

## ***Fujitsu PRIMEPOWER servers***

***The UNIX choice with data center credentials***





# **Fujitsu PRIMEPOWER servers**

---

## **The UNIX choice with data center credentials**

**C**hoosing a UNIX® server has become a strategic decision. UNIX servers are the engines powering the e-business boom. The applications they run—from customer relationship management, to supply chain management, to business-to-business Extranet applications—no longer merely support the business. They are the business. As application value rises, users multiply, servers proliferate, and data center complexity explodes, issues of availability and scalability loom larger. Choosing the right server—and the right vendor relationship—has never been as critical as it is today.

You need an enterprise UNIX alternative from a source that understands the issues from the data center perspective.



That alternative is the Fujitsu PRIMEPOWER® family of SPARC®-compatible Solaris® servers. That source is Fujitsu Technology Solutions.

Who are we? Fujitsu Technology Solutions has leveraged the resources of the Fujitsu Group, the fifth-largest computer company in the world, to deliver a UNIX choice that stands up to data center demands. We didn't start with the desktop and work our way up. We started with a deep understanding of the data center requirements for availability and scalability and drove them down through the entire PRIMEPOWER server line, from the enterprise to the workgroup.

Consider the advantages PRIMEPOWER offers:

- Huge selection of Solaris applications and software investment protection
- More reliability and availability features
- Unparalleled scalability
- Performance-enhanced design
- Advanced partitioning technology
- Data center quality service and support

## ***Applications, applications, and more applications***

**W**e understand the importance of protecting customers' investment in the applications that run their business and generate their revenue. PRIMEPOWER servers are your best choice for software investment protection.

PRIMEPOWER servers support a huge selection of applications. They run Solaris—the most popular UNIX operating system environment in the world. That means you can choose the best application for your business from the more than 12,000 Solaris applications commercially available today.

*The PRIMEPOWER family protects your software investment through strict SPARC compliance. The Fujitsu-designed PRIMEPOWER SPARC64 processor conforms to the SPARC V9 specification set by the SPARC International consortium.*

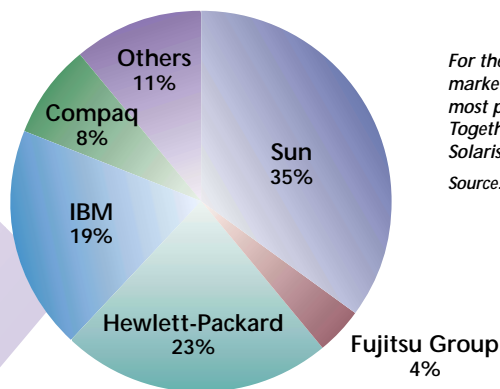
## Over 12,000 Solaris applications to choose from

The PRIMEPOWER family protects your software investment through strict SPARC compliance. The Fujitsu-designed PRIMEPOWER SPARC64 processor conforms to the SPARC V9 specification set by the SPARC International consortium. That means the Solaris applications you depend on today will run the way they should, without change, on PRIMEPOWER servers.

No company is more dedicated to the longevity of the SPARC/Solaris environment than Fujitsu, who co-developed the architecture. By providing an alternative SPARC-compliant Solaris platform, the Fujitsu PRIMEPOWER family stimulates the competition that drives innovation and helps solidify Solaris as the dominant UNIX operating system.

For software investment protection, choose PRIMEPOWER.

THE UNIX  
CHOICE WITH  
DATA CENTER  
CREDENTIALS



*For the safest bet in software investment, go with the market leader. The Solaris operating environment is the most popular UNIX operating system in the world. Together, Sun Microsystems and the Fujitsu Group give Solaris a 39-percent market share.*

*Source: Based on IDC's March 2001 Server Tracking Data.*

## **More serious about availability**

---

**E**very vendor talks availability, but Fujitsu Technology Solutions and Fujitsu do more about it.

The Fujitsu family of companies learned all about availability from making the most reliable, available computers in the world—mainframes. For almost 30 years, we've been supporting mission-critical applications and setting the standards for high availability in the most demanding data center environments. Everything we've learned, we're applying to the PRIMEPOWER family.

The result is a robust system with more reliability built into it than any other UNIX system today. Start with the system layout optimized for cool, reliable operation. Add the SPARC64 processor designed with mission-critical applications in mind. Program in the most extensive error correction code so that one-bit errors can never bring down the server and stop business. Other UNIX servers leave gaps in their ECC coverage, creating vulnerable points for failure. Only the PRIMEPOWER family provides ECC on all primary data paths—memory, system bus, and both levels of cache.

All UNIX servers offer redundant components to protect against single points of failure; most offer them as optional add-ons. With PRIMEPOWER, failure isn't an option. Redundant power supplies and fans aren't extra; they are part of the base system. The PRIMEPOWER family also features I/O multipathing, which provides redundant paths for I/O and network access.

The ability to monitor hardware status and health is a requirement for high availability. It shouldn't be an add-on either.

*The PRIMEPOWER family has all the hot-swappable components you depend on to keep your business running. Hard disks, processors, memory, power supplies, and fans can all be swapped on the fly.*

## **Error correction on all primary data paths**

### **Hot-swappable system boards**

PRIMEPOWER servers come with an integrated system control facility for hardware diagnostics and monitoring. This facility ties into PRIMEPOWER failover software and all popular system management applications.

All UNIX servers feature some components that can be replaced without bringing down the system and interrupting business. The PRIMEPOWER family has all the hot-swappable components you depend on to keep your business running. Hard disks, processors, memory, power supplies, and fans can all be swapped on the fly. The PRIMEPOWER family also has hot-swappable system boards for dynamic upgrade and continuous operation.

In addition to resilient design, the PRIMEPOWER family offers the very best in clustering technology for the ultimate in fault-tolerant operation. In fact, the company that makes the PRIMEPOWER family is today the company that helped invent failover clustering. Advances developed by Siemens, a Fujitsu partner, have become standard. They are incorporated into UNIX modules and widely adopted by third-party clustering software vendors. And PRIMEPOWER's clustering solution has been proven in action in hundreds of installations worldwide.

Put all these high-availability advantages together and you get an enterprise-class, data-center-worthy platform that sets the highest standard of availability in the UNIX marketplace. Your e-commerce and other business-critical, customer-facing applications demand nothing less.

For mission-critical availability, choose PRIMEPOWER.



THE UNIX

CHOICE WITH

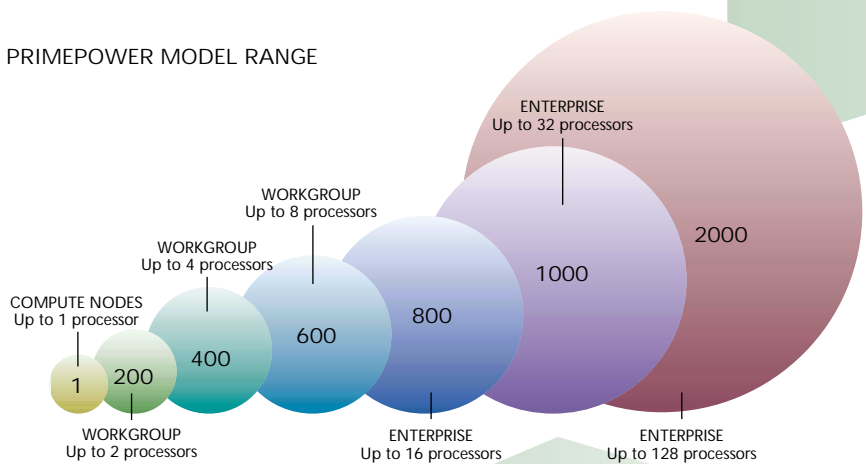
DATA CENTER

CREDENTIALS

## More room for growth

**W**ith explosive growth in e-business, success requires bigger and bigger servers to support new applications, soaring transaction volumes, and more users. At Fujitsu Technology Solutions, we are especially sensitive to customer issues of balancing growth with stability. PRIMEPOWER servers are designed with superior scalability to limit business disruption, prolong the life of your server investment, and bring more stability to volatile IT environments.

PRIMEPOWER MODEL RANGE





## Scalable to 128 processors

### Multiple processor generations in the same system

**The PRIMEPOWER family outdoes the competition in scalability, and you get maximum value from every processor added. PRIMEPOWER models range from 1 to 128 processors.**

First, the PRIMEPOWER family outdoes the competition in scalability, and you get maximum value from every processor added. PRIMEPOWER models range from 1 to 128 processors.

Second, PRIMEPOWER enterprise models accommodate more processors without a cabinet swap. The PRIMEPOWER 800 grows from 4 to 16 processors. The PRIMEPOWER 1000 grows from 4 to 32 processors. And the PRIMEPOWER 2000 scales from 8 to 128 processors—making it the current leader in UNIX capacity by a wide margin.

Third, the super scalability of the PRIMEPOWER family is supported by a very high-bandwidth data channel to memory and the I/O system, so performance stays high as capacity grows.

Fourth, only the PRIMEPOWER family supports multiple generations of processors in the same system. You can partition PRIMEPOWER enterprise models into multiple virtual systems running different processor clock speeds. This unique capability gives you more choice and flexibility in managing your system's upgrade and migration path. And we know how important that is for the enterprise data center.

For scalability and investment longevity, choose PRIMEPOWER.

THE UNIX

CHOICE WITH

DATA CENTER

CREDENTIALS

## High-performance engineering

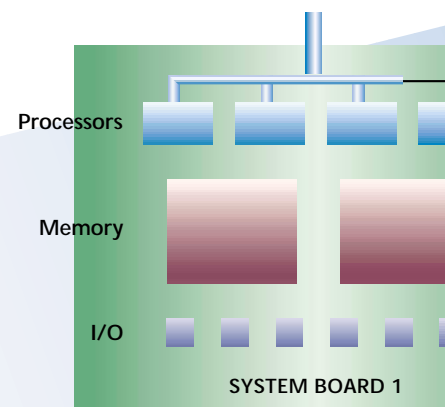
**O**ur data center credentials show up in the way PRIMEPOWER is engineered—for high performance and throughput to support huge volumes of data and large numbers of users.

The heart of the PRIMEPOWER family is the Fujitsu-designed SPARC64 processor, a superscalar 64-bit RISC chip that is 100-percent binary compatible with UltraSPARC. Along with strict compliance, the SPARC64 delivers superior performance. Performance enhancements include up to four floating point instructions and up to four integer instructions per cycle; a dual 128-bit system data bus; and larger cache. Level 1 cache is 128 KB data and 128 KB tag. Level 2 cache is 8 MB. And system main memory can be configured up to 512 GB. The performance advantage is particularly valuable for memory-intensive applications involving large data sets, such as data warehousing, enterprise resource planning, and customer relationship management.

Performance is further optimized by the innovative dual crossbar interconnect architecture for high-performance connection between the SPARC64 processors and between the system boards. Adapted from Fujitsu mainframe design, the PRIMEPOWER interconnect delivers ultra high I/O throughput in a UNIX server today—up to 57.6 gigabytes per second.

For compatibility *plus* higher performance, choose PRIMEPOWER.

CROSSBAR ARCHITECTURE



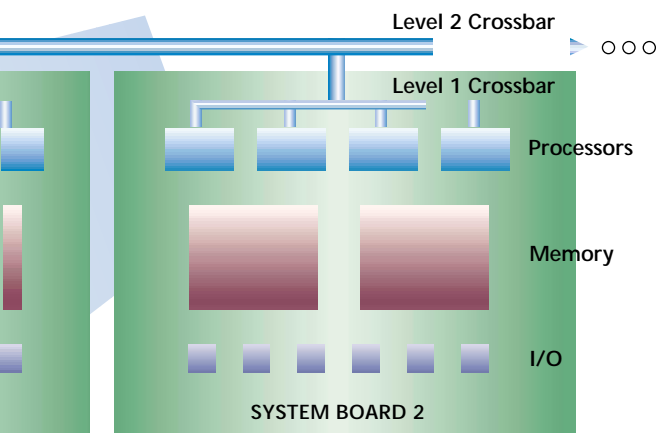
To optimize performance, PRIMEPOWER's crossbar interconnect connects multiple processors on a single system board and also

## **Performance-enhanced SPARC processor**

*Dual crossbar architecture  
for the highest UNIX throughput*

THE UNIX  
CHOICE WITH  
DATA CENTER  
CREDENTIALS

*Along with strict compliance, the SPARC64 delivers superior performance. Performance enhancements include up to three floating point instructions and up to four integer instructions per cycle; a dual 128-bit system data bus; and larger cache. Level 1 cache is 128 KB data and 128 KB tag. Level 2 cache is 8 MB.*



*ssbar interconnect architecture allows connection between system boards.*

## Advanced partitioning

---

**T**he rapid proliferation of UNIX servers stimulated by fast growing e-business applications dramatically increases the complexity of management in resource-strapped data centers, driving up costs, stressing staff to their limits, and jeopardizing availability. The solution: consolidation on a single large-capacity server. For consolidation, PRIMEPOWER enterprise servers are your best choice. In addition to being the current leader in UNIX capacity, the PRIMEPOWER family offers the most advanced partitioning capability in a UNIX system.

Pioneered by Amdahl Corporation, a Fujitsu subsidiary, partitioning enterprise systems and isolating resources and applications gives data centers the flexibility and agility to meet the challenge of rapid growth and fast changing customer requirements. In offering the PRIMEPOWER family, Fujitsu Technology Solutions brings that flexibility, once limited to mainframes, to the UNIX data center.

The PRIMEPOWER enterprise models—the 800, the 1000, and the 2000—can have up to 15 partitions. Partitions, consisting of one or more system boards, operate as independent systems with their own dedicated memory, controllers, and system disks. Partitioning enhances availability by shielding applications from hardware and software failures in other partitions.

The PRIMEPOWER partitioning solution goes even further to safeguard availability for mission-critical applications. Automatic System Reconfiguration detects and routes around processor, memory, and PCI-bus system problems, so business continues without disruption. And dynamic system reconfiguration allows you to add, delete, or change partitions or hot-swap components on the fly, without rebooting the system or any of the partitions. Automation makes reconfiguring partitions a quick and easy process so you can manage resources more efficiently and

*Partitions, consisting of one or more system boards, operate as independent systems with their own dedicated memory, controllers, and system disks. Partitioning enhances availability by shielding applications from hardware and software failures in other partitions.*

## Available on more models

### Dynamic and automatic reconfiguration

respond to changing conditions and requirements more rapidly. Added to that is Fujitsu Technology Solutions' resilient, enterprise-class reconfiguration implementation process, which contributes to data integrity and application continuance.

For flexibility the PRIMEPOWER partitioning capability is unsurpassed. You can run different Solaris levels in different partitions, so you have more control over your migration strategy and more protection for your application investment.

For partitioning flexibility, choose PRIMEPOWER.

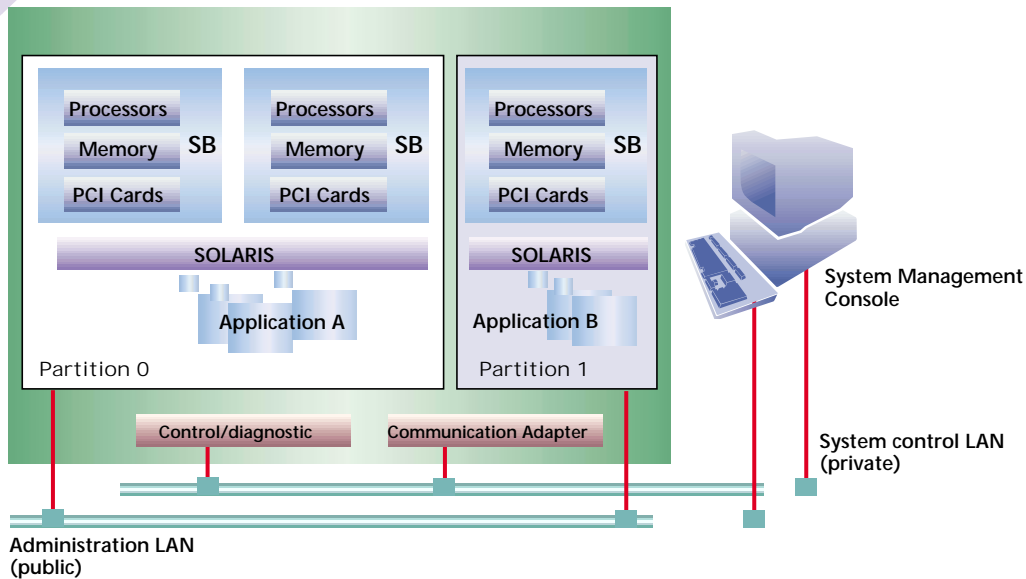
THE UNIX

CHOICE WITH

DATA CENTER

CREDENTIALS

#### PARTITION CAPABILITY



*The PRIMEPOWER family offers partitioning capability on more configurations than any other UNIX alternative. Application A and Application B run in isolated environments for operational flexibility.*

# A UNIX source that speaks your language

---

**W**hen your business depends on UNIX servers, the right vendor relationship matters as much as the right hardware. With the PRIMEPOWER family, you have a source for the industry-leading UNIX platform—Solaris—with a data center perspective.

Our data center perspective shows in the quality of our service, as well as in the quality of the product. We understand your enterprise challenges because we are drawing on the expertise of the Fujitsu companies who know what responsive, dependable service and support means to you. We speak your language. As the owner of a PRIMEPOWER server, you have access to the Amdahl Worldwide Customer Service Center, its global network of problem specialists, mature problem escalation procedures, and a comprehensive spares system. Amdahl service offerings can be selected to meet your individual needs.

For action that speaks louder than words, choose PRIMEPOWER.



---

## **FUJITSU TECHNOLOGY SOLUTIONS ALSO MEANS STORAGE SOLUTIONS**

Servers don't stand alone. The tidal wave of data that IT organizations have to contend with makes storage a vital part of the total solution. Fujitsu Technology Solutions matches the power and performance of PRIMEPOWER servers with a choice of top-notch storage alternatives that have the availability, scalability, and performance to stand up to the storage challenge.

### **EMC Symmetrix Enterprise Storage systems offer**

- Sophisticated software for sharing, protecting, and managing information
- Fully protected capacity to tens of terabytes
- Flexible connectivity options: Fibre, SCSI, ESCON
- Robust business-continuance features

### **EMC Celerra and IP4700 network attached storage offer**

- Ultra high performance
- File sharing between UNIX and Windows NT®
- Great scalability
- Fault-tolerant design

### **GSS 4900 storage systems offer**

- Screaming throughput over a gigabyte per second
- Massive capacity scalability to 64 terabytes
- Built-in SAN (iSAN), saving time, money, and integration headaches
- Global data consolidation for open systems servers: Solaris, Windows NT, HP/UX, AIX



FUJITSU TECHNOLOGY SOLUTIONS

Headquarters  
Fujitsu Technology Solutions, Inc.  
1250 East Arques Avenue  
P.O. Box 3470  
Sunnyvale, CA 94088-3470  
United States of America  
Tel: 877 213 6674  
Sales: 877 905 3644  
Fax: 408 746 6595  
Internet: [www.fujitsu-technology.com](http://www.fujitsu-technology.com)

Canada  
Tel: 416 510 3111  
Fax: 416 510 3353

Fujitsu and the Fujitsu logo are registered trademarks and PRIMEPOWER is a trademark of Fujitsu Limited. Amdahl is a registered trademark and GSS 4900 is a trademark of Amdahl Corporation. SPARC is a registered trademark of SPARC International, Inc. Products bearing the SPARC trademark are based on an Architecture developed by Sun Microsystems, Inc. Solaris is a registered trademark of Sun Microsystems, Inc. UNIX is a registered trademark in the U.S. and other countries, licensed exclusively through X/Open Company Limited. Windows NT is a registered trademark of Microsoft Corporation. All other trademarks and product names are the property of their respective owners and should be treated as such.

The information in this document may be superseded by subsequent documents. For details regarding delivery of specific products, features, and services, contact your local Fujitsu Technology Solutions representative.

© 2001 Fujitsu Technology Solutions.  
All rights reserved. Printed in the U.S.A.  
MM003044-US-002 [1:5] 7/01