

### Overview and Models

### HP Line Interactive Single Phase Uninterruptible Power Systems (UPS)

Looking for cost-effective power protection for your small office environments?

HP Line Interactive Single Phase Uninterruptible Power System (UPS) solutions range from tower-based systems designed to safeguard tower servers and small office equipment, to rack-based systems that can protect a full rack of servers. Standard features include intuitive front panel displays for local management, and HP Enhance Battery Management (EBM) that help to extend the service-life of your batteries. HP Power Protection, a power management software application that ships with each model, combined with a UPS Network Module, optional on some models, enables you to remotely monitor and manage your UPS through HP Systems Insight Manager or via a standard web browser.

When you need it, use outstanding HP support services for your whole data center environment. With HP Care Pack Services, have the security of knowing that your HP UPS will be covered at the same service level and coverage period as your HP server. HP UPSs are backed by a 3-year limited warranty, with the first year including parts and labor. Also, standard on all HP UPS units is our exclusive 30-day Battery Pre-Failure Warranty, which ensures that when customers receive notification from HP Power Manager Software that the battery may fail, the battery is replaced free of charge under the warranty. This warranty is offered worldwide.

#### **Tower UPS Models**

##### **HP T750 G4 UPS Models**

HP T750 G4 NA/JP Uninterruptible Power System	J2P85A
HP T750 G4 INTL Uninterruptible Power System	J2P88A

##### **HP T1000 G4 UPS Models**

HP T1000 G4 NA/JP Uninterruptible Power System	J2P86A
HP T1000 G4 INTL Uninterruptible Power System	J2P89A

##### **HP T1500 G4 UPS Models**

HP T1500 G4 NA/JP Uninterruptible Power System	J2P87A
HP T1500 G4 INTL Uninterruptible Power System	J2P90A

#### **Rack/Tower UPS Models**

##### **HP R/T2200 G4 UPS Models**

HP R/T2200 G4 NA/JP Uninterruptible Power System	J2R00A
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##### **HP R/T3000 G4 UPS Models**

HP R/T3000 G4 Low Voltage NA/JP Uninterruptible Power System	J2R01A
HP R/T3000 G4 High Voltage NA/JP Uninterruptible Power System	J2R02A
HP R/T3000 G4 High Voltage INTL Uninterruptible Power System	J2R04A

#### **Rack UPS Models**

##### **R1500 G4 Models**

HP R1500 G4 NA Uninterruptible Power System	J2Q99A
HP R1500 G4 JP/TWN Uninterruptible Power System	J2R05A
HP R1500 G4 INTL Uninterruptible Power System	J2R03A

##### **R5000 UPS Models**

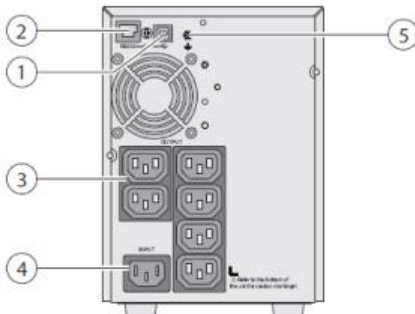
HP R5KVA 3U L630 High Voltage NA/JP Uninterruptible Power System	AF460A
HP R5KVA 3U IEC309-32A High Voltage INTL Uninterruptible Power System	AF461A

##### **R7000 UPS Models**

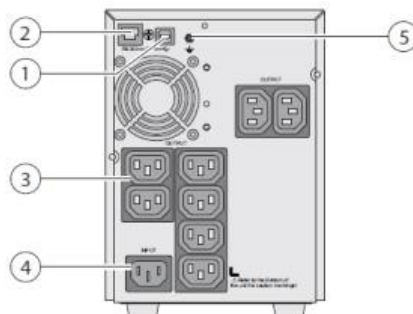
HP R7KVA 4U 50A High Voltage NA/JP Uninterruptible Power System	AF462A
HP R7KVA 4U IEC-32A High Voltage INTL Uninterruptible Power System	AF463A

### Tower UPS Features

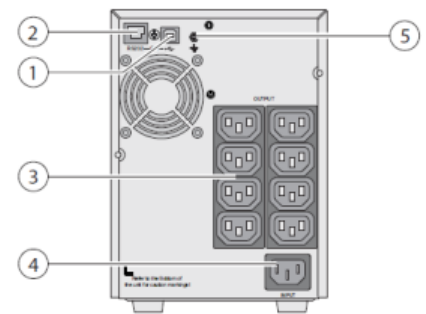
#### Tower UPS Rear Panel



**HP T750 G4 UPS INTL**



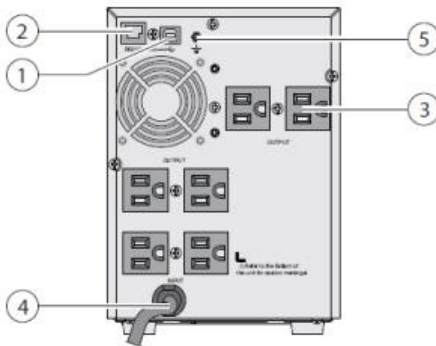
**HP T1000 G4 UPS INTL**



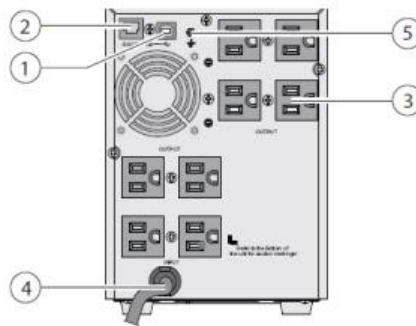
**HP T1500 G4 UPS INTL**

1. USB Communication Port
2. RS-232 Communication Port
3. Outlets for Connection of Critical Equipment

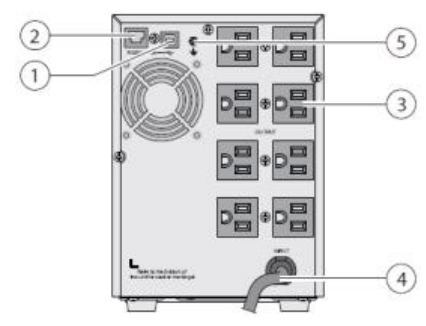
4. Socket for Connection to AC Power Source
5. Ground Screw



**HP T750 G4 UPS NA/JPN**



**HP T1000 G4 UPS NA/JPN**



**HP T1500 G4 UPS NA/JPN**

1. USB Communication Port
2. RS-232 Communication Port
3. Outlets for Connection of Critical Equipment

4. Attached 6-ft. Input Power Cord for AC Power Source
5. Ground Screw

### Tower UPS Models Provide Power Protection and Management Optimized for Smaller IT Environments

#### Key Features

- Manageability through USB and Serial ports
- Ease of configuration via enhanced front panel display.
- Intelligent manageability with bundled Power Manager Software.

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

### Tower UPS Specifications

#### Towers G4 UPS Specifications

<b>Battery Type</b>	12 V, 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>	± 20% for nominal voltages of 100, 110, 120, 220, 230, and 240VAC. Note: Nominal voltages to coincide with standard power ranges
	<b>Frequency</b>	50/60 Hz
	<b>Online Efficiency</b>	>94%
	<b>REPO</b>	N/A
	<b>Online Regulation</b>	-10% to +6% of nominal voltage
<b>Electrical Output</b>	<b>On battery Regulation</b>	±5%, -10% of nominal voltage
	<b>Voltage Wave Form</b>	Sine wave
	<b>Connections</b>	See Model Selection Matrix
	<b>Output protection</b>	Firmware overload sensing and control
<b>Battery</b>	<b>Extended Batteries</b>	N/A
	<b>Backup Time</b>	See Backup Times Chart
	<b>Recharge Time</b>	<4 hours to charge 90% usable capacity. <24 hours for complete recharge
	<b>Serial Ports</b>	RS232 (via RJ45 connector to DB9) and USB ports (ships with communication cables)
<b>Communications</b>	<b>Option Slot</b>	N/A
	<b>Option Cards</b>	N/A
	<b>LCD Interface</b>	LCD Display and Button Interface
	<b>Software</b>	HP Power Protector management software available via download
	<b>Operating Temperature</b>	32° to 104° F (0° to 40° C) ( with battery)
<b>Environmental and Safety</b>	<b>Non-operating Temperature</b>	-15° to 55° F (-26° to 13° C) (without battery)
	<b>Operating Humidity</b>	5% to 90% (non-condensing)
	<b>Storage Humidity</b>	5% to 90% (non-condensing)
	<b>Operating Altitude</b>	Up to 1500 m above sea level
	<b>Audible Noise</b>	<40dB in normal operation. <45dB while on inverter
	<b>Safety Markings</b>	NA/JPN: UL/cUL, ICES B,NOM,VCCI, Int'l: CE,TUV GS,C-tick,EAC,KC
	<b>Safety Certifications</b>	UL1778, UL60950-1; CSA22.2 No.107.3-05,; EN609501-, EN62040-1 IEC62040-1-1, IEC 60950-1
	<b>REPO Port</b>	N/A

#### HP T750 G4 UPS Specifications

See model matrix for other specifications.

<b>T750 G4, NA/JP</b> J2P85A	<b>Load Segments</b>	1
<b>T750 G4, INTL</b> J2P88A	<b>Unit Dimensions (WxDxH)</b>	5.9 x 13.4 x 8.3 inch (150 x 340 x 210 mm)
	<b>Shipping Dimensions(LxWxH)</b>	18.7x 9.4 x 12.1 inch (476 x 238 x 308 mm)
	<b>Unit Weight</b>	23.6 lbs (10.7kg)
	<b>Shipping Weight</b>	26.4 lbs (12 kg)

Tower UPS Specifications

HP T1000 G4 UPS Specifications

<b>T1000 G4, NA/JP</b> J2P86A	<b>Load Segments</b>	1
<b>T1000 G4, INTL</b> J2P89A	<b>Unit Dimensions (WxDxH)</b>	5.9 x 13.4x 8.3 inch (150 x 340x 210 mm)
	<b>Shipping Dimensions(LxWxH)</b>	18.7 x 9.4 x 12.1 inch (476 x 238 x 308 mm)
	<b>Unit Weight</b>	25.1 lbs (11.4kg)
	<b>Shipping Weight</b>	28.7 lbs (13 kg)

HP T1500 G4 UPS Specifications

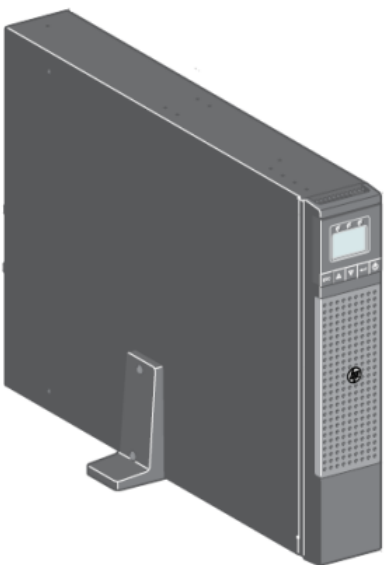
<b>T1500 G4, NA/JP</b> J2P87A	<b>Load Segments</b>	1
<b>T1500 G4, INTL</b> J2P90A	<b>Unit Dimensions (WxDxH)</b>	5.9 x 16.1 x 8.3inch (150 x 410 x 210 mm)
	<b>Shipping Dimensions(LxWxH)</b>	19.6 x 9.4 x 12.1 inch (498 x238 x 308 mm)
	<b>Unit Weight</b>	34.4 lbs (15.6 kg)
	<b>Shipping Weight</b>	37.3 lbs (16.9 kg)

**NOTE:** Locate which Operating Systems are supported at:  
<http://www.hp.com/products/powermanager>.

HP R/T2200 and R/T3000 Tower Uninterruptible Power System (UPS)



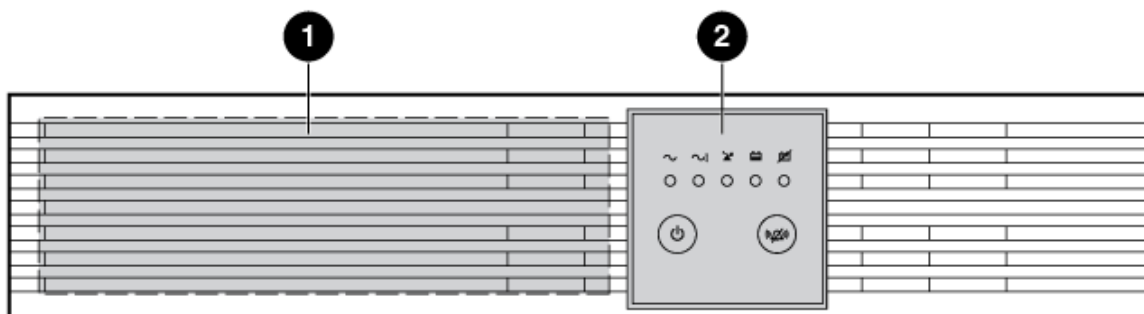
R/T3000 in Rack UPS configuration



R/T3000 with Tower UPS floor stands

HP R/T2200 Uninterruptible Power System (UPS)

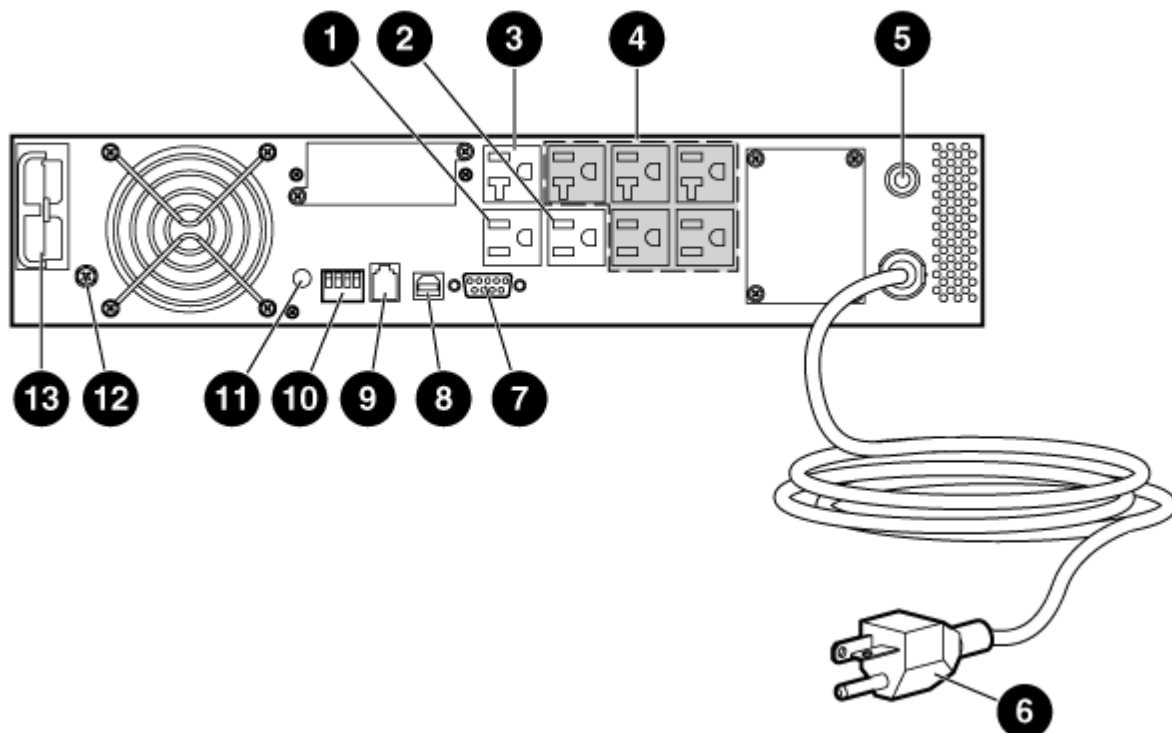
### HP Rack UPS Specifications



**Front panel**

1 Battery compartment

2 Control buttons and LED display



**NA/JPN/TWN rear panel**

- |                                                                                            |                                                       |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 1 Load segment 1 (one NEMA 5-15 output receptacle for surge and battery backup protection) | 8 USB communications port                             |
| 2 Load segment 2 (one NEMA 5-15 output receptacle for surge and battery backup protection) | 9 REPO port                                           |
| 3 Load segment 3 (one NEMA 5-15 output receptacle for surge and battery backup protection) | 10 Voltage configuration and charge rate DIP switches |
| 4 Load segment 4 (one NEMA 5-15 output receptacle for surge and battery backup protection) | 11 Power sensitivity adjustment dial                  |
| 5 Input circuit breaker                                                                    | 12 Ground bonding screw                               |
| 6 Input power cord with NEMA 5-20 plug                                                     | 13 ERM connector                                      |
| 7 Serial communications port                                                               |                                                       |

### HP Rack UPS Specifications

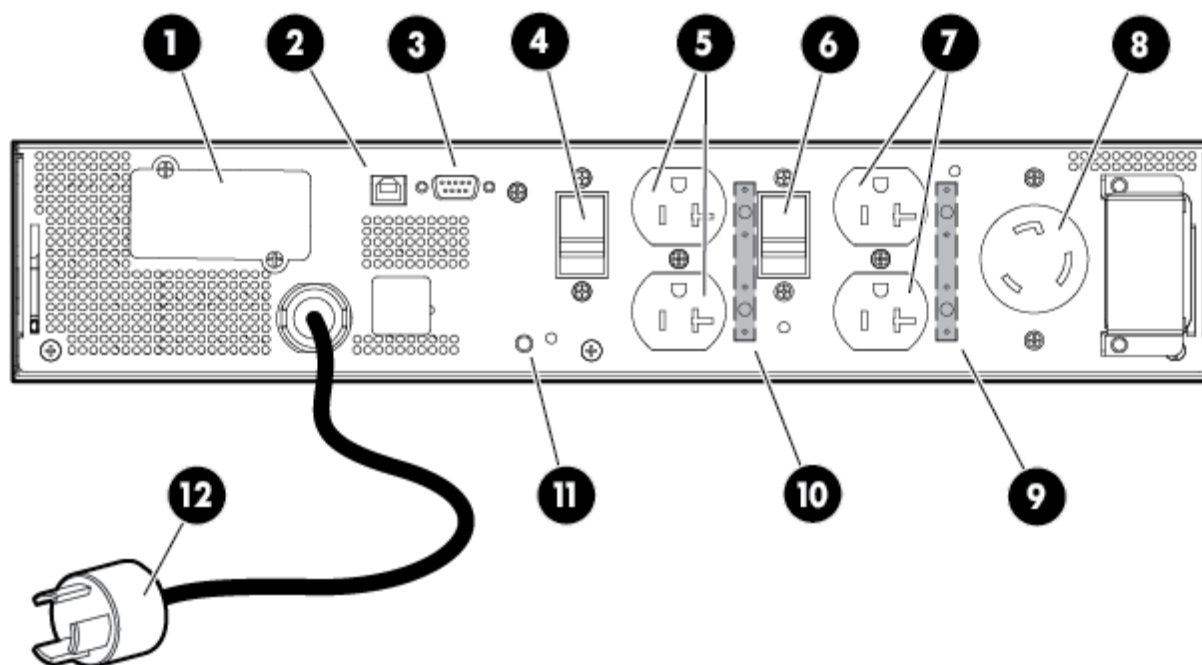
#### HP R/T3000 Uninterruptible Power System (UPS)



**Front Panel**

1 Battery compartment

2 Control buttons and LED display



**NA/JPN rear panel**

- 1 UPS option card
- 2 USB communications port
- 3 Serial communications port
- 4 Load segment circuit breaker
- 5 Load segment 1 (two NEMA 5-20R T-slot receptacles)
- 6 Load segment circuit breaker

- 7 Load segment 2 (two NEMA 5-20R T-slot receptacles)
- 8 PDU output (NEMA L5-30R) receptacle (load segment 1)
- 9 Cord retention clip attachment location
- 10 Cord retention clip attachment location
- 11 Ground bonding screw
- 12 Power cord with L5-30 plug

#### HP R/T2200 and R/T3000 Tower Uninterruptible Power System (UPS)

#### Flexible Rack/Tower Models Deliver Cost-Effective Power Protection

##### Key features

- Convertible design can be used as a 2U rack mountable UPS or as a standalone tower UPS

### HP Rack UPS Specifications

- Power density up to 3000VA / 2700 Watts (200-240V models)
- Easy configuration through enhanced front panel display
- More efficient voltage regulation using digital signal processing technology
- Enhanced system flexibility with two independently controlled load segments
- Support for Remote Emergency Power Off (REPO) circuitry
- Easy serviceability through modular design

### Specifications

#### R/T2200 G4 UPS (NA/JPN only)

<b>Battery Type</b>	12 V, 34W, 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; Battery string voltage 48Vdc
	<b>Frequency</b>	50/60 Hz
	<b>Online Efficiency</b>	94%
	<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>Type</b>	Maintenance-free, sealed, valve-regulated lead acid (VRLA)
<b>Battery</b>	<b>Extended Batteries</b>	Up to four ERMs can be supported; recommendation is up to 2
	<b>Backup Time</b>	See Backup Times Chart
	<b>Recharge Time</b>	<3 hours to 90% 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 (For Optional Communication Card)
	<b>Option Cards</b>	HP UPS Network Module (not included in kit but orderable option)
	<b>LCD Interface</b>	LCD Display and Button Interface
	<b>Software</b>	HP Power Protector software available via download
<b>Environmental and Safety</b>	<b>Operating Temperature</b>	0°C to 40°C (32°F to 104°F); Long term use at higher temperature will reduce battery life 25°C (77°F)
	<b>Non-operating Temperature</b>	-15°C to 50°C (-5°F to 122°F)
	<b>Operating Humidity</b>	20% to 90% (non-condensing)
	<b>Storage Humidity</b>	10% to 90%
	<b>Operating Altitude</b>	Up to 6,562 ft (2000 m) above sea level
	<b>Audible Noise</b>	<40dB in normal operation. <45dBon battery operation
	<b>Safety Markings</b>	NA/JPN: UL, cUL, VCCI
	<b>Safety Certifications</b>	UL1778, UL60950-1; CSA22.2 No.107.3-05;; EN60950-1, EN62040-1IEC62040-1-1, IEC 60950-1,
	<b>REPO Port</b>	Meets NEC code 645-10 and 645-11and UL requirements
	<b>Unit Dimensions (LxWxH)</b>	20.55x 17.36 x 3.39 inches / 522x 441 x 86.2 mm
<b>Shipping Dimensions(LxWxH)</b>		36.26 x 23.23 x 11.02 inches / 921 x 590 x 280 mm
<b>Unit Weight</b>		65.28 lbs/29.61 kg
<b>Shipping Weight</b>		83.62 lbs UPS and 83.62 lbs ERM / 37.93 kg & 37.93 kg



### HP Rack UPS Specifications

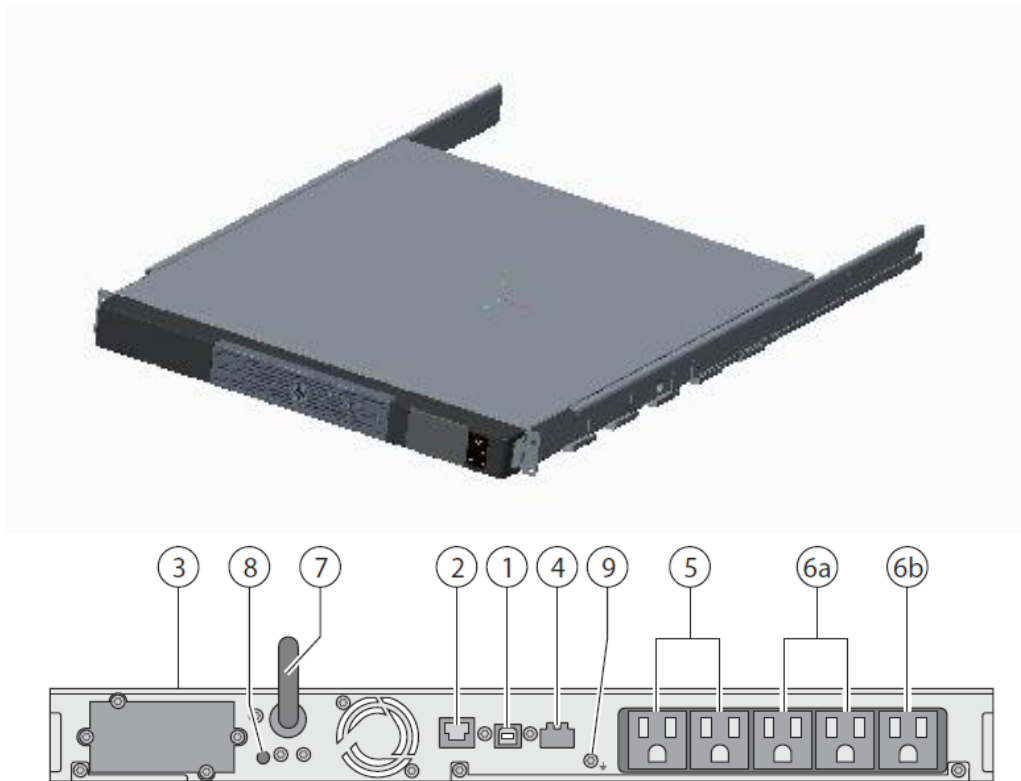
#### R/T3000 G4 UPS

<b>Battery Type</b>	12 V, 34W, 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; Battery string voltage 72Vdc
	<b>Frequency</b>	50/60 Hz
	<b>Online Efficiency</b>	94%
	<b>REPO</b>	Remote Emergency Power-Off disables AC power to load
<b>Electrical Output</b>	<b>Online Regulation</b>	-10% to +6% of nominal voltage
	<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>Battery</b>	<b>Output Protection</b>	Re-settable circuit protectors
	<b>Type</b>	Maintenance-free, sealed, valve-regulated lead acid (VRLA)
	<b>Extended Batteries</b>	Up to four ERMs can be supported; recommendation up to 2
	<b>Backup Time</b>	See Backup Times Chart
<b>Communications</b>	<b>Recharge Time</b>	<3 hours to 90% usable capacity; <48 hours for complete recharge
	<b>Serial Ports</b>	Standard DB-9 and USB ports (ships with communication cables)
	<b>Option Slot</b>	One (For optional communication card)
	<b>Option Cards</b>	HP UPS Network Module (not included in kit but orderable option)
<b>Environmental and Safety</b>	<b>LCD Interface</b>	LCD Display and Button Interface
	<b>Software</b>	HP Power Protector software available
	<b>Operating Temperature</b>	0°C to 40°C (32°F to 104°F); Long term use at higher temperature will reduce battery life at 25°C (77°F)
	<b>Non-operating Temperature</b>	-15°C to 50°C (-5°F to 122°F)
<b>Unit Dimensions (LxWxH)</b>	<b>Operating Humidity</b>	20% to 90% (non-condensing)
	<b>Storage Humidity</b>	10% to 90%
	<b>Operating Altitude</b>	Up to 6,562 ft (2000 m) above sea level
	<b>Audible Noise</b>	<4dB in normal operation. <50dB on battery operation
<b>Shipping Dimensions(LxWxH)</b>	<b>Safety Markings</b>	NA/JPN LV /HV: UL, cUL, VCCI Int'l: GS, CE, C-tick, TUV, EAC
	<b>Safety Certifications</b>	UL1778, UL60950-1; CSA22.2 No.107.3-05,; EN60950-, EN62040-1 IEC62040-1-1, IEC 60950-1
	<b>REPO Port</b>	Meets NEC code 645-10 and 645-11 and UL requirements
	<b>Unit Weight</b>	87.17 lbs/39.54 kg
<b>Shipping Weight</b>	107.48 lbs UPS and 120.59 lbs ERM / 48.75 kg & 54.7kg	



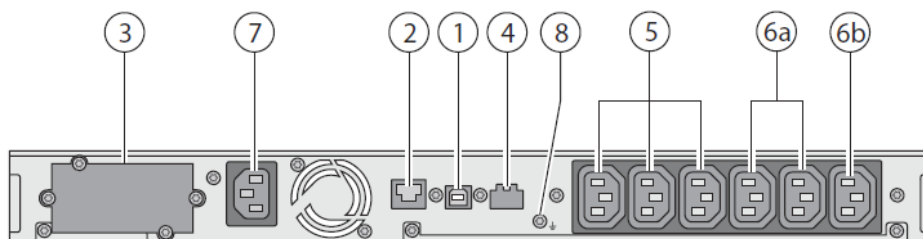
### HP Rack UPS Specifications

#### HP R1500 G4 NA and JP/TWN UPS



- |                                                                       |                                                                  |
|-----------------------------------------------------------------------|------------------------------------------------------------------|
| 1. IUSB Communication Port                                            | 6a. Group 1: programmable outlets for equipment connection       |
| 2. ES-232 Communication Port                                          | 6b. Group 2: programmable outlets for equipment connection       |
| 3. Slot for optional communication card                               | 7. Attached 6ft input power cord Nema 5-15P for AC power source, |
| 4. Connector for R00(Remote On/Off) or RPO (Remote Power Off) Control | 8. LED indicating site wiring fault alarm                        |
| 5. Outlets for connection of critical equipment (Primary group)       | 9. Ground screw                                                  |

#### HP R1500 G4 International UPS

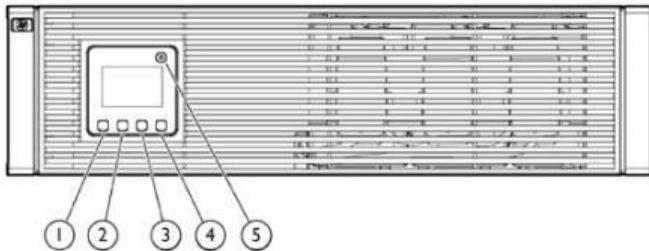


- |                                                                        |                                                                               |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 1. USB communication port                                              | 6a. Group 1: programmable outlets for equipment connection                    |
| 2. RS-232 communication port                                           | 6b. Group 2: programmable outlets for equipment connection                    |
| 3. Slot for optional communication card                                | 7. Input power connection (IEC -320-C14) for powering unit to AC power source |
| 4. Connector for R00 (Remote On/Off) or RPO (Remote Power Off) control | 8. Ground screw                                                               |

### HP Rack UPS Specifications

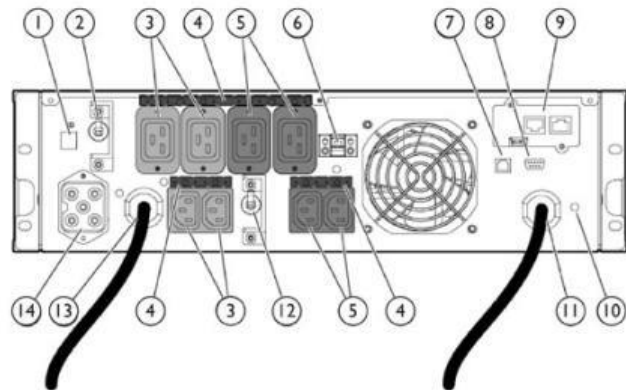
5. Outlets for connection of equipment (Primary group)

### R5000 UPS



#### Front View

1. Escape Button
2. Scroll up button
3. Scroll down button
4. Enter/Select button
5. Power button

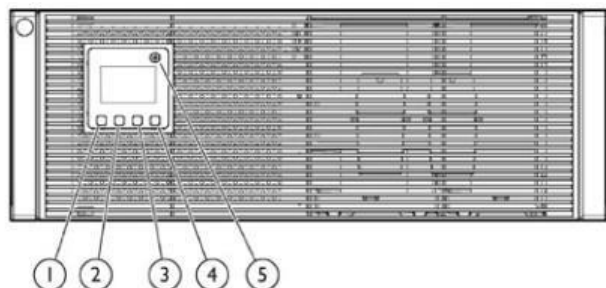


#### Rear View

1. ERM connector for the small plug on the split ERM cable
2. Load segment 1 circuit breaker (controls the C19 and C13 receptacles, but does not control the large output)
3. Load segment 1 (two IEC-320-C19 receptacles, two IEC-320-C13 receptacles)
4. Cord retention clip attachment locations
5. Load segment 2 (two IEC-320-C19 receptacles and two IEC-320-C13 receptacles)
6. REPO port
7. USB communications port
8. Serial communications port
9. HP UPS Network Module (included)
10. Ground bonding screw
11. Input power line cord with NEMA L6-30 plug
12. Load segment 2 circuit breaker
13. Large output NEMA L6-30R receptacle or IEC-309-32A receptacle associated with load segment 1
14. ERM Connector for large plug

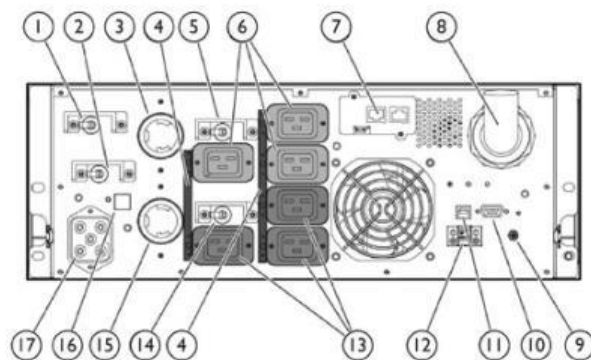
### HP Rack UPS Specifications

#### R7000 UPS



#### Front View

1. Escape Button
2. Scroll up button
3. Scroll down button
4. Enter/Select button
5. Power button



#### Rear View

1. Load segment 1 circuit breaker (controls L6-30R receptacle Item 3)
2. Load segment 2 circuit breaker (controls L6-30R receptacle Item 15)
3. Large output NEMA L6-30R receptacle or IEC-60309 32A receptacle on short cords associated with load segment 1
4. Cord retention clip attachment locations
5. Load segment 1 circuit breaker (controls the C19 receptacles, but does not control the large output)
6. 3 x IEC C19 receptacles on load segment 1
7. HP UPS Network Module
8. Input power line cord with NEMA CS8265C plug or IEC-309- 32A plug
9. Ground bonding screw
10. Serial communications port
11. USB communications port
12. REPO port
13. 3 x IEC C19 receptacles on load segment 2
14. Load segment 2 circuit breaker (controls the C19 receptacles, but does not control the large output receptacle)
15. IEC C19 receptacle
16. IEC C19 receptacle
17. IEC C19 receptacle

### Ultra-Dense Rack UPS Models Scale from Small to Enterprise IT Environments

#### Key Features

- Front panel LCD display
- Enhanced system flexibility with two independently controlled load segments

### Specifications

### HP Rack UPS Specifications

#### HP R1500 G4 UPS

<b>Electrical Input</b>	<b>Voltage Range</b>	± 15% of nominal 100 and 120V models and ± 20% of nominal on 230V models. See Model Matrix for nominal and user selectable voltage settings via LCD Front Display Panel
	<b>Frequency</b>	50/60 Hz ± 5Hz (auto sensing at default voltage )
<b>Electrical Output</b>	<b>Online Efficiency</b>	92%
	<b>Online Regulation</b>	-10% to +6% of nominal voltage*
	<b>On battery Regulation</b>	-10% / + 6% of nominal voltage
	<b>Voltage Wave Form</b>	Sine wave
	<b>Connections</b>	See Model Matrix; divided into 3 Load Segments
<b>Battery</b>	<b>Output Protection</b>	Firmware overload sensing and control,
	<b>Type</b>	Maintenance-free, sealed, valve-regulated lead acid (VRLA)
	<b>Backup Time</b>	See Backup Times Chart
	<b>Recharge Time</b>	<3 hours to 90% usable capacity; <24 hours for complete recharge
<b>Communications</b>	<b>Voltage</b>	36V Battery String
	<b>Ports</b>	Standard DB-9 port (Kit ships with cable for communication ) USB port (Kit ships with cable for communication)
	<b>Option Slot</b>	One ( for Optional Communication Card)
	<b>Option Cards</b>	HP UPS Network Module (Not included in Kit but orderable Option)
	<b>LED Indicators</b>	LED display integrated into the front panel
<b>Environmental and Safety</b>	<b>Software</b>	HP Power Protector management software available via download
	<b>Operating Temperature</b>	32° to 104° F (0° to 40° C) ( with battery)
	<b>Storage Temperature</b>	-15° to 55° F (-26° to 13° C) (without battery)
	<b>Humidity (Operation)</b>	0% to 90%
	<b>Humidity (Non-operating)</b>	0% to 90%
	<b>Operating Altitude</b>	up to 2000 meters
	<b>Audible Noise</b>	<40db (at 1m from surface of unit) <45dBA while on inverter
	<b>Safety Markings</b>	UL/cUL CE, TUV, C-tick, CES, EAC, VCCI, GS, KC, EK, BSMI
	<b>Safety Certifications</b>	UL1778; UL60950, CSA22.2 No.107.1, No.107.3.; CB Bulletin IEC62040-1; IEC 60950-1; EN60950-1; EN 62040-1; EN 61000-3-2+A1 +A2; EN 61000-3-3
	<b>EMC Markings</b>	FCC-BCISPR 22; VCCI B; CE, BSMI, C-TICK
	<b>Emissions</b>	FCC CFR 47, Part 15 Class A, EN50091-2
	<b>Immunity</b>	EN 55024; EN 50091-2 consisting of IEC 61000-4-2 thru IEC 61000-4-6 ; IEC 61000-4-11
	<b>Surge Suppression</b>	Conforms to IEEE 587B and ANSI C62.41
<b>Unit Dimensions (LxWxH)</b>		21.8x 17.2x 1.69 in (554 x 438 x 43 mm)
<b>Shipping Dimensions</b>		30.71x 22.8 x6.1 in (780 x 580 x 155 mm)
<b>Unit Weight</b>		39.06 lb (19.72 kg)
<b>Shipping Weight</b>		54.45 lb (24.7 kg)

\* The R1500 G4 UPS regulates the output voltage at -10% / +6% of the selected nominal voltage. The regulation is accomplished by bucking or boosting the input voltage. The voltage regulation operation is governed by the unit's input voltage spec of +/-20%. The unit will regulate at -10% / +6% while within the limits set by the input spec. The unit will go to battery operation upon exceeding the limits set by the input spec. The buck and boost voltage regulation operation, or AVR (Automatic Voltage Regulation), is accomplished by adjusting output transformer tap selections via electromechanical relays. The transformer tap selection is controlled via digital transition voltage set point values programmed in the unit's firmware. These programmed values are without tolerance.

The unit will monitor the input voltage and accept a range of +/-3% of the selected nominal voltage as the target voltage to regulate at -10% / +6%. For example, a unit configured to 120V nominal voltage will regulate at -10% / +6% for any voltage measured between 116.4V and 123.6V. The digital transition voltage set point values will adjust accordingly to regulate to -10% / +6% of the measured input voltage.

Transition set point voltages are subject to a hardware tolerances of +/-3% of the set point value.

### HP Rack UPS Specifications

#### R5000 3U UPS

<b>BTU Break Down</b>	<b>BTU On Line</b>	478 BT/hr
	<b>BTU On Battery</b>	1041 BTU/hr
	<b>Battery Type</b>	12V 27W
<b>Electrical Input</b>	<b>Voltage Range</b>	160-253V at 200/208V nominal; 176-253V at 220, 230, and 240V nominal
	<b>Frequency</b>	50/60 Hz
	<b>Online Efficiency</b>	94%
<b>Electrical Output</b>	<b>REPO</b>	Remote Emergency Power-Off disables AC power to load
	<b>Online Regulation</b>	-10% to +6% of nominal voltage
	<b>On battery Regulation</b>	±5% of nominal voltage
	<b>Voltage Wave Form</b>	Sine wave
	<b>Connections</b>	See Model Matrix; divided into 2 Load Segments
	<b>Output Protection</b>	Re-settable circuit protectors
<b>Battery</b>	<b>Type</b>	Maintenance-free, sealed, valve-regulated lead acid (VRLA)
	<b>Extended Batteries</b>	Up to four 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>Battery String Voltage</b>	216V
	<b>Battery Type</b>	12V 27W
<b>Communications</b>	<b>Battery Quantity</b>	18
	<b>LED Indicators</b>	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).
	<b>Operating Temperature</b>	50° to 104° F (10° to 40° C )
<b>Environmental and Safety</b>	<b>Storage Temperature</b>	32° to 77° F (0° to 25° C )
	<b>Transit Temperature</b>	-13° to 131° F (-25° to 55° C )
<b>Unit Dimensions (HxWxD)</b>	5 5 in (12.7 cm) x 17.2 in (43.7 cm) x 29.3 in (74.4 cm)	
<b>Shipping Dimensions</b>	14.4 in ( 36.58 cm) x 23.6 in ( 60 cm) x 38.78 in ( 98.5 cm)	
<b>Unit Weight</b>	126 lbs (57kg)	
<b>Shipping Weight</b>	192 lbs ( 87 kg)	

#### R7000 4U UPS

<b>BTU Break Down</b>	<b>BTU On Line</b>	581 BT/hr
	<b>BTU On Battery</b>	1501 BTU/hr
	<b>Battery Type</b>	12V 45W
<b>Electrical Input</b>	<b>Voltage Range</b>	160-253V at 200/208V nominal
	<b>Frequency</b>	50/60 Hz
	<b>Online Efficiency</b>	95%
<b>Electrical Output</b>	<b>REPO</b>	Remote Emergency Power-Off disables AC power to load
	<b>Online Regulation</b>	-10% to +6% of nominal voltage
	<b>On battery Regulation</b>	±5% of nominal voltage
	<b>Voltage Wave Form</b>	Sine wave
	<b>Connections</b>	See Model Matrix; divided into 2 Load Segments

### HP Rack UPS Specifications

<b>Battery</b>	<b>Output Protection</b>	Re-settable circuit protectors
	<b>Type</b>	Maintenance-free, sealed, valve-regulated lead acid (VRLA)
	<b>Extended Batteries</b>	Up to four 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>Battery String Voltage</b>	216V
	<b>Battery Type</b>	12V 45W
<b>Maximum wattage based on voltage input</b>	<b>Battery Quantity</b>	18
		200-240V: 7200VA/7200W
<b>Communications</b>	<b>Serial Ports</b>	Standard DB-9 and USB ports (ships with communication cables)
	<b>Option Cards</b>	HP UPS Network Module
	<b>LED Indicators</b>	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).
<b>Environmental and Safety</b>	<b>Operating Temperature</b>	50° to 104° F (10° to 40° C )
	<b>Storage Temperature</b>	32° to 77° F (0° to 25° C )
	<b>Transit Temperature</b>	-13° to 131° F (-25° to 55° C)
	<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>	<46db in normal operation(at 1m from surface of unit)
	<b>Safety Markings</b>	NA/JPN: UL, cUL Int'l: GS, CE, GOST
	<b>Safety Certifications</b>	UL1778, UL60950-1; CSA22.2 No.107.3, No.60-1950; EN50091-1-1; EN60950-1 IEC62040-1-1
	<b>EMC Markings</b>	NA/JPN: FCC, VCCI, ICES, CISPR Int'l: BSMI, C-Tick, CISPR
	<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>Unit Dimensions (HxWxD)</b>	<b>REPO Port</b>	Meets NEC code 645—11 intent and UL requirements
		6.75 in (17.1 cm) x 17.2 in (43.7 cm) x 28.9 in (73.4 cm)
	<b>Shipping Dimensions (H x L x W)</b>	16.10 in (40.9cm) x 23.6 in. (59.9cm) x 38.8 (98.6cm)
<b>Unit Weight</b>		165 lbs/75 kg
<b>Shipping Weight</b>		210 lbs/100 kg

### Related Options

#### UPS Network Module

The HP UPS Network 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.

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 Network 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 Network Module please see: <http://www.hp.com/go/hpunm>.

#### Extended Runtime Module (ERM)

Extended Runtime Modules increase the available runtime for the larger rack mounted UPS units to allow customers to ensure all of their applications can be gracefully shutdown in the event of a power failure.

- R/T2200 G4 & R/T3000 G4 Extended Runtime Module – 2U
- R5000 & R7000 Extended Runtime Module – 3U

#### 2U R/T UPS ERM Shipping Kit

HP 2U Rack/Tower UPS Shipping Kit

L4Q11A

**NOTE:** The optional 2U shipping kit consists of heavy duty rails, front and back CTO brackets and required mounting hardware for attaching the UPS or ERM to the rack. This kit is an option that is required if the UPS and or ERM are going to be mounted into a rack that will be shipped via transport. One of these kits is required per unit, whether UPS or ERM.

#### Extended Runtime Modules (ERM)

HP R/T2200 G4 Extended Runtime Module

J2R09A

HP R/T3000 G4 Extended Runtime Module

J2R10A

HP R/T3000 2U Extended Runtime Module

AF455A

**NOTE:** AF455A can only be used with the G2 models.

HP R5KVA and R7KVA 3U Extended Runtime Module

AF464A

**NOTE:** #0D1 will appear after the part number on the sales order if HP factory integration is indicated.

#### UPS Management

HP UPS Network Module Mini-slot Kit

AF465A



### Warranty and Care Pack

#### Warranty

When you need it, use outstanding HP support services for your whole data center environment. With HP Care Pack Services, have the security of knowing that your HP UPS will be covered at the same service level and coverage period as your HP server. HP UPSs are backed by a 3-year limited warranty, with the first year including parts and labor. Also, standard on all HP UPS units is our exclusive 30-day Battery Pre-Failure Warranty, which ensures that when customers receive notification from HP Power Manager Software that the battery may fail, the battery is replaced free of charge under the warranty. This warranty is offered worldwide.

**NOTE:** \$250,000 Computer/Load Protection Guarantee is also provided (applicable in North America only).

The HP UPS 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.

#### 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

#### Service and Support

##### HP Technology Services

HP Technology Services offers you consultants and support experts to solve your most complex infrastructure problems. We help keep your business running, boost availability and avoid downtime.

##### Protect your business beyond warranty with HP Care Pack Services

When you buy HP Options, it's also a good time to think about what level of service you may need. HP Care Pack services provide total care and support expertise with committed response choices designed to meet your IT and business need.

#### Insight Remote Support

Delivers secure remote monitoring and support for HP servers and storage, 24x7 at no additional cost. Available as part of HP Warranty, Care Pack and Service Contract offers.

#### Parts and materials

HP will provide HP-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements. Supplies and consumable parts will not be provided as part of this service; standard warranty terms and conditions apply. Parts and components that have exceeded their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual or the technical product data sheet will not be provided, repaired or replaced as part of this service.

#### Coverage

For ProLiant servers and storage systems, this service covers HP-branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as external monitors up to 22" and tower UPS products; these items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been exceeded. Coverage of the UPS battery is not included; standard warranty terms and conditions apply.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HP due to malfunction. It does not apply to any exchange of Disk or SSD/Flash Drives that have not failed. SSD/Flash Drives that are specified by HP as consumable parts and/or that have exceeded maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual or the technical data sheet are not eligible for the defective media retention service feature option.

### Warranty and Care Pack

**For more information** To learn more on services for HP ESSN Options, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: <http://www.hp.com/services/proliant> or <http://www.hp.com/services/bladesystem>

### Recommended HP Care Pack Services for optimal satisfaction with your HP product

**Recommended Services** **3-Year HP 24x7 4 hour Response, Hardware Support Onsite Service**  
Provides you with rapid remote support and if required an HP authorized representative who will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged.

**HP ProLiant Server Hardware Installation**  
Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner

**3-Year HP 6 hour Hardware Support Onsite Call-to-Repair Service**  
Provides an IT manager with a team of support specialists who will quickly begin troubleshooting the system to help return the hardware to operating condition within 6 hours of the initial service request to the HP Global Solution Center

**HP Proactive Select Service**  
Provides a flexible way to purchase HP best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months.

<b>HP Care Pack Services</b>	HP Install Universal Power Supply 3KVA to Below 6KVA Service	U4693E
	HP Install Universal Power Supply Less Than 3KVA Service	U4690E

### HP Model Matrix

#### HP T750 G4 UPS Model

Part Number	Operating Voltage Settings	Power Out (VA/Watts)	Input Connection	Output Connection
J2P85A (North America/Japan)	110V to 120V 100V- Japan	750VA/525W 750VA/500W	Attached NEMA 5-15 Plug type power cord, 16AWG	6 – NEMA 5-15 receptacles
	100V- Japan	750VA/500W		
J2P88A International model	220V/230V/240V	750VA/525W	C14 Inlet ( For detachable country specific power cord	6 – IEC C13 receptacles

#### HP T1000 G4 UPS Model

Part Number	Operating Voltage Settings	Power Out (VA/Watts)	Input Connection	Output Connection
J2P86A NA/JP	100V (Japan) to 110V 120V	1000VA/680W 1000VA/700W	Attached Nema 5-15 Plug type power cord, 16AWG	8 – Nema 5-15 receptacles
J2P89A INTL	220V/230V/240V	1000VA/700W	C14 Inlet ( For detachable country specific power cord	8 – IEC C13 receptacles

#### HP T1500 G4 UPS Model

Part Number	Operating Voltage Settings	Power Out (VA/Watts)	Input Connection	Output Connection
J2P87A NA/JP	100V Japan 110V 120V	1200VA/980W 1325VA/994W 1440VA/1080W	Attached Nema 5-15 Plug type power cord, 14AWG	8 – Nema 5-15 receptacles
J2P90A INTL	220V/230V/240V	1500VA/1050W	C14 Inlet ( For detachable country specific power cord	8 – IEC C13 receptacles

#### HP R1500 G4 UPS Models

Part Number	Operating Voltage Settings	Power Out (VA/Watts)	Input Connection	Output Connection
Low-Voltage Models				
J2Q99A NA	120V to 125V	1440/1100	NEMA 5-15P	5- Nema 5-15R
	100V	1200/900		receptacles
J2R05A JP/TWN	100V	1200/900	NEMA 5-15P	5- Nema 5-15R
	120V to 125V	1440/1100	Nema 5-15P With Taiwan approval	5-Nema 5-15R
High Voltage Model				
J2R03A INTL	220V/230V/240V	1550/1100	C14 inlet (for detachable country specific power cord	6- IEC 320-C13 receptacles
	200V to 208V	1395/990		
NOTE: Voltage is user selectable via LCD Front Display Panel				

#### HP R/T2200 G4 UPS

Part Number	Operating Voltage Settings	Power Out (VA/Watts)	Input Connection	Output Connection
J2R00A NA/JP	120V to 125V	1920/1920	Nema 5-20P 20A 3m cord	8 –Nema 5-20 Receptacles
	100V	1500/1400		

#### HP R/T3000 G4 UPS Models

Part Number	Operating Voltage Settings	Power Out (VA/Watts)	Input Connection	Output Connection
J2R01A LV NA/JP	120V <sup>1</sup> to 125V	2880/2700	L5-30P, 2.4m cord	LS1-LS4 <sup>2</sup> : 6x NEMA 5-20 outlets,
	100V	1500/1400		



### HP Model Matrix

				LS5 <sup>3</sup> : 1X NEMA L5-30 receptacle
J2R02A HV NA/JP	208V <sup>1</sup> to 240V	3000/2700	L6-20P, 2.4m cord	LS1-LS3 <sup>2</sup> : 8x IEC C13 LS5 <sup>3</sup> : 1x IEC C-19 (16A outlet)
	200V	2490/2241		
J2R04A HV INTL	208V to 240V (230V <sup>1</sup> )	3000/2700	Detachable IEC C-20 inlet plug for attaching country specific power cord	LS1-LS3 <sup>2</sup> : 8x IEC C13 LS5 <sup>3</sup> : 1x IEC C-19 (16A outlet)
	200V	2490/2241		

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

<sup>2</sup> LS1 thru LS4 = Load Segment 1 thru 4 (or less depending on unit)

<sup>3</sup> LS5 = Load Segment 5

### HP R5000 and R7000 UPS Models

Part Number	Operating Voltage Settings	Power Out (VA/Watts)	Input Connection	Output Connection
AF462A	200/208*	7200VA/7200W	Hubble CS8265C, 3m cord	LS1: 15A CB - 3 x C19 + 1 x L6-30R LS2: 15A CB - 3 x C19 + 1 x L6-30R
AF460A	200/208*, 220, 230, 240	5000/4500	L6-30P, 3m cord	LS1: 15A CB - 2 x C19 + 2 x C13 LS2: 15A CB - 2 x C19 + 2 x C13 Plus one pigtailed receptacle (LS1) 1 x L6-30R

### HP R/T2200 G4 UPS

Part Number	Operating Voltage Settings	Power Out (VA/Watts)	Input Connection	Output Connection
J2R00A NA/JP	120V to 125V	1920/1920	Nema 5-20P 20A 3m cord	8 - Nema 5-20 Receptacles
	100V	1500/1400		

### HP R/T3000 G4 UPS Models

Part Number	Operating Voltage Settings	Power Out (VA/Watts)	Input Connection	Output Connection
J2R01A LV NA/JP	120V <sup>1</sup> to 125V	2880/2700	L5-30P, 2.4m cord	LS1-LS4 <sup>2</sup> : 6x NEMA 5-20 outlets, LS5 <sup>3</sup> : 1X NEMA L5-30 receptacle
	100V	1500/1400		
J2R02A HV NA/JP	208V <sup>1</sup> to 240V	3000/2700	L6-20P, 2.4m cord	LS1-LS3 <sup>2</sup> : 8x IEC C13 LS5 <sup>3</sup> : 1x IEC C-19 (16A outlet)
	200V	2490/2241		
J2R04A HV INTL	208V to 240V (230V <sup>1</sup> )	3000/2700	Detachable IEC C-20 inlet plug for attaching country specific power cord	LS1-LS3 <sup>2</sup> : 8x IEC C13 LS5 <sup>3</sup> : 1x IEC C-19 (16A outlet)
	200V	2490/2241		

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

<sup>2</sup> LS1 thru LS4 = Load Segment 1 thru 4 (or less depending on unit)

<sup>3</sup> LS5 = Load Segment 5

### Estimated Backup Times

Tower UPS Models		
Load (Percent)	Load (Watts)	Estimated battery runtime at 100% battery charge (Minutes)
<b>T750 UPS</b>		
20%		37
50%	250W	15
80%		7
100%	500W	5
<b>T1000 UPS</b>		
20%		35
50%	335W	15
80%		7
100%	670W	5
<b>T1500 UPS</b>		
20%		41
50%	475W	15
80%		7
100%	950W	5

Rack UPS Models		
<b>R1500 G4 UPS</b>		
Load (Percent)	Load (Watts)	Minutes of Back up time
20%	200	58
50%	500	17
80%	800	8
100%	1000	5
<b>R/T2200 G4 UPS</b>		
Load (Percent)	Load (Watts)	Minutes of Back up time
20%		
50%		
80%		
100%		
<b>R/T3000 G4 UPS</b>		
Load (Percent)	Load (Watts)	Minutes of Back up time
20%		
50%		
80%		
100%		

### Estimated Backup Times

#### R7000 UPS

Load (Percent*)	With internal batteries (Minutes)	With One Extended Runtime Module (Minutes)	With Four Extended Runtime Modules (Minutes)
540W (20%)	52	98	301
1350W (50%)	13	33	103
2160W (80%)	6	18	57
2700W (100%)	4	13	39

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

#### R5000 UPS

Load (Percent*)	With internal batteries (Minutes)	With One Extended Runtime Module (Minutes)	With Four Extended Runtime Modules (Minutes)
540W (20%)	44	143	436
1350W (50%)	16	44	145
2160W (80%)	7	25	83
2700W (100%)	5.7	20	64

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

### Estimated Backup Times

Rack/Tower UPS Models					
Load (Percent*)	Estimates battery runtime	With One Extended Runtime Module (Minutes)	With Two Extended Runtime Modules (Minutes)	With Three Extended Runtime Modules (Minutes)	With Four Extended Runtime Modules (Minutes)
	(Minutes)				
R/T2200 G4 UPS					
384W 20%	45	142	256	346	448
960W 50%	15	55	99	110	144
1536W 80%	7	34	60	53	78
1920W 100%	5	26	47	36	57
R/T3000 G4 Low Voltage UPS					
540W 20%	40	125	225	349	452
1350W 50%	12	50	99	107	140
2160W 80%	6	30	60	67	88
2700W 100%	4	24	47	52	68
R/T3000 G4 High Voltage UPS					
540W 20%	45	142	256	321	417
1350W 50%	15	55	99	115	152
2160W 80%	7	34	60	72	95
2700W 100%	5	26	47	60	79

#### 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.



### Summary of Changes

Date	Version History	Action	Description of Change:
28-Sep-2015	From Version 9 to 10	Added	Added new Rack UPS Models to the Overview and Models section.  Towers G4 UPS Specifications table was added to Tower UPS Specifications.  HP R/T2200 and R/T3000 Tower Uninterruptible Power System (UPS) were added to HP Rack/Tower UPS Specifications.
		Changed	Overview and Models, Tower UPS Features, HP Rack UPS Specifications were revised.
		Removed	Tower UPS Front Panel was removed from QuickSpecs.
04-Jun-2015	From Version 8 to 9	Changed	Overview and Models, HP Tower UPS Specifications, HP Rack UPS Specifications, Related Options, HP Model Matrix, and Estimated Backup Times sections were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
30-Mar-2015	From Version 7 to 8	Changed	Changes made throughout the entire QuickSpecs.
09-Feb-2015	From Version 6 to 7	Added	Added G4 models.
		Changed	Changed name to HP Line Interactive Single Phase Uninterruptible Power Systems (UPS).  Consolidated Tower, Rack/Tower, and Rack Models into one single QuickSpecs.
08-Feb-2013	From Version 5 to 6	Changed	Changed G3 to G2 in the Intelligent Manageability section.
24-Aug-2012	From Version 4 to 5	Changed	Change made in Models section.
15-Aug-2012	From Version 3 to 4	Removed	Removed inactive links.
09-Jan-2012	From Version 2 to 3	Changed	Revised an inactive link in the Compatibility section of Standard Features.
20-Jul-2011	From Version 1 to 2	Changed	Descriptions for the Models section were updated.

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