

120V 2000VA 1600W Double-Conversion Smart Online UPS - 5 Outlets, Card Slot, LCD, USB, DB9, 1U Rack

MODEL NUMBER: **SU2000LCD1U**



True on-line double-conversion UPS provides pure sine wave output to server and network equipment in network closets and computer rooms.

Features

Double-Conversion UPS Protects Equipment Against Damage, Downtime and Data Loss

This 100/120/127V 50/60 Hz on-line double-conversion UPS system maintains perfect output by converting AC input to DC, then reconverting UPS output to fully regulated sine wave AC with +/-3% voltage regulation in on-line and battery modes. Featuring 1600W capacity, 540 joules of surge suppression, true on-line operation with pure sine wave output and zero transfer time between on-line and battery modes, the SmartOnline® SU2000LCD1U provides the highest level of AC power protection and battery backup for network equipment in your small- to medium-size data center or computer room.

Individually Controllable Load Banks Let You Access and Control Outlets Remotely

Five NEMA 5-20R outlets are split into two switchable load banks, allowing you to reboot select components or shed loads remotely. This UPS is recommended for any application supported by in-rack IT equipment, including servers, switches, phone systems, kiosks and high-end engineering and A/V computer systems.

Reliable, Expandable Battery Backup Keeps You Operational Through Power Outages

The field-replaceable, hot-swappable internal battery provides 10 minutes of support at half load (800W) and three minutes at full load (1600W), keeping protected equipment operational through power failures. The intelligent battery management system with temperature-compensated charging extends battery life.

ENERGY STAR-Certified Economy Mode Helps You Save Money and Protect the Environment

By meeting strict EPA efficiency guidelines, this ENERGY STAR-certified UPS system helps you save money and energy. A power-saving Economy mode setting option offers enhanced efficiency and reduced BTU output when utility power is already high quality.

Set Output Frequency to Match That of Your Connected Equipment

Using the UPS in Frequency Conversion mode will correct or convert the incoming frequency of 50 Hz to output 60 Hz (and vice versa).

Intuitive Front-Panel Interface for Convenient UPS Operation and Monitoring

The front-panel LCD features eight selectable screens of UPS data (including load, voltage and battery

Highlights

- Offers network-grade protection against power failures and voltage fluctuations
- Zero transfer time between on-line and battery modes for uninterrupted operation
- NEMA 5-20P input and 5 NEMA 5-20R outlets arranged in 2 switchable load banks
- Optional WEBCARDLXE network interface required to use Auto Probe feature
- ENERGY STAR-certified to save electricity, lower costs, and protect the environment

Applications

- Deliver continuously regulated sine wave output to mission-critical equipment
- Protect connected components from dangerous surges, spikes and line noise
- Keep equipment operational through short power failures
- Allow time to save data and safely shut down connected components in case of a prolonged blackout

Package Includes

- SU2000LCD1U SmartOnline Double-Conversion UPS
- USB cable
- RS-232 cable
- Rack-mounting hardware
- Owner's manual

data) and multiple screens of configuration and setup options. LEDs indicate AC output availability and fault status. On-screen operational diagram offers an easy-to-grasp visual representation of on-line, battery and ECO/Bypass modes.

Advanced Communications Ports Allow for Automatic Shutdowns

RS-232 and HID-compliant USB ports connect to a computer running free downloadable PowerAlert® software to enable safe unattended system shutdown in case of a prolonged power failure. Wireable ports enable EPO (Emergency Power Off) and ROO (Remote Off/On) operation for UPS emergency and daily operation preferences. RS-232 and USB cables are included.

Optional WEBCARDLXE Network Interface Offers 24/7 Remote Access

The SU2000LCD1U includes a slot for an optional HTML5-based WEBCARDLXE (sold separately) that enables full remote access for site power and UPS status monitoring, configuration, control and email notifications via secure web browser, SNMP, telnet or SSH. It supports 10/100 Mbps auto-sensing for optimum communication with an Ethernet network. Automated alerts help prevent accidental overloads, power loss and downtime.

Auto Probe Allows Autonomous UPS Management

WEBCARDLXE allows use of IP-based Auto Probe feature, which ensures continuous network uptime by communicating with other network devices. If communication is lost, Auto Probe autonomously performs one or more user-configurable actions, including email notifications, which help you return the network devices to an operational state.

Requires Only One Rack Space in a 4-Post Rack

Hardware is included for mounting the SU2000LCD1U in just 1U of space in an EIA-standard 19-inch 4-post rack enclosure or open frame rack to allow for more variety and spacing of equipment. The six-foot (1.8-meter) power cord with NEMA 5-20P plug connects to a compatible AC outlet.

Specifications

OVERVIEW	
UPC Code	037332238146
UPS Type	On-Line
INPUT	
Input Phase	Single-Phase
Rated input current (Maximum Load)	15.9A (100V); 14.7A (120V); 13.9A (127V)
Nominal Input Voltage(s) Supported	100V AC; 120V AC; 127V AC
Nominal Input Voltage Description	120V factory default
UPS Input Connection Type	5-20P
Input Circuit Breakers	20A
UPS Input Cord Length (ft.)	6
UPS Input Cord Length (m)	1.8
Recommended Electrical Service	20A 120V
OUTPUT	
Output Capacity (VA)	2000

Output Capacity (kVA)	2
Output Capacity (Watts)	1600
Output Capacity (kW)	1.6
Output Capacity Details	ON LINE MODE: Maximum output capacity is reduced to 1440 watts at 100V nominal; FREQUENCY REGULATION / CONVERSION MODE: Maximum output ratings are reduced in frequency regulation / conversion mode (127/120V 960 watts / 100V 864 watts) OVERLOAD CAPACITY: Supports inverter operation up to 105% load continuously, 106-115% load for 1 minute; 116-130% load for 12 seconds; 131-149% for 2 seconds and >150% load for 0 seconds before switching to BYPASS (when bypass input voltage and frequency are WITHIN bypass limits) or SHUTDOWN (when bypass input voltage or frequency are OUTSIDE bypass limits)
Power Factor	0.8
Crest Factor	3:1
Nominal Voltage Details	120V factory-default nominal voltage
Frequency Compatibility	50 / 60 Hz; Supports 50 to 60 Hz and 60 to 50 Hz conversion
Frequency Compatibility Details	ON LINE MODE: Output frequency is automatically configured to match nominal input frequency on startup; Output matches input frequency when +/-5Hz of nominal; Output is regulated to +/-0.05Hz when input frequency exceeds +/-5Hz of nominal. UPS switches to battery mode when input frequency is below 40Hz or above 70Hz. FREQUENCY REGULATION / CONVERSION MODE: Output is regulated to +/-0.05Hz of selected output frequency input is 40 to 70Hz; UPS switches to battery mode when input frequency is below 40Hz or above 70Hz. BATTERY MODE: Output is regulated to +/-0.05Hz.
Output Voltage Regulation (Line Mode)	+/- 3%
Output Voltage Regulation (Economy Line Mode)	+/- 10%
Output Voltage Regulation (Battery Mode)	+/- 3%
Load Management Receptacles	Two switchable NEMA 5-20R outlet banks (Bank 1: 2 outlets / Bank 2: 3 outlets)
Output AC Waveform (AC Mode)	Pure Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave
Nominal Output Voltage(s) Supported	100V; 120V; 127V
Output Receptacles	(5) 5-15/20R
Individually Controllable Load Banks	Yes
BATTERY	
Battery Type	Valve Regulated Lead Acid (VRLA)
Runtime Full Load (min.)	3 min. (1600W)
Runtime Half Load (min.)	10 min. (800W)
Expandable Runtime	No
DC System Voltage (VDC)	48
Battery Recharge Rate (Included Batteries)	Less than 8 hours recharge to 90% (typical, full load discharge)
Battery Replacement Description	Hot-swappable, user replaceable batteries

VOLTAGE REGULATION	
Voltage Regulation Description	Online, double-conversion power conditioning maintains 3% output voltage regulation during brownouts and overvoltages
Overvoltage Correction	Corrects overvoltages to 150V
Undervoltage Correction	Corrects undervoltages to 50V
USER INTERFACE, ALERTS & CONTROLS	
Front Panel LCD Display	Front panel LCD information and configuration screen offers detailed UPS and site power status and operating data, plus configuration of voltage, frequency, operating mode, alarm function and a variety of additional options (see manual)
Switches	2 switches control off/on power status and alarm-cancel operation; 2 additional scroll-down and scroll-up / select options enable LCD status viewing and configuration options
Alarm Cancel Operation	Power-fail alarm can be temporarily silenced using alarm-cancel switch
Audible Alarm	Audible alarm indicates UPS startup, power-failure, low-battery, overload and UPS fault conditions
LED Indicators	Two front panel LEDs indicate AC Output status (green) and Shutdown / Fault condition (red)
SURGE / NOISE SUPPRESSION	
UPS AC Suppression Joule Rating	540
UPS AC Suppression Response Time	Instantaneous
EMI / RFI AC Noise Suppression	Yes
PHYSICAL	
Primary Form Factor	Rackmount
Rack Height	1U
Cooling Method	Fan
Included Mounting Accessory Description	Includes 4 post rackmount installation accessories; Included mounting brackets support front-to-rear rail distances of 635 to 914mm
Installation Form Factors Supported with Included Accessories	4 post 19 inch rackmount
Minimum Required Rack Depth (cm)	78.74
Minimum Required Rack Depth (inches)	31
Minimum Required Rack Depth without External Battery Pack (cm)	79
Minimum Required Rack Depth without External Battery Pack (in.)	30.95
Primary UPS Depth (mm)	710
Primary UPS Height (mm)	44
Primary UPS Width (mm)	440
Shipping Dimensions (hwd / in.)	6.10 x 22.83 x 32.68

Shipping Weight (kg)	24.00
UPS Housing Material	Steel
UPS Power Module Dimensions (hwd, in.)	1.73 x 17.32 x 27.950
UPS Power Module Weight (kg)	22.00
UPS Power Module Weight (lbs.)	48.5
Unit Dimensions (hwd / in.)	1.730 x 17.320 x 27.950
Unit Weight (lbs.)	48.500
Unit Weight (kg)	22.00
ENVIRONMENTAL	
Operating Temperature Range	32° to 104°F (0° to 40°C)
Storage Temperature Range	5° to 122°F (-15° to 50°C)
Relative Humidity	5% to 95%, non-condensing
AC Mode BTU / Hr. (Full Load)	606.5
AC Economy Mode BTU / Hr. (Full Load)	111.4
AC Mode Efficiency Rating (100% Load)	90%
AC Economy Mode Efficiency Rating (100% Load)	98%
Online Mode Heat Dissipation (BTU/Hr) @ Full Load	606
Battery Mode Heat Dissipation (BTU/Hr) @ Full Load	888
Audible Noise	65 dBA at 1m front side
Operating Elevation (m)	Up to 3000m
COMMUNICATIONS	
Network Management Cards	 WEBCARDLXE
Network Monitoring Port Description	Supports detailed monitoring of UPS and site power conditions
PowerAlert Software	For local monitoring via the UPS's built-in communication ports, download PowerAlert software at https://tripplite.eaton.com/products/power-alert
Communications Cable	USB and RS232 cabling included
WatchDog Compatibility	Supports Watchdog application, OS and hard-reboot restart options for remote applications
Communications Interface	Contact closure; EPO (emergency power off); RS-232; Slot for SNMP/Web interface; USB (HID enabled)
LINE / BATTERY TRANSFER	
Transfer Time	Zero (0 milliseconds) in double-conversion mode; 4-7 milliseconds (AC to DC) / 4 milliseconds (DC to AC) economy mode

Low Voltage Transfer to Battery Power (Setpoint)	50
High Voltage Transfer to Battery Power (Setpoint)	150
FEATURES & SPECIFICATIONS	
Cold Start (Startup in Battery Mode During a Power Failure)	Cold-start operation supported
High Availability UPS Features	Automatic inverter bypass; Hot swappable batteries; Remote management; Surge/noise protection; Zero transfer time; Auto Probe Monitoring (requires WEBCARDLXE)
Green Energy-Saving Features	High efficiency economy mode operation; Individually controllable load banks
Grounding Details	Includes back panel grounding lug
APPLICATIONS	
UPS Applications	Mission Critical Applications
STANDARDS & COMPLIANCE	
Product Certifications	CSA (Canada); NOM (Mexico); UL 1778
Product Compliance	RoHS; ENERGY STAR Qualified; FCC Part 15 Class A (USA)
WARRANTY & SUPPORT	
Product Warranty Period (Worldwide)	2-year limited warranty
Connected Equipment Insurance (U.S., Canada & Puerto Rico)	\$250,000 Ultimate Lifetime Insurance