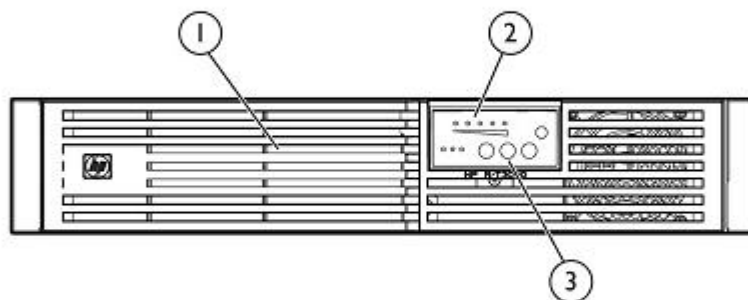


### Overview

The industry leading HP R/T3000 Uninterruptible Power System (UPS) packs up to 3000 watts into a space saving 2U design. Proven Digital Signal Processor (DSP) provides clean, reliable power protection in an energy efficient transformer-less design while reducing generated heat.

The HP R/T3000 UPS includes a Rack to Tower Conversion Kit for non rack applications outside the data center. In this configuration the HP R/T3000 can provide powerful protection to multiple tower servers as well as tower Blade Enclosures such as the HP c3000 BladeSystem.

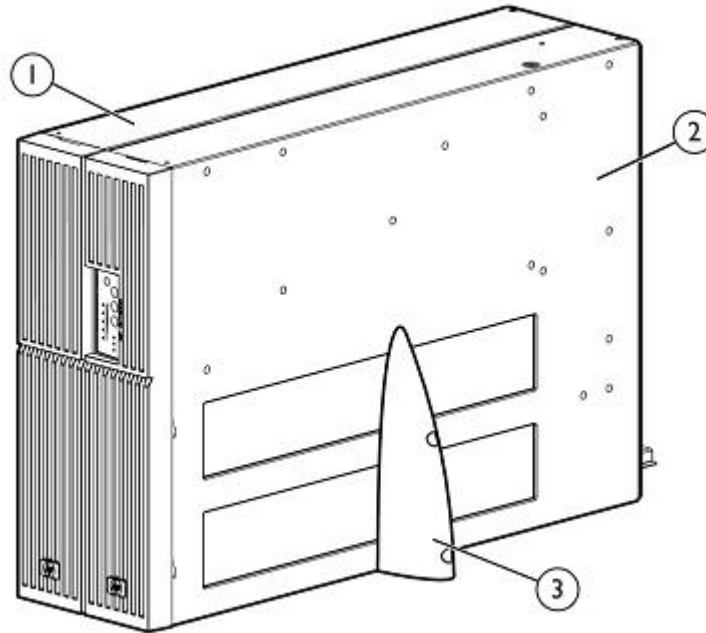
In addition, Extended Runtime Modules (ERM) are available to increase battery run time during a power outage. ERMs can be used in both rack mount and tower configuration with the HP R/T3000 UPS.



### R/T3000 Rackmount UPS configuration

1. Front bezel - battery compartment behind bezel
2. Status LED indicators
3. Power control buttons

### Overview



R/T3000 Tower UPS configuration with optional Extended Runtime Module

1. Optional Extended Runtime Module
2. R/T3000 in Tower UPS configuration
3. Tower UPS floor stands

### Models

HP R/T3000 2880VA Low Voltage 2U Rackmount Uninterruptible Power System  
HP R/T3000 3300VA High Voltage 2U Rackmount Uninterruptible Power System

AF452A  
AF453A

### Kit Contents

- HP UPS R/T3000
- HP Power Management Software CD
- Power Products Documentation CD
- Depth adjustable fixed rack mounting rails, mounting brackets, cord retention clips
- Rack to Tower Conversion Kit and floor stand
- Communications cables
- AF453A and AF454A also includes 1 PDU Extension Bar (7 x C13 outlets each)

### Standard Features

#### Key Features

- New convertible design can be used as a 2U rack mountable UPS or as a standalone tower UPS
- Increased power density with up to 3300VA / 3000 Watts (200-240V models)
- Greater system uptime with support for up to two Extended Runtime Modules (ERM)
- Easy configuration through enhanced front panel display
- Enterprise-wide intelligent manageability with bundled power management software
- Support for the HP UPS Management Module that extends the power management capabilities of the UPS
- More efficient voltage regulation using digital signal processing technology
- Ultimate long-term battery reliability with HP Enhanced Battery Management
- Enhanced system flexibility with two independently controlled load segments
- Support for Remote Emergency Power Off (REPO) circuitry
- Easy serviceability through modular design
- Hot-Swappable Batteries
- Backed by a three year warranty with the first year including parts and labor. HP's Pre-Failure warranty, and a \$250,000 load protection guarantee. (Certain restrictions and exclusions apply)
- Optional upgrades include:
  - Extended Runtime Modules (ERMs)
  - Management Cards

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**New Convertible Design** The R/T3000 can be used in a traditional rack mount environment or converted to a Tower UPS to support powerful Tower servers even Tower Blade Servers such as the HP c3000 BladeSystem.

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**2U Power Packed Design** Rated near unity at 3300VA / 3000W (200-240V models), the HP UPS R/T3000 packs more power in space-conserving rack-mount design, allowing you to support more critical equipment in your rack.

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**Increase System Uptime with Extended Runtime Modules** The Extended Runtime Modules are external battery modules that occupy 2U (3.5 inches) of rack space each. The HP UPS R/T3000 supports up to two Extended Runtime Modules (ERM), in either rack mount or tower configuration, which extend your overall battery runtime.

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**Lower Cost of Ownership with Innovative Technology** The HP UPS R/T3000 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.

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**Investment Protection with HP Enhanced Battery Management** HP UPS R/T3000 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.

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**Enhanced Flexibility** The high voltage R/T3000 UPS include one PDU Extension Bar. The extension bar has seven C13 outlets for powering equipment in the rack and attaches to the C19 outlets on the back of the UPS. The 6.5 foot (2 meter) cord allows the extension bar to be mounted in many locations inside the rear of the rack.

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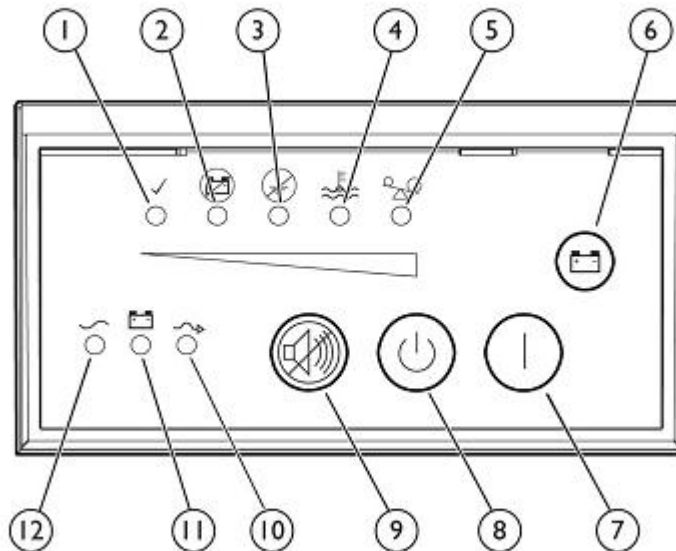


### Standard Features

**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.

### Enhanced Front Panel Display

LED and switch membrane integrated into the front panel with power controls and status and load indicators for easy visibility.



HP R/T3000 UPS Front Panel

- |   |                             |
|---|-----------------------------|
| 1. Dual function LED: Self Test and load indicator (10% load)         | 7. Power on button          |
| 2. Dual function LED: Battery fault and Load Indicator (25% load)     | 8. Power off button         |
| 3. Dual function LED: Site wiring fault and load indicator (50% load) | 9. Test/Alarm reset button  |
| 4. Dual function LED: Over Temperature and load indicator (75% load)  | 10. On bypass indicator     |
| 5. Dual function LED: Overload and load indicator (100%)              | 11. On battery indicator    |
| 6. Start on battery button  | 12. Utility power indicator |

### Standard Features

<b>Intelligent Manageability</b>	Free HP Power Management Software, an integrated component of HP Systems Insight Manager, the industry-leading hardware management platform, is included with all HP R/T3000 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.
<b>Independently Controllable Load Segments</b>	With two 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 R/T3000 can be configured to extend the shutdown delay time for more critical devices.
<b>Ease of Maintenance with Hot-Swappable Batteries</b>	The UPS R/T3000 is designed with simple access through the front panel for hot swappable batteries. Users can safely install new batteries without ever powering down connected server and server options.
<b>HP Quality</b>	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.
<b>Compatibility</b>	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 <a href="http://www.hp.com/products/ups">www.hp.com/products/ups</a> ).
<b>Optional UPS Management Module</b>	<p>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 provide 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.</p> <p>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.</p> <p>The HP UPS Management Module provides remote management of a UPS by connecting the UPS directly to the network. Configuration &amp; Management of the UPS from anywhere and at anytime via a standard web browser.</p> <p><b>NOTE:</b> For more information on the UPS Management Module please see: <a href="http://h18004.www1.hp.com/products/servers/proliantstorage/powerprotection/software/module/ups/index.html">http://h18004.www1.hp.com/products/servers/proliantstorage/powerprotection/software/module/ups/index.html</a> web browser.</p>
<b>Extended Runtime Module (ERM)</b>	The UPS R/T3000 supports up to two Extended Runtime Modules. Each module is a 2U (3.5 inches), rack mountable battery module that extends your overall battery runtime.



### Standard Features

**Rack to Tower Conversion Kit** The included HP R/T3000 UPS Tower Conversion Kit allows you to use the powerful R/T3000 in a tower configuration for your most powerful tower Servers or Blade Enclosures. The kit contains stabilizing feet and appropriate hardware for a fast, easy form factor change. Each Tower Conversion Kit can support one UPS and up to two Extended Runtime Modules.

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### Warranty

The HP UPS R/T3000 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 Battery Pre-Failure Warning, 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 Battery Pre-Failure Warning 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 North America, in addition to the HP three year, limited warranty.



### Service and Support

#### HP Care Pack Installation

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 and PDU 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 or resellers or visit our worldwide web site on the internet at: <http://www.hp.com/hps/carepack>

**NOTE:** For more complete information on HP Services offerings, customers and resellers, please visit us 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.



### *Related Options*

<b>Extended Runtime Module</b>	HP R/T3000 2U Extended Runtime Module	AF455A
<b>UPS Management</b>	HP Management Card for XR UPS	AF401A
	HP RJ45-DB89 DCE Female 5 Pack Serial Adapter	AF402A
<b>HP Care Pack</b>	HP Install Universal Power Supply 3KVA to Below 6KVA Service	U4693E



### Model Matrix

#### UPS Models

Part Number	Operating Voltage Settings	Power Out (VA/Watts)	Input Connection	Output Connection
AF452A Low Voltage	100, 110, 120, 127	2880/2700	L5-30P, 3m cord	LS1 <sup>2</sup> : 2x NEMA 5-20 outlets, 1 x NEMA L5-30R LS2 <sup>3</sup> : 2x NEMA 5-20 outlets
AF452S Low Voltage	100, 110, 120, 127	2880/2700	L5-30P, 3m cord	LS1 <sup>2</sup> : 2x NEMA 5-20 outlets, 1 x NEMA L5-30R LS2 <sup>3</sup> : 2x NEMA 5-20 outlets
AF453A High Voltage	200/208 <sup>1</sup> ,  Actual output voltage 204VAC	3300/3000	L6-20P, 3m cord	LS1 <sup>2</sup> : 3x IEC C13, 1x IEC C-19, 1x NEMA L6-20R LS2 <sup>3</sup> : 3x IEC C13, 1x IEC C-19 <b>NOTE:</b> Includes one PDU Extension Bar. Each Extension Bar has 7x C13 outlets and plugs into a C-19 on the rear of the UPS.
AF453S High Voltage	200/208 <sup>1</sup> ,  Actual output voltage 204VAC	3300/3000	L6-20P, 3m cord	LS1 <sup>2</sup> : 3x IEC C13, 1x IEC C-19, 1x NEMA L6-20R LS2 <sup>3</sup> : 3x IEC C13, 1x IEC C-19 <b>NOTE:</b> Includes one PDU Extension Bar. Each Extension Bar has 7x C13 outlets and plugs into a C-19 on the rear of the UPS.

<sup>1</sup> Factory default setting.

<sup>2</sup> LS1 = Load Segment 1

<sup>3</sup> LS2 = Load Segment 2



### Estimated Backup Times Chart (Minutes)

Low Voltage model  
(2880VA / 2700 Watt)

Load (Percent*)	Estimates battery runtime (Minutes)	With One Extended Runtime Module (Minutes)	With Two Extended Runtime Modules (Minutes)
540W (20%)	45	142	256
1350W (50%)	15	55	99
2160W (80%)	7	34	60
2700W (100%)	5	26	47

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

High Voltage model  
(3300VA / 3000 Watt)

Load (Percent*)	Estimated battery runtime (Minutes)	With One Extended Runtime Module (Minutes)	With Two Extended Runtime Modules (Minutes)
600W (20%)	40	125	225
1500W (50%)	12	50	99
2400W (80%)	6	30	60
3000W (100%)	4	24	47

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



# QuickSpecs

## HP R/T3000 Uninterruptible Power System (UPS)

### Technical Specifications

<b>Unit Dimensions (HxWxD)</b>	3.5 x 17.5 x 25 inches / 8.9 x 44.5 x 63.5 cm
<b>Shipping Dimensions</b>	11.25 x 23.48 x 36.25 inches / 28.57 x 59.64 x 92.07 cm
<b>Unit Weight</b>	82 lbs/37 kg
<b>Shipping Weight</b>	89 lbs UPS and 127 lbs ERM / 40.37 kg & 57.6 kg
<b>BTU Break Down</b>	<b>BTU On Line</b> 540 BT/hr <b>BTU On Battery</b> 1138 BTU/hr <b>Battery Type</b> 12 V, 5 AH, sealed, maintenance-free, rechargeable, valve regulated lead-acid batteries with a 3-5 year service life at 25C (77F).
<b>Electrical Input</b>	<b>Voltage Range</b> See Model Matrix for nominal and user selectable voltage settings <b>Frequency</b> 50/60 Hz <b>Online Efficiency</b> 95% <b>REPO</b> Remote Emergency Power-Off disables AC power to load <b>Online Regulation</b> -10% to +6% of nominal voltage
<b>Electrical Output</b>	<b>On battery Regulation</b> ±5% of nominal voltage <b>Voltage Wave Form</b> Sine wave <b>Connections</b> See Model Selection Matrix; divided into 2 Load Segments <b>Output Protection</b> Re-settable circuit protectors <b>Type</b> Maintenance-free, sealed, valve-regulated lead acid (VRLA)
<b>Battery</b>	<b>Extended Batteries</b> Up to two ERMs supported <b>Backup Time</b> See Backup Times Chart <b>Recharge Time</b> <3 hours to 80% usable capacity; <48 hours for complete recharge <b>Serial Ports</b> Standard DB-9 and USB ports (ships with communication cables)
<b>Communications</b>	<b>Option Slot</b> One <b>Option Cards</b> HP UPS Management Module <b>LED Indicators</b> LED and switch membrane integrated into the front panel <b>Software</b> HP Power Manager software included
<b>Environmental and Safety</b>	<b>Operating Temperature</b> 10°C to 40°C (50°F to 104°F); UL-tested at 25°C (77°F) <b>Non-operating Temperature</b> -20°C to 50°C (-4°F to 122°F) <b>Operating Humidity</b> 20% to 80% (non-condensing) <b>Storage Humidity</b> 5% to 95% <b>Operating Altitude</b> Up to 6,562 ft (2000 m) above sea level <b>Transit Altitude</b> 49,212 ft (15,000 m) above sea level <b>Audible Noise</b> <45db in normal operation. <50db on battery operation <b>Safety Markings</b> UL, cUL <b>Safety Certifications</b> UL1778, UL60950-1; CSA22.2 No.107.3-05,; EN60950-1 IEC62040-1-1 <b>REPO Port</b> Meets NEC code 645-10 and 645-11 and UL requirements



### 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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