

# EATON

# Powerware

## Powerware® ConnectUPS Web/SNMP

Product Focus



## Product Snapshot

<b>Type:</b>	Ethernet, Internet connectivity device
<b>Installation:</b>	Hot-plug
<b>Web Browser support:</b>	Internet Explorer
<b>Software support:</b>	LanSafe® software, NetWatch, PowerVision® software
<b>Additional features:</b>	Three-port switching hub (ConnectUPS-X) & optional environmental monitoring



## Features

- Supports real-time monitoring and control of UPSs across the network
- Enables monitoring and control via Web browsers, SNMP-compliant network management systems or power management software
- Delivers alarm notifications through email, to mobile phones, pagers, or SNMP traps
- Enables rapid identification and analysis of critical power conditions
- Logs and graphs detailed historical data to analyze trends
- Uses standard communication protocols on 10 Mb and 100 Mb Ethernet networks
- Performs as a switching hub for three 10/100 Mbps connections (ConnectUPS-X)
- Enables orderly shutdown and restart of remote UPSs
- Supports optional Powerware Environmental Monitoring Probe (EMP) for temperature, humidity and other contact sensor monitoring, management
- User Interface support for local languages (English, Chinese, Spanish, French, German, Italian)
- Operates with optional Powerware probe to monitor environmental conditions at remote sites
- Supports in-service installation and upgrades without interrupting critical loads (most models)
- Complies with the Restriction of Hazardous Substances Directive (RoHS) by EU

With the growth in distributed computing, computing and communication resources reside in multiple remote locations—and so do the uninterruptible power systems (UPSs) that protect them. Powerware ConnectUPS Web/SNMP cards enable you to monitor and control remote UPSs from Web browsers or industry-standard network management systems. A complete family addresses a broad range of Powerware UPS models, installation options (internal, external), communications (Web, SNMP, or both), and network rates (10 Mbps, 100 Mbps, or both):

- ConnectUPS-X connects to the X-Slot™ on a Powerware UPS, supports real-time Web and SNMP (Simple Network Management Protocol)

communication over 10/100BaseT Ethernet connections, and serves as a power-protected switching hub to support three additional 10/100BaseT links

- ConnectUPS-BD supports Powerware UPSs that feature BestDock ports, and provides real-time, Web-based and SNMP-based monitoring and control over 10/100BaseT Ethernet connections
- ConnectUPS-E provides equivalent real-time capabilities in an external device, specifically designed for Powerware 9150 and 9305 UPSs
- ConnectUPS BestLink is an external module specifically designed for monitoring and controlling Powerware Ferrups® UPSs



View critical power parameters over the Web from your PC, mobile phone, or PDA.

Simply point your Web browser to the IP address of the ConnectUPS Web/SNMP card for a display of current status. You can access this information from a PC, Internet-ready wireless device, or SNMP management software.

### Real-time monitoring

Gain up-to-the-minute assurance that computing and communication systems are receiving the continuous, clean power they demand. Through easily navigable Web pages, network administrators can check system status and view critical meter information, such as input and output voltage, UPS load, battery voltage and condition, at any time.

### Visibility via the Web

ConnectUPS-X, ConnectUPS-BD, ConnectUPS-E and BestLink options support standard Web browsers, such as Internet Explorer or Netscape. Displays also have been designed for simplified viewing using mobile phone or PDA (personal digital assistant) browsers - enabling systems managers to stay informed even when away from their mission-critical workstations and servers.

### Integration with standard SNMP management software

You can use an industry-standard network management system (NMS) - such as HP OpenView, IBM Director, Tivoli, or CiscoWorks 2000 - to monitor power conditions across the enterprise and to manage remote UPS systems and the operating systems they protect.



Integrate power protection into your existing SNMP network management system.

Configuration of control settings is fast, easy and password-protected.



### Automatic notification of alarm conditions

ConnectUPS options send real-time alert notifications to four designated recipients via email, PCS mobile phone, or pager, and via SNMP traps to an NMS or network messaging to Powerware NetWatch software. Each recipient has the option of receiving real-time event messages, daily status reports based on criticality, containing data and event log files, or a combination of routine reports and event notifications.

### Remote administration of UPSs

From a Web browser or NMS, which may be hundreds or thousands of miles away, a system administrator can shut down or reboot a remote UPS, perform remote UPS battery tests, and set up scheduled shutdowns of UPSs and associated servers. The ability to shut down or restart systems without a site visit dramatically reduces field service expense and response time. Scheduled shutdowns can be devised to conserve power or tighten security during specific time periods, such as evenings or weekends.



Rapid notification via email speeds corrective action.

### Full support for UPS MIB and beyond

For monitoring and managing remote UPSs through an NMS, ConnectUPS options support not only the standard UPS MIB (management information base) SNMP structure, but also Powerware extensions to that MIB structure, which enable advanced functions that are not addressed in the RFC-1628 standard.

## Orderly shutdown of remote operating systems

When alarm conditions persist for a specified period, from 1 to 600 seconds, the ConnectUPS initiates orderly shutdown of affected equipment. Using NetWatch software (which is included with ConnectUPS products and loaded on the protected computers), up to 255 Windows, Novell, Macintosh, and UNIX/Linux computers can be gracefully shut down without operator intervention. This capability ensures data integrity during a power outage that exceeds UPS backup time.

The system manager automatically receives warning messages when (A) the UPS has shifted to battery power, (B) battery power is getting low, or (C) orderly shut-down procedures are being initiated. You define exactly how to manage this shutdown - such as how long after going to battery power to begin shutdown, and how to stage the shutdown of servers by importance.

If the UPS supports individual control of "load segments" (groups of outlets), the ConnectUPS detects these load segments and provides the appropriate level of service to each, as configured by the system administrator.



Track key parameters with the ConnectUPS data log.

## Track and record detailed historical data

ConnectUPS-X, ConnectUPS-BD, BestLink, and ConnectUPS-E modules have built-in data and event logs that track and record specific power-related occurrences over time, at user-defined increments as fine as one-minute intervals.



Analyze trends with powerful visualization tools.

## Graph historical trends for rapid analysis

A JAVA applet on these four ConnectUPS options graphs data and event log values over time, making it easy to analyze chronic power problems and identify trends and cause-and-effect relationships. Zoom and data masking functions pinpoint specific anomalies for further investigation. Text-based event logs contain easy-to-understand event descriptions with corresponding date and time stamp.

## Integrated switching hub capability

The ConnectUPS-X module serves double duty as a switching hub for three additional power-protected 10/100BaseT Ethernet connections, thereby eliminating the expense of buying a separate switching hub and a UPS to protect it.

## Monitoring remote environmental conditions

ConnectUPS modules operate with the Powerware Environmental Monitoring Probe (EMP) to remotely monitor the ambient temperature and humidity of the remote environment, as well as the status of two additional contact devices, such as a smoke detector or open-door sensor. This information can be used to trigger alarm notifications and automated shutdown.

## In-service installation and upgrades

ConnectUPS modules can be installed without interrupting critical loads, and can be easily updated over network connections. A simple network-based utility is used to discover and update multiple ConnectUPS modules on the network. For detail about features by model—and which ConnectUPS models are right for your Powerware UPSs—refer to the chart on the next page.



Custom-configure shutdown procedures with easy-to-use screens.

# Technical Specifications

MODEL	CONNECTUPS-X	CONNECTUPS-BD	CONNECTUPS-E	BESTLINK
Description	Card providing remote monitoring and control of Powerware UPSs			
Protocol Support	HTTP, SNMP, TFTP, Telnet, BootP, DHCP, WAP, ARP, RARP			
UPS Slot Type	X-Slot	BestDock	External	External
Network Support	Ethernet 10/100BaseT			
Switching hub	Yes (Three 10/100BaseT Connections)		No	No
Temp & Humidity Monitoring	Yes			
UPS Compatibility	see chart below			
Software Support	NetWatch, LanSafe, PowerVision, MultiView, any SNMP compliant Network Management System (NMS)			
Supported MIB	UPS standard MIB RFC-1628, Powerware MIB, MIB II			BestLink MIB
O/S Supported for Shutdown	Microsoft Windows, UNIX, Linux, NetWare and Macintosh (check www.powerware.com for a detailed list of systems supported)			
Local Language Support	English, Chinese, Spanish, French, German, Italian, Portuguese, other			No
Operating Temperature	0 to 40° C			
Operating Humidity	10 – 80%, non-condensing			
Power Input	9VDC unregulated			12V unregulated
Power Consumption	3.5 Watts			
Dimensions: (inches) (mm)	4.7x4.5x1.5 120x114x39	5.3x3.2x1.3 134x81x33	5.3x3.4x1.1 134x86x27	5.3x3.4x1.1 134x86x27
Weight	6oz.	4oz.	6oz.	6oz.
Regulatory	FCC Class B			FCC Class A

## ConnectUPS/Powerware UPS Compatibility

Model	Part Number	Powerware UPSs	Environmental Monitoring Probe
X-Slot ConnectUPS-X	116750221-001	5115 RM, 5125, 9125, 9320, 9330, 9335, 9340 and 9390 via Expansion Chassis: 9120, 9170+, 9315	Yes
Best Dock ConnectUPS-BD	116750222-001	9120 and 9170+	Yes
ConnectUPS-E	116750223-001	9150 and 9305	Yes
BestLink Web/SNMP	IPK-0318	FERRUPS	

## Typical Networked UPS Solution Using ConnectUPS Products



RoHS and WEEE regulate the use and disposal of certain harmful substances. Eaton has voluntarily complied with all RoHS and WEEE standards.

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