Datasheet
Fujitsu PRIMEQUEST 1800E2 Mission Critical Enterprise Server

No Time for Downtime with Windows and Linux

Mission-Critical Enterprise Server for Linux and Windows

Fujitsu PRIMEQUEST1800E2 servers let customers realize the flexibility and economic benefits of x86 industry standards, now also for their mission critical enterprise applications without compromising their business continuity demands. As the backbone of enterprise solutions, the PRIMEQUEST 1800E2 servers ensure maximum system availability, performance and data integrity as required from true mission critical platforms.

Customers will immediately benefit from a radically optimized cost effectiveness against comparable Unix based enterprise platforms, while preserving all the attributes of mission critical operations. Moreover, by using latest mainstream x86 Intel Xeon processor technology and featuring full support of the global standard x86 Linux® and Microsoft® Windows® operating systems, VMware® and other virtualization technologies, PRIMEQUEST 1800E2 servers support the wealth of the x86 software ecosystems. Thus they also constitute a fast track for transition of legacy software/ platform stacks with uncertain future.

On top of x86 industry standard server capabilities, PRIMEQUEST1800E2 servers add up outstanding platform reliability, innnovative error prevention and self-healing capabilities which Fujitsu have refined over generations of highly reliable Mainframe and Unix systems. The result is a highly available mission critical system platform that ensures maximum service continuity, supported by online maintenance, hot-plug redundant components and Active Reserve system boards for fast and automated recovery, PRIMEQUEST 1800E2 servers are perfectly designed to run your most important business solutions that require:

Top Performance and High Availability

Its superior High Availability system design does not compromise on Top Performance: Scaling-up to latest generation 8x latest generation Intel® Xeon® E7-8870 processors (totalling 80 cores) and using Fujitsu´s super fast I/O technologies, PRIMEQUEST 1800E2 has already hit high ranked performance scores in the large systems server arena, proof-pointing that open system standards can efficiently handle demanding enterprise workloads such as corporate databases, transactional processing applications or Java based business suites with significantly lowered cost of ownership.

Hardware partitioning enables to accomodate a greater number of workloads per system, providing a risk-free concurrent IT production, with full isolation of resources and fault immunity between any of up to 4 partitions. The unique support of Active Reserve system boards cares for instant automatic recovery of services in case of hard errors, where standard x86 servers need complex and time consuming manual inspection and recovery operations.

Customers can also mix their "virtualized" application tiers with hardware partition isolated back-end workloads that need physical server topologies for top performance. Both, minimized server consolidation and operational costs and mission critical production continuity can be achieved simultaneously with the PRIMEQUEST 1800 E2 Enterprise Server platform.

Features and benefits

Main features	Benefits
Almost every component redundant	
■ Almost all the components can be redundantly configured ■ Unique redundancy at the heart of server, including system boards and system interconnects, offers even greater protection ■ Redundancy of internal I/O channels and PCI switches to avoid singular cable mess	■ Applications on Fujitsu PRIMEQUEST 1800E2 can continue operation even if a component fails ■ Central component failure is usually fatal for continued system operation. Fujitsu PRIMEQUEST's unique levels of redundancy can eliminate such causes of failure, enabling continuous uptime
High Availability- beyond the standard x86 Server RAS	**PRIMEQUEST 1800E2 shifts x86 Industry Standards to a mission critical platform level**
■ Selfhealing functions	■ Its built-in error prevention/correction and self-healing capabilities result in outstanding platform reliability
■ Hardware Partitions & Isolation	■ Isolated partitions run different servers inside a single system without any fault interference. Also enables to run cluster-in-a-box fail-over scenarios with less operational complexity and 50% less investment.
■ Active Reserve System Board for fast automatic recovery of services	■ Its unique support of Active Reserve system boards cares for instant automatic recovery of services in case of hard errors, where standard x86 servers need complex and time consuming manual inspection and recovery operations, that may cause 30 times longer recovery time.
■ Online Maintenance	■ All serviceable system modules can be accessed from front or rear of the system, without cabling hassle. Together with their redundancy, online maintenance is enabled and lower intervals for planned downtime are achieved.
New Cost Effectiveness over Unix servers	
■ Fujitsu PRIMEQUEST 1800E2 enables lower power consumption across the total range of application workloads ■ Compact 12 U rack form factor saves on datacenter space	■ As server resource utilization changes, PRIMEQUEST 1800E2 power consumption stays low. In particular it only consumes power according to its actual application workload. ■ Its maximum power load is significantly lower than UNIX enterprise servers with comparable performance
■ Simplified server lifecycle management and lower costs ■ The Fujitsu ServerView management suite takes care of PRIMERGY and PRIMEQUEST servers in your datacenter over the entire life cycle.	■ One uniform management suite for PRIMERGY x86 servers and PRIMEQUEST1800 E2 enables lower management complexity ■ Capitalizes on the x86-server management experiences of the staff ■ Reduces the need for specialized skills in managing different
■ Lower license fees and software maintenance costs for Oracle Databases	■ Against RISC and EPIC based processor technologies (i.e. POWER® and Itanium®), Oracle® database and maintenance fees are counted with core factor 0,5 only.
■ Software and related maintenance fees benefit from the x86 industry standard ecosystems.	■ PRIMEQUEST 1800E2 does not require platform specific software versions other than x86 Industry Standards. This keeps ongoing software maintenance costs at a low level.

Risk free concurrent IT production with fail-safe HW partitioning and Virtualization

- Hardware partitioning with up to four partitions per system
- Hardware partitions and software virtualization can be mixed in the same server
- Standard virtualization products such as VMware vSphere 4, Hyper-V, and Red Hat Enterprise Linux KVM are supported

- Provides a risk-free concurrent IT production with full isolation of resources and fault immunity between any partition of the system.
- More server workloads can be consolidated per system
- "Virtualized" application services and back-end workloads that require "physical server topologies" for top performance- such as corporate databases and transactional business applications -can be mapped onto a single server system.
- Uniformly, all applications benefit from the platforms superb system reliability -resulting in higher SLA satisfaction

Fast Track for transition of legacy software and platform stacks which suffer from unclear future

- Customers are concerned about the ISVs, that have started to de-focus on releasing future software versions for EPIC based technologies.
- Customers have highly accepted Linux x86 and Windows x86 OS platforms also for mission critical deployment

- With PRIMEQUEST 1800 E2 , Fujitsu is the only vendor able to now provide a mission critical server built upon latest Intel Xeon E7-8800 processor technology
- PRIMEQUEST 1800E2 fully supports the x-86 software solution ecosystem and thus enables a smooth and seamless transition and relief of burdens for solutions and platforms with uncertain future.

Technical details

Mainboard	
Processor quantity and type	1-8 x Xeon processor E7 family
Processor options	1 x Xeon processor E7-8870(10 cores, 2.4GHz, 30MB L3 cache per chip)
	1 x Xeon processor E7-8830 (8 cores, 2.13GHz, 24MB L3 cache per chip)
Memory slots	128
Memory slot type	DDR3
Memory capacity (min. - max.)	8GB-2TB
Note	Max. 4TB memory capacity will be available in future
Memory protection	ECC
	Extended ECC
	DDDC (Double Data Device Correction) available with FW >= SB13011
	Memory Patrol
	Memory Mirroring
Memory modules	4 x 2GB DIMM
	4 x 4GB DIMM
	4 x 8GB DIMM
	4 x 16GB DIMM
	4 x 32GB DIMM
Drive bays	
Hard disk bay configuration	Max. 16 x 2.5-inch for SAS
Hard disk drive	146GB 2.5-inch 15,000rpm
	300GB 2.5-inch 10,000rpm
	300GB 2.5-inch 15,000rpm
	600GB 2.5-inch 10,000rpm
	900GB 2.5-inch 10,000rpm
	400GB SSD
Optical drive	1xCD-ROM/DVD-ROM
Interfaces	
LAN	16 x 1Gbps Ethernet (1000Base-T) ports
VGA	1 port
Slots	
PCI Express	16x PCI-Express (x8, full-height, short)
Note	Expandable to 40 slots when using External PCI boxes
Connectable components	
Fibre channel controllers	Single Channel 8Gbps Fiber Channel Card
	Dual Channel 8Gbps Fiber Channel Card
LAN controllers	Dual Channel 1000BASE-T Card
	Dual Channel LAN Card (10Gbps)
	10GBASE-SR SFP+ Optical Module
PCIe SSD	785GB and 1,2TB

Service Processor	
Management Board (MMB)	1 x COM Port (D-SUB 9 pines)
	4 x LAN ports (2 x user ports(1000Base-T/100Base-T/10Base-T), 1 x maintenance port (100Base-TX), 1 x REMCS port (100Base-TX))

Operating System	
Red Hat Enterprise Linux	Red Hat Enterprise Linux 5.6, 5.7 and 5.8 (for Intel 64 and x86)
	Red Hat Enterprise Linux 6.0, 6.1, 6.2 and 6.3 (for Intel 64 and x86)
SUSE Linux Enterprise Server	SUSE Linux Enterprise Server 11 SP2 (for Intel64)
	SUSE Linux Enterprise Server 11 SP2 (for x86)
Microsoft Windows Server® 2008	Microsoft Windows Server® 2008 R2, Standard Edition (64-bit)
	Microsoft Windows Server® 2008 R2, Enterprise Edition (64-bit)
	Microsoft Windows Server® 2008 R2, Datacenter Edition (64-bit)
	Microsoft Windows Server® 2008 R2 SP1, Standard Edition (64-bit)
	Microsoft Windows Server® 2008 R2 SP1, Enterprise Edition (64-bit)
	Microsoft Windows Server® 2008 R2 SP1, Datacenter Edition (64-bit)
Microsoft Windows Server® 2012	Microsoft Windows Server® 2012, Standard Edition (64-bit)
	Microsoft Windows Server® 2012, Enterprise Edition (64-bit)
VMware	VMware vSphere ESX 4.1
	VMware vSphere 5.0 U1 +Patch03
Oracle VM Server for x86	Oracle VM 3.0

Optional Software	
High Availability	Veritas™ Cluster Server from Symantec
	Veritas Storage Foundation™ HA from Symantec
	Veritas Storage Foundation™ from Symantec
Server Management	ServerView Suite
	ServerView Resource orchestrator (option)

RAS features		
Redundant components		Memory (memory mirroring), HDD (RAID0/1/1E/5/6/10), Power Supply Unit (option), PCI card (option), FAN, System Board (Reserved System Board), Management Board (option), Power Supply to server (option)
- Note		For PCI card redundancy, redundancy software is required.
Hot-swap components		HDD, Power Supply Unit (option), FAN, PCI-card, DVD-RW drive, Management Board (option)
- Note		For both software and hardware RAID, only Red Hat Linux supports HDD hot swapping.
		For hot-swapping PCI cards, a redundant software and PCI Hot Plug are required. OS products available for PCI card hot swapping are as follows. ■ Red Hat Enterprise Linux (For Intel64/x86) ■ Microsoft Windows Server 2008/2008 R2(32-bit/64-bit) Please note such redundancy is not available with VMware vSphere 4
Other RAS features	Quick Path Interconnect	Data transferred between system boards protected by system interface error detection, re-transmission, and degradation.
	Cable-less Design in chassis	Removes cabling errors, cabling work and cable problems when changing partition configurations.

Dimensions / Weight	
Weight	150kg (330 lb.)
Rack-mount (W x D x H)	482 x 800 x 530 mm, 12U

Environment	
Noise emission	59 dB
Operating ambient temperature	5 – 35 degree C
Operating relative humidity	20 – 80 %
Operating relative altitude	3000 m
Operating environment	FTS 04230 Guideline for Data Center (installation locations)
Operating environment Link	http://docs.ts.fujitsu.com/dl.aspx?id=e4813edf-4a27-461a-8184-983092c12dbe

Electrical values	
Rated operating range	200 - 240 VAC ±10%
Rated frequency range	50/60 Hz +2%, -4%
Active power max.	4,000 Watts
Active apparent power max.	4210 VA
Heat emission	14,400 kJ/h[13,649 BTU/h]
Rush currency	20 or less A

Compliance	
Europe	EMC Directive 2004/108/EC
	Low Voltage Directive 2006/95/EC
	RoHS Directive(2002/95/EC)
USA/Canada	FCC
	ICES-003
Japan	VCCI

Warranty	
Standard Warranty	3 Years
Service level	Service level On-site Service (depending on country)

Service link	
Service link	www.fujitsu.com/support

More information

Fujitsu platform solutions

In addition to Fujitsu PRIMEQUEST 1800E2, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures
With the Fujitsu Dynamic Infrastructures approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure-as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing products
www.fujitsu.com/global/services/computing/
- PRIMERGY: Industrial standard server
- SPARC Enterprise: UNIX server
- PRIMEQUEST: Mission-critical Enterprise server
- ETERNUS: Storage system

More information

Learn more about Fujitsu PRIMEQUEST 1800E2, please contact your Fujitsu sales representative, Fujitsu business partner, or visit our website.
www.fujitsu.com/primequest/

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT. Please find further information at:
www.fujitsu.com/global/about/environment/

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