E750RM2U - 750VA/600W
E1000RM2U - 1000VA/800W

E1500RM2U - 1500VA/1200W
E2000RM2U - 2000VA/1760W
E3000RM2U - 3000VA/2560W

EnterprisePlus UPS Model E750RM2U

The Minuteman® EnterprisePlus™ line interactive uninterruptible power supply (UPS) combines line interactive technology with industry-leading features in a versatile case design that allows the units to be installed in many different formats and environments.

In developing one of the best-valued, highest quality UPS products on the market, the EnterprisePlus UPS has these standard features:

- **0.8 power factor -** increases the capacity of the unit without migrating to larger models (0.88 power factor for 2000VA and 0.853 power factor for 3000VA).

- **Load shedding -** extends the time of critical applications without adding external battery packs by removing power to non-essential devices connected to the same UPS

- **Independent Battery Bypass™ -** allows the UPS to provide voltage regulation with surge and spike protection on the utility AC power even when batteries are weak or dead.

- **Virtually unlimited extended runtime for critical applications -** virtually an unlimited number of battery packs can be connected to the EnterprisePlus UPS for extending run times

- **Flexibility in installation -** floor-standing tower and 19-inch rackmount hardware is included. Optional installation kits are available for 23-inch racks/cabinet and wallmount installation.

- **Small form factor -** 3.5-inch (2U) rack/tower case style

- **Independent battery pack chargers -** reduces battery recharge times

- **Simultaneous DB-9, USB and SNMP communications**

- **Minuteman® SentryPlus™ UPS monitoring and control software included**

- **Easy to read front panel display -** with load/battery meter

- **Industry high product protection -** with 3-year non-prorated warranty (including batteries)

- **Dedicated remote Emergency Power Off (EPO) port**

- **120V and 208V models available**

- **RoHS compliant**

- **Protects your your investment** - connected equipment is covered with $100,000 Minuteman Platinum Protection Plan® (U.S. and Canada only)

EnterprisePlus™ UPS Model E750RM2U with tower mount stand provided (standard)

MINUTEMAN® ENTERPRISEPLUS™ LINE INTERACTIVE UNINTERRUPTIBLE POWER SUPPLY (UPS)

The EnterprisePlus UPS is rich in standard features and optional accessories allowing users to order "off the shelf" products and yet retain the flexibility and robust features, which was previously only available as a special order product.

ELECTRICAL CHARACTERISTICS

Output Power Factor

All EnterprisePlus models up to 1500VA come with a 0.8 power factor of which increases the watt capacity of the units. The 2000VA model has a 0.88 power factor and the 3000VA has a 0.853 power factor. Offering larger capacities in smaller UPS VA sizes reduces the overall cost of the UPS solution for a specific load requirement.

Output Voltage

All units in the EnterprisePlus Series produce an electrical signal that does not vary from nominal voltage by more than 5%. Tightly regulating the output voltage increases the quality of power to connected equipment adding to its life expectancy, which lowers the total cost of ownership to users.

Total Harmonic Distortion (THD)

THD is the distortion of a normal AC electrical signal commonly causes UPS when connected loads near the capacity of the units. This distortion can cause internal heat to build up on sensitive equipment not designed to allow for these altered AC signals. The EnterprisePlus UPS maintains an output AC signal, at all times and with linear loads, within 2% of a true sine wave.

Output Receptacle Control

The ability to extend the runtime of critical devices during an extended blackout is handled through the EnterprisePlus's load shedding function. Each model in the EnterprisePlus UPS comes with two independently-circuited receptacle segments. Through the use of Minuteman's SentryPlus software or communication with the UPS through an Ethernet connection, users can either turn on, off, or reset each segment independently of the other. By reducing the load amount on the UPS, the runtime of critical devices on the UPS battery can be extended.

COMMUNICATION FEATURES

Simultaneous RS-232, USB and Ethernet communications: The EnterprisePlus UPS provides users with the ability to communicate with the UPS simultaneously through three separate protocols: RS-232, USB and Ethernet. Users can now directly connect and manage the UPS from multiple stand-alone, or networked computers. By including concurrent Ethernet communications (SNMP or direct IP address), the EnterprisePlus UPS can provide detailed monitoring and management to many various environments.
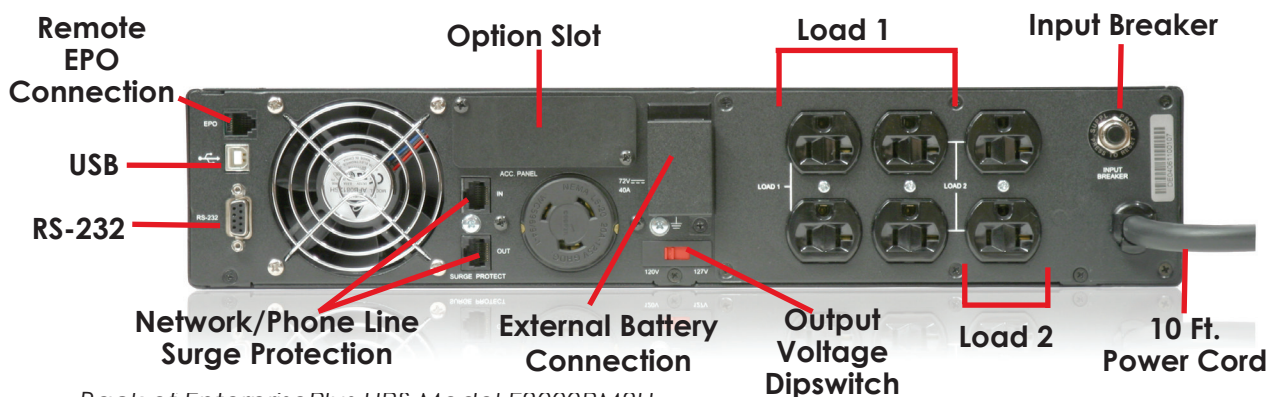
OTHER FEATURES

RoHS Compliancy

Recognizing the benefit of being environmentally conscious, Para Systems developed the EnterprisePlus UPS Series to be compliant with the European Economic Unions directive on the reduction of hazardous substances (RoHS), in electronic equipment.

Manual and Automatic Self-Testing

The EnterprisePlus UPS is designed to proactively notify users of any impending faults or failures with the UPS. This allows for preemptive repair or replacement of components or batteries preventing unexpected downtime caused by the UPS.

Dedicated EPO Port:

This direct access port allows users to perform an immediate remote shutdown of the UPS in cases of emergency or when access to the UPS is restricted or inconvenient.

Back of EnterprisePlus UPS Model E2000RM2U

Minuteman® EnterprisePlus™ Series Uninterruptible Power Supply

Battery Characteristics

Extended Runtime Capability

All models of the EnterprisePlus UPS come standard with internal batteries. To protect critical devices through extended blackouts, the EnterprisePlus UPS Series utilizes external battery packs that can be daisy-chained in unlimited quantities to provide a virtual unlimited amount of battery runtime.

Fast Battery Recharge

With independent chargers in each battery pack offered for the EnterprisePlus UPS Series, the maximum recharge time for depleted batteries is 8 hours, no matter how many battery packs are installed on a UPS. Without these chargers, battery charging could take more than an entire day if more than one battery pack is used.

Battery Pack Models

Because each UPS has different battery requirements to support its maximum load capacity, the EnterprisePlus Series uses battery packs sized to match each UPS model:

- E750RM2U - EBP36XL
- E1000RM2U - EBP36XL
- E1500RM2U - EBP36XL
- E2000RM2U - EBP72XL
- E3000RM2U - EBP72XL

Battery Technology

All EnterprisePlus units and battery packs use valve-regulated lead-acid batteries (VRLA). These are safe for any type of freight transport. For added protection, all EnterprisePlus UPS models ship with these batteries disconnected. A "Quick Installation Guide" is included in each EnterprisePlus box to detail how to connect the batteries before turning on the units.

Hot-Swappable Batteries

The EnterprisePlus UPS offers battery replacement, through the front panel of the UPS, without having to remove the UPS from service. Connected loads are protected from voltage anomalies and spikes and surges while the batteries are being replaced.

LED Front Panel

The LED indicators on the EnterprisePlus UPS provide many details about the status of the EnterprisePlus UPS. The status lights provide data on the utility input to the UPS. Additionally, there are indicator lights to display the current status of the batteries of the UPS. These indicators can provide visual confirmation of anticipated battery failures or UPS faults so that preventative maintenance can be performed on the UPS. The EnterprisePlus UPS also has a LED meter that measures both connected load capacity and battery capacity. The LED panel is designed so that it can be oriented vertically or horizontally depending on the installation orientation of the UPS.
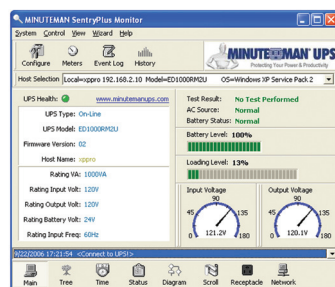
Para Systems Service

Para Systems offers unique resources to assist in the proper selection and sizing of a UPS installation:

- **minutemanups.com** – Full product specifications, literature and support documents as well as contact information are available.
- **SizeMyUPS.com** – Provides customized UPS sizing solutions as well as a library of common equipment loads to assist in properly sizing your UPS solution
- **CompareMyUPS.com** – Provides a competitive feature analysis of Minuteman UPS products versus other manufacturers.
- **SizeMyPDU.com** – A customized website for selecting a specific Minuteman PDU product for any installation.

In addition to web resources, Para Systems offers personal support of all our products through our customer support

Minuteman SentryPlus™ Software

Minuteman's SentryPlus™ UPS monitoring and control software comes included with each EnterprisePlus UPS unit at no extra charge. SentryPlus is compatible with Windows (XP, 2000, Server 2003, NT 4.0, ME and 98), Unix and Linux operating systems. With SentryPlus software users can monitor and control any new and most installed Minuteman UPS products on a connected network from one application session. The ease of installation, ease of use, and backward compatibility makes it the best software of its kind.

SentryPlus Features Include:

- **SNMP/Ethernet compatibility**
- **Concurrent monitoring through single or multiple computers via RS-232, USB and Ethernet connections**
- **Monitor and control multiple UPS devices from a single application session**
- **Perform scheduled shutdowns and restarts**
- **Program e-mail, pager or network broadcast of user-defined UPS events**
- **Full diagnostic and event reporting**
- **Real-time graphical displays of user-defined UPS and utility conditions**
- **Record and save graphical event and history logs for future analysis.**

Minuteman® EnterprisePlus™ Line Interactive UPS System Specifications

MODEL	E750RM2U	E1000RM2U	E1500RM2U (E1500RMT2U)	E2000RM2U	E3000RM2U (E3000RMT2U)
GENERAL					
Maximum Power Capacity (VA/Watts)	750/600	1000/800	1500/1200	2000/1760	3000/2560
Topology	Line Interactive, True Sine Wave Uninterruptible Power Supply				
Power Factor	0.8			0.88	0.853
Battery and Surge Protected Receptacles	(6) 5-15R		(6) 5-15R ((6) 6-15R)	(6) 5-15/20R (1) L5-20R	(6) 5-15/20R & (1) L5-30R ((1) L6-30R) (6) -15/20R))
Input Connection (with 10 ft power cord)	5-15P		5-15P / (6-15P)	5-20P	L5-30P / (L6-30P)
Mounting/Installation	Rackmount/Tower and Wallmount				
INPUT					
Number of Phases	Single (1Ø 2W +G)				
Nominal Voltage•Voltage Range	120VAC (208VAC) • 80-164VAC (150-271VAC)				
Frequency Range•Acceptable Input Voltage	50/60Hz +/-6Hz Autosensing • 0-165VAC (0-300VAC)				
Low Voltage Transfer Point	80V (150V) resets to utility power at 85V (157V) or higher				
High Voltage Transfer Point	164V (271V) resets to utility power at 159V (264V) or lower				
Input Protection	Resettable circuit breaker				
OUTPUT NON-BATTERY OPERATION					
Voltage Range • Voltage Regulation	120VAC: 105-134VAC • -12.5% to 11.7% (208VAC: 189-236VAC) / -9.1% to +13.5%				
Frequency Range • Efficiency (Line Mode)	60Hz/50Hz ±6Hz • >93% at full load				
OUTPUT BATTERY OPERATION					
Nominal Voltage	Default 120VAC(208VAC), user selectable 127VAC(240VAC)				
Voltage Regulation	Nominal ±5% until low battery warning				
Frequency	50/60Hz ±0.1Hz unless synchronized to line				
Voltage THD	<5% at full linear load				
Dynamic Response • Transfer Time	±10% @ 100% Load change in 30 ms • 2-6 ms typical				
Waveform • Slew Rate	Sine wave • ≤1 Hz/second				
Overload capacity	110% for 20 seconds, 125% for 10 seconds, 150% shutdown immediately				
Protection	Over current, Short circuit protection and Latching shutdown				
BATTERY SYSTEM					
Battery Type	Sealed, non-spillable, maintenance free, value regulated lead acid				
Typical Recharge Time	8 hours from total discharge				
Typical Battery Life	3-5 years, depending on discharge cycles and ambient temperature				
System Voltage	36VDC			72VDC	
Battery Module	BM0029	BM0029	BM0030	BM0031	BM0032
Runtime: Half •Full Load (minutes)	17 • 8	15 • 5	11 • 4	13 • 5	8 • 3
SURGE PROTECTION AND FILTERING					
Surge Energy Rating (Joules)	800J (600J)				
Surge Current Capability	6500Amps total				
Surge Response time	0ns(instanaeous) normal mode: <5 ns common mode				
Noise Filter	normal and common mode EMI/RFI suppression				
Audible Noise at 1 m (3 ft.)	<45dBA			<60dBA	
ENVIRONMENTAL					
Operating Temperature •Storage Temperature	+32° to +104°F (0° to 40°C) • +5° to +113°F (-15° to +45°C)				
Operating/Storage Humidity	95% non-condensing				
Operating Elevation•Storage Elevation	0 to 10,000ft. (0 to 3,000m) • 0 to 50,000ft. (0 to 15,000 m)				
PHYSICAL					
Size - Net (H x W x D) in (mm)	3.5 x 17.3 x 17 in (89 x 440 x 432 mm)			3.5 x 17.3 x 24 in (89 x 440 x 610 mm)	
Size - Shipping (H x W x D) in (mm)	9 x 20 x 23.6 in (230 x 508 x 600 mm)			9 x 23.6 x 39.4 in (230 x 600 x 1000 mm)	
Weight - Net lbs(kg) • Ship lb(kg)	46.2 lb (21 kg) • 55 lb (25 kg)			110.9 lb (50.4 kg) • 127.0 lb(57.3 kg)	
BATTERY PACKS					
Battery Pack	EBP36XL			EBP72XL	
Typical Recharge Time	8 hours max				
Size - Net • Size - Shipping (H x W x D) in (mm)	3.5 x 17.3 x 17 in (89 x 440 x 432 mm) • 9 x 20 x 23.6 in (230 x 508 x 600 mm)				
Weight - Net • Shipping lb (kg)	55 lb (25 kg) • 64 lb (29 kg)				
REGULATORY COMPLIANCE (UPS AND BATTERY PACKS)					
Safety and Approvals	RoHS Compliant, cUL (UL1778), CE, FCC UPS Class B BP-Class A				
Warranty • Platinum Protection	Three-years non-prorated • $100,000				

RoHS Compliant

PN-34000310- 06-07

MINUTEMAN®
Power Technologies
From Para Systems, Inc.