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## Highlights

- Provides up to 2200 VA/1920 W in only 2U of rack space
  - A 95 percent or greater efficiency rating helps reduce energy usage and costs
  - Intuitive, customizable LCD display in nine languages and bundled intelligent IBM UPS Manager software enhance control and manageability
  - IPv6 compliance for future proofing and real-time clock for error logging
  - Integrates with IBM Systems Director Active Energy Manager™
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# IBM 2200 VA LCD 2U Rack UPS

*Space-saving, high-density power protection*

In today's high-availability server environments, unplanned power outages or line quality irregularities can have a considerable financial impact on both small and medium and large enterprise businesses. Selecting the right Uninterruptible Power Supply (UPS) can efficiently, reliably and affordably help protect against these costly incidents.

The IBM 2200 VA LCD 2U Rack UPS provides smart energy management and the highest level power protection that today's IT infrastructures require. Delivering 1920 watts of power in only 2U of rack space, the IBM 2200 Rack UPS optimizes power protection in high-performance environments. With an efficiency rating of 95 percent or greater, the UPS helps reduce energy usage and cooling costs, improve energy management, and optimize workload performance and availability for IBM System x® and BladeCenter® server applications.

## Energy-efficient design maximizes ROI

This high-density UPS packs more real power (watts) into a space-saving 2U of rack space to protect more equipment and leave more room for expanding IT systems.

Designed to operate at 95 percent or greater efficiency—which results in lower power consumption, less heat dissipation and decreased cooling costs—the IBM 2200 UPS can help organizations with even a modest number of servers to significantly reduce energy bills, without compromising performance or reliability.



### Optimized for performance and availability

The IBM 2200 UPS features ABM technology, which incorporates sophisticated sensing circuitry and an innovative three-stage charging technique to significantly extend UPS battery life while optimizing recharge time. The UPS also provides up to 60-days notification that the battery is approaching the end of its useful life, providing you more than sufficient time to hot swap the batteries without powering down the UPS or protected loads.

For applications requiring extended backup times, an external battery module can be added to run connected systems for hours during a prolonged power outage.

Furthermore, load segments allow for individual control of receptacle groups, enabling maximized run time for critical devices. For increased accuracy, the IBM 2200 UPS features a real-time clock, which enables precise shutdown and power-up of systems in preferred sequence and real-time stamping on event logs to track and record specific power-related occurrences over time.

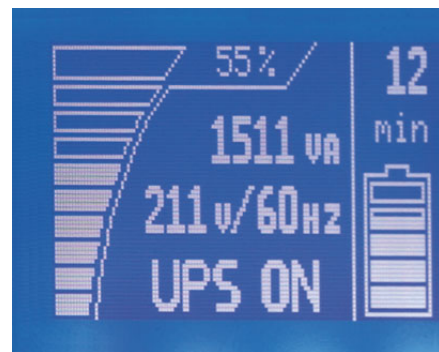
The IBM 2200 UPS is equipped with two cascadable REPO ports enabling the UPS to be remotely switched off in the event of an emergency.



The IBM 2200 UPS delivers up to 2200 VA/1920 W of advanced protection in a space-saving 2U rack design

### Intuitive UPS management

With a bright, easily customizable, graphical LCD display that provides configurability and displays important status information in nine languages (English, French, German, Spanish, Russian, Korean, Japanese, Simplified Chinese and Traditional Chinese), the IBM 2200 UPS is exceptionally easy to manage and an ideal solution for standardization across the global enterprise. Run time, load and other vital information and troubleshooting are also displayed.



Bright graphical LCD user interface simplifies UPS monitoring and management

The IBM 2200 UPS includes, free-of-charge, intelligent IBM UPS Manager software to monitor, manage and gracefully shut down connected load in the event of an extended power interruption. The IBM 2200 UPS also allows dual-channel communication through the USB port and optional Network Management Card (46M4110) at the same time, an effective redundancy feature to maximize communications

flexibility. The NMC supports IPv6 IP addressing and security providing convenient, over-the-network UPS remote monitoring and management through a standard web browser. An optional Environmental Monitoring Probe (46M4113) is also available for thermal (temperature and humidity) management requirements.

### Improved energy management



IBM Systems Director Active Energy Manager (AEM) provides an array of new features that allow power and thermal trending analysis for improved power management. By plugging systems into an IBM UPS, AEM is able to collect power information for each device, presenting a more complete view of energy usage within the data center. With access to accurate, detailed information on power usage right at their fingertips, IT and facility managers are now able to

manage data center for optimal energy-efficiency, migrating workloads to eliminate hot spots or transferring work from underutilized systems to conserve energy.

### Simplified deployment

The IBM 2200 is a rack-ready UPS product that supports preconfigured shipment in an IBM rack. The modular design of the UPS and EBM allows for scalability and versatility.

IBM UPS solutions are designed by IBM and manufactured to IBM's demanding specifications by Eaton Corporation, a recognized global leader in power management. This long-time partnership enables you to receive IBM's renowned service, support, and warranty protection worldwide, coupled with Eaton's expertise in UPS and power management software solutions. IBM power protection solutions integrate into both IBM Systems Director and Tivoli® products.

		
IBM model number	LCD 2U Rack UPS (100/120 V)	LCD 2U Rack UPS (230 V)
IBM part number	53952AX	53952KX
VA/Watts rating	1920 VA/1920 W (120 V) 1500 VA/1500 W (100 V)	2200 VA/1920 W
Nominal Output Voltage (V ac) (autosensing at first power-up)	100/120 V	230 V
Waveform type	Sine wave	
Output connections (all output receptacles are controllable via Two Load Groups (segments))	(6) NEMA 5-20R (2) IEC 320 C19 (2) IEC 320 C13	(2) IEC 320 C19 (8) IEC 320 C13
Nominal Output Voltage (V ac)	92 - 108 V (100 V) 106 - 132 V (120 V)	208 - 253 V (230 V)

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**Data Sheet**

<b>Input</b>		
Nominal input voltage	100/120 V	230 V
Input frequency (autosensing)	50/60 Hz +/- 3 Hz	
Input connection type	IEC 320 C20	IEC 320 C14
Input cords	IEC 320 C19 to NEMA 5-20P 4.3 m	Optional Country Specific Line Cords
Input voltage range, mains operations	84 - 121 V for 100 V 97 - 145 V for 120 V	160 - 286 V for 230 V
<b>Batteries</b>		
Typical backup times	14 minutes (@ 50% rated W) 5 minutes (@ rated W)	
Battery type	Valve Regulated Lead Acid (VRLA)—Maintenance free, sealed, leak proof	
Optional external battery pack	Yes	
Typical recharge time	4 hours to 90% charge from a UPS/battery discharge of 50% rated load	
<b>Communications and management</b>		
Interface port	USB HID Port/Serial/Optional LAN Card	
Management software included	Intelligent power manager supervisory software	
Control panel	Intelligent three-button, dual-color, backlit graphical LCD displays vital UPS status in nine languages	
Audible alarm	Alarm when on battery: Distinctive low-battery alarm	
Remote Power Off (REPO)	REPO port	
<b>Surge protection and filtering</b>		
Surge energy rating	1200J	2400J
Filtering	ANSI/IEEE C62.41; 1991 CATEGORYB3 (SURGE)	
<b>Physical</b>		
Rack height	2U	
Dimensions (H x W x D)	3.3 x 17.2 x 22.8 in./84.5 x 438x 579.2 mm	
Product weight	68 lb/31 kg	
Packaging weight	41 kg	
Color	IBM Black Bezel	
<b>Environmental and Safety</b>		
Audible noise, 1 meter from unit surface	Normal operation at rated load and Battery Discharge Mode <55 dbA For load <70% <50 dbA	
Efficiency	95% minimum at full-rated load—normal usage, not during battery recharge	
Operating Temperature	0°C (32°F) to +40°C (104°F)	
Relative Humidity	0 - 95% noncondensing	
Safety Markings	UL, cUL; IEC/EN 62040-1-1, IEC/EN 60950-1, TUV CB Report; CE Mark, TUV CB Report transfer global	
EMC Markings	100/120 V: FCC Class B, EN55022 Class B; BSMI, CNS14757-2, Class B 230 V: CE (per IEC/EN62040-2: Emissions, Category C1; Immunity, Category C2); VCCI, Class B; C-Tick, AS/NZS 3548, Class B; IEC61000-3-2: 2000; IEC61000-3-3: 2004; ICES Canada	

**IBM Systems and Technology Group**  
**Data Sheet**

**IBM 2200 options at a glance**

Part number	46M4108
Form factor	2U
Battery information	(6) 12 V, 9 Ah, sealed, lead acid, maintenance free
Weight	93 lb/42.2 kg
Dimensions (H x W x D)	3.3 x 17.2 x 22.8 in./84.5 x 438 x 580.2 mm

**Network Management Card (NMC)**

Part number	46M4110
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**Environmental monitoring probe**

Part number	46M4113
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**IBM 2200 120 V Rack UPS Run time Chart**

Load			Run time in minutes	
Percent Load	VA	Watts	Standard Internal Batteries*	+ 1 EBM*
25%	500	500	42	143
50%	969	969	14	66
75%	1450	1450	11	43
100%	1920	1920	5	28

**IBM 2200 230 V Rack UPS Run time Chart**

Load			Run time in minutes	
Percent Load	VA	Watts	Standard Internal Batteries*	+ 1 EBM*
25%	550	500	41	138
50%	1100	968	14	64
75%	1650	1450	10	40
100%	2200	1920	5	28

## For more information

To learn more about the IBM 2200VA LCD 2U Rack UPS, visit [ibm.com/systems/x/hardware/options/](http://ibm.com/systems/x/hardware/options/) or contact your IBM marketing representative or IBM Business Partner



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\* Battery backup times are approximate and may vary with equipment, configuration, battery age, temperature, etc.



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