

Power Management Solutions



Benefits of using Power Management Solutions

- Real-time notification makes it easy to prevent or analyse possible failures immediately
- Helps to prevent data losses by enabling controlled shutdown of servers and PC operating systems
- View and analyse power events and measured values from recorded logs
- Save time and money with remote equipment control, which removes the need for additional site visits to restart equipment. It also enables prolonged runtime of essential equipment during power outages by allowing orderly remote shutdown of non-critical systems and processes.

Minimize downtime and prevent data loss

In order to get full benefit out of a UPS it needs to communicate with the outside world. IT system administrators need to be informed if power supply is compromised, facility managers have to be notified if temperature rises in the UPS or battery room and service has to be alarmed if there is a component failure in the system. Having the ability to control power systems remotely or automatically opens up new opportunities and can bring huge savings in work effort, energy usage and response time. Controllable power distribution can be used to reboot equipment or turn it off when it is not needed.

Eaton's Power Management Solutions, including software and connectivity products, scale from homes to most mission-critical data centres and from largest factories to unmanned remote observation stations. They link to network, IT, facility, automation and building management systems delivering information to e-mail, mobile devices and Web among others.

In the optimum case sophisticated analysis in power devices themselves or software such as PowerVision® can prevent the risk of downtime. Even in the case where risk is present, a fast delivery of an alarm increases the likelihood that it can be dealt with before there are any consequences to the operation of the powered system. Even in case where power loss can't be avoided, software can help by automatically shutting down systems in a controlled and predefined manner, preventing data corruption on storage devices and databases. Eaton's offices and representatives have experts who can help in designing and installing these solutions.

Protection: shutting down servers

To ensure the integrity of the system and the data, a computer operating system must be shut down in the correct sequence. Dedicated shutdown software must be installed on the servers to execute various functions before the power supply is cut off. These functions include:

- executing a script to close applications running on the server;
- initiating a shutdown sequence or hibernation after a preset timeout or just before total battery discharge;
- rebooting the operating system automatically or manually when the mains power is restored;
- showing UPS alerts to the user.



Powering Business Worldwide

Power Management Solutions

Software Suite

Eaton offers a full line of shutdown and monitoring software products to enhance the protection provided by its UPSs. The Software Suite, conveniently packed on one CD-Rom, follows every UPS free of charge.

NetWatch is a shutdown agent for the ConnectUPS Web/SNMP card. It is a very compact piece of software, but still features powerful configuration options for shutdown actions, timings and user notification.

LanSafe® is a network shutdown software product that currently supports up to 20 operating systems. It ensures controlled sequential shutdown of the whole network across platforms in case of a prolonged power failure. LanSafe allows the shutdown of up to 64 computers protected by a single UPS.

Intelligent Power® Manager is a software tool for managing networked UPS and PDU systems more easily and at lower cost than the major NMS platforms, and is dedicated to power management functions. Administrators have an overall, consolidated view of the main operating parameters of all UPS systems. The web-based interface is intuitive and easy to use while also having high configurability and powerful features.

Intelligent Power Manager centralises alarm management. It can collate several events into a single message and deliver the message via email or SMS.

Intelligent Power Manager is very easy and fast to install. Once running, the software discovers manageable power devices automatically and is operational in just a few seconds.

A version of Intelligent Power Manager limited to 10 monitored devices is available free with each networked Eaton UPS.

PowerVision is performance monitoring and trend analysis software for critical UPSs and multiple UPSs in a network. It stores information about the operation of the UPS device in its relational database where it can be retrieved for display and analysis. PowerVision's alert and notification behaviour is highly configurable, which makes it a great tool for system administrators.

Integrated shutdown controller module can host hundreds of shutdown clients and it can also be used in case of paralleled UPSs. PowerVision's shutdown logic is based on user definable script, which gives almost unlimited flexibility in deciding when to initiate operating system shutdown. The Software Suite CD offers a 30-day trial license of PowerVision Network Edition.

- **Network Edition**, which monitors multiple UPSs in the network.
- **Facility Edition**, which provides support for other equipment in the power chain and more options for parallel systems.
- **Enterprise Manager**, which adds a data view client and support for multiple PowerVision Facility or Network editions.



Linux and Eaton uninterruptible power supplies

For several years Eaton has been actively supporting the trend towards open source software by providing information on our products to the Network UPS Tools development community. For more information on this tool, please see www.networkupstools.org



Software Compatibility

LanSafe	Compatible with	Operating system support*
	3105	Windows 2000/XP/2003/Vista/2008
	5110	VMware ESX 3.5
	5115	Novell NetWare 5.0, 6.0, 6.5
	5125	AT&T SVR4 v.3.0
	5130**	HP UX 10.20, 11.0, 11i (PA RISC) 11i 1.6, 2 (Itanium)
	9120	AIX 4.x (RISC) 4.X, 5.1, 5.2, 5.3 (PowerPC)
	9125	SCO OpenServer 5.0.6, 5.0.7
	9130	Solaris 7, 8, 9, 10 (SPARC, Intel)
	9135**	SGE Irix 6.5 (MIPS)
	9140	Mac OS X 10.2.8, 10.3.X, 10.4.X (PowerPC)
	9155	Red Hat Enterprise Linux 3, 4, 5
	9355	SuSE 8, 9, 10
	9390	SuSe Enterprise Linux Server 8, 9, 10
	9395	Fedora Core 5, 6, 7, 8

Intelligent Power Manager	Compatible with	Operating system support*
	All UPS models with Eaton Web/SNMP card, managed and monitored ePDUs	Windows 2000/XP (Home or Pro) /2003 / Vista / 2008

PowerVision	Compatible with	Operating system support*
	Network Edition	PowerVision Editions
	5115	Windows
	5125	2000 Server, Advanced Server, Professional
	9120	XP Home Edition, Professional
	9125	Server 2003 Standard, Web, Enterprise
	9130	
	9140	PowerVision shutdown agent
	9155	Windows
	9355	2000 Server, Advanced Server, Professional
	9390	XP Home Edition, Professional
	9395	Server 2003 Standard, Web, Enterprise
	Generic third party UPS	
	Generic redundant units (1+1)	UNIX
		HP-UX v. 10.x and higher
		IBM AIX v. 4.x and higher
		Sun Solaris v. 6.x and higher
		SGI Irix v. 6.3 and higher
		Linux (kernel version 2.2 and higher)
		BSD OS v. 4.x and higher
		Novell NetWare
		Netware v. 4.11 and higher, requires TCP/IP

NetWatch OS Support	Compatible with	Operating system support*
	All models with ConnectUPS Web/SNMP card	Windows 2000, XP, 2003, Vista, 2008, VMware ESX 3.5, Novell NetWare, SGI IRIX, HP-UX, IBM AIX, Linux, BSD, SCO, Solaris, Mac OS X

* Check latest information at www.eaton.com/powerquality

** LanSafe v.6 or higher

Power Management Solutions

Connection Options to Manage and Monitor Your UPS

ConnectUPS Web/SNMP card is a complete UPS monitoring, control and shutdown solution in a networked IT environment. In case of alert the Web/SNMP card can notify users and administrators through e-mail and SNMP traps. In case of a prolonged power failure the protected computer systems can be shut down in a graceful manner with NetWatch and LanSafe software. The unique three-port switching hub on the X-Slot model provides additional network connections.

ConnectUPS-X

P/N 116750221-001 for Eaton 5115 RM, 5125, 5125 RM, 9125, 9140, 9155, 9355, 9390, 9395, BladeUPS.

ConnectUPS-BD

P/N 116750222-001 for Eaton 9120 and 9130.

ConnectUPS-E

P/N 116750223-001 is an external model that is connected to a serial port on a UPS.

ConnectUPS-MS

P/N 103006826 for Eaton 5130, 9135.



Environmental Monitoring Probe (EMP) adds temperature, humidity and two contact closure monitoring capability to ConnectUPS Web/SNMP cards. It is well suited for monitoring rack temperature and door status, as well as battery temperature. Operating system shutdown can be triggered if user defined thresholds are exceeded or contact closure status changes. P/N 116750224-001 for all UPSs with a Web/SNMP card installed.



Relay/AS400 cards are an easy connection to IBM AS/400 series computers as well as industrial and building management systems.

P/N 1018460 for Eaton 5115 RM, 5125, 5125 RM, 9125, 9140, 9155, 9355, 9390, 9395, BladeUPS.

P/N 1014018 for Eaton 9120 and 9130.



X-Slot ModBus card connects the UPS to industrial and building management systems using ModBus/JBUS RTU protocol. P/N 103002510-5501 for Eaton 5115 RM, 5125, 5125 RM, 9125, 9155, 9355, 9395.



ViewUPS-X remote display is an LCD panel that lets users view the status of the UPS from as far as 100 m. ViewUPS-X has also four status LEDs and an alarm sound. The display is bundled with a dedicated X-Slot card that also powers the display through the communication cable. In addition to the remote display connection the card has also a SELV isolated relay port for connection to monitoring systems and AS/400 computers.

P/N 1027020 for 5115 RM, 5125, 5125 RM, 9125, 9140, 9155, 9355, 9390, 9395, BladeUPS.

