

Tripp Lite 1111 W. 35th Street Chicago, IL 60609 USA Telephone: 773.869.1234 www.tripplite.com

# SmartPro 120V 2.2kVA 1.92kW Line-Interactive Sine Wave UPS, 2U, Extended Run, Network Card Options, LCD, USB, DB9

# MODEL NUMBER: SM2200RMXL2UP







# 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 site-power 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. Communications interfaces support communications via USB, DB9 serial and slot for optional network management card options. HIDcompliant 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 monitoring software is available for 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 silentmode configuration options. Programmable self-test. Field-replaceable, hot-swappable battery modules.

#### Features

- Tripp Lite SM2200RMXL2UP line interactive 2U rack/tower UPS with 2200VA / 2.2kVA / 1920W capacity and extended runtime options
- Line interactive UPS with Automatic Voltage Regulation (AVR) corrects brownouts and overvoltages from 83 to 145V

# Highlights

- 2.2kVA / 2200VA / 1920W line interactive 2U rack/tower UPS, Sine Wave
- Extended runtime options, 0.9 Power Factor, Interactive LCD interface
- 96% line-mode efficiency, 2 switched load banks, 4-post mounting kit
- USB, RS232, EPO and slot for network management card options
- 120V NEMA 5-20P input, 4
  NEMA 5-15R & 4 NEMA 5-15/20R 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

- SM2200RMXL2UP UPS system
- USB, Serial & EPO cabling
- 4 post installation kit
- Owner's manual



- NEMA 5-20P input plug; 4 NEMA 5-15/20R and 4 5-15R output receptacles, Two independently switched 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)
- Extended runtime is available with optional BP48V24-2U (limit 1), BP48V60RT-3U (multi-pack compatible) and BP48V27-2US (multi-pack compatible), Supports 1920 watts in standalone or extended run configurations
- External battery configurations require the use of Tripp Lite's External Battery Configuration Software (see manual)
- Hot-swappable, user-replaceable internal batteries and external battery packs 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, DB9 and EPO (Emergency Power Off) interfaces
- Compatible with Tripp Lite UPS management card options TLNETCARD, WEBCARDLX and SNMPWEBCARD
- HID-compliant USB port enables integration with built-in power management and auto shutdown features of Windows and Mac OS X
- USB & DB9 ports enable data-saving unattended shutdown when used with Tripp Lite's PowerAlert software, available via FREE download from <u>www.tripplite.com/poweralert</u>
- Built-in Emergency Power Off (EPO) interface with cable

# **Specifications**

OVERVIEW	
UPC Code	037332144348
UPS Type	Line-Interactive
OUTPUT	
Output Volt Amp Capacity (VA)	2200
Output kVA Capacity (kVA)	2.20
Calparity (kt) (	2.20



Perver Factor      0.87        Nominal Voltage Details      120× nominal output in battery mode        Frequency Compatibility      60 Hz        Jonann Voltage Regulation (Line      -14%, +6%.        Voltage Regulation (Line      -14%, +6%.        Jonann Voltage Regulation (Battery      -4.5%.        Jonann Voltage Regulation (Battery      -4.5%.        Jonann AC Waveform (Battery      Pure Sine wave        Durput AC Waveform (Battery      Pure Sine wave        Durput AC Waveform (Battery      Pure Sine wave        Durput Acapety Details      Supported        Supported      110V: 115V: 120V        Durput Acapety Details      Supported        Norminal Input Voltage(S)      110V: 115V: 120V        Durput Acapety Details      120V AC        UPS Input Controllable Load Banks      Yes        Nerrinal Voltage (S) Supported      120V AC        <	[	
Nominal Voltage Details      120v nominal output in battery mode        Frequency Compatibility      60 Hz        Output Voltage Regulation (Line)      -14%, 49%,        Output Voltage Regulation (Stattery)      -5%        Cad Managament Receptacles      Two switched single outlet load banks (1 5-15/20R & 1 5-15R)        Output AC Waveform (Rectiputed)      Pure Sine wave        Output Capacity Details      Supports 1920 watts in standalone or extended numme configurations        Nominal Output Voltage(R)      110V; 115V; 120V        Output Capacity Details      Supports 1920 watts in standalone or extended numme configurations        Nominal Output Voltage(S)      110V; 115V; 120V        Output Controllable Load Banks      Yes        Nerror      16A        Nominal Input Voltage(S) Supported      120V AC        UPS Input Cornection Type      520P        UPS Input Cornection Type      520P        Sugeomediad Electrical Sarvice      2014 20V        Recommanded Electrical Sarvice      2014 20V        Recommended Electrical Sarvice      2014 20V        Fuenced Turnifice (min.)      4.5 min. (1920w)        Hall Load Runtime (min.)      12 min. (980w)        Expended Institume supported via	Output kW Capacity (kW)	1.92
Frequency Compatibility  60 Hz    Dutput Voltage Regulation (Line  14%, +8%    Output Voltage Regulation (Battery  +4.5%    Load Management Receptacles  Two switched single outlet load banks (1 5-15/20R & 1 5-15R)    Dutput AC Waveform (AC Mode)  Pure Sine wave    Dutput AC Waveform (Retainty)  Pure Sine wave    Dutput AC Waveform (Battery)  Pure Sine wave    Dutput AC Waveform (Battery)  Pure Sine wave    Dutput AC Battery  Pure Sine wave    Dutput AC Battery  Pure Sine wave    Dutput Capacity Details  Supports 1920 watts in standalone or extended runtime configurations    Nominal Output Voltage(s)  110V; 115V; 120V    Dutput Capacity Details  (4) 5-158; (4) 5-152/OR    Network  Yes    NPUT  Rated input current (Maximum Load)    16A  10    Nominal Output Voltage(s) Supported  120V AC    JPS Input Cord Length (h;)  10    JPS Input Cord Length (h;)  11    JPS Input Cord Length (h;)  3.1    Recommended Electrical Service  20A 120V    Single-Phase  Single-Phase    Sangle-Phase  Single-Phase    Stage-Phase  Single-Phase    Externed Instrume (min.)  4.5 min. (1920w)    Hatl Load Runtime (min.	Power Factor	0.87
Cuput Voltage Regulation (Line Mode)  -:14%, +5%    Cuput Voltage Regulation (Battery Mode)  +/-5%    Load Management Receptacles  Two switched single outlet load banks (1.5-15/20R & 1.5-15/R)    Duput AC Waveform (AC Mode)  Pure Sine wave    Duput AC Waveform (Battery Mode)  Pure Sine wave    Duput AC Waveform (Battery Mode)  Pure Sine wave    Duput AC Waveform (Battery Mode)  Pure Sine wave    Duput AC Jopacity Details  Supports 1320 waits in standalone or extended runtime configurations    Nominal Output Voltage(s)  110V; 115V; 120V    Output Receptacles  (4) 5-15r; (4) 5-15/20R    Individually Controllable Load Banks  Yes    NPUT  Supported    Nominal Output Connection Type  5-20P    UPS Input Corn Length (ft)  10    UPS Input Cord Length (ft)  10    UPS Input Cord Length (ft)  11    UPS Input Cord Length (ft)  11    UPS Input Cord Length (ft)  12    UPS Input Cord Length (ft)  12 <td< td=""><td>Nominal Voltage Details</td><td>120v nominal output in battery mode</td></td<>	Nominal Voltage Details	120v nominal output in battery mode
Mode)    11 mm, HD/3      Dutput Votage Regulation (Battery)    +/- 5%      Load Management Receptacles    Two switched single outlet load banks (1 5-15/20R & 1 5-15R)      Dutput AC Waveform (AC Mode)    Pure Sine wave      Dutput AC Waveform (AC Mode)    Pure Sine wave      Dutput Capacity Details    Supports 1920 waits in standalone or extended runtime configurations      Nominal Dutput Voltage(s)    110V: 115V: 120V      Dutput Capacity Details    Yes      Nominal Dutput Voltage(s)    110V: 115V: 120V      Dutput Controllable Load Banks    Yes      Nominal Dutput Voltage(s)    16A      Nominal Input Voltage(s) Supported    120V AC      UPS Input Connection Type    5-20P      UPS Input Cord Length (ft.)    10      UPS Input Cord Length (ft.)    120V AC      UP Tesse    20A 120V      Input Phase    Single-Phase      Extended runtime supported via optional external battery packs    Extended runtime supported via optional external battery packs	Frequency Compatibility	60 Hz
Mode)      Mi Day        Load Management Receptacles      Two switched single outlet load banks (1 5-15/20R & 1 5-15R)        Dutput AC Waveform (AC Mode)      Pure Sine wave        Dutput AC Waveform (Battery)      Pure Sine wave        Dutput AC Waveform (Battery)      Pure Sine wave        Dutput AC Maveform (Battery)      Pure Sine wave        Dutput AC Maveform (Battery)      Pure Sine wave        Dutput AC Maveform (Battery)      Pure Sine wave        Dutput AC AC Maveform (Battery)      Pure Sine wave        Dutput AC AC Maveform (Battery)      Pure Sine wave        Mode)      10V: 115V: 120V        Dutput AC AC Maveform (AC Mode)      (4) 5-15/20R        Individually Controllable Load Banks      Yes        Neuront Connection Type      5-20P        IPS Input Corn Length (ft)      10        10PS Input Cord Length (ft)      10        11PS Input Cord Length (ft)      10        11PS Input Cord Length (ft)      10        11PS Input C	Output Voltage Regulation (Line Mode)	-14%, +6%
Output AC Waveform (AC Mode)      Pure Sine wave        Dutput AC Waveform (Battery      Pure Sine wave        Dutput Capacity Details      Supports 1920 watts in standalone or extended runtime configurations        Nominal Output Voltage(s)      110V; 115V; 120V        Output Receptacies      (4) 5-15R; (4) 5-15/20R        Individually Controllable Load Banks      Yes        NPUT      Rated input current (Maximum Load)        16A      120V AC        UPS Input Contection Type      5-20P        UPS Input Cond Length (h.)      10        UPS Input Cond Length (h.)      10        UPS Input Cond Length (h.)      10        UPS Input Cord Length (m)      3.1        Recommended Electrical Service      20A 120V        Recommended Electrical Service      Single-Phase        Battery Pack Compatibility      4.5 min. (1920w)        Half Load Runtime (min.)      4.5 min. (1920w)        Half Load Runtime (min.)      12 min. (980w)        Externeded runtime supported via optional external battery packs        Externed Runtime (min.)      12 min. (980w)        Externed Runtime (min.)      4.5 min. (1920w)        Externeded runtime supported via optional external battery pa	Output Voltage Regulation (Battery Mode)	+/- 5%
Duput AC Waveform (Battery)      Pure Sine wave        Output AC Waveform (Battery)      Pure Sine wave        Output AC Quacity Details      Supports 1920 watts in standalone or extended runtime configurations        Neminal Output Voltage(s)      110V: 115V: 120V        Dutput Receptacles      (4) 5-15R: (4) 5-15/20R        Individually Controllable Load Banks      Yes        NPUT      Rated input current (Maximum Load)        Rated input current (Maximum Load)      16A        Nominal Input Voltage(s) Supported      120V AC        UPS Input Connection Type      5-20P        UPS Input Cord Length (ft.)      10        UPS Input Cord Length (ft.)      12 min. (1920w)        Hall Load Runtime (min.)      4.5 min. (1920w)        Hall Load Runtime (min.)      12 min. (660w)        Extended runtime supported via optional external battery packs        Samps-ras classes "productLink" Infa" //www.tippilte.com/External-48/V-2U-Rack-Frodosure-DC-casing-select-UPS Systems B-P48/V2T-2U-P48/V4-2U-R	Load Management Receptacles	Two switched single outlet load banks (1 5-15/20R & 1 5-15R)
Mode)      Puile Sine wave        Dutput Capacity Details      Supports 1920 watts in standalone or extended runtime configurations        Nominal Output Voltage(s)      110V; 115V; 120V        Dutput Receptacles      (4) 5-15R; (4) 5-15/20R        Individually Controllable Load Banks      Yes        NPUT      Rated input current (Maximum Load)        16A      120V AC        UPS Input Connection Type      5-20P        Supported      120V AC        UPS Input Cord Length (ft.)      10        10 Single-Phase      Single-Phase        Battery Recommended Electrical Service      20A 120V        Input Phase      Single-Phase        Battery Pack Compatibility      Ansp:-ca class="productLink" href="//www.tinpute.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS Systems B-P48V24-2U-2a-Sa-Rabp;//imit 1)Sabsp:-ca class="productLink" href="//www.tinpute.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS Systems B-P48V927-2U-2B-48V490RT-3U-2a-Rabps;//imit 1)Sabsp:-ca class="productLink" href="//www.tinpute.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS Systems B-P48V927-2U-2B-48V490RT-3U-2a-Rabps;//imit 1)Sabsp:-ca class="productLink" href="//www.tinpute.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS Systems B-P48V924-2U-2B-24V24-2U-2a-Rabps;//imit 1)Sabsp:-ca class="productLink" href="//www.tinpute.com/External-48V-3U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabl	Output AC Waveform (AC Mode)	Pure Sine wave
Nominal Output Voltage(s)    110V; 115V; 120V      Supported    (4) 5-15R; (4) 5-15/20R      Individually Controllable Load Banks    Yes      NPUT    Rated input current (Maximum Load)      16A    16A      Nominal Input Voltage(s) Supported    120V AC      UPS Input Connection Type    5-20P      UPS Input Cord Length (ft.)    10      UPS Input Cord Length (m)    3.1      Recommended Electrical Service    20A 120V      Input Phase    Single-Phase      Surgle-Phase    Single-Phase      EATTERY    2      Full Load Runtime (min.)    4.5 min. (1920w)      Half Load Runtime (min.)    12 min. (1920w)      Extended runtime supported via optional external battery packs    Tobsp:-a class="product.link" href="//www.tippite.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS Systems-BP48V24-2U-BP48V24-2U-SeAntsp:(multi-pack compatibility class="product.link" href="//www.tippite.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS Systems-BP48V24-2U-SeAntsp:(multi-pack compatible)      Cystem Voltage (VDC)    48    Less than 4.5 hours from 10% to 90% (typical, full load discharge)      Dattery Recharge Rate (included lasters)    Less than 4.5 hours from 10% to 90% (typical, full load discharge)	Output AC Waveform (Battery Mode)	Pure Sine wave
Supported    1100, 1100, 1200      Dutput Receptacles    (4) 5-15R; (4) 5-15/20R      Individually Controllable Load Banks    Yes      NPUT    Rated input current (Maximum Load)      Rated input current (Maximum Load)    16A      Normial Input Voltage(s) Supported    120V AC      UPS Input Connection Type    5-20P      UPS Input Cord Length (ft.)    10      UPS Input Cord Length (ft.)    10      UPS Input Cord Length (m)    3.1      Recommended Electrical Service    20A 120V      Nput Phase    Single-Phase      Supported    120 vice      Full Load Runtime (min.)    4.5 min. (1920w)      Half Load Runtime (min.)    12 min. (960w)      Expandable Battery Runtime    Extended runtime supported via optional external battery packs      Subsp://a class=*productLink* href=*//www.tipplite.com/External-48V-2U-rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48/24-2U-3b-B48/007-3U-3b-B58/(mint 1)-Rack-Enclosure-DC-Cabling-select-UPS-Systems-BP48/24-2U-3b-B48/007-2U-5a-Abresp.(mint 1)-Rack-Enclosure-DC-Cabling-select-UPS-Systems-BP48/24-2U-3b-B48/007-2U-5a-Abresp.(mint 1)-Rack-Enclosure-DC-Cabling-select-UPS-Systems-BP48/24-2U-3b-B48/007-2U-5a-Abresp.(milt-pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48/24-2U-3b-B48/007-2U-5a-Abresp.(milt-pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48/24-2U-3b-B48/007-2U-5a-Abresp.(milt-pack-En	Output Capacity Details	Supports 1920 watts in standalone or extended runtime configurations
Individually Controllable Load Banks    Yes      NPUT      Rated input current (Maximum Load)    16A      Nominal Input Voltage(s) Supported    120V AC      UPS Input Connection Type    5-20P      UPS Input Cord Length (ft.)    10      UPS Input Cord Length (ft.)    10      UPS Input Cord Length (m)    3.1      Recommended Electrical Service    20A 120V      Input Phase    Single-Phase      BATTERY    Full Load Runtime (min.)      Full Load Runtime (min.)    4.5 min. (1920w)      Half Load Runtime (min.)    12 min. (960w)      Extended runtime supported via optional external battery packs    SansportDureBatteryPack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V24-2UBP48V24-2URas-Anbsp.(Imit 1). Anbspca      Cabsing-select-UPS-Systems-BP48V24-2UBP48V24-2URas-Anbsp.(Imit 1). Anbspca    Cabsing-select-UPS-Systems-BP48V24-2UBP48V24-2URas-Anbsp.(Imit 1). Sanspca      Cabling-select-UPS-Systems-BP48V24-2UBP48V24-2URas-Anbsp.(Imit 1). Sanspca    Cabling-select-UPS-Systems-BP48V24-2UBP48V24-2URas-Anbsp.(Imit 1). Sanspca      Cabling-select-UPS-Systems-BP48V24-2UBP48V24-2URas-Anbsp.(Imit 1). Sanspca    Cabling-select-UPS-Systems-BP48V24-2UBP48V24-2URas-Anbsp.(Imit 1). Sanspca      Cabling-select-UPS-Systems-BP48V24-2UBP48V24-2URas-Anbsp.(Imit 1). Sanspca	Nominal Output Voltage(s) Supported	110V; 115V; 120V
NPUT      Rated input current (Maximum Load)    16A      Nominal Input Voltage(s) Supported    120V AC      UPS Input Connection Type    5-20P      UPS Input Cond Length (ft.)    10      UPS Input Cord Length (ft.)    12      Input Phase    Single-Phase      BATTERY    Extended runtime supported via optional external battery packs      & Ansp.:-a class='productLink' Infe!'/www.tipplite.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48VQRT-2U-BP48VQRT-2U-Vack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48VQRT-3U-SP48VQRT-3U-SP48VQRT-3U-SP48VQRT-3U-SP48VQRT-3U-SP48VQRT-3U-SP48VQRT-3U-SP48VQRT-3U-SP48VQRT-3U-SP48VQRT-2U-Sack-Tower-Battery-Pack-for-UPS-Systems-BP48VQ2T-2US-SP48V	Output Receptacles	(4) 5-15R; (4) 5-15/20R
Rated input current (Maximum Load)    16A      Nominal Input Voltage(s) Supported    120V AC      UPS Input Connection Type    5-20P      UPS Input Cord Length (ft.)    10      UPS Input Cord Length (m)    3.1      Recommended Electrical Service    20A 120V      input Phase    Single-Phase      BATTERY    5-20P      Full Load Runtime (min.)    4.5 min. (1920w)      Half Load Runtime (min.)    12 min. (960w)      Expandable Battery Runtime    Extended runtime supported via optional external battery packs      External Battery Pack Compatibility    Anbsp: <a class="productLink" href="//www.tripplite.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-cdabing-select-UPS-Systems-BP48V27-2US" productlink"="">BP48V27-2US"&gt;BP48V27-2US"&gt;BP48V27-2US"&gt;BP48V27-2US"&gt;BP48V27-2US"&gt;BP48V27-2US"&gt;BP48V27-2US"      DC System Voltage (VDC)    48      Battery Recharge Rate (Included Battery Ret (Included Battery Ret (Included Battery)    Less than 4.5 hours from 10% to 90% (typical, full load discharge)      Internal UPS Replacement Battery    Anbsp:<a class="productLink" href="//www.tripplite.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V24-2U" productlink"="">BP48V24-2U"&gt;BP48V24-2U      External Battery Pack Compatibility     <a class="productLink" href="//www.tripplite.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V24-2U-SP48V24-2U" productlink"="">BP48V24-2U"&gt;BP48V24-2U"&gt;BP48V24-2U      External Battery Pack Compatibility     <a class="productLink" href="//www.tripplite.com/External-48V-3U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V60RT-3U-BP48V24-2U">BP48V24-2U      External Battery Pack Compatibility     <a class="productLink" href="//www.tripplite.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V24-2U" productlink"="">BP48V24-2U"&gt;BP48V24-2U        External Battery Pack Compatibility       <a class="productLink" href="//www.tripplite.com/External-48V-3U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V60RT-3U">BP48V24-2U        External Battery Pack Compatibility       <a class="productLink" href="//www.tripplite.com/External-48V-3U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V60RT-3U">BP48V27-2US        DC System Voltage (VDC)      48        Battery Recharge Rate (Included Batteries)      Less than 4.5 hours from 10% to 90% (typical, full load discharge)        Internal UPS Replacement Battery       <a class="productLink" href="//www.tripplite.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V/24-2U-&gt;BP48V/24-2U'&gt;BP48V24-2U/&gt;BP48V20-Zattery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V27-3U-BP48V60RT-3U-&gt;BP48V60RT-3U-&gt;BP48V60RT-3U-&gt;BP48V60RT-3U-&gt;BP48V20-Zattery-Pack-Tower-Battery-Pack-For-UPS-Systems-BP48V27-2US-&gt;BP48V27-2US" productlink"="">BP48V27-2US-&gt;BP48V27-2US-&gt;BP48V27-2US-&gt;BP48V27-2US-&gt;BP48V27-2US      DC System Voltage (VDC)    48      Battery Recharge Rate (Included Batteries)    Less than 4.5 hours from 10% to 90% (typical, full load discharge)      Internal UPS Replacement Battery     <a class="productLink" href="//www.tripplite.com/2U-UPS-Replacement-48VDC-Battery-Cartridge-1-set-4-&lt;/td&gt;&lt;/td&gt;&lt;td&gt;Half Load Runtime (min.)&lt;/td&gt;&lt;td&gt;12 min. (960w)&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Cabling-select-UPS-Systems-BP48V24-2U~BP48V24-2U">BP48V24-2U    Shopsp;(limit 1); <a< td="">      class="productLink" href="//www.tripplite.com/External-48V-3U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V60RT-3U~BP48V60RT-3U"&gt;BP48V60RT-3U      select-UPS-Systems-BP48V60RT-3U~BP48V60RT-3U    Shopsp;(multi-pack-comer-Battery-Pack-Tower-Battery-Pack-Tower-Battery-Pack-Tower-Battery-Pack-Tower-Battery-Pack-for-UPS-Systems-BP48V27-2US~BP48V27-2US"&gt;BP48V27-2US"&gt;BP48V27-2US      DC System Voltage (VDC)    48      Battery Recharge Rate (Included Batteries)    Less than 4.5 hours from 10% to 90% (typical, full load discharge)      Internal UPS Replacement Battery     <a class="productLink" href="//www.tripplite.com/2U-UPS-Replacement-48VDC-Battery-Cartridge-1-set-4-&lt;/td&gt;&lt;/td&gt;&lt;td&gt;External Battery Pack Compatibility&lt;/td&gt;&lt;td&gt;Cabling-select-UPS-Systems-BP48V24-2U~BP48V24-2U" productlink"="">BP48V24-2U</a> (limit 1); <a class="productLink" href="//www.tripplite.com/External-48V-3U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling- select-UPS-Systems-BP48V60RT-3U~BP48V60RT-3U"&gt;BP48V60RT-3U</a </a<></a> (multi-pack compatible); <a class="productLink" href="//www.tripplite.com/2U-UPS-Replacement-48VDC-Battery-Cartridge-1-set-4-select-Tripp-Lite-SmartPro-UPS~RBC94-2U" productlink"="">RBC94-2U-/a&gt; </a></a></a></a></a></a></a></a></a>	Battery Recharge Rate (Included Batteries)	Less than 4.5 hours from 10% to 90% (typical, full load discharge)
	Internal UPS Replacement Battery Cartridge	<a class="productLink" href="//www.tripplite.com/2U-UPS-Replacement-48VDC-Battery-Cartridge-1-set-4-&lt;br&gt;select-Tripp-Lite-SmartPro-UPS~RBC94-2U">RBC94-2U</a>



Battery Access	Front panel battery access door
Battery Replacement Description	Hot-swappable, user replaceable batteries
Expandable Runtime	Yes
VOLTAGE REGULATION	
Voltage Regulation Description	Automatic voltage regulation (AVR) maintains regulated line power output with an input voltage range of 83 and 145
Overvoltage Correction	Voltage reduction of 12% applies when input is between 127 and 145
Undervoltage Correction	Voltage boost of 12% applies when input voltage is between 96 and 108
Severe Undervoltage Correction	Voltage boost of 24% applies when input voltage is between 83 and 95
USER INTERFACE, ALERTS & COM	ITROLS
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 power-failure, overload and low-battery conditions
SURGE / NOISE SUPPRESSION	
UPS AC Suppression Joule Rating	570
UPS AC Suppression Response Time	Instantaneous
EMI / RFI AC Noise Suppression	Yes
PHYSICAL	
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 (2-9USTAND); Wallmount (2POSTRMKITWM)
Minimum Required Rack Depth with External Battery Pack (cm)	66
Minimum Required Rack Depth with External Battery Pack (in.)	26
Minimum Required Rack Depth without External Battery Pack (cm)	61
Minimum Required Rack Depth without External Battery Pack (in.)	24



Optional Mounting Accessory Notes	Optional <a class="productLink" href="//www.tripplite.com/2U-9U-Tower-Stand-Kit-select-Rack-Mount-UPS-&lt;br&gt;Systems~2-9USTAND">2-9USTAND</a> enables upright tower UPS placement; <a class="productLink" href="//www.tripplite.com/2-Post-Rack-Mount-Wall-Mount-Adapter-Kit-select-Rack-Mount-UPS- Systems~2POSTRMKITWM"&gt;2POSTRMKITWM enables wall-mount and 2-post rackmount installation;  <a class="productLink" href="//www.tripplite.com/4-Post-1U-Universal-Adjustable-Rack-Mount-Shelf-Kit-for-&lt;br&gt;Wall-Mount-Racks~4POSTRAILKITWM">4POSTRAILKITWM</a> enables installation in 4-post short-depth racks from 14.5 to 23.5 inches (368 to 597mm); <a class="productLink" href="//www.tripplite.com/Heavy-Duty-&lt;br&gt;2-post-Front-Mounting-Ear-Kit~UPSHDEARKIT">UPSHDEARKIT</a> enables installation in 2 or 4-post racks using front vertical rails only, without rear support</a 
Primary Form Factor	Rackmount
Primary UPS Depth (mm)	483
Primary UPS Height (mm)	89
Primary UPS Width (mm)	445
Rack Height	2U
Shipping Dimensions (hwd / cm)	22.35 x 55.12 x 60.96
Shipping Dimensions (hwd / in.)	8.80 x 21.70 x 24.00
Shipping Weight (kg)	36.29
Shipping Weight (lbs.)	80.00
UPS Housing Material	Steel
UPS Power Module Dimensions (hwd, cm)	8.89 x 44.45 x 48.26
UPS Power Module Dimensions (hwd, in.)	3.50 x 17.50 x 19.00
UPS Power Module Weight (kg)	29.03
UPS Power Module Weight (lbs.)	64
ENVIRONMENTAL	
Operating Temperature Range	+32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius.
Storage Temperature Range	+5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius.
Relative Humidity	0 to 95%, non-condensing
AC Mode BTU / Hr. (Full Load)	250
Battery Mode BTU / Hr. (Full Load)	980
AC Mode Efficiency Rating (100% Load)	96%
COMMUNICATIONS	
Communications Interface	USB (HID enabled); DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface
Network Management Cards	SNMPWEBCARD; TLNETCARD; <a class="productLink" href="//www.tripplite.com/Web-Management-Accessory-Card~WEBCARDLX">WEBCARDLX</a>
Network Monitoring Port Description	Supports detailed monitoring of UPS and site power conditions
PowerAlert Software	For local monitoring via the UPS's built-in USB / Serial ports, download PowerAlert Local software at http://www.tripplite.com/poweralert
Communications Cable	USB and DB9 cabling included



WatchDog Compatibility	Supports Watchdog application, OS and hard-reboot restart options for remote applications
Network UPS Tools Compatibility	NUT compatible. See the full list of Tripp Lite NUT compatible UPS systems at http://www.networkupstools.org/stable-hcl.html?manufacturer=Tripp Lite
LINE / BATTERY TRANSFER	
Transfer Time	5 milliseconds (line to battery mode); 1 millisecond (battery to line mode)
Low Voltage Transfer to Battery Power (Setpoint)	83
High Voltage Transfer to Battery Power (Setpoint)	145
SPECIAL FEATURES	
Grounding Lug	Back panel grounding lug
Cold Start (Startup in Battery Mode During a Power Failure)	Cold-start operation supported
High Availability UPS Features	Hot swappable batteries
Green Energy-Saving Features	Greater than 95% efficiency - GREEN UPS; Individually controllable load banks
CERTIFICATIONS	
UPS Certifications	Tested to UL1778 (USA); Tested to CSA (Canada); Tested to NOM (Mexico); Meets FCC Part 15 Category A (EMI)
WARRANTY	
Product Warranty Period (Worldwide)	2-year warranty, 3 year with registration. Note: <a <br="" class="insuranceLink">href="//www.tripplite.com/support/product-warranty-registration"&gt;Registration is required</a> for 3-year warranty.
Connected Equipment Insurance (U.S., Canada & Puerto Rico)	\$250,000 <a class="insuranceLink" href="//www.tripplite.com/support/insurance-policy">Ultimate Lifetime Insurance</a>

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