

Safety and Regulatory Information

HP Superdome Family

Eighth Edition



Manufacturing Part Number : A9834-9005A-en
March 2006

Legal Notices

© Copyright 2006 Hewlett-Packard Development Company, L.P.

The information contained herein is subject to change without notice.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Printing History:

First Edition: ----- October 2000

Second Edition:----- July 2001

Third Edition: ----- September 2003

Fourth Edition: ----- September 2004

Fifth Edition: ----- November 2004

Sixth Edition: ----- February 2005

Seventh Edition: ----- April 2005

Eighth Edition: ----- March 2006

1 Safety and Regulatory Information



For your protection, this product has been tested to various national and international regulations and standards. The scope of this regulatory testing includes electrical/mechanical safety, radio frequency interference, acoustics, and know hazardous materials. Where applicable, approvals obtained from third-party test agencies are shown on the product label.

Notational Conventions

WARNING Warnings highlight procedures or information necessary to avoid injury to personnel. The warning should tell the reader exactly what will result from what actions and how to avoid them.

CAUTION A caution highlights procedures or information necessary to avoid damage to equipment, damage to software, loss of data, or invalid test results.

NOTE A note highlights supplemental information.

Safety in Material Handling

WARNING Do not lift the cabinet manually. To avoid physical injury you must use a mechanical lifting device.

WARNING Do not lift a cell board without assistance.

WARNING Use care when working with hazardous voltages. This equipment may be configured with dual input line sources. Hazardous voltages and energy may be present even after the removal of a single input source. Trained service personnel must follow the service guidelines.

WARNING Do not stand in front of the equipment as it is rolled off the pallet onto the ramps. When removing the equipment from the shipping pallet, follow the guidelines specified in the Installation Procedures section of the appropriate equipment guides.

WARNING Do not attempt to move the cabinet, either packed or unpacked, up or down an incline of more than 15°.

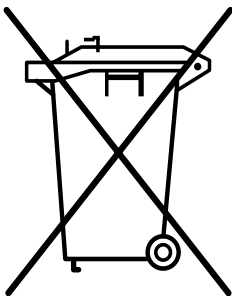
IOX Only:

WARNING Attach stabilizer feet to both front and back before extending the equipment drawers. Failure to attach the stabilizer feet may result in a tip hazard.

IOX Only:

WARNING Observe pinch hazard areas. Keep fingers away from closing parts.

Disposal of waste equipment by users in private household in the European Union



This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.



USA Radio Frequency Interference FCC Notice

The Federal Communications Commission (in 47 CFR Part 15 subpart B) has specified that the following notice be brought to the attention of the users of this product.

NOTE This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The user is cautioned that changes or modifications not expressly approved by Hewlett-Packard could result in the equipment being noncompliant with FCC Class A requirements and void the user's authority to operated the equipment.

Japanese Radio Frequency Interference VCCI

This equipment is in the Class A category information technology equipment based on the rules of Voluntary Control Council For Interference by Information Technology Equipment (VCCI). When used in a residential area, radio interference may be caused. In this case, user may be required to take appropriate corrective actions.

Korean RFI Statement

Class A Equipment:

Please note that this equipment has been approved for business purpose with regards to electromagnetic interference, if purchased in error for use in a residential area, you may wish to exchange the equipment where you purchase it.

European Union RFI Statement

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Canada RFI Statement

This Class A digital apparatus complies with Canadian ICES-003.

BSMI (Taiwan)

Warning Users: This is a Class A IT (Information Technology) Product. If this product is used in a domestic environment, radio frequency disturbance may occur, in which case the user may be required to take corrective actions.

The EMC label is in the form shown in Figure 1-1. The eight # signs represent an eight-character, alpha-number string.

Figure 1-1

檢磁 #####

Taiwan EPA Battery Recycling

The Taiwan EPA requires dry battery manufacturing or importing firms in accordance with Article 15 of the Waste Disposal Act to indicate the recovery marks on the batteries used in sales, giveaway, or promotion. Contact a qualified Taiwanese recycler for proper battery disposal.

Figure 1-2 Taiwan EPA Statement



Acoustics (Germany)

Acoustic Noise (A-weighted Sound Pressure Level LpA) measured at the bystander position, normal operation, to ISO 7779. LpA = 65.1 dB.

IT Power System

To ensure safe operation of this equipment, connect only to an AC power source that contains a protective earthing (PE) conductor. IT Power Systems do not provide adequate grounding and are not recommended.

TT, TN-C, and TN-C-S Power Systems

These products should not be connected to power systems that switch open the return lead when the return lead also functions as the protective earth (PE). A separate PE ground wire must be connected to the equipment at the designated PE terminal tie point.

High Leakage Current

WARNING Do not connect the supply before establishing an adequate ground (earth) connection.

Installation Conditions

See installation instructions before connecting this equipment to the input supply.

WARNING The equipment must be provided with a proper AC protective earth (PE) ground connection.

Recommended Wire Sizes

Table 1-1 shows the wire size requirements for conductors in power supply cords (Extracted from IEC 60950, Table 11).

NOTE Specific countries require a derating factor for the wire size when running multiple conductors in the same power cord. It is recommended to use only power cord conductors sized for this derating factor.

Table 1-1 Recommended Wire Sizes

Current	Wire Size	Derating Factor
0-25 Amps	2.5 mm (14 AWG)	4 mm (12 AWG)
25-32 Amps	4 mm (12 AWG)	6 mm (10 AWG)
32-40 Amps	6 mm (10 AWG)	10 mm (8 AWG)
40-63 Amps	10 mm (8 AWG)	16 mm (6 AWG)
63-80 Amps	16 mm (6 AWG)	25mm (4 AWG)

Disconnect Devices

Disconnect devices or circuit breakers must be used to protect the system against abnormal hazards. Table 1-2 details the circuit breaker specifications.

Table 1-2 Wall Disconnect Device Circuit Breaker Specification

Agency approvals:	UL, CSA, VDE
Interrupt capacity	5,000 amperes
Breaker type	Magnetic trip
Voltage rating	250V minimum 3-pole+PE, 420V minimum 4-pole+PE
Input Source	3 pole + PE or 4-pole + PE
Circuit Interruption	Simultaneous trip of all poles
Ground	The protective earth (PE) ground wire is not switched

WARNING Provide a disconnect device to protect against abnormal hazards.

Systems configured with a full complement of cells, memory, and I/O and connected to a 5-wire source must have a maximum 24A 3-phase with neutral (4-pole) circuit breaker installed as part of the building installation.

Systems configured with a full complement of cells, memory, and I/O and connected to a 4-wire source must have a maximum 44A 3-phase (3-pole) circuit breaker installed as part of the building installation.

IOX Multiple Power Sources and Cords

This equipment may be configured with dual-input line sources. Hazardous voltages and energy may be present even after the removal of a single input source.

IOX Only:

WARNING Remove both input power sources before replacing an internal fuse.

WARNING If the system has two PDCA installed, ensure that power is removed from both PDCA before removing fuses.

Fuse Warnings

Superdome Only:

WARNING Disconnect power before changing fuse.

CAUTION For continued protection against risk of fire, replace fuses only with same type and rating.

Lithium Battery Caution

WARNING Observe the correct polarity when changing the lithium battery. There is a danger of explosion if battery is installed incorrectly.

Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions and local disposal requirements.

IMPORTANT Switzerland: Annex 4.10 of SR 814.013 applies to batteries.

Japanese Power Cord Notice

CAUTION Your computer must only use the power cord that was shipped with the computer. Do not use this power cord with any other products.

Australian C-Tick Label

Figure 1-3

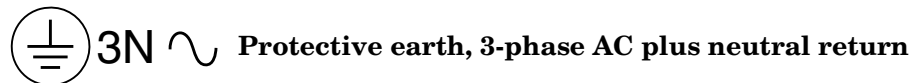


International Symbols (IEC335-1)

Figure 1-4 Four Wire Connection



Figure 1-5 Five Wire Connection



Laser Safety

NOTE Laser devices installed in this equipment must be certified as Class 1 Laser devices by the Regulatory Agency recognized by the country where the equipment is installed.

NOTE If a Fibre Channel I/O card is present, the following laser safety statement applies.

This product contains a laser internal to the Optical Link Module (OLM) for connection to the Fibre communications port.

In the U.S.A., the OLM is certified as a Class 1 laser product conforming to the requirements contained in the Department of Health and Human Services (DHHS) regulation 21 CFR, Subchapter J. The certification is indicated by a label on the plastic OLM housing.

Outside the USA, the OLM is certified as a Class 1 laser product conforming to the requirements contained in IEC 60825-1:1993+A1 and EN 60825-1:1994, including Amendment 11:1996.

NOTE If a DVD is present, the following laser safety statement applies.

This product contains a laser internal to the Digital Versatile Disc (DVD) housing.

In the U.S.A., the DVD is certified as a Class 1 laser product conforming to the requirements contained in the Department of Health and Human Services (DHHS) regulation 21 CFR, Subchapter J. The certification is indicated by a label on the DVD housing.

Outside the U.S.A., the DVD is certified as a Class 1 laser product conforming to the requirements contained in IEC 60825-1:1993+A1 and EN 60825-1:1994, including Amendment 11:1996.

Associated Documents

Figure 1-6 Declaration of Conformity - Page 1



DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name: Hewlett-Packard Company
Address: 3000 Waterview Parkway
Richardson, Texas 75080, USA

declares that the product

Product Name(s): Superdome, hp Integrity Superdome, hp 9000 Superdome (HP High Performance SMP Server)
Model Number(s): SPP5, [Marketing nomenclature: Model 16, SD16000, Model 32, SD32000, Model 64, SD64000]
Base Product Number(s): A5200A, A5201A, A5202A, A6113A, A6445A, A6862A, A6864A, A6864AX, A6866AX, A6866BX, A6866CX, A6868AX, A6888AX, A6924AX
Product Option(s): All

conforms to the following Product Specifications:

Safety: IEC 60950-1:10/2001 1st Edition (with national differences for the countries & areas listed on page 2)
EN 60950-1:12/2001; Part 1: General requirements
UL 60950-1:1/2003, 1st Edition; BI-National Standard with CSA
CAN/CSA C22.2 No. 60950-1; 1st Edition; BI-National Standard with UL

EMC: CISPR 22:1997 / EN 55022:1998; +A2:2003 Class A	
EN 55022:1998 Class A	Radiated/Conducted Emissions
EN 61000-3-11:2000 / IEC 61000-3-11:2000	Voltage Fluctuation/Flicker
EN 61000-3-12:2005 / IEC 61000-3-12:2004	Powerline Harmonics $\leq 75A$
CISPR24:1997+A2:2002/EN 55024:1998+A2:2003	Immunity for ITE
EN 61000-4-2:1995/A2:2001 8kV CD / 15kV AD	ESD
EN 61000-4-3:2002 100 kHz-10GHz, 10 V/m, 1kHz AM	Radiated Immunity
ENV 50204:1995 900MHz, 1.89GHz, PM, 10 V/m	Radiated Immunity
EN 61000-4-4:2004 1kV Power line, 0.5kV signal cables	EFT
EN 61000-4-5:1995/A1:2000 2kV CM, 1kV DM	Surge
EN 61000-4-6:1996/A1:2001 150MHz-400MHz, 3V _{rms} , 1kHz AM	Conducted Immunity
EN 61000-4-8:1993/A1:2001 3A/m, 50Hz	Magnetic Immunity
EN 61000-4-11:1994/A1:2001 11V _{rms} (10ms), 161V _{rms} (0.5s), 11V _{rms} (5s)	Voltage Dips/Interrupts

Supplementary Information:

The product as stated above complies with the requirements of the Low Voltage Directive 73/23/EEC, and the EMC Directive 89/336/EEC, as amended by 93/68/EEC.

Date: 18 January 2006

by: Cecil Clayton ID
Hewlett-Packard Company
Product Regulations Manager

Figure 1-7 Declaration of Conformity - Page 2



DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN 45014

FCC Regulations (USA Only)

The Federal Communications Commission (in 47 CFR Part 15) has specified that the following notice be brought to the attention of the users of this product

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense

The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance (Hewlett-Packard) could result in the equipment being non-compliant with the FCC Class A requirements and void the user's authority to operate the equipment

Additional International Approvals

AS/NZS CISPR 22 : 2004 C-Tick & Supplier Code (N279)
ICES-003 Issue 4:2004
IEC 60950:1991 +A1 +A2 +A3 +A4 +A11
GB4943-2001
GB9254-1998
VCCI/CISPR22:1997 Class A
MIC No. 1996-18, Class A
BSMI, CNS-13438 11/94 (Rev. 5/97)

Australia/New Zealand
Canada
International
China
China
Japan
Korean
Taiwan

IEC 60950-1 Evaluated National Differences for the following countries and areas.

CENELEC, AT = Austria, AU = Australia, BE = Belgium, CA = Canada, CH = Switzerland, CN = China, CZ = Czech Republic, DE = Germany, DK = Denmark, ES = Spain, FI = Finland, FR = France, GB = United Kingdom, GR = Greece, HU = Hungary, IE = Ireland, IL = Israel, IN = India, IT = Italy, JP = Japan, KR = Republic of Korea, NL = The Netherlands, NO = Norway, PL = Poland, RU = Russia, SE = Sweden, SG = Singapore, SI = Slovenia, SK = Slovakia, TR = Turkey, UA = Ukraine, US = United States, ZA = South Africa

Argentina, Australia, Austria, Belarus, Belgium, Brazil, Canada, China, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, India, Ireland, Israel, Italy, Japan, Republic of Korea, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, Turkey, Ukraine, UK, USA, Yugoslavia.

European Contact: Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 140, D-71034 Boeblingen, Germany (FAX +49-7031-14-3143) Rev. 1/18/2006 SPP5 Page 2 of 2

Figure 1-8 Declaration of Similarity



Hewlett-Packard Company
PO Box 833851
Richardson, TX 75083-3851

To: Certification Body July 17, 2003

From: Hewlett Packard Company
Regulatory Engineering Department
3000 Waterview Parkway
Richardson, TX 75080
USA

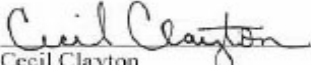
**Declaration of Similarity (DoS)
for
Product Families**

We, the undersigned manufacturer, hereby confirm that the following models are identical in all electrical safety and electromagnetic aspects from the regulatory point of view.

Model Name	Model Numbers	Product Part Numbers
HP 9000 SuperDome (SPP5) Enterprise Server	SPP5 - SD16000, SD32000, SD64000	A5200A, A6113A, A5201A, A5202A, A6445A, A6862A, A6866AX, A6866BX, A6924AX, A6864AX

Supplementary Information:

The SuperDome server is a new product family. The A5200A represents an unconfigured unpopulated system. Each of the next following Product Part Numbers correspond to a Model Number representing changes in the amount of memory and processors. All models are identical in all electrical and physical aspects. The SD16000 (A6113A) represents a 16 way capable base configuration where the main backplane is partially populated. The SD32000 (A5201A) represents an upgrade to a 32 way capable base configuration where the backplane is fully populated. And the SD64000 (A5201A + A5202A) represents individual systems networked together. The A6445A represents the upgraded 750MHz Microprocessor Cell board. The A6862A represents the upgraded 875MHz Microprocessor Cell board. The latest Cell/Power Board design (with 1.5GHz -Itanium Microprocessors) is a product enhancement to complement the existing 875MHz Microprocessor. This new Cell/Power Board design has separated the power and microprocessor section, due to weight constraints. The new Cell/Power board design consists of a separate Power Board A6866AX, which mates to the Cell board A6866BX(w/o Microprocessors installed). With Madison IA (1.5GHz)Microprocessors installed in the Cell bd., the p/n changes to A6924AX. The latest version of SuperDome also incorporates PCIX chassis's (A6864AX), which is the most current I/O industry standard.


Cecil Clayton
Product Regulation Manager
High Performance Systems Lab
Date: July 14, 2003


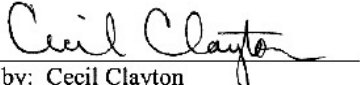

John Ngo
EMI Operations Manager
National Technical Systems, Plano, TX
Date: July 14, 2003

Figure 1-9 I/O Expansion Cabinet Declaration of Conformity

DECLARATION OF CONFORMITY																													
according to ISO/IEC Guide 22 and EN 45014																													
Manufacturer's Name:	Hewlett-Packard Company																												
Address:	3000 Waterview Parkway Richardson, TX 75080, USA																												
Declares that the product:																													
Product Name:	I/O Expansion (IOX) cabinet for SuperDome																												
Model Number(s):	SPP6:IOX, SPP6-1:XPC, SPP6-2:XUC/RDM, SPP6-3:ICE																												
Base Product Number(s):	A5861A:IOX, A5861-26001:XPC, A5861-26002:XUC, A5861-26003:RDM, A5862A:ICE																												
Product Option(s):	All																												
Conforms to the following Product Specifications:																													
Safety:	IEC 60950:1999 (with national differences for the countries listed on page 2) EN 60950:2000 UL 60950:2000																												
EMC:	<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">CISPR 22 3rd edition:1997/ EN 55022:1998</td> <td>Class A</td> </tr> <tr> <td>EN 55022:1998, Class A, 30 MHz to 5 GHz</td> <td>Radiated Emissions</td> </tr> <tr> <td>EN 55022:1998, Class A, 150 kHz to 30 MHz</td> <td>Conducted Emissions</td> </tr> <tr> <td>CISPR 24:1997/EN 55024:1998</td> <td>Immunity for ITE</td> </tr> <tr> <td>EN 61000-4-2:1995, 8kV CD / 15kV AD</td> <td>ESD</td> </tr> <tr> <td>EN 61000-4-3:1996,100kHz-1GHz, 10V/m, 1kHz AM</td> <td>Radiated Immunity</td> </tr> <tr> <td>ENV 50204:1995, 900MHz/1.89GHz, PM, 10 V/m</td> <td>Radiated Immunity</td> </tr> <tr> <td>EN 61000-4-4:1995, 1kV Power line, 0.5kV signal cables</td> <td>EFT</td> </tr> <tr> <td>EN 61000-4-5:1995, 2kV CM, 1kV DM</td> <td>Surge</td> </tr> <tr> <td>EN 61000-4-6:1996, 150kHz - 400MHz, 3V_{rms}, 1kHz AM</td> <td>Conducted Immunity</td> </tr> <tr> <td>EN 61000-4-8:1993, 3 A/m, 50Hz</td> <td>Magnetic Immunity</td> </tr> <tr> <td>EN 61000-4-11:1994, 11V_{rms} (10ms), 161V_{rms} (0.5s), 11 V_{rms} (5s)</td> <td>Voltage Dips & Interrupts</td> </tr> <tr> <td>EN61000-3-2; '95 +A14</td> <td>Power line Harmonics</td> </tr> <tr> <td>EN61000-3-3; '95</td> <td>Voltage Flicker</td> </tr> </table>	CISPR 22 3rd edition:1997/ EN 55022:1998	Class A	EN 55022:1998, Class A, 30 MHz to 5 GHz	Radiated Emissions	EN 55022:1998, Class A, 150 kHz to 30 MHz	Conducted Emissions	CISPR 24:1997/EN 55024:1998	Immunity for ITE	EN 61000-4-2:1995, 8kV CD / 15kV AD	ESD	EN 61000-4-3:1996,100kHz-1GHz, 10V/m, 1kHz AM	Radiated Immunity	ENV 50204:1995, 900MHz/1.89GHz, PM, 10 V/m	Radiated Immunity	EN 61000-4-4:1995, 1kV Power line, 0.5kV signal cables	EFT	EN 61000-4-5:1995, 2kV CM, 1kV DM	Surge	EN 61000-4-6:1996, 150kHz - 400MHz, 3V _{rms} , 1kHz AM	Conducted Immunity	EN 61000-4-8:1993, 3 A/m, 50Hz	Magnetic Immunity	EN 61000-4-11:1994, 11V _{rms} (10ms), 161V _{rms} (0.5s), 11 V _{rms} (5s)	Voltage Dips & Interrupts	EN61000-3-2; '95 +A14	Power line Harmonics	EN61000-3-3; '95	Voltage Flicker
CISPR 22 3rd edition:1997/ EN 55022:1998	Class A																												
EN 55022:1998, Class A, 30 MHz to 5 GHz	Radiated Emissions																												
EN 55022:1998, Class A, 150 kHz to 30 MHz	Conducted Emissions																												
CISPR 24:1997/EN 55024:1998	Immunity for ITE																												
EN 61000-4-2:1995, 8kV CD / 15kV AD	ESD																												
EN 61000-4-3:1996,100kHz-1GHz, 10V/m, 1kHz AM	Radiated Immunity																												
ENV 50204:1995, 900MHz/1.89GHz, PM, 10 V/m	Radiated Immunity																												
EN 61000-4-4:1995, 1kV Power line, 0.5kV signal cables	EFT																												
EN 61000-4-5:1995, 2kV CM, 1kV DM	Surge																												
EN 61000-4-6:1996, 150kHz - 400MHz, 3V _{rms} , 1kHz AM	Conducted Immunity																												
EN 61000-4-8:1993, 3 A/m, 50Hz	Magnetic Immunity																												
EN 61000-4-11:1994, 11V _{rms} (10ms), 161V _{rms} (0.5s), 11 V _{rms} (5s)	Voltage Dips & Interrupts																												
EN61000-3-2; '95 +A14	Power line Harmonics																												
EN61000-3-3; '95	Voltage Flicker																												
Supplementary Information:																													
The product as stated above complies with the requirements of the Low Voltage Directive 73/23/EEC, and the EMC Directive 89/336/EEC, as amended by 93/68/EEC.																													
<u>May 31, 2001</u>																													
Date	by: Cecil Clayton Hewlett-Packard Company Product Regulations Manager																												
European Contact: Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 130, D-71034 Boeblingen, Germany (FAX +49-7031-14-3143)																													