

# SmartOnline 208/240V 20kVA On-Line UPS – Double Conversion, 18kW, N+1, 12U, Network Card Option, TAA Compliant

MODEL NUMBER: SU20KRATA



N+1 20kVA UPS protects connected equipment against damage due to blackouts, brownouts, surges and line noise.

## Features

**Protects Mission-Critical Rack-Mounted Equipment against Damage, Downtime and Data Loss** This N+1 UPS system protects connected equipment against damage, downtime and data loss due to power outages, voltage fluctuations and transient surges. Featuring an 18,000W capacity, high 0.9 power factor, true on-line operation with pure sine wave output and zero transfer time to battery, the SmartOnline® SU20KRATA provides the highest level of battery backup and AC power protection for critical server, network and telecom equipment. It offers automatic N+1 redundancy at load levels up to 10kVA and non-redundant operation from 10kVA all the way up to 20kVA.

**Reliable, Expandable Battery Backup** UPS battery backup keeps connected equipment operational through short power failures, and provides time to save data and perform an orderly system shutdown in case of a prolonged blackout. The external battery provides 12.5 minutes of support at half load and 4.3 minutes at full load. During normal operation, incoming utility power keeps the battery fully charged so backup power will be available when needed. For mission-critical applications demanding continuous uptime, the 20kVA UPS can provide expandable runtime with optional external battery packs, such as Tripp Lite's field-replaceable, hot-swappable BP240V10RT3UTAA (sold separately). A battery-independent restart ensures automatic UPS power-up after lengthy power outages, even with expired batteries.

**Easily Hot-Swappable with No Expensive Service Calls or Downtime Needed** With its parallel PDU, the SU20KRATA with manual bypass switching enables hot-swappable replacement of all major UPS system components in both N+1 and combined operating modes. In bypass mode, the PDU passes power to equipment without the use of the power and battery modules, allowing them to be removed while keeping your application in operation. When making repairs or replacing a battery, no lengthy service calls or downtime are necessary.

**Intuitive Front-Panel Interface for Convenient UPS Operation and Monitoring** Front-panel LEDs indicate line power, online mode, bypass mode, on-battery, charger and AC output status at a glance. The LCD readout with scroll controls supports visual monitoring of a variety of control options to support advanced UPS settings and configurations. The panel rotates for comfortable viewing in rack-mount or tower configuration.

**Optional WEBCARDLX Network Interface Offers 24/7 Access** An accessory slot accommodates the

## Highlights

- Zero transfer time between AC power and battery for uninterrupted operation
- PDU keeps essential equipment powered during hot-swap battery replacement or repair
- Delivers complete N+1 redundancy when used with loads up to 10kVA
- Optional external batteries provide additional runtime for essential applications
- Complies with the Federal Trade Agreements Act (TAA) for GSA Schedule purchases

## Applications

- Delivering perfectly regulated sine wave output to mission-critical equipment
- Protecting connected components from dangerous surges, spikes and line noise
- Keeping equipment operational through short power failures
- Allowing time to save data and safely shut down components in case of a prolonged blackout

## Package Includes

- (2) SU10KRT3UPMTAA hot-swappable UPS power modules
- SUPDMB20KTAA parallel PDU w/maintenance bypass switch
- (2) BP240V10RT3UTAA external battery packs
- USB cable
- DB9 cable
- EPO cable
- Rack-mounting hardware
- Owner's manual



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optional Java-free HTML5-based WEBCARDLX interface, which enables full remote access for site power and UPS status monitoring, configuration, control and email notifications via secure web browser, SNMP, telnet or SSH. It supports 10/100 Mbps auto-sensing for optimum communication with an Ethernet network. Automated alerts help prevent accidental overloads, power loss and downtime.

**Advanced Communications Ports**USB and DB9 ports (cables are included) enable data-saving unattended shutdown of connected systems when used with Tripp Lite's free downloadable PowerAlert® software. Capabilities include detailed monitoring of load levels, self-test data and utility power conditions.

**Versatile Installation Options**Hardware is included for mounting the 20kVA UPS system in 12U of space in an EIA-standard 19-inch 4-post rack. Use four optional 2POSTRMKITHD kits for 2-post rack mounting or two optional 2-9USTAND kits for mounting in an upright tower position.

**TAA-Compliant UPS for GSA Schedule Purchases**The SU20KR TAA is compliant with the Federal Trade Agreements Act (TAA) for GSA Schedule purchases.

**2-Year Warranty, \$250K Ultimate Lifetime Insurance and Environmentally Responsible Design**The SU20KR TAA comes with a 2-year warranty and \$250,000 of Ultimate Lifetime Insurance for any connected components damaged by a power surge (U.S., Canada and Puerto Rico only). It's manufactured in compliance with strict RoHS specifications, reflecting Tripp Lite's commitment to environmental responsibility.

## Specifications

OVERVIEW	
UPC Code	037332223777
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; 240V AC
UPS Input Connection Type	Hardwire
UPS Input Connection Description	3 wire single phase input (L1, L2, G)
Recommended Electrical Service	125A @ 200V, 208V, or 240V (L1, L2, G)
OUTPUT	
Output Capacity (VA)	20000
Output Capacity (kVA)	20.00
Output Capacity (Watts)	18000
Output Capacity (kW)	18.00
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
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 (Battery Mode)	+/- 2%
Output Circuit Breakers	Two built-in 30A breakers protect one L6-30R outlet each; Eight built-in 20A breakers protect one C19 outlet each
Output AC Waveform (AC Mode)	Pure Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave
Nominal Output Voltage(s) Supported	200V; 208V; 240V
Output Receptacles	(2) L6-30R; (8) C19
Individually Controllable Load Banks	No
<b>BATTERY</b>	
Battery Type	Valve Regulated Lead Acid (VRLA)
Runtime Full Load (min.)	4.3 min. (18kW)
Runtime Half Load (min.)	12.5 min. (9000W)
Expandable Runtime	Yes
Expandable Runtime Description	For best results, add external batteries in multiples of two so that both included 10kVA power modules have an equal number and type of connected battery packs
External Battery Pack Compatibility	BP240V10RT3UTAA; BP240V787C-1PH
DC System Voltage (VDC)	240
Battery Recharge Rate (Included Batteries)	Less than 6 hours from 10% to 90% (typical, full load discharge)
Battery Replacement Description	Hot-swappable, user replaceable external battery packs
<b>VOLTAGE REGULATION</b>	
Voltage Regulation Description	2% output voltage regulation in standard online, double-conversion mode
Overvoltage Correction	Corrects overvoltages up to 300V
Undervoltage Correction	Corrects undervoltages as low as 100V
<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; LCD Display supports ENGLISH, FRENCH, GERMAN, ITALIAN, SPANISH and PORTUGUESE (see manual)
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, 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 17.50 x 25.00
Included Battery Pack Weight (lbs.)	159
Included Battery Pack Weight (kg)	72.12
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 ( <a href="http://tripplite.eaton.com/2-Post-Rack-Mount-Installation-Kit-3U-Larger-UPS-Transformer-Battery-Pack-Components~2POSTRMKITHD">2POSTRMKITHD</a> ); Tower ( <a href="http://tripplite.eaton.com/2U-9U-Tower-Stand-Kit-select-Rack-Mount-UPS-Systems~2-9USTAND">2-9USTAND</a> )
Maximum Device Depth (cm)	83.82
Maximum Device Depth (in.)	33
Maximum Device Depth (mm)	838
Minimum Required Rack Depth (cm)	96.52
Minimum Required Rack Depth (inches)	38
Optional Mounting Accessory Notes	Qty 4 <a href="http://tripplite.eaton.com/2-Post-Rack-Mount-Installation-Kit-3U-Larger-UPS-Transformer-Battery-Pack-Components~2POSTRMKITHD">2POSTRMKITHD</a> required; Qty 2 <a href="http://tripplite.eaton.com/2U-9U-Tower-Stand-Kit-select-Rack-Mount-UPS-Systems~2-9USTAND">2-9USTAND</a> 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

Unit Dimension Details	Includes 2 SU10000RT3UPMTAA UPS/Power modules, 2 BP240V10RT3UTAA Battery packs and SUPDMB20KTAA 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 17.50 x 25.82
UPS Power Module Weight (kg)	19.96
UPS Power Module Weight (lbs.)	44
<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	CSA (Canada); UL 1778
Product Compliance	RoHS; FCC Part 15 Class A (USA)
<b>WARRANTY &amp; SUPPORT</b>	
Product Warranty Period (Worldwide)	2-year limited warranty
Connected Equipment Insurance (U.S., Canada & Puerto Rico)	\$250,000 <a class="insuranceLink" href="//tripplite.eaton.com/support/insurance-policy">Ultimate Lifetime Insurance</a>

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