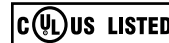




Middle Atlantic Products

EXCEPTIONAL SUPPORT & PROTECTION™

Hardwired Uninterruptible Power Supply



Hardwired Uninterruptible Power Supply with Energy Saver design that is optimized to address the needs of A/V systems

Features

- Hardwired output via integral junction box
- Flex input
- Pure Sine Wave technology with Automatic Voltage Regulation to improve the quality of power provided to the A/V system
- Expansion battery option extends runtime in the event of sustained power outages
- Surge suppression utilizes a clean line-to-neutral design that does not pass noise contamination to ground
- Internet enabled with optional expansion card, which includes:
 - Real time UPS monitoring via the Web
 - Remote management and configuration of UPS via Web Browser or NMS (Network Management System)
 - Auto-shutdown to protect servers/workstations from data loss due to power failure
 - Schedule shutdown/start-up/reboot of the UPS
 - Event logging to trace UPS operational history
 - Data logging for analyzing power conditions
 - Event notification via email and SNMP traps
 - Supports TCP/IP, SNMP/HTTP, NTP, DNS, SMTP protocol
 - MIB (Management Information Base) provided
 - Quick installation and user friendly interface
 - User upgradeable firmware via FTP
 - Security management provided
- Control system integration via RS-232 and USB and analog I/O
- Load shedding allows extended run time for system-critical components by disconnecting power to less-critical components
- Line Interactive Technology
- Power Manager software allows extensive configuration and event notification capabilities
- Energy Saver design reduces power consumption by up to 75% when compared with traditional UPS designs
- UL Listed in the US and Canada

ENERGY
SAVER



UPS-2200R-HH (front)



UPS-2200R-HH (Rear)



UPS-EBPR

CUSTOMIZABLE SPECIFICATION CLIPS AVAILABLE AT MIDDLEATLANTIC.COM

Architects and Engineers' Specifications

Rackmount Uninterruptible Power Supply (UPS) shall be Middle Atlantic Products model # UPS-2200R-HH. UPS shall be line interactive with AVR. Unit shall measure 19.00" W x 3.50" H x 19.00" D and occupy 2 rackspace. UPS shall have a rear mounting range of 19" to 32" and not require more than one person to mount. Unit shall operate on 120 VAC/60Hz current. Unit shall have a nominal output of 120V. Unit shall have a capacity of 2,150 VA and 1,650 W. Unit shall have (2) NEMA 5-20R receptacles on the rear of the unit. UPS-2200R-CH/HH shall have a hardwired J-Box output and one each critical/non-critical load NEMA 5-20R receptacle. Unit shall be IP enabled when used with optional IP Expansion card, model# UPS-IPCARD. Rackmount UPS shall include a 36" flex cable. UPS shall have surge suppression that utilizes a clean line-to-neutral design that does not pass noise contamination to ground. Rackmount UPS shall have a hot swappable battery that allows for a 8 minute run time at half load and a 16 minute run time at full load. Rear of unit shall have inputs that allow for the installation of up to 10 additional hot swappable batteries. Rackmount UPS shall be RoHS EU Directive 2002/95/EC compliant. Rackmount UPS shall utilize Middle Atlantic Power Manager™ software. Rackmount UPS shall be warrantied to be free from defects in materials and workmanship under normal use and conditions for a period of 3 years; battery shall be warrantied for a period of 2 years. Rackmount UPS shall be UL listed in US and Canada.

UPS-IPCARD

Web based control shall be enabled on non-internet enabled Middle Atlantic Products UPS by UPS-IPCARD, which shall be installed into the Expansion Port on the rear of the UPS. This shall be compatible with UPS firmware v1.65 or greater, and provide full functionality when used on models with firmware v1.75 or greater.

Expansion Battery

Rackmount expansion battery pack shall be Middle Atlantic Products model# UPS-EBPR. Expansion battery pack shall be suitable for use with UPS-2200R-HH/CH. UPS-EBPR shall measure 19.00" W x 3.50" H x 19.29" D and occupy 2 rackspace. With ___ hot swappable batteries connected to the unit, there is a ___ minute run time at half load and a ___ minute run time at full load (refer to chart). Rackmount expansion battery pack shall be warrantied for a period of 2 years.

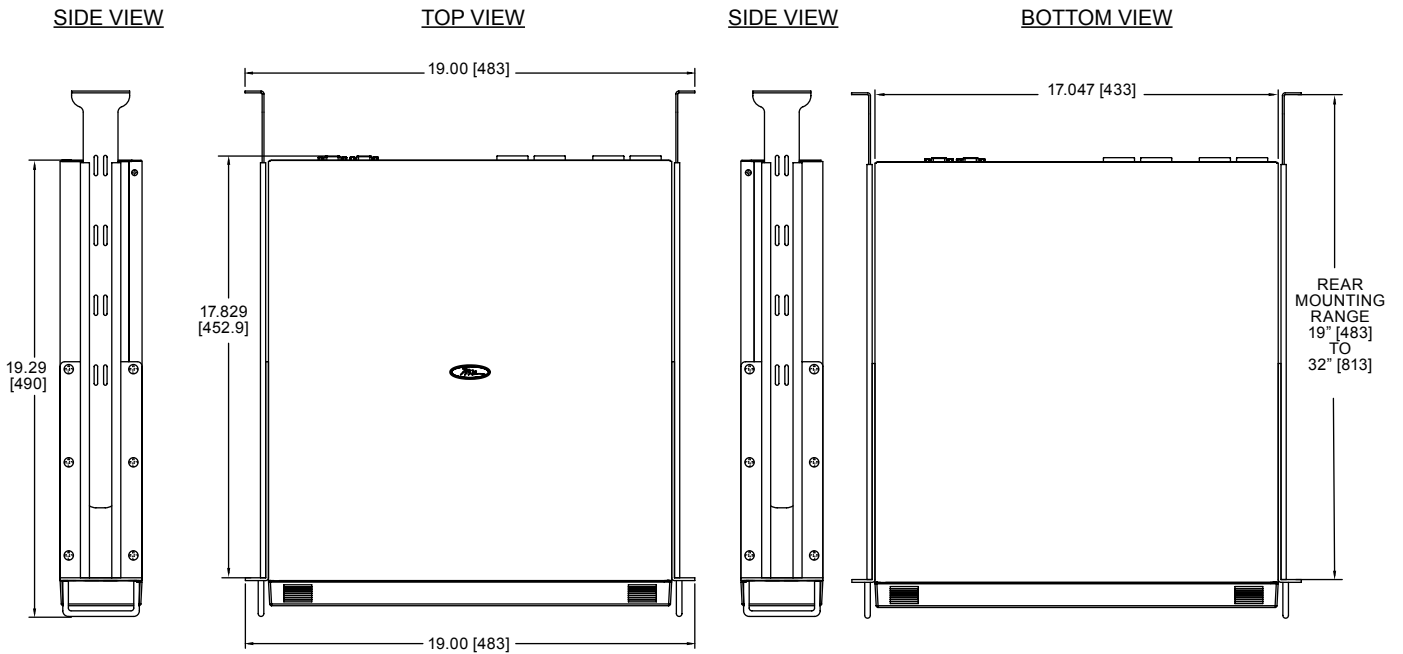
Replacement Battery

Replacement Battery Pack for the UPS shall be Middle Atlantic Products model # UPS-RBP. Replacement battery pack shall be suitable for use with UPS-2200R-HH/CH. Replacement battery shall be warrantied to be free from defects in materials and workmanship under normal use and conditions for a period of 2 years.

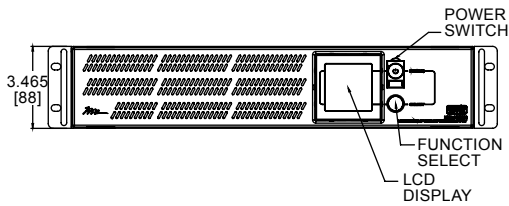


UPS basic dimensions

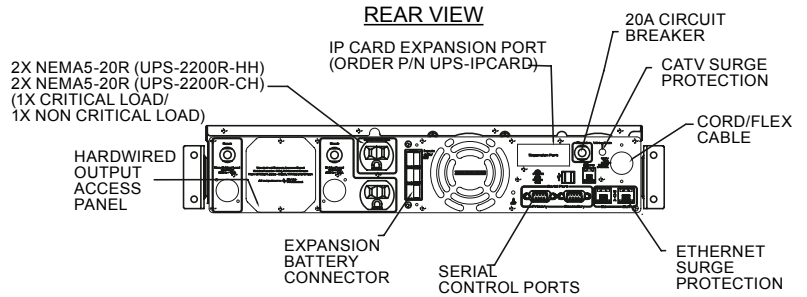
All dimensions in inches unless otherwise noted [All dimensions in brackets are in millimeters]



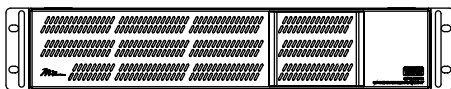
FRONT VIEW



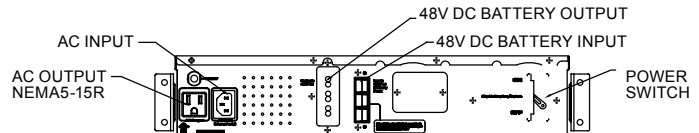
REAR VIEW



FRONT VIEW (UPS-EBPR)



REAR VIEW (UPS-EBPR)



| General Information | |
|---------------------------------------|--|
| Model No. | UPS-2200R-CH Series |
| Input | |
| Nominal Input Voltage | 120 V |
| Input Voltage Range | 80VAC – 145VAC |
| Input Frequency | 60 Hz +/- 3 Hz (auto sensing) |
| Input Protection Type | Resettable thermal fuse |
| Cord Length / Cord Type / Plug Type | 9 ft. / 12/3 / NEMA 5-20P |
| Output | |
| Green Mode Consumption | Less than 9W at full battery capacity |
| Nominal Output Voltage | 120 V |
| Capacity (VA) | 2150VA |
| Capacity (Watts) | 1650W |
| Waveform | Pure Sine Wave |
| On Line Output Frequency | 57 - 63 Hz for 60 Hz nominal |
| On Battery Output Frequency | 60 Hz +/- .1 Hz |
| Transfer Time (Typical) | 4 ms typical line to battery / battery to line |
| Overload Protection (on line mode) | 100%≤ Load < 110% warning, 120 sec shutdown 110%≤ Load < 125% warning, 40 sec shutdown 125%≤ Load warning, 10 sec shutdown |
| Overload Protection (on battery mode) | 100%≤ Load < 110% warning, 30 sec shutdown 110%≤ Load < 125% warning, 10 sec shutdown 125%≤ Load warning, 3 sec shutdown |

| Total Harmonic Distortion (THD) | | |
|---------------------------------|------|------|
| Total System Load | 60% | 100% |
| Utility Mains* THD | 2.0% | 2.0% |
| Battery Backup THD | 1.5% | 5.2% |

*typical 120V power with 2%-4% THD

| Surge Protection and Filtering | |
|--------------------------------|--|
| Lightning / Surge Protection | L-N = > 381 J (127J x 3) Clamp voltage 270V (Max energy 10 / 1000 μs) |
| RJ11 / RJ45 Protection | Sidactorx1 Clamp Voltage 275V Fuse (.75A / 250V) x 2 |
| Physical | |
| Output Receptacles | (2) NEMA 5-20R Receptacles, J-Box |
| Dimensions (in.) | 19.00" [423] W x 3.50" [89] H x 19.29" [490] D |
| Weight (lb.) | 77 lbs. |
| Battery | |
| Rating | 12V / 9.0 AH x 4 |
| Auto Charger | 1A |
| Hot Swappable External Battery | Yes |
| Run Time at Half Load | 13 minutes |
| Run Time at Full Load | 6.4 minutes |
| Warning Diagnostics | |
| Control Panel | LCD Display Indicators, Power On |
| Audible Alarms | On Battery, Low Battery |
| Environmental | |
| Operating Temperature | 32°F to 104°F (0°C to 40°C) |
| Operating Relative Humidity | 0 to 95% Non-Condensing |

| | |
|----------------------------|--|
| Communication | UPS-2200R-HH Series |
| Software | Middle Atlantic Power Manager™ |
| Management | |
| Self-Test | Manual Self-Test via front panel |
| Auto-Charger/ Auto-Restart | Yes |
| COM Interface | Primary: - RS232 Communication + Control - Analog Status Notification + Control Secondary: - Analog status notification only |
| Built-in USB Interface | Yes |

| | | | | | |
|----------------------|--------------|-----------|---------|-----------|--------------|
| Utility Voltage (AC) | ≤ 80 | 81-105 | 106-133 | 133-147 | >147 |
| Fans Engaged | Front & Rear | Rear only | None | Rear Only | Front & Rear |
| dBA above Ambient | 27dBA | 14dBA | 0 | 14dBA | 27dBA |

| UPS-2200R Series | | | | | | | | | | | | | | | | |
|-------------------------------|------------------------------|------|------|------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| Load (VA) | 120 | 240 | 360 | 480 | 600 | 720 | 840 | 960 | 1080 | 1200 | 1320 | 1440 | 1560 | 1680 | 1800 | 1920 |
| Load (W)* | 90 | 180 | 270 | 360 | 450 | 540 | 630 | 720 | 810 | 900 | 990 | 1080 | 1170 | 1260 | 1350 | 1440 |
| Load (A) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Number of expansion batteries | ESTIMATED RUN TIME (Minutes) | | | | | | | | | | | | | | | |
| UPS only | 102 | 51 | 34 | 26 | 20 | 17 | 15 | 13 | 11 | 10 | 9 | 9 | 8 | 7 | 7 | 6 |
| 1 | 561 | 283 | 190 | 143 | 114 | 94 | 80 | 69 | 60 | 53 | 47 | 42 | 37 | 33 | 29 | 26 |
| 2 | 1020 | 515 | 345 | 260 | 207 | 171 | 145 | 125 | 109 | 96 | 84 | 75 | 66 | 58 | 51 | 45 |
| 3 | 1479 | 747 | 501 | 377 | 300 | 249 | 211 | 181 | 158 | 139 | 122 | 108 | 95 | 84 | 74 | 64 |
| 4 | 1938 | 979 | 657 | 494 | 394 | 326 | 276 | 238 | 207 | 181 | 160 | 141 | 124 | 109 | 96 | 84 |
| 5 | 2397 | 1211 | 813 | 611 | 487 | 403 | 341 | 294 | 256 | 224 | 197 | 174 | 153 | 135 | 118 | 103 |
| 6 | 2856 | 1443 | 968 | 728 | 580 | 480 | 407 | 350 | 305 | 267 | 235 | 207 | 182 | 161 | 141 | 122 |
| 7 | 3315 | 1676 | 1124 | 845 | 674 | 557 | 472 | 406 | 353 | 310 | 272 | 240 | 212 | 186 | 163 | 142 |
| 8 | 3774 | 1908 | 1280 | 962 | 767 | 635 | 537 | 463 | 402 | 352 | 310 | 273 | 241 | 212 | 185 | 161 |
| 9 | 4233 | 2140 | 1435 | 1079 | 860 | 712 | 603 | 519 | 451 | 395 | 348 | 306 | 270 | 237 | 208 | 181 |
| 10 | 4692 | 2372 | 1591 | 1196 | 954 | 789 | 668 | 575 | 500 | 438 | 385 | 339 | 299 | 263 | 230 | 200 |

*Assuming a Power Factor of .75