

# SmartOnline 208/240, 230V 12kVA 10.8kW Double-Conversion UPS, N+1, 8U Rack/Tower, Extended Run, SNMPWEBCARD Option, USB, DB9, Bypass Switch, Hardwire

MODEL NUMBER: **SU12KRT4UHW**



## Description

Tripp Lite SU12KRT4UHW 12,000VA / 12Kva / 10,800 watt online, double-conversion UPS system offers complete power protection for critical server, network and telecommunications equipment in an 8U rack/tower configuration. This system delivers complete N+1 redundancy when used at loads up to 6kVA, and non-redundant operation at loads between 6 and 12kVA. Fault-tolerant auto-bypass prevents unexpected service interruptions during UPS overload or internal fault conditions. Included parallel PDU with manual bypass switching enables hot-swappable replacement of all major UPS system components in both N+1 and combined operating modes. Enhanced availability, fault tolerance and simple hot-swap replacement options make this UPS ideal for advanced networking applications in data centers, computer rooms, network closets and rugged industrial locations.

## Features

- Tripp Lite SU12KRT4UHW 12kVA, 12,000VA / 10,800 watt on-line, double-conversion UPS system in 8U total rack/tower configuration
- Unique configuration offers 12kVA non-redundant operation and automatic N+1 redundancy at load levels of 6kVA and under
- Included Parallel PDU with manual bypass switch enables hot-swap replacement of power modules at any supported load level
- Hardwire input and output connections
- Maintains sine wave output within 2% of selectable 200/208/220/230/240V nominal
- Supports 50/60Hz operation for worldwide frequency compatibility
- Expandable runtime with optional external battery packs
- Some external battery configurations require the use of Tripp Lite's External Battery Configuration Software(see manual)
- Intelligent battery management system with temperature-compensated charging extends battery life
- Battery independent restart
- Highly efficient economy mode option
- Optional [SNMPWEBCARD](#); [RELAYIOCARD](#) and [RELAYIOMINI](#) interface modules available([RELAYIOMINI](#) requires removal of USB interface module)
- Applications utilizing the optional network communications card require two [SNMPWEBCARD](#) accessories(install one per included power module)

## Highlights

- 12kVA / 12,000VA / 10,800 watt on-line double-conversion 8U rack/tower UPS
- 200/208/220/230/240V +/-2% 50/60Hz output, Economy mode option
- Hot-swap power & battery modules, N+1 fault tolerance at loads up to 6kVA
- USB, RS232, EPO ports, Slot for optional SNMP/WEB & other card options
- Front panel LEDs, Detailed LCD monitoring and control screen
- Expandable runtime with optional external battery packs

## Package Includes

- 2 [SU6000RT4UHVPM](#) UPS Power Modules
- SUPDMB12KHW Detachable PDU with manual bypass switch
- 4 post compatible rack rail kit(2 sets)
- PowerAlert software and complete data cabling



- HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X
- Includes Free PowerAlert monitoring software; PowerAlert LOCAL, PowerAlert NSA and PowerAlert NMS for monitoring up to 250 SNMP-enabled UPS, PDU and other networking devices
- Optional [2POSTRMKITHD](#) supports installation in 2 post 19 inch racks(2 required)
- Optional [2-9USTAND](#) supports upright tower placement(1 required)
- Supports Emergency Power Off(EPO) via built-in interface
- Front panel LEDs and LCD readout with scroll controls
- LED / LCD display panel rotates for viewing in rackmount or tower configurations
- External battery packs are field replaceable and hot swappable
- Frequency conversion mode enables conversion of 60Hz to 50Hz or 50Hz to 60Hz(no de-rating)
- \$250,000 Ultimate Lifetime Insurance(U.S., Canada, and Puerto Rico only)

## Specifications

| OUTPUT  |  |
|---|--|
| Output Volt Amp Capacity (VA)                 | 12000  |
| Output kVA Capacity (kVA)                     | 12   |
| Output Watt Capacity (Watts)                  | 10800  |
| Output kW Capacity (kW)                       | 10.8   |
| Output Capacity Details                       | Supports up to 105% load continuously in double conversion mode, 106 to 125% for 1 minute, 126% to 150% for 30 seconds; Loads over 150% trigger immediate bypass mode operation to support loads directly from mains power; Double conversion mode is automatically restored as load levels are reduced to 95% or less |
| Power Factor                                  | 0.9  |
| Crest Factor                                  | 3:1  |
| Nominal Output Voltage(s) Supported           | 200V; 208V; 220V; 230V; 240V   |
| Nominal Voltage Details                       | Voltage selection via front panel LCD interface  |
| Frequency Compatibility                       | 50 / 60 Hz; Supports 50 to 60 Hz and 60 to 50 Hz conversion  |
| Frequency Compatibility Details               | Output frequency matches input nominal on startup; Frequency conversion mode enables conversion of 60Hz to 50Hz or 50Hz to 60Hz (no de-rating)   |
| Output Voltage Regulation (Line Mode)         | +/- 2%   |
| Output Voltage Regulation (Economy Line Mode) | +/- 10%  |
| Output Voltage Regulation (Battery Mode)      | +/- 2%   |
| Output Receptacles                            | Hardwire   |
| Output Receptacle Details                     | Supports North American 208/240V* output (L1,L2,G) and International 230/220/240V (L,N,PE) hardwire output; *For 120V output with 208/240V (L1,L2,G) input wiring, use optional SU6000XFMR2U transformer   |
| Output AC Waveform (AC Mode)                  | Pure Sine wave   |
| Output AC Waveform (Battery Mode)             | Pure Sine wave   |



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| INPUT                                      |   |
|--|---|
| Rated input current (Maximum Load)         | 63.8A (200V), 61.2A (208V), 58A (220V), 55.4A (230V), 53.2A (240V)  |
| Nominal Input Voltage(s) Supported         | 200V AC; 208V AC; 220V AC; 230V AC; 240V AC   |
| UPS Input Connection Type                  | Hardwire  |
| UPS Input Connection Description           | Supports North American 208/240V input (L1,L2,G) and International 230/220/240V (L,N,PE) input wiring   |
| Recommended Electrical Service             | 70A   |
| Input Phase                                | Single-Phase  |
| BATTERY                                    |   |
| Full Load Runtime (min.)                   | 2 minutes (10,800 watts)  |
| Half Load Runtime (min.)                   | 8.5 minutes (5400 watts)  |
| Expandable Battery Runtime                 | Runtime is expandable with external battery packs   |
| External Battery Pack Compatibility        | <a href="#">BP192V12-3U</a> ; <a href="#">BP192V557C-1PH</a> ; <a href="#">BP192V787C-1PH</a> ; <a href="#">BP192V1037C-1PH</a> ; <a href="#">BP192V1407C-1PH</a>   |
| Expandable Runtime Description             | For best results, add external batteries in multiples of two so that both included 6kVA power modules have an equal number and type of connected battery packs  |
| DC System Voltage (VDC)                    | 192   |
| Battery Recharge Rate (Included Batteries) | Less than 6 hours from 10% to 90% (typical, full load discharge)  |
| Internal UPS Replacement Battery Cartridge | Each of the two included 6kVA power modules contain one <a href="#">RBC5-192</a> internal replacement battery cartridge   |
| Battery Access                             | Front panel battery access door   |
| Battery Replacement Description            | Hot-swappable, user replaceable internal battery cartridges and external battery packs  |
| Expandable Runtime                         | Yes   |
| VOLTAGE REGULATION                         |   |
| Voltage Regulation Description             | +/-2% output voltage regulation in standard online, double-conversion mode  |
| Overvoltage Correction                     | Corrects overvoltages as high as 300V (<90% load) and 280V (full load)  |
| Undervoltage Correction                    | Corrects undervoltages as low as 100 (<50% load) and 155V (full load); derates linearly   |
| USER INTERFACE, ALERTS & CONTROLS          |   |
| Front Panel LCD Display                    | Selectable LCD display with scroll and selection buttons enables UPS control and detailed monitoring options; LED/LCD panel rotates for viewing in rack/tower formats (see manual)  |
| Switches                                   | Includes main power off/on switch, plus 2 switches to set and execute scrollable LCD functions. A manual bypass switch featured on the detachable PDU allows for complete removal of the UPS during routine maintenance without disrupting power to connected loads |
| Alarm Cancel Operation                     | Alarm cancel switch   |
| Audible Alarm                              | Unique audible alarms for all major UPS, environmental and power conditions (see manual)  |
| LED Indicators                             | 6 LEDs indicate line power, online mode, economy/bypass mode, on-battery, charger and AC output status; LCD screen offers additional information and control options  |



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| SURGE / NOISE SUPPRESSION                                     |  |
|---|--|
| UPS AC Suppression Response Time                              | Instantaneous  |
| EMI / RFI AC Noise Suppression                                | Yes  |
| PHYSICAL  |  |
| Included Mounting Accessory Description                       | Includes 4 post mounting accessories for each included component   |
| Installation Form Factors Supported with Optional Accessories | 2 post rackmount(2POSTRMKITHD); Tower(2-9USTAND)   |
| Optional Mounting Accessory Notes                             | Qty 2 2POSTRMKITHD required for 2 post rackmount installation of all included components   |
| Primary Form Factor   | Rackmount  |
| UPS Power Module Dimensions (hwd, in.)                        | 6.85 x 17.5 x 20.7   |
| UPS Power Module Dimensions (hwd, cm)                         | 17.4 x 44.5 x 52.6   |
| Rack Height (U Spaces)  | 8  |
| Maximum Device Depth (in.)                                    | 24   |
| Maximum Device Depth (cm)                                     | 61   |
| UPS Power Module Weight (lbs.)                                | 108  |
| UPS Power Module Weight (kg)                                  | 49   |
| UPS Dimensions Details  | Includes two 4U power modules plus SUPDMB12HW detachable PDU with bypass; UPS Power Module Dimensions are for one of the two included SU6000RT4UHVPM power modules; Installed Whole System Rack Depth specification indicates the depth of the entire UPS as installed with the PDU attached |
| UPS Shipping Dimensions (hwd / in.)                           | 41 x 24 x 34   |
| UPS Shipping Dimensions (hwd / cm)                            | 104 x 61 x 97  |
| Shipping Weight (lbs.)  | 342  |
| Shipping Weight (kg)  | 155.3  |
| Cooling Method  | Fans   |
| UPS Housing Material  | Steel  |
| 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)                                 | 3534   |
| AC Economy Mode BTU / Hr. (Full Load)                         | 1414   |



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|   |  |
|---|--|
| AC Mode Efficiency Rating (100% Load)                       | 90%  |
| AC Economy Mode Efficiency Rating (100% Load)               | 96%  |
| Operating Elevation (ft.)                                   | 0-3000m (0 to 10,000 ft.)  |
| Audible Noise   | 60 dBA at front side 1 meter   |
| Operating Elevation (m)                                     | 0-3000 m   |
| <b>COMMUNICATIONS</b>                                       |  |
| Communications Interface                                    | USB (HID enabled); DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface  |
| Network Monitoring Port Description                         | Applications utilizing the optional network communications card require two SNMPWEBCARD accessories (install one per included power module); Additional contact closure support with optional RELAYIOCARD and RELAYIOMINI interface cards; RELAYIOMINI installation requires removal of panel containing USB ports |
| PowerAlert Software   | Included   |
| Communications Cable  | USB, DB9 serial and EPO cables included  |
| WatchDog Compatibility                                      | Yes  |
| <b>LINE / BATTERY TRANSFER</b>                              |  |
| Transfer Time   | No transfer time (0 ms.) in online, double-conversion mode   |
| Transfer Time (Economy Mode)                                | 8 milliseconds typical in optional economy mode  |
| Low Voltage Transfer to Battery Power (Setpoint)            | 156V (full load) / 100V (50% load or less, derates linearly)   |
| High Voltage Transfer to Battery Power (Setpoint)           | 280V (full load) / 300V (90% load or less)   |
| <b>SPECIAL FEATURES</b>                                     |  |
| Cold Start (Startup in Battery Mode During a Power Failure) | Cold-start operation supported   |
| High Availability UPS Features                              | Automatic inverter bypass; Hot swappable batteries; Hot swappable UPS power module; Manual bypass switch   |
| Green Energy-Saving Features                                | High efficiency economy mode operation; Support for daily startup and shutoff; Schedulable daily hours of economy mode operation   |
| <b>CERTIFICATIONS</b>                                       |  |
| UPS Certifications  | Tested to UL1778 (USA); Tested to CSA (Canada); Meets FCC Part 15 Category A (EMI); ROHS (Restriction of Hazardous Substances)   |
| UPS Certification Details                                   | IEC 61000-4-5 1995 B Surge Immunity  |
| <b>WARRANTY</b>   |  |



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|-------------------------------------|-------------------------|
| Product Warranty Period (Worldwide) | 2-year limited warranty |
|-------------------------------------|-------------------------|

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