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TRIPP-LITE SMART2200RM2U SmartPro Line Interactive UPS Owner's Manual

SmartPro 120V 2.2kVA 1.92kW Line-Interactive Sine
Wave UPS, 2U, Network Card Options, LCD Display, USB, DB9
MODEL NUMBER: SMART2200RM2U
Owner's Manual

Contents

SMART2200RM2U SmartPro Line Interactive UPS

1000 Eaton Boulevard
Cleveland, OH 44122
United States

Highlights

- 2.2kVA / 2200VA / 1920W line interactive 2U rack/tower UPS, Sine Wave
- 120V output, Corrects brownouts and overvoltages from 83V to 145V
- 0.9 Power Factor, Interactive LCD interface
- 96% line-mode efficiency, 2 switched load banks
- USB, RS232, EPO and slot for Network Card options
- 120V NEMA 5-20P input, 4 NEMA 5-15R & 4 NEMA 515/20R outlets
- To use the Auto Probe feature, this product requires a WEBCARDLX network interface (sold separately) running LX firmware update 15.5.2 or later

Package Includes

- SMART2200RM2U UPS system
- USB, Serial & EPO cabling
- 4 post rackmount installation kit
- Instruction manual

Description

Tripp Lite SmartPro Line Interactive UPS with enhanced LCD interface offers network-grade power protection for critical server, network and telecommunications equipment. Line Interactive Uninterruptible Power Supply (UPS) with built-in Auto-Voltage Regulation (AVR) actively corrects brownouts and overvoltages back to usable levels while maintaining a full battery charge in case of power failure. Tripp Lite's unique configuration excels in exceptionally poor-power environments with two separate levels of voltage boost to correct both slight undervoltages and severe brownout conditions. Interactive LCD interface reports UPS operating mode, detailed UPS and sitepower data, plus enables a variety of UPS setup and configuration options. Super-fast switchover from line to battery power occurs within milliseconds to maintain operation of connected equipment without interruption or reboot. 96% line-mode efficiency offers reduced heat emissions and operating costs. Network management interfaces support communications via USB, RS-232 and slot for network management accessory card. HID-compliant USB port enables integration with built-in power management and auto shutdown features of Windows and Mac OS X. Network communications ports enable detailed monitoring of equipment load levels, self-test data and utility power conditions. PowerAlert UPS monitoring software is available via free download. Switched output load banks enable scheduled and real-time remote reboot and load shedding of select outlets.

Emergency Power Off (EPO) interface. LCD display panel easily rotates for viewing in rackmount or tower configurations. Audible alarm with push-button momentary alarm-cancel and silent-mode configuration options. Programmable self-test. Field-replaceable, hot-swappable battery modules.

Features

- Tripp Lite SMART2200RM2U line interactive 2U rack/tower UPS with 2200VA / 2.2kVA / 1920W capacity
- Line interactive UPS with Automatic Voltage Regulation (AVR) corrects brownouts and overvoltages from 83 to 145V
- NEMA 5-20P input plug; 4 NEMA 5-15R & 4 NEMA 5-15/20R output receptacles, Two independently switchable output load banks
- Maintains uninterrupted operation of connected networking equipment during blackouts, surges, brownouts and overvoltages
- High 96% efficiency rating in line-power mode offers reduced power consumption and BTU emisssions
- Internal batteries offer 12 minutes at 50% load (960W) and 4.5 minutes at 100% load (1920W)
- Hot-swappable, user-replaceable internal batteries can be replaced with no disruption to connected equipment
- Intelligent battery management system extends battery life
- Front panel LCD monitoring screen with MODE and ENTER buttons reports operating mode with 5-bar battery charge graphic, plus 7 selectable screens of detailed UPS and site power information
- LCD interface also supports a number of advanced user setup and operating preferences
- Ships with 4 post rackmount installation hardware; Optional 2POSTRMKITWM enables 2 post rackmount/wallmount installation; Optional 2-9USTAND enables tower placement
- Built-in USB, RS-232 and slot for network management accessory cards; Compatible with Tripp Lite UPS management card options TLNETCARD, WEBCARDLX, SNMPWEBCARD and RELAYIOCARD
- HID-compliant USB port enables integration with built-in power management and auto shutdown features of Windows and Mac OS X
- USB & Serial ports enable data-saving unattended shutdown when used with Tripp Lite's PowerAlert software, available via FREE download from **tripplite.eaton.com/products/power-alert**
- Built-in Emergency Power Off (EPO) interface with cable

Specifications

OVERVIEW	
UPC Code	37332150622
UPS Type	Line-Interactive
INPUT	

Input Phase	Single-Phase
Rated input current (Maximum Load)	16A (120V)
Nominal Input Voltage(s) Supported	120V AC
UPS Input Connection Type	5-20P
Input Circuit Breakers	20A
UPS Input Cord Length (ft.)	10
UPS Input Cord Length (m)	3.1
Recommended Electrical Service	20A 120V
OUTPUT	
Output Capacity (VA)	2200
Output Capacity (kVA)	2.2
Output Capacity (Watts)	1920
Output Capacity (kW)	1.92
Power Factor	0.87

Nominal Voltage Details	120v nominal output in battery mode
Frequency Compatibility	60 Hz
Output Voltage Regulation (Line Mode)	-14%, +6%
Output Voltage Regulation (Battery Mode)	+/- 5%
Load Management Receptacles	Two switchable single-outlet load banks
Output AC Waveform (AC Mode)	Pure Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave
Nominal Output Voltage(s) Supported	110V; 115V; 120V
Output Receptacles	(4) 5-15R; (4) 5-15/20R
Individually Controllable Load Banks	Yes
BATTERY	
Battery Type	Valve Regulated Lead Acid (VRLA)
Runtime Full Load (min.)	4.5 min. (1920W)
Runtime Half Load (min.)	12 min. (960W)

Expandable Runtime	No
DC System Voltage (VDC)	48
Battery Recharge Rate (Included Batteries)	Less than 4.5 hours from 10% to 90% (typical, full load discharge)
Battery Access	Front panel battery access door
Internal UPS Replacement Battery Cartridge	RBC94-2U
Battery Replacement Description	Hot-swappable, user replaceable batteries

VOLTAGE REGULATION

Voltage Regulation Description	Automatic voltage regulation (AVR) maintains line power operation with an input voltage range of 83 to 145
Overvoltage Correction	Input voltages between 127 and 145 are reduced by 12%
Undervoltage Correction	Input voltages between 108 and 96 are boosted by 12%
Severe Undervoltage Correction	Input voltages between 83 and 95 are boosted by 24%

USER INTERFACE, ALERTS & CONTROLS

Front Panel LCD Display	Front panel LCD information and configuration screen offers detailed UPS and site power status and operating data, plus configuration of voltage, operating mode, alarm function and a variety of additional options (see manual for detailed LCD configuration and monitoring options)
Switches	3 pushbutton switches control OFF / ON power status, MODE selection and MUTE / ENTER control functions
Alarm Cancel Operation	Power-fail alarm can be temporarily silenced using alarm-cancel switch; silent mode alarm configuration option available
Audible Alarm	Audible alarm indicates UPS startup, power-failure, low-battery, overload, UPS fault and remote shutdown conditions

SURGE / NOISE SUPPRESSION

UPS AC Suppression Joule Rating	570
UPS AC Suppression Response Time	Instantaneous
EMI / RFI AC Noise Suppression	Yes

PHYSICAL

Primary Form Factor	Rackmount
Rack Height	2U
Cooling Method	Fan

Included Mounting Accessory Description	Included 4POSTRAILKIT mounting bracket enables installation in 4 post racks from 20.5 to 36 inches (521 to 914mm)
Installation Form Factors Supported with Included Accessories	4 post 19 inch rackmount
Installation Form Factors Supported with Optional Accessories	2 post rackmount (2POSTRMKITWM); 2-4 post front rail rackmount (UPSHDEARKIT); 4 post rackmount short-depth (4POSTRAILKITWM); Tower (29USTAND); Wallmount (2POSTRMKITWM)
Minimum Required Rack Depth (cm)	63.5
Minimum Required Rack Depth (inches)	25

Optional Mounting Accessory Notes	Optional 2-9USTAND enables upright tower UPS placement; 2POSTRMKITWM enables wall-mount and 2-post rackmount installation; 4POSTRAILKITWM enables installation in 4-post short-depth racks from 14.5 to 23.5 inches (368 to 597mm); UPSHDEARKIT enables installation in 2 or 4-post racks using front vertical rails only, without rear support
Primary UPS Depth (mm)	494
Primary UPS Height (mm)	87
Primary UPS Width (mm)	440
Shipping Dimensions (hwd / in.)	8.90 x 24.30 x 21.30
Shipping Dimensions (hwd / cm)	22.61 x 61.72 x 54.10
Shipping Weight (lbs.)	77.8
Shipping Weight (kg)	35.29
UPS Housing Material	Steel
UPS Power Module Dimensions (hwd, cm)	8.71 x 43.99 x 49.43

UPS Power Module Dimensions (hwd, in.)	3.43 x 17.32 x 19.46
UPS Power Module Weight (kg)	26.13
UPS Power Module Weight (lbs.)	57.6
Unit Weight (lbs.)	57.56
Unit Weight (kg)	26.11

ENVIRONMENTAL

Operating Temperature Range	32° to 104°F (0° to 40°C)
Storage Temperature Range	5° to 122°F (-15° to 50°C)
Relative Humidity	0 to 95%, non-condensing
AC Mode BTU / Hr. (Full Load)	306
Battery Mode BTU / Hr. (Full Load)	1157
AC Mode Efficiency Rating (100% Load)	96%
Audible Noise	45 dBA maximum, front side 1m

COMMUNICATIONS

Network Management Cards	SNMPWEBCARD; TLNETCARD ; WEBCARDLX ; RELAYIOCARD
Network Monitoring Port Description	Supports detailed monitoring of UPS and site power conditions
PowerAlert Software	For local monitoring via the UPS's built-in communication ports, download PowerAlert software at **https://tripplite.eaton.com/products/power-alert**
Communications Cable	USB, DB9 and EPO cabling included
Watch Dog Compatibility	Supports Watchdog application, OS and hard-reboot restart options for remote applications
Network UPS Tools (NUT) Compatibility	NUT compatible. See a full list of NUT compatible Tripp Lite UPS systems at **https://networkupstools.org/stablehcl.html?manufacturer=Tripp%20Lite**
Network Management Card Description	Network management card optional
Communications Interface	DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface; USB (HID enabled)
LINE / BATTERY TRANSFER	
Transfer Time	5 milliseconds (AC to battery mode), 1 millisecond (Battery to AC mode)

Low Voltage Transfer to Battery Power (Set point)	83
High Voltage Transfer to Battery Power (Set point)	145

FEATURES & SPECIFICATIONS

Cold Start (Startup in Battery Mode During a Power Failure)	Cold-start operation supported
High Availability UPS Features	Auto Probe Monitoring and Reboot (requires WEBCARDLX); Automatic Voltage Regulation (AVR); Hot swappable batteries; Remote management; Surge/noise protection
Green Energy-Saving Features	Greater than 95% efficiency – GREEN UPS; Individually controllable load banks
Grounding Lug	Back panel grounding lug

STANDARDS & COMPLIANCE

Product Certifications	CSA (Canada); NOM (Mexico); UL 1778
Product Compliance	RoHS; FCC Part 15 Class A (USA)

WARRANTY & SUPPORT

Product Warranty Period (Worldwide)	2-year warranty, 3 year with registration. Note: Registration is required for 3-year warranty.

Connected Equipment Insurance (U.S., Canada & Puerto Rico)	$250,000 Ultimate Lifetime Insurance

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Documents / Resources

	TRIPP-LITE SMART2200RM2U SmartPro Line Interactive UPS [pdf] Owner's Manual SMART2200RM2U SmartPro Line Interactive UPS, SMART2200RM2U, SmartPro Line Interactive UPS, Line Interactive UPS, Interactive UPS, UPS

References

- **2U to 9U Tower Stand Kit for select Rack-Mount UPS Systems | Eaton**
- **Management Software: PowerAlert Platform | Eaton**
- **Insurance Coverage | Eaton**
- **Product Registration | Eaton**
- **Network Card for Tripp Lite UPS or PDU | Eaton**

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