

# Model #: SU2200XLA

# SmartOnline 2.2kVA On-Line Double-Conversion UPS, Tower, 110/120V NEMA outlets



### **Highlights**

- 2200VA / 2.2kVA / 2400 watt on-line double-conversion tower UPS
- 110/120V +/-2% output at 50/60Hz, high efficiency economy mode option
- Expandable runtime, Hot-swappable battery modules
- USB, RS232 & EPO ports; support for SNMP/WEB 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

## **Description**

Tripp Lite's Smart Online SU2200XLa on-line, double conversion UPS protects critical server, networking or telecommunications equipment from blackouts, brownouts, voltage fluctuations and surges in an attractive all-black upright tower form factor. Large capacity 2200VA/1600W UPS continuously converts incoming AC to DC, 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 systems. True sine wave output and zero transfer time offers guaranteed compatibility with all equipment types. Includes 7 UPS supported outlets. 2 three-outlet load banks can be independently controlled via software interface to selectively reboot remote equipment or automatically shed less critical loads to extend battery runtime for the most critical equipment. Battery support can be extended with the addition of external battery packs. 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. Network management interfaces support simultaneous communications via USB port, DB9 serial port and SNMPWEBCARD slot. HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X. Includes Tripp Lite's PowerAlert UPS Power Management Software. Compatible with Tripp Lite's Watchdog Service Monitoring and Control Software.

Package Includes

- SU2200XLa On-line Double-Conversion UPS System
- PowerAlert Software and cabling
- Instruction manual with warranty information
- EPO (Emergency Power Off) cabling

#### **Features**

- True on-line, double conversion UPS provides a constant, pure sine wave AC output
- Maintains continuous operation through blackouts, brownouts, voltage fluctuations and surges with zero transfer time
- Zero transfer time, on-line, double-conversion and economy-mode operation supported
- Removes harmonic distortion, electrical impulses, frequency variations and other hard-to-solve power problems
- Accepts input voltages between 80V and 150V (65V to 150V at loads under 70%), regulating output to 120V AC +/-2%
- 2200VA/1600W output capacity with 7 total outlets (6 NEMA5-15/20R and 1 L5-20R)
- Two built-in individually switchable load banks, each with three outets, can be controlled via software interface to selectively reboot remote equipment or automatically shed less critical loads to extend battery runtime for the most critical equipment
- Standard internal battery set provides 14 min. runtime at half load and 4.5 min. at full load

- Runtime is expandable with BP48V24-2U (limit 1) or BP48V60RT3U (multi-pack compatible) external battery packs
- Attractive all-black upright tower format
- Simultaneous communications via HID-compliant USB port, serial port, and SNMP/web card slot
- HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X
- DB9 serial network interface supports RS-232 and contact closure messaging
- Slot for optional SNMP/web card (part #: SNMPWEBCARD)
- Included PowerAlert UPS Power Management Software and cabling provides monitoring of in-depth site power conditions, full UPS status
  and fault warnings, output load level and load bank power control
- Compatible with Tripp Lite's WatchDog Service Monitoring and Control Software (part# WATCHDOGSW)
- Fault tolerant electronic bypass maintains utility output during a variety of UPS fault conditions
- Diagnostic LEDs
- \$250,000 Ultimate Lifetime Insurance coverage for conbnected equipment(USA & Canada only)
- 2-year product warranty

#### **Specifications**

|      | ITC   | ти  |
|------|-------|-----|
| - 00 | J I F | -01 |

| 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 (Economy line mode)       +/- 10%         Output voltage regulation (Battery       +/- 2%  | OUTPUT   |  |
|--|--|--|
| (KVA)         Instruct of the second of  | Output Volt Amp<br>Capacity (VA)               | 2200   |
| (wats)         Image: Comparison of the second of the  |  | 2.2  |
| Output power factor         0.7           Crest Factor         3:1           Nominal Output<br>Voltage(s) Supported         110V; 120V           Nominal Voltage details         120V default           Frequency<br>compatibility<br>compatibility details         0.7 60 Hz           Output voltage<br>regulation (line mode)         Output frequency matches input nominal on startup, defaults to 60 Hz on cold-start           Output voltage<br>regulation (line mode)         +/- 2%           Output voltage<br>regulation (line mode)         +/- 2%           Built-in controllable<br>Switched laad banks         Two switchable three-outlet 5-15/20R load banks           Output AC waveform<br>(AC mode)         Sine wave   |  | 1600   |
| Creat Factor         3:1           Nominal Output<br>Voltage(s) Supported         110V; 120V           Nominal Voltage details         120V default           Terguency<br>compatibility         50 / 60 Hz           Frequency<br>compatibility         50 / 60 Hz           Output frequency matches input nominal on startup, defaults to 60 Hz on cold-start           Output voltage<br>regulation (line mode)         +/- 2%           Output voltage<br>regulation (Economy<br>line mode)         +/- 2%           Output voltage<br>regulation (Battery<br>mode)         +/- 2%           Built-in controllable<br>Built-in controllable<br>switched lead banks         6 5-15/20R outlet(s); 1 L5-20R outlet(s)           Output AC waveform<br>(AC mode)         Sine wave           Output AC waveform<br>(Battery mode)         Pure Sine wave   | Output kW capacity                             | 1.6  |
| Nominal Output<br>Voltage(s) Supported         110V; 120V           Nominal Voltage details         120V default           Trequency<br>compatibility         50 / 60 Hz           Output requency matches input nominal on startup, defaults to 60 Hz on cold-start           Output voltage<br>regulation (line mode)         +/- 2%           Output voltage<br>regulation (leconomy<br>line mode)         +/- 10%           Output voltage<br>regulation (Battery<br>mode)         +/- 2%           Built-in CDTrollable<br>switched load banks         6 5-15/20R outlet(s); 1 L5-20R outlet(s)           Output AC waveform<br>(AC mode)         Sine wave   | Output power factor                            | 0.7  |
| Voltage (s) Supported         Interced for the support of the su | Crest Factor                                   | 3:1  |
| Frequency<br>compatibility       50 / 60 Hz         Frequency<br>compatibility details       Output frequency matches input nominal on startup, defaults to 60 Hz on cold-start         Output voltage<br>regulation (line mode)       +/- 2%         Output voltage<br>regulation (Economy<br>line mode)       +/- 10%         Output voltage<br>regulation (Battery<br>mode)       +/- 2%         Built-In UPS output<br>receptacles       6 5-15/20R outlet(s); 1 L5-20R outlet(s)         Built-in outrollable<br>switched load banks       Two switchable three-outlet 5-15/20R load banks         Output AC waveform<br>(AC mode)       Sine wave  | Nominal Output<br>Voltage(s) Supported         | 110V; 120V   |
| compatibility         Second end           Frequency<br>compatibility details         Output frequency matches input nominal on startup, defaults to 60 Hz on cold-start           Output voltage<br>regulation (line mode)         +/- 2%           Output voltage<br>regulation (Economy<br>line mode)         +/- 10%           Output voltage<br>regulation (Battery<br>mode)         +/- 2%           Built-in UPS output<br>receptacles         6 5-15/20R outlet(s); 1 L5-20R outlet(s)           Built-in controllable<br>switched load banks         Two switchable three-outlet 5-15/20R load banks           Output AC waveform<br>(AC mode)         Sine wave           Pure Sine wave         Pure Sine wave  | Nominal Voltage details                        | 120V default   |
| compatibility details  |  | 50 / 60 Hz   |
| regulation (line mode)   | Frequency compatibility details                | Output frequency matches input nominal on startup, defaults to 60 Hz on cold-start |
| regulation (Economy<br>line mode)  |  | +/- 2%   |
| regulation (Battery<br>mode) <ul> <li>Built-in UPS output<br/>receptacles</li> <li>6 5-15/20R outlet(s); 1 L5-20R outlet(s)</li> <li>Built-in controllable<br/>switched load banks</li> <li>Two switchable three-outlet 5-15/20R load banks</li> <li>Output AC waveform<br/>(AC mode)</li> <li>Sine wave</li> <li>Pure Sine wave</li> </ul>  | regulation (Economy                            | +/- 10%  |
| receptacles       Two switchable three-outlet 5-15/20R load banks         Built-in controllable switchable three-outlet 5-15/20R load banks       Two switchable three-outlet 5-15/20R load banks         Output AC waveform (AC mode)       Sine wave         Output AC waveform (battery mode)       Pure Sine wave  | Output voltage<br>regulation (Battery<br>mode) | +/- 2%   |
| switched load banks       Output AC waveform<br>(AC mode)     Sine wave       Output AC waveform<br>(battery mode)     Pure Sine wave  |  | 6 5-15/20R outlet(s); 1 L5-20R outlet(s)   |
| (AC mode)       Output AC waveform<br>(battery mode)   Pure Sine wave  |  | Two switchable three-outlet 5-15/20R load banks                                    |
| (battery mode)   |  | Sine wave  |
| INPUT  |  | Pure Sine wave   |
|  | INPUT  |  |

| Rated input current (at maximum load)                                  | 16A (120V), 17.6A (110V)  |
|--|---|
| Nominal Input<br>Voltage(s) Supported                                  | 110V AC; 120V AC  |
| UPS input connection type  | 5-20P   |
| Input circuit breaker  | 30A   |
| UPS Input cord length (ft.)  | 10  |
| UPS Input cord length<br>(m)   | 3   |
| Recommended<br>Electrical Service                                      | 20A 120V  |
| BATTERY  |   |
| Full load runtime<br>(minutes)   | 4.5 min. (1600w)  |
| Half load runtime<br>(minutes)   | 14 min. (800w)  |
| Expandable battery runtime   | Extended runtime supported via optional external battery packs  |
| External battery pack compatibility                                    | BP48V24-2U (limit 1); BP48V60RT3U (multi-pack compatible)   |
| DC system voltage<br>(VDC)   | 48  |
| Battery recharge rate (included batteries)                             | Less than 5 hours from 10% to 90%   |
| Replacement battery<br>cartridge (internal UPS<br>battery replacement) | RBC48-SUTWR   |
| Battery Access   | Battery access door   |
| Battery replacement description  | Hot-swappable, user replaceable 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)   |
| LEDS ALARMS & SWITC  | HES   |
| LED Indicators   | 14 LEDs indicate line power, online mode, economy/bypass mode, on-battery, overload, battery low, replace battery and fault status information - includes 4-LED meter display for load and battery charge level |
| Alarms   | Audible alarm indicates UPS startup, power-failure, low-battery, overload, UPS fault and remote shutdown conditions   |
| Alarm cancel operation   | Power-fail alarm can be silenced using alarm-cancel switch  |

| Switches  | 2 switches control off/on power status and alarm-cancel/self-test operation |
|---|---|
| SURGE / NOISE SUPPRE  | SSION   |
| 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<br>suppression   | Yes   |
| PHYSICAL  |   |
| Installation form<br>factors supported with<br>included accessories                             | Tower   |
| Primary form factor   | Tower   |
| UPS / Power Module<br>dimensions in primary<br>form factor (height x<br>width x depth / inches) | 10.2 x 9 x 19.5   |
| UPS / Power Module<br>dimensions in primary<br>form factor (height x<br>width x depth / cm)     | 26 x 22.9 x 49.5  |
| UPS / Power Module<br>weight (lbs)  | 52.7  |
| UPS / Power Module<br>weight (kg)   | 23.9  |
| UPS Shipping<br>dimensions (height x<br>width x depth / inches)                                 | 15.2 x 13 x 24  |
| UPS Shipping<br>dimensions (height x<br>width x depth / cm)                                     | 38.7 x 33 x 61  |
| Shipping weight (lbs)   | 59.5  |
| Shipping weight (kg)  | 27  |
| UPS housing material  | Steel   |
| Cooling method  | Fan   |
| ENVIRONMENTAL   |   |
| Operating Temperature<br>Range  | +32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius                   |
| Storage Temperature<br>Range  | +5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius                  |
| Relative Humidity   | 0 to 95%, non-condensing  |
| AC mode BTU / hr. (full<br>load)  | 812.9   |
| AC economy mode<br>BTU / hr. (full load)  | 347.2   |

| Battery mode BTU / hr.<br>(full load)                            | 885.6   |
|--|---|
| AC economy mode<br>efficiency rating (100%<br>load)              | 94%   |
| Audible Noise  | < 45 dB at front side 1m  |
| COMMUNICATIONS   |   |
| Communications interface   | USB (HID enabled); DB9 Serial; Contact closure; EPO (emergency power off); Slot for SNMP/Web interface                          |
| Network monitoring port description                              | Supports detailed monitoring of UPS and site power conditions; DB9 port supports RS232 and contact closure communications       |
| PowerAlert software  | Included  |
| Communications cable   | USB and DB9 cabling included  |
| WatchDog compatibility   | Supports Watchdog application, OS and hard-reboot restart options for remote applications                                       |
| LINE / BATTERY TRANSF  | ER  |
| Transfer time  | No transfer time (0 ms.) in online, double-conversion mode  |
| Low voltage transfer to battery power (setpoint)                 | 80V (100% load), 65V (  |
| High voltage transfer<br>to battery power<br>(setpoint)          | 150   |
| SPECIAL FEATURES   |   |
| Cold Start (startup in battery mode during a power failure)      | Cold-start operation supported  |
| High availability UPS features                                   | Automatic inverter bypass; Hot swappable batteries  |
| Green & high efficiency 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<br>Period (U.S., Canada &<br>Puerto Rico)       | 2-year limited warranty   |
| Connected Equipment<br>Insurance (U.S.,<br>Canada & Puerto Rico) | \$250,000 Ultimate Lifetime Insurance   |

# **Related Items**

**Optional Products** 

| Product Type     | Related Model | Description  | Qty. |
|------------------|---------------|--|------|
| SNMP Accessories | SNMPWEBCARD   | For remote monitoring and control via SNMP, Web, or Telnet.  | -    |
| SNMP Accessories | ENVIROSENSE   | Monitors temperature, humidity and contact-closure inputs. (Requires SNMPWEBCARD or switched PDU.) | -    |
| UPS Accessories  | RELAYIOCARD   | Programmable Relay I/O Card  | -    |

| UPS Accessories        | MODBUSCARD      | For remote monitoring and control via MODBUS protocol   | - |
|------------------------|-----------------|---|---|
| Shutdown Cable Kits    | AS400CABLE KIT  | Power Management Tools - UPS Communication Cable Kit for System i / AS400 / iSeries Servers   | - |
| External Battery Packs | BP48V24-2U      | BP48V242U - External Battery Pack for UPS System  | - |
| External Battery Packs | BP48V60RT-3U    | External Battery Pack and Cable. 3U, Expandable, Blue 2-Point Connector   | - |
| Extended Warranties    | WEXT3-2200-3000 | 3-Year Extended Warranty - For Smart Line-Interactive and Online<br>Tower or Rack models, 2200-3000VA   | - |
| Extended Warranties    | WEXT5-2200-3000 | 5-Year Extended Warranty - For Smart Line-Interactive and Online<br>Tower or Rack models, 2200-3000VA or less   | - |
| Power Distribution     | PDUB20          | Dual source Power Distribution Unit / PDU with Manual Transfer Switch<br>enables Hot-swappable UPS Replacement in Critical Network<br>Applications  | - |
| Power Distribution     | PDU1220T        | Basic PDU / Power Distribution Unit - Safe, reliable power distribution for critical networking equipment   | - |
| Power Distribution     | PDUV20          | Safe, reliable power distribution for critical networking equipment   | - |
| Power Cables           | PDUNV           | Basic PDU / Power Distribution Unit - Safe, reliable power distribution for critical networking equipment   | - |
| Power Distribution     | PDUMH20         | Metered PDU / Power Distribution Unit- Safe, reliable power distribution with digital current meter   | - |
| Power Distribution     | PDUMV20         | Metered PDU / Power Distribution Unit - Safe, reliable power distribution with digital current meter  | - |
| Power Distribution     | PDUMH20AT       | Metered PDU with ATS - Power Distribution Unit with dual-input Auto<br>Transfer Switching   | - |
| Power Distribution     | PDUMNH20        | Monitored PDU / Power Distribution Unit supports real-time remote<br>monitoring of load level, voltage and frequency with options for remote<br>environmental and security monitoring                 | - |
| Power Distribution     | PDUMNV20        | Monitored PDU / Power Distribution Unit supports real-time remote<br>monitoring of load level, voltage and frequency with options for remote<br>environmental and security monitoring                 | - |
| Power Distribution     | PDUMH20ATNET    | Switched, Metered PDU with ATS - Power Distribution Unit with dual-input Auto Transfer Switching, individual outlet control and SNMP network interface  | - |
| Power Distribution     | PDUMV20NET      | Switched, Metered PDU with Remote Monitoring - 0U Vertical<br>Rackmount Power Distribution Unit for Networks with Individually<br>Switchable Outlets, Current Metering, Remote Monitoring and Control | - |
| Power Cables           | P044-06I        | 6-inch 12AWG Heavy Duty Power Adapter cord<br>(NEMA-L5-20R to NEMA-5-20P)   | - |
| Power Cables           | P049-010        | 10-ft. 12AWG Heavy Duty Power cord<br>(IEC-320-C19 to NEMA 5-20P)   | - |
| Power Cables           | P007-006        | 6-ft. Heavy-Duty 14AWG Power cord<br>(IEC-320-C13 to NEMA 5-15P)  | - |
| Power Cables           | P007-010        | 10-ft. Heavy-Duty 14AWG Power cord<br>(IEC-320-C13 to NEMA 5-15P)   | - |
| Power Cables           | P045-010        | 10-ft. 12AWG Heavy-Duty Power cord<br>(IEC-320-C19 to NEMA L5-20P)  | - |

More information, including related products, owner's manuals, and additional technical specifications, can be found online at www.tripplite.com/en/products/model.cfm?txtModeIID=3594.

Copyright © 2011 Tripp Lite. All rights reserved. All trademarks are the sole property of their respective owners. Tripp Lite has a policy of continuous improvement. Specifications are subject to change without notice. Photos may differ slightly from final products.