

220V / 230V / 240V



Server and Network Power Solutions

Smart-UPS®

Performance power protection for servers and networks



Reliability

Line-interactive design

Sine wave output -premium, safe power

Network-grade line conditioning

Automatic self-test

Interface communications port

Lightning/surge protection

ASIC's technology

Availability

AVR Boost brownout protection

AVR Trim overvoltage protection

CellGuard™ intelligent battery management

Battery replacement warning

Quick swap™ hot-swappable batteries

Redundant Switch for mirrored UPS power protection

ProtectNet for network surge protection

SmartSlot™ Accessories

Manageability

PowerChute™ *plus* software included

Software configurable features

Built-in SmartSlot for accessory cards

SNMP ready for servers with Power Net SNMP Agent

Load, power and voltage meters

Audible alarms

Personalised 24x7 Web support through APC Interactive Assistant

Warranty & Approvals

2 year warranty

VDE certified, CE certified, FCC Class B compliance

Novell labs approved

ISO 9002 and ISO 14001 certified manufacturing facilities

Global Service Programs

Installation

Maintenance

Assessment

See specification tables for model details.

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New for 2001

Smart-UPS 1000 and 1500 Tower Models

New APC Smart-UPS 1000 and 1500 tower models feature full PowerChute compatibility for Windows 2000 via either built-in USB or serial port, out-of-the-box. The new models increase APC's legendary reliability with the latest surface mount technology, wider input voltage window, extended range AVR Boost, and an improved, easy-to-use battery connect/disconnect. The new Smart-UPS 1000 and 1500 are also now featured in black. [Page 8-9](#)

Smart-UPS 1400 3U Rack or Stack Extended Run

APC Smart-UPS 1400 extended run is a scalable, rack or stack solution that provides more power (1050W) in a smaller 3U (5.25") form factor. Additional runtime may be achieved by adding up to 10 new 2U (SU24RMXLBP) battery packs. [Page 12-13](#)

Smart-UPS 3000 3U Rack-mount Extended Run

The new rack-optimized and scalable 3kVA extended run puts 2400W of power into only 3U (5.25") of rack space. Perfect for fully-loaded racks, its black color matches the new higher-powered rack servers. Additional runtime may be achieved by adding up to 10 new 3U battery packs (SU48RMXLBP3U). [Page 12-13](#)

Smart-UPS 2U Rack-mount Solutions

APC Smart-UPS Rack-Mount 700, 1000, and 1400 provide longer runtime on battery, a more convenient replacement battery chassis tray, improved voltage regulation, and enhanced intelligent battery management, all in a smaller 2U (3.5") form factor. [Page 10-11](#)

Windows® 2000 Ready



APC Smart-UPS provides the best "out-of-box" integration for "built-in" UPS shutdown in Microsoft Windows 2000. The co-development of Windows native UPS shutdown reinforces APC's and Microsoft's commitment to reliability in today's enterprise computing environments. APC continues to deliver innovative and convenient UPS management solutions to improve customers' productivity.

Sun Solaris™ Ready



APC's Smart-UPS 2200 and PowerChute *plus* were the first to be certified as Sun Solaris Ready. The Solaris Ready logo identifies products that have passed rigorous testing, defined and controlled by Sun, for seamless integration with Sun's SPARC or X86 Solaris environments.

Complete Power Protection

Reliability—Availability—Manageability: The three essential requirements when choosing power protection for your systems.

Reliability—The UPS design consistently delivers dependable performance through a combination of form, function and features. Your hardware is protected and your system life extended through features like full-time multi-stage surge suppression and noise filtering, network-grade line conditioning, proactive notification of problems and automatic shutdown during extended outages.

Availability—The UPS provides reliable power minimizing downtime. Availability increases when: the unit can operate through a greater range of input voltage; the batteries are easily accessible and user-serviceable and the unit provides information concerning problems and automatically takes action to keep systems available. Availability is increased by adding accessories which enhance network performance by rebooting hung devices, initiating shutdowns in the event of abnormal environmental conditions and provides notification of these actions.

Manageability—The UPS's control and status are available both in-band and out-of-band, allowing as much control as desired. The degree of manageability is directly related to users' customized parameters and notifications, through hardware and software features. Manageability is critical to the overall performance of the network and attached equipment.

Requiring **Reliability, Availability and Manageability** ensures that your power protection solution is dependable, accessible and flexible, minimizing downtime, saving time and money and increasing overall customer satisfaction.



Reliability

Line-interactive design delivers unmatched performance and reliability

Innovative line-interactive design uses the DC to AC power inverter "in reverse," like a battery charger, during normal operation providing greater performance and efficiency.

Sine-wave output

APC Smart-UPS sine-wave output provides assurance of compatibility with all loads.

(Does not apply to SU420INET/SU620INET models)

Network-grade line conditioning prevents glitches

Full time EMI/RFI filters prevent line noise from causing data errors. Smart-UPS meets Novell and Microsoft's approval for network protection, without the need for additional external conditioners.

Lightning and surge protection shields hardware

When measured via ANSI/IEEE 587 Category "A" and "B" tests, the suppression performance of the APC Smart-UPS is superior to virtually all separate surge suppressors.

Pre-failure diagnostics

Smart-UPS continuously monitors its health and proactively informs you of the results via Web, SNMP, E-mail or paging.

Automatic self-test

All APC Smart-UPS initiate a self-test at power-on and every 2 weeks, at the push of a button, or pre-determined times using software. This ensures that you will be alerted to degraded batteries before they wear out.

Graceful, unattended shutdown

In the event of an extended power outage, an APC Smart-UPS will interface with PowerChute *plus* via the serial port to perform automatic safe shutdown of the attached system. Power failures can occur at night, on weekends, or while the system administrator is out of the building, which makes automatic safe shutdown critical. Smart-UPS provides extensive unattended safe shutdown of many operating systems when the UPS runs out of battery power, including Microsoft Windows 95/98, Windows NT/2000, Novell NetWare, SCO Unix, Red Hat, SuSE, Caldera, and TurboLinux (other OSs available separately). By using PowerChute *plus* software you can manage and diagnose power problems.

• Safely shutdown a single server via serial cable

The Smart-UPS communications port provides the coordination of a safe shutdown with most popular operating systems by Microsoft, Novell, HP, IBM, Sun, SCO, Linux, and others.

• Safely shut down multiple servers via serial cable

APC has several solutions to shut down multiple servers. The 2-Port Interface Expander Card (AP9607) provides two additional ports. The 8-Port Interface Expander (AP9207) provides a total of eight ports and can be daisy-chained to provide 15 ports. Both accessories facilitate graceful system shutdown via dependable hardwire connections and allow advanced UPS management. The units are ideal for "server farms" or multiple operating system environments.

• Safely shutdown multiple servers via network connection

APC PowerChute network shutdown software communicates across the network with Smart-UPS equipped with APC Web/SNMP card to provide reliable, graceful unattended shutdown of multiple computer systems over the network.

Availability

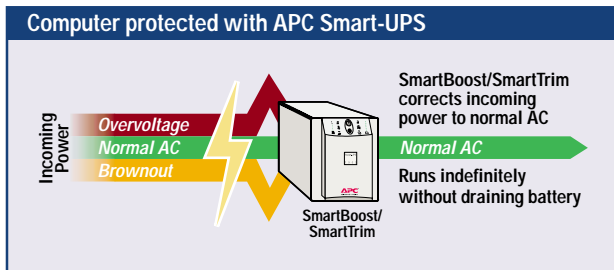
Automatic Voltage Regulation

AVR Boost automatically corrects brownout conditions

Allows you to work through brownouts without unnecessary battery drain. AVR Boost automatically steps up low voltage to safe output levels.

AVR Trim automatically corrects overvoltage conditions

Allows you to work through overvoltages without unnecessary battery drain. AVR Trim automatically steps down high voltage to safe output levels.



Intelligent Battery Management

CellGuard means longer battery life

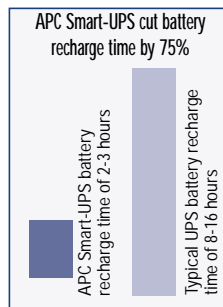
Improved reliability results from a precision battery charging system, and automatic true-load battery tests. Redundant overcharge protection contributes to longer battery life. AVR Boost and AVR Trim regulate under- and overvoltages without switching to battery.

Battery Replacement Warning prevents downtime

APC Smart-UPS automatically performs a self-test every two weeks. This ensures you will be alerted to degraded batteries before they wear out. Through software, or the push of a button, you may perform self-tests anytime.

Faster Recharge Time

APC Smart-UPS battery changing system is microprocessor controlled to precisely charge batteries in less time than legacy UPS systems. This makes your system available more quickly for subsequent power disturbances.



QuickSwap™

The 60 second, user friendly, hot-swappable battery replacement system

Saves the time and expense of returning the UPS to the factory for battery service, and allows safe and easy replacement of batteries while your system is up and running. Replacement battery kits ship in a reusable box for convenient return of exhausted batteries to a recycling center or to APC.



Prevent Downtime

Predict failures

By periodically conducting self-tests and other diagnostics, Smart-UPS can warn you of failures before they happen. For example, Smart-UPS will proactively notify you 6-8 weeks in advance of a battery replacement.

Deliver diagnostic data

Smart-UPS constantly monitors its health and delivers the results via Web, SNMP, E-mail, or paging.

Take Action

The built-in SmartSlot bay gives Smart-UPS the ability to take necessary actions to reboot "hung" devices, giving you availability when you need it most.

- Reboot hung servers and networking equipment remotely using modem (out-of-band) with the Out-of-Band Management card (AP9608).
- Reboot hung servers via Web, SNMP, or Telnet (in band) using the Web/SNMP Management card (AP9606 or AP9603).
- Reboot hung servers and networking equipment in and out-of-band using the MasterSwitch Plus (AP9255 or AP9225EXP).

Accessories Increase Availability

By adding APC accessory cards into the built-in SmartSlot™, you can monitor power conditions and take action. The addition of the accessory cards increases overall system availability by proactively notifying you of conditions that could affect uptime. (Accessories sold separately and detailed on p. 15.)

Redundant Switch

Redundant Switch continuously monitors two AC circuits and automatically switches from the primary to the redundant power source, increasing overall system availability. (See p. 16 for more information.)

ProtectNet™

ProtectNet increases the availability of your systems by protecting your wiring and cabling from "back-door" surges and spikes, which cause system downtime and equipment damage. (For more information, visit www.apcc.com/products/protectnet)



Manageability

Informative LED Display provides status at a glance

Instantly assess the status of your power and the APC Smart-UPS without even pushing a button. Bar meters and status indicators are simple to use and easy to understand. Visible and audible alarms alert you to fault conditions.

Load, Power and Volt Meters keep you in control

The Load Meter* prevents you from exceeding UPS capacity. The Volt Meter* reports utility line voltage and battery capacity, allowing you to gauge how much time you have before batteries are depleted. An alarm sounds when batteries are low, allowing you time to save data and shutdown the system.

**These features are not available on the SU420 INET/620INET models.*

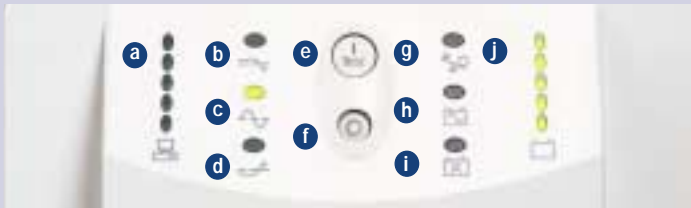
Alarms

Audible alarms alert you to changes in operating environment and battery conditions. Some alarms are software configurable and most can also be suppressed or delayed to eliminate nuisance alarms.

APC Interactive Assistant

This Web-empowered technology enables administrators to complete a variety of tasks via APC's Web site, including troubleshooting potential problems and proactively updating their UPS power management features within PowerChute. It gives the user a link back to APC to aid in diagnosing/ordering/replacing a bad battery, provides upgrade information, and assists the user with warranty registration.

APC Interactive Assistant also presents custom-tailored information to the user based upon variables such as their UPS model and the version of PowerChute running.



- a Load Display***- Shows the power being drawn by the load and prevents you from exceeding capacity.
- b AVR Trim LED***- LED lights when the UPS is correcting a high utility voltage condition.
- c On-line LED**- LED lights when the UPS is supplying utility power to the loads.
- d AVR Boost LED***- LED lights when the UPS is correcting a low utility voltage condition.
- e On/Test Button**- Turns on the UPS and activates the UPS self-test and utility line voltage displays.
- f Off Button**- Turns off the UPS and the load. Specifically designed to prevent accidental shutdowns.
- g Overload LED**- LED lights and alarm sounds when the load connected to the UPS exceeds capacity.
- h On-Battery LED**- LED lights and alarm sounds when the UPS is supplying battery power to the load.
- i Replace Battery LED**- LED lights and alarm sounds when the UPS battery is nearly dead and must be replaced (typically within 30 days.)
- j Battery Charge/Line Voltage Display***- Displays both present battery charge as a percentage of battery capacity and utility line voltage. Alarm sounds upon low battery condition.

**These features are not available on the SU420INET/620INET models.*

PowerChute *plus* power management software included

Meets the demands of high performance networks and enhances the reliability and manageability of network and web servers.

Browser Manageable

The Smart-UPS is easily manageable through standard browsers on local computers, networked computers or remote systems. (Requires PowerChute Web Device Manager running on a Windows NT/2000 web server on your network. See www.apcc.com for a free download.)

E-mail and Pager Alerts

APC Smart-UPS E-mails and/or pages you via PowerChute *plus* alerting you of power problems and allowing you to respond in order to maximise uptime.

Integrates with Server and Enterprise Management

All Smart-UPS are shipped with support for Dell Network/Node Manager, Compaq Insight Manager (Windows NT and Novell NetWare), HP TopTools and IBM NetFinity, and plug-ins for HP Openview, CA Unicenter, and Tivoli Netview.

Built-in SmartSlot gives you the customisable performance you need

APC Smart-UPS are equipped with a built-in SmartSlot* allowing you to implement various UPS Accessory cards to customise and enhance the management of your APC Smart-UPS. APC's series of UPS accessories plug directly into the back of your UPS. When an APC accessory is installed in your UPS, it becomes an integral part of the unit, drawing power from the UPS even when the UPS is in "sleep mode." Optional accessories allow you to remotely reboot individual devices, monitor ambient temperature and humidity and work with Emergency Power-Off (EPO) systems. (Accessories detailed on page 15)

(Option not available on SU420INET/SU620INET models)*

Includes PowerChute® *plus* software for advanced UPS power management and diagnostics

APC Smart-UPS ship with APC's PowerChute® *plus* UPS power management and diagnostic software to provide network administrators with useful UPS information and flexibility in configuring UPS reaction to power events. By tailoring each UPS to the network environment you can significantly enhance network performance and reliability. Use your APC Smart-UPS in conjunction with PowerChute *plus* for optimal, custom protection. In addition to extensive unattended system shutdown, you get UPS testing/status, remote UPS management and environmental/ power monitoring. (PowerChute *plus* support for Novell NetWare, Windows, Windows 95/98, Windows NT/2000, Windows for Workgroups, SCO Unix, Red Hat, SuSE, Caldera and TurboLinux included. PowerChute *plus* for use with other operating systems sold separately. (Visit our web site at www.apc.com for more information).

APC's PowerChute *plus* includes an SNMP Agent (Windows NT and NetWare included with Smart-UPS) and offers integration with Compaq Insight Manager (Windows NT and NetWare only), IBM Netfinity and HP TopTools.

Events Handling allows administrators to plan for and control crisis situations

Users can customize the APC Smart-UPS' reaction to all power events. For each possible power event the user has the option of choosing up to seven items from a list of possible UPS actions. Actions include: Log Event, Notify Administrator, Notify Users, Shut Down Server, Run Command File, Page and Send E-Mail. Customizing UPS actions allows you to plan for and control crisis situations before they cause downtime or threaten data.

Software configurable features

Customize the operation of an APC Smart-UPS to your environment and needs. With PowerChute *plus* software, as well as the Web/SNMP Management Card, you can adjust eleven operating parameters. Settings are stored in the APC Smart-UPS' permanent memory (EEPROM). The following parameters are adjustable:

UPS ID

Users may assign any 8 character settings to assist in UPS identification. For example, UPS ID may be server name or UPS location.

Low transfer

Low transfer voltage may be moved downward to extend brownout range, or upward to protect sensitive equipment.

High transfer

High transfer voltage may be moved lower to

protect sensitive equipment, or higher to conserve battery during extended high line voltage conditions.

Sensitivity

Sensitivity to line noise may be adjusted for fuel powered AC generator applications.

Self test

The APC Smart-UPS automatically performs a self-test every two weeks, ensuring proactive detection of a weakening battery. Users can opt for weekly testing, testing at start-up only or no automatic self-test.

Alarm

The audible alarm may be suppressed or delayed to eliminate alarms.

Shutdown delay

The delay between when the shutdown signal is sent from the CPU to UPS and when the UPS shuts down can be adjusted for special applications.

Turn-on delay

Allows multiple APC Smart-UPS on the same power grid or circuit to stagger or sequence their return from shutdown once the utility line returns.

Low battery capacity

The low battery warning may be moved from 2 minutes up to 10 minutes before battery exhaustion. This allows plenty of time for safe shutdown of complex applications.

Minimum battery capacity

When utility line returns after a shutdown, Smart-UPS can ensure that the batteries first recharge to allow for subsequent safe shutdown of file servers and CPUs. For telecom or hub applications APC Smart-UPS can be set to reboot immediately.

PowerChute *plus* features PowerChute Web Device Manager

PowerChute Web Device Manager allows UPS monitoring via a Web Browser. Users have access to their Web server UPS information from anywhere on the Internet or Intranet. It is no longer necessary for the administrator to be logged into the network in order to monitor the UPS/power information.

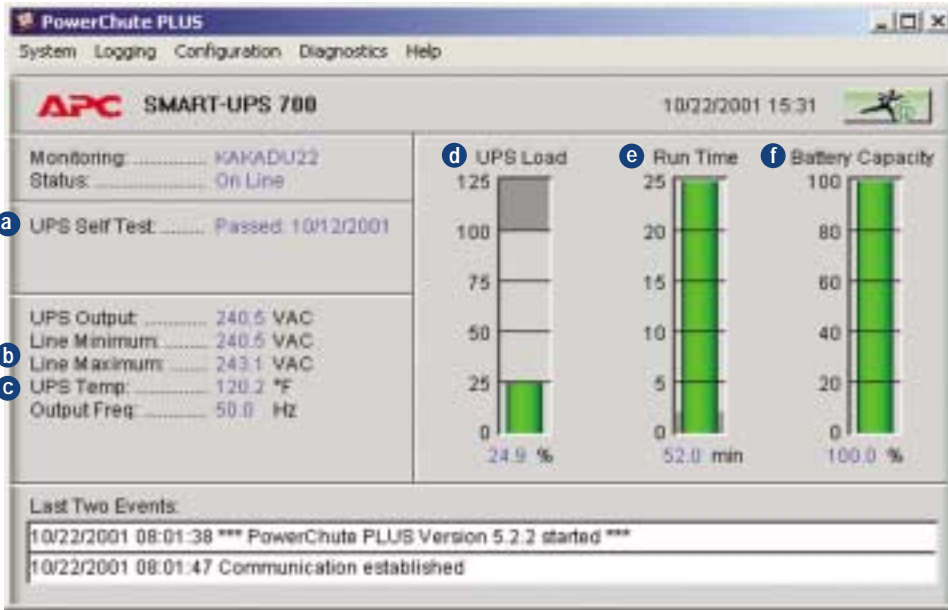


Microsoft BackOffice Compatible

APC's PowerChute® *plus* earned Microsoft's approval for use with BackOffice. PowerChute *plus* functions properly in the BackOffice environment and avoids conflicts with Microsoft Windows NT.

Schedule UPS self-tests and shutdowns

Use PowerChute *plus* to schedule unattended UPS self-



- a** **UPS self test**- Unattended scheduled self- tests warns of faulty UPS or weak battery.
- b** **Min./Max. power line voltage**- Useful in determining power quality.
- c** **UPS temperature***- Monitoring for proper UPS temperature to extend battery life.
- d** **Battery runtime**- Minutes of battery time left for system use and subsequent outages.
- e** **Utility line voltage**- Power quality display for fast problem diagnosis.
- f** **% UPS load**- Load capacity display to ensure correct UPS load.

*Not available on SU420NET/620NET models

Look across the LAN at any APC Smart-UPS from your workstation and check important data such as UPS operation, power line status and environmental conditions using the real-time graphical display of UPS/power status.

SNMP compatibility for enterprise UPS power management

SNMP Ready for Servers

The APC Smart-UPS series supports the Simple Network Management Protocol (SNMP) via APC's PowerNet SNMP family of products. PowerNet SNMP products deliver warnings regarding power events and UPS status to any Network Management Station whether the UPS is located 20 feet away or 2000 miles away.

tests, server shutdowns, and UPS runtime calibrations. SmartScheduling™ (not available for all operating systems) provides a more powerful and easier to use interface for scheduling these actions.

DMI Compliant

PowerChute plus is now manageable via the DMI protocol permitting seamless integration with DMI-based server management packages such as Intel's LANDesk Server Manager.

Application Shutdown

In the event of a power outage, PowerChute plus will save open files and gracefully closes open applications. Applications supported include Microsoft Office, PerfectOffice and Lotus SmartSuite.

Certification by operating system and application vendors

Since APC UPS software is tested and certified for operating systems such as Microsoft Windows NT, Novell Network, IBM OS/2, Solaris, HP/UX, AIX and SCO Unixware, you are ensured of operating system vendor support, as well as compatible operation with APC software.

APC's SNMP Agent, included with PowerChute plus, allows you to monitor and control the APC UPSs along your entire network data path.

This same worldwide power management capability for Smart-UPS protecting servers or inter-networking equipment is available via the Web/SNMP Management Card (sold separately).

USB Compatible

The new APC Smart-UPS 1000 and 1500 are compatible with Windows 2000's built-in USB and serial UPS support out-of-the-box. Additionally, full PowerChute plus compatibility is obtained via either of the built-in ports (USB or serial). As a charter member of the USB Implementers Forum, APC played a significant role in defining USB-specifications for power devices.



Lotus Notes server shutdown is included with PowerChute plus for each platform Lotus Notes supports.



PowerNet® SNMP Manager maximizes your management capabilities by presenting all UPS information in an intuitive graphical display. (Sold separately. Visit our web site at www.apcc.com for more information.)



All trademarks are the property of their owners

For more information, visit APC's Web site at www.apcc.com or call your local APC office

Smart-UPS® Tower Series

Superior design, high volume manufacturing and continuous quality enhancement allow APC Smart-UPS to feature unsurpassed reliability.



NEW
Smart-UPS 1000
and 1500
now USB compatible

XIOtech Partners with APC to Provide High Availability Storage Solutions

XIOtech manufactures a centralised, intelligent shared storage subsystem touted by industry experts as 'SAN (storage area networking) in a box'. We call it the Magnitude and it is capable of processing speeds in excess of 90,000 I/Os a second, which is 10 times faster than traditional enterprise RAID systems. Customers who purchase these products require rapid and continuous access to data.

Data access is critical to our customers. Our customers look to us to solve any challenges that might cause them to lose access to their data, including data path failure, drive failure, corrupt data tables, user error, adding storage, zero-backup window and power problems. We can't assume anything. We recognise that a corporation's data is the lifeblood of the company. Losing data means losing crucial competitive advantage.

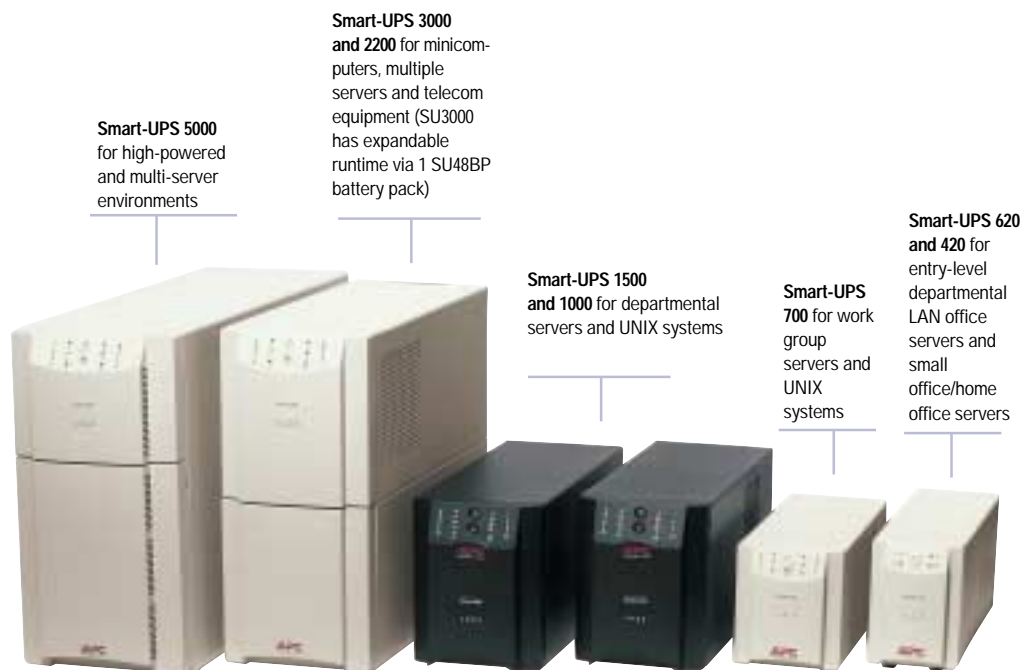
Since power problems are one of the leading causes of downtime, we decided from the beginning to include the

APC Smart-UPS® 2200 as part of the standard configuration of our Magnitude product. As an award-winning REDI (Remarkable Efficient Device I/O) Storage Architecture device, the Magnitude allows users to connect their most critical systems to a high-availability, centralised storage sub-system. We have users accessing multiple terabytes of data from NT and NetWare servers.

Today, as many as eight Intel servers can all share the same storage. In fact, this quarter we will announce connectivity support for hundreds of servers connected to the same storage subsystem, all powered by the APC Smart-UPS. We have installations in large financial organisations, pre-press companies, education, government, and hospitals, and they all rely on APC.



*Dan McCormick
Director of Product
Management
XIOtech*



APC Smart-UPS ships with PowerChute plus software for Windows NT/2000, Novell NetWare, Windows 95/98, SCO Unixware, SCO OpenServer, and Linux. Includes PowerNet SNMP Agent Plug-in for Compaq Insight Manager, HP TopTools, and IBM NetFinity Manager (Windows NT and NetWare platforms.)

New! New!

SPECIFICATION	SU420INET ¹	SU620INET ¹	SU700INET	SUA1000I	SUA1500I	SU2200INET	SU3000INET	SU5000I	
Ships with PowerChute <i>plus</i> software	Support for Windows NT/2000, Novell NetWare, Windows 95/98, SCO UnixWare, SCO OpenServer, and Linux. Includes agent plug-ins for Compaq Insight Manager, HP Top Tools, and IBM NetFinity Manager (NT and NetWare platforms.)								
Input Line	IEC320 C14 (10AMP)					IEC320 C20 (16AMP) ²		Hardwire	
Output Receptacles (IEC320 C13)	4	4	4	8	8	8 IEC320 C13 (10AMP) + 1 IEC320 C19 (16AMP)		8 IEC320-C13 2 IEC320-C19	
Number of SmartSlot bays	n/a	n/a	1	1	1	1	1	2	
Maximum Dimensions (H x W x D)	168 x 119 x 368mm		157 x 137 x 358mm	216 x 170 x 439mm		432 x 196 x 546mm		439 x 229 x 665mm	
Net Weight	9.1 kg	12.3 kg	13.2 kg	19.1 kg	24.1 kg	50.8 kg	55.8 kg	95.3 kg	
Shipping Weight	10 kg	13.2 kg	14.5 kg	20.9 kg	26.4 kg	60.8 kg	64.5 kg	104.4 kg	
Replacement Battery Cartridge	RBC 2	RBC 4	RBC 5	RBC 6	RBC 7	RBC 11	RBC 11	Two RBC 12	
"T" Level for Service Options	T1	T1	T2	T2	T3	T4	T4	T5	
OPERATION	SU420INET	SU620INET	SU700INET	SUA1000I	SUA1500I	SU2200INET	SU3000INET	SU5000I	
Nominal Input Voltage	230 Vac, single phase, 50 or 60 Hz (auto-selectable)								
Transfer Time (typical)	2 milliseconds, includes detection time								
AVR Boost/Trim	30% / 12%		12% / 12%	30% / 12%		12% / 12%			
Default Input Voltage Range ³	160-286 Vac		174-286 Vac	160-286 Vac		174-286 Vac			
Max input voltage adjustable range for mains without battery discharge	151-302 Vac		168-302 Vac	151-302 Vac		168-302 Vac			
Output Voltage Range	208-253 Vac		196-253 Vac	208-253 Vac		196-253 Vac			
Capacity (Volt-Amps, Watts)	420, 260	620, 390	700, 450	1000, 670	1500, 980	2200, 1600	3000, 2250	5000, 3750	
Surge energy rating, peak current	320 Joules			480 Joules, 6.5kA					
Normal, common mode clamping response time	0 ns, <5ns typical								
Normal mode surge voltage let through (IEEE 587 Cat. A 6kV test)	<0.7% of peak typical				<0.3% of peak typical				
Batteries	Sealed, maintenance-free lead acid with 3-6 year typical lifetime.								
Recharge time to 90% capacity	4.5 hours			3 hours					
Ambient Operation	3,000 meters max. elevation, 0-95% humidity non-condensing 0-40 deg. C								
Storage Conditions	15,000 meters max. -15-45 deg. C								
Audible noise at 1 meter	<45 dBA	<45 dBA	<41 dBA	<41 dBA	<45 dBA	<45 dBA	<53 dBA	< 47 dBA	
BTUs (hr.)	50	70	85	100	135	275	375	430	
TYPICAL RUNTIME									
LOAD Watts	(VA)	SU420INET	SU620INET	SU700INET	SUA1000I	SUA1500I	SU2200INET	SU3000INET ⁴ (w/ SU48BP)	SU5000I
65	100	40min	1hr 14min	1hr 35min	2hr 25min	3hr 55min	7hr 5min	7h 10m (11h 9m)	9hr 27min
130	200	14min	30min	43min	1hr 14min	2hr 7min	4hr 15min	4h 20m (7h 41m)	6hr 17min
195	300	6min	15min	23min	46min	1hr 22min	2hr 58min	3h 3m (5h 36m)	4hr 39min
260	400	-	9min	14min	30min	58min	2hr 14min	2h 19m (4h 44m)	3hr 38min
325	500	-	6min	9min	21min	44min	1hr 45min	1h 50m (3h 50m)	2hr 58min
390	600	-	-	6min	15min	33min	1hr 25min	1h 29m (3h 18m)	2hr 29min
455	700	-	-	-	11min	27min	1hr 10min	1h 14m (2h 53m)	2hr 7min
520	800	-	-	-	9min	22min	1hr	1h 4m (3h 15m)	1hr 50min
585	900	-	-	-	7min	17min	51min	53m (2h 4m)	1hr 36min
650	1000	-	-	-	6min	14min	44min	46m (1h 47m)	1hr 25min
780	1200	-	-	-	-	9min	34min	37m (1h 31m)	1hr 8min
910	1400	-	-	-	-	7min	26min	28m (1h 15m)	56min
1040	1600	-	-	-	-	-	21min	22m (57m)	47min
1300	2000	-	-	-	-	-	14min	15m (37m)	34min
1430	2200	-	-	-	-	-	11min	12m (27m)	29min
1625	2500	-	-	-	-	-	-	5m (13m)	23min
1950	3000	-	-	-	-	-	-	-	17min
3500	5000	-	-	-	-	-	-	-	6min

¹ SU420INET and SU620INET also offer built-in dataline protection for RJ-11 and 10BaseT ethernet protection.

² Ships with (2) detachable 8 ft. input power cords: (1) CEE7/7 and (1) BS1363.

³ Transfer points are user-adjustable using software.

⁴ Additional battery pack (SU48BP) available for extra runtime.

Note: For the most recent sizing information, consult the Size-UPS section of APC's Web Site at www.apcc.com/sizing.

Note: Servers and other IT equipment are moving to Power Factor Corrected (PFC) power supplies of 1.0, where the power drawn in Volt-Amps (VA) is equal to Watts(W). For accurate sizing, use the watt rating of the equipment to determine the correct UPS and runtime. If the watt rating is unavailable use the Amp (A) rating and multiply by the voltage to obtain VA. For the most recent sizing information, please consult the Size-UPS section of APC's website at www.apc.com/sizing.

For Operation without battery discharge, transfer points are user adjustable using software.

Smart-UPS[®] Rack-mount Series

APC's slimline rack-mount Smart-UPS delivers premium uninterruptible power and the most advanced performance features available.

Offered in a broad range of VA ratings, designed to address a variety of network equipment configurations, Smart-UPS RMs are easy to install and are compatible with all popular rack systems, including the Compaq server rack.

With an advanced line-interactive design, PowerChute *plus* power management support for major network OSs, (including Windows NT and Novell Netware), and PowerNet SNMP support for Novell NMS, Compaq's Insight Manager, and other SNMP based NMSs, it's not surprising that APC UPSs protect more networks than all other UPS brands combined.

Smart-UPS RMs are equipped with a SmartSlot internal accessory slot to provide Web/SNMP management, control via modem or multi-OS shut-down with the addition of the appropriate card.

New!



APC Smart-UPS Rack-mount 700, 1000, and 1400 are for protection of servers, internetworking equipment, and PBX telecom systems. These Smart-UPS rack-mount units are only 2U (89mm) in height allowing more room to rack-mount other critical equipment. With longer runtime on battery, a faster and easier replacement battery chassis tray, improved voltage regulation, enhanced intelligent battery management, and a competitive price, the Smart-UPS 2U Rack-mount will be an excellent addition to your power protection solution.

For VA requirements between 250 and 450VA, the PowerStack™ family (PS250I/PS450I) is ideally suited to meet your growing rack, stack or wall mounting requirements. The PowerStack was designed to protect unmanaged hubs, switches, small routers, and small telephone key systems, all of which are often housed in remote wiring closets. PowerStack is 1U high, comes with four power outlets and has user replaceable, hot-swappable batteries. (See www.apcc.com/products/smart-ups_rm/index.cfm for more information and technical specs on the PowerStack family.)



APC Smart-UPS RMs protect your data

Your data is protected because Smart-UPS RMs supply network-grade battery backup when power fails. With PowerChute *plus* software or monitoring kits, APC Smart-UPS RMs will safely save your data and shut down your operating system before the battery is fully discharged, whether you're there or not.

APC Smart-UPS RMs protect your hardware

System life is extended through superior full-time multi-stage surge suppression and noise filtering. Novell approves this product for network protection, without additional external conditioners.

APC Smart-UPS RMs increase your overall system availability

AVR Boost and AVR Trim automatically correct low voltage and high voltage conditions allowing you to work through brownouts and overvoltages without using battery power.

APC Smart-UPS RMs reduce your cost

Smart-UPS RMs reduce your cost by decreasing downtime, and giving users increased control and power management. Users can further reduce costs with Smart-UPS RM user replaceable, hot-swappable batteries. Within minutes, a user can swap out a factory supplied battery while the load is still up and running, eliminating unnecessary service costs and downtime. (Typical battery life is three to six years.)

New! Scalable Runtime Smart-UPS RMXLs (page 12-13)

With the increased deployment of rack-based IT equipment to support e-commerce and converged data-voice networks, the need for system availability has never been greater. The move to rack based equipment has also created a need for an integrated power protection solution that has a common look and occupies less valuable data center space. To support these growing trends APC has expanded its rack mount extended run models with the new SU1400RMXL13U and SU3000RMXL13U.

Both models offer increased power output and longer runtimes than the standard models at only a slight premium in cost. In addition they offer the ability to add up to ten (10) matching battery packs allowing you to increase your system runtime, as you need it.



New! New! New!

SPECIFICATION	SU700RM12U	SU1000RM12U	SU1400RM12U	SU2200RM13U	SU3000RM13U	SU3000RM1NET(5U)	SU5000RM15U	
Ships with PowerChute <i>plus</i> and	Support for Windows NT/2000, Novell NetWare, Windows 95/98, SCO UnixWare, SCO OpenServer, and Linux. Includes agent plug-ins for Compaq Insight Manager, HP Top Tools, and IBM NetFinity Manager (NT and NetWare platforms.)							
Input Line	IEC320 C14 (10AMP)			IEC320 C20 (16AMP) ¹			Hardwire	
Output Receptacles (IEC320 C13)	4	4	4	8 IEC320 C13 (10AMP) +1 IEC320 C19 (16AMP)			8 IEC320 C13 2 IEC320 C19	
Number of SmartSlot bays	1	1	1	1	1	1	2	
Unit Height ("U" Height)	2U	2U	2U	3U	3U	5U	5U	
Maximum Dimensions (H x W x D)	89x483x457mm	89x483x457mm	89x483x457mm	132x483x635mm	132x483x635mm	222x483x451mm	222x483x635mm	
Net Weight	21.8 kg	28.1 kg	28.6 kg	46.8 kg	51.3 kg	57.2 kg	93 kg	
Shipping Weight	25.1 kg	31.4 kg	31.9 kg	55.9 kg	60.2 kg	65.8 kg	102 kg	
Replacement Battery Cartridge	RBC 22	RBC 23	RBC 24	RBC 12	RBC 12	RBC 11	Two RBC 12	
"T" Level for Service Options	T2	T3	T3	T4	T4	T4	T5	
OPERATION	SU700RM12U	SU1000RM12U	SU1400RM12U	SU2200RM13U	SU3000RM13U	SU3000RM1NET(5U)	SU5000RM15U	
Nominal Input Voltage	230 Vac, single phase, 50 or 60 Hz (auto-selectable)							
Transfer Time (typical)	2 milliseconds, includes detection time							
AVR Boost/Trim	30% / 12%			12% / 12%				
Default Input Voltage Range	160-286 Vac			174-286 Vac				
Max input voltage adjustable range for mains without battery discharge ²	151-302 Vac			168-302 Vac				
Output Voltage Range	208-253 Vac			196-253 Vac				
Capacity (Volt-Amps, Watts)	700, 450	1000, 670	1400, 950	2200, 1600	3000, 2250	3000, 2250	5000, 3750	
Surge energy rating, peak current	480 Joules, 6.5kA							
Normal, common mode clamping response time	0 ns, <5ns typical							
Normal mode surge voltage let through (IEEE 587 Cat. A 6kV test)	<0.3% of peak typical							
Batteries	Sealed, maintenance-free lead acid with a 3-6 year typical lifetime.							
Recharge time to 90% capacity	2 hours						3 hours	
Ambient Operation	3,000 meters max. elevation, 0-95% humidity non-condensing 0-40 deg. C							
Storage Conditions	15,000 meters max. -15-45 deg. C							
Audible noise at 1 meter	<36 dBA	<36 dBA	<46 dBA	<47 dBA	<47 dBA	<53 dBA	<53 dBA	
BTUs/hr.	68	89	171	275	375	375	430	
TYPICAL RUNTIME								
LOAD Watts	(VA)	SU700RM12U	SU1000RM12U	SU1400RM12U	SU2200RM13U	SU3000RM13U	SU3000RM1NET(5U)	SU5000RM15U
65	100	1hr 35min	3hr 10min	4hr 10min	5hr 47min	5hr 52min	7hr 10min	9hr 27min
130	200	43min	1hr 41min	2hr 16min	3hr 26min	3hr 31min	4hr 20min	6hr 17min
195	300	23min	1hr 4min	1hr 28min	2hr 22 min	2hr 27min	3hr 3min	4hr 39min
260	400	14min	44min	1hr 3min	1hr 46min	1hr 50min	2hr 19min	3hr 38min
325	500	9min	32min	47min	1hr 22min	1hr 26min	1hr 50min	2hr 58min
390	600	6min	24min	36min	1hr 6min	1hr 10min	1hr 29min	2hr 29min
455	700	-	18min	28min	54min	58min	1hr 14min	2hr 7min
520	800	-	14min	23min	45min	44min	1hr 4min	1hr 50min
585	900	-	11min	18min	38min	41min	53min	1hr 36min
650	1000	-	9min	15min	33min	36min	46min	1hr 25min
780	1200	-	-	11min	24min	26min	37min	1hr 8min
910	1400	-	-	8min	19min	21min	28min	56min
1040	1600	-	-	-	14min	16min	22min	47min
1300	2000	-	-	-	9min	10min	15min	34min
1430	2200	-	-	-	8min	9min	12min	29min
1625	2500	-	-	-	-	5min	5min	23min
1950	3000	-	-	-	-	-	-	17min
3500	5000	-	-	-	-	-	-	6min

¹ Ships with (2) detachable 8 ft. input power cords: (1) CEE7/7 and (1) BS1363.

² Transfer points are user-adjustable using software.

Note: Servers and other IT equipment are moving to Power Factor Corrected (PFC) power supplies of 1.0, where the power drawn in Volt-Amps (VA) is equal to Watts(W). For accurate sizing, use the watt rating of the equipment to determine the correct UPS and runtime. If the watt rating is unavailable use the Amp (A) rating and multiply by the voltage to obtain VA. For the most recent sizing information, please consult the Size-UPS section of APC's website at www.apc.com/sizing.

For operation without battery discharge, transfer points are user adjustable using software.

Smart-UPS Availability

- Achieving 99.999% uptime requires a UPS with a runtime of greater than one hour, or a generator.
- Up-time levels can be dramatically enhanced by increasing the run time of your UPS from five minutes to one hour.

Additional information about availability can be found on APC's Web site (www.apcc.com). Once you have entered APC's home page, please locate the "Search Web Site" section, and then type "white papers" into the search block area. Your search will present a new page where you will be able to click on "white papers". At this point, click on title T19 to obtain more information about availability.



Smart-UPS® XL and RMXL

Expandable, extended run power

APC's Smart-UPS XL is ideal for mission critical applications where long runtimes are essential. Examples of these applications include telephone PBXs, order entry data base servers, computers supporting manufacturing or service operations and critical data communications links. The XL enables a business to survive a prolonged power outage. With the Smart-UPS XL, runtime can be added by simply plugging in additional battery packs.



APC Smart-UPS 3000RMXL

Cost-effective solution

In many cases, extended-run capability is achieved by over-sizing the UPS itself. For example, in applications where the load capacity must be at least 900VA, this would usually mean a much more expensive UPS, rated for 3000VA. An oversized UPS solution requires the installation of special building wiring which can cost well over the price of a UPS itself.

Low cost shipping and installation

Some extended run UPS systems must be shipped via special truck and unloaded on a special dock, to accommodate the size and weight of the UPS. In contrast, the modular design of the Smart-UPS XL and its batteries allow it to be delivered by common carrier.

Acceptable Availability	99.99%	99.999%
Required Run-time	>5 minutes	>1 hour
Suggested UPS	Smart-UPS	Smart-UPS XL or RMXL

Smart-UPS XL, RMXL and UX Battery Packs

Long battery life

By packaging the batteries in an enclosure separate from the UPS electronics, the batteries operate at reduced temperatures. Battery life is further enhanced through CellGuard intelligent battery management with high precision FastCharge™, and automatic true-load battery tests.

APC Smart-UPS XL increases your availability with N+1 batteries

Extended battery packs running in parallel with internal batteries provide extended runtime and redundancy, if a battery should fail. Smart-UPS XL battery packs are hot-swappable so you never have to take down your mission-critical loads to service the unit. Novell approves this product for network protection, without additional external conditioners.

Fault tolerance

Redundant batteries increase Smart-UPS XL's fault tolerance. This feature eliminates unit shutdown due to a single battery's failure.

Simple maintenance

A battery change usually requires trained service personnel or the expense of hiring an electrician. This is not the case with APC's Smart-UPS XL and RMXL. The modular Smart-UPS XL allows the user to easily replace battery packs in minutes, while the protected equipment remains up and running.

UXBP24 and UXBP48 Battery packs

The UXBP24 and UXBP48 are Ultra-extended run Battery Packs designed to be used with Smart-UPS products. The combination provides expandable and extended-run power protection for maximum up-time at

an economical price. They are ideal for mission critical applications where ultra-long runtimes are essential. The UXBP24 and UXBP48 are 24V and 48V offerings, respectively.

UXBP24 and UXBP48 offer:

- **Low installation & service costs-** Polarised connectors ensure a safe and fast installation or replacement, eliminating the need for an electrician and expensive service contracts.
- **Space efficient-** Battery packs are designed to be stacked 4 high.
- **Flexible-** Battery packs can be used with either the Smart-UPS XL or Smart-UPS RMXL products.

	Tower Units			<i>New!</i>	Rack-mount Units	<i>New!</i>
SPECIFICATION	SU700XLINET	SU1000XLINET	SU2200XLINET	SU1400RMXL13U	SU2200RMXLINET	SU3000RMXL13U
Ships with PowerChute <i>plus</i> software	Support for Windows NT/2000, Novell NetWare, Windows 95/98, SCO UnixWare, SCO OpenServer, and Linux. Includes agent plug-ins for Compaq Insight Manager, HP Top Tools, and IBM NetFinity Manager (NT and NetWare platforms.)					
Input Line Cord (1.8m line cord))	IEC320 C14		IEC320 C20 ¹	IEC320 C14	IEC320 C20 ¹	IEC320 C20 ¹
Output Receptacles	4 IEC320 C13		8 IEC320 C13 and 1 IEC 320 C19	8 IEC320 C13 and 1 IEC 320 C19	8 IEC320 C13 and 1 IEC 320 C19	8 IEC320 C13 and 3 IEC 320 jumpers 1 IEC 320 C19
Number of SmartSlot bays	1 Smart Slot Bay included					
Maximum Dimensions (H x W x D)	216 x 170 x 439mm		432 x 192 x 546mm	130 x 432 x 394mm	222 x 483 x 451 mm	133 x 483 x 660mm
Net Weight (kg)	24.1 kg	27.2 kg	54.9kg	31.8 kg	56.4kg	56.4kg
Shipping Weight (kg)	26.3 kg	29.5 kg	63.6kg	38.6 kg	65kg	63.2kg
Replacement Battery Cartridge	RBC 7	RBC 7	RBC 11	RBC 25	RBC 11	RBC 27
"T" Level for Service Options	T3	T3	T4	T4	T4	T4
OPERATION	SU700XLINET	SU1000XLINET	SU2200XLINET	SU1400RMXL13U	SU2200RMXLINET	SU3000RMXL13U
Nominal Input Voltage	230 Vac, single phase, 50 or 60 Hz (auto-selectable)					
Transfer Time (typical)	2 milliseconds, includes detection time					
AVR Boost/Trim	12% / 12%					
Default Input Voltage Range	174-286 Vac					
Max input voltage adjustable range for mains without battery discharge ²	168-302 Vac					
Output Voltage Range	196-253 Vac					
Capacity (Volt-Amps, Watts)	700, 450	1000, 670	2200, 1600	1400, 1050	2200, 1600	3000, 2400
Surge energy rating, peak current capability	320 Joules, 6.5kA		480 Joules, 6.5kA			
Normal, common mode clamping response time	0 ns, <5ns typical, meets UL 1449					
Normal mode surge voltage let through (IEEE 587 Cat. A 6kV test)	<0.3% of peak typical					
Batteries	Sealed, maintenance-free lead acid batteries with a 3-6 year typical lifetime. 3 hour typical recharge time to 90%.					
Ambient Operation	10,000 ft. (3,000 meters) max. elevation, 0-95% humidity non-condensing; 32 to 104°F (0-40°C)					
Storage Conditions	50,000 ft. (15,000) meters max.elevation; 5 to 113°F (-15 to 45°C)					
Audible noise at 1 meter from surface of unit	<42 dBA	<42 dBA	<53 dBA	<45 dBA	<53 dBA	
BTUs/hr.	100	120	305	155	275	375
BATTERY PACK OPTIONS	SU700XLINET	SU1000XLINET	SU2200XLINET	SU1400RMXL13U	SU2200RMXLINET	SU3000RMXL13U
Extended runtime	SU24XLBP	SU24XLBP	SU48XLBP	SU24RMXLBP2U	SU48RMXLBP	SU48RMXLBP3U
Ultra-extended runtime	UXBP24	UXBP24	UXBP48	N/A	UXBP48	N/A

¹ Ships with (2) detachable 8 ft. input power cords; (1) CEE7/7 on a (1) BS1363.

² Transfer points are user-adjustable using software.



APC Smart-UPS XL families (pictured left) include units ranging from 700VA to 3000VA. Additional battery packs (pictured right) are available to increase system availability.



Smart-UPS® XL, RMXL and UX Battery Packs

	Battery Packs		<i>New!</i>	<i>New!</i>	
SPECIFICATION	SU24XLBP/SU48XLBP/SU48BP	SU24RMXLBP2U	SU48RMXLBP	SU48RMXLBP3U	UXBP24/UXBP48
Maximum Dimensions (H x W x D)	216x170x439mm	86x432x483mm	178x483x457mm	133x483x660mm	308x448x749mm
Net Weight (lbs.)	31.3kg	30.5kg	61.7kg	63.6kg	128.2kg
Shipping Weight (lbs.)	33.1kg	35.9kg	69.4kg	70.4kg	140.9kg
Replacement Battery Cartridge	RBC11	RBC 26	(2) RBC11	(2) RBC 27	RBC13
"T" Level for Service Options	T3	T4	T4	T4	T4
OPERATION	SU24XLBP/SU48XLBP/SU48BP	SU24RMXLBP2U	SU48RMXLBP	SU48RMXLBP3U	UXBP24/UXBP48
Batteries	Sealed, maintenance-free lead acid batteries with a 3-6 year typical lifetime.				
Ambient Operation	10,000 ft. (3,000 meters) max. elevation, 0-95% humidity non-condensing; 32 to 104 deg.F (0-40 deg. C)				
Storage Conditions	50,000 ft. (15,000) meters max.elevation; 5 to 113 deg. F (-15 to 45 deg. C)				

APC Smart-UPS with UX battery packs provide ultra-extended runtime for maximum uptime

Smart-UPS® XL, RMXL and UX Battery Packs

TYPICAL RUNTIME FOR SU700XLINET & SU1000XLINET (SU700XLINET & SU1000XLINET USE THE SU24XLBP)										
LOAD VA	WATTS	SU700XLINET & SU1000XLINET	1 SU24XLBP	2 SU24XLBP	3 SU24XLBP	4 SU24XLBP	1 UXBP24	2 UXBP24	3 UXBP24	4 UXBP24
100	65	3hr 55min	12hr 30min	21hr 5min	29hr 41min	38hr 16min	39hr 17min	78hr 57min	14hr 19min	149hr 41min
300	195	1hr 22min	4hr 58min	8hr 35min	12hr 13min	15hr 50min	16hr 16min	33hr 1min	47hr 57min	62hr 53min
500	325	43min	2hr 58min	5hr 15min	7hr 33min	9hr 50min	10hr 7min	20hr 43min	30hr 11min	39hr 39min
600	390	33min	2hr 25min	4hr 21min	6hr 18min	8hr 14min	8hr 28min	17hr 26min	25hr 26min	33hr 26min
700	455	26min	2hr 2min	3hr 42min	5hr 23min	7hr 4min	7hr 15min	15hr 1min	21hr 57min	28hr 52min
800 ¹	520	21min	1hr 44min	3hr 12min	4hr 41min	6hr 10min	6hr 20min	13hr 11min	19hr 17min	25hr 24min
900 ¹	585	17min	1hr 30min	2hr 49min	4hr 8min	5hr 27min	5hr 37min	11hr 44min	17hr 11min	22hr 39min
1000 ¹	650	14min	1hr 19min	2hr 30min	3hr 41min	4hr 53min	5hr 1min	10hr 33min	15hr 30min	20hr 26min

¹ Runtimes at these load levels are applicable to the SU1000XLINET only.

New!

TYPICAL RUNTIME FOR SU1400RMXL3U (SU1400RMXL3U USES THE SU24RMXLB2U)										
LOAD VA	WATTS	SU1400RMXL3U	1 SU24RMXLB2U	2 SU24RMXLB2U	3 SU24RMXLB2U	4 SU24RMXLB2U	5 SU24RMXLB2U	6 SU24RMXLB2U	8 SU24RMXLB2U	10 SU24RMXLB2U
400	250	1hr 6min	2hr 38min	4hr 19min	5hr 52min	7hr 51min	10hr 27min	12hr 24min	16hr 54min	20hr 46min
700	455	29min	1hr 20min	2hr 18min	3hr 13min	4hr 22min	5hr 50min	7hr	9hr 38min	11hr 53min
900	585	18min	57min	1hr 42min	2hr 24min	3hr 18min	4hr 28min	5hr 22min	7hr 24min	9hr 10min
1200	809	10min	36min	1hr 8min	1hr 38min	2hr 17min	3hr 10min	3hr 48min	5hr 18min	6hr 35min
1400	1050	6min	23min	47min	1hr 10min	1hr 40min	2hr 20min	2hr 50min	4hr	5hr

TYPICAL RUNTIME FOR SU2200XLINET, SU2200RMXLINET. (SU2200XLINET USES THE SU48XLBP; SU2200RMXLINET USES SU48RMXLB)										
LOAD VA	WATTS	SU2200XLINET SU2200RMXLINET	1 SU48XLBP	2 SU48XLBP 1 SU48RMXLB	3 SU48XLBP	4 SU48XLBP 2 SU48RMXLB 1 UXBP48	3 SU48RMXLB 3 SU48RMXLB	8 SU48XLBP 4 SU48RMXLB 2 UXBP48	3 UXBP48	
600	390	1hr 25min	3hr 16min	5hr 8min	7hr 1min	8hr 53min	12hr 38min	16hr 50min	24hr 33min	
800	520	60min	2hr 24min	3hr 50min	5hr 17min	6hr 43min	9hr 36min	12hr 50min	18hr 46min	
1000	650	44min	1hr 42min	3hr 1min	4hr 12min	5hr 22min	7hr 42min	10hr 20min	15hr 10min	
1200	780	34min	1hr 30min	2hr 28min	3hr 27min	4hr 26min	6hr 24min	8hr 37min	12hr 41min	
1400	910	26min	1hr 14min	2hr 4min	2hr 55min	3hr 46min	5hr 28min	7hr 22min	10hr 53min	
1600	1040	21min	1hr 2min	1hr 46min	2hr 30min	3hr 15min	4hr 45min	6hr 25min	9hr 31min	
2000	1300	14min	46min	1hr 20min	1hr 56min	2hr 31min	3hr 44min	5hr 5min	7hr	
2200	1430	11min	39min	1hr 10min	1hr 43min	2hr 16min	3hr 21min	4hr 35min	34min	

New!

TYPICAL RUNTIME FOR SU3000RMXL3U (SU3000RMXL3U USES UP TO 10 SU48RMXLB3U)										
LOAD VA	WATTS	SU3000RMXL3U	1 SU48RMXLB3U	2 SU48RMXLB3U	3 SU48RMXLB3U	4 SU48RMXLB3U	6 SU48RMXLB3U	8 SU48RMXLB3U	10 SU48RMXLB3U	
750	600	40m	2hr 51min	4hr 26min	6hr 38min	8hr 30min	12hr 19min	16hr 2min	20hr	
1125	900	25m	1hr 48min	2hr 52min	4hr 23min	5hr 39min	8hr 16min	10hr 48min	13hr 31min	
1500	1200	16m	1hr 16min	2hr 4min	3hr 12min	4hr 10min	6hr 9min	8hr 5min	10hr 9min	
2250	1800	11m	43min	1hr 15min	2hr 1min	2hr 40min	3hr 59min	5hr 17min	6hr 41min	
3000	2400	7m	27min	50min	1hr 24min	1hr 53min	2hr 53min	3hr 52min	4hr 55min	

Note: Servers and other IT equipment are moving to Power Factor Corrected (PFC) power supplies of 1.0, where the power drawn in Volt-Amps (VA) is equal to Watts(W). For accurate sizing, use the watt rating of the equipment to determine the correct UPS and runtime. If the watt rating is unavailable use the Amp (A) rating and multiply by the voltage to obtain VA. For the most recent sizing information, please consult the Size-UPS section of APC's website at www.apc.com/sizing.

Management Peripherals for Smart-UPS

Customise your power protection solution with UPS Accessories* from APC

Web/SNMP Management Card



Reboot hung servers via Web, SNMP, or Telnet

From your Network Management Station you may use the 10Base-T Ethernet Web/SNMP Management Card (AP9606) and/or Token Ring (AP9603) SNMP Card. Perform remote UPS shutdown, reboot, and other management and diagnostic functions.

Integrate smoke or halon alarms, telephone switches and other dry contact closures

Add security to your UPS system with the Relay I/O Card (AP9610).

Monitor temperature, humidity and rack security

Smoke alarms and halon alarms can also be monitored with the Environmental Monitoring Card (AP9612TH) through the PowerChute plus, PowerNet SNMP or the Out-of-band Management Card interface. The alarm switch kit (AP9513) is designed to monitor and notify users (when used in conjunction with AP9612TH and the NetShelter® rack enclosure) if the NetShelter door has been breached.

Extended UPS monitoring

The Isolated Serial Extension Cable (ISEC) is designed to provide bulletproof monitoring of an APC UPS for extended distances up to 100 meters (AP9825).



Isolated Serial Extension Cable

Reboot hung servers and networking equipment remotely via modem

The Out-of-band Management Card (AP9608) provides complete UPS information, paging on power problems and remote safe reboot of servers via user supplied modem.

Safely shutdown up to three servers

The 2-Port Interface Expander Card (AP9607) provides two additional ports to facilitate graceful system shutdown via dependable hardware connections and allows advanced UPS management. The unit is ideal for "server farms" or multiple operating system environments, since all three servers can be running different OSs.

Shutdown multiple servers from one UPS

Connect up to 8 completely OS-independent servers to a single UPS with Share-UPS™ (AP9207) 8-Port interface expander (15 servers with 2 Share-UPS). Share-UPS integrates with PowerChute plus software. Each server runs its own copy of PowerChute plus software, for monitoring and power management of the UPS.



Share-UPS 8 port interface expander

Integrate multiple accessories

The Triple Expansion Chassis (AP9604) is an external, 1U, 19" rack-mountable device that allows integration of additional UPS slot accessories with a Smart-UPS, Matrix, or Symmetra Power Array. Triple Expansion Chassis can be used in a rack environment or as a stand-alone device that allows you to add up to three (3) slot cards to UPSs that have an existing slot already in use.



Triple Expansion Chassis



APC MasterSwitch Power Controller

MasterSwitch™ remote reboot device

The MasterSwitch (AP9210) network power controller can easily reboot remote servers, internetworking equipment, or banks of modems to prevent on-site service calls. The perfect complement to your High Availability solution, MasterSwitch gives you power distribution and complete, remote control of eight independent power channels to put an end to the frustration of locked-up servers and wasted management time.



APC Remote Power-off Device

Remote Power-off Device

The APC Remote Power-off Device (RPO) allows data center managers to turn off APC UPS output with a remote switch. When used in conjunction with an Emergency Power-Off (EPO) system, the RPO can turn off equipment in an emergency. (AP9830)

Out-of-band Management Card (AP9608)

Relay I/O Card (AP9610)

2-port Interface Expander Card (AP9607)

Environmental Monitoring Card (AP9612TH)



(*Note: APC accessory cards are designed to work with APC UPS products that have a SmartSlot bay. The SU420INET and SU620INET products do not have a SmartSlot bay.)

Redundant Switch for Smart-UPS

APC's Redundant Switch accessory products offer network managers a cost effective method for increasing AC power availability to network equipment

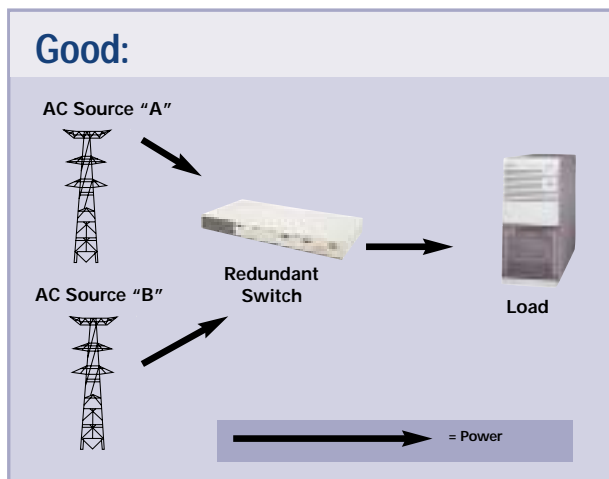
Mirrored UPS Protection

With dual input power cords, Redundant Switch has the ability to source power from one of two separate AC circuits. The Redundant Switch continuously monitors both AC circuits and will switch automatically from the primary to the redundant AC source. The transfer is seamless to the attached loads ensuring the availability of continuous AC power and safe server shutdown. Also, Redundant Switch provides user configurable settings for low voltage and AC line distortion in order to meet the variable power needs of your site.

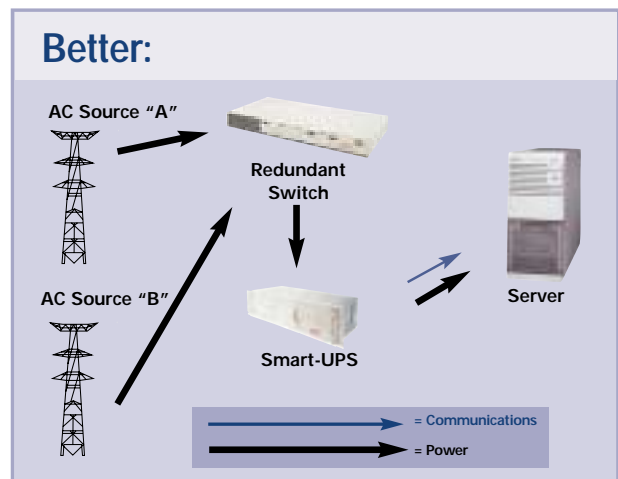
The Redundant Switch can easily be installed in any 19" equipment rack, occupying just 45mm or one U of rack space. Alternatively, it can be mounted in the rear or side of the rack, requiring zero U of valuable rack space. It ships with all appropriate rack mount hardware for two and four post racks.

Implementing Your Solution

Because its design is so flexible, there are numerous configurations for Redundant Switch providing different levels of availability. Three are outlined below: Good, Better, and Best.

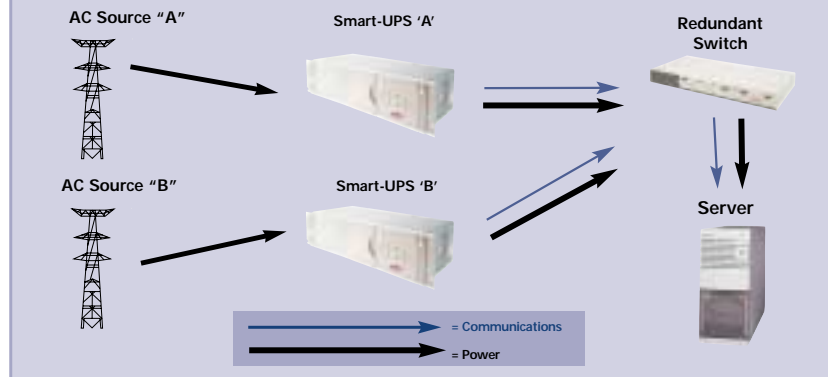


In this application, the Redundant Switch is connected to two separate AC sources. Loads with a single or multiple power cords can now have N+1 power paths in case of a single AC source failure. The AC sources can originate at a centralized UPS, a generator set, or even separate utilities. *Protection:* This application protects against failure of one of the two AC sources; these problems can range from a tripped circuit breaker to a utility blackout to a centralized UPS failure.



In this application, the Redundant Switch is connected to two separate AC sources. A single Smart-UPS is then connected to the Redundant Switch, thereby providing the Smart-UPS with dual AC input feeds. *Protection:* A Smart-UPS in the power path will provide full time surge suppression and utilize battery backup should both of the two AC sources fail. Smart-UPS protects against brownout, blackouts, and overvoltages that affect the entire distribution system. With a Smart-UPS, there is also graceful server shutdown, power monitoring, and power management.

Best:



In this application, a Redundant Switch is used with two identical Smart-UPS and PowerChute *plus*. In networking environments where redundant drives, processors, and power supplies are commonplace, mirrored power protection configuration should be a major consideration. *Protection:* Both Smart-UPS will provide continuous EMI/RFI filtering and surge suppression. Battery backup is available in case of a primary or redundant AC source failure. In case of a severe power event, the redundant Smart-UPS will continue to support the load and also provide graceful shutdown to Windows NT/2000, Novell and Solaris based operating systems. Power monitoring and management is available with PowerChute *plus* software and APC accessories. In this configuration, the Redundant Switch also has an Emergency Power Off (EPO) connector which allows the Smart-UPS to be switched off by a remotely operated EPO control. Such a configuration is common in computer rooms and laboratories where, for safety reasons, power to the loads may need to be disconnected.

Redundant Switch Configuration Table for "Best" Application

Redundant Switch Model	Voltage Rating	Power Rating of Load	Recommended Smart-UPS*
SU043	230V	1400VA	(2) SU700, (2) SU1000, (2) SU1400
SU044-1	230V	3000VA	(2) SU2200, (2) SU3000

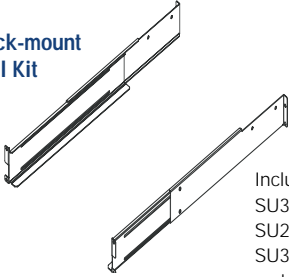
* Note: Smart-UPS should be identical tower, rack-mount, extended run or rack-mount extended run models where applicable.

Specifications	SU043	SU044-1
Acceptable input voltage	230 VAC: 0 - 325 VAC	
Output voltage	230 VAC: 207 - 253 VAC (by default when used with Smart-UPS)	
Frequency limits (on-line operation)	50 or 60 Hz, $\pm 5\%$	
Transfer time	6ms, typical	
Normal Sensitivity		
Maximum load	1400 VA 6 A	3000 VA 13 A
Operating temperature	0 to +50 °C (+32 to +122 °F)	
Storage temperature	-15 to +50 °C (+5 to +122 °F)	
Operating and storage relative humidity	0 to 95%, non-condensing	
Operating elevation	0 to +3,000 m (0 to +10,000 ft)	
Storage elevation	0 to +15,000 m (0 to +50,000 ft)	
Electromagnetic immunity	IEC 801-2, 801-3, 801-4	
Audible noise in dBA @ 1 m	<45	
Size (H x W x D)	4.45 x 43.2 x 19 cm	
Weight - net (shipping)	4.5 (6.8) kg	
Safety approvals	GS licensed by VDE to EN 50091 and 60950	
EMC verification	CISPR 22 Class A verified	
Power Inlet	2 IEC320/C14	2 IEC320/C20
Power Outlet	2 IEC320/C13	1 IEC320/C19, 2 IEC320/C13

Smart-UPS® Wiring Devices and Hardware Accessories

Part #SU032

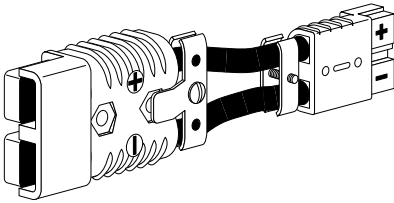
Rack-mount Rail Kit



Included in SU3000RM, SU2200RM3U, SU3000RM3U and all RMXL products

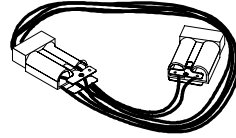
Part# SU037

Cable Adapter



Connects SU48XLBP to AP2000XL. Also connects AP2000XLBP to SU2200XL

Extension Cables



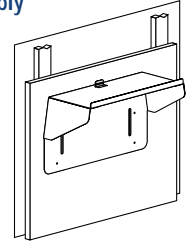
The SU039, SU039-1 and SU039-2 are 122 cm battery extension cables for use with APC's 24 and 48 volt battery packs. In certain applications, customers require the ability to place their batteries outside of a rack or further away from the main unit than our standard cables allow. The extension cables allow customer the flexibility of placing the connected batteries a maximum of five feet or sixty inches away from their Smart-UPS unit.

Part#SU039: Cable, 122 cm Extension for SU48XLBP, SU48RMXLBP

Part#SU039-1: Cable, 122 cm Extension for SU48BP

Part#SU039-2: Cable, 122 cm Extension for SU24XLBP

Shelf Assembly



Part# SU046

SU046 Shelf Assembly

Part# SU046-6

Package of six Shelf Assembly Units

Each SU046 Shelf Assembly is capable of supporting a 31.75 kg. load. A typical 3-shelf installation must support approximately 90.72 kg. of weight. It is imperative that the method of fastening the shelves to the wall, as well as the wall structure itself, is capable of safely supporting these loads. Make sure that the installation is performed by a qualified professional.

PowerView™

Hand-held-control panel for network administrators that configures and controls UPSs in rack, computer room, and data center environments

Attach this hand-held device to a Smart-UPS, Matrix-UPS, or Symmetra Power Array to monitor and control the UPS from a distance of up to 15 feet. You operate the easy-to-use display with your fingertips as you select options from the device's menu-driven interface to control and monitor the connected UPS and its accessories. Functions include status reporting, setup, UPS control, and event logging. Four LED indicators report the operational status of the connected UPS, indicating whether it is on-line, on-battery, on-bypass, or experiencing an internal fault condition. (AP9215)



Award	Publication	Year
Gold Award	Channels Asia (Asia)	1999
Platinum Award	PC Week Asia	1999
Best Personal UPS	Computerworld (Singapore)	1999
Best Workgroup UPS	Computerworld (Singapore)	1999
Best UPS brand with users	PC Week Survey (Thailand)	2000
Best UPS brand with organisations	PC Week Survey (Thailand)	2000
Best Buy	Computer Shopper (US)	1999
Best Buy 2200	Network Solutions (Korea and UK)	1999
Best Product of the Year	PC World (India)	1998
Best Security Hardware	Secure Computing Magazine (UK)	1998
Editor's Choice Award	LAN Times	1998
Editor's Choice Award	ComputerWorld	1998
Product of the Year, Power Protection Category	Networking Solutions	1998
Editor's Choice Award	Computer and Network	1998
The Choice of Info	Info Exame (Brazil)	1999
Editor's Choice Award	Computer Reseller News	1998
Editor's Choice Award	PC Expert (France)	1999



Global Service Programs

Installation Service

Quick-Start plan

Highest level of service combines **Start-up Service** and next business day **On-site support service**

- 24 x 7 telephone technical support with 1 hour response
- 1 year extension (#WQSPX1-T_) or 3 year warranty extension (#WQSPX3-T_)

Start-up service

- Part Number (#WISTL-T_)
- APC-certified quality engineer verifies proper wiring of APC hardware
- Start up unit and perform comprehensive diagnosis and self-tests
- Attach appropriate loads to your APC UPS
- Includes all parts, labor and travel expenses
- Train your support staff on the proper use of the unit

Maintenance Service

On-site support service

- Next business day on-site repair service
- **Power Plan extended warranty**
1 year extension (#WSVNDX1-T_) or 3 year extension (#WSVNDX3-T_)
- Includes all parts, internal batteries (delivered next business day) labor and travel expenses
- 24 x 7 telephone technical support with 1 hour response

Power Plan extended warranty

- Extends product's standard warranty by 1 year (#WXTDX1-T_) or 3 years (#WXTDX3-T_)
- All parts and internal batteries are covered, all delivered to your site by next business day
- Shipping, to and from APC, is paid by APC
- 24 x 7 telephone technical support with 1 hour response

All service program pricing levels are based on product "T" level - please refer to product specification pages for the correct "T" level of your product. Your APC representative can provide comprehensive pricing and program specifications. For more information, visit www.apcc.com/support to access the Service Configurator and additional program specifics.

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