Manufacturing

The ProLiant 7000, like all Compaq products, is run through a series of tests during the manufacturing process itself. Compaq designs and uses its own hardware and software testing tools to make sure products meet the highest standards. Various product- and process-level audits are performed at different stages of assembly to ensure quality. Tightly knit manufacturing teams work together to ensure every ProLiant 7000 is built to exacting specifications.

Compaq has received numerous awards for its manufacturing process: • Large Manufacturing Category of the 1996 Houston Award for Quality, • Energy Star 1997, • PC Partner of the Year Award (second year in a row), • World Environment Center Gold Medal Award, • 1997 Texas Quality Award, • China Manufacturing: 1998 Shenzhen Regional Technical Supervision Bureau Quality Award, • Singapore Manufacturing: 1997 Singapore National Quality Circle Organization Award, and the • 1998 Singapore National Productivity Award.

Compaq does what it takes to test the ProLiant 7000 rigorously, from conception to production, to ensure delivery of the most reliable mission-critical server.



WHY THE PROLIANT 7000 WITH PENTIUM® II XEON™ PROCESSORS IS SUPERIOR TO OTHER SOLUTIONS

Benefits of Compaq ProLiant 7000 Versus Other Servers with Pentium® II Xeon™ Processors

Upgradability – The ProLiant 7000 is the only server in the industry offering an In-Chassis upgrade of Pentium® Pro™ processors to 4-way and 8-way Pentium® II Xeon™ processors.

- In-chassis upgrades reduce total costs of ownership. Because many enterprise operating systems, application software installations, and warranties are linked to hardware serial numbers, the continuation of the serial number provides significant cost savings. Also, the in-chassis upgrade allows extended amortization of the server.
- Rather than a “forklift” transition, Compaq replaces key parts while migrating other major components. Components migrated in the upgrade include:
 - ◆ Chassis (and serial number)
 - ◆ EDO Memory (4-way upgrade only)
 - ◆ Power Supplies
 - ◆ Hard Drives
 - ◆ Media Devices
 - ◆ Hot Plug Redundant Fans
 - ◆ Integrated Management Display
 - ◆ CD-ROM and Floppy Drives (4-way only)
 - ◆ PCI Cards

PCI Hot Plug – First Introduced by Compaq

- Enhanced usability with push button design – offering the benefit of a single button at each PCI Hot Plug slot to enable rapid replacement, upgrade, and addition of PCI cards without powering down the server.
- 32- and 64-bit PCI slots – the five 64-bit slots provide double the bandwidth to storage, networks, and peripherals.
- Fully Microsoft Server 98 Compliant

3-channel Smart Array 3100ES Controller

- Supports contiguous array across 18 internal drives for up to 218.4GB storage.
- Provides 64MB of cache for high-performance RAID.



- Convenient cable-free design allows connection of cages to the system I/O board itself and not the array controller card.

The Most Expandable Server

- Nine PCI Hot Plug slots provide plenty of headroom for growing needs.
- 18 x 1" hot plug hard drive bays for excellent expandability, with the flexibility to choose 12 x 1.6" if desired, or a combination of 1" and 1.6" in a single drive cage.
- Six removable media bays – 6 total, one 1.44MB floppy, one 24X IDE CD-ROM, 4 available: ideal for DLTs, additional CD-ROMs, or other removable media devices.

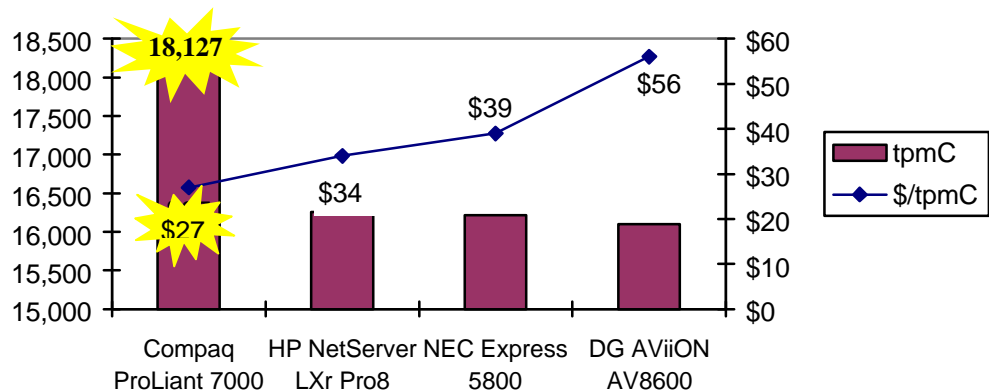
Benefits of Compaq ProLiant 7000 Versus Servers with 8-Way Pentium® Pro™ Processors

Pentium® II Xeon™ processors have been designed to provide maximum performance and headroom in server systems. Improvements over Pentium® Pro™ processors include support for a 50% faster 100MHz system bus, larger secondary cache (2MB in 450MHz CPU) with faster internal cache bus, and a higher internal (core) frequency.

These advancements combined with a balanced system architecture mean that a ProLiant 7000 configured with four Pentium® II Xeon™ processors will provide performance matching or exceeding eight processor Pentium Pro systems at substantially lower cost because four Pentium® II Xeon™ processors are much less expensive than eight Pentium® Pro™ processors.

Pentium® II Xeon™ processors are at the very beginning of their life cycle. Future versions are planned with larger cache sizes and faster processors. The Pentium Pro processor has reached its limits in processor speeds, front-side bus speed, cache size, and cache speed. These four factors are especially critical for eight-way scalability, leading to a rapid fall-off in performance for systems with greater than four Pentium® Pro™ processors.

While eight-way Pentium Pro systems have reached their performance limits, ProLiant 7000 provides superior investment protection and scalability with faster Pentium® II Xeon™ processors and upgradability to eight-way Pentium® II Xeon™ processors, as shown in the chart below.⁵

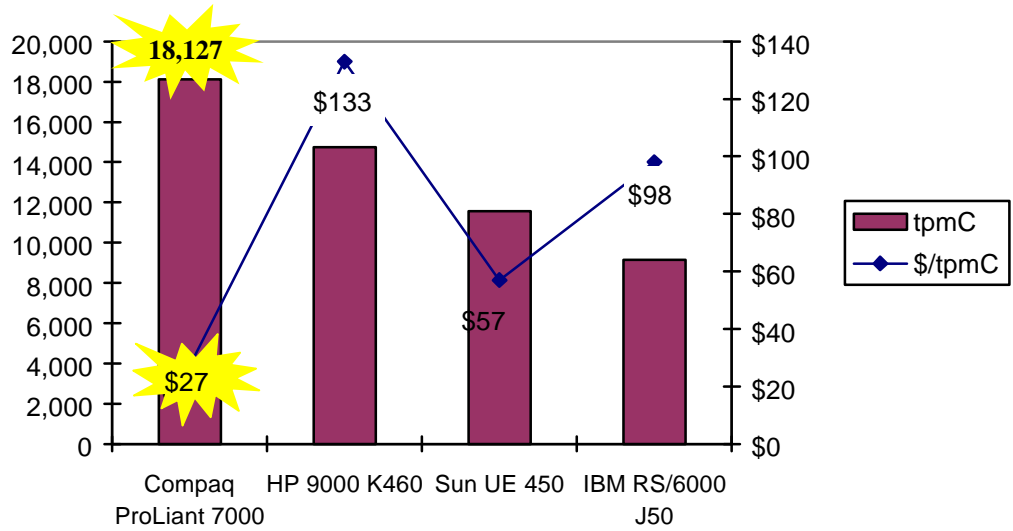




⁵ Based on Published TPC-C Results as of 6/29/98.

Benefits of Compaq ProLiant 7000 Versus RISC Platforms

Compared to traditional RISC midrange servers, the ProLiant 7000 provides superior scalable performance and investment protection without sacrificing high-availability features. Innovative new features provide an exceptional level of reliability and high-availability compared to most RISC vendors. The ProLiant 7000 with Pentium® II Xeon™ processors provides superior performance at a fraction of the price, as demonstrated in the chart below.⁶



⁶ Based on Published TPC-C Results as of 6/29/98.

	Compaq ProLiant 7000	Hewlett-Packard 9000 K460	IBM RS/6000 J50	Sun Enterprise 3500	Sun UE450
Processor	400 MHz II Xeon™	180MHz PA-8000	200 MHz PowerPC 604e	250 or 336MHz UltraSPARC	250/300MHz UltraSPARC Pentium®
# of Processors	1-4, future upgrade to 8	1-4	2, 4, 6 or 8	1-8	1-4
Secondary Cache	1 MB (future 2MB)	2 MB	2 MB	4 MB	1 or 2MB
Standard ECC Memory	256 MB	128 MB	256 MB	256 MB	0 MB
Maximum Memory	8 GB	8 GB	4 GB	8 GB	4GB
Expansion Slots	9 PCI Hot Plug, (5 64-bit + 4 32-bit), 1 ISA modem	4 HP-PB (8 max) 1 HP-HSC (5 max)	7 Micro Channel	2-8 PCI or 3-12 Sbus (none Std)	10 PCI
Media Bays	6	2	3	2	2
Hot-Plug Drive Bays	18 x 1" (12 x 1.6")	4 non-hot plug	5	8	20, (4 std)
Max. Internal Storage	218.4GB	36GB	63.7GB	72.8GB	84GB
Max. External Storage	>6TB	21TB	3.4TB	>6TB	>6TB
Disk Controller	Dual Integrated Wide-Ultra SCSI-3 + single Wide-Ultra SCSI	Integrated Fast-Wide Differential SCSI-2	Fast-Wide SCSI-2 (in a slot)	Integrated Fast-Wide SCSI-2 on I/O board	Integrated Ultra SCSI 3
RAID Controller	Smart Array 3100ES, Standard	Not supported internally	Not supported internally	Not supported internally	Not supported internally
Redundant NIC Support	Yes*	No	No	Optional	Optional
Redundant Fans	Yes, Hot Plug	No	No	Yes	No
Redundant Power Supplies	Yes, Hot Plug	No	No	Opt. Hot Plug	Opt. Hot Plug
Redundant Processor Power Modules	Yes	No	No	No	No
Remote Management	Optional IRC	Integrated Modem for Remote Management	Integrated Service Processor	Remote Console Support	Remote Console Support
Server Management	Remote Insight Board, Opt. Compaq Insight Manager, Standard	SAM Std HP OpenView, Opt	Visual Syst Mgr., Std Tivoli, Opt	SyMON, Std Ent. Mgr, Opt	SyMON, Std Ent Mgr, Opt
Intelligent Integration	SmartStart	No	AIX	Solaris Webstart	Solaris Webstart
Pre-Failure Warranty	Standard: Disk Drives, Memory, Processors	No	No	No	No

*Netelligent Dual-port
10/100 TX Ethernet
NIC can be configured
as a redundant pair.

PRODUCT SPECIFICATIONS

FEATURES	Compaq ProLiant 7000						
Processor	Pentium® II Xeon™ 400MHz with integrated 1024KB Level-2 cache, support for up to 4 Pentium® II Xeon™ processors, upgradable to future Pentium II processor technology and planned 8-way upgrade. One redundant processor power module standard.						
Memory	256MB ECC memory expandable to 8GB using industry-standard ECC protected EDO DIMMs.						
Cache Memory	1024KB Level-2 Cache.						
Form Factor	19" Rack-Ready (14U); Rack-to-Tower option kit.						
Network Controller	Dual autosensing Netelligent 10/100 TX PCI UTP.						
Drive Controller	Smart Array 3100ES controller in PCI slot (three-channel for internal RAID configurations only) and two integrated Wide-Ultra SCSI-3 controllers (for removable media bays) plus one Wide-Ultra SCSI-3.						
I/O Expansion Slots	10 Total Slots: Five 64-bit PCI Hot Plug, four 32-bit PCI Hot Plug, one ISA modem slot. All 9 PCI Hot Plug slots support Compaq PCI Hot Plug push button feature.						
Hot-Pluggable Drive Bays	Three internal drive cages; each drive cage holds 6 x 1.0" or 4 x 1.6" or combinations; 18 x 1.0" or 12 x 1.6" drive bays total.						
Maximum Storage	<table border="0"> <tr> <td style="text-align: right;">Internal</td> <td>Maximum internal capacity: 218.4GB (12 x 18.2GB) or 163.8GB (18 x 9.1GB).</td> </tr> <tr> <td style="text-align: right;">External</td> <td>Maximum external capacity: >6TB.</td> </tr> <tr> <td style="text-align: right;">Removable Media Bays</td> <td>Six total bays: four available 5.25" removable media, one 1.44MB floppy drive, one 24X MAX IDE CD-ROM.</td> </tr> </table>	Internal	Maximum internal capacity: 218.4GB (12 x 18.2GB) or 163.8GB (18 x 9.1GB).	External	Maximum external capacity: >6TB.	Removable Media Bays	Six total bays: four available 5.25" removable media, one 1.44MB floppy drive, one 24X MAX IDE CD-ROM.
Internal	Maximum internal capacity: 218.4GB (12 x 18.2GB) or 163.8GB (18 x 9.1GB).						
External	Maximum external capacity: >6TB.						
Removable Media Bays	Six total bays: four available 5.25" removable media, one 1.44MB floppy drive, one 24X MAX IDE CD-ROM.						
Power Supplies	Two Hot Plug Redundant 750/500 watt N+1 Power Supplies standard, with support for up to three Power Supplies per system. Power Supplies are Load sharing. Server uses 1 to 3 supplies based on system configuration. Optimized for 220 (high-line) volts. Runs either on 110 (low-line) or 220 (high-line) volts.						
Interfaces	Two network RJ-45, External Wide-Ultra SCSI, two serial, parallel, keyboard, and pointing device (mouse).						
Graphics	Integrated 1024 x 768 x 256 color with 2MB memory.						
Full-Spectrum Fault Management	<table border="0"> <tr> <td style="text-align: right;">Fault Prevention</td> <td>Compaq Insight Manager, Pre-Failure Warranty, Integrated Management Display, Integrated Remote Console, Remote Insight Board PCI (optional)</td> </tr> <tr> <td style="text-align: right;">Fault Tolerance</td> <td>On-Line Spare, UPS (optional), Redundant Power Supplies, Redundant Processor Power Modules, ECC memory, Compaq Smart Array controllers, Redundant Network Adapter Software.</td> </tr> <tr> <td style="text-align: right;">Fault Recovery</td> <td>On-Line Recovery Server (optional), Standby Recovery Server (optional), Online Storage Controller Recovery Option (optional), Automatic Server Recovery (ASR-2), Server Health Logging, Revision History Table, Automatic Revision Tracking, Drive Parameter Tracking and Dynamic Sector Repairing (with SMART Array 3100ES controller), Off-Line Processor, I/O Bus Utilization Monitor, Power-Down Utility, Integrated Management Log Viewer, Power Down Manager, Power Supply Viewer.</td> </tr> </table>	Fault Prevention	Compaq Insight Manager, Pre-Failure Warranty, Integrated Management Display, Integrated Remote Console, Remote Insight Board PCI (optional)	Fault Tolerance	On-Line Spare, UPS (optional), Redundant Power Supplies, Redundant Processor Power Modules, ECC memory, Compaq Smart Array controllers, Redundant Network Adapter Software.	Fault Recovery	On-Line Recovery Server (optional), Standby Recovery Server (optional), Online Storage Controller Recovery Option (optional), Automatic Server Recovery (ASR-2), Server Health Logging, Revision History Table, Automatic Revision Tracking, Drive Parameter Tracking and Dynamic Sector Repairing (with SMART Array 3100ES controller), Off-Line Processor, I/O Bus Utilization Monitor, Power-Down Utility, Integrated Management Log Viewer, Power Down Manager, Power Supply Viewer.
Fault Prevention	Compaq Insight Manager, Pre-Failure Warranty, Integrated Management Display, Integrated Remote Console, Remote Insight Board PCI (optional)						
Fault Tolerance	On-Line Spare, UPS (optional), Redundant Power Supplies, Redundant Processor Power Modules, ECC memory, Compaq Smart Array controllers, Redundant Network Adapter Software.						
Fault Recovery	On-Line Recovery Server (optional), Standby Recovery Server (optional), Online Storage Controller Recovery Option (optional), Automatic Server Recovery (ASR-2), Server Health Logging, Revision History Table, Automatic Revision Tracking, Drive Parameter Tracking and Dynamic Sector Repairing (with SMART Array 3100ES controller), Off-Line Processor, I/O Bus Utilization Monitor, Power-Down Utility, Integrated Management Log Viewer, Power Down Manager, Power Supply Viewer.						
Software	Compaq SmartStart, Compaq Insight Manager standard.						
Operating Systems Supported	Windows NT, SCO, Unixware, Novell NetWare						
Warranty	Limited three-year Pre-Failure Warranty on drives, processors, and memory, for servers using Compaq Insight Manager. Certain restrictions and exclusions apply.						
Service and Support	Compaq Care provides a wide range of service offerings including a three-year limited warranty, Pre-Failure Warranty, and Compaq Service and Support Programs available on a worldwide basis.						

