# QuickSpecs

#### Overview

### **HPE Line Interactive Rack/Tower Uninterruptible Power System**

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

HPE line interactive, single phase Rack/Tower and Rackmount Uninterruptible Power System (UPS) solutions can protect up to 10 servers and other devices in both rackmount and desktop IT environments. Standard features include intuitive front panel displays for local management, and HPE Enhanced Battery Management (EBM) that helps to extend the service-life of your batteries. HPE Power Protector, a power management software application, combined with a UPS Network Management Module, a support option on all models, enables you to remotely monitor and manage your UPS through HPE Systems Insight Manager or via a standard web browser.

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

- Remote access through an optional 1-GbE-based network management card ensures widespread connectivity with most user networks.
- Web-based management applications, HPE Power Protector, allows you to monitor, manage, and control a single Uninterrupted Power Supply both locally and remotely.
- Outlet switching and metering at the load segment allows you to monitor, control and prioritize access to the Uninterrupted Power Supply's power
- Protects more devices by providing up to 14% more wattage compared to traditional Uninterrupted Power Supplies.
- HPE Enhanced Battery Management (EBM) technology delivers up to 50% longer battery life.
- Industry leading efficiency of up to 99% helps to ensure minimal power loss and lower power costs.
- Up to 4 extended runtime modules can be simply added to the Uninterrupted Power Supply configuration that extends your Uninterrupted Power Supply by a factor of 15x or more
- Batteries can be hot-swapped safely without every shutting down IT equipment.

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## Flexible Rackmount and Rack/Tower Models Deliver Cost-Effective Power Protection Key features

#### Ease of Use

- Next-generation LCD offers a graphical interface which provides all critical UPS information in a single screen view.
- Up to 4 extended runtime modules can be simply added to the UPS configuration that extend your UPS runtime by a factor of 15x or more.
- Batteries can be hot-swapped safely without ever shutting down IT equipment.

#### Management

- Remote access through an optional 1GbE-based network management card ensures widespread connectivity with most user networks.
- Web-based management application, HPE Power Protector, allows you to monitor, manage, and control a single UPS, locally and remotely.
- Outlet switching and metering at the load segment level allows you to monitor, control and prioritize access to UPS power.

#### **Efficiency**

- Protects more devices by providing up to 28% more wattage compared to traditional UPSs.
- Enhanced Battery Management (EBM) technology delivers up to 50% longer battery life.
- Industry leading efficiency of up to 99% helps to ensure minimal power loss and lower power costs.

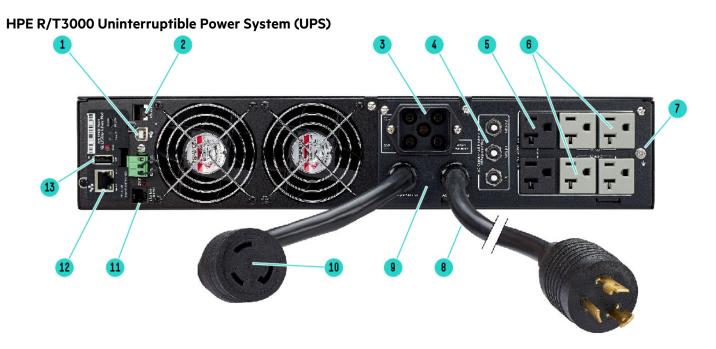
## **HPE Rack/Tower UPS models**





Rack configuration

**Tower configuration** 

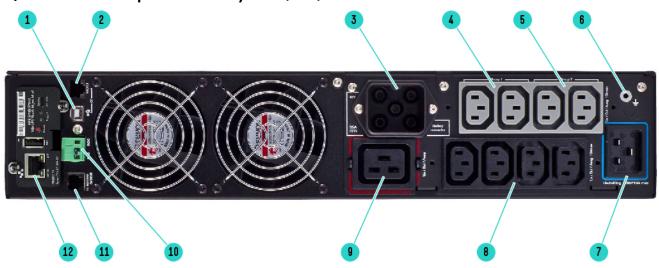


## LV NA/JPN rear panel

- 1 USB communication port
- 2 RS-232 communication port
- 3 Connector for additional battery module
- 4 Circuit breakers
- 5 Primary Group: outlets for connection of critical equipment
- 6 Four programmable outlets for connection of equipment
- 7 Ground connection

- 8 Attached input power cord for AC power source LED indicating SWF (site wiring fault) alarm (Although the
- 9 LED remains on the rear panel, this feature is disabled for low voltage models)
- 10 30A outlet (L5-30R) for connection of equipment
- Connector for automatic recognition of an additional battery module
- 12 Connector for ROO (Remote On/Off) or RPO (Remote Power Off) control
- Slot for optional communication card, shown with optional Management Card (installed)

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

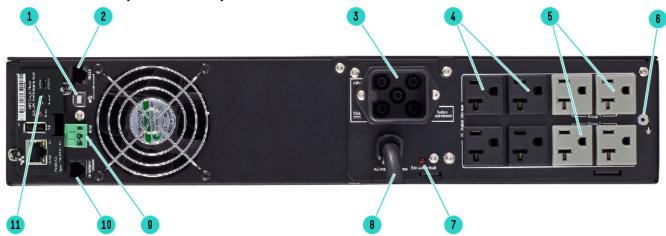


### HV NA/JP and INTL rear panel

- 1 USB communication port
- 2 RS-232 communication port
- 3 Connector for additional battery module
- Group 1: Two programmable outlets for connection of equipment
- Group 2: Two programmable outlets for connection of equipment
- 6 Ground connection

- 7 Inlet for connection to AC power source
- 8 Primary Group: 4 outlets for connection of critical equipment
- 9 16A outlet for connection of equipment
- Connector for ROO (Remote On/Off) or RPO (Remote Power Off) control
- Connector for automatic recognition of an additional battery module
- Slot for optional communication card, shown with optional HPE Management Card installed

### **HPE R/T2200 Uninterruptible Power System (UPS)**



#### NA/JPN rear panel

- 1 USB communication port
- 2 RS-232 communication port
- 3 Connector for additional battery module
- 4 Primary Group: outlets for connection of critical equipment 10
- 5 Four programmable outlets for connection of equipment
- 6 Ground connection

- LED indicating SWF (site wiring fault) alarm (Although the
- 7a LED remains on the rear panel, this feature is disabled for low voltage models)
- 8 Attached input power cord for AC power source
- Off) control Connector for ROO (Remote On/Off) or RPO (Remote Power Off) control
- Connector for automatic recognition of an additional battery module
- Slot for optional communication card, shown with optional Management Card installed

#### What's in the box:

- HPE R/T2200 UPS or R/T3000 UPS
- Rail kit and mounting hardware
- Bezel components
- Output power jump cables (2) for HV North America and International models
- RS-232 communication cable (1)
- USB cable (1)
- Cable locking device for HV North America and International models
- Tower stands
- Documentation

#### **HPE R1500 G5 UPS Models**



#### What's in the box

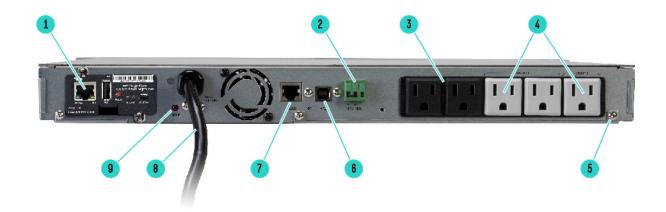
- HPE R1500 UPS
- Rail kit and mounting hardware
- Bezel components
- (2) Output power jump cables (International model only)
- (1) RS-232 communication cable
- (1)USB cable
- Cable locking device (International model only)
- Documentation

The R1500 G5 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.

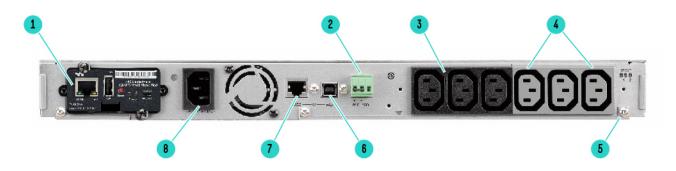




#### PE R1500 G5 NA and JP/TWN UPS

- Slot for optional communication card; shown with Network Management Card installed
- 2. Connector for ROO(Remote On/Off) or RPO (Remote Power Off) Control
- 3. Primary Group: Outlets for connection of critical equipment
- 4. Programmable outlets for equipment connection
- 5. Ground screw

- 6. RS-232 Communication Port
- 7. USB Communication Port
- 8. Attached 6ft input power cord NEMA 5-15P for AC power source
- 9. LED indicating site wiring fault alarm



#### HPE R1500 G5 International UPS

- Slot for optional communication card; shown with Network Management Card installed
- Connector for ROO (Remote On/Off) or RPO (Remote Power 6 Off) control
- 3. Primary Group: Outlets for connection of equipment
- 4. Programmable outlets for equipment connection
- 5. Ground screw
- RS-232 communication port
- 7. USB communication port
- 8. Input power connection (IEC -320-C14) for powering unit to AC power source

#### Standard Features

#### **HPE Power Management**

#### **HPE Power Protector Software**

HPE Power Protector is a web-based application that enables administrators to manage an HPE UPS from a browser-based management console. Administrators can monitor, manage, and control a single UPS locally and remotely. A familiar browser interface provides secure access to the UPS Administrator Software and UPS Client Software from anywhere on the network. Administrators may configure power failure settings and define UPS load segments for maximum uptime of critical servers. The UPS can also be configured to extend runtimes for critical devices during utility power failures. For most UPSs, the receptacles on the rear panel are divided into one or more groups, called load segments, which can be controlled independently. By shutting down a load segment that is connected to less critical equipment, the runtime for more critical equipment is extended, providing additional protection.

- UPS power management via HPE Power Protector available via free download from HPE.com.
- Allows for local or network-based UPS monitoring, status updates, and control over shutdown communications
- Download to other servers or IT devices to create "clients" that can be configured for graceful shut down
- Access the HPE Power Protector user interface via a USB or serial connected server (proxy server) or through the optional 1GbE Network Management Card

## Increase stability and security in your data center

HPE Power Protector gives you the ability to establish power failure policies and automatically respond 24×7 to power faults or security risks without IT administrators present. Prioritize shutdowns in the event of a power failure to ensure that your data and hardware are fully protected. Delay restart based on defined load segments after a shutdown to sequence the start-up of system components and perform UPS diagnostics to ensure the availability of adequate battery backup times.

### Simplify management of UPS functions

Simple, effective management of environments, one UPS at a time. For users wanting ease of use, this is the tool to use. From load segmentation to power down prioritization and alert management, this tool offers everything needed from a single console. It even offers remote access via a web browser with secure SSL authentication. Simple, easy to read status "gauges" offer monitoring at a glance.

See HPE Power Protector QuickSpecs for more information. .

### **Supported Operating Systems**

Similar to hardware support, HPE Power Protector is designed to support a wide array of operating systems, spanning Microsoft Windows, Linux, UNIX, and virtual platforms.

## **Standard Features**

#### **UPS Network Management Module**

The HPE UPS Network Module enables you to monitor and manage power environments through comprehensive control of HPE UPSs. The HPE 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 HPE 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 HPE 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 any time via a standard web browser.

Notes: For more information on the UPS Network Module please see:

http://www.hpe.com/info/rackandpower.

#### Warranty

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

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

The HPE UPS is covered by a three year warranty, with the first year including parts and labor. Also, standard on all HPE UPS units, is our exclusive Battery Pre-Failure Warning, which extends the advantage of a HPE 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 HPE Power Management Software that the battery may fail, the battery is replaced free of charge under the warranty.

**Notes:** \$250,000 Computer/Load Protection Guarantee is also provided in North America, in addition to the HPE 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

#### **HPE Technology Services**

HPE 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 HPE Pointnext operational services

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

#### Parts and materials

Hewlett Packard Enterprise will provide HPE-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.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

## **Configuration Information**

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

Q1L84A
Q1L85A
Q1L86A
Q1L87A

#### **Rackmount UPS Models**

HPE R1500 Gen5 NA UPS	Q1L88A
HPE R1500 Gen5 JP/TW UPS	Q1L89A
HPE R1500 Gen5 INTL UPS	Q1L90A

### **UPS Network Management Module**

HPE Single Phase 1Gb UPS Network Management Module Q1C17A

#### **Extended Runtime Module (ERM)**

HPE 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.

HPE R/T2200 G4 Extended Runtime Module	J2R09A
HPE R/T3000 G4 Extended Runtime Module	J2R10A

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

HPE 2U Rack/Tower UPS Shipping Kit

L4Q11A

**Notes:** 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.

### **HPE Pointnext operational services**

HPE Install Universal Power Supply 3KVA to Below 6KVA Service	U4693E
HPE Install Universal Power Supply Less Than 3KVA Service	U4690E

## Service and Support

### Coverage

For ProLiant servers and storage systems, this service covers HPE-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 HPE 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 HPE 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.

#### For more information

To learn more on services for HPE ESSN Options, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit: <a href="https://www.hpe.com/us/en/services/operational.html">https://www.hpe.com/us/en/services/operational.html</a>

#### **Recommended Services**

Recommended HPE Pointnext operational services for optimal satisfaction with your HPE product

### 3-Year HPE 24x7 4 hour Response, Hardware Support Onsite Service

Provides you with rapid remote support and if required a Hewlett Packard Enterprise 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.

#### **HPE ProLiant Server Hardware Installation**

Provides for the basic hardware installation of Hewlett Packard Enterprise 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 HPE 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 HPE Global Solution Center

#### **HPE Proactive Select Service**

Provides a flexible way to purchase HPE 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.

## Service and Support

### Environment-friendly Products and Approach-nd-of-life Management and Recycling

Hewlett Packard Enterprise offers end-of-life **product return, trade-in, and recycling programs,** in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE Directive (2012/19/EU) 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 Enterprise web site**. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Operating s	ystem HPPP	(Client &	Admin)						
		Service Platform HPPP		HPNMC					
		Pack		Admin	Client	NMC			
Microsoft Wi	Microsoft Windows								
Windows Server 2016	Standard, Data Center, Core			Tested	Tested	Tested			
Windows Server 2012	Standard, Data Center, Core		x64	Supported	Supported	Supported			
Windows Server 2012 R2	Standard, Data Center, Core		x86, x64	Tested	Tested	Tested			
Windows Server 2008 R2	Standard, Data Center, Core	SP1	x64, IA64	Tested	Tested	Tested			
Windows Server 2008	Standard, Data Center, Core	SP2	x86, x64, IA64	Supported	Supported	Supported			
Windows Server 2003 R2	Standard, Data Center, Core			Not supported	Not supported	Not supported			
Windows 10	Enterprise, Pro		x64	Tested	Tested	Tested			
Windows 8.1	Enterprise, Pro		x64	Tested	Tested	Tested			
Windows 8	Enterprise, Pro		x86, x64	Supported	Supported	Supported			
Windows 7	Professional, Ultimate, Standard	SP1	x86, x64	Tested	Tested	Tested			
Windows XP	Professional	SP3		Not supported	Not supported	Not supported			
Linux									
Red Hat Enterprise	7.3		x86, x64	Tested	Tested	Tested			
Linux	7.2		x86, x64	Tested	Tested	Tested			
	6.7		x86, x64	Tested	Tested	Tested			
	6.6		x86, x64	Supported	Supported	Supported			
	5.11		x86, x64	Tested	Tested	Tested			
	5.10		x86, x64	Supported	Supported	Supported			
	5.7		x86, x64	Not supported	Not supported	Not supported			

Operating sys	Operating system HPPP (Client & Admin)							
	S	Service	Platform	HPPP		НРИМС		
		Pack		Admin	Client	NMC		
SUSE Linux Enterprise	Fedora core 15		x86, x64	Not supported	Not supported	Not supported		
Server/Nove I	Fedora core 14		x86, x64	Not supported	Not supported	Not supported		
SUSE Linux Enterprise	12	SP2	x86, x64, IA64	Tested	Tested	Tested		
Server/Nove I	11	SP3	x86, x64, IA64	Tested	Tested	Tested		
	OpenSuse 13.0		x86, x64	Not supported	Not supported	Not supported		
	OpenSuse 12.3		x86, x64	Not supported	Not supported	Not supported		
Virtual enviro	nments							
VMware	ESXi 6.5		X86, IA64	N/A	Tested	Tested		
	ESXi 6.0	U1	X86, IA64	N/A	Tested	Tested		
	ESXi 5.5	U3	X86, IA64	N/A	Tested	Tested		
	ESXi 5.1 (pay version only)	U1		N/A	Supported	Supported		
	ESXi 5.0 (pay version only)	U1		N/A	Supported	Supported		
	ESX 4.1 (pay version only)	U1		N/A	Not supported	Not supported		
	ESXi 4.1 (pay version only)	U1		N/A	Not supported	Not supported		
	ESX 4.0 (pay version only)	U1		N/A	Not supported	Not supported		
	ESXi 4.0 (pay version only)	U1		N/A	Not supported	Not supported		

## Rack/Tower models

HPE R/T2200 G5 UPS							
Part Number	Operating Voltage		Power Out (VA/Watts)	Input Connection	Output Connection		
Q1L84A NA/JP	1L84A NA/JP 120V to 125V	120V	1920/1920	NEMA 5-20P 20A, 3m cord	(8) –NEMA 5-20 Receptacles, (4) Primary Group		
	100V		1500/1400		(2) Load Group 1 (2) Load Group 2		

HPE R/T3000 G5	UPS Models				
Part Number	Operating Voltage Settings		Power Out (VA/Watts)	Input Connection	Output Connection
Q1L85A LV NA/JP	120V <sup>1</sup> to 125V	120V	2880/2700	L5-30P, 2.4m cord	(6) NEMA 5-20R (1) NEMA L5-30 which includes (2) Primary Group 5-20R and (1) L5-30, (2) Load Group 1 5-20R and (2) Load Group 2 5-20R
	100V		2490/2250		
Q1L86A HV NA/JP 208V <sup>1</sup>	208V <sup>1</sup>	200V	3000/2700	L6-20P, 2.4m cord	(8) IEC C13 (1) IEC C-19 which includes (4) Primary Group IEC C13 and (1) IEC C19, (2) Load Group 1 IEC C13 and (2) Load Group 2 IEC C13
	200V		2490/2241		
Q1L87A HV INTL	208V to 240V	230V	3000/2700	Detachable IEC C- 20 inlet plug for attaching country	(1) IEC C-19 which includes (4) Primary Group IEC C13
	200V		2490/2241	specific power cord	and (1) IEC C19, (2) Load Group 1 IEC C13 and (2) Load Group 2 IEC C13

Operating system HPPP (Client & Admin)						
	•	Service	Platform	HPPP		HPNMC
		Pack		Admin	Client	NMC
Microsoft	Windows Hyper-V Server 2012	R2		N/A	Supported	Supported
	Windows Hyper-V Server 2008	R2	X86, IA64	N/A	Supported	Supported
Xen	Citrix XenServer 6.0			N/A	Supported	Supported
	Citrix XenServer 5.6		IA64	N/A	Supported	Supported
	OpenSource Xen 2.6 on RHEL 5			Not supported	Not supported	Not supported
	OpenSource Xen 3.2 on Debian 5			Not supported	Not supported	Not supported
KVM	KVM 17 Linux 2.6.21 kernel			Not supported	Not supported	Not supported

**Notes:** For x86-64 and IA-64 architectures and on Microsoft Windows systems and HP-UX for IA-64, HPE Power Protector will work in 32-bit compatibility mode. This implies that no native ports for these architectures will be made for these systems; the only exception is for components that strictly require native ports, such as device drivers.

R/T2200 and R/T30	000 UPS Specifications	
Electrical Input	Voltage Range	100V nominal = 80V - 128V 120V nominal = 89V - 159V 208V nominal = 160V - 163V 230V nominal = 160V - 294V See Model Matrix for nominal and user selectable voltage settings.
	Frequency	50/60 Hz
	Online Efficiency	94%
Electrical Output	On battery Regulation	±5% of nominal voltage
	Online Regulation	-10% to +6% of nominal voltage
	Voltage Wave Form	Sine wave
	Connections	See Model Selection Matrix; divided into 2 Load Segments
	Output protection	Firmware overload sensing and control
Battery	Туре	Maintenance-free, sealed, valve-regulated lead acid (VRLA)
	Extended Batteries	Up to four ERMs can be supported; recommendation is up to 2
	Backup Time	See Backup Times Chart
	Recharge Time	<3 hours to 90% usable capacity; <24 hours for complete recharge
	Voltage	R/T2200 = 48V R/T3000 = 72V
Communications	Serial Ports	Standard DB-9 and USB ports (ships with communication cables)
	Option Slot	(1) (For optional Communication Card)
	Option Cards	HPE UPS Network Management Module (sold separately)
	LCD Interface	LED Display integrated into front panel
	Management Software	Power Management including HPE Power Protector software. See HPE Power Protector <b>QuickSpecs</b> for more information.

R/T2200 and R/T3000 U	JPS Specifications	
Environmental and Safety	Operating Temperature	0°C to 40°C (32°F to 104°F); Long term use at higher temperature will reduce battery life 25°C (77°F)
	Non-operating Temperature	-15°C to 50°C (5°F to 122°F)
	Operating Humidity	0% to 90% (non-condensing)
	Storage Humidity	0% to 90%
	Operating Altitude	Up to 6,562 ft (2000 m) above sea level
	Audible Noise	<40dB in normal operation. <45dBA on battery operation
	Safety Markings	UL/cUL CE, TUV, C-tick, CES, EAC, VCCI, GS, KC, EK, BSMI, TIS, BIS
	Safety Certifications	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
	EMC Markings	FCC-A; CISPR 22; VCCI A; CE, BSMI, C-TICK
	Emissions	FCC CFR 47, Part 15 Class A, EN50091-2
	Immunity	EN 55024; EN 50091-2 consisting of IEC 61000-4-2 thru IEC 61000-4-6; IEC 61000-4-11
	Surge Suppression	Conforms to IEEE 587B and ANSI C62.41
	RPO/ROO Port	The Normally Closed (NC) RPO shuts off power to all UPS outlets when opened. The UPS must be manually restarted once the terminals are closed again. There is a preinstalled jumper in the RPC terminals.  The Normally Open (NO) ROO initiates a UPS Power On function when closed. Opening the terminals again will shut off the UPS.
R/T2200 G5 Weights and	Unit Dimensions (LxWxH)	20.55 x 17.36 x 3.39 inches / 522 x 441 x 86.2 mm
Dimensions	Shipping Dimensions(LxWxH)	36.26 x 23.23 x 11.02 inches / 921 x 590 x 280 mm
	Unit Weight	65.28 lbs/29.61 kg
	Shipping Weight	83.62 lbs / 37.93 kg
R/T3000 G5 Weights and	Unit Dimensions (LxWxH)	25.47 x 17.4 x 3.4 in / 647 x 441x 86.2 mm
Dimensions	Shipping Dimensions(LxWxH)	36.26 x 23.23 x 11.02 inches / 921 x 590 x 280 mm
	Unit Weight	87.17 lbs / 39.54 kg
	Shipping Weight	107.48 lbs / 48.75 kg

PE R1500 G5 UPS		
Electrical Input	Voltage Range	± 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
	Frequency	50/60 Hz ± 5Hz (auto sensing at default voltage )
	Online Efficiency	92%
Electrical Output	Online Regulation	-10% to +6% of nominal voltage*
	On battery Regulation	-10% / + 6% of nominal voltage
	Voltage Wave Form	Sine wave
	Connections	See Model Matrix; divided into 3 Groups
	Output Protection	Firmware overload sensing and control
Battery	Туре	Maintenance-free, sealed, valve-regulated lead acid (VRLA)
	Backup Time	See Backup Times Chart
	Recharge Time	<3 hours to 90% usable capacity; <24 hours for complete recharge
	Voltage	36V Battery String
Communications	Ports	Standard DB-9 port (Kit ships with cable for communication ) USB
		port (Kit ships with cable for communication)
	Option Slot	(1) ( reserved for Optional Network Management Module)
	Option Cards	HPE UPS Network Management Module (sold separately)
	LCD Indicators	LED display integrated into the front panel
	Management Software	Power Management including HPE Power Protector software. See
		HPE Power Protector <b>QuickSpecs</b> for more information.
<u> </u>	Operating Temperature	32° to 104° F (0° to 40° C) ( with battery)
	Non-operating Temperature	-15° to 1122° F (-26° to 50° C)
	Operating Humidity	0% to 90% (non-condensing)
	Storage Humidity	0% to 90% (non-condensing)
	Operating Altitude	up to 2000 meters above sea level
	Audible Noise	<ul><li>&lt;40db (at 1m from surface of unit) &lt;45dBA on battery operation</li></ul>
	Safety Markings	UL/cUL CE, TUV, C-tick, CES, EAC, VCCI, GS, KC, EK, BSMI, TIS, BIS
	Safety Certifications	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
	EMC Markings	FCC-BCISPR 22; VCCI B; CE, BSMI, C-TICK
	Emissions	FCC CFR 47, Part 15 Class A, EN50091-2
	Immunity	EN 55024; EN 50091-2 consisting of IEC 61000-4-2 thru IEC
		61000-4-6 ; IEC 61000-4-11
	Surge Suppression	Conforms to IEEE 587B and ANSI C62.41
	RPO/ROO Port	The Normally Closed (NC) RPO shuts off power to all UPS outlets
		when opened. The UPS must be manually restarted once the
		terminals are closed again. There is a preinstalled jumper in the
		RPO terminals.
		The Normally Open (NO) ROO initiates a UPS Power On function when closed. Opening the terminals again will shut off the UPS.
Unit Dimensions (LxWxH)	21.8x 17.2x 1.69 in (554 x 438 :	·
Shipping Dimensions	30.71x 22.8 x6.1 in (780 x 580	
Unit Weight	39.06 lbs (19.72 kg)	A 100 IIIII)
	-	
Shipping Weight	54.45 lbs (24.7 kg)	

## Rack model

	perating	Default Voltage	Power Out	Input	Output Connection		
	oltage Settings	Setting	(VA/Watts)	Connection	output connection		
Q1L88A NA 12	20V to 125V	120V	1440/1100	NEMA 5-15P	(5) IEC C13 which includes:		
10	00V		1200/900		<ul><li>(1) Primary Group 2x IEC C13;</li><li>(2) Load Groups: Group 1 2x IEC C13 and Group 2 1x IEC C13</li></ul>		
Q1L89A JP/TWN 10	00V	100V	1200/900	NEMA 5-15P With Taiwan approval	(5) IEC C13 which includes: (1) Primary Group 2x IEC C13; (2) Load Groups: Group 1 2x IEC		
12	20V <sup>1</sup> to 125V		1440/1100		C13 and Group 2 1x IEC C13		
Q1L90A INTL 22	20V/230V/240V	230V	1550/1100	C14 inlet for attaching country specific power cord	(6) IEC C13 which includes: (1) Primary Group 3x IEC C13; (2) Load Groups: Group 1 2x IEC		
20	00V to 208V		1395/990		C13 and Group 2 1x IEC C13		

## Estimated Runtime with Extended Runtime Module (ERM)

Battery runtimes are approximate and may vary with equipment, configuration, battery age, temperature, etc.

R/T2200 G5 UPS							
Power		Estimated Runtime (min)					
Load %	Watts	Internal Batteries	1 ERM	2 ERMs	3 ERMs	4 ERMs	
10	191.1	80.1	286.9	491.0	725.3	898.3	
20	382.2	30.5	122.9	217.7	311.0	406.2	
30	573.3	17.3	74.9	135.3	189.5	255.4	
40	764.4	11.6	52.7	96.5	133.3	183.7	
50	955.5	8.5	40.1	74.3	101.5	142.3	
60	1146.6	6.6	32.1	60.0	81.2	115.5	
70	1337.7	5.3	26.6	50.1	67.3	96.8	
80	1528.8	4.4	22.6	42.8	57.2	83.1	
90	1719.9	3.7	19.5	37.3	49.5	72.6	
100	1911	3.2	17.2	32.9	43.5	64.3	

Power		Estimated Runtime (min)					
Load %	Watts	Internal Batteries	1 ERM	2 ERMs	3 ERMs	4 ERMs	
10	270	61.4	281.0	474.6	665.5	859.7	
20	540	27.7	126.5	219.4	311.4	404.5	
30	810	17.4	79.3	139.7	199.8	260.2	
40	1080	12.5	57.0	101.4	145.8	190.3	
50	1350	9.6	44.1	79.1	114.1	149.3	
60	1620	7.8	35.7	64.6	93.5	122.4	
70	1890	6.5	29.9	54.4	79.0	103.5	
80	2160	5.6	25.7	46.9	68.2	89.5	
90	2430	4.9	22.4	41.1	60.0	78.8	
100	2700	4.3	19.8	36.6	53.4	70.3	

R/T3000 G5 UPS High Voltage								
Power			Estimated Runtime (min)					
Load %	Watts	Internal Batteries	1 ERM	2 ERMS	3 ERMs	4 ERMs		
10	270	83.3	259.1	456.9	655.5	853.5		
20	540	31.4	121.8	219.2	316.8	414.0		
30	810	17.7	78.3	142.7	207.1	271.1		
40	1080	11.8	57.2	105.2	153.2	200.8		
50	1350	8.6	44.9	83.0	121.2	159.1		
60	1620	6.7	36.8	68.4	100.1	131.5		
70	1890	5.4	31.1	58.1	85.2	112.0		
80	2160	4.4	26.9	50.5	74.0	97.4		
90	2430	3.8	23.6	44.5	65.4	86.1		
100	2700	3.2	21.1	39.8	58.6	77.2		

R1500 G5 UPS Estimated Runtime				
Load %	Watts	Estimated Runtime (min)		
10	109	97		
20	219	39		
30	328	23		
40	438	16		
50	547	12		
60	656	10		
70	766	8		
80	875	7		
90	985	6		
100	1094	5		

## **Summary of Changes**

Date	Version History	Action	Description of Change
15-Jun-2020	Version 5	Changed	Battery Information was updated
06-May-2019	Version 4	Changed	Models Section was updated
01-Oct-2018	Version 3	Changed	Overview, Models and Related Options were updated.
02-Jul-2018	Version 2	Changed	Models Section was updated
02-Apr-2018	Version 1	New	New QuickSpecs

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a00041730enw - 16158 - Worldwide - V5 - 15-June-2020