# imall

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

### SmartOnline 120V 2.2kVA 1.6kW Double-Conversion UPS, 2U Rack/Tower, Extended Run, Pre-installed WEBCARDLX network interface, USB, DB9 Serial

#### MODEL NUMBER: SU2200RTXL2UN





#### Description

Tripp Lite Smart Online UPS systems offer high performance power protection ideal for critical server and network equipment in datacenters, computer rooms and network closets. Online, double-conversion Uninterruptible Power Supply (UPS) maintains perfectly regulated output power by continuously converting raw AC input to DC, then re-converting output back to AC. Fully regulated sine wave AC output with +/-2% voltage regulation powers network equipment continuously, even during severe brownouts and overvoltages, all without depleting UPS battery reserves. Maintains battery-derived AC output during power failures with zero transfer time. Extended runtime options available. Highly efficient operation in optional economy mode saves BTU heat output and energy costs. Network management interfaces support communications via USB port, DB9 serial port and pre-installed WEBCARDLX network management interface card. The Java-free HTML5-based WEBCARDLX interface enables full remote access for site power and UPS status monitoring, configuration, control and email notifications via secure web browser, SNMP, telnet or SSH. It supports 10/100 Mbps auto-sensing for optimum communication with an Ethernet network. Optional EnviroSense2 modules (sold separately) provide a variety of environmental monitoring capabilities. Protocols supported include HTTP, HTTPS, SMTP, SNMPv1, SNMPv2, SNMPv3, telnet, SSH, FTP, DHCP and NTP. Built-in DB9 port offers both enhanced RS-232 data and basic contact closure monitoring ability. HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X. PowerAlert UPS monitoring software is available via free download. Emergency Power Off (EPO) interface. LED display reports UPS operating mode, line power availability, battery mode operation, inverter operation and output power availability. Audible alarm with push-button momentary alarm-cancel. Programmable self-test. Fault-tolerant auto-bypass mode. Field-replaceable, hot-swappable internal batteries and external battery packs.

#### Highlights

- 2200VA / 2.2kVA / 1600 watt on-line double-conversion 2U rack/tower UPS
- 110/120V +/-2% output at 50/60Hz, high efficiency economy mode option
- Expandable runtime, Hot-swap batteries; 19 in / 48.3cm installed depth
- USB, RS232, EPO ports and Pre-installed WEBCARDLX network interface
- Front panel status LEDs with detailed load and battery metering
- 2 independently switchable output load banks
- NEMA 5-20P input; L5-20R & 5-15/20R outlets

#### **Package Includes**

- SU2200RTXL2UN UPS with
  Pre-installed Network
  Management Card interface
- USB, DB9 and EPO cabling
- Mounting hardware for 4 post rack enclosures
- Instruction manual



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#### Features

- Tripp Lite SU2200RTXL2UN 2200VA / 2.2kVA / 1600W on-line, double-conversion 3U rackmount UPS
- Selectable 110/120V output (120V factory preset)
- NEMA 5-20P input, 6 NEMA 5-15/20R & 1 L5-20R
- Two switched 3-outlet load banks support remote reboot or programmable load shedding options
- Supports 2% output voltage regulation and zero transfer time in double conversion mode
- Economy mode option offers enhanced efficiency operation, reduced power consumption and lower BTU emissions
- 14 minutes runtime at 50% load (800W) and 4.5 minutes at 100% load (1600W) with internal batteries
- BP48V24-2U (limit 1), BP48V60RT-3U (multi-pack compatible) and BP48V27-2US (multi-pack compatible) external battery packs available (some configurations require Tripp Lite's External Battery Configuration Software)
- Intelligent battery management system extends battery life
- LED Display reports UPS operating mode, line power availability, battery mode operation, inverter status and output power availability
- Audible alarm with push-button momentary alarm-cancel
- 4 post installation hardware included, Optional 2POSTRMKITWM enables 2 post rack installation
- Single line TEL / Network surge suppression
- · Electronic bypass maintains utility output during a variety of UPS fault conditions
- Network interfaces support communications via built-in USB, DB9 serial / contact-closure and preinstalled WEBCARDLX network management card
- WEBCARDLX interface allows full remote access for power monitoring, configuration, control and email notifications via secure web browser, SNMP, telnet or SSH
- Optional E2 sensors enable site monitoring of temperature, humidity and contact-closure status
- HID-compliant USB interface 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 <u>www.tripplite.com/poweralert</u>

## **Specifications**

| OVERVIEW                      |              |
|-------------------------------|--------------|
| UPC Code                      | 037332181480 |
| OUTPUT                        |              |
| Output Volt Amp Capacity (VA) | 2200         |
| Output kVA Capacity (kVA)     | 2.2          |
| Output Watt Capacity (Watts)  | 1600         |



| Output kW Capacity (kW)                          | 1.6  |
|--|--|
| Output Capacity Details                          | OVERLOAD CAPACITY: Supports inverter operation up to 105% load continuously, 125% load for 3 minutes; 150% load for 30 seconds and >150% load for 0.5 seconds before switching to BYPASS (when bypass input voltage and frequency are WITHIN bypass limits) or SHUTDOWN (when bypass input voltage or frequency are OUTSIDE bypass limits) |
| Power Factor                                     | 0.7  |
| Crest Factor                                     | 3:1  |
| Nominal Output Voltage(s)<br>Supported           | 110V; 120V   |
| Nominal Voltage Details                          | 120V default   |
| Frequency Compatibility                          | 50 / 60 Hz   |
| Frequency Compatibility Details                  | Output frequency matches input nominal on startup, defaults to 60 Hz on cold-start   |
| Output Voltage Regulation (Line Mode)            | +/- 2%   |
| Output Voltage Regulation<br>(Economy Line Mode) | +/- 10%  |
| Output Voltage Regulation (Battery Mode)         | +/- 2%   |
| Output Receptacles                               | (6) 5-15/20R; (1) L5-20R   |
| Load Management Receptacles                      | Two switchable three-outlet 5-15/20R load banks  |
| Output AC Waveform (AC Mode)                     | Sine wave  |
| Output AC Waveform (Battery Mode)                | Pure Sine wave   |
| INPUT  |  |
| Rated input current (Maximum Load)               | 16A  |
| Nominal Input Voltage(s) Supported               | 110V AC; 120V AC   |
| UPS Input Connection Type                        | 5-20P  |
| Input Circuit Breakers                           | 30A  |
| UPS Input Cord Length (ft.)                      | 10   |
| UPS Input Cord Length (m)                        | 3.1  |
| UPS Input Cord Length Details                    | Built-in   |
| Recommended Electrical Service                   | 20A 120V   |
| Input Phase                                      | Single-Phase   |
| BATTERY  |  |
| Full Load Runtime (min.)                         | 4.5 min. (1600w)   |
| Half Load Runtime (min.)                         | 14 min. (800w)   |
| Expandable Battery Runtime                       | Extended runtime supported via optional external battery packs   |



| 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~BP48V24-2U">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">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">BP48V60RT-3U</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</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</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</a> (limit 1); <a class="productLink" href="//www.tripplite.com/External-48V-2U-Rack-Tower-Battery-Pack-For-UPS-Systems-BP48V27-2US">BP48V27-2US"&gt;BP48V27-2US</a> (multi-pack compatible); <a class="productLink" href="/www.tripplite.com/External-48V-2U-Rack-Tower-Battery-Pack-for-UPS-Systems-BP48V27-2US">BP48V27-2US"&gt;BP48V27-2US</a> (multi-pack compatible); <a class="productLink" href="/www.tripplite.com/External-48V-2U-Rack-Tower-Battery-Pack-for-UPS-Systems-BP48V27-2US">WWW.tripplite.com/External-48V-2U-Rack-Tower-Battery-Pack-for-UPS-Systems-BP48V27-2US</a> |
|---|--|
| Expandable Runtime Description                | <a class="productLink" href="//www.tripplite.com/External-48V-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V24-2U~BP48V24-2U">BP48V24-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V24-2U~BP48V24-2U"&gt;BP48V24-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V24-2U~BP48V24-2U"&gt;BP48V24-2U-Rack-Tower-Battery-Pack-Enclosure-DC-Cabling-select-UPS-Systems-BP48V24-2U~BP48V24-2U"&gt;BP48V24-2U</a>  |
| DC System Voltage (VDC)                       | 48   |
| Battery Recharge Rate (Included Batteries)    | Less than 6 hours from 10% to 80% (typical, full load discharge)   |
| Internal UPS Replacement Battery<br>Cartridge | <a class="productLink" href="//www.tripplite.com/2U-UPS-Replacement-48VDC-Battery-Cartridge-1-set-4-select-Tripp-Lite-SmartPro-UPS~RBC94-2U">RBC94-2U</a>  |
| Battery Access                                | Front panel battery access door  |
| Battery Replacement Description               | Hot-swappable, user replaceable sealed, flame retardant, non-spillable batteries   |
| Expandable Runtime                            | Yes  |
|   |  |

#### VOLTAGE REGULATION

| Voltage Regulation Description | Online, double-conversion power conditioning                                  |
|--------------------------------|---|
| Overvoltage Correction         | 2% output voltage regulation during overvoltages to 150                       |
| Undervoltage Correction        | 2% output voltage regulation during undervoltages to 80                       |
| Severe Undervoltage Correction | 2% output voltage regulation during undervoltages to 65 (under 70% load only) |
|                                |   |

#### **USER INTERFACE, ALERTS & CONTROLS**

| Switches               | 2 switches control off/on power status and alarm-cancel/self-test operation  |
|------------------------|--|
| Alarm Cancel Operation | Power-fail alarm can be silenced using alarm-cancel switch   |
| Audible Alarm          | Audible alarm indicates UPS startup, power-failure, low-battery, overload, UPS fault and remote shutdown conditions  |
| LED Indicators         | 14 LEDs indicate line power, online mode, economy/bypass mode, on-battery, overload, battery low, replace battery and fault status information; 4-LED meter displays load and battery charge levels; LED panel rotates for viewing in rack/tower formats |

#### SURGE / NOISE SUPPRESSION

| UPS AC Suppression Joule Rating     | 570  |
|-------------------------------------|--|
| UPS AC Suppression Response<br>Time | Instantaneous  |
| UPS Dataline Suppression            | 1 line TEL/DSL (1 in / 1 out); 10/100Base T Ethernet |
| EMI / RFI AC Noise Suppression      | Yes  |
| PHYSICAL                            |  |

| Included Mounting Accessory<br>Description                    | Includes 4 post rackmount installation accessories                           |
|---|--|
| Installation Form Factors Supported with Optional Accessories | 2 post rackmount (2POSTRMKITWM); Wallmount (2POSTRMKITWM); Tower (2-9USTAND) |



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| Primary Form Factor  | Rackmount  |
|--|--|
| UPS Power Module Dimensions (hwd, in.)                             | 3.5 x 17.5 x 19  |
| UPS Power Module Dimensions (hwd, cm)                              | 8.89 x 44.45 x 48.26   |
| Rack Height (U Spaces)   | 2  |
| Minimum Required Rack Depth without External Battery Pack (cm)     | 61   |
| Minimum Required Rack Depth with<br>External Battery Pack (cm)     | 66   |
| Minimum Required Rack Depth<br>without External Battery Pack (in.) | 24   |
| Minimum Required Rack Depth with<br>External Battery Pack (in.)    | 26   |
| UPS Power Module Weight (lbs.)                                     | 47.4   |
| UPS Power Module Weight (kg)                                       | 21.50  |
| Shipping Dimensions (hwd / in.)                                    | 9.100 x 20.200 x 23.500  |
| Shipping Dimensions (hwd / cm)                                     | 23.11 x 51.31 x 59.69  |
| Shipping Weight (lbs.)   | 63.2000  |
| Shipping Weight (kg)   | 28.67  |
| Cooling Method   | Fan  |
| UPS Housing Material   | Steel  |
| Primary UPS Height (mm)  | 89   |
| Primary UPS Width (mm)   | 445  |
| Primary UPS Depth (mm)   | 483  |
| 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)                                      | 816  |
| AC Economy Mode BTU / Hr. (Full<br>Load)                           | 349  |
| Battery Mode BTU / Hr. (Full Load)                                 | 889  |
| AC Economy Mode Efficiency Rating (100% Load)                      | 94%  |
| Audible Noise  | < 45dB at 1m   |
| COMMUNICATIONS   |  |
| Communications Interface   | Contact closure; DB9 Serial; EPO (emergency power off); Pre-installed network card; Slot for SNMP/Web interface; USB (HID enabled) |
|  |  |



| Network Monitoring Port Description                            | Includes pre-installed WEBCARDLX network interface; DB9 port supports RS232 and contact closure<br>communications; Economy-mode setting option is available using PowerAlert software and DB9 Serial cable<br>connection OR installed Network Management Card |
|--|---|
| PowerAlert Software  | For local monitoring via the UPS's built-in communication ports, download PowerAlert Local software at<br>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   |
| LINE / BATTERY TRANSFER  |   |
| Transfer Time  | No transfer time (0 ms.) in online, double-conversion mode  |
| Low Voltage Transfer to Battery<br>Power (Setpoint)            | 80V (100% load), 65V ( <70% load)   |
| High Voltage Transfer to Battery<br>Power (Setpoint)           | 150   |
| SPECIAL FEATURES   |   |
| Cold Start (Startup in Battery Mode<br>During a Power Failure) | Cold-start operation supported  |
| High Availability UPS Features                                 | Automatic inverter bypass; Hot swappable batteries  |
| Green Energy-Saving Features                                   | High efficiency economy mode operation; Individually controllable load banks; Schedulable daily hours of economy mode operation   |
| 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<br>(Worldwide)                         | 2-year limited warranty   |
| Connected Equipment Insurance<br>(U.S., Canada & Puerto Rico)  | \$250,000 <a class="insuranceLink" href="//www.tripplite.com/support/insurance-policy">Ultimate Lifetime<br/>Insurance</a>  |

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