



Model #: SMART2200RML2U

SmartPro Expandable Rack/Tower UPS System - Intelligent, line-interactive network power management system



Highlights

- 2200VA / 2.2kVA line interactive, extended-run 2U rack / tower UPS
- Maintains sine-wave 100/110/120V nominal output over an input range of 83 to 145V
- Network communications supported via HID enabled USB port, DB9 serial port, SNMP/Web card slot and EPO interface
- Current monitoring and switched PDU control via 3 individually controllable load banks
- Input: NEMA 5-20P / Output: 4 NEMA 5-15/20R, 4 NEMA 5-15R (120V)
- 2 year product warranty / \$250,000 Ultimate Lifetime Insurance (USA, Puerto Rico & Canada only)

Description

2200VA line interactive UPS system for server, network and telecommunications equipment. 2U rackmount or tower form factor with an installed depth of only 19 inches. Expandable battery runtime with optional BP48V24-2U and BP48V60RT-3U external battery packs. Uninterruptible Power Supply (UPS) switches to battery-derived AC output during power failures and extreme voltage variations. Line interactive Automatic Voltage Regulation (AVR) offers two levels of voltage boost during brownouts and one level of voltage cut during overvoltages to maintain regulated 100, 110, 120v selectable output over an input range of 83-145V. Includes NEMA 5-20P input plug and both NEMA 5-15R and 5-15/20R output receptacles. Network-grade AC surge and noise suppression. Network management interfaces support simultaneous communications via USB port, DB9 serial port and SNMPWEBCARD slot. HID-compliant USB interface enables full 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 3 network interfaces. Includes PowerAlert monitoring software and complete cabling. Emergency Power Off (EPO) interface. Integrated 3-bank PDU switching supports load shedding and remote-reboot of connected equipment. 3-stage metered current monitoring and battery charge status LEDs. Utility power and voltage regulation LEDs. Audible alarm. Self-test. 4-post rackmount accessories included; 2-9USTAND tower kit and 2POSTRMKITWM two post rack & wallmount accessories available. Field-replaceable, hot-swappable internal batteries and external battery packs. Attractive all-black color scheme. 2-year warranty and \$250,000 connected equipment insurance; extended warranty and service contracts available.

Applications

Ideal for protection of critical 120V equipment in server rooms, internetworking closets and telecommunications systems in rackmount or tower applications. Common applications include corporate or departmental servers, workstations, hubs, routers, bridges, CAD/CAM workstations, concentrators, IP telephony and traditional PBX switching systems.

Package Includes

SMART2200RML2U UPS system

PowerAlert software CD-ROM

USB, serial and EPO cabling

Owner's manual with warranty information

Features

SmartPro line interactive UPS system is ideal for voice, data, medical and industrial networking applications

Line interactive Automatic Voltage Regulation (AVR) offers two levels of voltage boost during brownouts and one level of voltage cut during overvoltages

Maintains continuous operation through blackouts, voltage fluctuations and surges

Corrects line voltage conditions as low as 83V and as high as 145 back to selectable 100/110/120V nominal values

Standard internal battery set offers 16 minutes at half load (800w) and 6 minutes at full load (1600w)

Optional BP48V24-2U and BP48V60RT3U external rack/tower battery packs enable extended runtime operation

Compact rackmount form factor installs using only 2 rack spaces (2U) with a maximum installed depth of only 19 inches

Ships with all mounting accessories for 4 post rackmount installation

Optional 2POSTRMKITWM enables 2 post rackmount or wallmount installation

Optional 2-9USTAND accessory enables small-footprint upright tower placement

Network interfaces support simultaneous communications via built-in USB, DB9 serial and SNMPWEBCARD slot

HID compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X

Included PowerAlert UPS monitoring software supports safe unattended shutdown, monitoring and control via local connected servers, with the built-in ability to shutdown any number of additional servers over IP

UPS interface supports on-battery, low-battery, power-restored, AC-voltage, DC-voltage, output current monitoring, battery charge current, battery capacity, AC line frequency, timed inverter sutoff, activate self-test, load bank output power control and remote reboot

Built-in Emergency Power Off (EPO) interface with cable

NEMA 5-20P input plug / NEMA 5-15R & NEMA 5-15/20R output receptacles

Integrated 3 bank switched PDU enables remote outlet management for load shedding or remote reboot of individual load banks (Each bank controls 1 outlet per load bank)

Front panel LEDs offer current monitoring and battery charge level information

UPS ships fully assembled in full compliance with DOT regulations, no time consuming connection of internal batteries by user required

2 year manufacturer's product warranty,

Specifications

SYSTEM OVERVIEW	
Voltage compatibility	120V factory default (110V, 100V user selectable)
Frequency compatibility	50 / 60 Hz
OUTPUT	
Output VA	2200
Output watts	1600
Output nominal voltage	120V (110V, 100V) VAC
Output voltage regulation	LINE MODE: Sine wave line voltage 120V (-18% / +8%)
Output frequency regulation	LINE MODE: Passes line frequency of 60Hz +/-10%
Outlet quantity / type	4 NEMA 5-15R and 4 NEMA 5-15/20R
Customized load management receptacles	3 single outlet load banks
INPUT	
Maximum input amps	13.3 (120V)/ 14.6 (110V)/ 16.0 (100V)
Input connection type	NEMA 5-20P

Input cord length	10 ft./ 3m
Recommended Electrical Service	20A 120V
BATTERY	
Full load runtime	6
Half load runtime	16
DC system voltage	48V
Typical battery lifespan	4-6 years typical
Replacement Battery Cartridge	RBC94-2U
VOLTAGE REGULATION	
Voltage regulation description	Automatic Voltage Regulation (AVR) circuits maintain clean, regulated computer-grade 120V nominal output, without using battery power, during brownouts to 79V and overvoltages to 147V
Overvoltage correction	120V: Input voltages between 127 and 145 volts AC are reduced by 12% / 110V: Input voltages between 116 and 133 are reduced by 12% / 100V: Input voltages between 106 and 121 are reduced by 12%
Brownout correction	120V: Input voltages between 96-108 are boosted by 12% / 110V: Input voltages between 87 and 99 are boosted by 12% / 100V: Input voltages between 83 and 90 are boosted by 12%
Severe brownout correction	120V only: Input voltages between 83 and 95 are boosted by 24%
LEDS ALARMS & SWITCHES	
Front panel LEDs	5 front panel LEDs à Green POWER LED, Green VOLTAGE CORRECTION LED, 3 color BATTERY CHARGE LED, 3 color OUTPUT LOAD LEVEL LED, red BATTERY WARNING LED.
Alarms	3 function audible alarm indicates power failure conditions (4 short beeps every 10 seconds), overload (continuous short beeps) and low battery (continuous tone)
Switches	Yes, includes 2 front panel mounted push-button switches for system enable, self-test and alarm cancel functions. Back panel includes voltage selection dip switches for 120 / 110 / 100 volts nominal
SURGE / NOISE SUPPRESSION	
AC surge suppression	570
AC suppression response time	Instantaneous
EMI / RFI AC noise suppression	Yes
PHYSICAL	
Shipping weight (lbs)	72
Shipping weight (kg)	32.4
Shipping Dimensions (HWD/in)	9 x 23.5 x 20
Shipping Dimensions (HWD/cm)	23 x 59.7 x 50.8
Unit weight (lbs)	64
Unit weight (kg)	28.8
Unit Dimensions (HWD/in)	3.5 x 17.5 x 19
Unit Dimensions (HWD/cm)	8.9 x 44.5 x 48.26
Material of construction	Steel
Form factors supported	Rack (2U)

Cooling method	Fan
Battery Access	Battery access panel allows hot swap replacement without powering connected equipment off.
ENVIRONMENTAL	
Operating Temperature	+32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius
Storage Temperature	+5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius
Relative Humidity	0 to 95%, non-condensing
Line mode BTU/hr. (Max.)	168.2 BTU/hr. (worst case)
Battery mode BTU/hr. (Max.)	604.4 BTU/hr. (worst case)
COMMUNICATIONS	
Network monitoring port	HID-compliant USB port and RS232
Software and cabling included	Includes PowerAlert UPS monitoring software for all common network and standalone operating systems. Ships with 2 cables, 1-USB to USB & 1-DB9 to DB9
SNMP compatibility	Built-in accessory slot accommodates internal SNMPWEBCARD and other network accessories
WatchDog compatibility	Yes, compatible with Tripp Lite's WatchDog system service software to restore operation to locked equipment through soft reboot of application / OS or hard power off/on reboot of connected equipment - ideal for unattended kiosk applications
LINE / BATTERY TRANSFER	
Transfer time from line power to battery mode	2-4 milliseconds
Low voltage transfer to battery power	Switches to battery power if line voltage decreases to 83 (120V), 87 (110V), or 83 (100V) volts or less. Resets back to line power as line voltage increases to 87 (120V), 92 (110V), or 87 (100V) volts or higher.
High voltage transfer to battery power	Switches to battery power as line voltage increases to 145 (120V), 133 (110V), or 121 (100V) volts or higher. Resets back to line power when line voltage decreases to 141 (120V), 129 (110V), or 118 (100V) volts or less.
SPECIAL FEATURES	
EPO port	Includes RJ11 EPO (emergency power off) port and interconnection cable
TVSS grounding	Includes back panel grounding point with thumbscrew for data line surge suppressors and other network accessories requiring a safe grounding point
Cold Start	Yes, inverter can be "cold started" to enable temporary AC output during a power failure
Appearance	Attractive all-black housing
BATTERY PACK ACCESSORY (optional)	
Battery Pack Accessory (optional)	BP48V242U (limit 1) and BP48V60RT3U (multi-pack compatible)
CERTIFICATIONS	
Certifications	Tested to UL1778 (USA), CSA C22.2 No. 107.3 (Canada), RoHS compliant, Class A (Emissions), NOM (Mexico)
WARRANTY	
Product warranty	2 year product warranty
Optional coverage	3 year, 5 year, next day and on-site warranty coverage available for select opportunities

Related Items

Extended Warranties

WEXT3-2200-3000	3-Year Extended Warranty - For Smart Line-Interactive and Online Tower or Rack models, 2200-3000VA	Qty: [optional]
WEXT5-2200-3000	5-Year Extended Warranty - For Smart Line-Interactive and Online Tower or Rack models, 2200-3000VA or less	Qty: [optional]
External Battery Packs		
BP48V24-2U	BP48V242U - External Battery Pack for UPS System	Qty: [optional]
BP48V60RT-3U	External Battery Pack and Cable. 3U, Expandable, Blue 2-Point Connector	Qty: [optional]
Power Distribution		
PS7224-20	Tripp Lite Power Strip - Multiple outlets wherever you need them	Qty: [optional]
PDU1220	Basic PDU / Power Distribution Unit - Safe, reliable power distribution for critical networking equipment	Qty: [optional]
Rackmount/Wallmount Kits		
2POSTRMKITWM	Allows for 2 post mounting of Tripp Lite 2U-4U rackmount UPS systems and battery packs	Qty: [optional]
SNMP Accessories		
ENVIROSENSE	Power Management Tools - Environmental Sensor	Qty: [optional]
SNMPWEBCARD	Power Management Tools - Internal SNMP/Web Card	Qty: [optional]
Software		
WATCHDOGSW	WatchDog Service Monitoring / Reboot Software	Qty: [optional]
Surge Protectors		
DTEL2	Network Surge Suppressor - Essential protection for data and communication lines	Qty: [optional]
DNET1	Network Surge Suppressor - Essential protection for data and communication lines	Qty: [optional]
DCATV	Network Surge Suppressor - Essential protection for TV/VCR coaxial lines	Qty: [optional]
Tower Stands		
2-9USTAND	Tower Stand - Expandable Tower Base Stand UPS Accessory	Qty: [optional]
USB Hubs/Accessories		
U022-010	USB Cable - 10-ft. USB 2.0 AB Gold Device Cable	Qty: [optional]

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