





We all depend on mains power, but it isn't always reliable or even available. Between the overburdened power grid, severe weather and hazards lurking inside your own walls, your equipment is under constant attack. You can prevent equipment damage, data loss and downtime by installing a UPS system to regulate incoming AC power and provide battery backup during outages.

Whether you're supporting racks of mission-critical servers in your data center or a single desktop computer in your home office, Tripp Lite can provide the UPS you need to get the job done. And with Tripp Lite, you'll get more for your money.

But with so many models to choose from, how can you determine which UPS is best for your application? Consider the five questions on the next page to help you choose.



## Five Basic Questions to Consider When Choosing a UPS System

### 1. Do you need a Network/Server UPS or a Desktop UPS?

Network/Server UPS Systems protect equipment in high-availability environments like data centers. Desktop UPS Systems protect computers, peripherals and other electronics in your home or office.

**You need a Network/Server UPS if you answer yes to any of these questions:**

- Will the UPS support mission-critical equipment?
- Will the UPS support a load higher than 1500 VA?
- Will the UPS be installed in a rack or rack enclosure?
- Does your equipment require pure sine wave power?
- Do you need a UPS that has expandable runtime?

### 2. How much UPS capacity do you need?

To estimate capacity requirements, add up the wattage of all the equipment you plan to connect. (Refer to the equipment manufacturer's documentation to find the wattage. If output is listed in amps, multiply by the AC voltage to estimate wattage. If you can't find documentation, refer to the equipment nameplate.) Check the UPS system specifications to see which models will handle your requirements.

*Note: This method provides a rough estimate, but we recommend that you use our UPS finder at [www.tripplite.com/upsguide](http://www.tripplite.com/upsguide) or contact your Tripp Lite representative for a more precise estimate.*

### 3. Which input and output power connections do you need?

Check the UPS specifications to make sure the UPS can connect to a compatible AC circuit/outlet in the installation location. You also need to make sure the UPS system's outlets match the plugs and voltage requirements of your equipment. You can provide additional outlets, placement flexibility and management capabilities by connecting one or more Tripp Lite PDUs to the UPS output.

### 4. How much battery backup runtime do you need?

With an 80% load, included UPS batteries typically provide five to ten minutes of runtime. That's long enough to outlast most outages. If you need additional runtime, choose a UPS system that supports connecting external battery packs. Go to [www.tripplite.com/runtime](http://www.tripplite.com/runtime) for interactive battery backup runtime charts for every UPS model. You can see how battery pack options affect runtime at any wattage level, download traditional runtime chart PDFs and determine the wattage requirements of your equipment.

### 5. What other UPS features do you need?

Tripp Lite manufactures many different UPS systems suitable for a wide range of applications and budgets. See pages 4-5 for a comparison of the key features available in each UPS family.

## Desktop UPS Systems

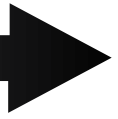
EXTRA PROTECTION / HIGHER CAPACITY ▶ EXTRA PROTECTION / HIGHER CAPACITY







	Line-Interactive Protection	Line-Interactive / On-Line Protection
	 <b>Digital, OmniVS® and AVR Series Line-Interactive UPS (pages 26-27)</b>	 <b>Small Network/Server UPS* (≤1500 VA – see page 5)</b>
<b>Features</b>		
<b>POWER PROTECTION</b>		
Available Load Capacities	<b>550 VA to 1500 VA</b>	<b>500 VA to 1500 VA</b>
Surge/Noise Protection	Yes	Yes
Data Line Protection	Select Models	Select Models
Voltage Regulation	Yes	Yes
Expandable Runtime	Two Models	Select Models
<b>CONVENIENCE</b>		
Compact Form Factors	Low-Profile or Tower	Tower or Rack/Tower
Simple Operation	Yes	Yes
<b>GREEN BACKUP POWER</b>		
High Efficiency	Most Models	Most Models
<b>COMMUNICATIONS AND MANAGEMENT</b>		
Diagnostic LEDs	Most Models	Select Models
LCD Status Screen	Digital (LCD) Models	Select Models
Serial and/or USB Ports	Yes	Yes
Switched Outlet Banks	No	Select Models
Manageable via Host Computer	Yes	Yes
Centrally Manageable	Yes	Yes

\* Although small Network/Server UPS Systems can be ideal for important desktop applications (such as protecting critical workstations), some Network/Server UPS Systems have high-speed cooling fans that may not be suitable for low-noise environments. Contact your Tripp Lite representative for assistance if you are considering this option.

# Network/Server UPS Systems

HIGHER CAPACITY ► EXTRA PROTECTION / HIGHER CAPACITY

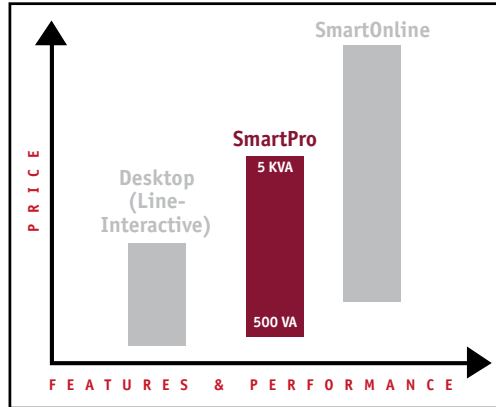


	Line-Interactive Protection		On-Line Protection		Hot-Swappable On-Line Protection	
						
	<b>SmartPro Tower UPS</b> (pages 10-11)	<b>SmartPro Rack/Tower UPS</b> (pages 6-9)	<b>SmartOnline Tower UPS</b> (pages 18-19)	<b>SmartOnline Rack/Tower UPS</b> (pages 12-17)	<b>SmartOnline Hot-Swappable Rack/Tower UPS</b> (pages 12-17)	<b>SmartOnline 3-Phase UPS</b> (pages 20-23)

## Features

POWER PROTECTION						
Available Load Capacities	750 VA to 3 kVA	500 VA to 5 kVA	1 kVA to 3 kVA	1 kVA to 6 kVA	6 kVA to 20 kVA	20 kVA to 120 kVA
Surge/Noise Protection	Yes	Yes	Yes	Yes	Yes	Yes
Expandable Runtime	Select Models	Select Models	Select Models	Yes	Yes	Yes
Voltage Regulation	Yes	Yes	Advanced (±2%)	Advanced (±2% or ±3%)	Advanced (±2%)	Advanced (±1% or ±2%)
Pure Sine Wave Output	Three Models	All Models >500 VA	Yes	Yes	Yes	Yes
True On-Line Operation	No	No	Yes	Yes	Yes	Yes
GREEN BACKUP POWER						
High Efficiency	Most Models	Yes	Yes	Yes	Yes	Yes
Economy Mode Operation	N/A	N/A	Yes	Yes	Yes	Yes
HIGH AVAILABILITY						
Input Voltage Range	Wide	Wide	Very Wide	Very Wide	Very Wide	Very Wide
Industrial Overload Capacity	No	No	No	No	Yes	Yes
Automatic Bypass	No	No	Yes	Yes	Yes	Yes
Hot-Swappable Battery	Yes	Yes	Yes	Yes	Yes	Yes
Hot-Swappable Power Module(s)	No	No	No	No	Yes	Yes
Built-in N+1 Redundancy	No	No	No	No	Select Models	Select Models
COMMUNICATIONS AND MANAGEMENT						
Control Panel	LEDs	LEDs or LCD	LEDs	LEDs and/or LCD	LEDs and LCD	LEDs and LCD
Serial and/or USB Ports	Yes	Yes	Yes	Yes	Yes	Yes
Switched Outlet Banks	Select Models	Most Models	Yes	Select Models	No	No
Manageable via Host Computer	Yes	Yes	Yes	Yes	Yes	Yes
Manageable via Network Card	Most Models	Yes	Yes	Yes	Yes	Yes
Centrally Manageable	Yes	Yes	Yes	Yes	Yes	Yes

## SmartPro Line-Interactive Rack/Tower UPS Systems



- ▶ 500 to 5 000 VA
- ▶ Internal Batteries and Extended Runtime Options
- ▶ Automatic Voltage Regulation (AVR)
- ▶ Rack/Tower/Stack Adaptable

### Conserve Space—Slim as 1U!

SmartPro Rack/Tower UPS Systems provide more battery backup (up to 5 000VA) and premium features in compact cases (as slim as 1U) which make the best use of available rack space.



### Protect Every Application

SmartPro Rack/Tower UPS Systems are available in a wide variety of capacities to protect every size computer application from downtime, damage and data loss due to power problems. SmartPro Rackmount/Tower UPS Systems provide protection against all types of power problems, including brownouts, blackouts, surges and line noise. Line-interactive operation—also known as automatic voltage regulation (AVR)—automatically regulates incoming voltage to keep equipment working through low voltage (brownouts) and high voltage conditions\* indefinitely, without draining battery power. SmartPro Rack/Tower UPS Systems provide reliable battery power to keep computers up and running through short blackouts and allow enough time to save data and shut down during longer ones. In addition, all AC outlets are backed by internal surge suppression and line noise filtering components to protect equipment from damage due to lightning and surges or malfunctions and poor performance due to line noise.

\* SMX500RT1U models offer undervoltage correction only.

A W A R D - W I N N I N G T R I P P L I T E R E L I A B I L I T Y



*"I found Tripp Lite's product quality and customer support to be head-and-shoulders above the field."*  
**Kraft Foods** Alane Watkins, Systems Administrator

## Extend Runtime

Select models accept external battery packs to provide extended runtime. Without enough runtime, businesses stand to lose up to \$70,000 (USD) per hour according to a survey on the cost of lost productivity for an hour of network downtime.\*

\* IDC.



Extending runtime is as simple as plugging in additional external battery packs.

## Adapt to Rack/ Tower/Stack Applications

Adapt all models from rack-mount to tower or stacking applications.\*

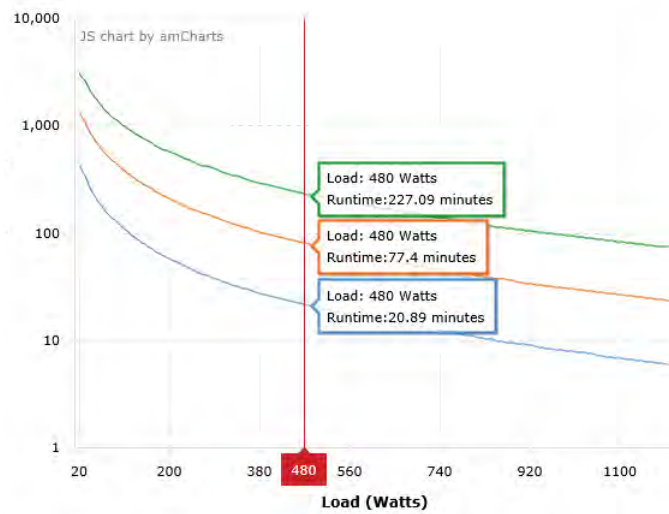
- Removable rack hardware
- Optional base stands



Rack/Tower UPS with optional base stands.

\* 1U models include hardware to adapt to tower mounting. Optional base stands (model: 2-9USTAND) are available to adapt any combination of models, from 2U to 9U wide, to tower mounting.

## Extended Runtime Charts



Add external battery packs to increase runtime.

Compare Battery Packs:

Option 1:

1 x BP36V15-2U

Option 2:

1 x BP36V42-3U

1 x BP36V42-3U  
1 x BP36V15-2U  
Included battery



Go to [www.tripplite.com/runtime](http://www.tripplite.com/runtime) for interactive battery backup runtime charts for every UPS model.

## Manage Servers

Built-in communication ports provide the ability to manage servers without the need for accessories. Using PowerAlert software, models with multiple communication ports can simultaneously provide intelligent communications, shutdown commands and reporting on multiple servers—even if they are running different operating systems.\* Intelligent communications allow you to check UPS status (including battery charge level) and AC power status, as well as reboot switched outlet banks.

\* Additional PowerAlert features: pages 24-25.

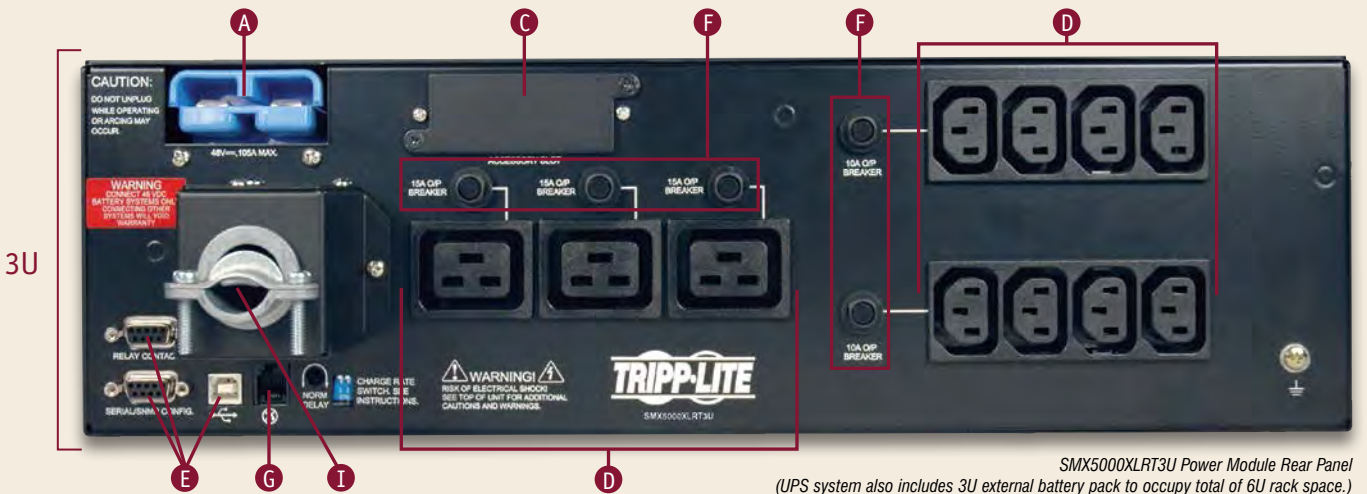
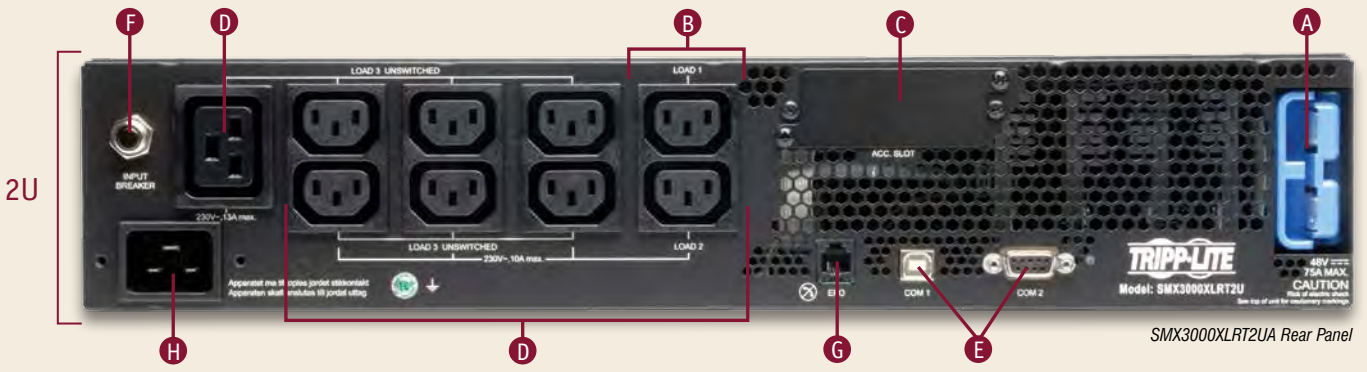
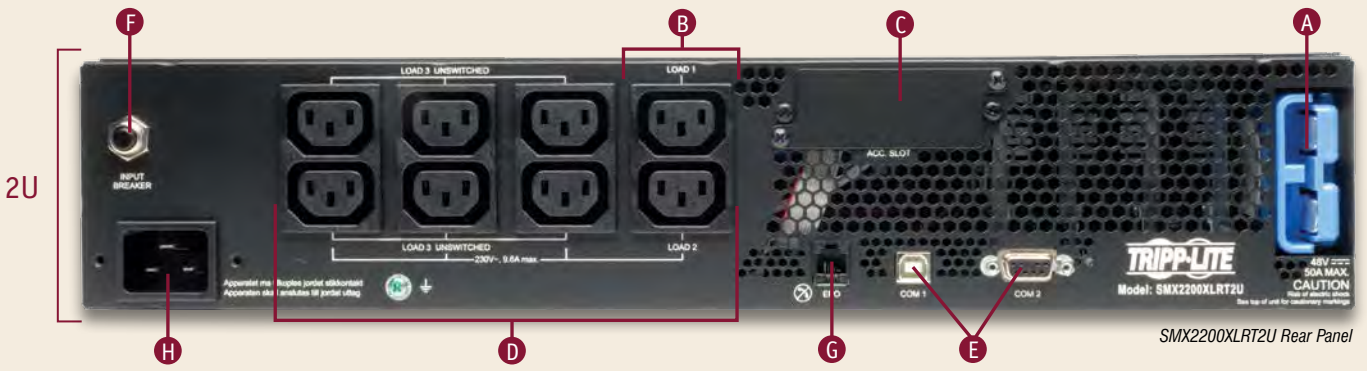
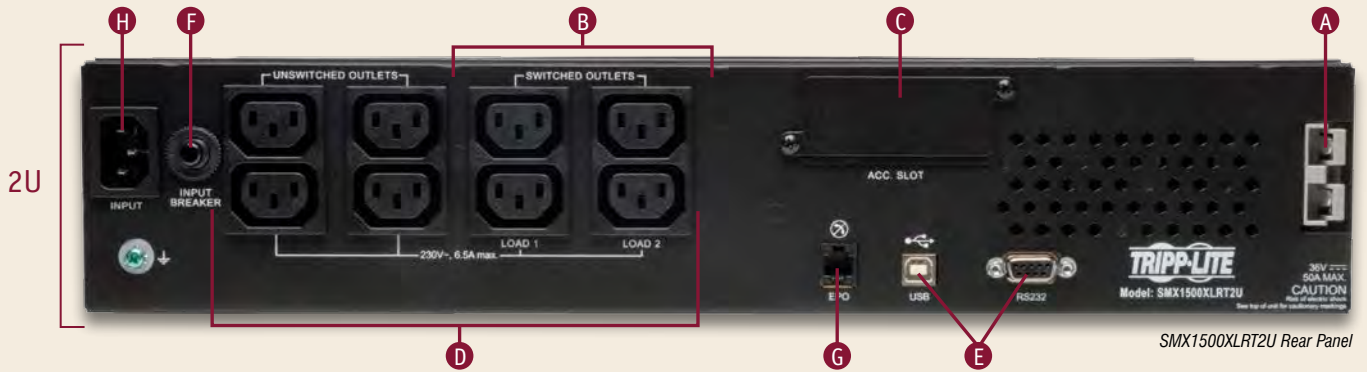
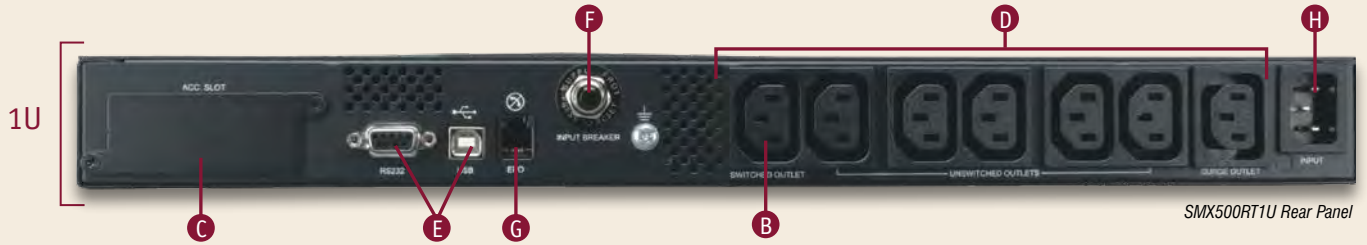
## Control Individual Outlets

Prioritize the uptime of mission-critical loads during a power failure with switched outlet banks featured on select models. Switched outlet banks can be controlled independently through PowerAlert. Use PowerAlert to reboot a locked-up computer by cycling the power on and off to select outlets on the UPS system. You can also program PowerAlert to shut down less important systems during an extended blackout, preserving battery runtime for critical equipment.


## Display Operating Conditions

A front panel LED or LCD display alerts you to a variety of UPS operating conditions, including AC line present, automatic voltage regulation, UPS load and replace battery. The easy-to-read interface provides more information than comparable models, allowing you to react to alerts before your systems are placed at risk.








**A Extended Runtime Capability**   
Select models feature connectors that accept optional external battery packs for additional runtime. External batteries can be “hot-swapped”. Go to [www.tripplite.com/runtime](http://www.tripplite.com/runtime) for interactive runtime charts for every UPS model.

**B Switched Outlet Banks**  
Prioritize the uptime of mission-critical loads during a power failure. Select models feature switched outlet banks that you can control independently through PowerAlert software. Use PowerAlert to reboot a locked-up computer or to shut down less important systems during extended blackouts, preserving battery runtime for critical equipment.

**C Accessory Card Slot**   
Accepts optional internal SNMPWEBCARD or RELAYIOCARD. SNMPWEBCARD provides network interface for monitoring and control via SNMP, Web, SSH or telnet, enabling remote reboots, shutdowns and more. Use with optional ENVIROSENSE to monitor temperature and humidity or to monitor alarms and security systems. RELAYIOCARD provides a programmable contact closure interface with 6 outputs and 1 input.

**D Flexible Output Options**  
C13 and/or C19 outlets ensure maximum compatibility with equipment worldwide.

**E Communication Ports**  
Built-in USB and/or serial ports simultaneously provide shutdown commands and reporting on multiple servers.

**F Short Circuit Protection**  
Breakers safeguard your equipment and the UPS.

**G Emergency Power Off (EPO)**  
A jack included with all models allows remote emergency shutdown.

**H AC Input Connector**  
C14 or C20 inlet (depending on model) connects to a user-supplied cord and plug compatible with local AC outlets.

**I Hardwire Input**






**Front Panel Battery Replacement (Not Shown)**  
Most models feature a removable panel which allows for internal battery replacement.\* Internal batteries can be “hot-swapped”.

\* Tripp Lite offers a complete line of replacement battery cartridges (R.B.C.) at [www.tripplite.com](http://www.tripplite.com).



**Mounting Hardware (Not Shown)**  
Included mounting hardware supports 4-post rack installation. 1U models also support tower and 2-post rack installation. 2U and larger models require optional mounting accessories for tower or 2-post rack installation.

## Specifications

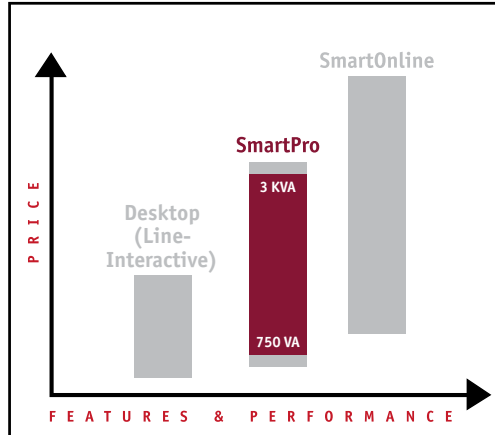


Model	Output Capacity	Typical Half-Load Runtime <sup>(1)</sup>	Extended Runtime	Total Rack Size	Nominal AC Voltage (50/60 Hz)	AC Outlet Quantity (Type) [Switched Outlet Banks]	USB Ports	DB9 Serial Ports <sup>(2)</sup>	AC Input Connector
<b>SmartPro Single-Phase Rack/Tower UPS Systems</b>									
SMX500RT1U	500 VA/300 W	14,6 min.	-	1U	230 (220/230/240)	7 (C13) [1x1]	1	1	C14
SMX1000RT2U	1000 VA/700 W	21 min.	-	2U	230 (220/230/240)	6 (C13) [2x2]	1	1	C14
 SMX1500XLRT2U	1500 VA/1350 W	13,6+ min.	<b>A</b>	2U	230 (220/230/240)	8 (C13) [2x2]	1	1	C14
 SMX2200XLRT2U	2200 VA/1920 W	11,9+ min.	<b>B</b>	2U	230 (220/230/240)	8 (C13) [2x1]	1	1	C20
 SMX3000XLRT2U	3000 VA/2250 W	11+ min.	<b>B</b>	2U	230 (220/230/240)	8 (C13), 1 (C19) [3x2]	1	1	C20
 SMX3000XLRT2UA	3000 VA/2700 W	11,1+ min.	<b>B</b>	2U	230 (220/230/240)	8 (C13), 1 (C19) [2x1]	1	1	C20
 SMX5000XLRT3U	5000 VA/3750 W	20+ min.	<b>B</b>	3U	230 (220/230/240)	8 (C13), 3 (C19)	1	1	Hardwire
<b>Optional External Battery Packs</b>									
<b>A</b> BP36V15-2U	36V external battery pack and cable. Gray 2-pole connector. 2U rack/tower cabinet. Not expandable.								
<b>A</b> BP36V27-2US	36V external battery pack and cable. Gray 2-pole connector. 2U rack/tower cabinet. Expandable via daisy chain.								
<b>A</b> BP36V42-3U	36V external battery pack and cable. Gray 2-pole connector. 3U rack/tower cabinet. Expandable via daisy chain.								
<b>B</b> BP48V24-2U	48V external battery pack and cable. Blue 2-pole connector. 2U rack/tower cabinet. Not expandable.								
<b>B</b> BP48V27-2US	48V external battery pack and cable. Blue 2-pole connector. 2U rack/tower cabinet. Expandable via daisy chain.								
<b>B</b> BP48V60RT-3U	48V external battery pack and cable. Blue 2-pole connector. 3U rack/tower cabinet. Expandable via daisy chain.								
<b>Additional Accessories</b>									
<b>2-9USTAND</b>	Base stand kit adapts rackmount cabinets for tower installation. Adjusts from 2U to 9U. Two kits adjust from 10U to 14U.								
<b>2POSTRMKITHD</b>	Heavy-duty 2-post rack mounting kit for 2U to 4U UPS cabinets. Order one kit per cabinet.								
<b>ENVIROSENSE</b>	Connects to SNMPWEBCARD for remote temperature and humidity monitoring. Also monitors and controls contact-closure devices.								
<b>RELAYIOCARD</b>	Adds programmable contact-closure interface. Includes six outputs and one input.								
<b>SNMPWEBCARD</b>	Adds network interface to UPS systems for remote management via SNMP, Web, SSH or telnet, including free PowerAlert software.								

Certifications vary by model. All models include an accessory card slot. (1) Runtime varies with load, battery condition and other factors. (2) Select DB9 ports support contact-closure communications.

 Model with expandable runtime.  Model with LCD.

## SmartPro Line-Interactive Tower UPS Systems



### Protect Every Application

SmartPro Tower UPS Systems are available in a wide variety of capacities to protect every size computer application from downtime, damage and data loss due to power problems. SmartPro Tower UPS Systems provide protection against all types of power problems, including brownouts, blackouts, surges and line noise. Line-interactive operation—also known as automatic voltage regulation (AVR)—keeps equipment working through low voltage (brownouts) and high voltage conditions indefinitely, without draining battery power. SmartPro Tower UPS Systems provide reliable battery power to keep computers up and running through short blackouts and allow enough time to save data and shut down during longer ones. In addition, all AC outlets stop damaging surges and filter disruptive line noise.

### Control Individual Outlets

Prioritize the uptime of mission-critical loads during a power failure with switched outlet banks featured on select models. Use PowerAlert to reboot a locked-up computer by cycling the power on and off to select outlets on the UPS system. You can also program PowerAlert to shut down less important systems during an extended blackout, preserving battery runtime for critical equipment.

### Manage Multiple Servers

Multiple built-in communication ports provide the ability to simultaneously manage multiple servers without the need for accessories. Using PowerAlert software, select models with multiple communication ports will simultaneously provide intelligent communications, shutdown commands and reporting on multiple servers—even if they are running different operating systems.\*

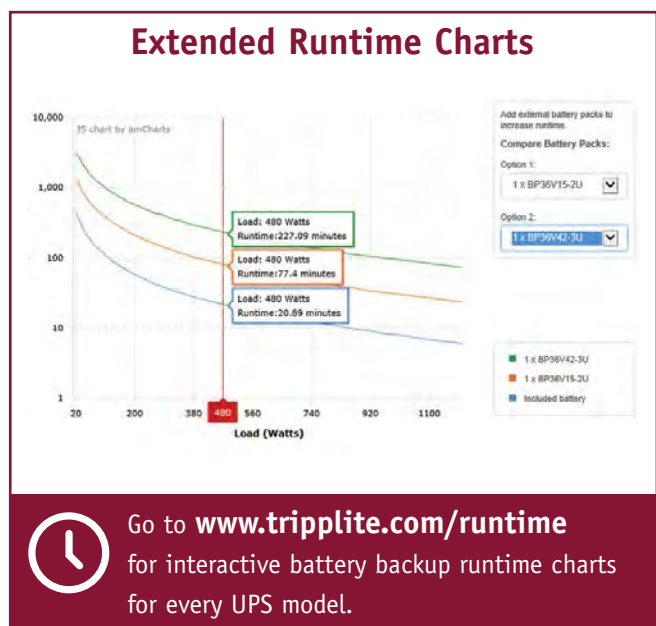
\* Additional PowerAlert features: pages 24-25.

- ▶ 750 to 3000VA
- ▶ Internal Batteries and Extended Runtime Options
- ▶ Automatic Voltage Regulation (AVR)


### Extend Runtime

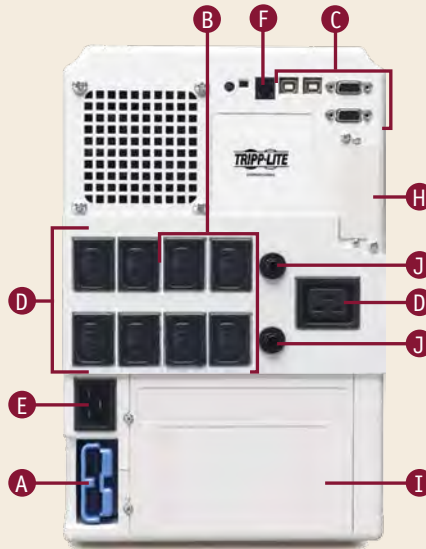
Select models accept external battery packs to provide extended runtime. Without enough runtime, businesses stand to lose up to \$70,000 (USD) per hour according to a survey on the cost of lost productivity for an hour of network downtime.\*

\* IDC.





Go to [www.tripplite.com/runtime](http://www.tripplite.com/runtime) for interactive battery backup runtime charts for every UPS model.

- A Extended Runtime Capability**  
Select models feature connectors that accept optional external battery packs for additional runtime. External batteries can be "hot-swapped". Go to [www.tripplite.com/runtime](http://www.tripplite.com/runtime) for interactive runtime charts for every UPS model. 
- B Switched Outlet Banks**  
Prioritize the uptime of mission-critical loads during a power failure. Select models feature switched outlet banks that you can control independently through PowerAlert software. Use PowerAlert to shut down less important systems first, preserving battery runtime for critical equipment.
- C Communication Ports**  
Built-in USB and/or serial ports simultaneously provide shutdown commands and reporting on multiple servers.
- D Flexible Output Options**  
C13 and/or C19 outlets ensure maximum compatibility with equipment worldwide.
- E AC Input Connector**  
C14 or C20 inlet (depending on model) connects to a user-supplied cord and plug compatible with local AC outlets.



SMARTINT3000VS Rear Panel


- F Emergency Power Off (EPO)**  
A jack on select models allows remote emergency shutdown.
- G Tel/DSL/Ethernet Surge Protection (Select Models, Not Shown)**  
Protect computers from damage on a single telephone or Ethernet line.

- H Accessory Card Slot**  
Accepts optional internal SNMPWEBCARD or RELAYIOCARD. SNMPWEBCARD provides network interface for monitoring and control via SNMP, Web, SSH or telnet, enabling remote reboots, shutdowns and more. Use with optional ENVIROSENSE to monitor temperature and humidity or to control and monitor alarms. RELAYIOCARD provides programmable contact closure interface with 6 outputs and 1 input. 
- I Battery Replacement**  
Tripp Lite UPS batteries will protect equipment for several years with normal use. Most models feature a removable panel that allows for internal battery replacement\*. Internal batteries can be "hot-swapped".
- J Short Circuit Protection**  
**Performance Conditions Displayed**  
Front panel LEDs alert you to a variety of performance conditions, including AC line present, automatic voltage regulation, UPS load level and replace battery. 

\* Tripp Lite offers a complete line of replacement battery cartridges (R.B.C.) at [www.tripplite.com](http://www.tripplite.com).

## Specifications




Model	Output Capacity	Typical Half-Load Runtime <sup>(1)</sup>	Extended Runtime	Nominal AC Voltage (50/60 Hz)	AC Outlet Quantity (Type) [Switched Outlet Banks]	USB Ports	DB9 Serial Ports <sup>(2)</sup>	SNMP Slot	Data Line Surge Protection	AC Input Connector
<b>SmartPro Single-Phase Tower UPS Systems with Pure Sine Wave Output from Battery</b>										
SMX750SLT	750 VA/500 W	15 min.	-	230 (220/230/240)	6 (C13)	1	1	Y	Tel/Network	C14
SMX1050SLT	1050 VA/650 W	20 min.	-	230 (220/230/240)	8 (C13)	1	1	Y	Tel/Network	C14
SMX1500SLT	1500 VA/900 W	20 min.	-	230 (220/230/240)	8 (C13)	1	1	Y	Tel/Network	C14
<b>SmartPro Single-Phase Tower UPS Systems</b>										
SMARTINT1500	1500 VA/940 W	20 min.	-	230 (220/230/240)	6 (C13)	-	2	N	-	C14
SMARTINT2200VS	2200 VA/1600 W	19 min.	-	230 (220/230/240)	8 (C13), 1 (C19) [3x2]	2	2	Y	-	C20
 SMARTINT3000VS	3000 VA/2250 W	14+ min.	<b>A</b>	230 (220/230/240)	8 (C13), 1 (C19) [3x2]	2	2	Y	-	C20

### Optional External Battery Packs

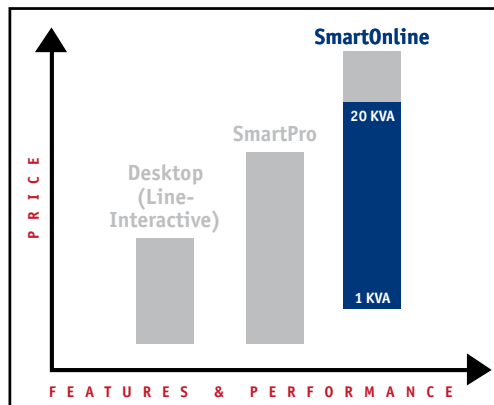
<b>A</b> BP48V24-2U	48 V external battery pack and cable. Blue 2-pole connector. 2U rack/tower cabinet. Not expandable.
<b>A</b> BP48V27-2US	48 V external battery pack and cable. Blue 2-pole connector. 2U rack/tower cabinet. Expandable via daisy chain.
<b>A</b> BP48V60RT-3U	48 V external battery pack and cable. Blue 2-pole connector. 3U rack/tower cabinet. Expandable via daisy chain.

### Additional Accessories

<b>ENVIROSENSE</b>	Connects to SNMPWEBCARD for remote temperature and humidity monitoring. Also monitors and controls contact-closure devices.
<b>RELAYIOCARD</b>	Adds programmable contact-closure interface. Includes six outputs and one input.
<b>SNMPWEBCARD</b>	Adds network interface to UPS systems for remote management via SNMP, Web, SSH or telnet, including free PowerAlert software.

Certifications vary by model. (1) Runtime varies with load, battery condition and other factors. (2) Select DB9 ports support contact-closure communications.  Model with expandable runtime.

## SmartOnline True On-Line Rack/Tower UPS Systems



### TRUE ON-LINE

- ▶ 1 to 20 kVA
- ▶ Zero Transfer Time, Double Conversion
- ▶ Wide Input Voltage Range with Precision-Regulated Output
- ▶ Extended Runtime Options
- ▶ Automatic Internal Bypass
- ▶ Maintenance Bypass and Detachable PDU Options

### Deliver True On-Line, Pure Sine Wave, Zero Transfer Time Operation

SmartOnline Rackmount/Tower UPS Systems provide mission-critical equipment with the highest level of power protection. Double-conversion technology continually converts incoming AC power into filtered DC power, and then resynthesizes it back into AC power with a pure sine wave. Constant on-line operation completely isolates sensitive equipment from every power problem on the AC line. SmartOnline models accept the widest range of incoming voltage and frequency variations, delivering the most consistently pure, highly regulated power:  $\pm 2\%$  VAC.\*

\* Regulation is  $\pm 3\%$  VAC for SUINT2200RTL2UA.

SmartOnline Rackmount/Tower UPS Systems provide reliable battery power with zero transfer time to keep networks up and running through short blackouts and allow enough time to save data and shut down during longer ones. In addition, they stop damaging surges and filter disruptive line noise.

### Manage Multiple Servers

Using PowerAlert software, select models with multiple communication ports will simultaneously provide intelligent communications, shutdown commands and reporting on multiple servers—even if they are running different operating systems.\* Intelligent communications allow you to check UPS status (including battery charge level and runtime remaining) and AC power status as well as reboot switched outlet banks.

\* Additional PowerAlert features: pages 24-25.

### Control Individual Outlets

Switched outlet banks on select models can be controlled independently through PowerAlert. Use PowerAlert to reboot a locked-up computer by cycling the power on and off to select outlets on the UPS system. You can also program PowerAlert to shut down less important systems during an extended blackout, preserving battery runtime for critical equipment.

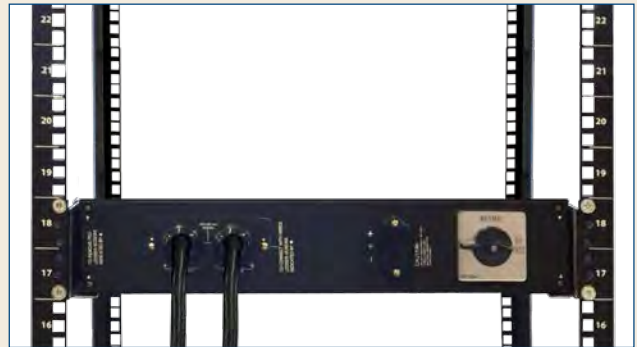
### Save Electricity and Reduce Costs

SmartOnline UPS Systems are up to 97% efficient in economy mode, a potential increase of 10% or more versus comparable on-line UPS systems. Economy mode can make your data center significantly cooler, greener and more cost-effective.


## Provide Maximum Availability with Hot-Swappable Design



*Hot-Swap the Power Module . . .*



*. . . Detachable Bypass PDU Continues Powering Equipment*

All SmartOnline Rackmount/Tower UPS Systems include an automatic internal bypass that ensures maximum availability of connected equipment by passing through utility power in the event of an internal fault or overload. Hot-swappable models include two additional features that ensure continuous availability: a modular design and detachable bypass PDU. When the bypass switch is set to “bypass”, the power module can be removed for maintenance while the detachable bypass PDU remains installed, continuing to power connected equipment as long as utility power is present. Hot-swappable models are designated by the  symbol in the specifications chart.

## Adapt to Rack / Tower / Stack Applications

Adapt all models from rackmount to tower or stacking applications.

- Removable rack hardware
- Optional tower base stands (2-9USTAND)



*Single cabinet tower mount with optional base stands.*



*Multiple cabinet tower mount with optional base stands.*

## Extend Runtime


All models accept external battery packs to provide extended runtime. Without enough runtime, businesses stand to lose up to \$70,000 (USD) per hour according to a survey on the cost of lost productivity for an hour of network downtime.\*

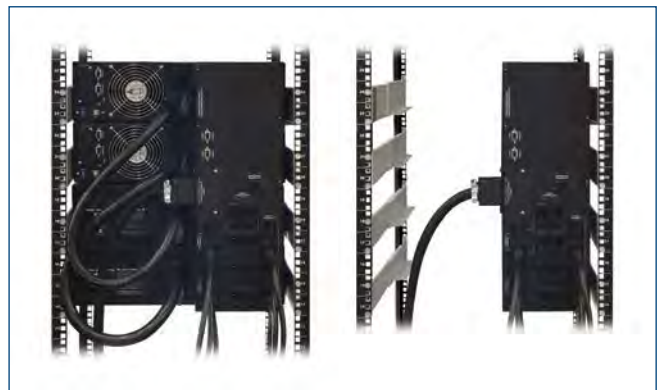


*Extending runtime is as simple as plugging in additional external battery packs.*

\* IDC.

## Provide Built-in N+1 Redundancy

Select models (designated by the  symbol in the specifications chart) include dual power modules for built-in N+1 redundancy. The power modules are hot-swappable, so they can be removed for maintenance, repair or replacement while the detachable bypass PDU powers equipment.



*Select models include dual hot-swappable power modules for built-in N+1 redundancy.*

## Display Operating Conditions

A front panel LED or LCD display alerts you to a variety of UPS conditions, including operating mode, load level and battery charge level. The easy-to-read interface provides more information than comparable models, allowing you to react to alerts before your systems are placed at risk.



**A Extended Runtime Capability**

All models feature connectors that accept optional external battery packs for additional runtime. External batteries can be “hot-swapped”. Go to [www.tripplite.com/runtime](http://www.tripplite.com/runtime) for interactive runtime charts for every UPS model.



**B Detachable Bypass PDU**

Passes through power to connected equipment if the power module is removed for maintenance, repair or replacement.

**C Switched Outlet Banks**

Select models feature switched outlet banks that you can control independently through PowerAlert software.

**D Communication Ports**

Built-in USB and/or serial ports simultaneously provide shutdown commands and reporting on multiple servers.

**E Bypass Operation**

A bypass switch allows the power module to be removed for maintenance, repair or replacement while continuously passing through utility power to connected equipment.



**F AC Input Connector**

C14 or C20 inlet (depending on model) connects to a user-supplied cord and plug compatible with local AC outlets.

**G Accessory Card Slot**

Accepts optional internal SNMPWEBCARD or RELAYIOCARD. SNMPWEBCARD provides network interface for monitoring and control via SNMP, Web, SSH or telnet, enabling remote reboots, shutdowns and more. Use with optional ENVIROSENSE to monitor temperature and humidity. RELAYIOCARD provides a programmable contact closure interface with 6 outputs and 1 input.



**H Emergency Power Off**

A jack included with select models allows remote emergency shutdown.

**I Flexible Output Options**

C13 and/or C19 outlets on select models ensure maximum compatibility with equipment worldwide.

**J Short Circuit Protection**

Circuit breakers guard against short circuits and overloads.

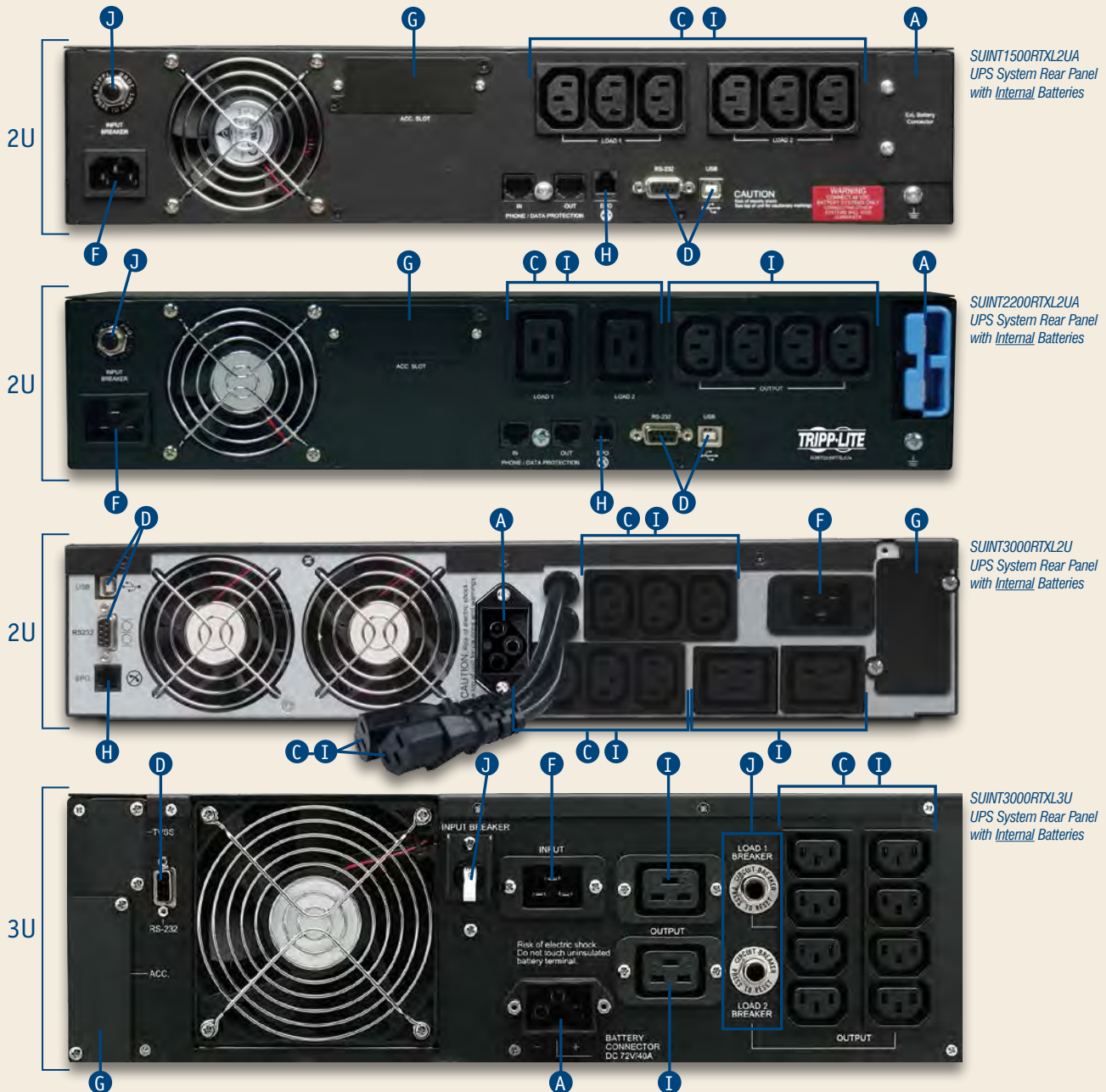
**K Hardwire Input**

**Front Panel Battery Replacement (Not Shown)**

1000 to 3000 VA models feature a convenient front-panel battery access.\* All models allow “hot-swap” battery replacement.

\*Tripp Lite offers a complete line of replacement battery cartridges (R.B.C.) at [www.tripplite.com](http://www.tripplite.com).

**Standard Models** Maximum Availability Features: Internal Bypass • Hot-Swappable Batteries



**Hot-Swappable Modular Models** Maximum Availability Features:  
 Internal Bypass • Detachable Bypass PDU • Hot-Swappable Power Module • Hot-Swappable Batteries



## Specifications



Model	Output Capacity	Typical Half-Load Runtime <sup>(1)</sup>	Extended Runtime	Total Rack Size	Input Voltage Range <sup>(2)</sup>	Nominal Output Voltage (50/60 Hz)	Output Voltage Regulation	AC Outlet Quantity (Type) [Switched Outlet Banks]	USB Ports	DB9 Serial Ports <sup>(3)</sup>	AC Input Connector
<b>SmartOnline Rack/Tower UPS Systems</b>											
<b>SUINT1000RTL2UA</b>	1 kVA/0,8 kW	12+ min.	<b>A</b>	2U	130-275	230 (200/220/230/240)	±2%	6 (C13)	1	1	C14 inlet
<b>SUINT1500RTL2UA</b>	1,5 kVA/1,2 kW	12+ min.	<b>B</b>	2U	130-275	230 (200/220/230/240)	±2%	6 (C13) [2x3]	1	1	C14 inlet
<b>SUINT2200RTL2UA</b>	2,2 kVA/1,6 kW	14+ min.	<b>B</b>	2U	130-275	230 (200/220/230/240)	±3%	4 (C13) + 2 (C19) [2x1]	1	1	C20 inlet
<b>SUINT3000RTL2U</b>	3 kVA/2,5 kW	15+ min.	<b>C</b>	2U	120-288	230 (200/208/220/230/240)	±2%	8 (C13) + 2 (C19) [2x4]	1	1	C20 inlet
<b>SUINT3000RTL3U</b>	3 kVA/2,4 kW	14+ min.	<b>C</b>	3U	130-275	230 (200/220/230/240)	±2%	8 (C13) + 2 (C19) [2x4]	–	1	C20 inlet
<b>SU6000RT3UHV</b>	6 kVA/4,2 kW	20+ min.	<b>E</b>	6U	156-276	230 (200/208/220/230/240)	±2%	Hardwire	–	2	Hardwire
<b>SU6000RT3UHVXL</b>	6 kVA/4,2 kW	30+ min.	<b>E</b>	6U	156-276	230 (200/208/220/230/240)	±2%	Hardwire	–	2	Hardwire
<b>SmartOnline Hot-Swappable Rack/Tower UPS Systems</b>											
<b>SU6000RT4UHV</b>	6 kVA/5,4 kW	8,5+ min.	<b>D</b>	4U	100-300	230 (200/208/220/230/240)	±2%	4 (C19)	1	1	Hardwire
<b>SU6000RT4UHVHW</b>	6 kVA/5,4 kW	8,5+ min.	<b>D</b>	4U	100-300	230 (200/208/220/230/240)	±2%	Hardwire	1	1	Hardwire
<b>SU8000RT3UG</b>	8 kVA/7,2 kW	13,5+ min.	<b>E</b>	6U	100-300	230 (200/208/220/230/240)	±2%	6 (C19)	1	1	Hardwire
<b>SU8000RT3UHW</b>	8 kVA/7,2 kW	13,5+ min.	<b>E</b>	6U	100-300	230 (200/208/220/230/240)	±2%	Hardwire	1	1	Hardwire
<b>SU10KRT3UHV</b>	10 kVA/9 kW	12,5+ min.	<b>E</b>	6U	100-300	230 (200/208/220/230/240)	±2%	Hardwire	1	1	Hardwire
<b>SU10000RT3UG</b>	10 kVA/9 kW	12,5+ min.	<b>E</b>	6U	100-300	230 (200/208/220/230/240)	±2%	6 (C19)	1	1	Hardwire
<b>SmartOnline Hot-Swappable Rack/Tower UPS Systems with Dual Power Modules (Provide N+1 redundancy when load is 50% or less.)</b>											
<b>SU12KRT4UHW</b>	12 kVA/10,8 kW	8,5+ min.	<b>E</b>	8U	100-300	230 (200/208/220/230/240)	±2%	Hardwire	1	1	Hardwire
<b>SU16KRTG</b>	16 kVA/14,4 kW	13,5+ min.	<b>E</b>	12U	100-300	230 (200/208/220/230/240)	±2%	8 (C19)	1	1	Hardwire
<b>SU16KRTHW</b>	16 kVA/14,4 kW	13,5+ min.	<b>E</b>	12U	100-300	230 (200/208/220/230/240)	±2%	Hardwire	1	1	Hardwire
<b>SU20KRTG</b>	20 kVA/18 kW	12,5+ min.	<b>E</b>	12U	100-300	230 (200/208/220/230/240)	±2%	8 (C19)	1	1	Hardwire
<b>SU20KRTHW</b>	20 kVA/18 kW	12,5+ min.	<b>E</b>	12U	100-300	230 (200/208/220/230/240)	±2%	Hardwire	1	1	Hardwire
<b>SmartOnline Rack/Tower UPS System with 3-Phase Input and Single-Phase Output (Includes SNMP card and supports parallel configuration of up to 4 units.)</b>											
<b>SU10KRT3/1X</b>	10 kVA/7 kW	14+ min.	<b>E</b>	6U	277-485 (3-phase)	230 (200/220/230/240)	±2%	Hardwire	–	1	Hardwire

Certifications vary by model. All models include an accessory card slot. **(1)** Runtime varies with load, battery condition and other factors. **(2)** Input voltage range varies with load. **(3)** Select DB9 ports support contact-closure communications.

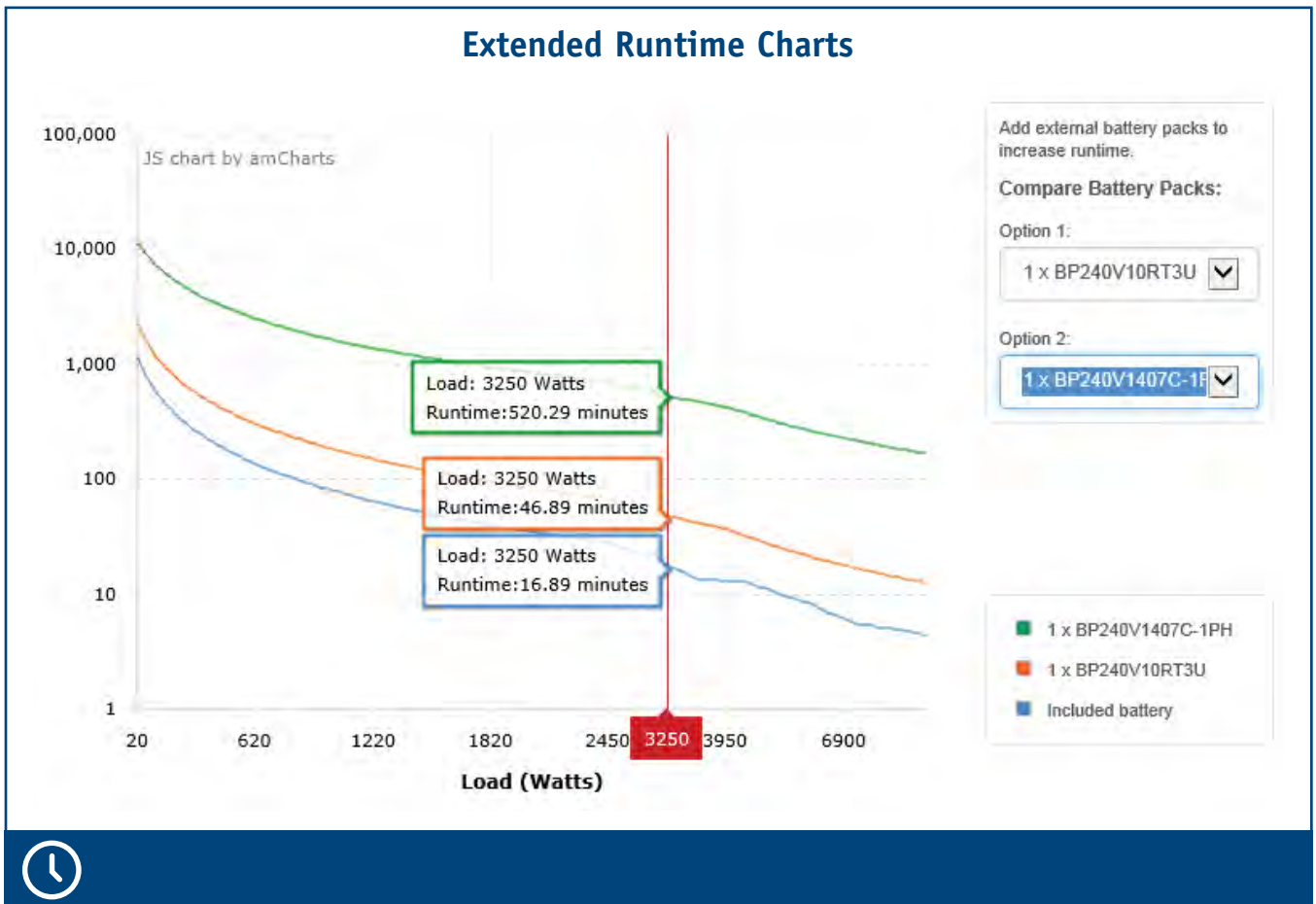
Model with expandable runtime. Model with LCD. Model with hot-swappable power module(s). Model with built-in N+1 redundancy.



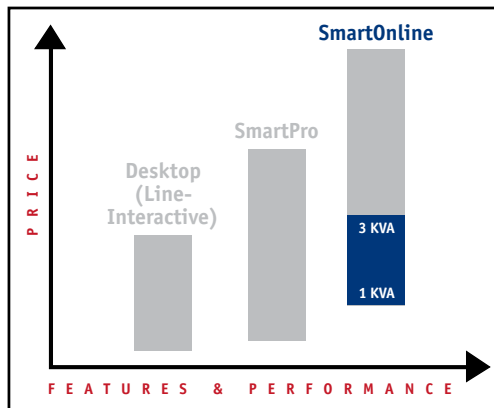
# Specifications



Model	Description
<b>Optional External Battery Packs</b>	
<b>A BP24V15RT2U</b>	24V external battery pack and cable. Red and black 2-pole connector. 2U rack/tower cabinet. Not expandable.
<b>A BP24V28-2U</b>	24V external battery pack and cable. Red and black 2-pole connector. 2U rack/tower cabinet. Not expandable.
<b>A BP24V36-2US</b>	24V external battery pack and cable. Red and black 2-pole connector. 2U rack/tower cabinet. Expandable via daisy chain.
<b>A BP24V70-3U</b>	24V external battery pack and cable. Red and black 2-pole connector. 3U rack/tower cabinet. Expandable via daisy chain.
<b>B BP48V24-2U</b>	48V external battery pack and cable. Blue 2-pole connector. 2U rack/tower cabinet. Not expandable.
<b>B BP48V27-2US</b>	48V external battery pack and cable. Blue 2-pole connector. 2U rack/tower cabinet. Expandable via daisy chain.
<b>B BP48V60RT-3U</b>	48V external battery pack and cable. Blue 2-pole connector. 3U rack/tower cabinet. Expandable via daisy chain.
<b>C BP72V15-2U</b>	72V external battery pack and cable. Black 3-pole connector. 2U rack/tower cabinet. Not expandable.
<b>C BP72V18-2US</b>	72V external battery pack and cable. Black 3-pole connector. 2U rack/tower cabinet. Expandable via daisy chain.
<b>C BP72V28RT-3U</b>	72V external battery pack and cable. Black 3-pole connector. 3U rack/tower cabinet. Expandable via daisy chain.
<b>D BP192V12-3U</b>	192V external battery pack and cable. Black 3-pole connector. 3U rack/tower cabinet. Expandable via daisy chain.
<b>E BP240V10RT3U</b>	240V external battery pack and cable. Black 3-pole connector. 3U rack/tower cabinet. Expandable via daisy chain.
<b>Additional Accessories</b>	
<b>2-9USTAND</b>	Base stand kit adapts UPS systems for tower installation. Adjusts from 2U to 9U. Two kits adjust from 10U to 14U. Included with select UPS models.
<b>2POSTRMKITHD</b>	Heavy-duty 2-post rack mounting kit for 2U to 4U UPS cabinets. Order one kit per cabinet.
<b>ENVIROSENSE</b>	Connects to SNMPWEBCARD for remote temperature and humidity monitoring. Also monitors and controls contact-closure devices.
<b>MODBUSCARD</b>	Accessory card adds interface for MODBUS RTU industrial communications protocol, RS-422/485 and RS-232.
<b>RELAYIOCARD</b>	Accessory card adds programmable contact-closure interface. Includes six outputs and one input.
<b>RELAYIOMINI</b>	Miniature accessory card adds contact-closure port (DB9) to select UPS systems. Replaces USB port.
<b>SNMPWEBCARD</b>	Adds network interface to UPS systems for remote management via SNMP, Web, SSH or telnet, including free PowerAlert software.



## SmartOnline True On-Line Tower UPS Systems



### Deliver True On-Line, Pure Sine Wave, Zero Transfer Time Operation

SmartOnline Tower UPS Systems provide mission-critical equipment with the highest level of power protection. Double-conversion technology continually converts incoming AC power into filtered DC power, and then resynthesizes it back into AC power with a pure sine wave. Constant on-line operation completely isolates sensitive equipment from every power problem on the AC line. SmartOnline models accept the widest range of incoming voltage and frequency variations, delivering the most consistently pure, highly-regulated power:  $\pm 2\%$  VAC.

SmartOnline Tower UPS Systems provide reliable battery power with zero transfer time to keep networks up and running through short blackouts and allow enough time to save data and shut down during longer ones. In addition, they stop damaging surges and filter disruptive line noise. All models ensure maximum availability with an automatic internal bypass which passes through utility power in the event of an internal fault or overload.

### Manage Multiple Servers

Using PowerAlert software, simultaneously manage multiple servers—even if they are running different operating systems.\* Intelligent communications allow you to check UPS status (including battery charge level and runtime remaining) and AC power status. You can use PowerAlert to reboot a locked-up server by cycling the power to select UPS outlets or shut down nonessential systems during a blackout, preserving runtime for critical equipment.

\* Additional PowerAlert features: pages 24-25.

### Save Electricity and Reduce Costs

SmartOnline UPS Systems are up to 97% efficient in economy mode, a potential increase of 10% or more versus comparable on-line UPS systems. Economy mode can make your data center significantly cooler, greener and more cost-effective.

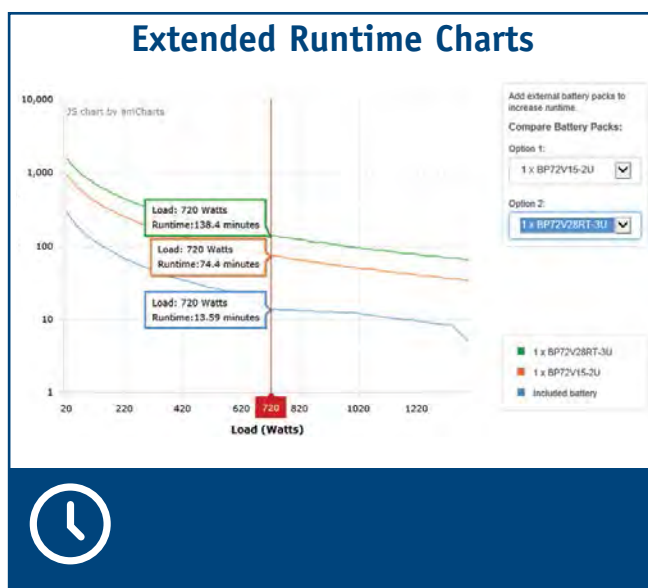
### TRUE ON-LINE

- ▶ 1 000 to 3 000 VA
- ▶ Zero Transfer Time, Double Conversion
- ▶ Wide Input Voltage Range with Precision-Regulated Output
- ▶ Automatic Internal Bypass
- ▶ Internal Batteries and Extended Runtime Options

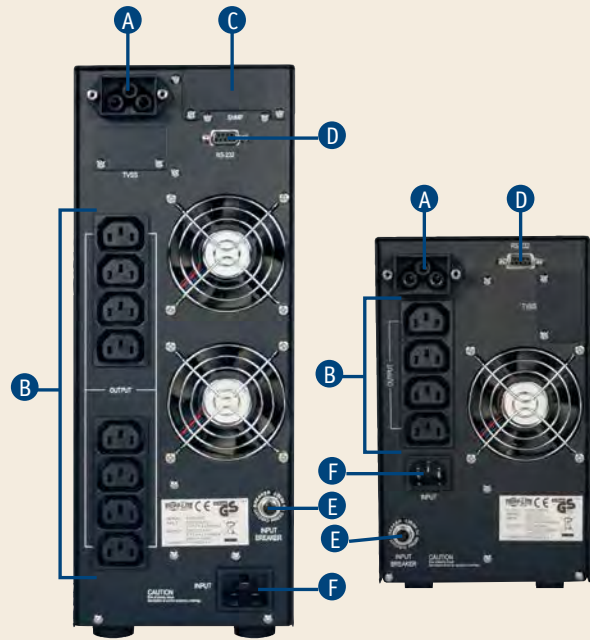
### Extend Runtime

Select models accept external battery packs to provide extended runtime. Without enough runtime, businesses stand to lose up to \$70 000 (USD) per hour according to a survey on the cost of lost productivity for an hour of network downtime.\*

\* IDC.



- A Extended Runtime Capability**  
Select models feature connectors that accept optional external battery packs for additional runtime. External batteries can be “hot-swapped”. Go to [www.tripplite.com/runtime](http://www.tripplite.com/runtime) for interactive runtime charts for every UPS model.
- B Flexible Output Options**  
C13 outlets ensure maximum compatibility with equipment worldwide.
- C Accessory Card Slot**  
Accepts optional internal SNMPWEBCARD or RELAYIOCARD. SNMPWEBCARD provides network interface for monitoring and control via SNMP, Web, SSH or telnet, enabling remote reboots, shutdowns and more. Use with optional ENVIROSENSE to monitor temperature and humidity. RELAYIOCARD provides a programmable contact closure interface with 6 outputs and 1 input.
- D Communication Port**  
Built-in serial port provides shutdown commands and reporting.
- E Short Circuit Protection**  
Breakers guard against short circuits and overloads.
- F AC Input Connector**  
C14 or C20 inlet (depending on model) connects to a user-supplied cord and plug compatible with local AC outlets.

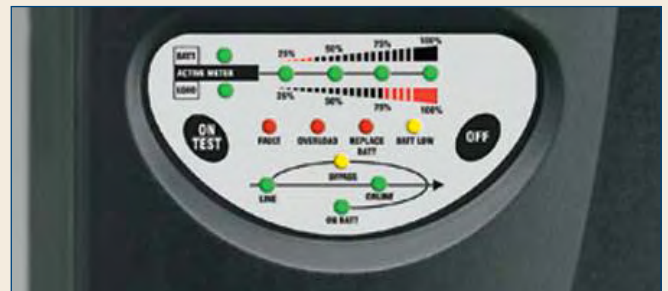


SUINT3000XL Rear Panel

SUINT1000XL Rear Panel

## Display Critical Operational Conditions

SmartOnline Tower UPS Systems feature a front panel LCD or LED display which displays a variety of UPS operational modes and conditions. This interface provides more information than comparable models, allowing you to react more rapidly to an alert before your systems are put at risk.



## Specifications



Model	Output Capacity	Typical Half-Load Runtime <sup>(1)</sup>	Extended Runtime	Input Voltage Range <sup>(2)</sup>	Nominal Output Voltage (50/60 Hz)	Output Voltage Regulation	AC Outlet Quantity (Type)	DB9 Serial Ports <sup>(3)</sup>	Accessory Card Slot	AC Input Connector
<b>SmartOnline Tower UPS Systems</b>										
SUINT1000XL	1 kVA/0,7 kW	14 min.	-	80-280	230 (220/230/240)	±2%	4 (C13)	1	N	C14 inlet
SUINT2000XL	2 kVA/1,4 kW	14+ min.	<b>A</b>	80-280	230 (220/230/240)	±2%	8 (C13)	1	Y	C20 inlet
SUINT3000XL	3 kVA/2,1 kW	14+ min.	<b>A</b>	80-280	230 (220/230/240)	±2%	8 (C13)	1	Y	C20 inlet
<b>Optional External Battery Packs</b>										
<b>A</b> BP72V15-2U	72V external battery pack and cable. Black 3-pole connector. 2U rack/tower cabinet. Not expandable.									
<b>A</b> BP72V18-2US	72V external battery pack and cable. Black 3-pole connector. 2U rack/tower cabinet. Expandable via daisy chain.									
<b>A</b> BP72V28RT-3U	72V external battery pack and cable. Black 3-pole connector. 3U rack/tower cabinet. Expandable via daisy chain.									
<b>Additional Accessories</b>										
<b>ENVIROSENSE</b>	Connects to SNMPWEBCARD for remote temperature and humidity monitoring. Also monitors and controls contact-closure devices.									
<b>RELAYIOCARD</b>	Adds programmable contact-closure interface. Includes six outputs and one input.									
<b>SNMPWEBCARD</b>	Adds network interface to UPS systems for remote management via SNMP, Web, SSH or telnet, including free PowerAlert software.									

Certifications vary by model. (1) Runtime varies with load, battery condition and other factors. (2) Input voltage range varies with load. (3) Select DB9 ports support contact-closure communications.

Model with expandable runtime.

## SmartOnline Modular 3-Phase

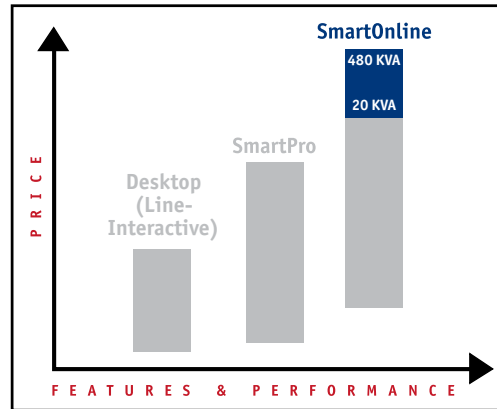
True On-Line Tower UPS Systems



### Deliver True On-Line, Pure Sine Wave, Zero Transfer Time Operation

SmartOnline Modular 3-Phase UPS Systems provide mission-critical equipment with the highest level of power protection. Double-conversion technology continually converts incoming AC power into filtered DC power, and then resynthesizes it back into AC power with a pure sine wave. Constant on-line operation completely isolates sensitive equipment from every power problem on the AC line. SmartOnline Modular 3-Phase UPS Systems automatically correct the widest range of incoming voltages of any models in their class. A wider voltage correction range saves battery power and decreases battery wear by up to 40%, reducing battery replacement costs. SmartOnline Modular 3-Phase models provide reliable battery power with zero transfer time to keep networks up and running safely through short blackouts and allow enough time to safely shut down or switch to generator backup during longer ones. In addition, all models stop damaging surges and filter disruptive line noise.

SmartOnline Modular 3-Phase UPS Systems are ideal for protecting critical equipment in computing, networking or telecommunications environments.



### TRUE ON-LINE

- ▶ 20 to 120kVA (Up to 480kVA in Parallel)
- ▶ 3-Phase Hardwire (230/400V)
- ▶ N+1 Modular Architecture
- ▶ Parallel Capability with Patented DSP Control
- ▶ Low THDi for 1:1 Generator Sizing
- ▶ Zero Transfer Time, Double Conversion
- ▶ Advanced IGBT Rectifier and Inverter Technology with Power Factor Correction (PFC)

### Save Installation Costs (1:1 Generator Sizing)

SmartOnline Modular 3-Phase UPS Systems include a generator-friendly design that lowers installation costs. The SmartOnline UPS System's high input power factor and Digital Signal Processor (DSP) technology create less than 4% input Total Harmonic Distortion (THDi), enabling a 1:1 sizing of the UPS System to a generator set. Generators are affected by the THDi that a UPS system passes back through its input into the overall power system. If the THDi is high, managers are forced to oversize generators in order to compensate. With the SmartOnline UPS System's low THDi, generators run cooler and last longer, allowing managers to save installation costs by installing a generator with a capacity equal to their equipment load (a 1:1 ratio). In addition, low THDi eliminates the need to oversize cables and breakers and eliminates nuisance breaker tripping and overheated transformers.

## Save Operating Costs

SmartOnline Modular 3-Phase UPS Systems include advanced IGBT inverter technology that provides the highest efficiency (up to 96% in economy mode) of any UPS system in their class. High efficiency operation lowers UPS system operating and related cooling costs and lengthens UPS system service life. Since inverter components are smaller, SmartOnline models also save significant facility floor space compared to legacy systems.

## Include Additional Availability Features

A manual bypass breaker as well as an automatic bypass function included on SmartOnline Modular 3-Phase UPS Systems ensure the constant availability of connected equipment by safely passing through AC power if the UPS system requires maintenance. In addition, a battery cold-start function (initiated through the control panel) allows you to restart your UPS system and connected equipment during an extended blackout for periodic system access or retrieval of vital data.

## Provide Optional Extended Service / Support Programs

Start-Up and On-Site Service Programs are recommended and available separately to enhance the reliability of the installation. Preventative maintenance services are also available for added peace of mind.

## Provide Maximum System Availability

### with N+1 Modular Architecture and Parallel Capability

#### N+1 Modular Architecture

##### Maximum Availability with N+1 Redundancy

- Multiple, Redundant Power Modules
- Dual, Redundant Controller Power Supplies

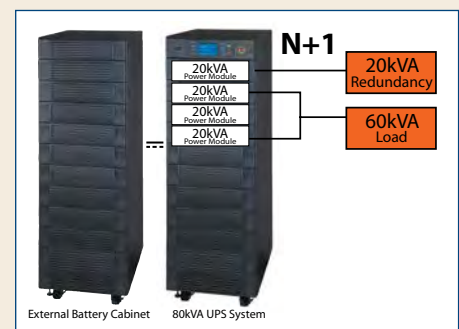
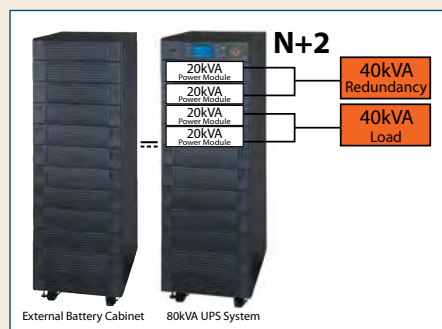
SmartOnline Modular 3-Phase UPS Systems 40kVA and above include multiple, self-contained power modules that provide fail-safe redundancy. In an N+1 configuration, a power module can be hot-swapped (with the load powered) if maintenance is required.



20kVA Redundant Power Module

##### Modular Architecture Provides N+1 (and Greater) Redundancy

UPS Capacity	Connected Load ("N")					
	20kVA	40kVA	60kVA	80kVA	100kVA	120kVA
20 kVA	N	-	-	-	-	-
40 kVA	N+1	N	-	-	-	-
60 kVA	N+2	N+1	N	-	-	-
80 kVA	N+3	N+2	N+1	N	-	-
100kVA	N+4	N+3	N+2	N+1	N	-
120kVA	N+5	N+4	N+3	N+2	N+1	N

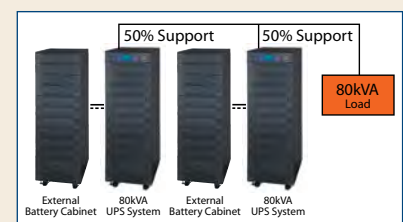


#### Parallel Capability

##### Provides Redundancy

Connect two or more SmartOnline UPS Systems in parallel to provide redundancy for the power distribution system. If one UPS is removed or taken offline for maintenance, the second UPS supports the equipment load automatically—without requiring additional programming.

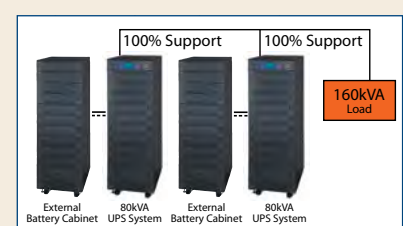
Patented dual DSP technology provides state-of-the-art parallel control.



##### Increases Capacity

Connect SmartOnline Modular 3-Phase UPS Systems in parallel to increase the capacity offered to a single equipment load.

Note: UPS systems connected in parallel must have the same capacity and voltage. Parallel connection also requires a parallel tie cabinet.



## UPS System Power Module Cabinet

The UPS System's power module cabinet delivers true on-line, pure sine wave power to connected equipment.



SU80KX2 Rear Panel

### Extended Runtime Capability (Rear Panel Access, Not Shown)



20 kVA and 40 kVA models include internal batteries. Other models require a stand-alone, hardwire external battery cabinet (bundled or available separately from Tripp Lite) to provide battery backup. All models accept connection of additional external battery cabinets for extended runtime. Contact Tripp Lite for a runtime solution customized for your application.

### Advanced Communications Capabilities

#### A RS-232 Interface

Provides shutdown commands and reporting on a single server.

#### B Accessory Card Slot

Accepts optional internal SNMPWEBCARD. SNMPWEBCARD provides network interface for monitoring and control via SNMP, Web, SSH or telnet, enabling remote reboots, shutdowns and more. Use with optional ENVIROSENSE to monitor temperature and humidity or to control and monitor alarms and security systems.



#### C Parallel Interface

Allows multiple UPS systems to support a single equipment load.

#### D Dry-Contact Interface

(Including "EPO" Emergency Power Off Function)

Allows remote emergency shutdown of the UPS system. Also allows the UPS system to monitor a variety of input/output conditions, including external battery module conditions.

#### Hardwire, 3-Phase (4-Wire, Wye) Output (Rear Panel Access, Not Shown)

Connects the power module directly to your equipment or a PDU (power distribution unit).

#### Hardwire, 3-Phase (4-Wire, Wye) Input (Rear Panel, Not Shown)

Connects the power module directly to the 3-Phase utility power source.

#### E Cooling Fans

Keep UPS system at optimal operating temperature, prolonging service life.

#### F Rolling Casters and Levelers

Provide added mobility and stability during installation.

#### G Multiple, Redundant Hot-Swappable 20kVA Power Modules

All SmartOnline Modular 3-Phase UPS Systems include multiple, self-contained power modules that provide the ultimate level of fail-safe redundancy. In an N+1 configuration, a power module can be hot-swapped (with the load powered) if maintenance is required.



20kVA Redundant Power Module

#### H Bypass Operation

A manual bypass breaker as well as an automatic static bypass ensure maximum availability of connected equipment by safely passing through AC power if the UPS system requires maintenance.



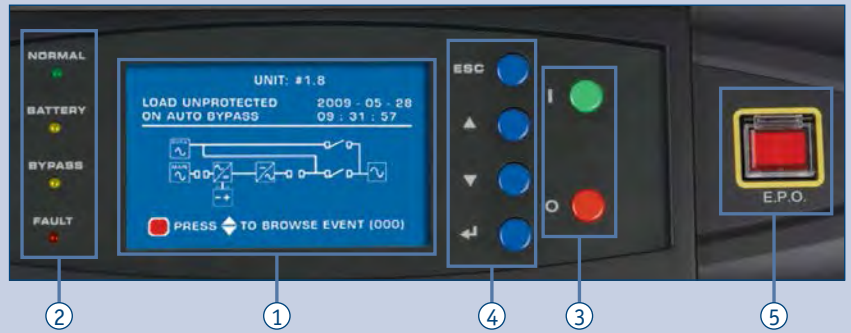
#### I Short Circuit Protection

Breakers safeguard your equipment, the UPS system and your electrical infrastructure against potential damage due to input or output short circuits and system overloads.

## Display and Control Panel

This interface indicates a variety of UPS operational modes and conditions, allowing you to react more rapidly to an alert before your systems are put at risk.

- 1 **LCD Screen:** lets you access more precise information than provided by LEDs alone. Text and intuitive operational block diagrams communicate a variety of fault/warning and UPS system operational conditions.



### Real-Time Event Log Screen (Up to 500 Events Listed)

Event log helps you decisively react to changing conditions by providing a broader context of UPS operation.

### Dynamic Battery Management Screen

Use the LCD display and control buttons to select optional settings for charge current and battery equalization—lengthening battery service life. Also use the control panel to “cold start” the UPS system.

- 2 **LED Set:** indicates normal on-line operation, on-battery operation, bypass operation or an input fault condition.
- 3 **Inverter On/Off Buttons**
- 4 **LCD Screen Control Buttons**
- 5 **“EPO” (Emergency Power Off) Button:** onsite safety measure (covered to protect against accidental contact) completely shuts down the UPS.

## Specifications

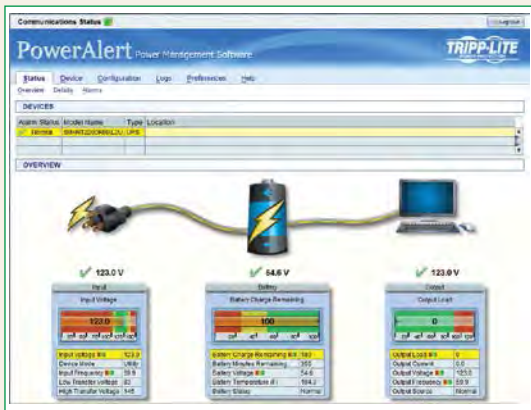


Model	Output Capacity	Typical Half-Load Runtime <sup>(1)</sup>	Extended Runtime	Input Voltage Range <sup>(2)</sup>	Nominal Input/Output Voltage (30, 4-Wire+Ground, Wye, 50/60 Hz)	Output Voltage Regulation	Communications	AC Input/Output Connection
<b>SmartOnline Modular 3-Phase Tower UPS Systems</b>								
<b>SU20KX</b>	20 kVA/16 kW	13+ min.		120-276/208-477	230/400 (220/380, 230/400, 240/415)	±2%	DB9 Serial, Contact-Closure, Accessory Card Slot	Hardwire
<b>SU40KX</b>	40 kVA/32 kW	13+ min.		120-276/208-477	230/400 (220/380, 230/400, 240/415)	±2%		Hardwire
<b>SU60KX</b>	60 kVA/48 kW	Requires  or		120-276/208-477	230/400 (220/380, 230/400, 240/415)	±2%		Hardwire
<b>SU60KX/26B</b>	60 kVA/48 kW	14+ min.		120-276/208-477	230/400 (220/380, 230/400, 240/415)	±2%		Hardwire
<b>SU80KX</b>	80 kVA/64 kW	Requires  or		120-276/208-477	230/400 (220/380, 230/400, 240/415)	±2%		Hardwire
<b>SU80KX/40C</b>	80 kVA/64 kW	9,6+ min.		120-276/208-477	230/400 (220/380, 230/400, 240/415)	±2%		Hardwire
<b>SmartOnline KX2 Modular 3-Phase Tower UPS Systems</b>								
<b>SU80KX2</b>	80 kVA/64 kW <sup>(3)</sup>	Requires		120-276/208-477	230/400 (220/380, 230/400, 240/415)	±1%	DB9 Serial, Contact-Closure, Accessory Card Slot	Hardwire
<b>SU100KX2</b>	100 kVA/80 kW <sup>(3)</sup>	Requires		120-276/208-477	230/400 (220/380, 230/400, 240/415)	±1%		Hardwire
<b>SU120KX2</b>	120 kVA/96 kW	Requires		120-276/208-477	230/400 (220/380, 230/400, 240/415)	±1%		Hardwire
<b>Internal Battery Packs and External Battery Cabinets</b>								
<b>SURBC2030</b>	240 VDC replacement internal battery pack for SU20KX or SU40KX. Can also extend SU20KX runtime.							
<b>BP480V26B</b>	±240 VDC hardwire external battery cabinet. Multiple cabinets can be daisy-chained. Design matches UPS cabinet.							
<b>BP480V40C</b>	±240 VDC hardwire external battery cabinet. Multiple cabinets can be daisy-chained. Design matches UPS cabinet.							
<b>BP480V200</b>	±240 VDC hardwire external battery cabinet. Multiple cabinets can be daisy-chained. 10-year design life.							
<b>BP480V300</b>	±240 VDC hardwire external battery cabinet. Multiple cabinets can be daisy-chained. 10-year design life.							
<b>BP480V400</b>	±240 VDC hardwire external battery cabinet. Multiple cabinets can be daisy-chained. 10-year design life.							
<b>BP480V500</b>	±240 VDC hardwire external battery cabinet. Multiple cabinets can be daisy-chained. 10-year design life.							
<b>Additional Accessories</b>								
<b>ENVIROSENSE</b>	Connects to SNMPWEBCARD for remote temperature and humidity monitoring. Also monitors and controls contact-closure devices.							
<b>MODBUSCARD</b>	Adds interface for MODBUS RTU industrial communications protocol, RS-422/485 and RS-232.							
<b>SNMPWEBCARD</b>	Adds network interface to UPS systems for remote management via SNMP, Web, SSH or telnet, including free PowerAlert software.							
<b>SU20KSPM</b>	20 kVA hot-swappable replacement/spare/expansion power module for SU80KX2, SU100KX2 or SU120KX2.							
<b>SU20KMBPKX</b>	3-breaker maintenance bypass panel for SU20KX. Wall-mount. Kirk Key interlock system prevents operator errors.							
<b>SU40KMBPKX</b>	3-breaker maintenance bypass panel for SU40KX. Wall-mount. Kirk Key interlock system prevents operator errors.							
<b>SU60KMBPKX</b>	3-breaker maintenance bypass panel for SU60KX. Wall-mount. Kirk Key interlock system prevents operator errors.							
<b>SU80KMBPKX</b>	3-breaker maintenance bypass panel for SU80KX. Wall-mount. Kirk Key interlock system prevents operator errors.							

Certifications vary by model. (1) Runtime varies with load, battery condition and other factors. SU20KX and SU40KX have internal batteries. (2) Input voltage range varies with load. (3) Expandable up to 120 kVA by adding SU20KSPM power module(s).

Model with expandable runtime. Model with LCD. Model with hot-swappable power module(s). Model with built-in N+1 redundancy.

## PowerAlert Software



- ▶ Monitors and Controls Hundreds of UPS Systems, PDUs or Cooling Systems, plus ENVIROSENSE® Modules
- ▶ Software-Only Solution Requires No Additional Hardware or Licenses
- ▶ Available FREE—Included CD or Download

PowerAlert software monitors and controls power for hundreds of UPS systems, PDUs or cooling systems and the equipment they support. Since PowerAlert is a FREE, software-only solution, it saves network managers significant costs compared to competitive solutions that require additional hardware or license purchases.\* Using JAVA® and SNMP standards, PowerAlert simplifies power management for every network—from a single server to a global enterprise. PowerAlert allows managers to centrally monitor every UPS, PDU and cooling system on their network. In addition, PowerAlert allows users to set parameters for graceful, automatic file saves and system shut down in the event of an extended blackout.

\* FREE PowerAlert CD included with select models. FREE download available at [www.tripplite.com/pa](http://www.tripplite.com/pa).

### Reduces Deployment Time

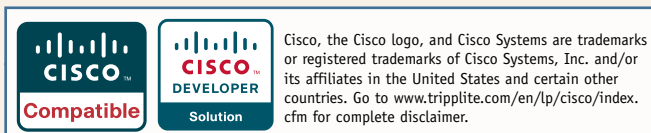
- **Mass Configuration of Devices**  
PowerAlert saves time and money by allowing managers to mass configure multiple remote device settings from a single location.
- **Device Auto-Discovery**  
Managers can set PowerAlert to auto-discover devices in specific network segments or IP address ranges.

### Reduces Troubleshooting Time

- **Alarm Log**  
PowerAlert speeds up alarm resolution by pooling all network alarms into a single, sortable easy-to-read list. Alarm entries feature intuitive color coding, including white (normal), yellow (warning) and red (critical).
- **“Recommended Action” Messaging**  
PowerAlert takes the guesswork out of how to respond to alarms. When managers select a device from the Network Management Screen, the device’s real-time power status is displayed along with the alarm’s “cause” and recommended “response.”

### Simplifies Network Power Management

- **SNMP Control**  
Any UPS connected to PowerAlert via a USB or serial cable can now be monitored via SNMP—without an internal SNMPWEBCARD and its additional IP address. PowerAlert’s built-in SNMP agent can make even a basic desktop UPS a monitored device on your network, visible to PowerAlert or any third-party network management system.
- **Alarm Notification**  
PowerAlert keeps managers continuously apprised of conditions through emails and SNMP traps, enabling them to proactively manage problems before they affect productivity.
- **Individual Outlet Control**  
PowerAlert allows managers to reboot locked devices or preserve runtime for critical equipment by remotely controlling the outlet power of UPS and power distribution units that offer outlet control capability. Select UPS and PDU devices can also be configured to perform custom, sequential startup and shutdown sequences.
- **Redundant UPS System Management**  
PowerAlert is smart enough to manage multiple UPS systems connected to a single load. For example, when two UPS systems are connected to support two power supplies on a server, PowerAlert is typically configured to gracefully shut down the server only after battery power is exhausted on both UPS systems.
- **Network Shutdown Commands**  
When a UPS communicates with PowerAlert software or via internal SNMPWEBCARD, other computers on the network may also be dependent on the condition of the UPS. Any networked computers with PowerAlert Network Shutdown Agent can detect an outage and automatically shut down before UPS battery power is exhausted. PowerAlert can also execute custom scripts upon any alarm condition.
- **Convenient Web-Browser Access**  
When the internal SNMPWEBCARD is used, network managers can access its management interface from any networked computer via a secure, password-protected browser session (HTTP or HTTPS).

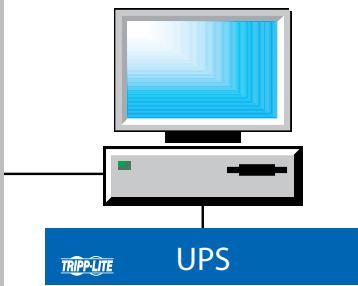


Cisco, the Cisco logo, and Cisco Systems are trademarks or registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries. Go to [www.tripplite.com/en/lp/cisco/index.cfm](http://www.tripplite.com/en/lp/cisco/index.cfm) for complete disclaimer.

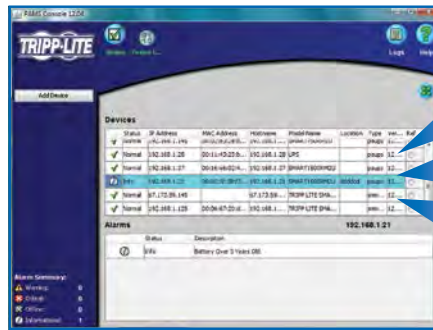


# PowerAlert's Power-Management Architecture

## Centralized Power Management



**Economy Mode Control**  
Manage the energy-saving economy mode settings of SmartOnline UPS Systems in real time, or define a schedule to switch between economy mode and full-time double conversion automatically.



**PowerAlert Network Management Screen**  
PowerAlert allows managers to monitor and control hundreds of devices from a single interface. Click on any device listing to open up to four device power status screens at a time.



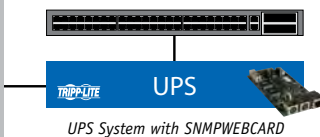
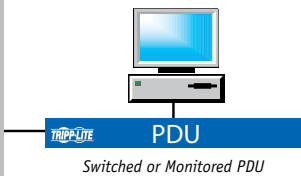
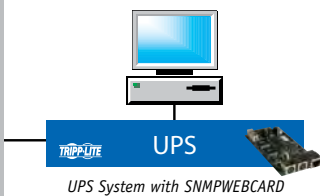
Real-Time Power Status Screens

**NMS Management**  
Managers can choose to access PowerAlert through a third-party network management system (NMS).



## SNMP Power Management

Ethernet



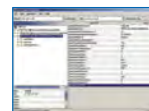
### Internal SNMP/Web Card

Using Tripp Lite's internal SNMP/Web management cards (Model # SNMPWEBCARD) or built-in network interface, managers can make UPS systems and select PDUs fully manageable (monitored and controlled) nodes on their network.

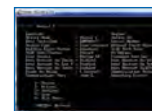


- Password-protected for increased security
- Flash-upgradeable for enhanced manageability
- Real-time clock and NTP-compatibility

### Communicate with SNMPWEBCARD through:



3rd-Party SNMP Tool



Telnet/SSH



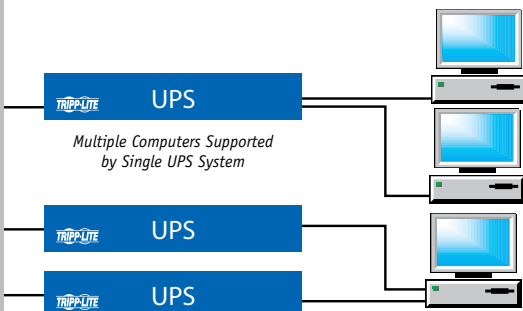
Web Browser (HTTP/HTTPS)

### Environmental Sensor

Using Tripp Lite's Environmental Sensor (Model # ENVIROSENSE, available separately) and SNMPWEBCARD, managers can monitor external temperature/humidity and contact-closure inputs.



## Local Power Management



Redundant Protection: Single Computer Supported by Multiple UPS Systems

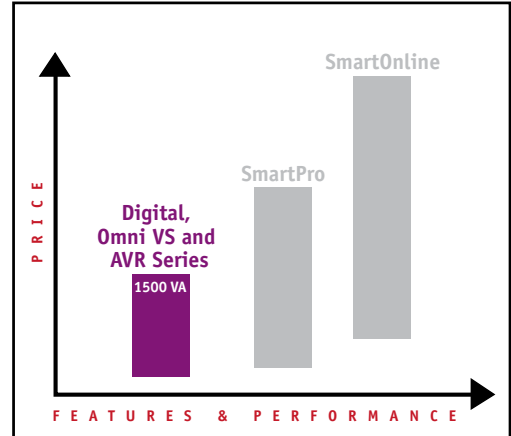


### Real-Time Power Status Screen

Managers can view power events in real time, responding to power problems before they affect network performance.

## Digital, OmniVS and AVR Series

Line-Interactive Tower and Low-Profile UPS Systems



- ▶ 350 to 1500 VA
- ▶ Automatic Voltage Regulation (AVR)
- ▶ Data Line Surge Protection Options
- ▶ Extended Runtime Options

### Protect Every Application

Digital, OmniVS and AVR Series UPS Systems are available in a wide variety of capacities to protect every size computer application from downtime, damage and data loss due to power problems. These UPS systems provide protection against power problems, including brownouts, blackouts, surges and line noise. Line-interactive operation—also known as automatic voltage regulation (AVR)—keeps equipment working through low voltage (brownouts) indefinitely, without draining battery power. Digital, OmniVS and AVR Series UPS Systems provide reliable battery power to keep computers up and running through short blackouts and allow enough time to safely shut down during longer ones.

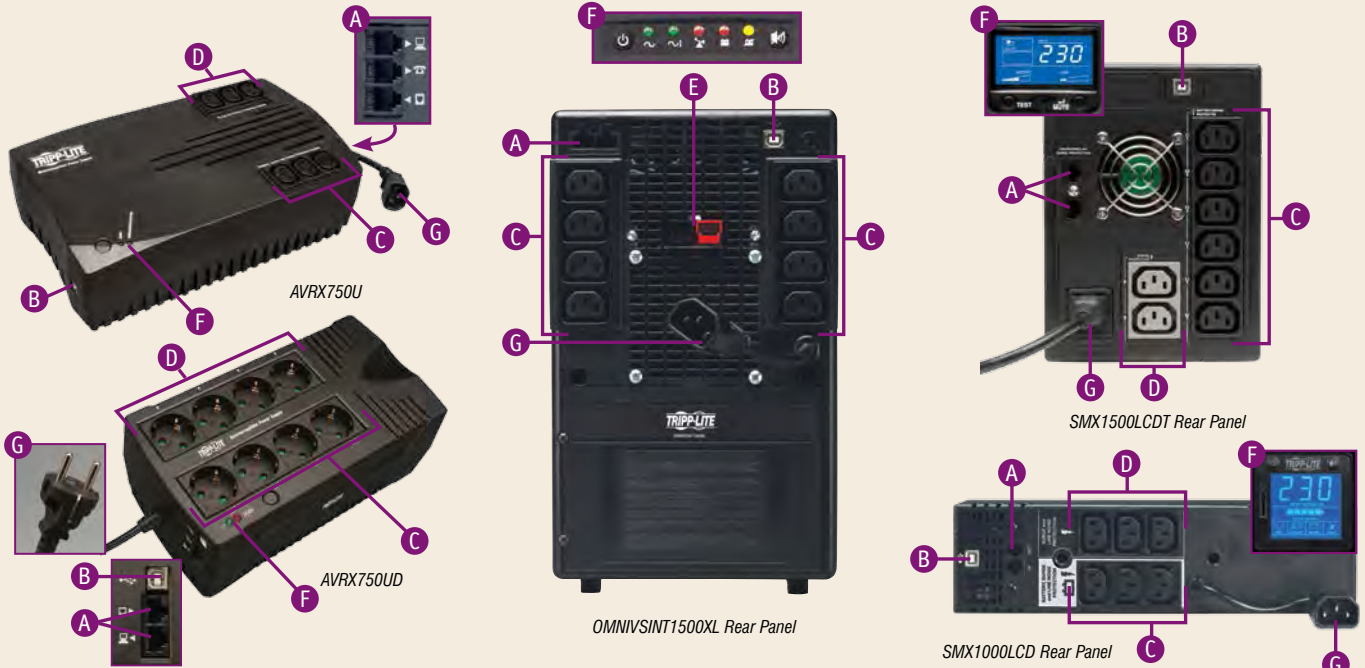
Digital UPS Systems include an LCD status screen that shows power conditions in real time. Monitor input voltage, battery charge level, load status and other power conditions at a glance.

### Protect Systems On Telephone, Ethernet or Coaxial Lines

Select UPS systems include surge-protected jacks that safeguard equipment against damaging surges traveling on the telephone, Ethernet or coaxial lines. In addition to protecting equipment against surges, reliable battery backup power maintains Internet, network or coaxial connections during brief blackouts.

### Automatically Shut Down Unattended Systems

All models feature at least one built-in communication port. Use with included cabling and PowerAlert software (available as a FREE download) to automatically save open files and shut down unattended equipment during an extended blackout. PowerAlert software waits for a user-specified length of time (during which on-screen notifications are displayed) before saving data and shutting down connected equipment.



- A Data Line Surge Protection**  
Protect telephone, Ethernet or coaxial lines with surge-protected jacks on select models.
- B Communication Ports**  
USB and/or serial ports connect all models to a computer. Use with PowerAlert software (FREE download) to automatically save open files and shut down equipment during extended blackouts.
- C UPS Outlets (All Models)**  
Provide battery backup and surge/noise protection for computers and monitors.
- D Surge-Only Outlets (Select Models)**  
Provide surge/noise protection without battery backup for printers and other peripherals.
- E Extended Runtime Capability**
- F Operating Conditions Displayed**  
LEDs or a front-panel LCD screen alert you to operating status and power problems.
- G AC Input Connector**  
C14 inlet connects to a user-supplied cord and plug compatible with local AC outlets. (Select models have a fixed cord and CEE 7/7 plug instead.)

## Specifications



Model	Output Capacity	Typical Half-Load Runtime <sup>(1)</sup>	Extended Runtime	Nominal AC Voltage (50/60 Hz)	AC Outlet Quantity (Type) <sup>(2)</sup> [UPS/Surge-Only]	USB Ports	DB9 Serial Ports	Data Line Surge Protection	Form Factor	AC Input Connector <sup>(2)</sup>
<b>AVR Series UPS Systems</b>										
AVRX550U	550 VA/300 W	8 min.	-	230 (220/230/240)	6 (C13) [3/3]	1	-	Tel/DSL	Low-Profile	C14
AVRX550UD	550 VA/300 W	9,7 min.	-	230 (220/230/240)	8 (Schuko) [4/4]	1	-	Tel/Network	Low-Profile	CEE 7/7
AVRX750U	750 VA/450 W	10 min.	-	230 (220/230/240)	6 (C13)	1	-	Tel/DSL	Low-Profile	C14
AVRX750UD	750 VA/450 W	11,7 min.	-	230 (220/230/240)	8 (Schuko) [4/4]	1	-	Tel/Network	Low-Profile	CEE 7/7
<b>OmniVS Series UPS Systems</b>										
OMNIVSINT800	800 VA/475 W	11,5 min.	-	230 (220/230/240)	4 (C13)	1	-	Tel/Network	Tower	C14
OMNIVSINT1000	1000 VA/500 W	12 min.	-	230 (220/230/240)	6 (C13)	1	-	Tel/Network	Tower	C14
OMNIVSINT1500XL	1500 VA/940 W	13+ min.	<b>A</b>	230 (220/230/240)	8 (C13)	1	-	Tel/Network	Tower	C14
<b>Digital UPS Systems with LCD Status Screen</b>										
SMX1000LCD	1000 VA/500 W	11 min.	-	230 (220/230/240)	6 (C13) [3/3]	1	-	Tel/DSL	Tower	C14
SMX1500LCD	1500 VA/900 W	12 min.	-	230 (220/230/240)	8 (C13)	1	1	Tel/Net+Coax	2U/Tower	C14
SMX1500LCDT	1500 VA/900 W	10 min.	-	230 (220/230/240)	8 (C13) [6/2]	1	-	Tel/Network	Tower	C14
<b>Hospital/Medical UPS Systems with Full Isolation and IEC 60101-1 Compliance</b>										
OMNIX350HG	350 VA/225 W	37 min.	-	230 (220/230/240)	6 (C13)	1	-	Tel/DSL	Tower	C14
SMX700HG	700 VA/450 W	36 min.	-	230 (220/230/240)	6 (C13)	1	1	-	Tower	C14
SMX1200XLHG	1000 VA/750 W	27,5+ min.	<b>B</b>	230 (220/230/240)	6 (C13)	1	1	-	Tower	C14

### Optional External Battery Packs and Accessories

- A BP24V15RT2U** 24V external battery pack and cable. Red and black 2-pole connector. 2U rack/tower cabinet. Not expandable.
- A BP24V28-2U** 24V external battery pack and cable. Red and black 2-pole connector. 2U rack/tower cabinet. Not expandable.
- A BP24V36-2US** 24V external battery pack and cable. Red and black 2-pole connector. 2U rack/tower cabinet. Expandable via daisy chain.
- A BP24V70-3U** 24V external battery pack and cable. Red and black 2-pole connector. 3U rack/tower cabinet. Expandable via daisy chain.
- B BP36V15-2U** 36V external battery pack and cable. Gray 2-pole connector. 2U rack/tower cabinet. Not expandable.
- B BP36V27-2US** 36V external battery pack and cable. Gray 2-pole connector. 2U rack/tower cabinet. Expandable via daisy chain.
- B BP36V42-3U** 36V external battery pack and cable. Gray 2-pole connector. 3U rack/tower cabinet. Expandable via daisy chain.
- UNIPLUGINT** Adapter converts a C13 outlet to a Wonpro universal outlet that is physically compatible with most household plugs worldwide.

Certifications vary by model. (1) Runtime varies with load, battery condition and other factors. (2) Schuko = CEE 7/4, Type F; CEE 7/7 = Hybrid Type E/F.

Model with expandable runtime. Model with LCD.

# Tripp Lite Manufactures More Than 3 000 Vendor-Neutral IT Infrastructure Solutions!



## Rack and Cooling Solutions

Tripp Lite makes more than 100 EIA-compliant rack enclosures, open frame racks, wall-mount racks, close-coupled cooling solutions and rack accessories.

## Power Distribution Units (PDUs)

Tripp Lite makes more than 100 basic, metered, monitored and switched rack PDUs in horizontal (1U/2U) and vertical (0U) form factors.

## KVM/Console Solutions

Tripp Lite makes more than 50 KVM switches, rack consoles and IP console servers, with or without built-in remote access (KVM over IP), built-in LCD monitor, multiuser support and Cat5/UTP cabling.

## Cables and Connectivity

Tripp Lite makes hundreds of cables, adapters and patch panels to connect high-speed data networks and power outlets to switches, routers and servers in high-density environments.

**Working on an IT infrastructure expansion or upgrade? Contact us today for help from our experienced project engineers!**

Distributed By:



Pulse Supply  
909 Ridgebrook Road, Sparks, Maryland 21152, USA  
TEL : +1-410-583-1701 FAX : +1-410-583-1704  
E-mail: [sales@pulsesupply.com](mailto:sales@pulsesupply.com)  
<https://www.pulsesupply.com/tripp-lite>