Uninterruptible POWER SUPPLIES

BUYER'S GUIDE

[**Editor's Note:** The Buyer's Guide summarizes vendor-submitted information. To find out about future Buyer's Guide topics or to learn how to include your product in an upcoming Buyer's Guide, go to http://www.win2000mag.com/aboutus/index .cfm?/action=lab. To view previous Buyer's Guides on the Web, go to http://www.win2000mag.com and select The Lab from the QUICK NAV menu.]

Power interruptions can cause severe repercussions for business computer systems. The problem is especially difficult in places where power outages and fluctuations frequently occur.

A UPS provides a backup battery and power inverter circuitry to insulate systems and data from power outages. In situations where momentary power fluctuations occur, a UPS provides constant power to keep your systems running. During extended power failures, a UPS provides backup power to keep your computers running long enough so that you can gracefully power down. The transfer time to backup is typically very short (usually rated in milliseconds) to maintain system and data integrity. Many UPSs provide filtration circuitry to eliminate voltage spikes, and some also deliver a constant voltage to your systems when the utility voltage surges or sags.

When choosing a UPS, match the unit's capacity to your needs. UPS vendors provide VA (volts × amperes) power ratings to indicate the maximum amount of power provided when AC power is present. Some UPSs might provide less power than their VA rating suggests because of losses incurred during the conversion from AC to DC, so it is also important to verify the UPS's output wattage. The wattage ratings listed on your computer equipment might not accurately represent the amount of power your system uses. You should either measure your equipment's actual power draw or select a UPS with a wattage rating that significantly exceeds the wattage rating on your equipment. The UPS's output wattage rating might not have any relevance to the unit's battery runtime under your projected power requirements. Carefully read the vendor's battery life specifications and consider the typical length of the power outages in your area.

After you address the electrical concerns, consider the optional hardware available or the features that the vendor's management software provides before you buy. For example, if the UPS must protect a group of servers, the management software's ability to vary the amount of time it takes to close each server's applications and shut down when power fails might be an essential feature. You might also want the UPS's software to alert the administrator and network users about an impending shutdown.

Finally, it's important to ask questions about the vendor's warranty and on-site service options. Remember that in a few years you'll have to replace the batteries, and replacement is quite labor-intensive if you plan to purchase numerous units. Securing on-site service options with the vendor before you purchase might free your IT staff from that labor in the future. Make sure you explore all the possible warranty alternatives with the vendor so that you receive the option that is most convenient for you.

—Mark Weitz

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Contact Information	Product Name	Price	Description
American Power Conversion 800-877-4080 http://www.apcc.com	Silcon DP300E	Starts at $21,990	Delta Conversion Online power protection for data centers, facilities, and other mission-critical applications; three-phase UPS for an alternative to double-conversion legacy UPS; available in 20,000VA to 500,000VA models
	Smart-UPS NS Series	Starts at $1999	Rack-mounted power protection for Hewlett-Packard (HP) NetServers; PowerXtend extensions integrate with NetServer Assistant; available in a 2200VA model and a 3000VA model
	Smart-UPS Rack-Mount	$699	Rack-mounted power protection and management for distributed business networks; available in 700VA to 3000VA models; includes power management accessories and software
	Smart-UPS T Series	Starts at $1699	Has 208 volts alternating current (VAC) tower and rack-mounted power protection and management for distributed business networks; available in 700VA to 5000VA models; includes power management accessories and software
	Smart-UPS XL and RMXL	Starts at $699	Extended runtime tower and rack-mounted power protection and management for distributed business networks; available in 700VA to 2200VA models; includes power management accessories and software
	Symmetra Power Array	Starts at $3999	Uses N+1 redundant Power Array from power and battery modules to ensure maximum uptime and scalability; available in 4000VA to 16,000VA models
Clary • 800-442-5279 http://www.clary.com	DT Series	Starts at $1690	A fully digital UPS; uses digital power factor correction; smallest rack mount in the industry (3.5")
	DT/ET Series	Starts at $2290	Designed for extreme temperature environments; can handle temperatures from -40ºC (-40ºF) to +74ºC (+165ºF)
	GT Series	Starts at $2290	Breaks down and rebuilds fluctuating power to a consistent power level; ideal UPS for locations with inconsistent power
Falcon Electric 877-232-5266 http://www.falconelectric.com	SG Series UPS Plus	$790 to $5890	True regenerative online design provides Input Power Correction; extended battery options, frequency converter capability, and UPSilon 2000 advanced standard features; available in 600VA to 6000VA models
Liebert 800-877-9222 http://www.liebert.com	PowerSure Proactive	$150	Intelligent power management function facilitates buck and boost transitions without transferring to battery; full range data-line product protection capability for modem, fax, phone, and network and communications equipment
	Series 300	Call vendor for pricing	Online protection for three-phase loads; available in 10,000VA to 125,000VA models; total system protection for sensitive electronic loads; options include communications features and fail-safe control and monitoring
	Series 600	Call vendor for pricing	Handles unbalanced and 100 percent nonlinear loads; available in 125,000VA to 1,000,000VA models; single and multi-module configurations
	UPStation GXT	Call vendor for pricing	Incorporates true online power protection with user-replaceable batteries; user-installable SNMP communications; increased

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Liebert continued			overload capacity; 2-way bypass; RS232 standard; minitower, rack-mountable, or tower design; available in 700VA to 3000VA models
	UPStation S	Call vendor for pricing	Power conditioning; features full SNMP communications capability; optional extended batteries offer as much as 24 hours of battery backup
	UPStation S3	Call vendor for pricing	Provides true online power; small footprint; power factor correction; transient-free step-load response; input current harmonic distortion of less than 3 percent
MGE UPS Systems 800-523-0142 http://www.mgeups.com	Pulsar Esprit	$1024	Designed for ISPs and application service providers (ASPs); high-availability power; standard Universal Serial Bus (USB) communications; Web-based management using Extensible Markup Language (XML)
ONEAC 800-327-8801 http://www.oneac.com	ON Series Power Conditioned UPS (200 to 2200)	$441 to $2800	Proprietary transformer design integrates power conditioning magnetics and voltage conversion magnetics; eliminates full spectrum of conducted power-line noise (50KHz to 10MHz); reduces effect of electrostatic discharge; provides clean signal reference ground
	ON Series Power Conditioned UPS (3300 and 5000)	Starts at $4149	Extended runtime UPS operates at 50Hz or 60Hz; offers hot-swappable batteries and power and control modules; includes a full-time online isolating transformer and a front-panel status display
OPTI-UPS 888-678-4877 http://www.opti-ups.com	OPTI-UPS 650ES	$229	650VA and 650 watts; four outlets; 15 minutes runtime capacity for a half load, 5 minutes for a full load; lightning, surge, and electromagnetic interference (EMI) and radio frequency interference (RFI) protection; Internet and network protection; user-replaceable battery; site wiring fault indicator
	OPTI-UPS 1100PS	$339	1100VA and 1100 watts; six outlets; rack mount; true sine-wave output voltage; lightning, surge, and EMI and RFI protection; Internet and network protection; independent outlet control; user-replaceable battery; site wiring fault indicator
	OPTI-UPS 1440PS-RM	$600	1440VA and 1140 watts; six outlets; rack mount; true sine-wave output voltage; lightning, surge, and EMI and RFI protection; Internet and network protection; independent outlet control; user-replaceable battery; site wiring fault indicator
Powerware 877-797-9273 http://www.powerware.com	Powerware 3115	Starts at $130	Suited for use with PCs, workstations, point-of-sale (POS) systems, network nodes, or similar equipment; provides a battery-power backup source for equipment control and predictability
	Powerware 5105	Starts at $329	Advanced Battery Management (ABM) doubles service life, optimizes recharge time, and provides 60-day notification of battery life; includes hot-swappable batteries; load segments schedule shutdowns and maximize runtime
	Powerware 5119	Starts at $699	Protects LANs, servers, workstations, and rack-based equipment; incorporates ABM optimizing recharge time; maintains steady voltage to critical load without using battery power
	Powerware 9125	Starts at $699	Designed for mission-critical applications that require high levels of protection with ABM and extended runtime

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Tripp Lite for 773-869-1111 http://www.tripplite.com	BC Pro (600, 850, 1050, 1400)	$209 to $569	For PCs, workstations, and servers; microprocessor-controlled blackouts, brownouts, surges, and line noise; serial port supports unattended shutdown; 600VA model offers modem and fax protection; six outlets
	Internet Office (280, 500, 700)	$99.50 to $239	Built-in modem and fax surge protection; battery backup prevents Internet crashes during short power losses; guaranteed surge protection; 500VA and 700VA models feature built-in serial ports; six outlets
	OmniSmart PNP (300, 450, 700, 850, 1050, 1400)	$165 to $649	Line-interactive power protection for PCs, workstations, and servers; automatic voltage correction with battery backup power; serial port; EMI and RFI line noise filtering; selected models feature six outlets and two-line modem and fax protection; guaranteed surge protection
	SmartPro DataCenter	$2999 to $4799	3000VA and 5000VA UPSs; line interactive for mission-critical network and telecom systems; advanced multiserver support; extended runtime batteries; guaranteed surge protection; 14 receptacles, four serial ports, and full diagnostics; XR models feature external battery capacity
	SmartPro NET (450, 700, 850, 1050, 1250, 1400, 2200, 3000)	$299 to $1969	Intelligent line-interactive UPSs for workstations and servers with heavy network loads; microprocessor-controlled; guaranteed surge protection; multilevel automatic voltage regulation; six to eight outlets; one to three serial ports; SL models feature extended runtime capacity
	SmartPro Rackmount (450, 700, 1050, 1400, 2200, 3000)	$299 to $1969	Line-interactive UPSs for hubs, routers, and network servers; microprocessor-controlled for network servers; 19" rack-mountable configuration; compact design; multilevel automatic voltage regulation; hot-swappable battery; as many as three serial ports; eight outlets; guaranteed surge protection
	SmartPro Unison (1000 and 2200)	$799 to $1599	Online UPS for voltage-sensitive servers and equipment; features pure sine waveform, zero transfer time, and premium voltage regulation; guaranteed surge protection; rack-mountable; 2U (3.5"); EMI and RFI line noise filtering
	SmartPro Unison (6000 and 10,000)	$5499 to $9499	True online UPSs featuring pure sine waveform, zero transfer time, and premium voltage regulation; guaranteed surge protection; EMI and RFI line noise filtering
TSi Power 770-339-9891 http://www.tsipower.com	UPS-600B	$189	Windows NT-compatible system suitable for servers and workstations; available in 600VA and 400-watt capacities
	UPS-720B	$399	Slimline, 19" rack-mountable system suitable for a large file server or workstation; 720VA capacity; power protection and backup
	UPS-10000	$1119	Slimline, rack-mountable system; built-in constant voltage output isolation transformer for maximum protection of large servers; 10,000VA capacity
	UPS-21000	$1597	Slimline, rack-mountable system; built-in constant voltage isolation transformer for maximum protection of a cluster of computers and peripheral equipment; 21,000VA capacity