RT1.5kVA and RT3kVA 2U Rack or Tower Uninterruptible Power Supplies-G2

Product Guide

The RT1.5kVA and RT3kVA 2U Rack or Tower Uninterruptible Power Supply-G2 offerings provide extended power protection with increased efficiency and simplified power management to safeguard the high-availability of Lenovo server environments.

The 2U Rack or Tower UPS-G2 units can be installed in a data center rack cabinet or can be used as tower UPS units in office and distributed IT environments where extended power protection is required.

The 2U Rack UPS-G2 unit with the Extended Battery Module-G2 is shown in Figure 1.

Figure 1. 2U Rack UPS-G2 unit (top) with Extended Battery Module-G2 (bottom)

Did you know?

2U Rack or Tower UPS-G2 units feature Advanced Battery Management (ABM) technology that uses a unique, three-stage charging technique that significantly extends battery service life by up to 50% and optimizes recharge time compared to traditional charging methods.

2U Rack or Tower UPS-G2 units can enhance system availability with individual receptacle groups or load segments that can be programmed and controlled, which allows mission-critical devices to be prioritized during shutdown to preserve battery run time if there is a prolonged power outage.

2U Rack or Tower UPS-G2 units meter energy consumption right down to the managed outlet groups. kWh values can be monitored using the LCD or Intelligent Power Software. Intelligent Power Software seamlessly integrates with leading virtualization environments and cloud orchestration tools.

Ordering information

The following tables show the orderable feature code, CTO, LFO and part number codes for the RT1.5kVA and RT3kVA UPS-G2 models.

Table 1. Ordering feature code, CTO and LFO models

Description	Feature code	CTO	LFO
UPS units			
RT1.5kVA 2U Rack or Tower UPS-G2 (100-125VAC)	BV35	7DD5CTO1WW	7DD5A001WW
RT1.5kVA 2U Rack or Tower UPS-G2 (200-240VAC)	BV36	7DD5CTO1WW	7DD5A002WW
RT3kVA 2U Rack or Tower UPS-G2 (100-125VAC)	BV38	7DD5CTO2WW	7DD5A003WW
RT3kVA 2U Rack or Tower UPS-G2 (200-240VAC)	BV39	7DD5CTO2WW	7DD5A005WW
Extended Battery Modules (EBMs)			
1.5kVA 2U Rack or Tower Extended Battery Module-G2*	BV37	7DD5CTO1WW	7DD5A004WW
3kVA 2U Rack or Tower Extended Battery Module-G2**	BV3A	7DD5CTO2WW	7DD5A006WW

* 1.5kVA 2U EBM supported with CTO1 models
** 3kVA 2U EBM supported with CTO2 models

Table 2. Ordering feature code and Part number options

Description	Feature code	Part number
UPS Gigabit Network Management Card-G2*	BV3G	4C57A87624
Environmental Monitoring Probe-G2*	BV3H	4XF7A87625

* The RT1.5kVA and RT3kVA 2U Rack or Tower UPS-G2 models do not come standard with NMC nor EMP, these are optional.

The UPS-G2 models are shipped with the following items:

- An accessory kit that contains the following items:
  - Tower pedestal feet
  - Four-post rail kit
  - Quick start guide
  - Safety guide
  - USB cable
  - RS-232 cable
- Documentation package

The Extended Battery Module-G2 is shipped with the following items:

- An accessory kit that contains the following items:
  - Rack-mount kit
  - Tower kit
  - EBM power cable
  - EBM detection cable

The 100-125 V UPS-G2 models ship with the following fixed line cords:

- RT1.5kVA 2U Rack or Tower UPS-G2 (100-125VAC): 3.0 m (10 ft) line cord with NEMA 5-15P plug
- RT3kVA 2U Rack or Tower UPS-G2 (100-125VAC): 2.5 m (8 ft) line cord with NEMA L5-30P plug

The RT1.5kVA, and RT3kVA 200-240 V UPS-G2 models do not ship with line cords.

The following tables list the compatible line cords which are suitable for RT1.5kVA and RT2.2kVA/RT3kVA 200-240 V UPS-G2 models, respectively.

Table 3. Line cords for 7DD5CTO1WW units (RT1.5kVA models)

Description	Part number	Feature code
4.3m, 10A/220V, C13 to GB 2099.1 (China) Line Cord	81Y2378	6580
4.3m, 10A/240V, C13 to IS 6538 (India) Line Cord	81Y2386	6567
4.3m, 10A/250V, C13 - 2P+Gnd (Brazil) Line Cord	81Y2387	6404
4.3m, 10A/230V, C13 to SI 32 (Israel) Line Cord	81Y2381	6579
4.3m, 10A/230V, C13 to CEI 23-16 (Italy/Chile) Line Cord	81Y2380	6493
4.3m 10A/220V, C13 to IRAM 2073 (Argentina) Line Cord	81Y2384	6492
4.3m, 12A/220V, C13 to KSC 8305 (S. Korea) Line Cord	81Y2385	6494
4.3m, 12A/200V, C13 to JIS C-8303 (Japan) Line Cord	4L67A08362	6495
4.3m, 10A/230V, C13 to CEE7-VII (Europe) Line Cord	81Y2376	6572
4.3m, 10A/230V, C13 to SEV 1011-S24507 (Sws) Line Cord	81Y2390	6578
4.3m, 10A/230V, C13 to BS 1363/A (UK) Line Cord	81Y2377	6577
4.3m, 10A/230V, C13 to SABS 164 (South Africa) Line Cord	81Y2379	6576
4.3m, 10A/230V, C13 to AS/NZS 3112 (Aus/NZ) Line Cord	81Y2383	6574
4.3m, 10A/250V, C13 to 76 CNS 10917-3 (Taiwan) Line Cord	81Y2389	6531
4.3m, 10A/230V, C13 to DK2-5a (Denmark) Line Cord	81Y2382	6575

Table 3. Line cords for 7DD5CTO2WW units (RT3kVA models)

Description	Part number	Feature code
C19 4.3m cord - NEMA L6-20P	40K9772	6275
C19 4.3 meter Line Cord - UK	40K9767	6278
C19 4.3 meter Line Cord - Europe	40K9766	6279
C19 4.3 meter Line Cord - S Africa	40K9770	6280
C19 4.3 meter Line Cord - Italy	40K9768	6281
C19 4.3 meter Line Cord - Israel	40K9771	6282
C19 4.3 meter Line Cord - Dmk/Swiss	40K9769	6283
C19 4.3 meter Line Cord - Australia/NZ	40K9773	6284
C19 4.3 meter Line Cord - India	40K9776	6285
Taiwan 16A/250V C19/CNS 10917 4.3m line cord	90Y3035	6287
C19 4.3 meter Line Cord - China	40K9774	6288
South Korea 15A/250V C19/KSC 8305 4.3m line cord	90Y3034	6289
Japan 15A/200V C19/JIS C-8303 4.3m line cord	41Y9233	6291
C19 4.3 meter Line Cord - Argentina	40K9777	6276
C19 4.3 meter Line Cord - Brazil	40K9775	6277

The RT1.5kVA and RT3kVA 2U Rack or Tower UPS-G2 models come equipped with a communication slot for the installation of an optional UPS Gigabit Network Management Card (NMC) (4C57A87624).

The NMC provides convenient, over-the-network UPS remote monitoring and management through a standard web browser or UPS Power Manager software.

Figure below shows the NMC.

Figure 2. UPS Gigabit Network Management Card

The Network Management Card has the following features:

- 10/100 Mb Ethernet (RJ-45 connector) with auto-negotiation
- Protocol Support HTTP, HTTPS 1.1, TLS 1.2, SNMP V1, SNMP V3, NTP, SMTP, SMTPS BOOTP/DHCP, CLI, MQTT, SSH, ARP, Syslog, Radius, LDAP, ActiveDirectory
- Graceful shutdown of protected servers and storage
- Configuration of automatic email messages in response to UPS alarms and to transmit periodic reports
- Cybersecurity enhancements, including stronger encryption, configurable password policy and usage of CA and PKI signed certificates
- Control of UPS on/off switching with a web browser
- Adjustment and control of load segments through the HTML interface, including sequential starting of the installation and optimization of backup time by shutting down non-priority systems
- Automatic date and time adjustment through an NTP server
- SNMP v1/v3 and IP v4/v6
- Recording of events and measurements in the system logs
- Data and event logging in the nonvolatile memory
- Card firmware update through the network
- Measurement of humidity and temperature with the optional Environmental Monitoring Probe (EMP)
- Easy installation (can be installed while the UPS is online to maintain the highest system availability)
- Includes IPM software

An optional EMP (part number 4XF7A87625) is used to report local temperature and humidity values and make that information available to management tools.

The EMP connects to the UPS via the NMC. The EMP is shown in the following figure.

Figure 3. Environmental Monitoring Probe

The Environmental Monitoring Probe has the following features:

- Monitors temperature, humidity, and status of two user-provided contact devices or sensors
- Compatibility with the UPS Network Management Card
- Can be located 50m from the network card using standard CAT5 network cable
- Ability to be daisy-chained (up to 3 per host), allowing multiple sensor connection to a single host
- Operating Temperature - 0 ° C to 70 ° C with an accuracy of ± 2 ° C
- Operating humidity - 10 % to 90 % with an accuracy of ± 5%
- Temperature, humidity, and contact status can be viewed with a Web browser through the Network user interface
- Stores events in the NMC's event log
- Sends SNMP alarms to network management systems
- Sends e-mail notifications through SMTP
- Dimensions (L x W x H) 57 x 37 x 29 mm
- Weight 34 g

Note: The EMP requires Network Management Card (NMC)

Features

A UPS is a device that acts as a defensive barrier between electronic equipment and incoming power problems. It conditions, regulates, and filters out power disturbances to ensure a clean power source for IT equipment. A UPS also provides battery backup if there is a power failure.

In today’s high availability server environments, unplanned power outages or line quality irregularities can have a considerable financial impact on all sized businesses. The typical utility power is 99.9% available, but that means that there can be almost 9 hours of downtime a year, not to mention brownouts and other power quality problems.

Uninterruptible power system (UPS) protects your sensitive electronic equipment from the most common power problems, including power outages, voltage sags, impulsive transients, line noise, and long-term under and over voltage conditions.

Power outages can occur when you least expect it and power quality can be erratic. These power problems have the potential to corrupt critical data, destroy unsaved work sessions, and damage hardware - causing hours of lost productivity and expensive repairs.

Selecting the right UPS can help protect against these potentially costly incidents.

The RT1.5kVA and RT3kVA 2U Rack or Tower UPS-G2 units are most effective against power failures, power sags, power surges, under-voltage, and over-voltage.

The RT1.5kVA and RT3kVA 2U Rack or Tower UPS-G2 models offer the following features:

- High-efficiency protection for more real power (Watts) in a compact tower or 2U rack design, which lowers power and cooling consumption
- A graphical Liquid Crystal Display (LCD) that provides intuitive configuration, management, and monitoring capabilities in the following languages to reduce management complexity:
    - Chinese
    - English
    - French
    - German
    - Italian
    - Japanese
    - Portuguese
    - Spanish
    - Russian
- Hot-swappable batteries for maximum uptime, availability, and ease of maintenance
- Subscription based Intelligent Power Manager (IPM) Software seamlessly integrates with leading virtualization environments and cloud orchestration tools. IPM provides effective local or remote power monitoring and management for servers and virtual machines and allows for graceful remote system shutdown
- ABM technology that significantly extends battery service life by up to 50% and optimizes recharge time
- Load segments for individual control of receptacle groups to manage sequential shut downs and start ups and reserve battery run time for the most critical equipment
- Optional Extended Battery Module (EBM) that provide extra run time to critical systems during a prolonged power outage
- An optional NMC for enhanced UPS monitoring and control over-the-network through a standard web browser
- An optional EMP for thermal management requirements (temperature and humidity)
- Dual channel communication through the USB or RS-232 port and an optional NMC at the same time to maximize communications flexibility
- The USB port supports HID (Human Interface Device) Power Device Class which means that the UPS can be directly managed by operating systems that support such USB classes.
- Remote flash upgradeable firmware for the UPS and NMC, which makes it an ideal solution for remote locations
- An ROO/RPO port to control power of the UPS unit through a wired remote switch

Technical specifications

Table 4 lists the technical specifications for the 100-125 V UPS-G2 models.

Table 4. Technical specifications for 100-125 V models

Specification	RT1.5kVA 2U Rack or Tower UPS-G2 (100-125VAC)	RT3kVA 2U Rack or Tower UPS-G2 (100-125VAC)
General		
CTO	7DD5CTO1WW	7DD5CTO2WW
Form factor	2U Rack or Tower	2U Rack or Tower
Topology	Line interactive, high frequency, sinewave output	
VA/Watts rating	1440 VA/1440 W @ 120 V	3000 VA/3000 W
Efficiency (on utility power)	Up to 98%	Up to 98%
Energy Star compliant	Yes	Yes
Electrical input		
Input voltage	100 - 125 V AC	100 - 125 V AC
Input frequency	50/60 Hz	50/60 Hz
Max input amperage	12 A	16 A
Input connector	NEMA 5-15P (12 A)	NEMA 5-20P (16 A)
Input line cord	Fixed 3.0 m (10 ft) NEMA 5-15P	Fixed 3.0 m (10 ft) NEMA 5-30P
Electrical output		
Output voltage settings	100/120/125 V AC	100/120/125 V AC
Output frequency	50/60 Hz	50/60 Hz
Output power capacity	• 100 V AC: 1200 VA/1200 W • 120-125 V AC: 1440 VA/1440 W	• 100 V AC: 1330 VA/1300 W • 120-125 V AC: 1950 VA/1920 W
Output connectors	• 8 x 5-15R	• 6 x 5-20R, 1 x L5-30R
Output load segments	• Group 1: 2x 5-15R • Group 2: 2x 5-15R	• Group 1: 2x 5-20R • Group 2: 2x 5-20R
Batteries		
Battery type	Valve Regulated Lead Acid (VRLA), sealed, leak-proof	
Battery capacity	7.2 Ah	9 Ah
Battery management	ABM technology or temperature-compensated charging method (user selectable), automatic battery test and deep discharge protection, automatic recognition of external battery units	
Battery replacement	Hot-swap internal battery and extended battery modules	
External battery support	Up to 4 (LFO 7DD5A004WW)	Up to 4 (LFO 7DD5A004WW)
Typical backup times	See Table below	
Communications and management		
USB port (Type B)	Yes	Yes
RS-232 serial port (RJ-45)	Yes	Yes
10/100 Mbps Ethernet port (RJ-45)	Optional with Network Management Card, 4C57A87624	
Environmental monitoring	Optional with Environmental Monitoring Probe-G2, 4XF7A87625 (requires NMC, 4C57A87624)	
Management software	Intelligent Power Manager	

Specification	RT1.5kVA 2U Rack or Tower UPS-G2 (100-125VAC)	RT3kVA 2U Rack or Tower UPS-G2 (100-125VAC)
Control panel	Intelligent 5-button graphical LCD	
LED indicators	Power On, On Battery, and Alarm	
Remote On/Off and Power Off	Remote On/Off (ROO) and Remote Power Off (RPO) terminal block connector	

The following table lists the technical specifications for the 2U Rack or Tower 200-240 V UPS models.

Table 5. Technical specifications for 200-240 V models

Specification	RT1.5kVA 2U Rack or Tower UPS-G2 (200-240VAC)	RT3kVA 2U Rack or Tower UPS-G2 (200-240VAC)
General		
Part number	7DD5CTO1WW	7DD5CTO2WW
Form factor	2U Rack or Tower	2U Rack or Tower
Topology	Line interactive, high frequency, sinewave output	
VA/Watts rating	1500 VA/1500 W	3000 VA/2700 W
Efficiency (on utility power)	Up to 98%	Up to 99%
Energy Star compliant	Yes	Yes
Electrical input		
Input voltage	200 - 240 V AC	200 - 240 V AC
Input frequency	50/60 Hz	50/60 Hz
Max input amperage	10 A	16 A
Input connector	IEC 320 C14 (10 A)	IEC 320 C20 (16 A)
Input line cord	Optional (See Table)	2 meters IEC 320 C20 (16 A)
Electrical output		
Output voltage settings	200/208/220/230/240 V AC	200/208/220/230/240 V AC
Output frequency	50/60 Hz	50/60 Hz
Output power capacity	• 200-240 V AC: 1550 VA / 1100 W	• 200 V AC: 2700 VA/2430 W • 208-240 V AC: 3000 VA/3000 W
Output connectors	• 8 x IEC C13	• 8 x IEC C13 • 2 x IEC C19
Batteries		
Battery type	Valve Regulated Lead Acid (VRLA): Maintenance-free, sealed, leak-proof	
Battery capacity	9 Ah	9 Ah
Battery management	ABM technology or temperature-compensated charging method (user selectable), automatic battery test and deep discharge protection, automatic recognition of external battery units	
Battery replacement	Hot-swap internal battery and extended battery modules	
External battery support	Up to 4 (LFO 7DD5A004WW)	Up to 4 (LFO 7DD5A006WW)
Typical backup times	See Table	
Communications and management		

Specification	RT1.5kVA 2U Rack or Tower UPS-G2 (200-240VAC)	RT3kVA 2U Rack or Tower UPS-G2 (200-240VAC)
USB port (Type B)	Yes	Yes
RS-232 serial port (RJ-45)	Yes	Yes
10/100 Mbps Ethernet port (RJ-45)	Optional with the NMC	Yes (on the NMC)
Environmental monitoring	Optional with the Extended Battery Module-G2 (requires the NMC, 4C57A87624)	
Management software	Intelligent Power Manager	
Control panel	Intelligent 5-button graphical LCD	
LED indicators	Power On, On Battery, and Alarm	
Remote On/Off and Power Off	Remote On/Off (ROO) and Remote Power Off (RPO) terminal block connector	

The following two tables list the expected period that the 2U Rack or Tower UPS-G2 models operate based only on batteries, depending on the load.

Note: Battery backup times are approximate and can vary with equipment, configuration, battery age, and temperature.

Table 6. 2U Rack or Tower 100-125 V UPS-G2 runtime chart

Load		Run time, Minutes				
Percentage	**Watts**	**No EBM**	**1x EBM**	**2x EBMs**	**3x EBMs**	**4x EBMs**
RT1.5kVA 2U Rack or Tower UPS-G2 (100-125VAC)						
25%	375 W	27.5	133	198	334	425
50%	750 W	10.5	58	104	160	202
75%	1125 W	5	34.65	60	88	135
100%	1500 W	2.5	23.5	42.5	70	94
RT3kVA 2U Rack or Tower UPS-G2 (100-125VAC)						
25%	750 W	24.25	105	180	255	330
50%	1500 W	10.25	44	73	101	130
75%	2250 W	5.5	25	47	69	91
100%	3000 W	3	17	32	47	62

Table 7. 2U Rack or Tower 200-240 V UPS-G2 runtime chart

Load		Run time, Minutes				
Percentage	**Watts**	**No EBM**	**1x EBM**	**2x EBMs**	**3x EBMs**	**4x EBMs**
RT1.5kVA 2U Rack or Tower UPS-G2 (200-240VAC)						
25%	375 W	27.5	133	198	334	425
50%	750 W	10.5	58	104	160	202
75%	1125 W	5	34.5	60	88	135
100%	1500 W	2.5	23.5	42.5	70	94
RT3kVA 2U Rack or Tower UPS-G2 (200-240VAC)						
25%	750 W	24.25	105	180	255	330
50%	1500 W	10.25	44	73	101	130
75%	2250 W	5.5	25	47	69	91
100%	3000 W	3	17	32	47	62

Connectors and controls

The front of the 2U Rack or Tower UPS-G2 units feature a 5-button graphical LCD. The display provides useful information about the UPS, load status, events, measurements, and settings.

The following figure shows the control panel on the front of the 2U Rack or Tower UPS-G2

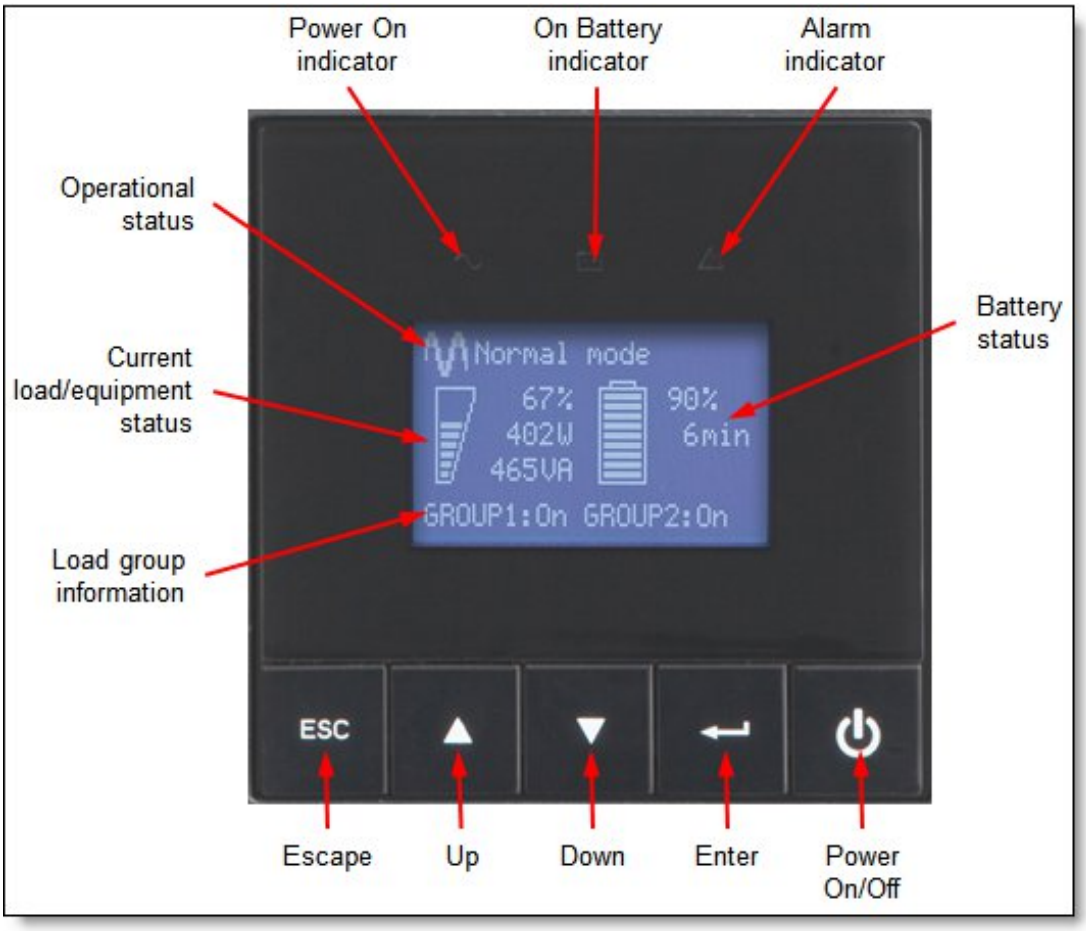

Figure 4. Control panel on the front of the 2U Rack or Tower UPS-G2

The following functions are available on the control panel:

- Status information: Displays the battery status, load percentage, output power, operational mode, and load group information.
- Measurements: Displays the output Watts VA, amperage, power factor, voltage, frequency, input voltage, input frequency, battery voltage, efficiency, and power usage.
- Control: Displays the battery test, reset error state, configure load segments, clear power usage measurements, and restore settings.
- Settings: Allows you to change product general parameters and set input and output parameters, on/off conditions, and battery configuration.
- Fault log: Displays the event log and alarm history.
- Identification: Displays the machine type, model, and serial number of the unit, and the firmware level of the UPS, including the optional NMC's firmware level and IP address, if installed.

The following figure shows the rear view of the RT1.5kVA 2U Rack or Tower UPS-G2 (100-125VAC) (7DD5CTO1WW).

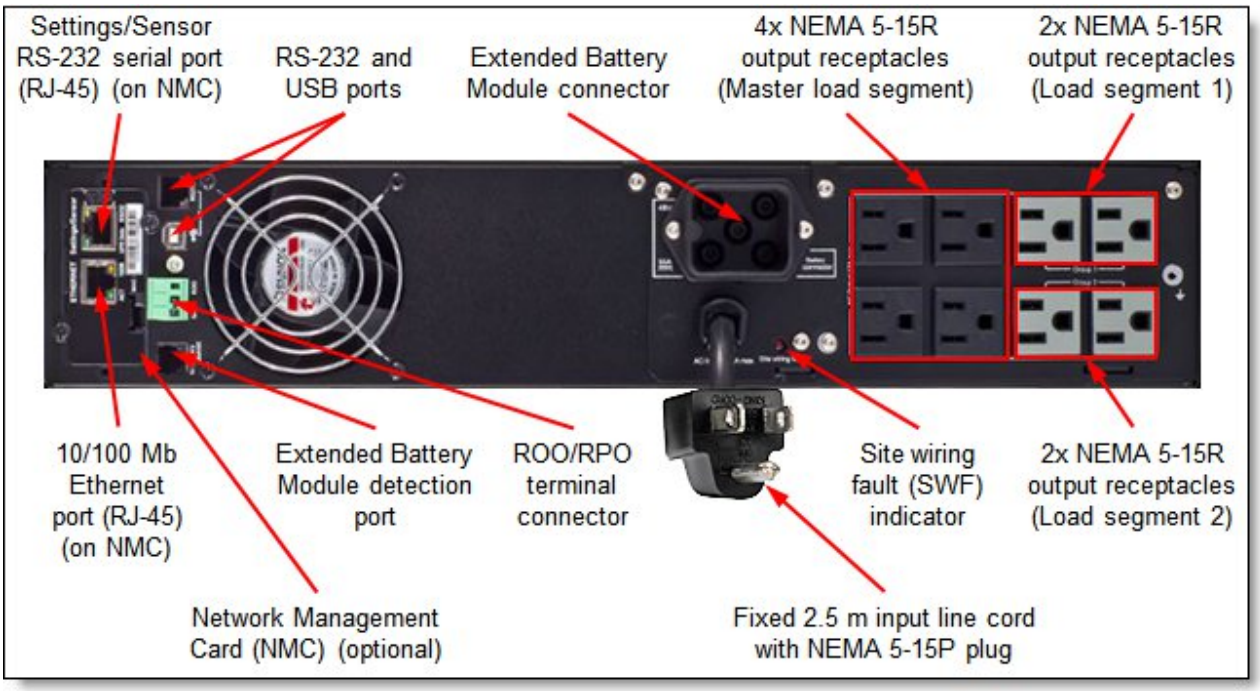

Figure 5. Rear view of the RT1.5kVA 2U Rack or Tower UPS-G2 (100-125VAC) (7DD5CTO1WW)

The following figure shows the rear view of the RT3kVA 2U Rack or Tower UPS-G2 (100-125VAC) (7DD5CTO2WW).

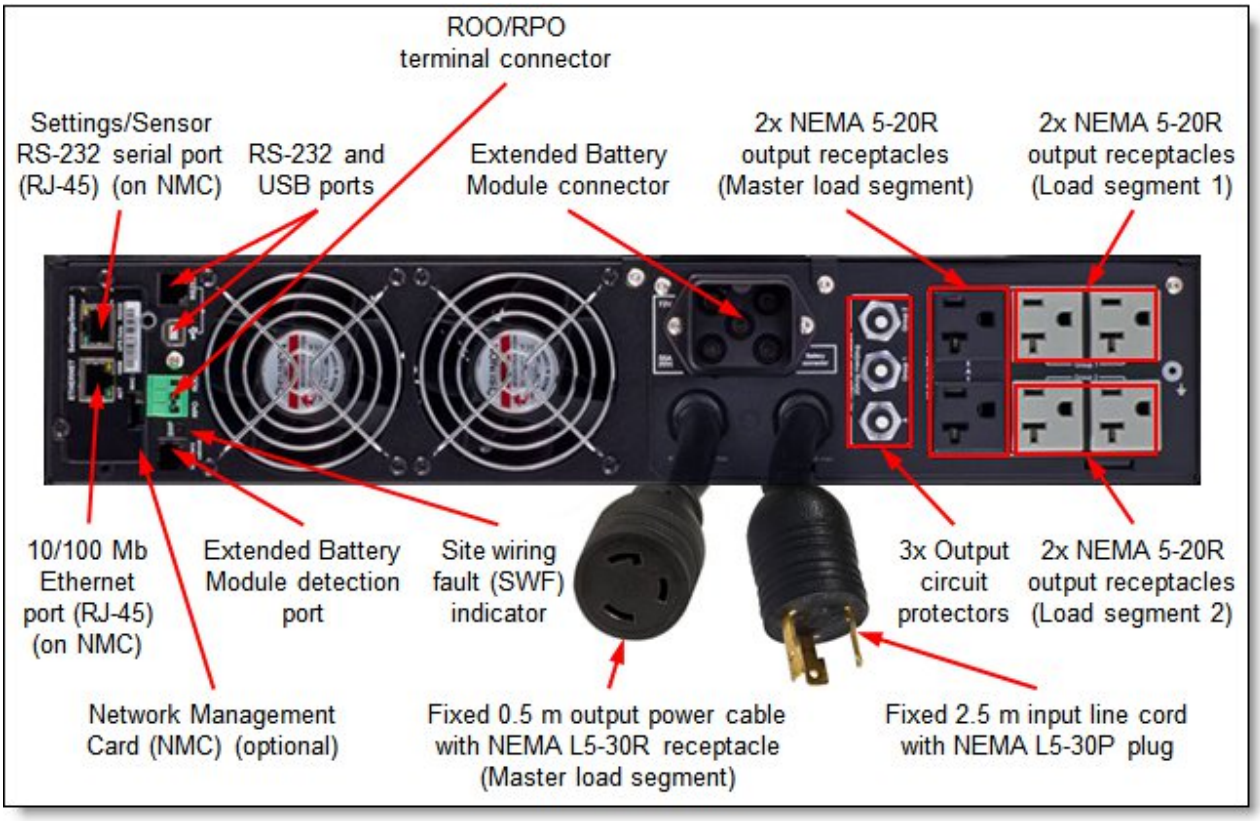

Figure 6. Rear view of the RT3kVA 2U Rack or Tower UPS-G2 (100-125VAC) (7DD5CTO2WW)

The following figure shows the rear view of the RT1.5kVA 2U Rack or Tower UPS-G2 (200-240VAC) (7DD5CTO1WW).

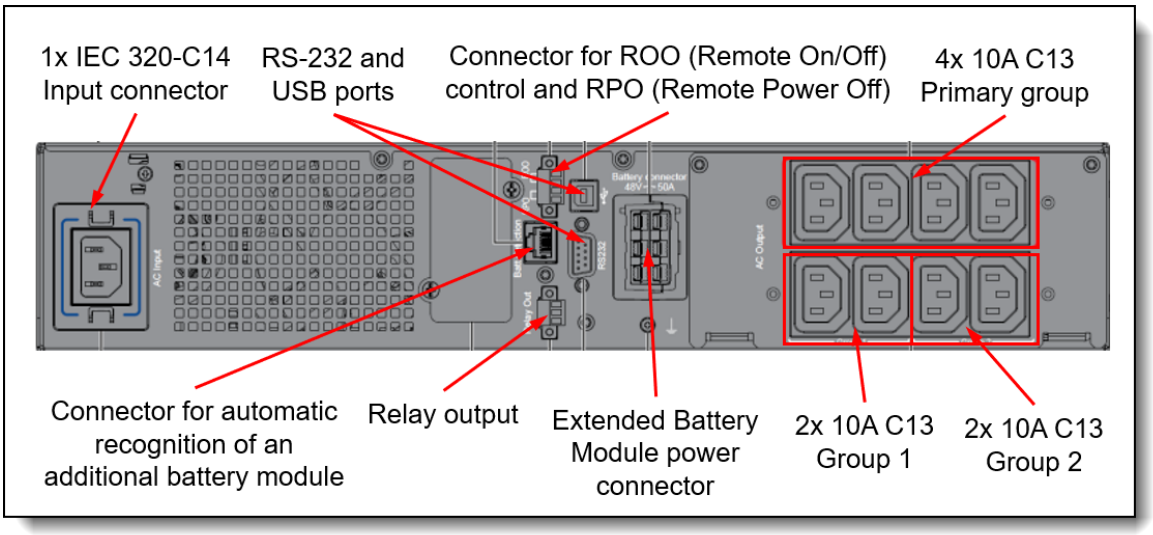

Figure 7. Rear view of the RT1.5kVA 2U Rack or Tower UPS-G2 (200-240VAC) (7DD5CTO1WW)

The following figure shows the rear view of the RT3kVA 2U Rack or Tower UPS-G2 (200-240VAC) (7DD5CTO2WW).

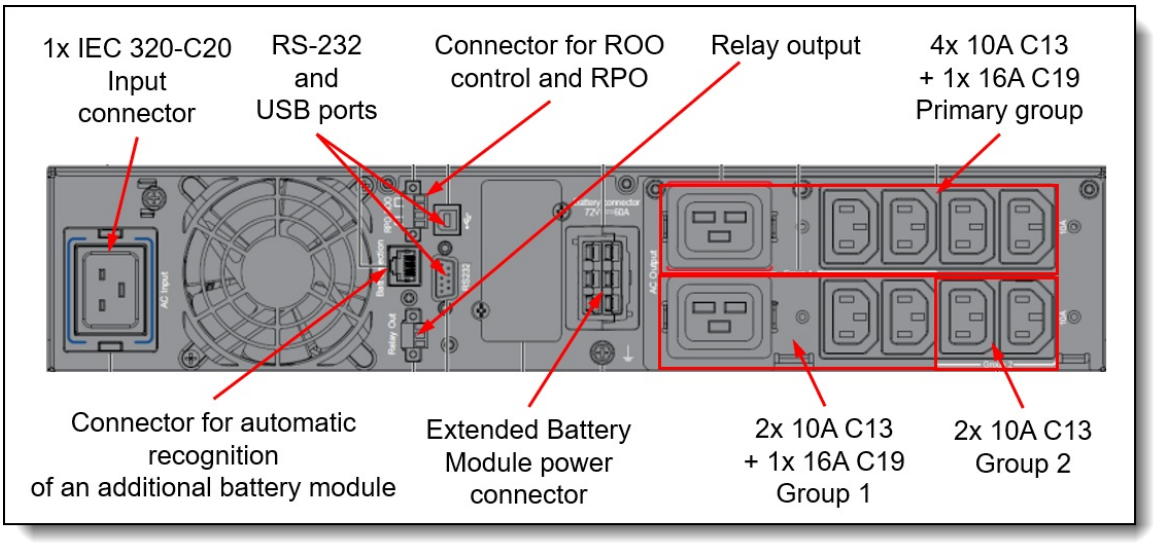

Figure 8. Rear view of the RT3kVA 2U Rack or Tower UPS-G2 (200-240VAC) (7DD5CTO2WW)

The following figure shows the rear view of the 1.5kVA (top) and 3kVA (bottom) 2U Rack or Tower Extended Battery Modules

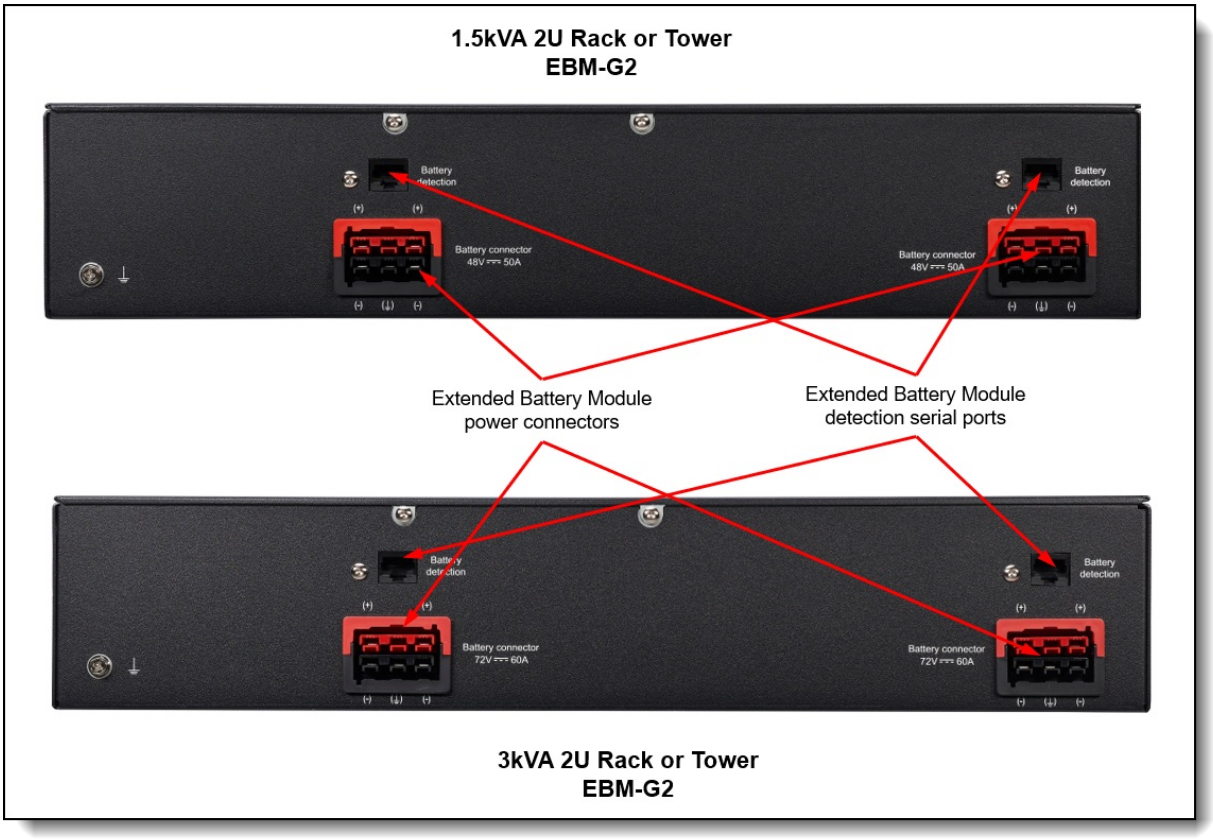

Figure 9. Rear view of the 1.5kVA (top) and 3kVA (bottom) 2U Rack or Tower Extended Battery Modules

Physical specifications

The 2U Rack or Tower UPS-G2 units have the following physical specifications (approximate):

- Height: 86 mm (3.4 in.)
- Width: 441 mm (17.4 in.)
- Depth:
  - RT1.5kVA: 447 mm (17.6 in.)
  - RT3kVA: 602 mm (23.7 in.)
- Weight:
  - RT1.5kVA (100-125VAC): 23.0 kg (50.7 lb)
  - RT1.5kVA (200-240VAC): 33.8 kg (74.5 lb)
  - RT3kVA (100-125VAC): 22.4 kg (49.4 lb)
  - RT3kVA (200-240VAC): 32.1 kg (70.6 lb)

The 2U Rack or Tower Extended Battery Module-G2 have the following physical specifications (approximate):

- Height: 85.5 mm (3.4 in.)
- Width: 603 mm (23.7 in.)
- Depth:
  - RT1.5kVA/RT2.2kVA: 522 mm (20.6 in.)
  - RT3kVA: 438 mm (23.7 in.)
- Weight:
  - RT1.5kVA/RT2.2kVA: 27.8 kg (61.3 lb)
  - RT3kVA: 40.4 kg (89.1 lb)

Operating environment

The 2U Rack or Tower UPS-G2 units are supported in the following environment:

- Temperature (operation): 0 - 40 °C (32 - 104 °F)
- Relative humidity: 0-90% non-condensing
- Maximum altitude (operation): 3,000 m (9,843 ft)

Agency approvals

The 2U Rack or Tower UPS-G2 units conform to the following regulations:

- RoHS Compliant
- BESC
- CBSA
- CE
- cUL/CSA
- Pvoc
- SGS
- UKCA
- UL

Warranty

The 2U Rack or Tower UPS-G2 models and the Extended Battery Module, including batteries, have 3 year warranty.

Management software

Management software

Eaton's Intelligent Power Manager (IPM) software for disaster avoidance applications provides the tools you need to monitor and manage power equipment in physical or virtual environments to keep IT devices running during a power or environmental event. This innovative software ensures system uptime and data integrity by allowing you to remotely monitor, manage and control devices on your network. IPM provides a solution that is easy to use, maintains business continuity and allows you to do more with less.

Intelligent Power Manager (IPM)

IPM is an easy-to-use disaster avoidance platform with sophisticated capabilities that include triggering alerts and automating resolutions to keep applications running. IPM enables you to:

- Leverage Eaton's integrations with industry leaders to keep critical applications running and automate resolutions for your entire network risking potential downtime.
- Migrate workloads to increase system uptime and minimize generator load by suspending non-critical virtual machines.
- Power cap servers to keep critical loads running longer by limiting server power consumption.
- Support for 5 nodes.

The Intelligent Power Manager (IPM) offers three levels of licenses

Monitor, manage and optimize. IPM Optimize is the premium offering and provides the most complete set of capabilities.

Table 8. Levels of licenses

Monitor Edition	Manage Edition	Optimize Edition
Choose this option if your key objective is to monitor an IT room	Choose this option if your key objective is to manage a number of UPSs and/or you are looking for basic graceful shutdown	Choose this option if you need virtualization load-shedding
• Contextual visibility of power metrics and constraints • Monitor Eaton and third-party power devices	• Contextual visibility of power metrics and constraints • Monitor Eaton and third-party power devices	• Contextual visibility of power metrics and constraints • Monitor Eaton and third-party power devices • Manage and update Eaton power devices • Define basic business continuity automation configurations with host-level actions • Simple wizard-based automation configuration • Define advanced business continuity automation configurations with VM and cluster-level actions • Graceful shut down

Maintain business continuity: Minimize operating expenses

- Intelligent load-shedding: Increase system uptime while extending battery runtime and minimizing generator load by suspending non-critical virtual machines.
- Site Recovery Manager failover: Reduce data recovery expenses by syncing primary and disaster-

recovery sites prior to power failures.

- Power capping on demand: Keep critical workloads running longer during a power outage by limiting server power consumption.

Eaton's Intelligent Power Manager resources:

Refer to the following resources:

- Setup guide
- IPM User guide
- Intelligent Power Manager (IPM) FAQ

Eaton's software subscription

Intelligent Power Manager software subscription for eligible Lenovo UPS-G2 models include a 3-year subscription for up to 5 equipment nodes of Eaton's Intelligence Power Manager (IPM) software (Optimize subscription).

IPM subscription is available from:

- https://Eaton.com/LenovoIPM
- LenovoIPM

Note:
To use the IPM software, you must have the NMC installed.
UPSes, PDUs and ATSs, as well as rack mounted servers, hypervisors, and storage devices count as nodes.

Supported servers

The 2U Rack or Tower UPS-G2 offerings are compatible with all ThinkSystem, System x and ThinkServer systems and other devices that require AC power.

To determine the best fit UPS for a particular configuration, the following needs to be considered:

- Total power load of the hardware that will be connected to the UPS
- Number and type of outlets required
- UPS outlet and group limitations for connecting the hardware to the UPS

To determine chassis, node and server overall power capacities, use the Power Configurator tool. The tool can be downloaded from http://support.lenovo.com/documents/LNVO-PWRCONF

To determine the power draw of other devices such as storage and switching that will be attached to the UPS, refer to the products user manual for the maximum power draw.

For additional technical information on the UPS line cords, outlets and grouping refer to the UPS Technical Reference, https://support.lenovo.com/docs/UM104477

Supported rack cabinets

The 2U Rack or Tower UPS-G2 units can be installed in the compatible rack cabinets as listed in Table

Table 9. Rack cabinets

Part number	Description
93072RX	25U Standard Rack
93072PX	25U Static S2 Standard Rack
93634PX	42U 1100mm Dynamic Rack
93634EX	42U 1100mm Dynamic Expansion Rack
93604PX	42U 1200mm Deep Dynamic Rack
93614PX	42U 1200mm Deep Static Rack
93074RX	42U Standard Rack

Related publications and links

For more information about this topic, see the following resources:

- Power and Cooling Technical References:
  - https://support.lenovo.com/us/en/documents/lnvo-powinf
- Product specifications and resources - RT1.5kVA 2U UPS-G2 (100-125VAC):
  - https://www.eaton.com/us/en-us/skuPage.5PX1500RTG2.specifications.html
- Product specifications and resources - RT3kVA 2U Rack or Tower UPS-G2:
  - https://www.eaton.com/us/en-us/skuPage.5PX1500RTG2.specifications.html
- Network Management Card
  - Network Management Card User Guide

Related product families

Product families related to this document are the following:

- Uninterruptible Power Supplies

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