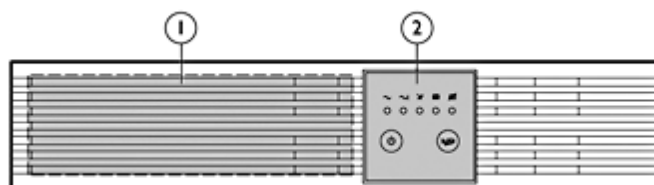


### Overview

The R/T 2200 G2 UPS is the next generation HP rack/tower UPS with USB support. This new UPS is designed to provide advanced power protection (or increased uptime and data corruption avoidance) for servers, storage, computer equipment, and network environments. The HP R/T 2200 UPS is a flexible solution, designed for customers who want to provide power protection in a tower form factor or in space-constrained rack enterprise environments.

Key benefits include increased power efficiency, smaller foot print with less weight, intuitive front panel display, Enhanced Battery Management (EBM), prioritized shut-down with independently controllable load segments, and hot-swappable batteries. Bundled with HP Power Manager software, this UPS also features a serial and USB ports for data exchange with the host computer, remote shut-down, a three-year warranty and a \$250,000 load protection guarantee.



R/T2000 G2

1. Battery Compartment
2. LED display

### Models

HP R/T 2200 UPS NA	AF409A
HP R/T 2200 UPS JPN/TWN	AF410A
HP R/T 2200 UPS INTL	AF411A

### Kit Contents - UPS R/T2200 G2

- HP UPS R/T2200 G2
- Power Management Software CD
- Power Products Documentation CD
- 6' (1.83 Meters) UPS to computer serial interface cable
- 6' (1.83 Meters) UPS to computer USB interface cable
- 6.5' UPS to computer telephone -modem cable
- R/T 2200 tower stand set

**NOTE:** The International model includes 2 IEC to IEC power cords in addition to the above.

### Product Highlights

**NOTE:** For a brief, printer friendly data sheet that describes this product and informs you of the essential capabilities and specifications, please visit: <http://h71028.www7.hp.com/ERC/downloads/4AA0-6982ENW.pdf>.

#### Key Features

R/T 2200 Models

- Manageability through USB port.
- Ease of configuration via enhanced front panel display.
- Intelligent manageability with bundled Power Management software.
- Long-term battery reliability with Enhanced Battery Management.
- Hot-Swappable battery.
- Enhanced system flexibility with independently controllable load segment.
- Backed by a three-year warranty, with the first year including parts and labor and a 60-day HP Battery Pre-Failure Warranty. In North America, it is covered by an additional \$250,000 load protection guarantee.
- Greater system uptime with support for Extended Runtime Module (ERM) (R/T2200).
- Rack/Tower convertible model.

**NOTE:** Certain restrictions and exclusions apply. Consult the HP Computer Support Center for details.

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#### Easy Configuration via Enhanced Front Panel Display

Please see the line art drawing previously shown to identify the front panel with noted button functionality.

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#### Investment Protection with Enhanced Battery Management

HP UPSs incorporate 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 overall cost of ownership and receive the best in the industry protection for your critical equipment.

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#### Intelligent Manageability

HP UPSs ship with HP Power Manager software, which enables you to monitor and control an HP UPS 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.

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#### Ease of Maintenance with Hot-Swappable Battery

HP UPSs are designed with hot-swappable batteries with simple access through the front panel. Users can safely install a new battery without ever powering down connected computer equipment.

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#### Independently Controllable Load Segments

The R/T2000 G2 UPS model incorporates independently controllable load segments (groups of outlets) that allow for prioritized shutdown of multiple servers. Managed through the Power Manager software, each individual load segment can be pre-configured by the system administrator to conduct a prioritized shutdown extending the runtime of your most critical servers. In addition, this feature promotes energy and power conservation by facilitating scheduled shutdown and startups during low usage such as weekends and holidays.

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#### Compatibility

Compatible with all HP computer systems and servers ranging from individual workstations to distributed enterprise and other HP equipment.

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### Product Highlights

#### HP Quality

HP 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.

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#### Warranty

HP UPSs are covered by a three-year warranty, with the first year including parts and labor. Also, standard on all HP UPS units is our exclusive 60-day Battery 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 (applicable in North America only).

### Service and Support, 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.

**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.

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#### 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 minimum period of 1 year or multiple years

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**HP Care Pack Information** For additional HP Care Pack (hardware & software) information, as well as orderable part numbers, please refer to the URL listed below: <http://h18005.www1.hp.com/services/carepack/index.html>

## Related Options

UPS Options	Extended Runtime Module (ERM), R/T2200	AF412A
Service & Support (Care Pack)	Hardware Installation (Electronic)	U4690E

## Technical Specifications

### UPS R/T2200 G2 Specifications

Low-Voltage Models R/T2200 G2 AF409A (NA) AF410A (JPN/TWN)	Unit Dimensions (WxHxD)	3.5 x 17.5 x 19 inches (88.9 x 444.5 x 482.6 mm)
	Shipping Dimensions	23.50 x 19.63 x 13.13 inches (596.9 x 498.60 x 333.50 mm)
	Unit Weight	62 lbs (21.12 kg)
	Shipping Weight	77 lbs (33.92 kg)
	R/T2200 G2	AF409A
	Operating Voltage Settings	120V
	Power Out (VA/Watts)	2200/1600
	Input Connection	Attached 10' power cord with NEMA 5-20P
	Output Connection	(4) 5-15R (4) 5-15/20R
	Load Segments	4

**NOTE:** Part Number AF409A is user selectable for 100V, 110V, or 120V via dip switch setting on the back of the unit.

Operating Voltage Settings	100V
Power Out (VA/Watts)	2200/1600
Input Connection	Attached 10' power cord with NEMA 5-20P
Output Connection	(4) 5-15R (4) 5-15/20R
Load Segments	4

High-Voltage Models  
R/T2200 G2  
AF411A (INTL)

Operating Voltage Settings	230V
Power Out (VA/Watts)	2200/1600
Input Connection	IEC 320 - C20 input connector
Output Connection	(8) IEC 320 C13
Load Segments	4

**NOTE:** Part Number AF411A is user selectable for 220V, 230V, or 240V via dip switch setting on the back of the unit.

### R/T2200 G2 Models Specifications

Electrical Input	Voltage Range	100V, 120V, 208V, and 230V models
	Frequency	See Model Specifications for nominal and user selectable voltage settings
	Connections	50/60 Hz
	Online Efficiency	See Model Selection Matrix 95%
	Surge Suppression	High Energy 6500A peak
Electrical Output	Online Regulation	-30% to +20% of nominal voltage
	On battery Regulation	±5% of nominal voltage
	Voltage Wave Form	Sine wave
	Connections	See Model Specifications
	Output Protection	Re-settable circuit protectors (R/T2200 models only)

### Technical Specifications

<b>Battery</b>	<b>Type</b>	Maintenance-free, sealed, valve-regulated lead acid (VRLA)
	<b>Recharge Time</b>	<4 hours to 90% usable capacity; <24 hours for complete recharge
	<b>Battery String Voltage</b>	R/T2200 G2: 48V (4X12V)
	<b>Battery Ampere Hour (ah)</b>	R/T2200 G2: 9ah
<b>Communications</b>	<b>Serial Ports</b>	Standard communication port (ships with 6' Serial communication cable)
	<b>USB Port</b>	Standard communication port (ships with 6' USB communication cable)
	<b>LED Indicators</b>	<ul style="list-style-type: none"> <li>• Power On/Standby button</li> <li>• Power LED</li> <li>• Voltage correction LED</li> <li>• Output Load Level LED                             <ul style="list-style-type: none"> <li>○ Red - Maximum load</li> <li>○ Amber - Medium load</li> <li>○ Green - light load</li> </ul> </li> <li>• Battery Charge LED                             <ul style="list-style-type: none"> <li>○ Power LED is Green                                     <ul style="list-style-type: none"> <li>▪ Red-The batteries are beginning to charge.</li> <li>▪ Amber-The batteries are midway through charging.</li> <li>▪ Green-The batteries are fully charged.</li> </ul> </li> <li>○ Power LED is flashing green                                     <ul style="list-style-type: none"> <li>▪ Red-The batteries have a low level of energy.</li> <li>▪ Amber-The batteries have a medium amount of energy.</li> <li>▪ Green-The batteries have a high amount of energy.</li> </ul> </li> </ul> </li> <li>• Battery Warning LED</li> <li>• Mute/Test Button</li> </ul>
	<b>Environmental and Safety</b>	
	<b>Operating Temperature</b>	50° to 104° F (10° to 40° C)
	<b>Transit and Storage Temperature</b>	-13° to 131° F (-25° to 55° C)
	<b>Humidity (Operation)</b>	20% to 80% (non-condensing)
	<b>Humidity (Non-operating)</b>	5% to 95%
	<b>Operating Altitude</b>	Up to 6,600 ft (2000 m) above sea level
	<b>Transit and Storage Altitude</b>	Up to 49,000 ft (15,000 m) above sea level
	<b>Audible Noise</b>	Less than 53 dBA max
	<b>Safety Markings</b>	Please see table below
	<b>EMC Markings</b>	Please see table below
	<b>Emissions</b>	FCC CFR 47, Part 15 Class A, EN50091-2
	<b>Immunity</b>	IEC 801-2, IEC 801-3, IEC 801-4, IEC 801-5
	<b>Surge Suppression</b>	Conforms to IEEE 587B and ANSI C62.41

Technical Specifications






Safety Markings

Certifications	Mark on Products	R/T2200 G2 UPS INTL	R/T2200G2 ERM
<b>Product Safety Requirements and Approvals:</b>			
EN62040-1-1 (IEC 62040-1-1) EN60950-1 (IEC 60950-1)	CE logo 	Y	Y
CB Scheme / report	None	Y	Y
USA UL 1778 3rd E.d. UL 60950:2003	TUV US Mark 		Y
CANADA CAN/CSA-C22.2 No. 60950-00 CSA C22.2 No. 107.3	TUV C Mark 		Y
European Approval	TUV GS Mark 	Y	
Australian Approval	Per Glen L. No mark required. Only country deviations needed in CB report.	Y	
Japan Approval	S Mark 		
Argentina (IRAM)	S Mark 	Y	
NOM	NOM-NYCE logo 		
Russia (GOST)	GOST logo 	Y	
Korea (EK)	EK marking, file # & stats 	Y	
Thailand (TISI)	TISI S Mark 	Y	



## Technical Specifications

### EMC Markings

Certifications	Mark on Products	R/T2200 G2 UPS INTL	R/T2200G2 ERM
<b>EMC Requirements and Approvals</b>			
Class		A	N/A
CISPR Pub 22, B	none	Y	
CE Mark Requirements	CE logo 	Y	Y
FCC	FCC logo 		
Canadian Approval (ICES)	ICES Label on UPS		
Australian (ACA)	C-Tick & mfgs suppl 	Y	
Japan Approval (VCCI)	VCCI logo 		
Taiwan (BSMI)	BSMI Marking with ID # 	Y	

### Estimated Backup Times Chart (In Minutes)

R/T2200G2			
Load, percent	Load, Watts	Estimated battery runtime at 100% battery charge	Runtime with an ERM
20%	320	45 minutes	150 minutes
50%	800	15 minutes	60 minutes
80%	1280	8.5 minutes	30 minutes
100%	1600	6 minutes	20 minutes

**NOTE:** Backup times are estimated for typical applications. Actual performance will depend on load and battery conditions.

### Technical Specifications

#### 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.

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