Deskside server excellence

RS/6000 Enterprise Server Model F80

Highlights

Powerful, up to six-way 64-bit SMP deskside server with copper chip technology

Outstanding price/performance for e-business, Web hosting, ERP, CRM, SCM and other business-critical applications

Designed with impressive availability and reliability features

Easy to migrate from the Model F50

Powered by AIX®, the leading commercial UNIX® OS

Price/performance leader

The Model F80 is a compact, deskside UNIX server with the performance, reliability, availability and serviceability demanded by today's e-business applications. It offers significant enhancements over its predecessor, the Model F50, with more than three times the commercial processing performance. The F80 also offers the best commercial price/performance of any RS/6000® server.

The F80 is an excellent choice for small and medium sized businesses to run their e-business, Web hosting, enterprise resource planning (ERP), supply chain management (SCM), customer relationship management (CRM), and datamart applications.

In larger organizations, the F80 is ideal for distributed store and branch operations or as a workgroup or Web server.

e-business

Feature	*Benefits*
Copper-based 64-bit RS64 III SMP processors	• Provide significant performance increases over earlier processors
Increased system memory and bandwidth	• Enables complex e-business applications to execute quickly and efficiently
Compact deskside form factor	• Accommodates several different configurations • Allows for 12 hot-swappable disk drives, up to 16GB of memory and 1-6 processors
10 hot-plug PCI slots	• Dramatically improve availability and provide uninterrupted growth for new adapters • Provide increased connectivity for e-business applications
Built-in service processor	• Designed to automatically monitor system operations and take preventive or corrective action • Allows diagnostics and maintenance to be performed remotely
High performance hot-swappable disk	• Provides reliable and high capacity disk storage • Provides data transfer rates of up to 80MB/sec (Ultra2 SCSI) and 160MB/sec (SSA) • Provides for uninterrupted growth to meet unplanned demand for storage
Hot-plug redundant power supplies and cooling fans (optional)	• Allow uninterrupted operation if a power supply or fan becomes disabled
Dynamic CPU Deallocation	• Automatically deallocates resources when impending CPU failures are detected so applications continue to run
AIX operating system	• Supports concurrent execution of 32- and 64-bit applications on 64-bit RS/6000 systems in their full range of scalability • Maintains branded conformance to The Open Group's XPG4, UNIX95, and UNIX98 specifications • Provides an AIX binary compatible environment that helps assure continuing application availability across AIX Version 4 releases

Dramatic improvements

The Model F80 offers the award-winning advanced technology of the Model S80[1] in an affordable, flexible deskside package. It is a follow-on to the popular Model F50, with new levels of performance, flexibility and reliability. The F80 has 1, 2, or 4 450 MHz or 6 500 MHz copper-based 64-bit RS64 III microprocessors. IBM's unique copper chip technology produces faster and more reliable processors improving speed and reducing the heat generated.

The F80 offers main memory of 256MB to 16GB – more than five times the F50. And with two system buses running at 2GB/second each, it provides over twice the system bandwidth. The Model F80 also has greater I/O bandwidth (1GB/second) than the F50. There are 10 64-bit hot-plug PCI adapter slots, a built-in 10/100 Mbps Ethernet port and integrated SCSI-2 F/W and Ultra2 SCSI controllers leaving all slots available for your use.

As a result, most commercial transaction applications should run up to three times faster on the 6-way system. And with the availability of 12 disk storage bays, all these features produce an exceptional configuration flexibility and scalability.

System availability built in

The Model F80 features significant reliability and availability innovations designed to allow the system to identify problems often before they interfere with operations. These features help the system remain operational while components such as disk storage or communications adapters are added or replaced. New to the F80 are hot-plug PCI slots, a hot-plug redundant power option, and hot-plug redundant cooling fans.

RS/6000 Model F80 at a glance

Minimum configuration	Microprocessor:	1-way 450 MHz RS64 III SMP
	Level 1 (L1) Cache:	128KB data/128KB instruction
	Level 2 (L2) Cache:	2MB
	RAM (memory):	256MB
	System bus:	Two busses, each 128 bits wide
	Storage options:	9.1GB disk installed in boot bay or one of 12 disk bays
	I/O expansion:	10 hot-plug PCI slots
	I/O bus width:	10 64-bit
	I/O bus speed:	6@66 MHz(3.3v)/4@33 MHz(5v)
Standard features	Integrated ports:	Keyboard, mouse, four serial, one parallel
	Integrated bays:	Diskette drive, CD-ROM, one additional bay
	Integrated controllers:	SCSI-2 F/W (internal),Ultra2 SCSI (external), 10/100 Mbps Ethernet
System expansion	Processor:	2- or 4-way (450 MHz), or 6-way (500 MHz)
	Level 2 (L2) Cache:	4MB/processor
	RAM:	Up to 16GB
	Storage:	12 1" hot-swappable disk bays; 9.1GB or 18.2GB drives; SCSI or SSA backplanes; 2 optional boot bays
RAS features	Hot-plug for PCI slots, power supplies and fans	Dynamic CPU Deallocation
	Hot-swappable disk	Redundant cooling fans (optional)
	Service processor	Redundant power supply (optional)
Operating system	AIX 4.3.3 (unlimited user license)	
Power requirements	110-127 VAC or 200-240 VAC autoranging	
System dimensions	Height: 610mm (24.0 in), Width: 483mm (19.0 in), Depth: 728mm (28.7 in)	
Warranty	Onsite for one year (limited) at no additional cost	

At the heart of the F80 is a service processor that is designed to constantly monitor the system's vital signs. It can determine and recommend actions often before a problem arises. If desired, a service call may be automatically placed.

The F80 also has an IBM-unique feature, Dynamic CPU Deallocation, that monitors the processors. In the event a processor displays indications of an impending failure, this feature working with AIX 4.3.3 gracefully takes the faulty processor offline. Work from the failing processor is automatically reassigned to other processors and replacement of the failing processor can be scheduled for a convenient time.

The hot-plug PCI slots make it possible to keep most e-business applications running while I/O adapters are added or replaced. Individual adapters can be enabled or disabled as needed, while operations not dependent on that adapter continue to run. There is usually no need to power-down and restart the system. Hot-swappable disk disk drives may be added or removed to meet unexpected demands without interrupting operations.

For near continous operations, industry-leading High Availability Cluster Multiprocessing (HACMP) disaster recovery software[2] packaged with dual F80s is available. This cluster solution, HA-F80, when combined with applications that meet IBM's ClusterProven™ standards, provides a superior base for high availability, an essential ingredient for e-commerce.

Easy upgrade

It's easy to upgrade to the Model F80 from an F50 by means of a serial number protected model conversion. The chassis is exchanged, while memory, adapters and disk drives can be reused. The result is a cost effective growth path to the higher performance, scalability and availability of the F80.

The AIX advantage

An unlimited user license of IBM's industry leading version of UNIX,[3] AIX 4.3.3, is included. Providing real value in reliability, availability and security, AIX is tuned for e-business performance and is widely recognized as state-of-the-art in systems and network management.

AIX 4.3.3 delivers Java™ technology, Web performance and scalability enhancements, and is an excellent choice for managing complex installations. It offers Web-based remote management tools to control the system and monitor key resources such as adapter and network availability, file system status and processor workload.

For more information

To learn more about the RS/6000 Model F80, contact your IBM marketing representative, IBM Business Partner, or visit the following IBM Web sites:

- **ibm.com**/servers/unix
- **ibm.com**/ibmlink

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Produced in the United States of America
5-00

[1] 1999 Network Hardware Product of the Year, *InfoWorld* Magazine, January 17, 2000

[2] *Competitive Analysis of UNIX Cluster HA Functionality,* D.H. Brown Associates, Inc., March 2000

[3] *1999-2000 Operating System Function Review*, D.H. Brown Associates, Inc., March 2000

Printed on recycled paper containing 10% recovered post-consumer fiber.

G221-7134-00