20-200 kW

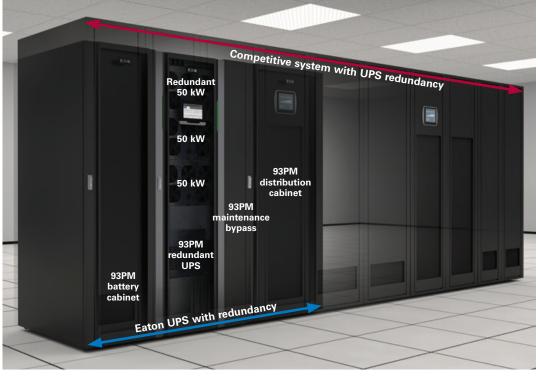
# Efficient. Scalable. Innovative.



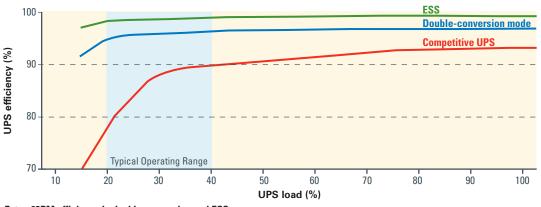


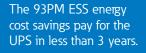
## 93PM features and benefits

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





Eaton 93PM efficiency in double conversion and ESS

#### Table showing 100 kW efficiency savings comparison

Load %	Leading competitor efficiency **	93PM ESS efficiency	93PM ESS annual savings(\$)*	93PM double- conversion efficiency	93PM double-conversion annual savings (\$)*
25%	<b>84.0</b> %	98.4%	\$6,868	95.8%	\$5,780
50%	<b>90.6</b> %	98.9%	\$7,303	96.8%	\$5,574
75%	<b>92.5</b> %	99.1%	\$8,515	97.0%	\$5,931
100%	93.0%	99.1%	\$10,436	96.8%	\$6,656

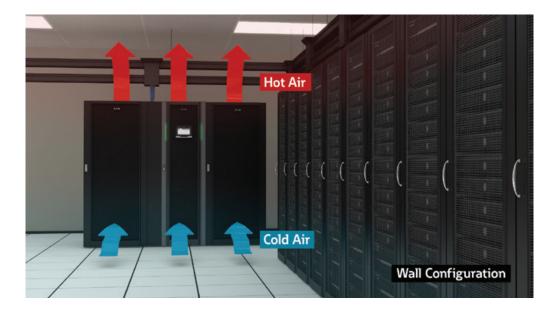
\* Savings calculated using \$0.10 kW/hr. and 80% cooling ratio (currency in US dollars)

\*\* Leading competitor does not offer ESS mode

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

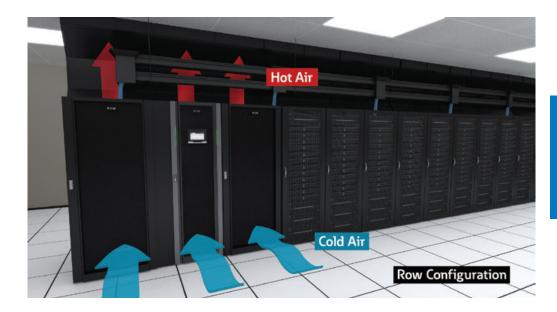
The 93PM doubleconversion energy savings pay for the UPS in less than 4 years.



#### 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.

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Intelligent Power Manager seamlessly integrates into the major virtualization platforms, including VMware®, Citrix®, Red Hat® and Microsoft® Systems Center.



**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 lightbars 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.

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

Eaton's eNotify Remote Monitoring Service provides 24x7 real-time monitoring of the 93PM and alerts service technicians to take necessary measures when a problem is detected.

## Eaton's comprehensive portfolio

Integrated data center products and services



## The functional core of the 93PM UPS

#### A Top cable entry

comes with sidecar/maintenance bypass options (sidecar option is required for top cable entry)

#### B Communications and connectivity

- Built-in device and host USB
- Five alarm inputs and dedicated EPO
- Alarm relay output
- Four communication slots
- **Color touchscreen LCD interface**
- Serviceable redundant fan assembly
- **Replaceable power modules** (50 kW) with independent control and power

Soft start controls

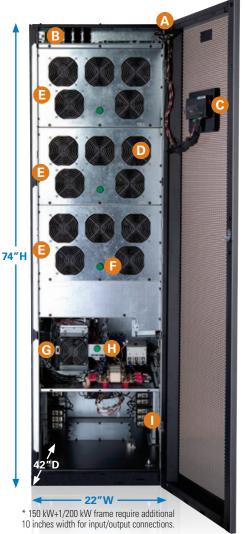
- Modular static switch assembly (independent power and control)
- ß **Redundant bypass control**
- Input/output connections

#### Eaton 93PM UPS technical specifications\*

#### **Power modules**

Power offering (kW)	50, 50+1, 100, 100+1, 150, 150+1, 200** (Derates available in 10 kW increments)
General charaterstics	
Efficiency in Energy Saver System (ESS)	99%
Efficiency in double-conversion mode	Up to 97%
Parallel capability	8 distributed
Input characterstics	
Voltage	480V (208V with IAC-D)
Voltage range	+10% / -15%
Frequency range	50/60 Hz
Power factor	> .99
Input current distortion	< 3% @ 100% load capacity
Battery	

Battery voltage	432V
Charging method	ABM® or float technology



99% ESS efficiency 97% doubleconversion efficiency

Front View

F.T-N

Open front view of the unit

#### Output

Voltage	480V (208V with IAC-D)
Regulation	±1% steady state
Voltage THD	<1% (100% linear load); <5% (non-linear load)
Load power factor range	.8 leading to .8 lagging without de-rating

#### Certification

Safety	UL1778, cUL
EMC	FCC Part 15 subpart B class A
Surge	IEC 61000-4-5

#### **Optional accessories**

- External slim maintenance bypass
   Integrated distribution cabinet (with input and output transformer options)
- Integrated parallel tie cabinets
  Integrated battery cabinet (small and large)

\*Due to continued improvements, specifications are subject to change. \*\*+1 provides 50 kW of internal redundancy at full load.

Powering Business Worldwide

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