SmartOnline 120V 2.2kVA 1.6kW Double-Conversion UPS, 2U Rack/Tower, Extended Run, Network Card Slot, USB, DB9 Serial

MODEL NUMBER: **SU2200RTXL2UA**

Highlights

- 2200VA / 2.2kVA / 1600 watt on-line double-conversion 2U rack/tower UPS
- 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; slot for network management card options
- 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
- 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

- SU2200RTXL2Ua On-line Double-Conversion UPS System
- USB, DB9 and EPO Cabling
- Mounting hardware for 4 post rack enclosures
- Instruction manual

Description

2200VA on-line, double-conversion UPS system for critical server, network and telecommunications equipment. 2U rackmount form factor with an installed depth of only 19 inches. Expandable battery runtime with optional BP48V24-2U (limit 1), BP48V60RT-3U (multi-pack compatible) and BP48V27-2US (multi-pack compatible) external battery packs. Full-time sine wave 120V output with +/-2% voltage regulation. Online, double-conversion Uninterruptible Power Supply (UPS) actively converts raw incoming AC power to DC, then re-converts output back to completely regulated, filtered AC output. Operates continuously without using battery power during brownouts to 65V and overvoltages to 150V. Highly efficient operation in optional economy mode saves BTU heat output and energy costs. NEMA 5-20P input plug. NEMA 5-15/20R and NEMA L5-20R output receptacles. Network-grade AC surge and noise suppression. Zero transfer time between AC and battery operation. Network-grade AC surge and noise suppression. Zero transfer time between AC and battery operation. Network management interfaces support simultaneous communications via USB port, DB9 serial port and slot for network management interface options. Built-in DB9 port offers both enhanced RS-232 enabled monitoring data, plus 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. Supports simultaneous detailed monitoring of equipment load levels, self-test data and utility power conditions via all 3 network interfaces. PowerAlert UPS monitoring software is available via free download. Emergency Power Off (EPO) interface. Integrated two-bank PDU switching supports load shedding and remote reboot of connected equipment. 3-stage metered current monitoring and battery charge status LEDs. LED display panel easily rotates for viewing in rackmount or tower configurations. Dataline surge suppression for dialup, DSL or network Ethernet connection. Utility power and voltage regulation LEDs. Audible alarm. Self-test. Fault-tolerant auto-bypass mode. 4-post rackmount accessories included; 2-9USTAND tower kit and 2POSTRMKITWM 2-post rack & wallmount accessories available. Field-replaceable, hot-swappable internal batteries and external battery packs. Attractive all-black color scheme. $250,000 Ultimate Lifetime

Insurance (U.S., Canada, and Puerto Rico only).

Features

- SmartOnline high performance UPS system is ideal for critical voice, data, medical and industrial network applications

- True on-line, double-conversion UPS provides perfectly regulated sine wave output within 2% of 120V under all usage conditions

- Maintains continuous operation through blackouts, voltage fluctuations and surges with zero transfer time

- Highly efficient operation in optional economy mode setting, saving BTU heat output and energy costs

- Removes harmonic distortion, fast electrical impulses, frequency variations and other hard to solve power problems not addressed by other UPS types

- Corrects line voltage conditions as low as 65V and as high as 150V back to 120V (+/-2%) values

- Standard internal battery set offers 14 min. runtime at half load (800W) and 4.5 min. at full load (1600W)

- Automatic restart after power outages that drain batteries and shutdown UPS immediately provide AC power to equipment when power returns

- Extended runtime available with optional BP48V24-2U (limit 1), BP48V60RT-3U (multi-pack compatible) and BP48V27-2US (multi-pack compatible) external battery packs

- Some external battery configurations require the use of Tripp Lite's External Battery Configuration Software (see manual)

- Intelligent battery management system extends battery life

- Compact rackmount form factor installs using only 2 rack spaces (2U) with a maximum installed depth of only 19 inches

- Ships with all mounting accessories for 4 post rackmount installation

- Optional 2POSTRMKITWM enables 2 post rackmount or wallmount installation

- Optional 2-9USTAND accessory enables small-footprint upright tower placement

- Fault tolerant electronic bypass maintains utility output during a variety of UPS fault conditions

- Network interfaces support simultaneous communications via built-in USB, DB9 serial / contact-closure and slot for network management card options

- Compatible with Tripp Lite UPS management card options TLNETCARD, WEBCARDLX, SNMPWEBCARD, MODBUSCARD and RELAYIOCARD

- 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 www.tripplite.com/poweralert

- Built-in Emergency Power Off (EPO) interface with cable

- NEMA 5-20P input plug; NEMA 5-15/20R & NEMA L5-20R output receptacles

- Integrated 2 bank switched PDU enables remote outlet management for load shedding or remote reboot of individual load banks (each bank has 3 outlets)

- Front panel LEDs offer current monitoring and battery charge level information
- UPS ships fully assembled in full compliance with DOT regulations, no time consuming connection of
  internal batteries by user required
- Single line TEL/DSL or network ethernet line surge suppression
- $250,000 Ultimate Lifetime Insurance (U.S., Canada, and Puerto Rico only)

Specifications

OVERVIEW	
UPC Code	037332042224
UPS Type	On-Line

INPUT	
Rated input current (Maximum Load)	16A
Nominal Input Voltage(s) Supported	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

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
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 (Economy Line Mode)	+/- 10%
Output Voltage Regulation (Battery Mode)	+/- 2%
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
Nominal Output Voltage(s) Supported	120V
Output Receptacles	(6) 5-15/20R; (1) L5-20R
Individually Controllable Load Banks	Yes

BATTERY

Battery Type	Valve Regulated Lead Acid (VRLA)
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
Expandable Runtime	Yes
Expandable Runtime Description	BP48V24-2U (limit 2 w/ 48VDCSPLITTER)
External Battery Pack Compatibility	BP48V24-2U (limit 1); BP48V60RT-3U (multi-pack compatible); BP48V27-2US (multi-pack compatible)
DC System Voltage (VDC)	48
Battery Recharge Rate (Included Batteries)	Less than 6 hours from 10% to 80% (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 sealed, flame retardant, non-spillable batteries

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 Time	Instantaneous
UPS Dataline Suppression	1 line TEL/DSL (1 in / 1 out); 10/100Base T Ethernet
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 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 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)	23.11 x 51.05 x 59.18
Shipping Dimensions (hwd / in.)	9.10 x 20.10 x 23.30
Shipping Weight (kg)	28.12
Shipping Weight (lbs.)	62.00
UPS Housing Material	Steel
UPS Power Module Dimensions (hwd, cm)	8.89 x 44.45 x 48.26
UPS Power Module Dimensions (hwd, in.)	3.5 x 17.5 x 19
UPS Power Module Weight (kg)	21.50
UPS Power Module Weight (lbs.)	47.4
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 Load)	169
Battery Mode BTU / Hr. (Full Load)	889
AC Economy Mode Efficiency Rating (100% Load)	94%
Audible Noise	< 45dB at 1m
COMMUNICATIONS	
Network Monitoring Port Description	Supports detailed monitoring of UPS and site power conditions; DB9 port supports RS232 and contact closure communications; Economy-mode setting option is available using PowerAlert software and DB9 Serial cable connection OR via select Network Management Card options
PowerAlert Software	For local monitoring via the UPS's built-in communication ports, download PowerAlert Local software at https://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
Communications Interface	Contact closure; DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface; USB (HID enabled)
LINE / BATTERY TRANSFER	
Transfer Time	No transfer time (0 ms.) in online, double-conversion mode
Low Voltage Transfer to Battery Power (Setpoint)	80V (100% load), 65V (<70% load)

High Voltage Transfer to Battery Power (Setpoint)	150
SPECIAL FEATURES	
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 inverter bypass; Expandable battery backup; Hot swappable batteries; On-Line/Double-Conversion; Remote management; Sine wave output; Zero transfer time
Green Energy-Saving Features	High efficiency economy mode operation; Individually controllable load banks; Schedulable daily hours of economy mode operation
STANDARDS & COMPLIANCE	
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 limited warranty
Connected Equipment Insurance (U.S., Canada & Puerto Rico)	$250,000 Ultimate Lifetime Insurance