

# HP Rackmountable Uninterruptible Power Systems

Family data sheet



HP Rackmountable Uninterruptible Power Systems (UPSs) protect your computer equipment and critical data against damage due to inconsistent and fluctuating power.

HP Rackmountable UPSs, designed for dense data center environments, offer industry-leading power density (watts/U-space). They provide more true power (measured in watts) in smaller form factors (measured in rack U-space), and more performance while saving valuable rack space for your server and storage equipment. The all-new R/T3000 G2 packs 3000 watts in just 2U. The R12000/3 has an amazing 2000 watts per U (12000 watts total in 6U), while providing unmatched power efficiency. Remote management is included with all HP UPSs at no additional charge and optional Extended Runtime Modules (ERMs) increase battery runtimes for extended outages.

Many studies and experiences show that power outages and disturbances account for a significant number of server failures and system downtime. You never know when a power outage can happen and to prevent one from happening you should have an HP UPS supporting all your HP server and storage equipment.

## Key benefits

### More power in less space

HP Rackmountable UPSs pack a large amount of power in one of the smallest form factors allowing you more rack space for server and storage equipment. Industry-leading power efficiency saves power as well as cooling costs in any environment.

### Enhanced battery management

HP UPSs incorporate enhanced battery management technology; an exclusive technology that can double

battery life, improve battery recharge time, and it also provides a 30-day advance notice before the end of battery life.

### System flexibility

With ERM, you can extend your overall runtime to continue working even during prolonged power outages.

### Load segment control

- Load segment control through receptacle groups gives you the flexibility to configure scheduled startups and shutdowns of network equipment to extend the runtime of critical devices. Note that when used with option management card, the UPS management software cannot do scheduled shutdowns by itself.
- All HP Rackmountable UPSs are equipped with hot-swappable batteries, which allow you to replace batteries without powering down the connected equipment. For superior high availability, you can hot-swap the batteries on all HP Rackmountable UPSs.

### Proven warranty

HP UPSs are backed by a limited three-year warranty, HP battery prefailure warranty, and a \$250,000 USD load protection guarantee.<sup>1</sup>

The UPS management software, HP Power Protector, is available as a free download for the R1500 G3 and the R/T3000 G2 with an optional HP UPS Network Module available for additional management features and operating systems support. The HP UPS Network Module is included with the R5000 and R7000 UPS at no charge while the R8000/3 and R12000/3 include the UPS Management module.

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<sup>1</sup>Certain restrictions and exclusions apply, available in North America only.

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## Technical specifications

### Electrical input and output

Frequency	50/60 Hz, $\pm 5$ Hz (auto sensing)
Online regulation	-10% to + 6% of nominal
On battery regulation	$\pm 5\%$ of nominal voltage

### Battery

Type	Maintenance-free, sealed, valve-regulated lead acid (VRLA) recharge
Time	<3 hours to 80% usable capacity; <24 hours for complete recharge

### Environment and safety

Operating temperature	50°F to 104°F/10°C to 40°C
Operating humidity	20% to 80% (noncondensing)
Operating altitude	Up to 10,000 ft/3,048 m above sea level
Emissions	Up to 10,000 ft/3,048 m above sea level
Immunity	IEC 801-2, IEC 801-3, IEC 801-4, and IEC 801-5
Surge suppression	Conforms to IEEE 587B and ANSI C62.41
REPO port	Meets NEC Code 645-11 intent and UL requirements

### Backup times<sup>2</sup> (in minutes)

	Load, percent runtime	Load, watts	Estimated battery at 100% battery charge	Runtime with one ERM	Runtime with two ERMs
<b>R1500 G3</b>	20%	200	58 minutes	N/A	N/A
	50%	500	17 minutes		
	80%	800	8 minutes		
	100%	1000	5 minutes		
<b>R/T3000 G2 LV</b>	20%	540	45 minutes	142 minutes	256 minutes
	50%	1350	15 minutes	55 minutes	99 minutes
	80%	2160	7 minutes	34 minutes	60 minutes
	100%	2700	5 minutes	26 minutes	46 minutes
<b>R/T3000 G2 HV</b>	20%	600	40 minutes	125 minutes	225 minutes
	50%	1500	12 minutes	50 minutes	99 minutes
	80%	2400	6 minutes	30 minutes	60 minutes
	100%	3000	4 minutes	24 minutes	40 minutes
<b>R5000</b>	20%	900	59 minutes	169 minutes	303 minutes
	50%	2250	16 minutes	44 minutes	90 minutes
	80%	3600	7 minutes	25 minutes	50 minutes
	100%	4500	5.7 minutes	20 minutes	40 minutes
<b>R7000 NA</b>	20%	1440	52 minutes	98 minutes	180 minutes
	50%	3600	13 minutes	33 minutes	63 minutes
	80%	5760	6 minutes	18 minutes	36 minutes
	100%	7200	4 minutes	13 minutes	26 minutes
<b>R7000 INTL</b>	20%	1300	62 minutes	117 Minutes	200 minutes
	50%	3250	15 minutes	37 minutes	70 minutes
	80%	5200	7 minutes	21 minutes	40 minutes
	100%	6500	5 minutes	15 minutes	30 minutes
<b>R8000/3<sup>3</sup></b>	20%	1600	55 minutes	118 minutes	183 minutes
	50%	4000	23 minutes	46 minutes	69 minutes
	80%	6400	12 minutes	27 minutes	41 minutes
	100%	8000	9 minutes	21 minutes	32 minutes
<b>R12000/3<sup>3</sup></b>	20%	2400	37 minutes	78 minutes	119 minutes
	50%	6000	13 minutes	30 minutes	44 minutes
	80%	9600	6 minutes	17 minutes	26 minutes
	100%	12000	5 minutes	12 minutes	20 minutes

<sup>2</sup> Backup times are estimated for typical applications. Actual performance will depend on environmental conditions, ambient temperature, battery age, and other factors. Technical information in this document is subject to change without notice.

<sup>3</sup> The HP R8000/3 and R12000/3 can support up to four ERMs.

## Ordering information

Model	Part number	Nominal voltage (VAC)	Power out (VA/watts)	Input connection	Output connection/load segments	U Height	Communication port	Option cards
Low-voltage models								
R1500 G3, NA	AF469A	120	1440/1000	NEMA 5-15P	4x NEMA 5-15R; 2 switched load segments	1U	Serial, USB	UPS Network Module
R1500 G3, JPN	AF470A	100	1200/1000	NEMA 5-15P	4x NEMA 5-15R; 2 switched load segments	1U	Serial, USB	UPS Network Module
R/T3000 G2, NA/JPN low voltage	AF466A	120	2880/2700	NEMA L5-30P	1x NEMA L5-30R; 4x 5-20R; 2 switched load segments	2U	Serial, USB	UPS Network Module
High-voltage models								
R1500 G3, INTL	AF471A	230	1500/1000	IEC-320-C14	4x IEC-320-C13 2 switched load segments	1U	Serial, USB	UPS Network Module
R/T3000 G2, NA/JPN high	AF467A	208	3300/3000	NEMA L6-20P	1x NEMA L6-20R; 6x IEC-320-C13, 2x IEC-320-C20, 2 switched load segments	2U	Serial, USB	UPS Network Module
R/T3000 G2, INTL	AF468A	220-240	3300/3000	Detachable inlet cord	6x IEC-320-C13, 2x IEC-320-C19, 2 switched load segments	2U	Serial, USB	UPS Network Module
Three-phase models								
R8000/3, NA	AF431A	208 V 3 Phase	8000/8000	NEMA L21-30	1x NEMA L15-30R	6U	UPS Management Module	N/A
R8000/3, INTL	AF432A	400 V 3 Phase	8000/8000	IEC309 516P6	1x IEC309 516P6	6U	UPS Management Module	N/A
R12000/3, NA	AF429A	208 V 3 Phase	12000/12000	IEC309 560P9	2x NEMA L15-30R	6U	UPS Management Module	N/A
R12000/3, INTL	AF430A	400 V 3 Phase	12000/12000	IEC309 532P6	3x IEC309 516P6	6U	UPS Management Module	N/A
Single-phase models								
R5000, NA	AF460A	208 V	5000/4500	NEMA L6-30P	4x IEC320 C13, 4x IEC320 C19, 1x NEMA L630R	3U	UPS Network Module included	
R5000, INTL	AF461A	230 V	5000/4500	IEC309 332P6	4x IEC320 C13, 4x IEC320 C19, 1x NEMA IEC309 332C6	3U	UPS Network Module included	
R7000, NA	AF462A	208 V	7200/7200	Hubbell CS8263C	6x IEC320 C19, 2x L6-30R	4U	UPS Network Module included	
R7000, INTL	AF463A	230 V	6500/6500	IEC309 332P6	6x IEC320 C19, 2x IEC309 332C6	4U	UPS Network Module included	
Optional ERMs								
R/T3000, ERM	AF455A					2U		
R5000/R7000, ERM	AF417A					3U		
R8000/3, R12000/3 ERM	AF434A					3U		
UPS option cards								
UPS Network Module	AF465A	For R1500 G3 and R/T3000 G2 UPSs (included in R5000 and R7000 UPSs)						
UPS Management Module	AF401A	Included in R8000/3 and R12000/3 UPSs						

## Right-size your power backup

Do you need to find the correct HP UPS for your system? Just visit [www.upssizer.com](http://www.upssizer.com) and select the right HP Tower and Rackmountable UPS in two easy steps:

1. Determine the group of devices you need to protect.
2. Specify your UPS requirements such as input voltage, required backup time, and provisions for future growth.

The HP UPS sizer selects the most suitable UPS solution for your needs and shows the technical specifications of the recommended UPS.

## HP Factory Express

HP Factory Express provides customization and deployment services along with your storage and server purchases. You can customize hardware to your exact specifications in the factory—helping speedy deployment. Visit: [www.hp.com/go/factoryexpress](http://www.hp.com/go/factoryexpress)

## Customer technical training

We offer a variety of training courses on storage software, networking, archiving, and disk storage systems. Our classes are available in many delivery modalities—from traditional instructor-led courses at one of our 80 training centers worldwide to online or onsite training. Visit: [www.hp.com/learn/storage](http://www.hp.com/learn/storage)

## HP Financial Services

HP Financial Services provides innovative financing and financial asset management programs to help you acquire, manage, and ultimately retire your HP solutions. Visit: [www.hp.com/go/hpfinancialservices](http://www.hp.com/go/hpfinancialservices)

## HP Services

### When technology works, business works.

When you buy HP ProLiant options for your HP ProLiant servers, you should also think about services.

### Recommended HP Care Pack Services

- 3-Year HP 24x7 4-hour Response, Hardware Support Onsite Service
- HP ProLiant Server Hardware Installation Service

### Related HP Care Pack Services

- 3-Year HP 6-hour Hardware Support Onsite Call-to-Repair Service
- HP Proactive Select Service

All support services come with HP Insight Remote Support, available at no additional cost, delivering remote monitoring, diagnosis, and problem resolution.

**Coverage:** For ProLiant servers, care pack services provide cover for 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 are covered at the same service level and for the same coverage period as the server unless either the maximum supported lifetime or the maximum or both usage limitation has been exceeded. Coverage of UPS battery is not included; standard warranty terms and conditions apply.

For more information, visit  
[www.hp.com/services/proliant](http://www.hp.com/services/proliant)  
[www.hp.com/services/bladeSystem](http://www.hp.com/services/bladeSystem).

Shield your business-critical data from power outages; visit [www.hp.com/products/ups](http://www.hp.com/products/ups).



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