

# Eaton 93PM UPS

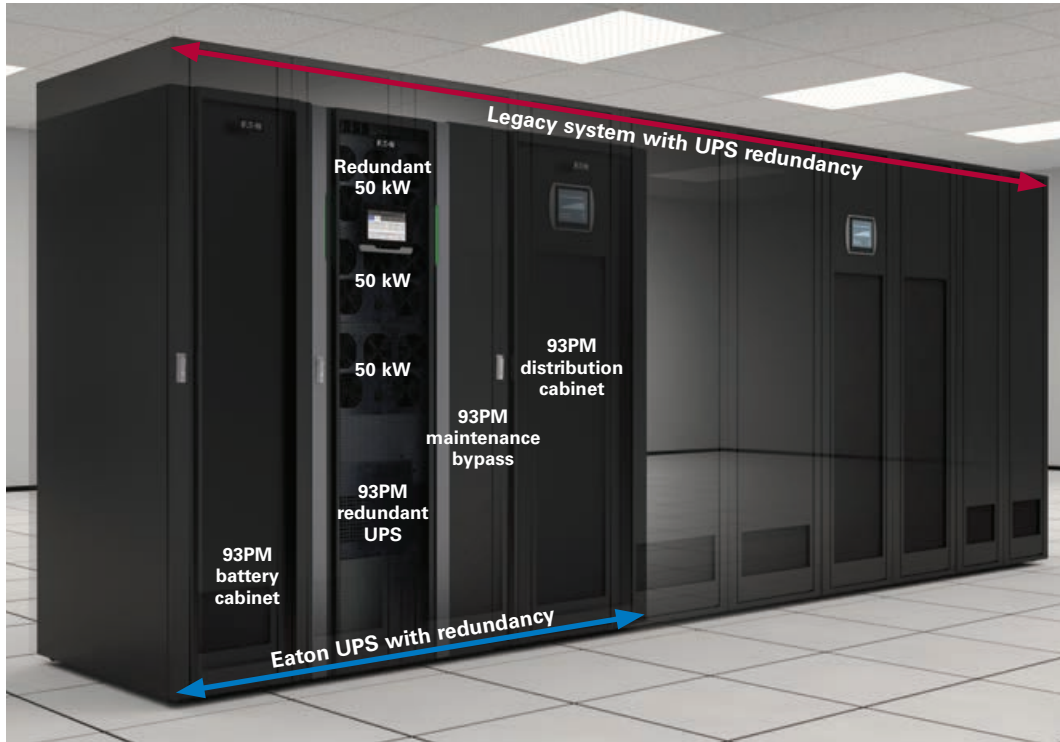
Efficient. Scalable. Innovative.



Powering Business Worldwide

# 93PM features and benefits

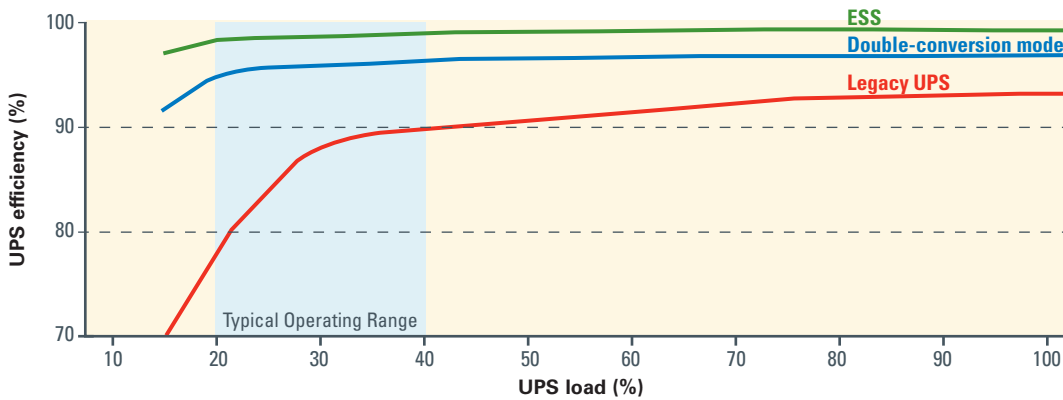
The Eaton 93PM UPS combines unprecedented efficiency and reliability with an eye-catching design. A space-saving, scalable and flexible device that's as easy to deploy as it is to manage, it's the perfect three-phase white or grey space solution for today's data center.



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

## 1. Lowest 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 ESS
  - Up to 97% efficiency in double-conversion mode



Eaton 93PM efficiency in double conversion and ESS

The 93PM ESS energy cost savings pay for the UPS in less than 3 years. Calculate your 93PM savings with ESS at [Eaton.com/ESS](http://Eaton.com/ESS).

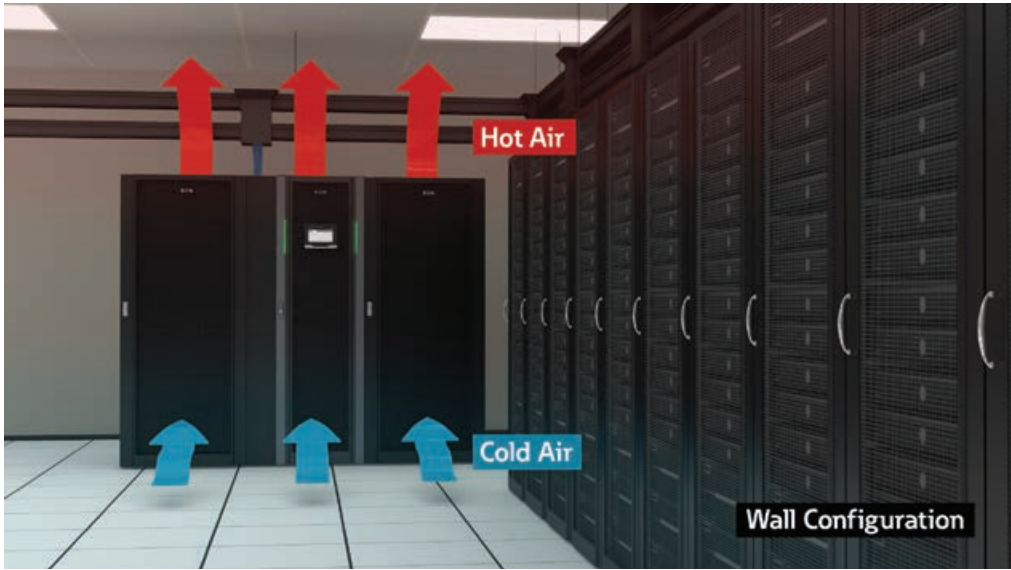
Table showing 400 kW efficiency savings comparison\*\*

Load %	Legacy UPS efficiency	93PM ESS efficiency	93PM ESS annual savings(\$)*	93PM double-conversion efficiency	93PM double-conversion annual savings (\$)*
25%	84.0%	98.4%	\$27,470	95.8%	\$23,121
50%	90.6%	98.9%	\$29,212	96.8%	\$22,294
75%	92.5%	99.1%	\$34,059	97.0%	\$23,724
100%	93.0%	99.1%	\$41,746	96.8%	\$26,623

\* Savings calculated using \$0.10 kW/hr. and 80% cooling ratio (currency in US dollars)

\*\* Table data is specific to the 480V 93PM UPS

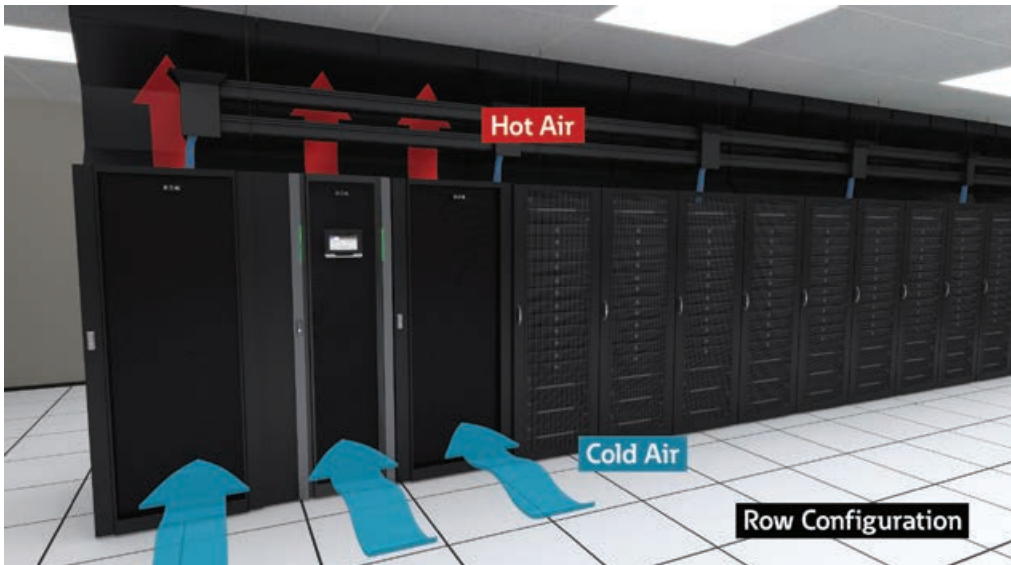
The 93PM double-conversion energy savings pay for the UPS in less than 3 years.



## 2. Easy deployment

- Maximizes deployment flexibility by providing flexible configurability

The 93PM supports front-to-top ventilation, ideal for against the wall configuration.



Front-to-top ventilation feature also makes the 93PM a perfect fit for in-row configurations that support slim chimneys.



The 93PM also supports front-to-back ventilation making it great for hot/cold aisle configuration.

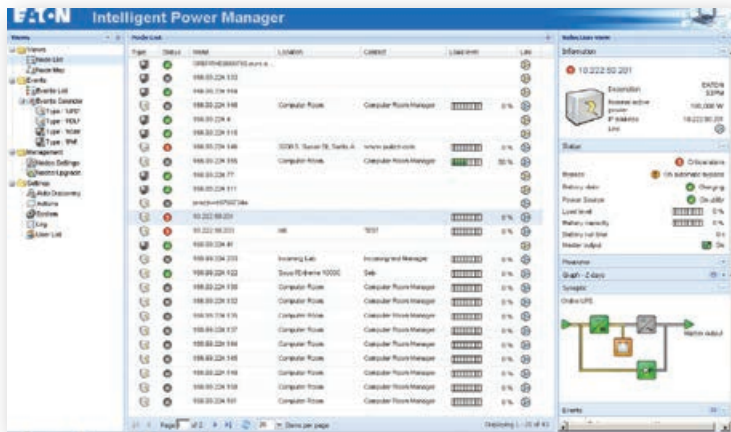
LED light bars



Green light bars showing healthy UPS



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®.



Communication card

Connectivity options:

- Power Xpert Gateway Mini-slot communication card
- Industrial relay card

### 3. Easy management

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

With the 93PM'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 93PM 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. Learn more at

[Eaton.com/intelligentpower](http://Eaton.com/intelligentpower).

- Increases uptime through its 24x7 remote monitoring and reporting capabilities

Eaton's PredictPulse™ remote monitoring and management service provides real-time monitoring of the 93PM and alerts service technicians to take necessary measures when a problem is detected. Learn more at [Eaton.com/PredictPulse](http://Eaton.com/PredictPulse).

# Eaton's comprehensive portfolio

Integrated data center products and services



**A** Overhead cable management solutions

**B** Thermal management solutions

**C** Busway

**D** ePDUs

**E** Aisle based power management solutions (UPSs)

**F** Rack monitoring solutions

**G** Rack-based power management solutions (UPSs)

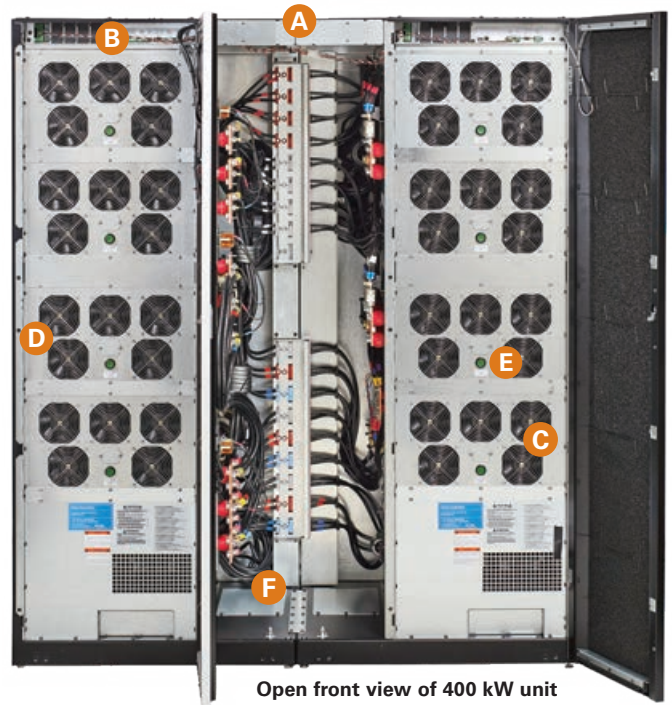
**H** IT enclosures

**I** Customized service plans

**J** Management software

# The functional core of the 93PM UPS

- A Cable entry**  
Top and bottom cable entry options available
- B Communications and connectivity**
  - Built-in device and host USB
  - Five alarm inputs and dedicated EPO
  - Alarm relay output
  - Four communication slots
- C Serviceable redundant fan assembly**  
Contained within each power module
- D Swappable power modules (50 kW)**  
with independent control and power
- E Soft start controls**  
Contained within each power module
- F Input/output connections**



Open front view of 400 kW unit

## EATON 93PM UPS TECHNICAL SPECIFICATIONS\*

### Power modules

Power offering (kW)	10–200 kW in 5 kW increments at 208/220V 20–160 kW in 10 kW increments at 400V 20–200 kW in 10 kW increments at 480V 200–400 kW in 50 kW increments at 480V (optional internal redundancy available)
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### General characteristics

Efficiency in Energy Saver System (ESS)	Up to 99%
Efficiency in double-conversion mode	Up to 97%
Parallel capability	Four distributed, contact factory for more information

Input characteristics	480V models	400V models	208V models
Voltage	480/277V 4-wire 480V 3-wire	380/220V 4-wire 400/230V 4-wire 415/240V 4-wire	208/120V 4-wire 220/127V 4-wire

Voltage range:	+10%/-15%	+10%/-10%	+15%/-15% @ 208V, +10%/-15% @ 220V
Frequency range	50/60 Hz	50/60 Hz	50/60 Hz
Power factor	> .99	> .99	> .99
Input current distortion	< 3% @ 100% load capacity	< 3% @ 100% load capacity	≤ 3.5% @ 100% load capacity

Battery	480V models	400V models	208V models
Battery voltage	432V, 480V	480V	480V
Charging method	ABM® or float technology	ABM® or float technology	ABM or float technology

Output	480V models	400V models	208V models
Voltage	480 3-phase 3-wire or 4-wire 208/120V with IAC-D up to 200 kW	380V, 400V or 415V 3-phase 3-wire or 4-wire	208V or 220V 3-phase 3-wire or 4-wire
Frequency range	50/60 Hz	50/60 Hz	50/60 Hz
Regulation	±1% steady state	±1% steady state	±1% steady state
Voltage THD	< 1% (100% linear load) < 5% (non-linear load)**	< 1% (100% linear load) < 5% (non-linear load)**	< 1.6% (100% linear load) < 5% (non-linear load)
Load power factor range	Unity with the ability to support 0.8 leading to 0.8 lagging without de-rating	Unity with the ability to support 0.8 leading to 0.8 lagging without de-rating	Unity with the ability to support 0.8 leading to 0.8 lagging without de-rating

Certification	480V models	400V models	208V models
Safety	UL 1778, cULus, UL 924 Emergency, UL 924 Auxiliary	UL 1778, cULus	UL 1778, cULus
EMC	FCC Part 15 subpart B class A	FCC Part 15 subpart B class A	FCC Part 15 subpart B class A
Surge	IEC 61000-4-5	IEC 61000-4-5	IEC 61000-4-5

### Optional accessories

- Integrated maintenance bypass
- Integrated distribution cabinet (with input and output transformer options)
- Integrated power distribution cabinet
- Integrated parallel tie cabinet
- Integrated battery cabinet (small and large)
- Wall mounted or floor mounted bypass
- Lithium battery cabinet

### UL 924 certification

The 93PM meets the strict standards for UL 924 compliance for emergency lighting applications when ordered with an emergency lighting SKU. For more information, visit [Eaton.com/UL924UPS](http://Eaton.com/UL924UPS)

### UPS dimensions

Height	74"
Depth	42"
Width	22" 20–150 kW (480V), 20–120 kW (400V) and 10–120 kW (208/220V) 32" 160–200 kW (480V) and 120–160 kW (400V) 34.4" 10–160 kW (208/220V) 43.3" 10–200 kW (208/220V) 64" 250–400 kW (480V)

\*Due to continued improvements, specifications are subject to change.