# SmartOnline Expandable Rack/Tower UPS System

On-line, double-conversion protection for mission-critical applications



#### Model #: SU2200RTXL2U

- 2200VA on-line 2U rack / tower UPS
- Enhanced serial communications port and SNMP/Web card slot
- ▶ Maintains 120V +/-2% output during overvoltages to 138 and brownouts as low as 65V
- 2 load banks, 7 outlets (5-15/20, L5-20)
- Expandable runtime
- \$250,000 Ultimate Lifetime Insurance (USA & Canada only)

## **DESCRIPTION**

Tripp Lite's SmartOnLine SU2200RTXL2U on-line, double conversion UPS protects critical server, networking and telecommunications equipment from blackouts, voltage fluctuations and transient surges. Multi-use form factor occupies only 2 rack spaces (2U) in standard 19 inch rackmount configuration and includes tower stands to support upright placement. Large capacity 2.2kVA/1600 watt UPS continuously converts incoming AC power to DC power, then back to perfect sine wave AC output at 120V AC (+/-2%). Removes harmonic distortion, fast electrical impulses, frequency fluctuations and other hard-to-solve power problems not addressed by other UPS types. True sine wave output and zero transfer time offers guaranteed compatibility with all equipment types. Includes 7 outlets arranged in two individually switchable load banks. These outlet banks can be independently controlled via software interface to selectively reboot remote equipment, or shed less critical loads to extend battery runtime for more critical equipment. Battery support can be extended indefinitely through the addition of external 2U rackmount battery packs (part# BP48V21-2U). Includes slot for internal SNMP/web card, plus DB9 enhanced serial monitoring port for unattended shutdown, remote control and monitoring of UPS system and power data. Compatible with Tripp Lite's Watchdog system service software.

#### **KEY BUYING POINTS**

- True on-line, double conversion UPS provides pure, sine wave AC output at all times
- Maintains continuous operation through blackouts, voltage fluctuations and surges with zero transfer time
- Removes harmonic distortion, electrical impulses, frequency variations and other hard to solve power problems
- Accepts input voltages between 80 and 138 (65 to 138 at loads under 70%), regulating output to 120v +/-2%
- 2200VA / 1600 watt power capacity with 7 total outlets (6 NEMA 5-15/20R & 1 NEMA L5 20)
- Standard internal battery set provides 18 minutes runtime at half load
- Expandable runtime with multiple external battery packs (part# BP48V21-2U)
- Innovative design makes unit adaptable for rackmount or tower applications (tower stands included)
- Uses only 2 rack spaces (2U) in standard 19 inch rack
- DB9 serial port for network interface; SNMP compatible
- Slot for optional SNMP/web card (part# SNMPWEBCARD)
- PowerAlert unattended shutdown software and 6 ft. network cable included
- Compatible with Tripp Lite's Watchdog system service software
- \$250,000 Ultimate Lifetime connected equipment insurance
- 2 year manufacturers product warranty
- Diagnostic LEDs
- Battery replacement door
- Mounting hardware included for 4 post rackmount installation, optional separate purchase accessory 2POSTRMKIT enables installation in 2 post telecom racks

#### TYPICAL APPLICATIONS

Ideal for protection of critical 120V equipment in server rooms, internetworking closets and telecommunications systems in rackmount
or tower applications. Common applications include corporate or departmental servers, workstations, hubs, routers, bridges, CAD/CAM
workstations, concentrators, IP telephony and traditional PBX switching systems.

## **OPTIONS & ACCESSORIES**

• External battery pack: BP48V21-2U

• SNMP accessories: SNMPWEBCARD, ENVIROSENSE

• Dataline protectors: DNET1, DTEL2, DCATV

• Circuit Tester: CT120

• Rack enclosures: SRNET45UB, SR45U, SR45UB, SR24UB

• Power Distribution: PDU1220, PS7224-20

• 2 Post Rackmount Installation Hardware: 2POSTRMKIT

## **PACKAGE INCLUDES**

- SU2200RTXL2U On-line Double-Conversion UPS System
- PowerAlert Software and cabling
- Mounting hardware for 4 post rackmount installation / tower stands
- Instruction manual with warranty information

# **COMPLETE SPECIFICATIONS**

SYSTEM OVERVIEW	
System overview:	Online, double conversion 2U rack / tower UPS system continuously maintains near-perfect output power for critical internetworking and telecommunications equipment. Completely regenerates input power into perfectly regulated sine wave output free of harmonic distortion fast electrical impulses and frequency fluctuations. Maintains output within 2% of 120V during brownouts as low as 65V and overvoltages to 138V. Supports enhanced monitoring of UPS and line power conditions via DB9 serial port, included PowerAlert monitoring software and complete cabling. Includes slot for SNMPWEBCARD and 2 individually controllable output load banks. Runtime is expandable with BP48V212U battery packs.
Voltage compatibility:	120V
Frequency compatibility:	50/60 Hz compatible
OUTPUT	
Output volt amp capacity (VA):	2200
Output watt capacity (watts):	1600
Output nominal voltage:	120V AC
Output voltage regulation:	Maintains full-time sine wave output within 2% of 120V, less than 5% total harmonic distortion
Output frequency regulation:	Regulates line frequency to 50/60Hz +/- 0.05Hz
Outlet quantity / type:	7 outlets (6 NEMA 5-15/20R, 1 NEMA L5-20)
Customized load management receptacles:	2 individually controllable load banks support automated load shedding and remote reboot or demand of locked network devices. Configurable via PowerAlert software to automatically switch off optional loads, like monitors, to increase available runtime for servers and other critical devices. (each bank includes 3 outlets)
Overload protection:	Via 30A input breaker and dual 15A output breakers
INPUT	
Maximum input amps / watts:	16.2A / 1885 watts max.
Input connection type:	NEMA 5-20P (includes user installable NEMA 5-15P replacement plug)
Input cord length:	10 ft. 12 gauge
Recommended electrical service:	20A 120V

BATTERY	
Full load runtime:	Internal batteries — 6 min. 1 BP48V212U battery pack (2200VA) — 21 min.
Half load runtime:	Internal batteries — 18 min. 1 BP48V212U battery pack (1100VA) — 15 min.
DC system voltage:	48 V DC
Typical battery lifespan:	3-6 years, depending on usage
Battery recharge rate:	2-4 hours to 90%
Expandable battery runtime:	Supports extended runtime with optional external battery pack BP48V212U (multi-pack compatible)
VOLTAGE REGULATION	
Voltage regulation description:	On-line, double-conversion power conditioning maintains output within 2% of 120 volts at all times
Overvoltage correction:	Maintains output of 120V +/-2% during overvoltages to 138V AC
Brownout correction:	Maintains output of 120V +/-2% during undervoltages to 80V AC
Severe brownout correction:	At load levels less than 70%, UPS maintains output of 120V +/-2% during undervoltages to 65V AC
LEDS ALARMS & SWITCHES	
Front panel LEDs:	6 LED STATUS DISPLAY: line power (green), online (green), bypass (yellow), on battery (green), overload (red), battery low (yellow) 4 LED LOAD / BATTERY LEVEL DISPLAY (100%, 75%, 50%, 25%)
Alarms:	Multi-function audible alarm offers notification of UPS start, backup operation, low battery warning, overload, UPS fault and remote shutdown
Switches:	Includes main power off/on switch, plus 1 switch to select battery charge / load level display
SURGE / NOISE SUPPRESSION	
SURGE / NOISE SUPPRESSION  AC surge suppression:	Conforms to IEEE 587 / ANSI C62.41 specifications
	Conforms to IEEE 587 / ANSI C62.41 specifications Instantaneous
AC surge suppression:	
AC surge suppression: AC suppression response time:	Instantaneous
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:	Instantaneous
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL	Instantaneous Yes
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL  Shipping weight (lbs):	Instantaneous Yes 69.4
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL  Shipping weight (lbs):  Shipping weight (kg):	Instantaneous Yes 69.4 31.5
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL  Shipping weight (lbs):  Shipping weight (kg):  Unit weight (lbs):	Instantaneous Yes 69.4 31.5 54.6
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL  Shipping weight (lbs):  Shipping weight (kg):  Unit weight (lbs):	Instantaneous Yes  69.4 31.5 54.6 24.8
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL  Shipping weight (lbs):  Shipping weight (kg):  Unit weight (lbs):  Unit weight (kg):  Unit Dimensions (HWD/in):	Instantaneous Yes  69.4 31.5 54.6 24.8 3.5 x 17.5 x 22
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL  Shipping weight (lbs):  Shipping weight (kg):  Unit weight (lbs):  Unit weight (kg):  Unit Dimensions (HWD/in):  Unit Dimensions (HWD/cm):	Instantaneous Yes  69.4 31.5 54.6 24.8 3.5 x 17.5 x 22 8.89 x 44.5 x 52.8
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL  Shipping weight (lbs):  Shipping weight (kg):  Unit weight (lbs):  Unit weight (kg):  Unit Dimensions (HWD/in):  Unit Dimensions (HWD/cm):  Material of construction:	Instantaneous  Yes  69.4  31.5  54.6  24.8  3.5 x 17.5 x 22  8.89 x 44.5 x 52.8  Steel  Supports 2U rackmount installation in 4 post rack enclosures. 2 post rackmount installation supported with optional 2POSTRMKIT. Upright tower installation supported with included
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL  Shipping weight (lbs):  Shipping weight (kg):  Unit weight (lbs):  Unit weight (kg):  Unit Dimensions (HWD/in):  Unit Dimensions (HWD/cm):  Material of construction:  Form factors supported:	Instantaneous Yes  69.4 31.5 54.6 24.8 3.5 x 17.5 x 22 8.89 x 44.5 x 52.8 Steel Supports 2U rackmount installation in 4 post rack enclosures. 2 post rackmount installation supported with optional 2POSTRMKIT. Upright tower installation supported with included tower stands
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL  Shipping weight (lbs):  Shipping weight (kg):  Unit weight (lbs):  Unit weight (kg):  Unit Dimensions (HWD/in):  Unit Dimensions (HWD/cm):  Material of construction:  Form factors supported:  Cooling method:	Instantaneous Yes  69.4 31.5 54.6 24.8 3.5 x 17.5 x 22 8.89 x 44.5 x 52.8 Steel Supports 2U rackmount installation in 4 post rack enclosures. 2 post rackmount installation supported with optional 2POSTRMKIT. Upright tower installation supported with included tower stands Built-in cooling fan
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL  Shipping weight (lbs):  Shipping weight (kg):  Unit weight (lbs):  Unit weight (kg):  Unit Dimensions (HWD/in):  Unit Dimensions (HWD/cm):  Material of construction:  Form factors supported:  Cooling method:  Battery Access:	Instantaneous Yes  69.4 31.5 54.6 24.8 3.5 x 17.5 x 22 8.89 x 44.5 x 52.8 Steel Supports 2U rackmount installation in 4 post rack enclosures. 2 post rackmount installation supported with optional 2POSTRMKIT. Upright tower installation supported with included tower stands Built-in cooling fan
AC surge suppression:  AC suppression response time:  EMI / RFI AC noise suppression:  PHYSICAL  Shipping weight (lbs):  Shipping weight (kg):  Unit weight (lbs):  Unit weight (kg):  Unit Dimensions (HWD/in):  Unit Dimensions (HWD/cm):  Material of construction:  Form factors supported:  Cooling method:  Battery Access:  ENVIRONMENTAL	Instantaneous Yes  69.4 31.5 54.6 24.8 3.5 x 17.5 x 22 8.89 x 44.5 x 52.8 Steel Supports 2U rackmount installation in 4 post rack enclosures. 2 post rackmount installation supported with optional 2POSTRMKIT. Upright tower installation supported with included tower stands Built-in cooling fan User replaceable, hot swap battery replacement supported via front access panel

Relative Humidity:	0 to 95%, non-condensing	
COMMUNICATIONS		
Network monitoring port:	One built-in DB9 port offers both enhanced RS-232 enabled monitoring data, plus contact closure basic monitoring capability	
Software and cabling included:	Yes, includes PowerAlert software CD-ROM and complete cabling	
SNMP compatibility:	Yes, includes slot for optional SNMPWEBCARD accessory (#SNMPWEBCARD)	
WatchDog compatibility:	Yes, compatible with Tripp Lite's Watchdog system service to restore operation to locked equipment through soft reboot of application / OS or hard power off/on reboot of connected equipment - ideal for unattended kiosk applications	
LINE / BATTERY TRANSFER		
Transfer time from line power to battery mode:	Zero, online UPS continuously converts incoming AC-to-DC, then back to AC. When commercial power is interrupted, UPS maintains continuous output from battery reserves with absolutely no disruption in output AC power.	
Low voltage transfer to battery power:	Maintains continuous operation during undervoltages as low as 80V (65V at load levels under 70%). Below this switchover point, output is supported from battery derived AC power.	
High voltage transfer to battery power:	Maintains continuous operation without using battery power during overvoltages to 138V. Above this point, output is supported from battery derived AC power.	
CERTIFICATIONS		
Certifications:	UL1778 (USA), cUL (Canada), FCC Class A (emissions), NOM (Mexico)	
WARRANTY		
Optional coverage:	3-5 year warranties, plus next day and on-site warranty coverage available for select opportunities. Contact Tripp Lite for additional information.	
Product warranty:	2 year product warranty	
Connected equipment insurance (USA and Canada Only):	\$250,000 connected equipment insurance (USA and Canada only)	
SPECIAL FEATURES		
EPO port:	Supports "Emergency Power Off" via special-order cabling, contact Tripp Lite for more information	
Cold Start:	Yes, inverter can be "cold started" to enable temporary AC output during a power failure	
Appearance:	Attractive black steel rackmount housing	
BATTERY PACK ACCESSORY (optional)		
Battery Pack Accessory (optional):	BP48V212U (optional)	

The policy of Tripp Lite is one of continuous improvement.

Specifications are subject to change without notice.

Therefore, your product may vary slightly from what is currently listed.



Tripp Lite World Headquarters 1111 W. 35th Street Chicago, IL 60609 USA

> Customer Support (773) 869-1234

© 2003 Tripp Lite. All Rights Reserved.