

## SmartOnline 208/240 & 120V 12kVA 8.4kW Double-Conversion UPS, 8U, Extended Run, Network Card Slot, USB, DB9, Bypass, Hardwire

MODEL NUMBER: **SU12000RT4UHW**



### Description

Tripp Lite's SU12000RT4UHW SmartOnline Hot-Swappable Modular Rack/Tower UPS System provides 12,000VA (12kVA) on-line, double-conversion UPS support for server, network and telecommunications equipment. Maintains battery-derived AC output during blackouts with active, full-time power conditioning. Fault-tolerant auto-bypass prevents unexpected service interruptions during overload or internal fault conditions. 4U power module and 4U external battery pack installs in 8 rack spaces (8U). Upright tower and two-post rackmount installation supported with optional accessories. Maintains full-time sine wave output within 3% of selectable 208/120 or 240/120V AC. Corrects brownouts and overvoltages from 65V to 140V (L-N). Expandable runtime with optional external battery packs. Converts raw input from AC to DC, then resynthesizes output power back to perfect sine wave AC output with enhanced protection from harmonic distortion, fast electrical impulses and other hard-to-solve power problems not addressed by other UPS types. Highly efficient operation in optional economy mode setting, saving BTU heat output and energy costs. Network-grade AC surge and noise suppression. Network management interfaces include combination DB9 RS-232 enabled and dry contact serial port, enhanced USB port and slot for network management card options. 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 three network interfaces. PowerAlert UPS monitoring software is available via free download. Supports Emergency Power Off (EPO) via built-in interface. Front panel LEDs and LCD readout with scroll controls support visual monitoring of all major UPS functions. LED/LCD display panel easily rotates for viewing in rackmount or tower configurations. Split-phase, four-conductor hardwire input. UPS supports hardwire output. Output hardwire connections are mounted on a detachable backplate with manual bypass switch to enable hot-swappable UPS replacement without powering off connected equipment. External battery packs are field replaceable and hot swappable. Attractive all-black color scheme. \$250,000 Ultimate Lifetime Insurance (U.S., Canada, and Puerto Rico only)

### Features

- True on-line, double-conversion UPS provides pure, full-time sine wave AC output free of surges, voltage fluctuations and line noise
- 12,000VA / 8400W output power capacity with dual voltage output of 208/120V or 240/120V
- 4U high power density power module and 4U external battery pack support rackmount installation in 8 rack spaces (8U)

### Highlights

- 12kVA / 12,000VA / 8400W on-line double-conversion UPS
- 208/120V or 240/120V +/-3% output at 60Hz, 94% Efficient Economy-mode option
- 8U Rack / Tower compatible; Hot-swappable power and battery modules
- USB, RS232 & EPO ports; slot for Network Management Card options
- Front panel LEDs with detailed LCD monitoring and control screen
- Expandable runtime with optional external battery packs
- Hardwire input (4 wire split phase); Hardwire output

### Package Includes

- SU12000RT4UHWPM UPS Power Module
- [BP192V18-4U](#) External battery pack
- SUPDMB16KHW Detachable PDU with manual bypass switch
- External 4U battery pack
- 4-post rackmount installation brackets



- Dual conversion UPS actively converts raw input from AC to DC, then back to perfect sine wave AC output with enhanced protection from harmonic distortion, fast electrical impulses and other hard-to-solve power problems not addressed by other UPS types
- Hardwire input and output terminals are mounted on a detachable backplate with manual bypass switch to enable hot-swappable UPS replacement without powering off connected equipment
- Provides perfectly regulated, sine wave output power free of line noise, transient surges and frequency variation for the most efficient operation of critical servers, networking and telecommunications equipment
- Maintains output within 3% of selected 208/120V or 240/120V nominal voltage during brownouts and overvoltages
- Supports connected equipment during blackouts for 20/7 min. at half/full load levels; runtime is further expandable with optional external battery packs (Model [BP192V18-4U](#))
- Some external battery configurations require the use of Tripp Lite's External Battery Configuration Software (see manual)
- Intelligent battery management system extends battery life
- Highly efficient Economy-mode option
- Network interfaces support simultaneous communications via DB9 port, USB port and slot for network management card options
- Compatible with Tripp Lite UPS management card options [WEBCARDLX](#), [SNMPWEBCARD](#), [MODBUSCARD](#) and [RELAYIOCARD](#)
- DB9 port supports RS-232 and dry contact messaging
- 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](http://www.tripplite.com/poweralert)
- Built-in Emergency Power Off (EPO) interface with cable
- Supports hardwire output at 208V and 120V
- Split phase, four-conductor hardwire input connection on included detachable PDU
- Front panel LEDs and LCD readout with scroll button enables visual confirmation of all major UPS functions and current site electrical conditions
- Front panel switches enable power on/off control, self-test and alarm cancel functions
- Included adjustable mounting rails support installation in 4-post 19-in. rack enclosures
- Optional [2-9USTAND](#) tower stand set supports upright tower installation
- Optional [2POSTRMKITHD](#) accessory enables 2-post rackmount installation (requires 2)
- Fault tolerant electronic bypass maintains utility output during a variety of UPS fault conditions
- \$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)  | 8400   |
| Output kW Capacity (kW)       | 8.4  |
| Output Capacity Details       | 12,000VA, 8400W (240V) / 10,395VA, 8400W (208V); Supports up to 105% load continuously in double conversion mode, 106 to 125% for 3 minutes, 126 to 150% for 30 seconds; Loads over 150% trigger immediate bypass mode operation to support equipment directly from mains power; Double conversion mode is automatically restored as the overload is cleared |
| Power Factor                  | 0.7  |
| Crest Factor                  | 3:1  |



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|---|---|
| Nominal Output Voltage(s) Supported           | 120V; 208V; 240V  |
| Nominal Voltage Details                       | 240/120V or 208/120V split phase output   |
| Frequency Compatibility                       | 60 Hz   |
| Output Voltage Regulation (Line Mode)         | +/- 3%  |
| Output Voltage Regulation (Economy Line Mode) | +/- 10%   |
| Output Voltage Regulation (Battery Mode)      | +/- 3%  |
| Output Receptacles                            | Hardwire  |
| Output Receptacle Details                     | Supports North American 208/120V or 240/120V split-phase output (L1, L2, N, G)  |
| Output AC Waveform (AC Mode)                  | Pure Sine wave  |
| Output AC Waveform (Battery Mode)             | Pure Sine wave  |
| <b>INPUT</b>                                  |   |
| Rated input current (Maximum Load)            | 50A   |
| Nominal Input Voltage(s) Supported            | 120/208V (Split phase L1,L2,N,G); 120/240V (Split phase L1,L2,N,G)  |
| UPS Input Connection Type                     | Hardwire  |
| UPS Input Connection Description              | 4 wire split-phase input (L1, L2, N, G)   |
| Recommended Electrical Service                | 50A 208/240-120 Split Phase (L1, L2, N, G); 6 AWG wiring recommended  |
| Input Phase                                   | Single-Phase  |
| <b>BATTERY</b>                                |   |
| Full Load Runtime (min.)                      | 7 min. (8400w)  |
| Half Load Runtime (min.)                      | 20 min. (2400w)   |
| Expandable Battery Runtime                    | Supports extended runtime with optional external battery packs  |
| External Battery Pack Compatibility           | <a href="#">BP192V18-4U</a> ; <a href="#">BP192V557C-16K</a> ; <a href="#">BP192V787C-16K</a> ; <a href="#">BP192V1037C-16K</a> ; <a href="#">BP192V1407C-16K</a> |
| DC System Voltage (VDC)                       | 192   |
| Battery Recharge Rate (Included Batteries)    | Less than 6 hours from 10% to 80% (typical, full load discharge)  |
| Battery Replacement Description               | Hot-swappable, user replaceable external battery packs  |
| Expandable Runtime                            | Yes   |
| <b>VOLTAGE REGULATION</b>                     |   |
| Voltage Regulation Description                | +/-3% output voltage regulation in online, double-conversion mode   |
| Overvoltage Correction                        | Corrects overvoltages to 140 (measured L1-N : L2-N)   |
| Undervoltage Correction                       | Corrects undervoltages to 65V (measured L1-N : L2-N)  |



| <b>USER INTERFACE, ALERTS &amp; CONTROLS</b>                  |  |
|---|--|
| 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  |
| Switches  | 2 Switches control off/on power status and alarm-cancel/self-test operation; 2 additional switches support set and execute scrolling LCD functions; bundled PDU includes bypass switch to enable hot-swap UPS power module replacement |
| 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   |
| <b>SURGE / NOISE SUPPRESSION</b>                              |  |
| UPS AC Suppression Response Time                              | Instantaneous  |
| EMI / RFI AC Noise Suppression                                | Yes  |
| <b>PHYSICAL</b>   |  |
| Included Mounting Accessory Description                       | 2 sets of adjustable 4 post rack rails included  |
| Installation Form Factors Supported with Included Accessories | 4 post 19 inch rackmount   |
| Installation Form Factors Supported with Optional Accessories | 2 post rackmount( <a href="#">2POSTRMKITHD</a> ); Tower( <a href="#">2-9USTAND</a> )   |
| Optional Mounting Accessory Notes                             | 2 sets of <a href="#">2POSTRMKITHD</a> required for 2 post rackmount installation  |
| Primary Form Factor   | Rackmount  |
| UPS Power Module Dimensions (hwd, in.)                        | 7 x 17.5 x 27.8  |
| UPS Power Module Dimensions (hwd, cm)                         | 17.78 x 44.45 x 70.61  |
| Rack Height (U Spaces)  | 8  |
| Maximum Device Depth (in.)                                    | 34   |
| Minimum Required Rack Depth (inches)                          | 40   |
| Maximum Device Depth (cm)                                     | 86.36  |
| Minimum Required Rack Depth (cm)                              | 101.60   |
| UPS Power Module Weight (lbs.)                                | 86   |
| UPS Power Module Weight (kg)                                  | 39.01  |
| UPS Dimensions Details  | Includes 4U battery pack, 4U UPS/power module and detachable bypass PDU; MAXIMUM DEVICE DEPTH specification refers to the whole UPS installed depth with bypass PDU installed  |
| Included Battery Pack Dimensions (hwd / in.)                  | 7 x 17.5 x 27.8  |



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|---|--|
| Included Battery Pack Weight (lbs.)           | 239  |
| Included Battery Pack Weight (kg)             | 108.41   |
| UPS Shipping Dimensions (hwd / in.)           | 45.5 x 23.5 x 34.3   |
| UPS Shipping Dimensions (hwd / cm)            | 115.57 x 59.69 x 87.12   |
| Shipping Weight (lbs.)                        | 448.8  |
| Shipping Weight (kg)                          | 203.8  |
| Cooling Method                                | Fan  |
| UPS Housing Material                          | Steel  |
| Maximum Device Depth (mm)                     | 864  |
| Minimum Required Rack Depth (mm)              | 1016   |
| Primary UPS Height (mm)                       | 178  |
| Primary UPS Width (mm)                        | 444  |
| Primary UPS Depth (mm)                        | 706  |
| Shipping Height (mm)                          | 1156   |
| Shipping Width (mm)                           | 597  |
| Shipping Depth (mm)                           | 871  |
| <b>ENVIRONMENTAL</b>                          |  |
| 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)                 | 4286   |
| AC Economy Mode BTU / Hr. (Full Load)         | 1829   |
| Battery Mode BTU / Hr. (Full Load)            | 3187   |
| AC Mode Efficiency Rating (100% Load)         | 87%  |
| AC Economy Mode Efficiency Rating (100% Load) | 94%  |
| 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; Contact closure; EPO (emergency power off); Slot for SNMP/Web interface             |
| Network Management Cards                      | <a href="#">SNMPWEBCARD</a> ; <a href="#">WEBCARDLX</a> ; <a href="#">MODBUSCARD</a> ; <a href="#">RELAYIOCARD</a> |



|   |  |
|---|--|
| Network Monitoring Port Description                         | RS232 and contact closure communications are supported on one DB9 port   |
| PowerAlert Software   | For local monitoring via the UPS's built-in communication ports, download PowerAlert Local software at <a href="http://www.tripplite.com/poweralert">http://www.tripplite.com/poweralert</a> |
| Communications Cable  | USB and DB9 cabling included   |
| <b>LINE / BATTERY TRANSFER</b>                              |  |
| Transfer Time   | No transfer time (0 ms.) in online, double-conversion mode   |
| Transfer Time (Economy Mode)                                | 2 milliseconds typical in optional economy mode  |
| Low Voltage Transfer to Battery Power (Setpoint)            | 65V (L1-N:L2-N)  |
| High Voltage Transfer to Battery Power (Setpoint)           | 140V (L1-N:L2-N)   |
| <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; Schedulable daily hours of economy mode operation  |
| <b>CERTIFICATIONS</b>                                       |  |
| UPS Certifications  | Meets FCC Part 15 Category A (EMI); ROHS (Restriction of Hazardous Substances); Tested to CSA (Canada); Tested to NOM (Mexico); Tested to UL1778 (USA)                                       |
| <b>WARRANTY</b>   |  |
| Product Warranty Period (Worldwide)                         | 2-year limited warranty  |
| Connected Equipment Insurance (U.S., Canada & Puerto Rico)  | \$250,000 <a href="#">Ultimate Lifetime Insurance</a>  |

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