

Power protection for virtualized environments

Eaton

5PX and 9PX UPS



Powering Business Worldwide

Eaton UPSs

Energy-efficient power protection for virtualized IT environments

Eaton's best in class backup power UPS solutions keep your business running without interruption, offering superior flexibility, optimum efficiency and reliability. They give you the peace-of-mind knowing equipment is power-protected 24/7.

Protect your IT applications:

- Eaton 5PX UPS is the ideal solution for protection of IT closet equipment including servers and network devices such as switches and routers
- Eaton 9PX UPS is the excellent solution for protection of mission critical IT applications including virtual servers, data storages and hyper-converged infrastructure solutions

The Eaton 5PX and 9PX UPSs enable you to:

- Secure mission-critical applications
- Reduce energy consumption and costs
- Optimize power density, minimize capital and operating expenditure

Use your U space for IT equipment

- With market-leading energy density, the 5PX and 9PX enable power up to 3kW in only 2U, 5.4kW in 3U and 10kW in only 6U

Protect more equipment

- With at least 0.9 power factor (and even 1 power factor on 9PX 1 to 3 kVA); the 5PX and 9PX deliver more real output power (Watts)

Reduce cooling and utility costs

- Energy Star qualified 5PX and 9PX UPSs provide unmatched energy efficiency for significantly reduced energy bills.



Extend UPS runtime

- Adding external hot-swappable battery modules, the UPS will run systems for hours if necessary

Configure and check status in a second

- Graphical LCD provides clear information on UPS status, measurements and parameters

Additional features of the 9PX UPS (5-11kVA)

- The 9PX can be paralleled to achieve twice the power of unitary product using HotSync technology, without extra cost on the initial purchase
- The 9PX internal bypass allows service continuity in case of internal fault, a maintenance bypass is also available (as standard on 8kVA and 11kVA) for easy replacement of the UPS without powering down critical systems

Powering virtualized environments

5PX and 9PX Netpack versions are delivered with network connectivity. When paired with Eaton Intelligent Power Manager software they can be easily integrated into your virtualization platform:



- Monitor and manage UPSs from a virtualization dashboard
- Suspend non-critical virtual machines, consolidate critical virtual machines and shut down unused servers to extend battery runtime
- Automate disaster avoidance with a planned migration application, such as VMware Site Recovery Manager and Microsoft Live Migration
- Gracefully shut down virtual machines in case of prolonged outages



Intelligent Power Manager capability by license

Intelligent Power Manager software offers three versions - a Basic edition, Silver license and Gold license.

The Gold license - our premium offering - provides the most complete set of capabilities including the ability to create business continuity policies triggered by third-party power devices in addition to Eaton equipment. The table below outlines the capabilities of each license.

| | Basic [Free] (Up to 10 Power Devices) | Silver (Up to 100 Power Devices) | Gold (More than 100 Power Devices) | Benefits |
|---|---|--|--|--|
| Standard Power Management Features | | | | |
| Protected Servers (IPP) and Virtual Servers | • | • | • | Gracefully shutdown servers |
| Storage Shutdown Module | • | • | • | Remotely shutdown select storage devices |
| Generic Drivers and Third Party Devices | • | • | • | Monitor 3rd party devices via a generic SNMP driver |
| Configuration Policy | • | • | • | Create power & environmental event business continuity policies for groups of devices |
| Control ePDU outlets | • | • | • | Enable policy based control of ePDU outlets |
| Advanced Event Action with Standard Events | • | • | • | Use standard power events in configuration policies |
| Advanced Event Action with Custom Events | - | • | • | Use custom user defined events in configuration policies |
| Generic SSH action | - | • | • | Easily configure custom actions on any SSH enabled device |
| 3rd party power device support | - | - | • | Create business continuity policies on events generated by supported 3rd party devices |

| | Basic [Free] (Up to 10 Power Devices) | Silver (Up to 100 Power Devices) | Gold (More than 100 Power Devices) | Benefits |
|---|---|--|--|---|
| Virtual Infrastructure Features | | | | |
| Plugin for VMware vCenter | • | • | • | Integrate power management into your vCenter environment |
| Plugin for Citrix XenCenter | • | • | • | Integrate power management into your XenCenter environment |
| Basic Power Actions: • Shutdown Storage Devices • Shutdown Virtual Hosts • Shutdown Virtual Machines • Enter/Exit Maintenance Mode | •* | •* | • | Perform basic graceful shutdown actions in business continuity policies by shutting down virtual machines, virtual hosts, shutting down select storage devices and/or by entering/exiting maintenance mode |
| Advanced Power Actions: For VM/Volume: • Load shedding • Shutdown Targeted Virtual Machines • Migrate Virtual Machines to Targeted Hosts | - | •* | • | Reduce power load by integrating policy driven VM load shedding into your business continuity policies Target a specific VM or groups of VMs for shutdown and/or migration in load shedding policies Target VMware vApps for shutdown in load shedding policies |
| For Hosts: • Shutdown VMware vApp • Automate VMware SRM Recovery Plan | | | | Automatically trigger the execution of your VMware SRM Recovery Plan when runtime hits a predefined threshold |
| Virtual IT Infrastructure Level: • Fully virtualized cluster shutdown | - | •* | • | Enable 100% safe shutdown and restore of VMs and host servers in high availability environments |

| | Basic [Free] (Up to 10 Power Devices) | Silver (Up to 100 Power Devices) | Gold (More than 100 Power Devices) | Benefits |
|---|---|--|--|---|
| 3rd Party IT Solution Connectors | | | | |
| Cisco UCS Manager | • | • | • | Dynamically power cap Cisco UCS devices in your business continuity policies |
| NetApp Storage | • | • | • | Trigger the shutdown of NetApp storage devices in your business continuity policies |
| CA Nimsoft | • | • | • | Open IPM from directly within Nimsoft |

| | Basic [Free] (Up to 10 Power Devices) | Silver (Up to 100 Power Devices) | Gold (More than 100 Power Devices) | Benefits |
|--|---|--|--|--|
| Management Packs | | | | |
| Eaton IPM Management Pack for VMware vRealize Operations Manager | - | • | • | Monitor and analyze power information directly from within VMware vRealize |

* Not included for Eaton Essential UPS Models (9E and 93E) and all non Eaton UPS Models. Competitor UPS customers need to purchase Gold License to enable Basic and Advanced virtualization features.

To learn more about Intelligent Power Manager, visit www.eaton.eu/IntelligentPower

Eaton 5PX/9PX UPS Technical Specification

| Technical Specifications | 5PX 1500-3000 | 9PX 1000-3000 | 9PX 5000-11000 |
|---|---|--|--|
| Power factor | 0.9 | 1 | 0.9 |
| Electrical characteristics | | | |
| Technology | Line-Interactive High Frequency (Pure Sinewave, Booster + Fader) | On-line double conversion with Power Factor Correction (PFC) system | |
| Input voltage range | 160V-294V (adjustable to 150V-294V) | 176-276V without derating (up to 100-276V with derating) | |
| Efficiency | up to 99% | up to 94% | up to 95% |
| Connections | | | |
| Input | 1500VA: IEC C14 (10A) 2200/3000: IEC C20 (16A) | 1000/1500: IEC C14 (10A) 2200/3000: IEC C20 (16A) | Terminal block (Harwired) |
| Outputs | 1500VA: 8 IEC C13 (10A) 2200/3000: 8 IEC C13 (10A) + 1 IEC C19 (16A) | 1000/1500: 8 IEC C13 (10A) 2200/3000: 8 IEC C13 (10A) + 2 IEC C19 (16A) | 5-6kVA: Terminal+ 8IEC C13 (10A) + 2 IEC C19 (16A) 8-11kVA : Terminal block + 4 IEC C19 (16A) |
| Switched Outlet Group | 2 groups | 2 groups | 2 goupes (5 & 6kVA only) |
| Batteries | | | |
| Battery management | ABM® and temperature compensated charging method (user selectable), automatic battery test, deep discharge protection, automatic recognition of external battery units. | | |
| Communication | | | |
| Communication ports | 1 USB port, 1 RS232 serial port, dry contacts, terminal block for remote On/Off and remote power Off | | |
| Communication slot | Network-MS card as standard | | |
| Operating conditions, standards and approvals | | | |
| Operating temperature | 0 to 40°C continuous | | |
| Performance – Safety – EMC | IEC/EN 62040-1 (Safety), IEC/EN 62040-2 (EMC), IEC/EN 62040-3 (Performance) | | |
| Approvals | CE, CB report (TUV), UL (9PX only), Energy Star | | |
| Dimensions H x W x D in mm/Weight | | | |
| Nb of U | 2U | 2U | 3U at 5 & 6kVA 6U at 8 & 11kVA |
| | | | |
| Part Numbers | 5PX | 9PX 1000-3000 | 9PX 5000-11000 |
| | 1500VA: 5PX1500iRTN | 1000VA: 9PX1000iRTN 1500VA: 9PX1500iRTN | 5kVA: 9PX5KiRTN |
| | 2200VA: 5PX2200iRTN | 2200VA: 9PX2200iRTN | 6kVA: 9PX6KiRTN |
| | 3000VA: 5PX3000iRTN | 3000VA: 9PX3000iRTN | 8kVA: 9PX8KiRTNBP 11kVA: 9PX11KiRTNBP |

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