QuickSpecs

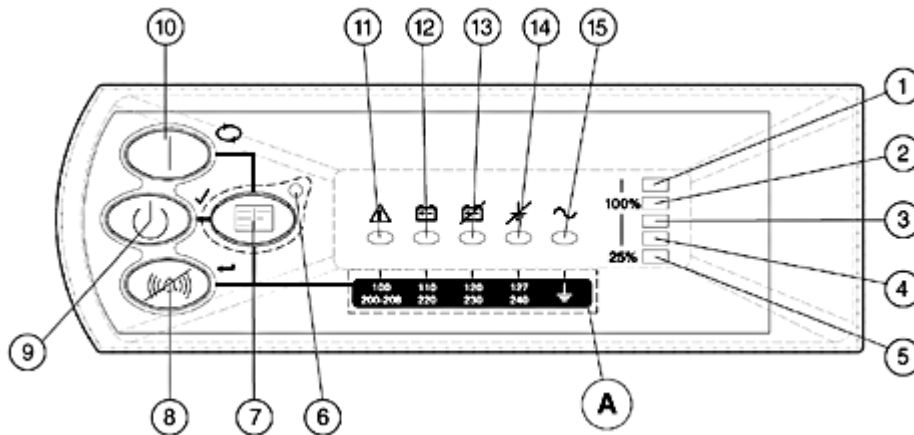*Overview*

The HP R3000 UPS is a high power-density solution, designed for customers who want to provide power protection in space-constrained rack enterprise environments.

This leading edge Uninterruptible Power System, R3000, features the industry's first 2U, rackmount design offering up to 2700 watts of true power - unprecedented power density! The R3000 uses a unique transformer-less technology, where high performance Digital Signal Processor (DSP) controllers replace bulky transformers. Through this advanced technology, the R3000 offers several benefits including increased power efficiency and smaller foot-print with less weight.

In addition, the HP R3000 UPS has the capability to be connected to optional Extended Runtime Module (ERM). Customers can further increase the runtime on their HP R3000 UPS by using this ERM. The HP UPS "" models denote "Extended Runtime Capable" UPS models.

1. LED indicating Overload capacity
2. LED indicating 76% to 100% load capacity
3. LED indicating 51% to 75% load capacity
4. LED indicating 26% to 50% load capacity
5. LED indicating 0% to 25% load capacity
6. Configure mode on LED*
7. Configure Button*
8. TEST/ALARM RESET Button

*Accessible only when the front bezel is removed

9.   STANDBY Button
10. ON Button
11. General Alarm
12. LED indicating 26% to 50% load capacity
13. Bad Battery/Low Battery
14. Site Wiring Fault Indicator
15. Utility LED
A.   Voltage Configuration Panel*

- New part numbers meet EU RoHS compliant specifications
- HP R3000 ERM (PN: AF415A) now configurable via the front panel

Overview

Models

HP R3000 VA UPS, 2U, DTC, INTL	AF414A
HP R3000 VA UPS, 2U, L5-30, NA	AF422A
HP R3000 VA UPS, 2U, L6-20, NA	AF423A
HP R3000 VA UPS, 2U, L6-20, JPN	AF424A
HP R3000 VA UPS, 2U, L5-30, JPN	AF425A

Product Highlights

Key Features

- Increased power density with up to 3000VA / 2700 Watts of power packed in just 2U rack space
- Greater system uptime with support for Extended Runtime Module (ERM)
- Easy configuration through enhanced front panel display
- Enterprise-wide intelligent manageability with bundled power management software
- Support for the HP UPS Management that extend the power management capabilities of the UPS
- More efficient voltage regulation with revolutionary technology
- Ultimate long-term battery reliability with HP Enhanced Battery Management
- Enhanced system flexibility with three independently controlled load segments
- Support for Remote Emergency Power Off (REPO) circuitry
- Easy serviceability through modular design
- Hot-Swappable Battery and Electronics Modules
- Backed by a limited three-year warranty, HP's Pre-Failure warranty, and a $250,000 load protection guarantee*.
  (Certain restrictions and exclusions apply; *Load protection guarantee available in North America only.)

2U Power Packed Design

Rated near unity at 3000VA / 2700W, the HP UPS R3000 packs more power in space-conserving rack-mount design, allowing you to support more critical equipment in your rack.

Increase System Uptime with Extended Runtime Modules

The Extended Runtime Modules are rack mounted battery modules that occupy 2U (3.5 inches) of rack space. The HP UPS R3000 supports two Extended Runtime Modules (ERM), which extends your overall battery runtime.

Lower Cost of Ownership with Innovative Technology

The HP UPS R3000 utilizes a new industry-leading technology that continually conditions and regulates power without using the battery, thereby increasing the life of the battery. The output voltage is automatically regulated, based on the connected load and the input voltage.

Investment Protection with HP Enhanced Battery Management

HP UPS R3000 incorporates Enhanced Battery Management: an exclusive, patented technology that doubles battery service life, optimizes battery recharge time, and provides advance notice of pending battery failure. With Enhanced Battery Management, you have a lower total cost of ownership and receive the best in the industry protection for your critical equipment.

Remotely Monitor UPSs on the Network

The optional HP UPS Management Module features the ability to perform simultaneous network and out-of-band communications. It enables network administrators to remotely monitor UPSs and reboot network devices. It provides SNMP functionality, including power event alerts, network power diagnostics, and remote UPS reboot and testing. Used in conjunction with HP Systems Insight Manager or other SNMP capable Network Management Software, power-related problems on the network are quickly discovered and remedied.

Product Highlights
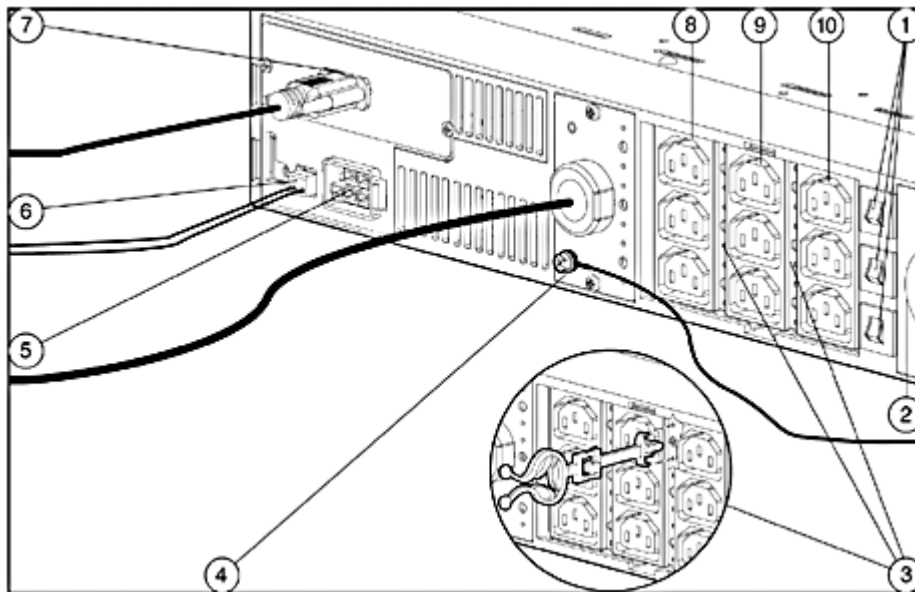
Easy Configuration via Enhanced Front Panel Display

LED and switch membrane integrated into the front panel with four button controls (three buttons for UPS power control and one button under the front bezel for configuration)

Intelligent Manageability

HP Power Management Software, an integrated component of HP Insight Manager, the industry-leading hardware management platform, is included with the HP UPS R3000 models. The HP Power Management Software enables you to monitor and control HP UPSs locally or remotely. This software is a versatile, fully configurable, alert response tool that gives system administrators a full overview of the network's conditions. It enables you to monitor system status and power conditions, configure shut down timing, customize alert messages, and perform UPS diagnostic checks quickly and easily.

Independently Controllable Load Segments

With three load segments, you have the flexibility to configure scheduled startups and shutdowns, in addition to independently control the separate load segments. Working in conjunction with HP Power Management Software, the HP UPS R3000 can be configured to extend the runtime for more critical devices.

1. Load Segment Circuit Protectors
2. HP PDU output receptacle*
3. Cord retention clip attachment locations
4. Ground bonding screw
5. ERM Connector

6. REPO Port
7. Communications Port/Option Slot
8. Load Segment 1
9. Load Segment 2
10. Load Segment 3

Ease of Maintenance with Hot-Swappable Batteries and Electronics Modules

The UPS R3000 is modular in design, and both the battery and the electronics modules are hot swappable. HP UPSs are designed with simple access through the front panel. Users can safely install new batteries and even the electronics module without ever powering down connected server and server options.

Product Highlights

HP Quality

HP's hardware qualification is the toughest in the industry. Extensive evaluation, testing, product improvement, and an unsurpassed warranty guarantee the highest level of system protection, electrical performance, product quality and compatibility.

Compatibility

Compatible with all HP servers, storage, racks, rack options, and other rack mountable HP equipment (for PDU options please refer to the UPS/PDU compatibility matrix on http://www.HP.com/ups).

Warranty

The HP UPS R3000 is covered by a three year warranty with the first year including parts and labor. Also, standard on all HP UPS units is our exclusive Pre-Failure Warranty which extends the advantage of a HP three-year, limited warranty by applying it to the battery before it actually fails. This warranty is offered worldwide. Specifically, the Pre-Failure Battery Warranty ensures that when customers receive notification from HP Power Management Software that the battery may fail, the battery is replaced free of charge under the warranty.

NOTE: $250,000 Computer/Load Protection Guarantee is also provided in NA, in addition to the HP three year, limited warranty.

Service and Support, HP Care Pack, and Warranty Information

HP Care Pack Installation

Care Pack services provide a range of life cycle support options that let you choose the service levels that meet your business requirements, from basic to mission-critical.

A full range of HP Care Pack hardware and software services are available including:

- Installation and start up
- Education courses
- Extended onsite hardware coverage hours from same business day 13 hours, 5 day to 24 hours, 7 days call window with options including 4 hour response or 6-hour Call To Repair
- Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials and VMware-based IT solutions helping to deliver high level of application availability. Response times range from 30 mins for critical problems to 2 hours.
- System Management, Performance Services and Mission Critical Support Solution.

HP Care Pack Services include HP branded hardware options qualified for the server, purchased at the same time or afterwards, internal to the enclosure, as well as 22" and smaller external monitors and rack mounted UPS options. HP Uninterruptible Power Systems will be covered at the same service level and coverage period as the server. For servers or storage systems installed within a rack, service also covers all HP qualified rack options installed within the same rack.

NOTE: For more information on HP Care Pack services, contact any of our worldwide sales offices, resellers or visit our worldwide website at: http://www.hp.com/hps/carepack
NOTE: For more complete information on HP Services offerings, customers and resellers, please visit is at: http://www.hp.com/hps
NOTE: Additional information regarding worldwide limited warranty and technical support is available at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html
NOTE: For additional information on Server Services, Rack and Power Options, please visit: http://h20219.www2.hp.com/services/cache/111072-0-0-225-121.html
NOTE: The information contained herein is subject to change without notice and is provided "as is" without warranty of any kind.
NOTE: The warranties for HP products and services are set forth in the express limited warranty statements accompanying such products and services.
NOTE: Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Warranty Upgrade Options

- Response - Upgrade on-site response from next business day to same day 4 hours
- Coverage - Extend hours of coverage from 5 days x 9 hours to 7 days x 24 hours
- Duration - Select duration of coverage for a period of 1, 3, or 5 years

Innovative Options to Meet Your Data Center Needs

Optional UPS Management Module	The HP UPS Management Module enables you to monitor and manage power environments through comprehensive control of HP UPSs. The HP UPS Management Module can support either a single UPS configuration or provides additional power protection with support for dual redundant UPS configuration for no-single-point-of-failure. The additional serial ports will provide greater power management control and flexible monitoring.

The management module can be configured to send alert traps to HP Systems Insight Manager and other SNMP management programs or used as a standalone management system. This flexibility enables you to monitor and manage UPSs through the network. To facilitate day-to-day maintenance tasks, the embedded management software provides detailed system logs.
The HP UPS Management Module provides remote management of a UPS by connecting the UPS directly to the network. Configuration & Management of the UPS from anywhere and at anytime via a standard web browser.

NOTE: For more information on the UPS Management Module please see http://h18004.www1.hp.com/products/servers/proliantstorage/powerprotection /software/module/ups/index.html web browser. |
| **Extended Runtime Module (ERM), R3000** | The UPS R3000 supports up to two Extended Runtime Modules. Each module is 2U (3.5 inches), a rack mountable battery module that extends your overall battery runtime. |

Options

Related Options

UPS Options	UPS Management Module	AF401A
	RJ45 to Serial adapters for UPS Management Module DCE Female, 5 pack	AF402A
	Extended Runtime Module, R3000, 2U NOTE: Replaces non-RoHS compliant part number 192188-B21.	AF415A
Service & Support (Care Pack)	Hardware Installation (Electronic)	U4693E

UPS R3000 Model Matrix

Part Number	Operating Voltage Settings	Power Out (VA/Watts)	Input Connection	Output Connection
Low-Voltage Models				
AF422A	120V(1)	2880/2700	NEMA L5-30P	(1)L5-30R; (6) 5-15R
AF425A	100V(1)	2400/2250	NEMA L5-30P	(1) L5-30R; (6) 5-15R
High Voltage Model				
AF423A	208V(2)	3000/2700	NEMA L6-20P	(1) L6-20R; (9) IEC 320-C13
AF414A	230V(3)	3000/2700	Detachable* Cord with country-specific plug	(1) IEC320-C19; (9) IEC 320-C13
AF424A	200V(2)	3000/2700	NEMA L6-20P	(1) L6-20R; (9) IEC 320-C13

1. User selectable for 100, 110, 120, 127V via front panel
2. User selectable for 200, 208, 220, 230, 240V via front panel
3. User selectable for 208, 220, 230, 240V via front panel

*NOTE: This model with the detachable cord can be used only in applications where the total leakage current is less than 3.5 mA.

Kit Contents
- HP UPS R3000
- HP Power Management Software CD
- Power Products Documentation CD
- Depth adjustable fixed rack mounting rails, mounting brackets, cord retention clips
- Communications cable
- Additional IEC to IEC jumper cords with high voltage models

Technical Specifications

Unit Dimensions	3.50 x 19.0 x 24.5 in (89 x 483 x 622 mm)	
Shipping Dimensions	14 x 32 x 38.5 in (356 x 813 x 978 mm)	
Unit Weight	82 lbs (37 kg)	
Shipping Weight	105 lbs (48 kg)	
BTU Break Down	BTU On Line	547
	BTU On Battery	1328.0
	Battery String Voltage	120 V
	Battery Type	12V 5ah
	Battery Quantity	10
Electrical Input	Voltage Range	100, 120 and 230V models. See Model Matrix for nominal and user selectable voltage settings
	Frequency	50/60 Hz
	Input Plug	See Model Matrix
	Online Efficiency	95%
	Surge Suppression	High Energy 6500A peak
	REPO	Remote Emergency Power-Off disables AC power to load
Electrical Output	Online Regulation	-10% to +6% of nominal voltage
	On battery Regulation	±5% of nominal voltage
	Voltage Wave Form	Sine wave
	Connections	See Model Selection Matrix; divided into 3 Load Segments
	Output Protection	Re-settable circuit protectors
Battery	Type	Maintenance-free, sealed, valve-regulated lead acid (VRLA)
	Extended Batteries	One ERM with two battery strings
	Backup Time	See Backup Times Chart
	Recharge Time	<3 hours to 80% usable capacity; <24 hours for complete recharge
Communications	Serial Ports	Standard DB-9 ports (ships with communication cable)
	Option Slot	One
	Option Cards	Six Port Card and SNMP / Serial Port Card
	LED Indicators	LED and switch membrane integrated into the front panel; with four-button control (three buttons for UPS power control and one button under the front bezel for configuration).
Environmental and Safety	Operating Temperature	50° to 104° F (10° to 40° C)
	Transit Temperature	-13° to 131° F (-25° to 55° C)
	Storage Temperature	32° to 77° F (0° to 25° C)
	Humidity (Operation)	20% to 80% (non-condensing)
	Humidity (Non-operating)	5% to 95%
	Operating Altitude	Up to 6,562 ft (2000 m) above sea level
	Transit Altitude	49,212 ft (15,000 m) above sea level
	Audible Noise	<46db (at 1m from surface of unit)
	Safety Markings	FCS, UL, CSA, VDE, NEMKO, FIMKO, DEMKO, SEMKO, NOM
	Safety Certifications	UL1778; CSA22.2 No.107.1,No.107.2,No.950; CB Bulletin No.86AI; EN50091-1; EN60950; EMKO-TSE207/95; NOM-019-SCFI-1993

Technical Specifications

EMC Markings	FCC; CISPR; VCCI; CE
Emissions	FCC CFR 47, Part 15 Class A, EN50091-2
Immunity	IEC 801-2, IEC 801-3, IEC 801-4, IEC 801-5
Surge Suppression	Conforms to IEEE 587B and ANSI C62.41
REPO Port	Meets NEC code 645-11 intent and UL requirements

Estimated Backup Times Chart (Minutes)

Load (Percent*)	With Standby Battery (Minutes)	With 1 ERM (Minutes)	With 2 ERMs (Minutes)
20	40	120	250
50	12	45	100
80	6.5	30	60
100	5	20	40

* Percent of 3000VA or 2700W of load
NOTE: Backup times are estimated for typical applications. Actual performance will depend on load and battery conditions.

Environment-friendly Products and Approach	End-of-life Management and Recycling	Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.
		The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/green. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.