

## SmartOnline 200-240V 20kVA 18kW Double-Conversion UPS, N+1, 12U, Network Card Slot, USB, DB9, Bypass Switch, C19

MODEL NUMBER: SU20KRTG



### Description

Tripp Lite SU20KRTG 20,000VA / 20kVA / 18,000 watt online, double-conversion UPS system offers complete power protection for critical server, network and telecommunications equipment in a 12U rack/tower configuration. This system delivers complete N+1 redundancy when used at loads up to 10kVA, and non-redundant operation at loads between 10 and 20kVA. 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 SU20KRTG 20kVA, 20,000VA / 18,000 watt on-line, double-conversion UPS system in 12U total rack/tower configuration
- Unique configuration offers 20kVA non-redundant operation and automatic N+1 redundancy at load levels of 10kVA and under
- Included Parallel PDU with manual bypass switch enables hot-swap replacement power modules at any supported load level
- Hardwire input; 8 C19 outlets
- Maintains full-time sine wave output within 2% of selectable 200/208/220/230/240V nominal
- Supports 50/60Hz operation for worldwide frequency compatibility
- Compatible with Tripp Lite UPS management card options TLNETCARD, WEBCARDLX, SNMPWEBCARD, MODBUSCARD and RELAYIOCARD (NOTE: Applications utilizing any supported network management card option, require the installation of two of the same model network card – install one card per included UPS power module)
- Optional WEBCARDLX (sold separately) with the latest version of PowerAlert Device Manager firmware (PADM20) provides enhanced remote management capabilities
- PADM20 and PowerAlert Element Manager (PAEM) form a powerful tool for expanding maintenance functions in large installations, including firmware update checks and backup and restoration of device configurations
- Expandable runtime with optional external battery packs
- Some external battery configurations require the use of Tripp Lite's External Battery Configuration

### Highlights

- 20kVA / 20,000VA / 18,000W on-line double-conversion UPS; 0.9 power factor
- 200/208/220/230/240V 50/60Hz output
- Hot-swap power and battery modules, N+1 fault tolerance at loads up to 10kVA
- Add optional WEBCARDLX with latest version of PADM20 for enhanced remote management
- Front panel LEDs with detailed LCD monitoring and control screen
- Expandable runtime with optional external battery packs
- Hardwire input (3 wire); C19 outlets

### Package Includes

- Two SU10000RT3UPM UPS power modules
- Two BP240V10RT3U battery packs
- SUPDMB20KIEC PDU with Bypass switch
- 4-post rackmount installation rails
- USB, DB9 & EPO cabling

Software (see manual)

- Battery independent restart ensures automatic UPS power-up after lengthy power outages, even with expired batteries
- Intelligent battery management system with temperature-compensated charging extends battery life
- HID-compliant USB interface
- USB & Serial ports enable data-saving unattended shutdown when used with Tripp Lite's PowerAlert software, available via FREE download from [tripplite.eaton.com/products/power-alert](http://tripplite.eaton.com/products/power-alert)
- Optional 2POSTRMKITHD supports installation in 2 post 19 inch racks (4 required)
- Optional 2-9USTAND supports upright tower placement (2 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)

## Specifications

| OVERVIEW                           |                                                                                                                                                                                                                                                                                                                        |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UPC Code                           | 037332158284                                                                                                                                                                                                                                                                                                           |
| UPS Type                           | On-Line                                                                                                                                                                                                                                                                                                                |
| INPUT                              |                                                                                                                                                                                                                                                                                                                        |
| Input Phase                        | Single-Phase                                                                                                                                                                                                                                                                                                           |
| Rated input current (Maximum Load) | 112.2A (200V), 108A (208V), 102A (220V), 97.6A (230V), 93.6A (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   | Hardwire input supports North American 208/240V input (L1, L2, G) and International 230/220/240V input (L, N, PE)                                                                                                                                                                                                      |
| Recommended Electrical Service     | 120A @ 200V-240V (L, N, PE), or 125A @ 200V, 208V, or 240V (L1, L2, G)                                                                                                                                                                                                                                                 |
| OUTPUT                             |                                                                                                                                                                                                                                                                                                                        |
| Output Capacity (VA)               | 20000                                                                                                                                                                                                                                                                                                                  |
| Output Capacity (kVA)              | 20                                                                                                                                                                                                                                                                                                                     |
| Output Capacity (Watts)            | 18000                                                                                                                                                                                                                                                                                                                  |
| Output Capacity (kW)               | 18                                                                                                                                                                                                                                                                                                                     |
| 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 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                                                                                                                                                                                                                                                            |





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| LED Indicators                                                | 6 LEDs indicate line power, online mode, 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 Joule Rating                               | 2565                                                                                                                                                                                                                                                                                                                                                          |
| UPS AC Suppression Response Time                              | Instantaneous                                                                                                                                                                                                                                                                                                                                                 |
| EMI / RFI AC Noise Suppression                                | Yes                                                                                                                                                                                                                                                                                                                                                           |
| <b>PHYSICAL</b>                                               |                                                                                                                                                                                                                                                                                                                                                               |
| Primary Form Factor                                           | Rackmount                                                                                                                                                                                                                                                                                                                                                     |
| Rack Height                                                   | 12U                                                                                                                                                                                                                                                                                                                                                           |
| Cooling Method                                                | Fans                                                                                                                                                                                                                                                                                                                                                          |
| Included Battery Pack Dimensions (hwd / in.)                  | 5.25 x 17.5 x 25                                                                                                                                                                                                                                                                                                                                              |
| Included Battery Pack Weight (lbs.)                           | 158.7                                                                                                                                                                                                                                                                                                                                                         |
| Included Battery Pack Weight (kg)                             | 71.99                                                                                                                                                                                                                                                                                                                                                         |
| Included Mounting Accessory Description                       | 4 sets of adjustable 4 post rack rails included (one for each included 3U module)                                                                                                                                                                                                                                                                             |
| Installation Form Factors Supported with Included Accessories | 4 post 19 inch rackmount                                                                                                                                                                                                                                                                                                                                      |
| Installation Form Factors Supported with Optional Accessories | 2 post rackmount (&nbsp;<a class="productLink" href="//tripplite.eaton.com/2-Post-Rack-Mount-Installation-Kit-3U-Larger-UPS-Transformer-Battery-Pack-Components~2POSTRMKITHD">2POSTRMKITHD</a>&nbsp;); Tower (&nbsp;<a class="productLink" href="//tripplite.eaton.com/2U-9U-Tower-Stand-Kit-select-Rack-Mount-UPS-Systems~2-9USTAND">2-9USTAND</a>&nbsp;)    |
| Maximum Device Depth (cm)                                     | 82.55                                                                                                                                                                                                                                                                                                                                                         |
| Maximum Device Depth (in.)                                    | 32.5                                                                                                                                                                                                                                                                                                                                                          |
| Maximum Device Depth (mm)                                     | 826                                                                                                                                                                                                                                                                                                                                                           |
| Minimum Required Rack Depth (cm)                              | 96.52                                                                                                                                                                                                                                                                                                                                                         |
| Minimum Required Rack Depth (inches)                          | 38                                                                                                                                                                                                                                                                                                                                                            |
| Optional Mounting Accessory Notes                             | Qty 4 &nbsp;<a class="productLink" href="//tripplite.eaton.com/2-Post-Rack-Mount-Installation-Kit-3U-Larger-UPS-Transformer-Battery-Pack-Components~2POSTRMKITHD">2POSTRMKITHD</a>&nbsp; required; Qty 2 &nbsp;<a class="productLink" href="//tripplite.eaton.com/2U-9U-Tower-Stand-Kit-select-Rack-Mount-UPS-Systems~2-9USTAND">2-9USTAND</a>&nbsp; required |
| Primary UPS Depth (mm)                                        | 656                                                                                                                                                                                                                                                                                                                                                           |
| Primary UPS Height (mm)                                       | 131                                                                                                                                                                                                                                                                                                                                                           |
| Primary UPS Width (mm)                                        | 445                                                                                                                                                                                                                                                                                                                                                           |
| Shipping Dimensions (hwd / in.)                               | 36.00 x 40.25 x 51.00                                                                                                                                                                                                                                                                                                                                         |
| Shipping Dimensions (hwd / cm)                                | 91.44 x 102.24 x 129.54                                                                                                                                                                                                                                                                                                                                       |
| Shipping Weight (lbs.)                                        | 601.00                                                                                                                                                                                                                                                                                                                                                        |
| Shipping Weight (kg)                                          | 272.61                                                                                                                                                                                                                                                                                                                                                        |

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| Unit Dimension Details                             | Includes 2 SU10000RT3UPM UPS/Power modules, 2 BP240V10RT3U Battery packs and SUPDMB20KIEC parallel bypass PDU; Listed weights and dimensions for UPS/Power module and Included battery pack each refer to a single unit; MAXIMUM DEVICE DEPTH specification refers to the whole UPS installed depth with parallel bypass PDU installed                                                                                                                             |
| UPS Housing Material                               | Steel                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| UPS Power Module Dimensions (hwd, cm)              | 13.06 x 44.45 x 65.58                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| UPS Power Module Dimensions (hwd, in.)             | 5.14 x 17.5 x 25.82                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| UPS Power Module Weight (kg)                       | 20.00                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| UPS Power Module Weight (lbs.)                     | 44.1                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <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)                      | 6830                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| AC Mode Efficiency Rating (100% Load)              | 90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Battery Mode Heat Dissipation (BTU/Hr) @ Full Load | 9185                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Operating Elevation                                | 0-3000m (0 to 10,000 ft.)                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Audible Noise                                      | 60 dBA at front side 1 meter                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>COMMUNICATIONS</b>                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Network Management Cards                           | SNMPWEBCARD; &nbsp;<a class="productLink" href="//tripplite.eaton.com/Web-Management-Accessory-Card-SmartPro-SmartOnline-UPS-Systems-TLNETCARD">TLNETCARD</a>&nbsp;; WEBCARDLX; &nbsp;<a class="productLink" href="//tripplite.eaton.com/MODBUS-Management-Accessory-Card-UPS-Remote-Monitoring-Control-MODBUSCARD">MODBUSCARD</a>&nbsp;; &nbsp;<a class="productLink" href="//tripplite.eaton.com/Programmable-Relay-I-O-Card-RELAYIOCARD">RELAYIOCARD</a>&nbsp;; |
| Network Monitoring Port Description                | Applications utilizing any supported network management card option, require the installation of two of the same model network card – install one card per included UPS power module; RELAYIOMINI installation requires removal of panel containing USB ports on each included UPS power module                                                                                                                                                                    |
| PowerAlert Software                                | For local monitoring via the UPS's built-in communication ports, download PowerAlert software at <a href="https://tripplite.eaton.com/products/power-alert">https://tripplite.eaton.com/products/power-alert</a>                                                                                                                                                                                                                                                   |
| Communications Cable                               | USB, DB9 serial and EPO cables included                                                                                                                                                                                                                                                                                                                                                                                                                            |
| WatchDog Compatibility                             | Supports Watchdog application, OS and hard-reboot restart options for remote applications                                                                                                                                                                                                                                                                                                                                                                          |
| Network Management Card Description                | Network management card optional                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Communications Interface                           | DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface; USB (HID enabled)                                                                                                                                                                                                                                                                                                                                                                              |
| <b>LINE / BATTERY TRANSFER</b>                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Transfer Time                                      | No transfer time (0 ms.) in online, double-conversion mode                                                                                                                                                                                                                                                                                                                                                                                                         |
| Low Voltage Transfer to Battery Power (Setpoint)   | 100V                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



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| High Voltage Transfer to Battery Power (Setpoint)           | 300V                                                                                                                                                                                                                                                                                                                          |
| <b>FEATURES &amp; SPECIFICATIONS</b>                        |                                                                                                                                                                                                                                                                                                                               |
| Cold Start (Startup in Battery Mode During a Power Failure) | Cold-start operation supported                                                                                                                                                                                                                                                                                                |
| High Availability UPS Features                              | Auto Probe Monitoring (requires WEBCARDLX); Automatic inverter bypass; Expandable battery backup; Hot swappable UPS power module; Hot swappable batteries; Manual bypass switch; N+1 Redundant up to 50% capacity; On-Line/Double-Conversion; Remote management; Sine wave output; Surge/noise protection; Zero transfer time |
| Green Energy-Saving Features                                | Support for daily startup and shutoff                                                                                                                                                                                                                                                                                         |
| <b>APPLICATIONS</b>                                         |                                                                                                                                                                                                                                                                                                                               |
| UPS Applications                                            | Mission Critical Applications                                                                                                                                                                                                                                                                                                 |
| <b>STANDARDS &amp; COMPLIANCE</b>                           |                                                                                                                                                                                                                                                                                                                               |
| Product Certifications                                      | IEC 61000; CSA (Canada); UL 1778                                                                                                                                                                                                                                                                                              |
| Product Compliance                                          | RoHS; CE (Europe); FCC Part 15 Class A (USA)                                                                                                                                                                                                                                                                                  |
| <b>WARRANTY &amp; SUPPORT</b>                               |                                                                                                                                                                                                                                                                                                                               |
| Product Warranty Period (Worldwide)                         | 2-year limited warranty                                                                                                                                                                                                                                                                                                       |

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