MINUTEMAN®
POWER TECHNOLOGIES



Ensuring Reliable AV

The Role of Backup Power and Power Protection in Audiovisual Systems

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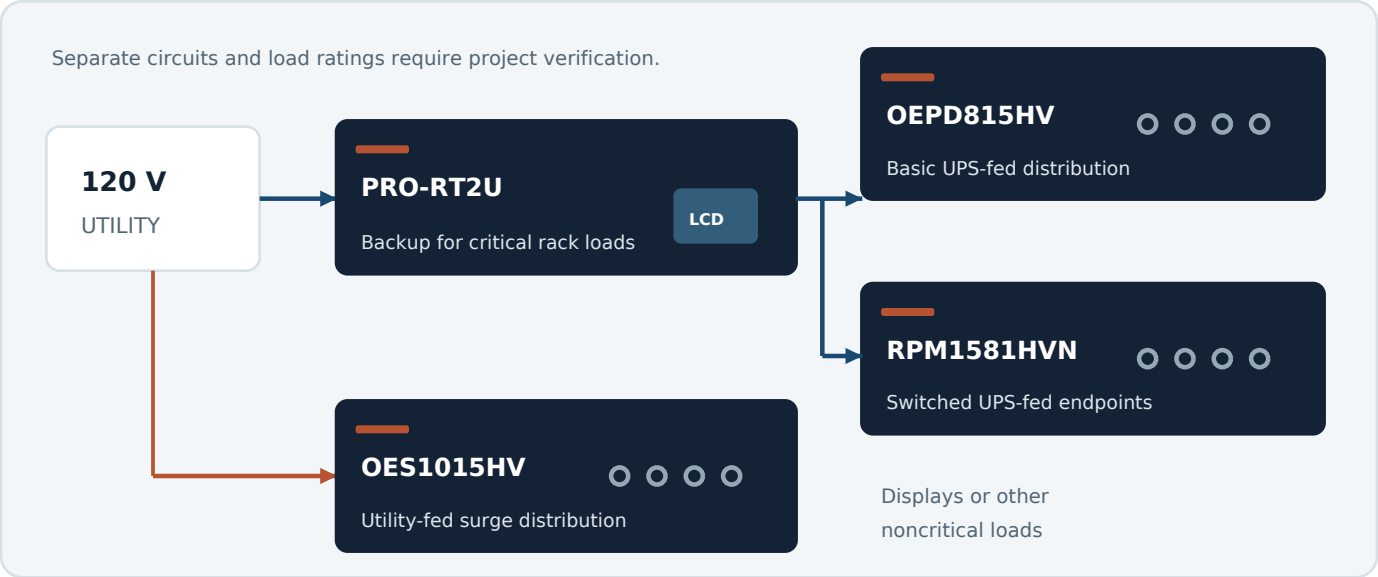
POWER CONTINUITY / RACK DISTRIBUTION / REMOTE RECOVERY

Reliable Power for Professional A/V

A practical rack architecture for conference rooms, signage and distributed systems

Professional A/V systems depend on controllers, codecs, digital signal processors, network switches and endpoints starting and recovering together. A short interruption can turn a working room into a service call. Minuteman Power Technologies pairs battery backup, rack distribution and selective outlet control so the critical control path stays available and technicians can recover locked devices remotely.

FIGURE 1 | RECOMMENDED POWER PATH



Reading the diagram. The UPS backs up the control and network core. The OEPD adds receptacles without switching. The RPM allows selected devices to be power cycled. An OES can serve a separately designed, nonbattery branch; it does not add backup time. These are architecture examples, not a wiring or load schedule.

Design priorities

- **Protect the control path**
  Keep the controller, DSP, codec and management network on the selected UPS.
- **Switch only what should reboot**
  Put recoverable endpoints on RPM outlets; keep the device and network used to reach the RPM available.
- **Separate high demand loads**
  Evaluate amplifiers, displays and projectors against actual current, inrush and shutdown requirements.

Select the right device for each layer

The models below suit common 120 V A/V cabinets. Selection depends on measured watts and VA, receptacle type, cabinet depth, desired runtime and whether a device may be deliberately rebooted. Ratings shown are manufacturer maximums, not a completed project design.

PRODUCT	RECOMMENDED MODEL	WHY IT FITS THE APPLICATION
UPS for standard rack	PRO1500RT2U	2U line interactive; 1,050 W. AVR, two controllable load banks and an always-on bank support a room control rack. [1]
UPS for shallow rack	SR1500RMLCD	2U, 12.6 in depth, 900 W. Space saving choice for a shallow A/V or wall enclosure. [2]
Basic distribution	OEPD815HV	8 outlets, 15 A input / 12 A maximum output; 1U or 0U mounting. Select behind the UPS where more receptacles are needed. [3]
Surge distribution	OES1015HV	10 outlets, 15 A input / 12 A output, 2,000 J. A utility-fed option for nonbackup loads; OES1020HV serves a suitable 20 A branch. [3]
Remote switching	RPM1581HVN	8 individually controlled outlets, 15 A input / 12 A output, 1U or 0U. Use for multiple remotely recoverable endpoints. [4]

When two switched outlets are enough

RPM1521E offers two independently controlled 5-15R receptacles and a 12 A maximum output, with SNMPv3 and delayed restart. It is a compact choice for a single codec or player plus one other endpoint. [5]

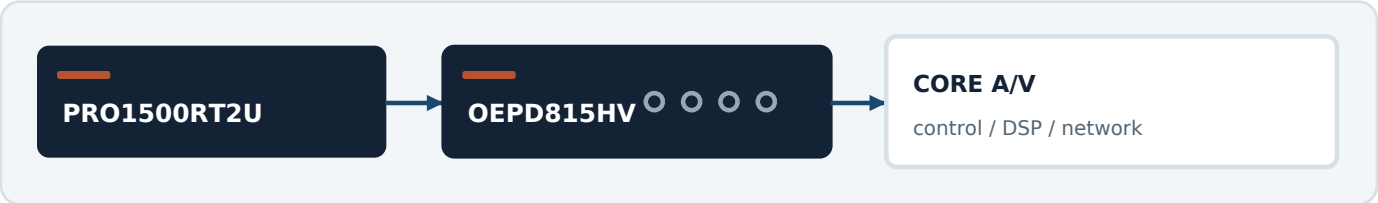
Important waveform check

PRO-RT2U and SR are both line interactive UPS families that produce a simulated sine wave on battery. Confirm the A/V device manufacturer accepts that waveform and the UPS transfer behavior. A load that requires true sine wave, zero transfer time or longer runtime needs a different UPS specification. [1][2]

Two deployment examples

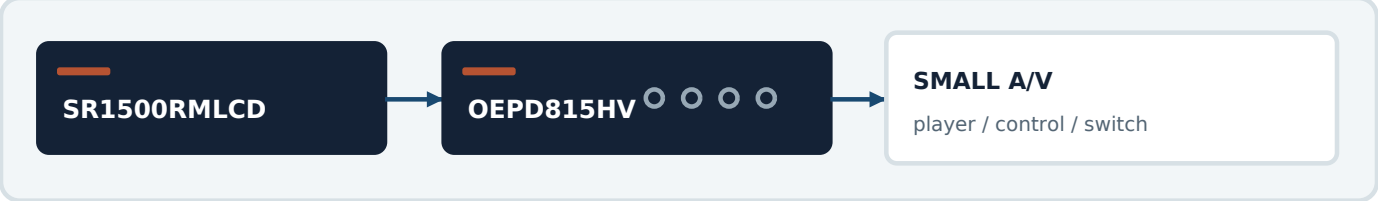
EXAMPLE A | CONFERENCE OR TRAINING ROOM

Rack: PRO1500RT2U → OEPD815HV for controller, DSP, codec and network switch. Use a separate UPS outlet for RPM1521E or RPM1581HVN to reboot a media player, decoder or video endpoint when its control path is still online. Assign the management switch to an always-on UPS outlet. [1][3][4][5]



EXAMPLE B | SHALLOW SIGNAGE OR AV CLOSET

Cabinet: SR1500RMLCD → OEPD815HV for a controller, compact player and local network devices, subject to rack depth and wattage. If only one or two endpoints need remote recovery, add RPM1521E on a separately available UPS outlet. A larger display can be evaluated on an appropriate utility-fed OES branch if battery operation is not required. [2][3][5]



Specify and commission

Measure steady and startup draw; size both watts and VA, UPS receptacles, PDU circuit limits and required runtime. Confirm battery waveform and transfer compatibility. Label every outlet, document switch order and test a utility loss, graceful recovery and remote reboot with the control network online. AVIXA performance guidance includes UPS and power recovery verification. [6]

Sources

[1] Minuteman PRO-RT2U

[2] Minuteman SR Series

[3] Minuteman OE Series PDUs

[4] Minuteman RPM 8 port

[5] Minuteman RPM 2 port

[6] AVIXA performance verification guide

Product specifications and model availability should be reconfirmed for the final bill of materials. Diagrammatic product shapes are illustrative and not scale drawings.