# **WORLDWIDE UPS SYSTEMS**









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# Tripp Lite UPS Systems

The most reliable and cost-efficient solutions available for protecting and supporting critical systems in any environment.









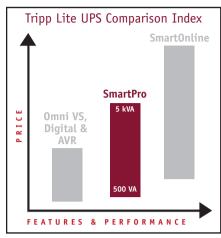


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- ▶ 500 5,000 VA
- ► Extended Runtime Options
- Automatic Voltage Regulation (AVR)
- Rack/Tower/Stack Adaptable

## Conserve Space—Slim as 1U!

SmartPro Rackmount/Tower UPS Systems provide more battery backup (up to 5000 VA) and premium product features in compact cases (as slim as 1U) which make the best use of available rack space. Select models are compact and shallow enough to allow users to mount a UPS system and an external battery pack back-to-back to increase the power protection in the same rack space.



3000 VA UPS (front) and extended run external battery pack (rear)—only 2U.

Kraft Foods Alane Watkins, Systems Administrator

### **Protect Every Application**

SmartPro Rackmount/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 complete 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 Rackmount/Tower 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. 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 audio/video distortion due to line noise.







<sup>\*</sup> SMX500RT1U models supply battery power during high voltage conditions.

#### **Extend Runtime**

Select models accept external battery packs to provide extended runtime. Without enough runtime, businesses stand to lose up to \$50,000\* per hour according to a recent survey on the cost of lost productivity for an hour of network downtime.\*\* Locate your planned load and optimum runtime on the chart to the right.

\* U.S. dollars. \*\* Yankee Group.



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

## Adapt to Rack/ Tower/Stack Applications

Adapt all models from rackmount to tower or stacking applications.\*

- Removable rack hardware
- Optional base stands



SMX3000XLRT2U tower mount with optional base stands.

R T			Runtime (minutes) with additional external battery pack(s)							
A	Load	Runtime (minutes) with	Non-Expandable	Expa	ndable Ba	ttery Pack(	(s)*			
Τ	(Watts)	included batteries	Battery Pack	1	2	3	4			
၁	SMX1500XL	RT2U Extended Runtime	BP36V15-2U		BP36V42-3U					
ш	500	18	75	206	421	636	850			
Σ	1000	7	30	87	185	288	392			
<u>г</u>	SMX2200XL	RT2U Extended Runtime	BP48V24-2U		BP48V60RT3U					
z	800	17	62	129	264	403	543			
R U	1600	6	25	53	113	177	244			
	SMX3000XL	RT2U Extended Runtime	BP48V24-2U		BP48V60RT3U					
П	800	17	60	124	256	392	527			
۵	1600	6.5	25	53	115	180	247			
z	SMX5000XL	RT3U Extended Runtime			BP48	V60RT3U				
H E	1875	20	N/A	61	114	169	227			
×	3750	8.5	N/A	24	47	72	98			
ш	* Battery packs th	nat are "expandable" can be connected together	for increased runtime.							

For additional extended runtime solutions to fit your specific load requirements, use Tripp Lite's interactive UPS Selector Guide at www.tripplite.com/selector/ups, or call Tripp Lite's Application Specialists at +1.773.869.1236.

### 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.\* Intelligent communications allow you to check UPS status (including battery charge level) and AC power status as well as reboot Customized Load Management Outlets.

### Control Individual Outlets

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

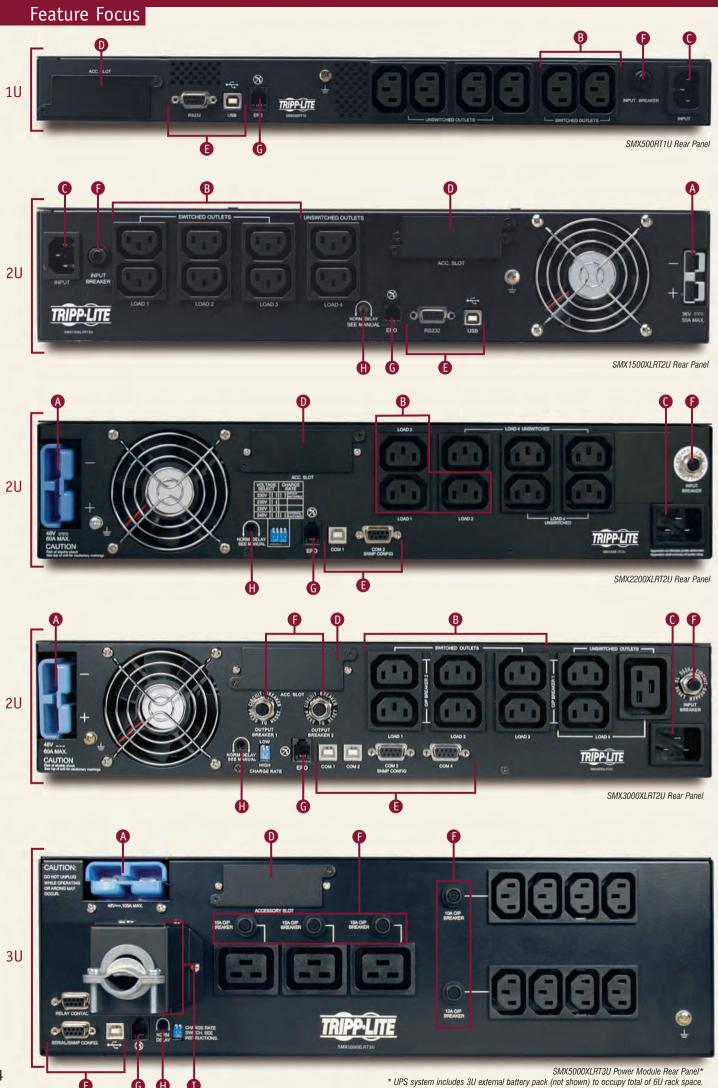
## **Display Complete Performance Conditions**

A front panel LED display alerts you to a variety of UPS performance 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 more rapidly to an alert before your systems are put at risk.



<sup>\* 1</sup>U 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.

<sup>\*</sup> Additional PowerAlert features: pages 18 and 19.



#### A Extended Runtime Capability

Select models feature connectors that accept optional external battery packs for additional runtime. External batteries can be "hot-swapped". See Extended Runtime Chart on page 3 to locate the perfect SmartPro Rackmount/Tower model that fits your runtime needs.

#### **B** Customized Load Management

Prioritize the uptime of mission-critical loads during a power failure. Select models feature special outlet banks that you 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 more critical equipment.

#### **C** AC Input Connector

Connector (C14 or C20, depending on model) accepts user-supplied cord with country-specific plug. Select models include AC power cables\* for connecting equipment to the UPS system's outlets.

\* Cables have a C13 end to connect to equipment and a C14 end to connect to the UPS system.

#### **D** NMS Integration

Accessory slot on all models accepts optional internal SNMP/Web



Card\* for remote shutdowns, reboots and more. Use card with optional environmental sensor\*\* to remotely monitor environmental conditions (temperature and humidity) or to control and monitor alarm/security systems. Dry contact interface works with most alarm, security and telecom devices.

\* Model: SNMPWEBCARD. \*\* Model: ENVIROSENSE.

#### Multiple Server Support

Up to four built-in communication ports on select models simultaneously provide shutdown commands and reporting on multiple servers without the need for accessories.

#### Short Circuit Protection

Breakers safeguard your equipment and the UPS from damage due to input or output short circuits and system overloads.

#### **6** Emergency Power Off (EPO)

A modular jack included with all models allows remote emergency shutdown.

# • User-Adjustable Power Sensitivity Dial

Select models include a user-adjustable dial which lowers the UPS system's sensitivity to waveform distortion. This feature conserves battery power in areas served by poor quality utility- or generator-supplied power.

#### Hardwire Input

## Front Panel Battery Replacement (not shown)

Tripp Lite UPS batteries will protect equipment for several years with normal use. 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.); visit www.tripplite.com.

#### **Specifications**

(E (E (M (G) (A)	Output	Backup Time	Optional		Nominal Input-Output			Customized Load	Com	m. Ports	RoHS
	Capacity	(Typical Minutes)	External	Rack	Voltage (Frequency	Outlet	Outlet	Management		RS-232	AC Input
Model	(VA/Watts)	Half/Full Load(B)	Battery Packs	Space	50/60 Hz)	Quantity	Туре	Outlets	USB	(DB9)	Connector(F)
UPS Systems											
SMX500RT1U	500/300	8/2.5	_	1U	230	6	C13	1 bank of 2	1	1	C14 inlet
SMX1000RT2U	1000/700	17/7	_	2U	230	6 <sup>(D)</sup>	C13	2 banks of 2	1	1	C14 inlet
SMX1500XLRT2U	1500/1000	18/7+	AB	2U	230	8(D)	C13	3 banks of 2	1	1	C14 inlet
SMX2200XLRT2U	2200/1600	17/6+	CD	2U	230 (220/ 230/240) <sup>(c)</sup>	8 <sup>(E)</sup>	C13	3 banks of 1	1	1	C20 inlet
⇒ SMX3000XLRT2U	3000/2250	11/4+	CD	2U	230	9(E)	8 C13, 1 C19	3 banks of 2	2	2	C20 inlet
SMX5000XLRT3U	5000/3750	20/8.5+	D	6U (3U power module & 3U battery pack)	230	11 <sup>(E)</sup>	8 C13, 3 C19	_	1	2 <sup>(G)</sup>	Hardwire

#### External Battery Packs and Accessories

Α	BP36V15-2U	36V external battery pack and cable, 2U. Not expandable. GRAY 2-point connector.						
В	BP36V42-3U	36V external battery pack and cable, 3U. Expandable. GRAY 2-point connector.						
C	BP48V24-2U 48V external battery pack and cable, 2U. Not expandable. BLUE 2-point connector.							
D	BP48V60RT3U	48V external battery pack and cable, 3U. Expandable. BLUE 2-point connector.						
	SNMPWEBCARD	Internal SNMP/Web management accessory card (connects compatible UPS systems to Ethernet).						
	ENVIROSENSE	Allows UPS to monitor external temperature/humidity and contact-closure inputs (requires SNMPWEBCARD).						
	2-9USTAND	Tower kit with 2 adjustable base stands—2U to 9U—(for all models except 1U models).						
	2POSTRMKITWM	Mounting kit for 2-post rackmount installation. For all UPS and battery pack models.						

Common specifications for all UPS systems: SNMP/Web accessory slot (for use with optional SNMPWEBCARD, sold separately). All models include mounting hardware to fit standard 19 in. racks.

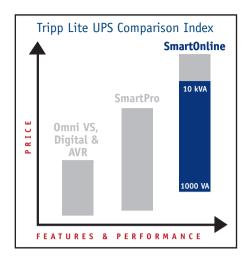
#### Complete, up-to-date specifications (including product weight and dimensions) available at www.tripplite.com

Also available: interactive UPS System selector guide, extended warranties, owner's manuals and more!

<sup>+</sup> Backup times are expandable using external battery packs. (A) Certifications vary by model. (B) Backup times vary depending on battery condition and load. (C) User-selectable. (D) Includes two 2-meter C13-to-C14 power cables for connecting equipment. (F) Connects to user-supplied input power cord with country-specific plug. Cord requires C13 end to connect to C14 inlet or C19 end to connect to C20 inlet. (B) SMX5000XLRT3U includes an RS-232 DB9 port and a relay contact-closure DB9 port. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos.







**Additional** Single- and 3-Phase solutions available— 1000 VA to 80 kVA! See pages 10 to 15.

### TRUE ON-LINE

- ▶ 1,000 10,000 VA
- ► Zero Transfer Time, Double Conversion
- ► Wide Input Voltage Range with Precision-Regulated Output
- Extended Runtime Options
- Automatic Internal Bypass

## 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 AC power: ±3% V or ±2% V and ±0.05 Hz.

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 safely shut down during longer ones. In addition, they stop damaging surges and filter disruptive line noise.

## Manage Multiple Servers

Multiple built-in communication ports provide the ability to simultaneously manage multiple servers. Using PowerAlert Software, select models with multiple communication ports will simultaneously provide intelligent communications,

shutdown commands and reporting on multiple servers.\* Intelligent communications allow you to check UPS status (including battery charge level) and AC power status as well as control Customized Load Management Outlets.

\* Additional PowerAlert features: pages 18 and 19.

#### Control Individual Outlets

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

## Provide 100% Availability

All models include an automatic internal bypass that ensures 100% availability of connected equipment by passing through utility power in the event of an internal fault or overload. Model SU10KRT3UHV includes two additional features: a maintenance bypass switch and a hot-swappable modular design. When the switch is set to "bypass", the UPS module can be removed while the detachable PDU module continues to power equipment.

#### **Extend Runtime**

All models accept external battery packs to provide extended runtime. Without enough runtime, businesses stand to lose up to \$50,000\* per hour according to a recent survey on the cost of lost productivity for an hour of network downtime.\*\* Locate your planned load and optimum runtime on the chart to the right.

\* U.S. dollars. \*\* Yankee Group.



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

## Adapt to Rack/ Tower/Stack **Applications**

Adapt all models from rackmount to tower or stacking applications.\*

- Removable rack hardware
- Included or optional base stands



SUINT3000RTXL3U tower mount with



SU10KRT3UHV tower mount with included base stands (shown with additional battery module, sold separately).

ь			Runtime (minutes)	with addit	onal extern	al battery	packs	
8	Load	Runtime (minutes) with	Non-Expandable	Expa	ndable Batte	ery Pack(s	3)**	
A	(Watts)	included batteries*	Battery Pack	1	2	3	4	
工	SUINT1000I	RTXL2Ua	BP24V28-2U	E	3P24V70-3U	l		
ں	400	12	78	200	413	628	841	
	800	4	32	87	189	295	403	
ш	SUINT1500I	RTXL2Ua	BP48V24-2U	В	P48V60RT3	U		
Σ	600	14	80	165	334	506	678	
Н	1200	4.5	34	71	151	235	320	
-	SUINT22001	RTXL2Ua	BP48V24-2U	В	P48V60RT3	U		
Z	800	14	56	117	242	370	499	
$\neg$	1600	5	23	50	107	168	231	
~	<u>SUINT30001</u>	RTXL3U	BP72V15-2U	BI	BP72V28RT-3U			
	1200	14	41	78	158	242	328	
۵	2400	5	17	33	69	108	150	
ш	SU6000RT3	UHV		BI	P240V10RT	<i>3U</i>		
۵	2100	20	N/A	80	131	184	238	
z	4200	8	N/A	33	56	80	105	
ш	SU10KRT3UHV BP240V10RT3U							
$\vdash$	4000	10	N/A	35	59	84	110	
×	8000	4	N/A	14	24	34	45	
ш	* Included batteries a connected together for	re contained either internally within the UPS system or increased runtime.	n or are offered as an external module,	depending on mode	el. ** Battery packs v	vhich are "expand	lable" can be	

For additional extended runtime solutions to fit your specific load requirements, use Tripp Lite's interactive UPS Selector Guide at www.tripplite.com/selector/ups, or call Tripp Lite's Application Specialists at +1.773.869.1236.

## Display Critical Operational Conditions

SmartOnline Rackmount/Tower UPS Systems feature a front panel LED display or combination LCD/LED display which shows 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.

LED Display— (1) Battery & Load Conditions: The Load and Battery Active Meters allow you to monitor the percentage levels (25% - 100%) of two conditions: 1) battery charge as equipment is supported by the UPS system during a blackout, and 2) the total amount of the UPS system's capacity that the equipment load is utilizing under normal operating conditions.

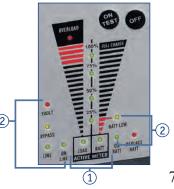
2 Fault/Warning & UPS System Operational Conditions: LED set alerts you to several fault conditions (including wiring faults in the wall outlet) and warning conditions (including the need to recharge or replace the UPS system's internal battery). It also indicates UPS system operational status, including normal on-line operation, bypass operation (due to fault or overload) or on-battery operation (due to a blackout or severe brownout).

Combination LCD/LED Display— 3 LCD Display: LCD Display lets you access more precise information than provided by LEDs alone. View over 45 separate fault/warning and UPS system operational conditions including operational mode, alarm/ shutdown conditions, input/output voltage/frequency, battery voltage, load percentage and more.

4 LED Display: LED set is organized into a flow chart that indicates UPS system operational status, including normal on-line operation, bypass operation (due to fault or overload) or on-battery operation (due to a blackout or severe brownout).







Optional base stands (model: 2-9USTAND) are available to adapt any combination of models, from 2U to 9U wide, to tower mounts (SU10KRT3UHV includes base stands.)

## Feature Focus

A Extended Runtime Capability

All models feature connectors that accept optional external battery packs for additional runtime. External batteries can be "hot-swapped". See Extended Runtime Chart on page 7 to locate the perfect SmartOnline Rackmount/Tower model that fits your runtime needs.

**B** Detachable PDU

Passes through power to connected equipment if UPS module is removed for maintenance.

Customized Load Management

Select models feature special outlet banks that you control independently through PowerAlert Software.

D Server Support

Up to two built-in communication ports on select models simultaneously provide shutdown commands and reporting on multiple servers without the need for accessories.

**B**ypass Operation

An external maintenance bypass switch allows the UPS module to be removed for maintenance while continuously passing through utility power to connected equipment.

**F** NMS Integration

Accessory slot accepts an optional internal SNMP/Web card\* for remote shutdowns, reboots and more. Use card with optional environmental sensor\*\* to remotely monitor environmental conditions or to control alarm/security systems.

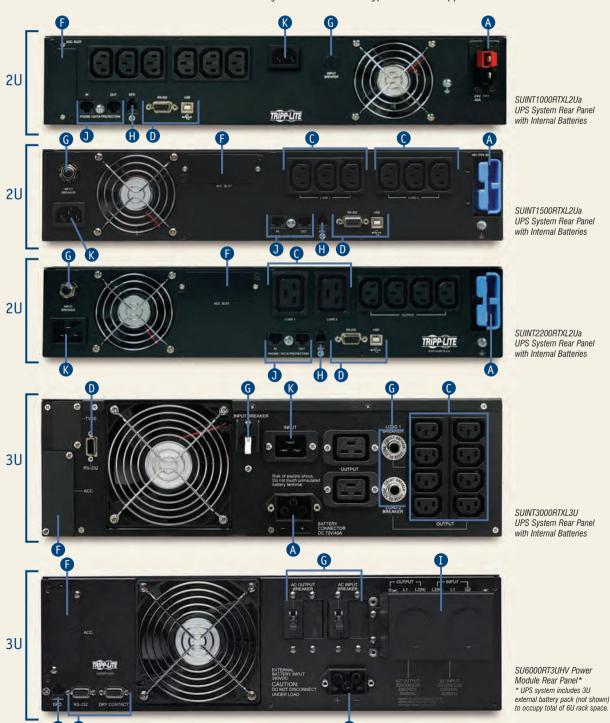


\* Model: SNMPWEBCARD. \*\* Model: ENVIROSENSE.

**G** Short Circuit Protection

Circuit breakers help guard against input/output short circuits and system overloads.

Standard Models 100% Availability Features: Internal Bypass • Hot-Swappable Batteries



#### H Emergency Power Off

A modular jack included with select models allows remote emergency shutdown. All other models can perform emergency shutdown by attaching an optional cable (model 73-0909, sold separately) to the communication port. The optional cable includes a DB9 connector to allow server support and a modular jack to allow emergency shutdown.

#### Hardwire, Single-Phase Input/Output

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

#### 1 Tel/DSL/Ethernet Surge Protection (Select Models)

Protect Internet-connected or networked computers from damage on a single Tel/DSL/Ethernet line with surge-protected jacks featured on select models.

#### **K** AC Input Connector

Connector (C14 or C20, depending on model) accepts user-supplied cord with country-specific plug. Select models include AC power cables\* for connecting equipment to the UPS system's outlets.

 $^{\star}$  Cables have a C13 end to connect to equipment and a C14 end to connect to the UPS system.

#### Front Panel Battery Replacement (not shown)

1,000 to 3,000 VA models feature a convenient front access door to replace internal batteries.\* All models allow "hot-swap" battery replacement.

\* Tripp Lite offers a complete line of replacement battery cartridges (R.B.C.); visit www.tripplite.com.

#### Hot-Swappable Modular Model 100% Availability Features:

Internal Bypass • External Bypass Switch • Modular Design (Detachable UPS Module, PDU Module & Battery Module) • Hot-Swappable Batteries



#### **Specifications**

												RoHS
(I) (C (C (M)) (Model	Output Capacity (VA/Watts)	Backup Time (Typical Minutes) Half/Full Load <sup>(8)</sup>	Optional External Battery Packs	Rack Space	Input Voltage Range (Frequency 50/60 Hz)	Nominal Output Voltage (Frequency 50/60 Hz)	Outlet Quantity	Outlet Type	Customized Load Management Outlets		unication orts RS-232 (DB9)	
UPS Systems	(VA/VValls)	Hall/Full Luau	I duks	орасс	30/00 112)	30/00 112)	Qualitity	турс	Outlets	030	(003)	Connector
	1			1					1			
SUINT1000RTXL2Ua	1000/800	12/4+	AB	2U	130-275 <sup>(c)</sup>	230 (220/230/240)	6 <sup>(D)</sup>	C13		1	1	C14 inlet
E SUINT1500RTXL2Ua	1500/1200	14/4.5+	CD	2U	130-275 <sup>(c)</sup>	230 (220/230/240)	6 <sup>(D)</sup>	C13	2 banks of 3	1	1	C14 inlet
📛 SUINT2200RTXL2Ua	2200/1600	14/5+	CD	2U	130-275 <sup>(c)</sup>	230 (220/230/240)	6 <sup>(E)</sup>	4 C13, 2 C19	2 banks of 1	1	1	C20 inlet
SUINT3000RTXL3U	3000/2400	14/5+	E F	3U	130-275 <sup>(c)</sup>	230 (220/230/240)	10 <sup>(E)</sup>	8 C13, 2 C19	2 banks of 4	_	1	C20 inlet
<b>□</b> SU6000RT3UHV	6000/4200	20/8+	G	6U (3U power module & 3U battery pack)	156-276	230 (220/230/240)	_	Hardwire	_	_	2 <sup>(G)</sup>	Hardwire
SU10KRT3UHV	10000/8000	10/4+	G	6U (3U power module & 3U battery pack)	156-276	230 (220/230/240)	_	Hardwire	_	_	2 <sup>(G)</sup>	Hardwire

Model	Description								
External Battery Paci	External Battery Packs and Accessories								
A BP24V28-2U	24V external battery pack and cable, 2U. Not expandable. RED/BLACK 2-point connector.								
B BP24V70-3U	24V external battery pack and cable, 3U. Expandable. RED/BLACK 2-point connector.								
C BP48V24-2U	48V external battery pack and cable, 2U. Not expandable. BLUE 2-point connector.								
D BP48V60RT3U	48V external battery pack and cable, 3U. Expandable. BLUE 2-point connector.								
E BP72V15-2U	72V external battery pack and cable, 2U. Not expandable. BLACK 3-point connector.								
F BP72V28RT-3U	72V external battery pack and cable, 3U. Expandable. BLACK 3-point connector.								
G BP240V10RT3U	240V external battery pack and cable, 3U. Expandable. BLACK 3-point connector.								
SNMPWEBCARD	Internal SNMP/Web management accessory card (connects compatible UPS systems to Ethernet).								
ENVIROSENSE	Allows UPS to monitor external temperature/humidity & contact-closure inputs (requires SNMPWEBCARD).								
2-9USTAND	Tower kit with 2 adjustable base stands—2U to 9U.								
2POSTRMKITWM	Mounting kit for 2-post rackmount installation. For all UPS and battery pack models.								
Common enecifications t	for all IDS exchange SMM/Mah accessory stat (for use with entional SMM/MAD/SECOND cold congrately). All models are designed with mounting bardways to fit standard 10 in racks. — Rackun								

Common specifications for all UPS systems: SNMP/Web accessory slot (for use with optional SNMPWEBCARD, sold separately). All models are designed with mounting hardware to fit standard 19 in. racks. + Backup times are expandable using external battery packs. (A) Certifications vary by model. (B) Backup times vary depending on battery condition and load. (C) 130-275V at 70% load; (B) Connects to user-supplied input power cord with country-specific plug. Cord requires C13 end to connect to C14 inlet or C19 end to connect to C20 inlet. (B) Models include an RS-232 DB9 port and a relay contact-closure DB9 port. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos.

# SmartOnline<sup>™</sup> Modular 3-Phase

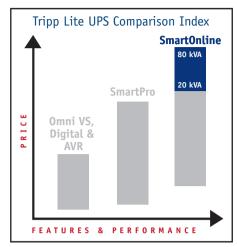
Intelligent True On-Line UPS Systems



## 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 for when it's needed during a blackout. 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.



Single-Phase solutions available— 1000 VA to 10 kVA! See pages 6 to 9 and 14 to 15.

#### TRUE ON-LINE

- ≥ 20 80 kVA
- ▶ Dual Input 3-Phase Hardwire (220/380V, 230/400V or 240/415V)
- ► N+1 Modular Architecture (SU40KX, SU60KX & SU80KX)
- ▶ 1+1 Parallel Capability
- ► Low THDi for 1:1 Generator Sizing
- ► Zero Transfer Time, Double Conversion
- ► Advanced IGBT Inverter Technology
- ▶ Real-Time Log of 500 Events
- ► Up to 97% AC-to-AC Efficiency

# 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 3% 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 of any UPS
system in its 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 Extended Service and Support

Tripp Lite provides technical support through every stage of the power protection process: application evaluation, UPS sizing, installation and long-term operation. For more comprehensive coverage, a variety of extended warranties and on-site service plans are available through local Tripp Lite partners. Contact Tripp Lite for details.

### **Provide 100% System Availability**

with N+1 Modular Architecture & 1+1 Parallel Capability

## N+1 Modular Architecture (SU40KX, SU60KX & SU80KX Models Only)

100% Availability with N+1 Redundancy

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

SU40KX, SU60KX and SU80KX models include multiple, self-contained power modules that provide the ultimate level of fail-safe redundancy. In an N+1 configuration, one or more power modules can be hot-swapped (with the load powered) if maintenance is required. In addition, the UPS system includes dual AC inputs (mains and reserve) to increase system availability.



20 kVA Redundant Power Module

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

Equipment Load ("N")							
Model	20 kVA	40 kVA	60 kVA	80 kVA			
SU40KX	N+1	N					
SU60KX	N+2	N+1	N				
SU80KX	N+3	N+2	N+1	N			





#### 1+1 Parallel Capability

#### **Provides Redundancy**

Connect two SmartOnline UPS Systems in parallel (1+1) to provide redundancy that "hardens" 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 like standard legacy systems. The SmartOnline UPS System's dual input connections provide an additional level of fail-safe redundancy by allowing each UPS system to be powered by two separate, redundant utility sources.

#### **Increases Capacity**

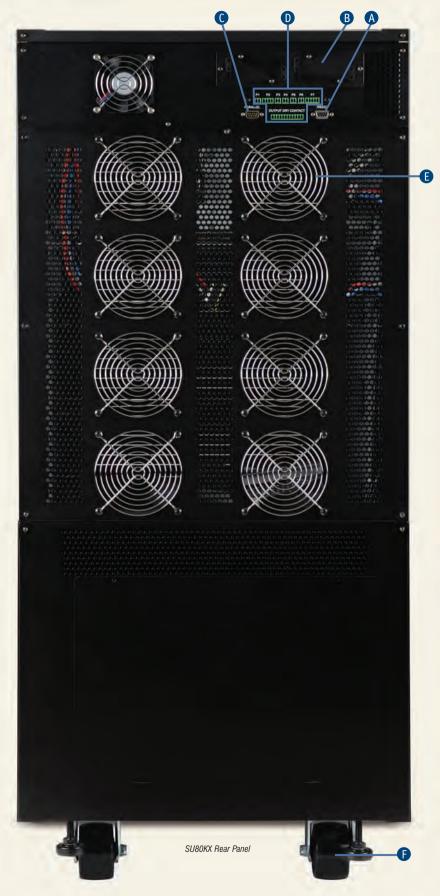
Connect two SmartOnline Modular 3-Phase UPS Systems in parallel to double the capacity offered to a single equipment load.

Note: UPS systems connected in parallel must have the same capacity.



### **UPS System Power Module Cabinet**

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



# Extended Runtime Capability (rear panel access, not shown)



SU20KX and SU40KX models include internal batteries. SU60KX and SU80KX models require a stand-alone, hardwired external battery module (available separately from Tripp Lite) to provide battery backup support. All models accept connection of additional external battery modules 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** NMS Integration

Accessory slot accepts an optional internal SNMP/Web card\* for remote shutdowns, reboots and more. Use



card with optional environmental sensor\*\* to remotely monitor environmental conditions or to control alarm/security systems.

\* Model: SNMPWEBCARD. \*\* Model: ENVIROSENSE.

© 1+1 Parallel Interface

Allows two UPS systems to support a single equipment load.

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 access, 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.

• Heavy-Duty, Wide Casters & Levelers

Provide added mobility and stability during installation.

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

SU40KX, SU60KX and SU80KX models include multiple, self-contained power modules that provide the ultimate level of fail-safe redundancy. In



20 kVA Redundant Power Module

an N+1 configuration, one or more power modules can be hotswapped (with the load powered) if maintenance is required. The SU20KX model includes a single hot-swappable 20 kVA power module.

#### **H** Bypass Operation

A manual bypass breaker as well as an automatic static bypass



ensure 100% availability of connected equipment by safely passing through AC power if the UPS system requires maintenance.

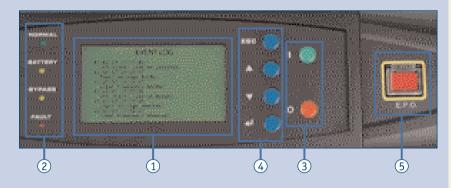
#### Short Circuit Protection

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 & 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 Display: 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)

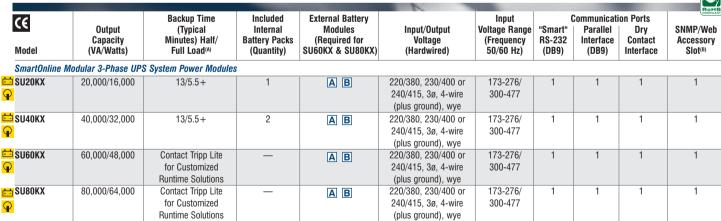
Event log helps managers decisively react to changing conditions by providing a broader context of UPS operation.

#### **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 Display Control Buttons
- (5) "EPO" (Emergency Power Off) Button: on-site safety measure (covered to protect against accidental contact) completely shuts down the UPS.

## Specifications



External Battery Modules, Internal Battery Packs and Accessories

External Battery IVI	Odules, Internal Battery Packs and Accessories
A BP480V26B	480V external battery module. Tower, hardwired (for all models).
BBP480V40C	480V external battery module. Tower, hardwired (for all models).
SURBC2030	Replacement internal battery pack (240V, for SU20KX and SU40KX models only).
SU20KMBP	External maintenance bypass panel (for SU20KX models only). Wall mount.
SU40KMBPX	External maintenance bypass panel (for SU40KX models only). Wall mount.
SU60KMBPX	External maintenance bypass panel (for SU60KX models only). Wall mount.
SU80KMBPX	External maintenance bypass panel (for SU80KX models only). Wall mount.
SNMPWEBCARD	Internal SNMP/Web management card (connects UPS system to Ethernet).
ENVIROSENSE	Allows UPS to monitor external temperature/humidity & contact-closure inputs (requires SNMPWEBCARD).
(A) SU20KX and SU40KX	X models include internal hatteries. Backup times will vary depending on hattery condition and load. \$1160KX and \$1180KX models require a standalone external hattery module (either RP480V26R or RP480V40C).

<sup>(</sup>A) SU20KX and SU40KX models include internal batteries. Backup times will vary depending on battery condition and load. SU60KX and SU80KX models require a standalone external battery module (either BP480V26B or BP480V40C, available separately) to provide battery backup support. All models accept connection of additional external battery modules for extended runtime. (B) For use with optional internal cards. SNMP/Web management accessory card (model: SNMPWEBCARD) available separately from Tripp Lite. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos.



## $SmartOnline^{\mathsf{T}}$ Intelligent True On-Line 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 AC power: ±3% V or ±2% V and ±0.05 Hz.

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 safely shut down during longer ones. In addition, they stop damaging surges and filter disruptive line noise. All models ensure 100% availability with an automatic internal bypass which passes through utility power in the event of an internal fault or overload.

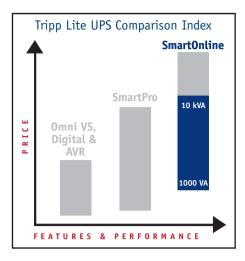
# Include Enhanced Communication Capability

All models include at least one built-in communication port. Most models also include an SNMP slot. PowerAlert Software provides power management, monitoring and control locally or remotely through TCP/IP. Intelligent communications allow you to check UPS status (including battery charge level) and AC power status.\*

\* Additional PowerAlert features: pages 18 and 19.

# Display Critical Operational Conditions

A front panel LED display (models SUINT1000XL, SUINT2000XL and SUINT3000XL) or combination LCD/LED display (model SU10K3/1X) alerts you to a variety of UPS



Additional
Single- and
3-Phase
solutions
available—
1000 VA to
80 kVA!
See pages
6 to 13.

#### TRUE ON-LINE

- ► 1,000 10,000 VA
- ► Zero Transfer Time, Double Conversion
- ► Wide Input Voltage Range with Precision-Regulated Output
- ► Automatic Internal Bypass
- ► Maintenance Bypass Option
- ► Extended Runtime Options

operational modes and conditions. The easy-to-read interface provides more information than comparable models, allowing you to react more rapidly to an alert before your systems are put at risk.

#### **Extend Runtime**

All models accept external battery packs to provide extended runtime. Without enough runtime, businesses stand to lose up to \$50,000\* per hour according to a recent survey on the cost of lost productivity for an hour of network downtime.\*\* Locate your planned load and optimum runtime on the chart below.

\* U.S. dollars. \*\* Yankee Group.

A R T		Runtime	Runtime (minutes) with additional externa battery packs				
Η		(minutes) with	Non- expandable				
٥	Load	included	battery	Expa	ndable B	attery Pa	cks*
ш	(Watts)	batteries	pack	1	2	3	4
Σ	SUINT1000XL		-	E	xternal B	BP .	
Ξ	350	14	N/A	111	203	298	394
z	700	5	N/A	45	85	128	173
⊃	SUINT2000XL		BP72V15-2U BP72V28RT-3U				
R	700	14	77	143	282	424	566
۵	1400	5	34	64	132	203	276
ш	SUINT3000XL		BP72V15-2U	BP	72V28R1	-3U	
٥	1050	14	49	92	185	282	380
z	2100	5	20	39	81	127	175
H E	3U 1UK3/1X BP24UV 1UK 13U						
×	4000	10	N/A	35	59	84	110
ш	8000	4	N/A	14	24	34	45
-							

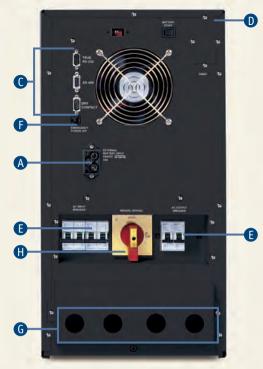
For additional extended runtime solutions to fit your specific load requirements, use Tripp Lite's interactive UPS Selector Guide at www.tripplite.com/selector/ups, or call Tripp Lite's Application Specialists at +1.773.869.1236.

<sup>\*</sup> Battery packs which are "expandable" can be connected together for increased runtime.









SU10K3/1X Rear Panel

#### A Extended Runtime Capability

All models feature connectors that accept optional external battery packs for additional runtime. External batteries can be "hot-swapped". See Extended Runtime Chart on page 14 to locate the perfect SmartOnline Tower model that fits your runtime needs.

#### **B** AC Input Connector (Inlet)

Inlet (C14 or C20, depending on model) accepts user-supplied cord with country-specific pluq. (Models SUINT1000XL, SUINT2000XL and SUINT3000XL only.)

#### Server Support

Built-in communication port(s) provide shutdown commands and reporting.

#### **D** NMS Integration

Accessory slot accepts an optional internal SNMP/Web card\* for remote shutdowns,



reboots and more. Use card with optional environmental sensor\*\* to remotely monitor environmental conditions or to control alarm/security systems. (Not included with model SUINT1000XL.) \* Model: SNMPWEBCARD. \*\* Model: ENVIROSENSE.

#### E Short Circuit Protection

short circuits and system overloads.

#### F Emergency Power Off

A modular jack allows remote emergency shutdown. (Model SU10K3/1X only.)

#### **6** 3-Phase Input and Single-Phase Output (Hardwire)

3-Phase (4-wire) hardwire input connects the UPS directly to a utility power source. Single-phase hardwire (2-wire) output connects the UPS directly to your equipment or a PDU. (Model SU10K3/1X only.)

#### **H** Bypass Operation

An external maintenance bypass switch allows UPS module maintenance while continuously passing through utility power to connected equipment.

Circuit breakers help guard against input

#### **Specifications**

						1					RoHS
(( <b>(C</b> ( ( ) ( )	Capacity	Backup Time (Typical Minutes)	Optional External	Input Voltage Range (Frequency	Nominal Output Voltage (Frequency	Outlet	Outlet		Communication Ports	SNMP/Web Accessory	AC Input
Model	(VA/Watts)	Half/Full Load(B)	Battery Packs	50/60 Hz)	50/60 Hz)	Quantity	Type	USB	DB9	Slot	Connector
SmartOnline UP	S Systems										
SUINT1000XL	1000/700	14/5+	Α	80-280 <sup>(c)</sup>	230 (220/230/240)	4(E)	C13	1	1 RS-232	_	C14 inlet(F)
SUINT2000XL	2000/1400	14/5+	BC	80-280 <sup>(c)</sup>	230 (220/230/240)	8 <sup>(E)</sup>	C13	1	1 RS-232	yes	C20 inlet <sup>(F)</sup>
SUINT3000XL	3000/2100	14/5+	BC	80-280 <sup>(c)</sup>	230 (220/230/240)	8(E)	C13	1	1 RS-232	yes	C20 inlet(F)
SU10K3/1X	10000/8000	18/6+	D	156-280/270-485	230 (220/230/240)	_	Hardwire	_	1 RS-232, 1 AS-400	yes	Hardwire
				(3-phase)(D)					1 contact closure,		(3-phase)

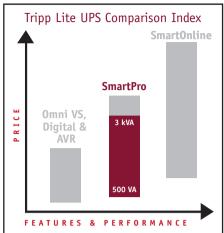
**External Battery Packs and Accessories** 

A Inquire	Contact Tripp Lite for more information.
BBP72V15-2U	72V external battery pack and cable, 2U. Not expandable. BLACK 3-point connector.
C BP72V28RT-3U	72V external battery pack and cable, 3U. Expandable. BLACK 3-point connector.
DBP240V10RT3U	240V external battery pack and cable, 3U rack/tower (order 2-9USTAND for tower). Expandable. BLACK 3-point connector.
SNMPWEBCARD	Internal SNMP/Web management accessory card (connects compatible UPS systems to Ethernet).
ENVIROSENSE	Allows UPS to monitor external temperature/humidity & contact-closure inputs (requires SNMPWEBCARD).
2-9USTAND	Tower kit with 2 adjustable base stands—2U to 9U.

<sup>+</sup> Backup times are expandable using external battery packs. (A) Certifications vary by model. (B) Backup times vary depending on battery condition and load. (C) 175-280V at 100% load. (D) Nominal input is user-selectable 220/380V, 230/400V, 240/415V, 3-phase, 4-wire (plus ground), wye. (E) Includes two (SUINT1000XL) or three (SUINT2000XL & SUINT3000XL) C13-to-C14 power cords (2 m) for connecting equipment. (F) Connects to user-supplied input power cord with country-specific plug. Cord requires C13 end to connect to C14 inlet or C19 end to connect to C20 inlet. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos

## $SmartPro^{\circ}$ Intelligent Line-Interactive 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 complete 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 safely 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 Customized Load Management Outlets featured on select models. Use PowerAlert to reboot a locked-up computer by cycling the power on and off to select outlet banks on the UPS system. You can also program PowerAlert to shut down less important systems during an extended blackout, preserving battery runtime for more 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.\*

- ▶ 500 3,000 VA
- ► Automatic Voltage Regulation (AVR)
- ► Extended Runtime Option
- ► Tel/DSL/Ethernet Surge Protection Options
- Pure Sine Wave Output Options
- Remote Monitoring and Control Options
- Customized Load Management Options

#### **Extend Runtime**

Select models accept external battery packs to provide extended runtime. Without enough runtime, businesses stand to lose up to \$50,000\* per hour according to a recent survey on the cost of lost productivity for an hour of network downtime.\*\* Locate your planned load and optimum runtime on the chart below.

\* U.S. dollars. \*\* Yankee Group.

CHART		Runtime (minutes)	Runtime ext		es) wit attery		ional
RUNTIME	Load (Watts)		Non-expand- able Battery Pack		Expandable Battery Pack(s)* 1   2   3		
ED	SMARTINT3000VS	butteries	BP48V242U	BP	48V60F	_	
EXTEND	800	20	60	124	256	392	527
EXT	1600	7.5	25	53	115	180	247

For additional extended runtime solutions to fit your specific load requirements, use Tripp Lite's interactive UPS Selector Guide at www.tripplite.com/selector/ups, or call Tripp Lite's Application Specialists at +1.773.869.1236.

<sup>\*</sup> Battery packs which are "expandable" can be connected together for increased runtime.

### Feature Focus

Model SMARTINT3000VS
features a connector that
accepts optional external battery
packs for additional runtime.
External batteries can be "hotswapped". See Extended Runtime
Chart on page 16.

B Customized Load Management
Prioritize the uptime of missioncritical loads during a power failure.
Select models feature special outlet
banks that you control independently
through PowerAlert Software. Use
PowerAlert to shut down less
important systems first, preserving
battery runtime for more critical
equipment.

#### Multiple Server Control

Up to four built-in communication ports on select models simultaneously provide shutdown commands and reporting on multiple servers without the need for accessories.

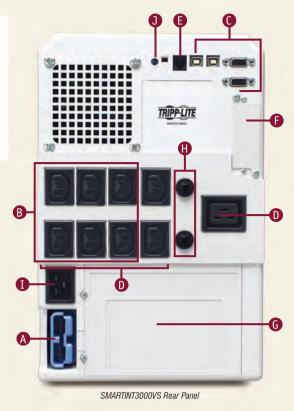
Variety of Output Options
 C13 and C19 outlets ensure maximum connection flexibility (select models).

#### **E** Emergency Power Off (EPO)

A modular jack on select models allows remote emergency shutdown.

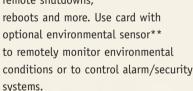
## Tel/DSL/Ethernet Surge Protection (Select Models, Not Shown)

Protect Internet-connected or networked computers from damage on a single Tel/DSL/Ethernet line.



**F** NMS Integration

Accessory slot on select models accepts optional internal SNMP/ Web Card\* for remote shutdowns,



\* Model: SNMPWEBCARD. \*\* Model: ENVIROSENSE.

#### **6** Battery Replacement

Tripp Lite UPS batteries will protect equipment for several years with normal use. 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.); visit www.tripplite.com.
- Short Circuit Protection
- AC Input Connector (Inlet) Inlet (C14 or C20, depending on model) accepts user-supplied cord with country-specific plug.
- User-Adjustable Power Sensitivity Dial

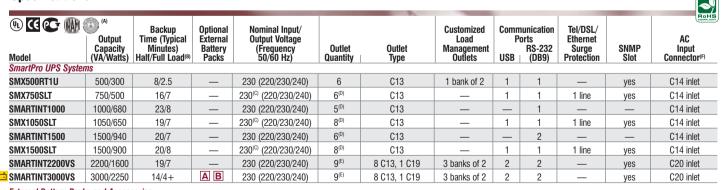
Select models include a useradjustable dial which lowers the UPS system's sensitivity to waveform distortion. This feature conserves battery power in areas served by poor quality utility- or generatorsupplied power.

#### 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.

#### **Specifications**



External Battery Packs and Accessories

A BP48V24-2U 48V external battery pack and cable. Tower or 2U rack. Not expandable. BLUE 2-point connector.

B BP48V60RT3U 48V external battery pack and cable. Tower or 3U rack. Expandable. BLUE 2-point connector.

SNMPWEBCARD Internal SNMP/Web management accessory card (connects compatible UPS systems to Ethernet).

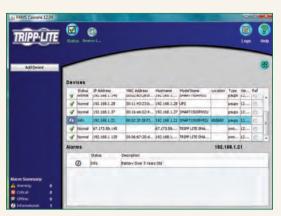
ENVIROSENSE Allows UPS to monitor external temperature/humidity and contact-closure inputs (requires SNMPWEBCARD).

#### Complete, up-to-date specifications (including product weight and dimensions) available at www.tripplite.com

Also available: interactive UPS System selector guide, extended warranties, owner's manuals and more!

<sup>+</sup> Backup times are expandable using external battery packs. (A) Certifications vary by model. (®) Backup times vary depending on battery condition and load. (©) Pure sine wave output. (®) Includes two 2-meter C13-to-C14 power cables for connecting equipment. (P) Connects to user-supplied input power cord with country-specific plug. Cord requires C13 end to connect to C14 inlet or C19 end to connect to C20 inlet. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos.

## PowerAlert Network Power Management Software



- ► Monitors & Controls Power for up to 250 UPS Systems or PDUs
- ➤ Software-Only Solution Requires No Additional Hardware or Licenses
- ► Available FREE—Included CD or Web Download

PowerAlert Network Power Management Software monitors and controls power for up to 250 UPS systems or PDUs and the computers and equipment that they support. Since PowerAlert is a FREE, software-only solution, it saves network managers significant installation 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, local server to a large, global enterprise. PowerAlert allows managers to centrally monitor every UPS and PDU on their network. In addition, PowerAlert allows users to set parameters for graceful, automatic system shut down in the event of an extended blackout.

\* FREE PowerAlert CD included with SmartPro and SmartOnline UPS systems. FREE download available at www.tripplite.com.

## 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 UPS and PDU 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."





Tripp Lite's PowerAlert Software, version 12.5, has tested compatible with Cisco CallManager, versions 4.0 and 4.1, Cisco 7600 Series Routers, 7500 Series Routers and Catalyst 65XL Layer 3 Switch. Tripp Lite PowerAlert Software, version 12, has tested compatible with Cisco CallManager, versions 3.3(4)-MCS and 4.0(2)-MCS. Go to www.tripplite.com/logodisclaimer for details.

# 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 the PowerAlert NMS or any third-party NMS such as HP OpenView.

#### Alarm Notification

PowerAlert keeps managers continuously apprised of network power conditions through emails and SNMP traps, enabling them to proactively manage power problems before they affect productivity.

#### Individual Outlet Control

PowerAlert allows managers to reboot locked devices or preserve runtime for more 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 installed and configured can listen for 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

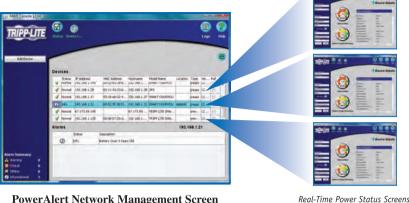
When the internal SNMPWEBCARD is used, network managers can access its management interface from any networked computer via a secure, password-protected browser session (HTTP or HTTPS).

## PowerAlert's Power-Management Architecture

## Centralized Power Management



Network Manager's Computer Supported by Single UPS System



PowerAlert Network Management Screen

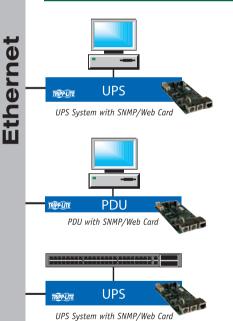
PowerAlert allows managers to monitor and control up to 250 devices from a single interface. Click on any device listing to open up to four device power status screens at a time.

#### NMS Management

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

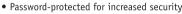


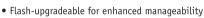
## **SNMP Power Management**



#### Internal SNMP/Web Card

Using Tripp Lite's Internal SNMP/Web Management Cards (Model # SNMPWEBCARD), managers can make UPS systems and select switched PDUs fully manageable (monitored and controlled) nodes on their network.





• Real-time clock and NTP-compatibility

#### Communicate with SNMPWEBCARD through:



3rd-Party SNMP Tool





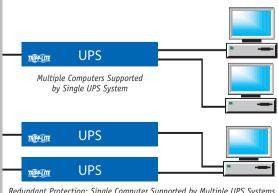
Web Browser (HTTP/HTTPS)

#### **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



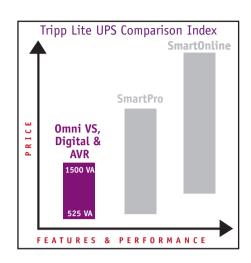
Real-Time Power Status Screen

Managers can view power events in real time, responding to power problems before they affect network performance, and also configure shutdown and alarm settings.

# Omni VS, Digital and AVR Series

## Line-Interactive UPS Systems







- ▶ 525 1,500 VA
- ► Automatic Voltage Regulation (AVR)
- ► Tel/DSL, Ethernet & Coaxial Surge Protection Options
- ► Extended Runtime Option

## **Protect Every Application**

Omni VS, Digital 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 complete 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) indefinitely, without draining battery power.\*
Omni VS, Digital 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.

\* Model INTERNETX525 features standby operation and uses battery power to correct brownouts.

Digital UPS Systems include an LCD display that shows incoming power conditions in real time. Monitor input voltage, battery and load status and more at a glance. The LCD display includes a dimmer switch and can be rotated for easy viewing in any application.

## Protect Systems On Tel/DSL, Ethernet or Coaxial Lines

Select UPS Systems include surge-protected jacks that safeguard equipment against damaging surges traveling on the Tel/DSL, 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

Most models feature at least one built-in communication port. Use with included cabling and PowerAlert Software (available as a FREE Web 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 safely shutting down connected equipment.

W A P D \_ W T N N T N G T P T P P I T T F P F I T A R T I T T V









- A Data Line Surge Protection

  Protect computers from damage on the Tel/
  DSL, Ethernet or coaxial line with surgeprotected jacks featured on select models.
  - 1-Line (Tel/DSL & Ethernet): Protects one device using one Tel/DSL or Ethernet line.
  - 1-Line (Tel/DSL): Protects one device using one Tel/DSL line.
  - 1-Line (Tel/DSL with built-in splitter):\*
    Protects two devices sharing one
    Tel/DSL line. Saves the hassle of
    unplugging devices to share a single line.
  - 1-Line (coaxial): Protects one device using one cable modem, DSS satellite, cable TV or antenna line. Connectors are gold "F" style and are digital-capable.
  - \* INTERNETX525 and AVRX750U only.
- Automatic Data Protection
  At least one built-in communication port
  connects most models to a PC or workstation.
  Use with FREE PowerAlert Software\* and
  included cabling to automatically save open
  files and shut down equipment during an
  extended blackout.
  - \* Available FREE as a Web download.

External Battery Packs and Accessories

A BP24V28-2U

**B** BP24V70-3U

- © Battery-Supported and Surge-Protected Outlets (for Computers and Monitors) All models include outlets that provide reliable battery support for computers and monitors during a blackout as well as complete surge suppression and line noise filtering.
- D Surge-Only Protected Outlets (for Printers and Peripherals)
  Select models include outlets that provide complete surge suppression and line noise filtering for printers and peripherals.
- E AC Input Connector (Inlet) C14 inlet accepts user-supplied cord with country-specific plug.
- **(F)** Space-Saving Cabinets
- **6** Battery Replacement Access (Select Models)
- ⊕ Extended Runtime Capability (OMNIVSINT1500XL only)

User-Adjustable Power Sensitivity Dial

Select models include a user-adjustable dial which lowers the UPS system's sensitivity to waveform distortion. This feature conserves battery power in areas served by poor quality utility- or generator-supplied power.

Performance Conditions Displayed

All UPS Systems feature either LEDs or an LCD display to alert you to potential power problems before they affect your equipment. The LCD display



Rotatable LCD Display

featured on Digital models includes a dimmer switch and can be rotated for easy viewing, regardless of whether the UPS is placed in a horizontal or vertical ("tower") position.

#### **Specifications** (h) (E (CE (M) (0)) Output **Backup Time** Optional Nominal Comm. Ports Input/Output Voltage Outlet Outlet RS-232 Data Line **AC Input** Capacity (Typical Minutes) External (VA/Watts) (Frequency 50/60 Hz) Model Half/Full Load® **Battery Packs** Quantity (DB9) **Surge Protection** Connector(F) Type Basic UPS Systems **INTERNETX525** 525/300 10/3 230<sup>(c)</sup> (220/230/240) 6(D) C13 1 line (Tel/DSL) C14 inlet PR0550X 550/275 13.5/4 230 (220/230/240) C13 C14 inlet AVR Series UPS Systems 6 (3 UPS/surge & 1 line (Tel/DSL) AVRX550U 550/300 8.5/3 230 (220/230/240) C13 C14 inlet 3 surge-only)(D) AVRX750U 750/450 10/3 230 (220/230/240) C13 1 line (Tel/DSL) C14 inlet 6 (3 UPS/surge & 1 3 surge-only)(D) Digital UPS Systems SMX1000LCD 1000/500 11/3 230 (220/230/240) 6 (3 UPS/surge & C13 1 line (Tel/DSL) C14 inlet 1 3 surge-only)(D) SMX1500LCD 1500/900 12/4.5 230 (220/230/240) 8(0) C13 1 line (Tel/DSL/ C14 inlet 1 1 Ethernet) & 1 line (Coax) Omni VS Series UPS Systems OMNIVSINT500 9/3 5 230 (220/230/240) 2(D) 500/300 C13 C14 inlet OMNIVSINT800 800/475 11.5/3.5 230 (220/230/240) /(D) C13 C14 inlet OMNIVSINT1000 1000/500 12/5 230 (220/230/240) 6(D) C13 C14 inlet ΑВ OMNIVSINT1500XL 1500/940 13/4.5+ 230 (220/230/240) C13 C14 inlet

2-9USTAND | Tower kit with 2 adjustable base stands—2U to 9U. Adapts BP24V28-2U or BP24V70-3U to tower format.

+ Backup times are expandable using external battery packs. (A) Certifications vary by model. (B) Backup times vary depending on battery condition and load. (C) INTERNETX525 supports 50 Hz frequency only. (D) Includes two C13-to-C14 power cables for connecting equipment. (E) Includes one C13-to-C14 power cable for connects to user-supplied input power cord with country-specific plug. Cord requires C13 end to connect to C14 inlet. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos.

24V external battery pack and cable, 2U. Not expandable. RED/BLACK 2-point connector

24V external battery pack and cable, 3U. Expandable. RED/BLACK 2-point connector.

# Full-Isolation Medical-Grade UPS Systems



- Built-In, Faraday-Shielded Isolation Transformer
- Medical-Grade (IEC 60601-1) Certification for Healthcare Applications
- Automatic Voltage Regulation (AVR)
- Also Ideal for Retail/P.O.S. and Network Applications
- Extended Runtime Option

# Combine Full-Isolation & UPS Protection

Tripp Lite Full-Isolation Medical-Grade UPS Systems feature built-in, Faraday-shielded isolation transformers, providing superior filtering of potentially disruptive line noise. In addition, all models provide complete protection against all types of power problems. Line-interactive operation—also known as automatic voltage regulation (AVR)—keeps equipment working through low voltage (brownouts) indefinitely, without draining battery power. Reliable battery power keeps computers up and running through short blackouts and allows enough time to safely shut down during longer ones. In addition, all AC outlets stop damaging lightning and surges.

# Provide IEC 60601-1 Compliance for Healthcare Facilities

IEC 60601-1 is a shock-prevention requirement that applies to all electronic devices in patient-care areas. Tripp Lite Medical-Grade UPS Systems reduce cumulative shock potential (leakage current) as low as 100μA, providing full IEC 60601-1 compliance for connected healthcare equipment. They enable facility-wide IEC 60601-1 compliance without requiring expensive equipment replacement and wiring upgrades. All models are certified for use both inside and outside patient-care areas.

# Provide the Benefits of a Dedicated Circuit

All models can be used in retail/POS and network applications to reduce data errors, audio/video distortion and equipment damage. Full Isolation UPS Systems provide the same benefits as running a dedicated AC input line—including a pure ground reference and complete immunity from line noise—without the expense and inconvenience of site wiring upgrades. They can eliminate disruptions and damage to sensitive equipment in sites with a history of poor performance, which is often attributable to substandard wiring.

# Include Enhanced Communication Capability

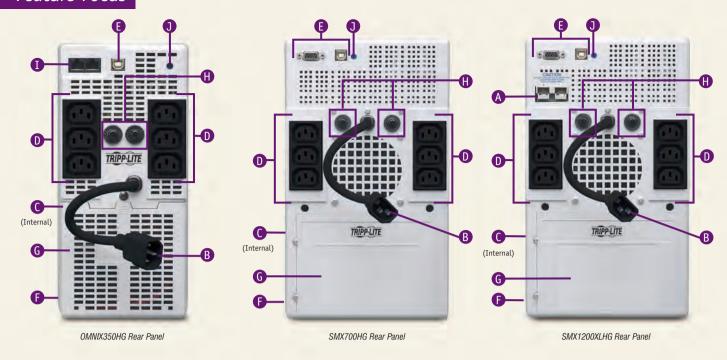
All models include at least one built-in communication port. PowerAlert Software provides power management, monitoring and control locally or remotely through TCP/IP. Intelligent communications allow you to check UPS status (including battery charge level) and AC power status.

CHART		Runtime (minutes)			ıtes) with battery p		nal
RUNTIME	Load (Watts)	with included batteries	Non-expand- able Battery Pack	Expandable Battery Pack(s)* 1   2   3			4
ED	SMX120	OXLHG	BP36V15-2U	BP36V42-3U			
EXTEND	375	25	109	293	586	877	1163
EXT	750	10	46	131	274	421	568

For additional extended runtime solutions to fit your specific load requirements, use Tripp Lite's interactive UPS Selector Guide at www.tripplite.com/selector/ups, or call Tripp Lite's Application Specialists at +1.773.869.1236.

<sup>\*</sup> Battery packs that are "expandable" can be connected together for increased runtime.

## Feature Focus



- A Extended Runtime Capability
  Model SMX1200XLHG accepts
  optional external battery packs
  for additional runtime. External batteries
  can be "hot-swapped". See Extended
  Runtime Chart on page 22.
- B AC Input Connector (Inlet)
  C14 inlet connects to user-supplied cord
  with country-specific pluq.
- C Isolation Transformer (Internal)

  Built-in isolation transformer with Faraday shield provides pure ground reference and complete immunity from line noise. It reduces leakage current as low as 100μA, enabling IEC 60601-1 compliance.
- Hospital-Grade Outlets C13 outlets suitable for use in hospital/medical environments, including those where hospital-grade outlets are required for proper connection.

Automatic Data Protection

At least one built-in communication port connects the UPS to a computer. Use with FREE PowerAlert Software\* and included cabling to automatically save open files and shut down equipment during an extended blackout.

- \* Available FREE as a Web download.
- **F** Space-Saving Cabinet
- G Battery Replacement Access
  Batteries will protect equipment for
  several years with normal use. A
  removable panel allows internal battery
  replacement\*. Internal batteries can be
  "hot-swapped".
  - \* Tripp Lite offers a complete line of replacement battery cartridges (R.B.C.); visit www.tripplite.com.
- Breakers safeguard your equipment and the UPS from damage due to short circuits or system overloads.

- Tel/DSL Surge Protection Model OMNIX350HG protects Internetconnected computers from damage on a 2-line Tel/DSL connection.
- User-Adjustable Power Sensitivity Dial A user-adjustable dial lowers the UPS system's sensitivity to waveform distortion. This feature conserves battery power in areas served by poor quality utility- or generator-supplied power.

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.

#### **Specifications**

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	Œ	Output Capacity	Backup Time (Typical Minutes)	Optional External	Nominal Input/ Output Voltage	Outlet		Comm.	RS-232	Tel/DSL	AC Input			
	Model	(VA/Watts)	Half/Full Load(A)	Battery Packs	(Frequency 50/60 Hz)	Quantity	Outlet Type	USB	(DB9)	Surge Protection	Connector(C)			
	Full-Isolation Medical-Grade UPS Systems (IEC 60601-1 Compliant)													
	OMNIX350HG	350/225	37/15.5	_	230 (220/230/240)	6	C13(B)	1	_	2 line	C14 inlet			
	SMX700HG	700/450	38/15.5	_	230 (220/230/240)	6	C13 <sup>(B)</sup>	1	1	_	C14 inlet			
<del>!  </del>	SMX1200XLHG	1000/750	25/10+	AB	230 (220/230/240)	6	C13 <sup>(B)</sup>	1	1	_	C14 inlet			

External Battery Packs

A BP36V15-2U 36V external battery pack and cable, 2U. Not expandable. GRAY 2-point connector.

B BP36V42-3U 36V external battery pack and cable, 3U. Expandable. GRAY 2-point connector.

<sup>+</sup> Backup times are expandable using external battery packs. (A) Backup times vary depending on battery condition and load. (9) Suitable for use in hospital/medical environments, including those where hospital-grade outlets are required for proper connection. (©) Inlet is attached to fixed 15 cm cord and connects to user-supplied input power cord with country-specific plug. User-supplied cord requires C13 end to connect to C14 inlet. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos.

## 230V Power Distribution Units (PDUs)



- ▶ 8 38 Outlets (C13 or C19)
- Metered Models for Load Monitoring
- Switched Models for Remote Outlet Control
- C14 or C20 AC Input Connector (Inlet)

## Improve Power Distribution Manageability and Reliability

Tripp Lite 230V Power Distribution Units (PDUs) are available in three different configurations: Basic, Metered and Switched. All PDU configurations reliably distribute power from a UPS system, generator or utility wall outlet to multiple pieces of critical networking, server or telecom equipment. Metered models provide a digital load meter that allows you to visually track PDU load conditions. Switched models include a digital load meter and a network interface that allows you to remotely control individual PDU outlets.

# Avoid PDU/Circuit Overload with Digital Load Meter

All Switched and Metered models include a digital load meter that allows you to track PDU load conditions (in amps), helping you to avoid overloading PDUs and utility circuits. You can also remotely



monitor PDU load conditions and set alarms when you use the network interface included with Switched models.

### Remotely Control Outlets via Network Interface

Switched PDUs include a built-in network interface that allows you to remotely control individual outlets (and connected devices)



via SNMP, Web or Telnet, reducing costly service calls by rebooting locked devices. Since other PDUs in their class include the network interface as a separate option, Tripp Lite's Switched PDUs save you significant installation costs.

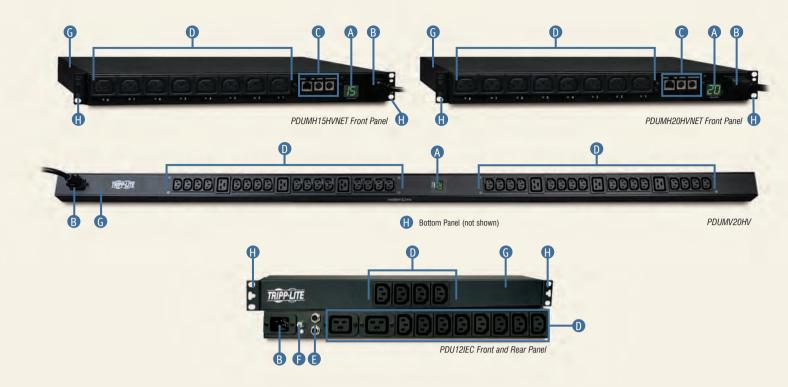
# Ensure Compatibility with Your AC Power Source

Tripp Lite 230V PDUs include a C14 or C20 AC inlet that supports detachable power cords. The AC inlet ensures compatibility with utility power, generators and UPS systems in any 230V region by allowing you to connect a user-supplied input power cord with a country-specific plug.



## **PDU Selector Guide (Features/Benefits)**Choose a PDU by identifying the ideal features and benefits for your application.

			PDU Types	
Features	Benefits	Basic	Metered	Switched
Multiple Outlets	Increase the number of devices that can be powered by a UPS system, generator or utility source.	Х	Х	Х
High-Current Plug and Low-Current Outlets	Increase connection flexibility by converting a single high-amperage outlet into multiple low-amperage outlets.	Select Models	Select Models	Select Models
C14 or C20 Inlet	Connects to a detachable AC input power cord (user-supplied) with a country-specific plug.	X	Х	Х
On-Site Load Monitoring (Digital Load Meter)	Avoid overloads and safely add loads as total equipment power consumption is displayed.		Х	Х
Remote Load Monitoring (Network Interface)	Remote notification of user-selectable load thresholds prevents downtime due to overload as network installations grow.			Х
Remote Control of Individual Outlets (via SNMP, Web or Telnet)	Reduces costly service calls by rebooting locked devices. Extends runtime of critical devices by turning off non-critical loads during blackouts.			Х



A Digital Load Meter (Select Models)

Maximizes the number of devices that can be safely added to the PDU (without overloading it) by displaying the total power consumption of connected equipment in amps.

**B** AC Input Connector (Inlet)

C14 or C20 inlet accepts user-supplied cord with country-specific plug.

Remote Control/Monitoring Network Interface (Select Models)

Remotely control individual PDU outlets through SNMP, Web or Telnet. "Status Link" jack connects PDU to Ethernet. "Envirosense" jack connects PDU to optional sensor module (model ENVIROSENSE) for remote temperature and humidity monitoring. "Config" jack allows manual PDU configuration after initial installation.

**D** Multiple AC Outlets C13 and/or C19 outlets.

- E Short Circuit Protection (Select Models)
- **F** Grounding Lug (Select Models)
- **G** Durable Metal Cabinet
- H Versatile Mounting Hardware

#### Plug Retention Bracket (not shown)

Select models include a removeable bracket that secures connected equipment cords, reducing the risk of accidental disconnection.

SPECIFICATIONS									
Model (I) "	Input/Output Voltage <sup>(8)</sup>	Maximum Input Current	AC Input Connector <sup>(0)</sup>	Outlet Quantity	Outlet Type	Front Outlets	Rear Outlets	Input Cord Length	Rackmount Form Factor
Switched PDUs (Ind	lividual Outlet Con	trol—Network Inte	erface)	1					
PDUMH15HVNET	230 (200-240)	15A <sup>(C)</sup>	C14 inlet	8	C13	8	_	2 m	1U (0U vertical)
PDUMH20HVNET	230 (200-240)	20A <sup>(C)</sup>	C20 inlet <sup>(E)</sup>	8	C13	8	_	2.6 m	1U (0U vertical)
PDUMV20HVNET	230 (200-240)	20A <sup>(C)</sup>	C20 inlet <sup>(E)</sup>	24	20 C13, 4 C19	24	_	3 m	0U vertical (1.6 m)
Metered PDUs (Disp	olay Load in Amps)	)							
PDUMV20HV	230 (200-240)	20A <sup>(C)</sup>	C20 inlet <sup>(E)</sup>	38	32 C13, 6 C19	38		3 m	0U vertical (1.6 m)
Basic PDUs (Multi-C	Outlet Power Distri	bution)							
PDUNV	100-240	16A	C20 inlet <sup>(F)</sup>	14	12 C13, 2 C19	4 C13	8 C13, 2 C19	3 m	1U (0U vertical)
PDU12IEC	100-240	16A	C20 inlet	14	12 C13, 2 C19	4 C13	8 C13, 2 C19		1U (0U vertical)
PDU Accessories									
ENVIROSENSE	Environmenta	ıl sensor module al	lows Switched PDUs	s to monitor extern	nal temperature/humic	lity & contac	t-closure inputs.		
UNIPLUGINT	Adapter conv	erts C13 outlet to ι	ıniversal outlet comp	atible with more t	han 20 plug types co	mmon in Eu	rope, Asia and Latir	America.	

© Certifications vary by model. © All models support 50/60 Hz frequency. © Derated input current is 80% of maximum value. © User supplies power cord with country-specific plug. © Also includes detachable L6-20P plugs. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos.



## SmartRack<sup>™</sup> Premium Enclosures



- ▶ 25U 48U Options
- ▶ 100% Server Compatibility
- ▶ Variable Mounting Depths
- ▶ Ouick-Release Doors & Side Panels
- ► Cable Management Rails
- ► Heavy-Duty Casters & Levelers
- Built-in Baying Hardware
- ► Fully Customizable
- ► Ready for Expansion

## Organize & Secure Standard 19-inch (482.6 mm) Rackmount Equipment

SmartRack Premium Enclosures and Open Frame Racks provide high-performance, economical solutions for mounting high-density server, networking and telecom equipment.

SmartRack Enclosures include a variety of premium security, cooling and cable management features. SmartRack Enclosures have variable mounting depths, ideal for servers. Integrated baying hardware enables cost-effective, orderly and efficient expansion. The cabinets include quick-release doors and side panels for convenient maintenance and split rear doors for improved access and reduced clearance requirements. Front access doors are reversible for installation flexibility. Front and rear doors and side panels are lockable. Massive front-to-rear ventilation capacity and full compatibility with air management accessories keep equipment at the perfect operating temperature. Open bottoms and top panel openings provide generous access for today's cable-intensive applications.

Two assembly options are available: standard enclosures that ship fully assembled for immediate deployment and knockdown enclosures ("KD" models) that ship partially assembled in a smaller container. After assembly, knockdown enclosures are identical to standard enclosures.

Open Frame Racks provide cost-conscious alternatives for organizing rackmount equipment. All models feature easy assembly, a self-squaring design and bolt-down capability.

#### **Specifications**

					RoHS
Model	Description	Rack Spaces	External Dimensions H x W x D	Final Installation Load Capacity	Included Doors/Side Panels
SmartRack	Premium Enclosures				
SR25UB	Standard Enclosure (Black) Ships Fully Assembled	25U	1245 x 600 x 1092 mm (49 x 23.63 x 43 in.)	1363 kg (3000 lb)	Doors & Side Panels
SR25UBKD	Knockdown Enclosure (Black) Ships Partially Assembled	25U	1245 x 600 x 1092 mm (49 x 23.63 x 43 in.)	1363 kg (3000 lb)	Doors & Side Panels
SR42UB	Standard Enclosure (Black) Ships Fully Assembled	42U	1994 x 600 x 1092 mm (78.5 x 23.63 x 43 in.)	1363 kg (3000 lb)	Doors & Side Panels
SR42UBKD	Knockdown Enclosure (Black) Ships Partially Assembled	42U	1994 x 600 x 1092 mm (78.5 x 23.63 x 43 in.)	1363 kg (3000 lb)	Doors & Side Panels
SR48UB	Standard Enclosure (Black) Ships Fully Assembled	48U	2261 x 600 x 1092 mm (89 x 23.63 x 43 in.)	1363 kg (3000 lb)	Doors & Side Panels
SR48UBKD	Knockdown Enclosure (Black) Ships Partially Assembled	48U	2261 x 600 x 1092 mm (89 x 23.63 x 43 in.)	1363 kg (3000 lb)	Doors & Side Panels
SmartRack	Open Frame Racks				
SR2P0ST	2-Post Open Frame Rack (black)	45U	2134 x 516 x 121 mm* (84 X 20.3 x 4.75 in.)	363 kg (800 lb)	N/A
SR4P0ST	4-Post Open Frame Rack (black)	45U	2141 x 514 x 610 to 914 mm* (84.3 x 20.25 x 24 to 36 in.)	454 kg (1000 lb)	N/A

<sup>\*</sup> SR2POST total depth with support base is 363 mm (14.3 in.). SR4POST total depth with support base is 889 to 1194 mm (35 to 47 in.). The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos.

# Cables & Connectivity Products



- ▶ Premium Quality
- ► Excellent Value
- ► Full Compatibility
- ► Wide Variety

## Superior Materials and Construction

Tripp Lite's rigorous quality control guarantees maximum reliability and complete compatibility with industry standards.

Tripp Lite	's rigorous quality control guarantees maximum reliability and
Specifica	itions
Model	Description
Cat5e & Cat6	Shielded (STP) Patch Cables - RJ45 M/M
N105-007-GY	2 m Cat5e 350MHz Molded Gray Shielded Patch Cable
N105-010-GY	3 m Cat5e 350MHz Molded Gray Shielded Patch Cable
N105-025-GY	7.5 m Cat5e 350MHz Molded Gray Shielded Patch Cable
N105-050-GY	15 m Cat5e 350MHz Molded Gray Shielded Patch Cable
N105-100-GY	30 m Cat5e 350MHz Molded Gray Shielded Patch Cable
N125-007-GY	2 m Cat6 Gigabit Molded Gray Shielded Patch Cable
N125-010-GY	3 m Cat6 Gigabit Molded Gray Shielded Patch Cable
N125-025-GY	7.5 m Cat6 Gigabit Molded Gray Shielded Patch Cable
N125-050-GY	15 m Cat6 Gigabit Molded Gray Shielded Patch Cable
Cat5e & Cat6	Patch Panels
N050-012	12-port Cat5e Wall-Mount Patch Panel - 568B
N052-012	12-port Cat5e 1U Rackmount Patch Panel - 568B
N052-024	24-port Cat5e 1U Rackmount Patch Panel - 568B
N052-048	48-port Cat5e 2U Rackmount Patch Panel - 568B
N054-024	24-port Cat5e 1U Rackmount Feed-Through Patch Panel
N250-012	12-port Cat6 Wall-Mount Patch Panel - 568B
N252-012	12-port Cat6 1U Rackmount Patch Panel - 568B
N252-024	24-port Cat6 1U Rackmount Patch Panel - 568B 48-port Cat6 2U Rackmount Patch Panel - 568B
N252-048 N254-024	24-port Cat6 1U Rackmount Feed-Through Patch Panel
N302-003	ex Multimode Fiber Optic Patch Cables  1 m ST/ST Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N302-005	2 m ST/ST Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N302-010	3 m ST/ST Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N304-003	1 m SC/ST Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N304-006	2 m SC/ST Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N304-010	3 m SC/ST Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N306-003	1 m SC/SC Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N306-006	2 m SC/SC Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N306-010	3 m SC/SC Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N316-01M	1 m LC/SC Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N316-02M N316-03M	2 m LC/SC Duplex Multimode 62.5/125 Fiber Optic Patch Cable 3 m LC/SC Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N318-01M	1 m LC/ST Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N318-02M	2 m LC/ST Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N318-03M	3 m LC/ST Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N320-01M	1 m LC/LC Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N320-02M	2 m LC/LC Duplex Multimode 62.5/125 Fiber Optic Patch Cable
N320-03M	3 m LC/LC Duplex Multimode 62.5/125 Fiber Optic Patch Cable
50/125 Duplex	Multimode Fiber Optic Patch Cables
N520-01M	1 m LC/LC Duplex Multimode 50/125 Fiber Optic Patch Cable
N520-02M	2 m LC/LC Duplex Multimode 50/125 Fiber Optic Patch Cable
N520-03M	3 m LC/LC Duplex Multimode 50/125 Fiber Optic Patch Cable
N520-05M	5 m LC/LC Duplex Multimode 50/125 Fiber Optic Patch Cable
N520-10M	10 m LC/LC Duplex Multimode 50/125 Fiber Optic Patch Cable
	5 Duplex Multimode LSZH Aqua Fiber Optic Patch Cables  1 m LC/LC Duplex Multimode 50/125 Aqua Fiber Optic Patch Cable
N820-01M N820-02M	2 m LC/LC Duplex Multimode 50/125 Aqua Fiber Optic Patch Cable
N820-03M	3 m LC/LC Duplex Multimode 50/125 Aqua Fiber Optic Patch Cable
N820-05M	5 m LC/LC Duplex Multimode 50/125 Aqua Fiber Optic Patch Cable
	ode Fiber Optic Patch Cable Adapters
N458-001-50	0.3 m LC/SC M/F Duplex Multimode 50/125 Adapter Cable
N458-001-62	0.3 m LC/SC M/F Duplex Multimode 62.5/125 Adapter Cable
	tached SCSI) Cables
S500-01M	1 m Internal SAS Cable - SFF-8484 to SFF-8484
S502-01M	1 m Internal SAS Cable - SFF-8484 to 4 x SATA 7-Pin Straight F
S520-01M	1 m External SAS Cable - SFF-8088 to SFF-8470
S522-01M	1 m External SAS Cable - SFF-8470 to SFF-8470
S524-01M	1 m External SAS Cable - SFF-8088 to SFF-8088

Model	Description
SATA (Serial A	TA) Cables
P940-08I	0.2 m SATA Signal Cable
P940-19I	0.5 m SATA Signal Cable
P940-39I	1 m SATA Signal Cable
P944-06I	.15 m SATA Power Cable
P945-06l	.15 m SATA Power Adapter/Ext. Cable - 2 x 4-pin & 15-pin SATA
P946-12I	0.3 m Dual Power Adapter Cable - 4-pin & 2 x 15-pin SATA
	· · · ·
P950-18I	0.5 m eSATA (SATA II) Signal Cable - 2 x 7 pin straight
P950-36I	1 m eSATA (SATA II) Signal Cable - 2 x 7 pin straight
P952-003	1 m SATA to eSATA Signal Cable - 7-pin M to 7-pin F
P952-18I	0.5 m SATA to eSATA Signal Cable - 7-pin M to 7-pin F
USB Cables &	
U007-40M	USB Over Cat5 Extension Kit (Extends up to 40 m)
U042-036	USB 2.0 Extra-Long Active Device Cable - 11 m
U239-000-R	USB 2.0 / SATA Hard Drive Cradle (For 2.5 in. or 3.5 in. Drive)*
U256-025-R	USB 2.0 External 2.5 in. Hard Drive Enclosure*
	IDMI Cables & Adapters
B120-000	DVI Dual Link Extender - DVI-I F/F*
B122-000	HDMI Signal Extender - HDMI F/F*
P118-000 P120-000	DVI Adapter - DVI-D M / DVI-I F DVI Adapter - DVI-A M / HD15 F
P126-000	DVI Adapter - DVI-I F / HD15 M
P130-000	HDMI to DVI Gold Adapter - HDMI F / DVI-D M
P132-000	DVI to HDMI Gold Adapter - DVI-D F / HDMI M
P166-001-A	HDMI Wall Plate (Active Signal Booster) - HDMI F/F
P166-001-P	HDMI Wall Plate (Passive) - HDMI F/F
P501-050	15 m Easy Pull SVGA Extension Cable & Connectors - HD15 M/F
P501-100	30 m Easy Pull SVGA Extension Cable & Connectors - HD15 M/F
P502-006	2 m SVGA Monitor Gold Cable with RGB Coax - HD15 M/M
P502-015	4.5 m SVGA Monitor Gold Cable with RGB Coax - HD15 M/M
P502-025	7.5 m SVGA Monitor Gold Cable with RGB Coax - HD15 M/M
P502-050	15 m SVGA Monitor Gold Cable with RGB Coax - HD15 M/M
P502-100	30 m SVGA Monitor Gold Cable with RGB Coax - HD15 M/M
P503-050	15 m Easy Pull SVGA Cable with RGB Coax - HD15 M/M
P503-100	30 m Easy Pull SVGA Cable with RGB Coax - HD15 M/M
P504-010 P504-025	3 m XVGA Monitor Cable with Coax - HD15 M/M with Audio 7.5 m XVGA Monitor Cable with Coax - HD15 M/M with Audio
P504-025	15 m XVGA Monitor Cable with Coax - HD15 M/M with Audio
P504-050-EZ	15 m Easy Pull XVGA Cable with Coax - HD15 M/M with Audio
P504-100-EZ	15 m Easy Pull XVGA Cable with Coax - HD15 M/M with Audio
P516-001-HR	0.3 m VGA/XVGA Y Splitter (High Resolution) - HD15 M/FF
P560-006	2 m DVI Dual Link TDMS Cable - DVI-D M/M
P560-006-A	2 m DVI Dual Link TDMS Cable - DVI-D M/M with Audio
P560-010	3 m DVI Dual Link TDMS Cable - DVI-D M/M
P560-010-A	3 m DVI Dual Link TDMS Cable - DVI-D M/M with Audio
P560-025	7.5 m DVI Dual Link TDMS Cable - DVI-D M/M
P560-050	15 m DVI Dual Link TDMS Cable - DVI-D M/M
P560-100	30 m DVI Dual Link TDMS Cable - DVI-D M/M
P561-050-EZ	15 m Easy Pull Single-Link DVI Cable - DVI-D M/M
P561-100-EZ	30 m Easy Pull Single-Link DVI Cable - DVI-D M/M
P564-001	0.3 m DVI Dual Link Splitter Cable - DVI-D M x 2 / DVI-I F
P566-006	2 m HDMI to DVI Gold Digital Video Cable - HDMI M / DVI-D M
P566-010	3 m HDMI to DVI Gold Digital Video Cable - HDMI M / DVI-D M 5 m HDMI to DVI Gold Digital Video Cable - HDMI M / DVI-D M
P566-016 P568-006	2 m HDMI Gold Digital Video Cable - HDMI M/M
P568-010	3 m HDMI Gold Digital Video Cable - HDMI M/M
P568-016	5 m HDMI Gold Digital Video Cable - HDMI M/M
P568-025	7.5 m HDMI Gold Digital Video Cable - HDMI M/M
P568-050-EZ	15 m Easy-Pull HDMI Cable with Connectors - HDMI M/M
P568-100-EZ	30 m Easy-Pull HDMI Cable with Connectors - HDMI M/M

<sup>\*</sup> Includes 100-240V AC power adapter with North American plug. Requires user-supplied plug adapter for use outside North America. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos.

## NetDirector<sup>™</sup> 1U Rackmount KVM Switches



Compact, Innovative Design

Tripp Lite's NetDirector KVM Switches allow users to control up to 512 computers with a single keyboard/monitor/mouse console. NetDirector KVM Switches are available in two different configurations: one that features a KVM switch alone\* and one that features a combination KVM switch with built-in, flip-up console. Models with a console include a keyboard, LCD screen, touch pad and an 8- or 16-port switch.

\* Models without a console require a separate keyboard, monitor and mouse console for complete functionality.

- ► Control Up to 512 PCs or Servers
- ► On-Screen Display Control
- ► PS/2 & USB Compatible Options

## Deliver Full Scalability, Compatibility and Security

Tripp Lite's NetDirector KVM Switches can control up to 512 computers by daisy-chaining or cascading additional KVM Switches.\* All NetDirector KVM Switches maintain strict security with a two-level password security feature that accommodates up to four users plus an administrator.

\* All NetDirector KVM Switches (except model: B020-008-17-IP) must use the 1U rackmount KVM Switch without the console (model: B022-016) for daisy-chaining or cascading more units.

## Simplify Operation

Auto-scanning function automatically sequences through all of the active KVM Switch ports, allowing users to monitor multiple tasks simultaneously. The B020-008-17-IP KVM Switch features on-board IP remote access, giving users the ability to access and manage servers via the Internet. Add IP remote access to any NetDirector KVM Switch by using an optional B050-000 IP Remote Access Unit.

#### Specifications

					RoHS
LCD	Interface	On-Screen	Daisy-Chain/Cascade	LEDs	Cables &
Display	Supported	Display (OSD)	Capability	On-Line/Selected	Accessories
_	USB & PS/2(B)	Yes	Yes (up to 512 CPUs)(D)	8/8	ABC
_	USB & PS/2	Yes	Yes (up to 120 CPUs)(D)	8/8	ABD
_	USB & PS/2	Yes	Yes (up to 128 CPUs)(D)	16/16	ABD
Yes (43 cm)	USB & PS/2(B)	Yes	Yes (up to 504 CPUs)(C)	8/8	ABE
Yes (43 cm)	USB & PS/2(B)	Yes	Yes (up to 64 CPUs)(D)	8/8	ABE
Yes (38 cm)	USB & PS/2(B)	Yes	Yes (up to 512 CPUs)(C)	16/16	ABE
Yes (43 cm)	USB & PS/2(B)	Yes	Yes (up to 512 CPUs)(C)	16/16	ABE
_	USB & PS/2(B)	Yes	Yes (up to 512 CPUs)(C)	16/16	ABE
Yes (43 cm)	PS/2	Yes	_	_	AB
Yes (48 cm)	PS/2 & USB	Yes	_	_	AB
	Display	USB & PS/2®	Display         Supported         Display (OSD)           —         USB & PS/2®         Yes           —         USB & PS/2         Yes           —         USB & PS/2         Yes           —         USB & PS/2         Yes           Yes (43 cm)         USB & PS/2®         Yes           Yes (43 cm)         USB & PS/2®         Yes           Yes (43 cm)         USB & PS/2®         Yes           —         USB & PS/2®         Yes           Yes (43 cm)         PS/2         Yes           Yes (43 cm)         PS/2         Yes	Display         Supported         Display (OSD)         Capability           —         USB & PS/2®         Yes         Yes (up to 512 CPUs)®           —         USB & PS/2         Yes         Yes (up to 120 CPUs)®           —         USB & PS/2         Yes         Yes (up to 128 CPUs)®           Yes (43 cm)         USB & PS/2®         Yes         Yes (up to 504 CPUs)®           Yes (43 cm)         USB & PS/2®         Yes         Yes (up to 64 CPUs)®           Yes (38 cm)         USB & PS/2®         Yes         Yes (up to 512 CPUs)®           Yes (43 cm)         USB & PS/2®         Yes         Yes (up to 512 CPUs)®           —         USB & PS/2®         Yes         Yes (up to 512 CPUs)®           Yes (43 cm)         PS/2         Yes         —	Display         Supported         Display (OSD)         Capability         On-Line/Selected           —         USB & PS/2 <sup>(B)</sup> Yes         Yes (up to 512 CPUs) <sup>(D)</sup> 8/8           —         USB & PS/2         Yes         Yes (up to 120 CPUs) <sup>(D)</sup> 8/8           —         USB & PS/2         Yes         Yes (up to 128 CPUs) <sup>(D)</sup> 16/16           Yes (43 cm)         USB & PS/2 <sup>(B)</sup> Yes         Yes (up to 504 CPUs) <sup>(C)</sup> 8/8           Yes (43 cm)         USB & PS/2 <sup>(B)</sup> Yes         Yes (up to 64 CPUs) <sup>(C)</sup> 8/8           Yes (38 cm)         USB & PS/2 <sup>(B)</sup> Yes         Yes (up to 512 CPUs) <sup>(C)</sup> 16/16           Yes (43 cm)         USB & PS/2 <sup>(B)</sup> Yes         Yes (up to 512 CPUs) <sup>(C)</sup> 16/16           Yes (43 cm)         PS/2         Yes         Yes         Us (up to 512 CPUs) <sup>(C)</sup> 16/16

#### KVM Cables and Accessories

	Model	Description
Α	B013-000**	KVM Console Extender (Extends console connection up to 150 m via Cat5e.)
В	B050-000**	IP Remote Access Unit (See below for description.)
С	P753-006	PS/2 Cable Kit for B007-008 - 2 m (6 ft.)
С	P753-010	PS/2 Cable Kit for B007-008 - 3 m (10 ft.)
С	P753-015	PS/2 Cable Kit for B007-008 - 4.5 m (15 ft.)
С	B015-000	USB to PS/2 KVM Adapter
D	P780-006	USB & PS/2 Cable Kit for B042 Series - 2 m (6 ft.)
D	P780-010	USB & PS/2 Cable Kit for B042 Series - 3 m (10 ft.)
D	P780-015	USB & PS/2 Cable Kit for B042 Series - 4.5 m (15 ft.)

	Model	Description
		•
Ε	P772-002	Daisy-Chain Cable for B020/B022 Series - 0.6 m (2 ft.)
E	P772-006	Daisy-Chain Cable for B020/B022 Series - 2 m (6 ft.)
Ε	P774-006	PS/2 Cable Kit for B020/B022 Series - 2 m (6 ft.)
Ε	P774-010	PS/2 Cable Kit for B020/B022 Series - 3 m (10 ft.)
Ε	P774-015	PS/2 Cable Kit for B020/B022 Series - 4.5 m (15 ft.)
E	P774-025	PS/2 Cable Kit for B020/B022 Series - 7.5 m (25 ft.)
E	P776-006	USB Cable Kit for B020/B022 Series - 2 m (6 ft.)
Ε	P776-010	USB Cable Kit for B020/B022 Series - 3 m (10 ft.)
E	P776-015	USB Cable Kit for B020/B022 Series - 4.5 m (15 ft.)

Common specifications for all KVM switches: All models are designed with mounting hardware to fit standard 19 in. racks. \* Includes C14 AC power inlet that connects to user-supplied power cord with country-specific plug. Supports 100-240V AC input. \*\* Includes 100-240V AC power adapter with North American plug. Requires user-supplied plug adapter for use outside North America. (A) Includes IP remote access via Internet connection. (B) Both USB and PS/2 compatible depending on optional KVM Cable Kits or adapters used. (C) Daisy-chain or cascade using optional B022-016 KVM Switches. (D) Daisy-chain or cascade using multiple units. All models require one KVM Cable Kit for each CPU connected. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos



#### IP Remote Access Unit Model B050-000

Allows administrators to control NetDirector KVM Switches through TCP/IP. Can be used for system administration, BIOS-level troubleshooting, installing GUI applications, rebooting and more. Operates through embedded processors only, not servers, so there is no interference with server or network performance. Offers password protection, certificate management, 256-bit SSL encryption and high-resolution video.

# NetDirector<sup>™</sup> Matrix & NetCommander<sup>™</sup> 1U Rackmount Cat5 KVM Switches



- ► Control Up to 4,096 PCs or Servers
- ► Provide Long-Distance Console/Server Control Up to 150 m
- ► PS/2, USB & Sun™ Compatible Options

### Provide Multi- or Single-User Support

NetDirector™ Matrix 1U Rackmount Cat5 KVM Switches are the optimal solutions for simultaneously controlling multiple computers by up to four independent users.\* Console and Server Interface Modules are available to connect the KVM Switches to each user's console (keyboard, monitor and mouse) as well as each connected server. The Interface Modules can be placed up to 150 m away from the KVM Switches using Category 5/5e patch cables.

NetCommander™ 1U Rackmount Cat5 KVM Switches are the next-generation of cost-effective, feature-rich Cat5 KVM Switches for single users. They allow a user to control up to 256 PCs or servers with a single keyboard/monitor/mouse console. Interface Modules are available to connect the KVM Switches to each server up to 10 m away using Category 5/5e patch cables.

 $^{\star}$  32-Port KVM Switch (model: B060-032) supports up to four independent users. 16-Port KVM Switch (model: B060-016-2) supports up to two independent users.

# Deliver Full Scalability, Compatibility and Security

NetDirector KVM Switches can control up to 32 directly connected computers (or up to 4,096 computers when additional KVM Switches are connected through a combination of daisy-chaining and cascading). Cost-effective NetCommander KVM Switches can control up to 16 directly connected computers (or up to 256 computers when additional KVM Switches are connected through a combination of daisy-chaining or cascading). The KVM Switches and Interface Modules are compatible with all major operating systems and support most keyboards and mice. A variety of USB, PS/2 and Sun Interface Modules are available. A password security feature accommodates multiple users. In addition, crystal clear video transmission provides connected monitors with optimal video resolution.

**E** | **B078-001-USB** | USB Server Interface Module for B072 Series

#### **Specifications**

								ROHS
CE F©	Ports	Description	Interface Supported	On-Screen Display (OSD)	Daisy-Chain/Cascade Capability	LEDs	Cables & Accessories	Users
r Matrix 1U	Rackmoui	nt Cat5 KVM Switches						
2*	16	1U Matrix Cat5 KVM Switch	USB, PS/2 & Sun(A)	Yes	Yes (up to 2,048 CPUs)(D)	17	ABCD	2
	32	1U Matrix Cat5 KVM Switch	USB, PS/2 & Sun(A)	Yes	Yes (up to 4,096 CPUs)(C)	33	ABCD	4
nder 1U Ra	ckmount (	Cat5 KVM Switches						
1*	8	1U Cat5 KVM Switch	USB & PS/2(B)	Yes	Yes (up to 64 CPUs)(F)	16	ABCE	1
B072-016-1*		1U Cat5 KVM Switch	USB & PS/2(B)	Yes	Yes (up to 256 CPUs)(E)	32	ABCE	1
1	Matrix 1U * nder 1U Ra *	Matrix 1U Rackmount  16 32  10 11 12 13 14 15 16 16 17 18 18 18	Matrix 1U Rackmount Cat5 KVM Switches           **         16         1U Matrix Cat5 KVM Switch           32         1U Matrix Cat5 KVM Switch           nder 1U Rackmount Cat5 KVM Switches         *         8         1U Cat5 KVM Switch	Matrix 1U Rackmount Cat5 KVM Switches           **         16         1U Matrix Cat5 KVM Switch         USB, PS/2 & Sun <sup>(A)</sup> 32         1U Matrix Cat5 KVM Switch         USB, PS/2 & Sun <sup>(A)</sup> **         8         1U Cat5 KVM Switch         USB & PS/2 <sup>(B)</sup>	Matrix 1U Rackmount Cat5 KVM Switches           **         16         1U Matrix Cat5 KVM Switch         USB, PS/2 & Sun <sup>(A)</sup> Yes           32         1U Matrix Cat5 KVM Switch         USB, PS/2 & Sun <sup>(A)</sup> Yes           nder 1U Rackmount Cat5 KVM Switches           *         8         1U Cat5 KVM Switch         USB & PS/2 <sup>(B)</sup> Yes	Matrix 1U Rackmount Cat5 KVM Switches           16         1U Matrix Cat5 KVM Switch         USB, PS/2 & Sun <sup>(A)</sup> Yes         Yes (up to 2,048 CPUs) <sup>(D)</sup> 32         1U Matrix Cat5 KVM Switch         USB, PS/2 & Sun <sup>(A)</sup> Yes         Yes (up to 4,096 CPUs) <sup>(C)</sup> inder 1U Rackmount Cat5 KVM Switches         *         8         1U Cat5 KVM Switch         USB & PS/2 <sup>(B)</sup> Yes         Yes (up to 64 CPUs) <sup>(F)</sup>	Matrix 1U Rackmount Cat5 KVM Switches           16         1U Matrix Cat5 KVM Switch         USB, PS/2 & Sun <sup>(A)</sup> Yes         Yes (up to 2,048 CPUs) <sup>(D)</sup> 17           32         1U Matrix Cat5 KVM Switch         USB, PS/2 & Sun <sup>(A)</sup> Yes         Yes (up to 4,096 CPUs) <sup>(C)</sup> 33           ander 1U Rackmount Cat5 KVM Switches         *         8         1U Cat5 KVM Switch         USB & PS/2 <sup>(B)</sup> Yes         Yes (up to 64 CPUs) <sup>(F)</sup> 16	Matrix 1U Rackmount Cat5 KVM Switches           **         16         1U Matrix Cat5 KVM Switch         USB, PS/2 & Sun <sup>(A)</sup> Yes         Yes (up to 2,048 CPUs) <sup>(D)</sup> 17         A B C D           32         1U Matrix Cat5 KVM Switch         USB, PS/2 & Sun <sup>(A)</sup> Yes         Yes (up to 4,096 CPUs) <sup>(C)</sup> 33         A B C D           Inder 1U Rackmount Cat5 KVM Switches           *         8         1U Cat5 KVM Switch         USB & PS/2 <sup>(D)</sup> Yes         Yes (up to 64 CPUs) <sup>(F)</sup> 16         A B C E

#### KVM Cables and Accessories

	Model	Description		Model	Description
Α	B013-000**	KVM Console Extender (Extends console connection up to 150 m	D	B054-001-PS2	PS/2 Server Interface Module for B060 Series
		via Cat5e.)	D	B054-001-USB	USB Server Interface Module for B060 Series
В	B050-000**	IP Remote Access Unit (See p. 28 for description.)		B054-001-SUN	Sun Server Interface Module for B060 Series
С	N105-Series	See p. 27 for compatible N105-series Cat5e cables.	D	B062-002-PS2**	PS/2 Console Interface Module for B060 Series
	Cat5e Cables		D	B062-002-USB**	USB Console Interface Module for B060 Series
			E	B078-001-PS2	PS/2 Server Interface Module for B072 Series

Common specifications for all KVM switches: All models include mounting hardware to fit standard 19 in. racks. \* Includes C14 AC power inlet that connects to user-supplied power cord with country-specific plug. Supports 100-240V AC input. \*\* Includes 100-240V AC power adapter with North American plug. Requires user-supplied plug adapter for use outside North America. (A) USB, PS/2 or Sun compatible depending on Interface Module used. (©) Daisy-chain or cascade using optional B060-032 KVM Switches. (D) Daisy-chain or cascade using optional B060-016-2 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (D) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E) Daisy-chain or cascade using optional B072-016-1 KVM Switches. (E

Complete, up-to-date specifications (including product weight and dimensions) available at www.tripplite.com

Also available: interactive Cables & Connectivity selector guide, owner's manuals and more!

# PowerVerter® APS DC-to-AC Inverter/Chargers







- ▶ 700 6000 Watt Continuous Output
- ► Peak Surge Output for an Extended Period
- ► Integrated 3-Stage **Battery Chargers**
- ► Automatic Transfer Switching

## Provide a Heavy-Duty Alternative **Power Source**

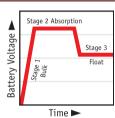
PowerVerter APS Inverter/Chargers provide the most reliable alternative energy sources during utility power problems (blackouts, brownouts, overvoltages and surges). When utility power is present, APS models automatically condition and/or power equipment while filtering surges and simultaneously recharging connected batteries. When utility power is absent (during a blackout in stationary applications or while driving in mobile applications) APS models automatically switch from utility power to battery backup power. With their heavy-duty, moisture-resistant construction, APS Inverter/Chargers are the ideal backup power source for any environment.

## Deliver Extended Peak Surge Power

Many tools, appliances and printers require more power to start up than they do to run continuously. PowerVerter APS Inverter/Chargers accommodate these "peak surge" demands by delivering more output power than their continuous ratings. A DoubleBoost™ feature provides up to 200% of the continuous output for up to 10 seconds, providing the extra power needed to cold start heavy-duty tools and equipment. An OverPower™ feature delivers up to 150% of the continuous output for 1 to 60 minutes, providing plenty of reserve power to reliably support tools and equipment longer.

## Preserve Your Battery

An advanced, 3-stage battery charger recharges your battery faster than conventional chargers while protecting against over-charge and over-discharge. A charge conservation setting preserves battery power by automatically shutting off the inverter in the absence of any power



Charging Profile

demand from connected equipment. When in use, all models are rated over 90% efficient,\* ensuring more of your battery's power is used to run connected equipment in the absence of utility power. How long you are able to run your equipment in the absence of utility power is determined by the amount and size of user-supplied batteries that you connect to the APS Inverter/Charger.

\* Efficiency varies depending on equipment load.

## **Provide Superior Output**

PowerVerter APS Inverter/Chargers provide the most stable voltage and frequency output to help your equipment perform at its peak. A Frequency Control feature allows devices dependent on tightly-regulated AC line frequency (such as computers, TVs, DVD/CD players, etc.) to operate without any irregularities.

## Tripp Lite Inverter/Chargers: The Cleaner, "Greener" Alternative to Gas Generators



 Produces Quiet, **Fume-Free Power:** With no fumes, fuel or excess noise, Tripp Lite

Inverter/Chargers are the safer alternative to gas generators. They are ideal for applications where gas generators would be hazardous (such as indoors or in enclosed mobile applications) or inconvenient (such as in residential areas).

Saves Gas: Tripp Lite Inverter/Chargers consume no fuel, drawing power from your battery

system. Gas generators, by comparison, require frequent, costly trips to the pump.

**Produces More Stable Power:** 

Tripp Lite Inverter/Chargers produce stable, microprocessor-controlled voltage and frequency to help your equipment perform at its peak. Gas generators, on the other hand, compromise the reliability of your equipment with overvoltages, frequency variations and surges.

### Feature Focus

- A C13 AC Outlets or Hardwire Terminals
- B On/Off Switch
- Battery Charge Level LEDs Indicate the approximate charge level— High/Medium/ Low—of connected batteries.
- Connected Load Level LEDs Indicate the approximate wattage load level—High/Medium/Low—of connected equipment.
- Provides optional remote monitoring and control when used with a Tripp Lite Remote Control LED/Switch Module.

Tripp Lite model APSRM4, sold separately. (Remote control jack is included on all Inverter/Charger models except APSX700HF.)

Battery Charge Conservation "Load Sense" Dial

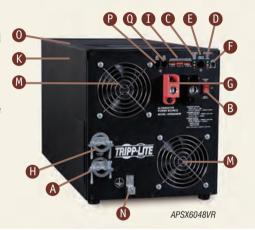
Conserves battery power by setting the load level at which the inverter automatically shuts off.

(All Inverter/Charger models except APSX750, APSX750F, APSX1250 and APSX1250F.)

- **6** DC Input Terminals
- (H) C14 AC Inlet or Hardwire Terminals Recharge connected batteries and pass through surge-protected utility power, when available. Inlet accepts user-supplied cord with country-specific plug.
- Optimize Inverter/Charger operation depending on your application. Set voltage switch points, battery charging parameters and more.
- 1 Circuit Breakers
- High-Impact Polycarbonate or Metal Case







- Integrated Mounting Feet/Flanges
- M Cooling Fan
- Grounding Lug
- Pure Sine Wave Model for Telecom/Facility Backup

The APSX6048VR model features 48V DC input for a variety of applications, including telecom. It also features a robust output capacity (6000 watts) to support an entire small office or department within a larger facility. Pure sine wave output on battery makes it ideal for even the most sensitive network equipment.

- P Remote Battery Temperature Sensor Prolongs battery life by adjusting charge based on battery temperature.

  Includes cable. (APSX6048VR only.)
- Remote Generator Start Connector Automatically cycles generator based on battery voltage. Requires cable. (APSX6048VR only.)

## Voltage Regulation LEDs (not shown)

Indicate whether Inverter/Charger is automatically regulating incoming voltage. (APSINT3636VR only.)

## Low Battery Alarm/Shutdown (internal, not shown)

Automatically detects low voltage and shuts down inverter to preserve vehicle battery.

# Overload Alarm/Shutdown (internal, not shown)

Automatically detects wattage overload on AC output and shuts down inverter as a protective measure.

#### **Specifications**

Specifications											
				INPUT (DC & AC)				Rohs			
	Continuous	OverPower™ Peak Surge Watts (150% of Cont.	DoubleBoost™ Peak Surge Watts (200% of Cont.		Output Voltage/ Frequency AC	Input Voltage DC (Nominal/	Input Voltage AC	Charger	Transfer Time (Line Power to		
Model	Watts <sup>(A)</sup>	for 1 to 60 min.)(B)	for up to 10 sec.)(B)	Outlets <sup>(C)</sup>	(Nominal)	Range)	(Nominal)	Capacity	Battery)(E)	AC Input Connector <sup>(F)</sup>	
PowerVerter APS Inverter/Chargers											
APSX700HF	700	1050	1400	1 C13	230V / 50 Hz	12V (10-15V)	230V	6 A	2 cycles	C14 inlet	
APSX750	750	1075	1500	2 C13	230V / 50 Hz	12V (10-15V)	230V	20/5 A <sup>(D)</sup>	1 cycle	C14 inlet	
APSX750F	750	1075	1500	2 C13	230V / 50 Hz	12V (10-15V)	230V	20/5 A <sup>(D)</sup>	½ cycle	C14 inlet	
APSX1250	1250	1875	2500	2 C13	230V / 50 Hz	12V (10-15V)	230V	30/7.5 A <sup>(D)</sup>	1 cycle	C14 inlet	
APSX1250F	1250	1875	2500	2 C13	230V / 50 Hz	12V (10-15V)	230V	30/7.5 A <sup>(D)</sup>	½ cycle	C14 inlet	
APSINT2012	2000	3000	4000	Hardwire	230V / 50 Hz	12V (10-15V)	230V	60/15 A <sup>(D)</sup>	1 cycle	Hardwire	
APSINT2424	2400	3600	4800	Hardwire	230V / 50 Hz	24V (20-30V)	230V	30 A	1 cycle	Hardwire	
APSINT3636VR	3600	5400	7200	Hardwire	230V / 50 Hz	36V (30-45V)	230V	30 A	1 cycle	Hardwire	
PowerVerter AP	S Inverter/Ch	arger—PURE SINE	WAVE for Telecom/Fa	acility Back	kup						
APSX6048VR	6000	9000	12000	Hardwire	208 or 230V/	48V (42-60V)	208 or 230V/	90/23 A <sup>(D)</sup>	½ or 1	Hardwire	
Dowerlowton AD	C Invostos/Ch	organ Assessarios			50 or 60 Hz <sup>(0)</sup>		50 or 60 Hz <sup>(D)</sup>		cycle <sup>(D)</sup>		
PowerVerter APS Inverter/Charger Accessories  APSRM4 Remote Control LED/Switch Module. Faceplate, cord and daisy-chain capability. (For all models except APSX700HF.)											
APSRM4											
98-121	12V DC, 75										
BP260			Two 98-121 Batteries	S							
PowerVerter Inv	erters (DO N	OT INCLUDE A BATT	ERY CHARGER)								
PVINT375	375	N/A	600 <sup>(G)</sup>	1 <sup>(H)</sup>	230V / 50 Hz	12V (10-15V)	N/A	N/A	N/A	N/A	
PVX700	700	N/A	1400 <sup>(G)</sup>	1 <sup>(H)</sup>	230V / 50 Hz	12V (10-15V)	N/A	N/A	N/A	N/A	

Maximum output power (Continuous or Peak Surge) only available when connected batteries are properly charged. Run vehicle engine or charger often to maintain proper charge. DoubleBoost duration for APS Inverter/Charger models is up to 10 seconds. DoubleBoost duration for Inverter models is instantaneous. Actual wattage levels and durations vary depending on optimal operating conditions: battery age, battery charge level and ambient temperature. Models with C13 outlet(s) include adapter that converts C13 outlet to universal outlet compatible with more than 20 plug types common in Europe, Asia and Latin America. Common in Europe, Asia and Latin America.

# TRIPP-LITE SURGE SUPPRESSORS & LINE CONDITIONERS S U R G E

# Surge Suppressors



### Protect Valuable Equipment

Protect It!™ Surge Suppressors provide the highest joule ratings in their class. More joules mean more protection from surges.

#### Specifications

### Heavy-Duty Surge Protection

- ► EMI/RFI Line Noise Filtering
- Durable Metal or Plastic Housing
- Multiple Mounting Options
- ► Lifetime Warranty

### Use Trusted Technology

Tripp Lite's Isobar® Surge Suppressor is the corporate standard for premium surge suppression technology, with more than 16 million in use worldwide.

Sporting at 1915												
CE <sup>(A)</sup> Model	Input/Output Voltage®	Joule Rating	AC Input Connector	Input Cord Length	Outlet Quantity	Outlet Type	Other Features					
Isobar Premium Surge Suppressor (Metal Housing and Exclusive Isolated Filter Banks)												
EURO-4	230 (220-240)	680	C14 <sup>(c)</sup>	2 m (detachable)	4	C13	Isolated Filter Banks, Illuminated Switch					
Protect It! Surge Suppressors (High-Impact, Flame-Retardant Plastic Housing)												
SUPER60MNI B	230 (220-240)	750	BS 1363 (British)	1.8 m	6	Universal <sup>(0)</sup>	Illuminated Switch					
SUPER60MNI D	230 (220-240)	750	CEE 7/7 (French/German)	1.8 m	6	Universal <sup>(D)</sup>	Illuminated Switch					
SUPER60MNI I	230 (220-240)	750	CEI 23-16/VII (Italian)	1.8 m	6	Universal <sup>(0)</sup>	Illuminated Switch					
TRAVELERC6	230 (100-240)	820	C5 <sup>(E)</sup>	In-Line	1	C6 <sup>(E)</sup>	Tel/Modem Protection w/Splitter, LEDs					
TRAVELERC8	230 (100-240)	820	C7 <sup>(E)</sup>	In-Line	1	C8 <sup>(E)</sup>	Tel/Modem Protection w/Splitter, LEDs					
Accessory												

Adapter converts C13 outlet to universal outlet compatible with more than 20 plug types common in Europe, Asia and Latin America. (A) Certifications vary by model. (B) Nominal. All models support nominal 50/60 Hz frequency. (C) Connects to user-supplied input power cord with country-specific plug. Includes detachable 2 m C13-to-C14 power cord. (C) Compatible with more than 20 plug types common in Europe, Asia and Latin America. (C) Designed for in-line connection between an external AC adapter and the device it powers (such as a laptop). TRAVELERC6 is for compatible 3-conductor connections. TRAVELERC8 is for compatible 2-conductor connections. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual

## Line Conditioners



- Automatic Voltage Regulation (AVR)
- ► Network-Grade Surge Protection
- EMI/RFI Line Noise Filtering

## Protect Valuable Equipment

Network-grade surge protection and noise filtering provides the same protection as a high-quality surge suppressor.

## Automatic Voltage Regulation

Line conditioners correct brownouts and high voltage conditions automatically—perfect for facilities with frequent power fluctuations.

#### **Specifications**

(A) Model	Input/Output Output Voltage <sup>(6)</sup> Capacity		AC Input Connector	Outlet Quantity	Outlet Type	Other Features	RoHS			
Line Conditioner										
LR604	230 (220-240)	600W	C14 <sup>(c)</sup>	3 <sup>(D)</sup>	C13	Illuminated Switch, Diagnostic LEDs				
LR1000	230 (220-240)	1000W	C14 <sup>(c)</sup>	6	2 (C13), 2 (5-15R)	Diagnostic LEDs				
LR2000	230 (220-240)	2000W	C14 <sup>(c)</sup>	6 <sup>(D)</sup>	2 (C13), 2 (5-15R), 2 (6-15R)	Diagnostic LEDs				
Accessory										
UNIPLUGINT	Adapter converts C13 outlet to universal outlet compatible with more than 20 plug types common in Europe, Asia and Latin America.									

Octifications vary by model. On Mominal, All models support nominal 50/60 Hz frequency. October to user-supplied input power cord with country-specific plug. LR604 includes detachable 8 ft. (2.4 m) C13-to-Schuko (CEE 7/4) power cord. © LR604 and LR2000 include one UNIPLUGINT outlet adapter compatible with more than 20 plug types common in Europe, Asia and Latin America. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos.

Complete, up-to-date specifications (including product weight and dimensions) available at www.tripplite.com Also available: interactive Surge Suppressor selector guide, owner's manuals and more! All trademarks are the property of their respective owners

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