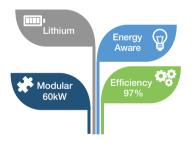


# Eaton 93PR 500-600kW UPS



Eaton 93PR UPS Complete modular data center solution Lithium-ion Compatible





## 93PR Features and Benefits



The Eaton 93PR UPS combines unprecedented efficiency and reliability with an eye-catching design. A space-saving, scalable and flexible device that's as easy to deploy as it is to manage, it's the perfect three-phase white or grey space solution for today's data center.

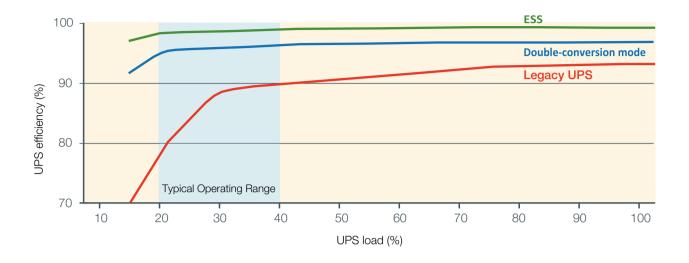
# Extra Low TCO (Total Cost of Ownership)

Conserves valuable data center floor space with its compact footprint and internal redundancy design.

Reduces cost and unexpected future growth risks with its vertical scalability, enabling you to scale as you grow.

Reduces power and cooling OPEX through industry-leading energy-efficiency.

- 99% efficiency with Energy Saver System (ESS)
- Up to 97% efficiency in double-conversion mode





The 93PR's vertical scalability, internal redundancy and compact footprint design

Your UPS cost will be recovered in 3 years' time thanks to the significant energy savings in Eaton ESS/double conversion efficiency. Calculate your 93PR savings with ESS.

# The functional core of the 93PR UPS





- Cable entry

  Top and bottom cable entry available
- Communications and connectivity
  - Built-in device and host USB
  - Five alarm inputs and dedicated EPO
  - Alarm relay output
  - Four connectivity/ communication slots
- 60kW HOTSWAPPABLE power modules (1~10)
- Hot replaceable STSW module
  600kW with fast protection bypass fuse and
  back-feed protection
- DC start controls

  Available in each power module
- Input / output isolations
  Input / Output / Bypass / MBS isolation switches
- Redundancy and speed controllable fans
- 7"Color display







# Eaton 93PR UPS



FITON

- Perfect integration with Lithium battery, compatible with multiple Lithium-ion BMS
- High efficiency UPM module, efficiency up to 97%
- Complete power isolation options (Input/ Output/ Bypass/ MBS)



Enhanced efficiency and reliability with SIC Hybrid IGBT Module

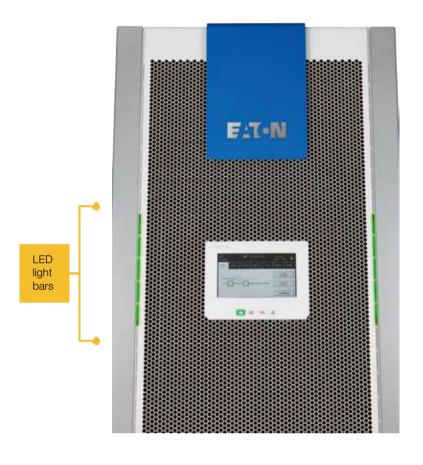


Long life oil-filled capacitor



Po Box 5322, Daisy Hill QLD 4127

# Easy management



Provides easier access to detailed status information through its large, user-friendly LCD touchscreen interface

With the 93PR's graphical LCD interface you can track stats on energy savings, battery time, outage tracking, load profiling and much more.

The green/yellow/red LED light- bars make system status visible from a distance in data centers.

Integrates with the leading virtual platforms through its full suite of power management and connectivity software

Designed for the most advanced IT environments, the 93PR supports optional communication cards that allow remote access via the HTTP(S), SNMP, MODBUS TCP/IP, Modbus RTU and BACnet IP protocols. In addition, Eaton's Power Xpert® software and Intelligent Power® Software Suite give you all the tools you need to manage power devices in your physical or virtual environment.

Red light bars showing alerts on system. Yellow light bars indicate battery and bypass status.



Intelligent Power Manager® (IPM) is a world class power management software platform. It seamlessly monitors power and environmental conditions while providing business continuity for workloads using VMware®, Citrix® and Microsoft® platforms. IPM also optimizes power and environmental conditions for data centers using OpenStack® or HPE OneView®.













## Connectivity options:

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Power On Australia Pty Ltd - ABN 48 110 752 442

- ♥ Unit 2/121 Evans Road SALISBURY QLD 4107 (Head Office)
- Po Box 5322, Daisy Hill QLD 4127

# Lithium-ion battery

### Power on demand

Eaton's lithium-ion battery systems provide a reliable and flexible solution that ensures 24/7 system uptime while delivering significant total-cost-of- ownership (TCO) savings. Capable of providing mega-watts of power in a small footprint, this battery solution comprises of lightweight battery strings designed to seamlessly connect to a Power Xpert™ 9395 or 93PM UPS.

## Why lithium?

Lithium-ion chemistry demonstrates superior characteristics in UPS applications, this results in high energy density, long life, flexible installation, improved cycle life and a lower TCO.

# Backup battery runtimes

Contact Eaton for backup times and configurations. A wide range of runtimes from 3 minutes to an hour + are available.

# Management and monitoring system

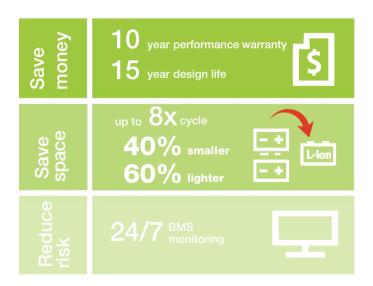
The lithium-ion battery integrates a powerful battery management system (BMS), providing cell protection (temp, current, over/under voltage), cell balancing, state of charge and health and alarms/ reports.

Protection: The BMS processes critical parameters such as voltage levels, temperature, and current at the module and solution levels. Abnormal conditions (warnings and alarms) are quickly detected and, if necessary, the BMS will protect the system from damage by disconnecting the affected battery.

#### Performance optimization:

The BMS incorporates cell and module balancing controls. This function optimizes the voltages of each module to maximize performance and increase service life.

## Benefits of lithium-ion



## EnergyAware upgrade

With Eaton's EnergyAware kits upgrade, UPS with lithium battery can do much more beyond UPS.

**Demand charge management**User avoids demand charges by discharging at peak times.

**Time-of-use optimization**Shifts energy consumption to avoid peak energy usage.

**Demand response**Utility company requests reduction in power usage.

Frequency regulation
Charge or discharge battery on command to stabilize the grid.

Aggregation services
Manage multiple assets in a
building or campus to work as a
single entity.



## **EATON 93PR 500-600 kW UPS**

# **Technical Specifications\***

#### Power modules

Power offering (kW)	600kW in 60kW increments
Frame options	
Frame Offering	600kW frame with 60kW modules UPS can be configured in different output ratings depending on site ambient temperature  • 600kVA/ 600kW at 30°C continuous • 550kVA/ 550kW at 35°C continuous • 500kVA/ 500kW at 40°C continuous

#### General characteristics

Up to 97.5%
op to 01.070
Maximum 8 units external parallel
Supported
Rectifier ramp up, compatible with generator, ramp up rate configurable

#### Input characteristics

input onaracteristics	
Voltage	380/400/415V
Voltage range:	301~478V L-L 175~276V L-N
Frequency range	50/60 Hz
Power factor	> 0.99
Input current distortion	< 3% @ 100% load capacity

### **Battery**

Battery Type	Lithium, VRLA, Ni-Cad
Charging method	BMS, ABM or constant float charge
Battery Voltage	360~640 Vdc
Battery Connection	Support common battery

### Output

Cutput	
Voltage	380/400/415V 4 wire
Frequency range	50/60 Hz
Regulation	±1% steady state
Voltage THD	< 1% (100% linear load) < 5% (non-linear load)
Overload	125% 10 mins

#### Certification

Safety	IEC62040-1
EMC	IEC62040-2
Performance	IEC62040-3
Certificate	CE

#### Optional accessories

- SNMP Card
- X-Slot Modbus RTU Card
- INDRELAY-MS Card
- Network-M2
- INDGW-M2
- PXGMSUPS Card
- External Sync Control Box
- Lithium battery cabinet
- Top exhaust kits

#### UPS dimensions (mm)

Height	2069
Depth	1100
Width	1200

### UPM dimensions (mm)

Height	173.4 (4U)
Depth	700
Width	439

## Weight (kg)

UPS (w/o UPM)	766
UPM	39

<sup>\*</sup> Due to continuous improvement, specifications are subject to change without notice.

