Power Xpert® Software

General Description

Power Xpert Software aggregates the information arriving from different types of device families via various communication methods. Its unique Web-based design, alarm bubble-up, and advanced trend and waveform analysis tools help you to quickly turn your attention to the most important events and to identify reliability issues and cost-saving opportunities. The standard custom graphic package, the Layout Manager, with an icon library and standard vertical templates, allows you to import and mimic your physical environment and gauges. Open protocol support makes Power Xpert Software compatible with most newer generation third-party equipment. Older legacy, proprietary protocols are supported by Power Xpert Gateways, and custom software drop-in drivers made available by Eaton. Power Xpert Software is the first power system software of this caliber to put all of these powerful features at your fingertips.

Power Xpert Software provides an easy upgrade path to allow existing PowerNet users to enjoy the benefits of power monitoring through a simple Web browser interface.

Power Xpert is a complete software solution to manage your power system. Critical components such as metering devices, protective relays, circuit breaker trip units, motor starters and uninterruptible power supplies communicate vital information about the health and status of critical infrastructure devices.

Product Selection Guide

Power Xpert Software Professional Edition

- Geared toward end users, with built-in support for Eaton power distribution products such as switchgear, UPSs, breakers, PDUs, RPPs, meters, relays, VFDs and MCCs, among others
- Eaton products connect with the software directly via an Ethernet connection, while legacy devices use a Power Xpert Gateway to Web-enable their communications
- A subset of third-party meters and devices are supported as standard via the gateway connection

Power Xpert Software Enterprise Edition

- Geared toward advanced power users, system integrators and enterprises with heterogeneous device spectrum and system developers who can take advantage of the included SNMP and Modbus integration development utilities
- Extensive support for third-party devices via standard SNMP and Modbus TCP protocols
- Large variety of ready made, optional third-party drop-in drivers available

Features

- Connects to your existing network
- Data trending and graphing for detailed information for trouble-shooting, problem prevention and costs savings
- Web-based views that allow access to critical information from any location via a Web browser
- A modular, scalable architecture that allows the addition of capabilities and devices as the power system expands
- Alarm conditions bubble up through the system to allow personnel to identify which device is in alarm and where it is located
- All the functionality of Eaton's PowerNet software suite
- Connectivity to a wide range of Eaton and third-party devices. For a full list of compatible devices, refer to the hardware compatibility list found at www.eaton.com/pxs

For full details on Power Xpert Software, refer to **Tab 2, Section 2.4**.

Foreseer® Services

Foreseer Software and Engineering Services (Foreseer Services) provide vendor independent, power and energy infrastructure integration solutions that help companies reduce energy consumption and unplanned downtime due to the failure of critical power, environmental, safety or security systems.

Turnkey software and connectivity solutions are coupled with state-of-the-art project management, systems design, third-party device integration, testing and custom application development to develop a comprehensive monitoring solution to meet your custom needs.

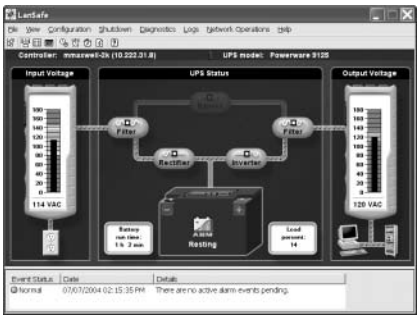
Foreseer Services is delivered in categories, offering a multitude of unique value-add services that you can discuss with your Eaton sales professional.

- Design services
- Installation services
- Commissioning services
- Follow-up services
- Hardware services
- Software services

Foreseer Services is fully distributable to allow different monitoring capabilities to be deployed at different sites, allowing you to purchase only what is needed. Many competitive systems offer a one-size-fits-all type approach where you end up paying for more capacity than is needed. With Foreseer Services, you pay only for what you need, when you need it.

For full details on Foreseer Services, refer to **Tab 2, Section 2.4**.

Eaton LanSafe



Eaton LanSafe

General Description

LanSafe Power management software provides automatic, unattended and graceful shutdown of computer systems throughout the network during an extended power outage. It continuously monitors the UPSs status and automatically notifies defined users locally and remotely about UPS events.

LanSafe can be setup to shutdown a large group of computers running multiple operating systems (e.g. Linux, UNIX, Windows, Novell). It's exclusive SafetyNet™ technology enables network administrators to establish a user-defined sequential shutdown so that the most critical equipment (such as database or file servers) is shut down last, after work in progress is saved from client workstations through hubs, switches, routers and communication servers.

With event notification, one can specify unique text messages associated with each alarm, and to which users the alarms are broadcasted over the network. For remote alarms, the software can initiate an e-mail message to immediately notify users about a power problem.

In addition, LanSafe provides as standard the ability to send SNMP traps to any SNMP compliant network management system (NMS) like HP-OpenView or CiscoWorks 2000. LanSafe also supports the 'GET' and 'SET' SNMP commands, which allows the NMS administrator to periodically enquire all metering information such as input voltage, output voltage, battery health and runtime among others.

LanSafe software is bundled free-of-charge with all Eaton UPSs on the software suite CD-ROM.

Application Focus

- Advanced computer shutdown capabilities
- Basic UPS monitoring and management
- Local and networked single- or three-phase Eaton UPSs
- Third-party UPS support via USB HID and SNMP (RFC1628) standards

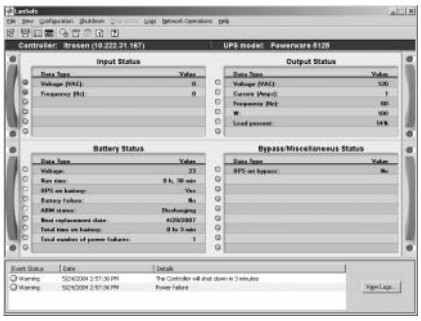
Key Product Features

- Automatically performs a graceful shutdown of the computer system and saves work-in-progress during an extended power outage
- Displays vital UPS information with an intuitive, graphic format for non-technical personnel
- Broad OS support:
  - Compiles a full year of UPS events with a graphical calendar view
- Communicates UPS status change messages via e-mail, pager or cell phone to keep you informed at all times
- Notifies you in advance that it is time to hot-swap your batteries so that your UPS is ready for the next power outage
- Saves electricity and adds security with automatic power-on and power-off scheduling capability
- Helps you determine how much money the UPS and LanSafe is saving you during every power failure due to prevented downtime with a cost savings calculator
- Runs invisibly with stealth mode operation, which is particularly useful when integrating LanSafe into a POS, ATM or other environment where discretion is necessary
- Remotely recycles power of hung-up hubs, routers and computer systems with UPS power on/off capability

Requirements

- Eaton UPS with contact closure, serial, USB or connect UPS network communications
- Third-party UPS support via USB HID and SNMP (RFC1628) standards
- Supported computer operating system, current list available at http://www.powerware.com/Software/Lansafe5.asp
- Configured SMTP server for e-mail notifications
- Computer system supporting minimum system requirements: 200 MHz CPU, 32MB RAM, 30MB HD, SVGA monitor

Monitoring



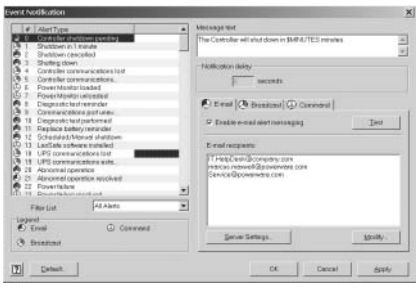
Monitoring

LanSafe can monitor a single UPS at a time via the ControlRoom (screenshot above) or PowerScope views. Other LanSafe installations on the network can be selected for monitoring and management via the file-open controller option.

Communication—Input/Output

- RS-232
- USB
- ConnectUPS Web/SNMP Ethernet network connection
- SNMP via RFC1628 standard

Notification



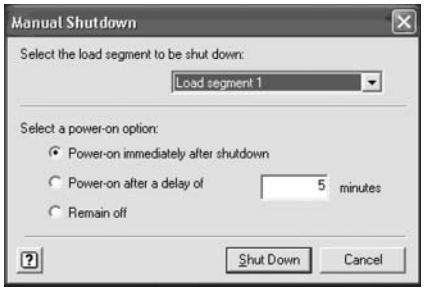
Notification

- Personalized UPS Alarm notifications
- Local event message notification
- Network broadcasts
- E-mail
- Command execution
- SNMP traps
- SNMP proxy agent (GET and SET capability)

Computer Shutdown

Sequential SafetyNet shutdown ensures that all network transactions are completed prior to shutdown. Workstations are shut down first, internet working equipment is shut down next and Servers are shut down last.

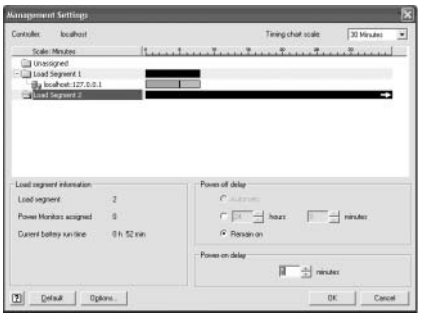
Load Segment Control



Load Segment Control

Doubles the run time for mission critical loads. Turns separate load segments (receptacle groups) on and off at predefined times, or automatically during power outage events. In addition load segments can be turned off and back on again manually over the network or locally.

Diagnostics

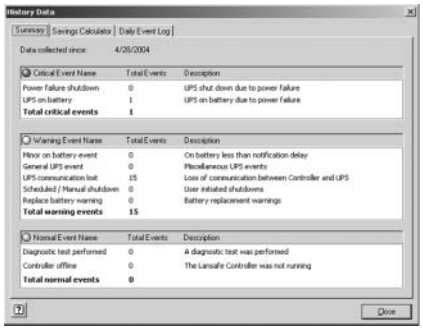


Diagnostics

LanSafe reminds the user ahead of time when the UPS batteries need to be replaced.

The Test Hardware option performs a diagnostic test to verify your UPS is functioning properly. The tests provide information about the UPS battery and internal circuitry and can be initiated either locally or remotely.

Data Archiving/Analysis

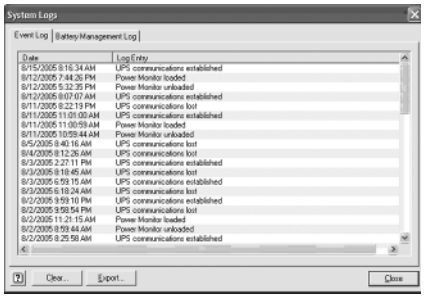


Data Archiving/Analysis

The history data summary displays a cumulative tally of system events that have occurred since LanSafe was installed.

View input, output voltage, output load and battery voltage measurement changes over a period of time in a crisp clear graphic diagram format.

Integration



Integration

- NMS (network management systems, e.g., HP-OpenView, IBM Tivoli, CA-Unicenter, Cisco 2000) via SNMP
- PowerVision network edition for viewing all LanSafe installations on the network
- Other systems via command execution

33

Eaton MultiView

Eaton MultiView

General Description

Windows-based Web browser for monitoring multiple Eaton UPSs via ConnectUPS Web cards and LanSafe v. 5 instances.

Application Focus

- Basic network device monitoring
- Multiple single- or three-phase Eaton UPSs

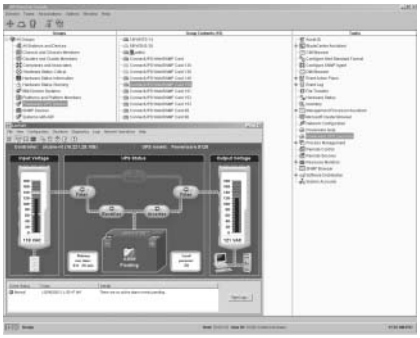
Key Product Features

- Simple monitoring for multiple UPSs connected via ConnectUPS Web/SNMP card and/or LanSafe v. 5
- Status@aGlance™ monitoring capability
- Drill down access to web page details (ConnectUPS Web/SNMP card only)
- Allows user to view multiple web sites simultaneously within a single browser window
- Searches for and automatically adds browser pages of connected ConnectUPS Web/SNMP cards as well as the Status@aGlance monitoring feature from the Eaton LanSafe v. 5 software

Requirements

- Eaton UPS
- Windows operating system
- Eaton connectivity device, e.g., serial card or ConnectUPS Web/SNMP

Eaton Extensions for IBM Director



Eaton Extensions for IBM Director

General Description

Plug-in software for IBM director network management system that allows network system administrators to monitor, diagnose, configure, set alarms, schedule self-tests, check battery, gather inventory information, and control Eaton UPSs network-wide from a single console within IBM director.

Application Focus

- Network management system integration
- Multiple single- or three-phase Eaton UPSs

Key Product Features

- Network monitoring and control software for all UPSs in the network
- UPS control and power management for IBM director system administrators
- Seamless integration of UPSs into the IBM director management console
- UPS Inventory management
- Central log for UPS events

Requirements

Primary computer running IBM director version 5.1.

Integration

Installing the Eaton extensions for IBM director enables the user to easily and automatically integrate Eaton UPSs into the IBM director environment.

Eaton NetWatch

General Description

NetWatch client UPS software enables users to shutdown a server or workstation and acts as a network-monitoring tool through the Eaton ConnectUPS-X, ConnectUPS-BD or BestLink SNMP/WEB Adapter connectivity devices. During an extended power outage, the SNMP/WEB adapter informs all registered NetWatch clients to shut down their respective operating systems, thus preparing them for the removal of AC power.

Application Focus

- Basic network device monitoring
- Multiple single- or three-phase Eaton UPSs

Key Product Features

- Shutdown up to 255 computers dependent upon power from a Eaton UPS
- Popup messaging on Windows to notify UPS on battery conditions

Requirements

- Eaton UPS
- Computer or server running an operating system supported by CoreLogic
- UPS-native or Eaton X-Slot communications supporting serial, USB or SNMP

Shutdown

Computer shutdown is achieved through the use of NetWatch software. The shutdown message is sent in the form of a network broadcast from the ConnectUPS or BestLink connectivity card to all available NetWatch clients on the network. In the event of a power failure all clients are notified to shutdown based upon their local settings.

Eaton Modbus Profiler

General Description

Profiler is a power management and UPS software tool that creates a Modbus register map for a particular Eaton UPS. It reads the available parameters in a UPS and compares them with a list of universally supported Modbus parameters. If the parameter in the UPS and parameter in the master list both exist, then the Profiler program reports the supported parameter.

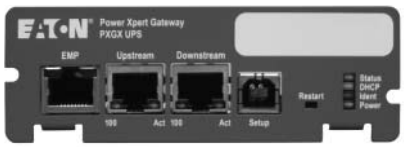
Intelligent Power Software Suite

Intelligent Power Software Suite

General Description

The Intelligent Power® Software Suite CD ships with Eaton UPSs and delivers the latest power monitoring and management software. This software works in conjunction with your UPSs and other power devices to provide a total power solution for your network. Perfect for virtualized environments, the software suite even integrates seamlessly with VMware's vCenter Server™ and Microsoft's SCVMM™.

Power Xpert Gateway UPS Card—Uninterruptible Power Supplies



Power Xpert Gateway UPS Card

General Description

The Power Xpert Gateway UPS Card (PXGX UPS) provides Web-enabled, real-time monitoring of Powerware Uninterruptible Power Supplies (UPS) through standard on-board Web pages, Power Xpert Software or third-party software.

An integral part of the Power Xpert Architecture, which provides end-to-end PowerChain solutions, the PXGX UPS provides a central point to connect distribution products to an Ethernet network.

Features

Information is presented in organized, user-friendly Web pages and includes the following:

- UPS system identification
- Voltage
- Current
- Frequency
- Energy
- Output Power
- Power—full load %
- Battery information
  - History and maintenance
  - Run time remaining
  - Voltage
  - % battery left

For full details on the Power Xpert Gateway UPS card, see **Tab 2**, **Section 2.3**.

33

ConnectUPS Web/ SNMP Products

ConnectUPS Web/SNMP Products

General Description

The Eaton ConnectUPS Web/SNMP product family provides seamless Eaton UPS integration into the Ethernet network and the Internet. The built-in Web server allows the users to monitor and manage the UPSs through the ConnectUPS via a standard Web browser.

HTTP, SNMP, SMTP, WAP, Telnet compatibility and a console port enable dynamic and versatile support for a large variety of system configurations.

When used in conjunction with NetWatch client software, the ConnectUPS products also provide graceful shutdown of operating systems of up to 255 computers powered by a single UPS.

Application Focus

- Ethernet, Internet connectivity device
- Graceful shutdown functionality when used in conjunction with NetWatch power management software
- Integration to standard SNMP, HTTP, WAP, SMTP compliant applications

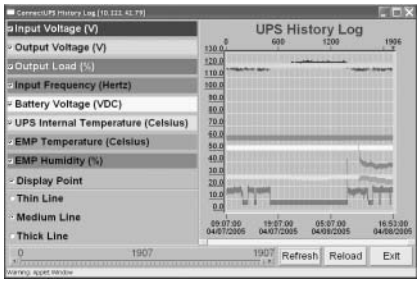
Key Product Features

- 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 e-mail, 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 10/100Mbps connections (ConnectUPS-X)
- Enables orderly shutdown and restart of remote UPSs
- Supports optional Eaton 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, other
- Interworks with optional Eaton probe to monitor environmental conditions: temperature and humidity at remote sites
- Supports in-service installation and upgrades without interrupting critical loads (most UPS models)

Event Notification

ConnectUPS products send real-time alert notifications to four designated recipients via e-mail, PCS mobile phone, or pager, and via SNMP traps to an NMS or network messaging to Eaton 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.

Monitoring



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.

ConnectUPS-X, ConnectUPS-BD, and ConnectUPS-E products 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.

Communication—Input/Output

- 10/100 Ethernet
- 3-port switching hub (ConnectUPS-X model only)
- HTTP
- SNMP
- SMTP
- WAP
- Telnet

Management

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.

Integration

- Network management systems (NMS) via SNMP
- Mobile phones via WAP
- Optional EMP (environmental monitoring probe) for temperature and humidity monitoring

Load Segment Control

Turns separate load segments (receptacle groups) on and off at predefined times, or automatically during power outage events. In addition load segments can be turned off and back on again manually over the network or locally.

Information Tables

Table 33.4-1. Technical Specifications

Model	ConnectUPS-X	ConnectUPS-BD	ConnectUPS-E	BestLink
Description	Card providing remote monitoring and control of Eaton UPSs			
Protocol support	http, SNMP, TFTP, Telnet, BootP, DHCP, WAP, ARP, RARP			
PS slot type	X-Slot	BestDock	External	External
Network support	Ethernet 10/100Base-T			
Switching hub	Yes (three 10/100Base-T connections)		No	
Temperature and humidity monitoring	Yes			
UPS compatibility	See chart below			
Supported MIB	UPS standard MIB RFC-1628, Eaton MIB, MIB II, 2003			BestLink MIB
?/S supported or shutdown	Microsoft Windows 9X, ME, 2000/NT and XP, Various UNIX (including Linux) Versions, Novell NetWare, Macintosh			
Operating temperature	0–40°C			
Operating humidity	10–80%, noncondensing			
Power input	9 Vdc unregulated			12V unregulated
Power consumption	3.5 watts			
Dimensions in inches (mm)	4.70 x 4.50 x 1.50 (119.4 x 114.3 x 38.1)	5.30 x 3.20 x 1.30 (134.6 x 81.3 x 33.0)	5.30 x 3.40 x 1.10 (134.6 x 86.4 x 28.00)	5.30 x 3.40 x 1.10 (134.6 x 86.4 x 28.0)
Weight	6 oz.	4 oz.	6 oz.	6 oz.
Regulatory	FCC Class B			

Table 33.4-2. ConnectUPS/Eaton UPS Compatibility

Model	Part Number	Eaton UPSs	Environmental Monitoring Probe
X-Slot ConnectUPS-X Kit	116750221-001	5115 RM, 5125, 9125, 9320, 9330, 9335, 9340, and 9390 via expansion chassis: 9120, 9170+, 9315	Yes
Best dock ConnectUPS-BD kit	116750222-001	9120 and 9170+	Yes
ConnectUPS-E kit	116750223-001	9150 and 9305	Yes
Best Link Web/SNMP Kit	116750225-001	FERRUPS	—

33

Relay Products

Relay Products

General Description

Eaton relay interface cards enable automatic shutdown and network monitoring of Eaton UPS system status through a connected computer.

The relay interface cards are available in two models, the X-Slot version and BestDock version. Both are dedicated adapters that provide the essential dry-contact interface between an Eaton UPS and any relay-connected computer, including the IBM AS/400, as well as a variety of industrial applications.

Application Focus

- Basic network device monitoring
- Multiple single- or three-phase Eaton UPSs
- Single UPS and parallel systems (single/three phase UPS)

Key Product Features

- Simple integration with building and security alarm systems
- Compatibility with simple shutdown methods, i.e., IBM AS/400 and Windows UPS service
- Option available for all UPS models excluding 3110,3115, 5115 (tower) models
- Isolated Form-C relay contacts
- Compatibility with simple shutdown methods, i.e., IBM AS/400 and Windows UPS service

Requirements

- Compatible Eaton UPS
- IBM AS/400 cable to connect between DB-15 port on card to computer

Monitoring

Monitoring is accomplished though the use Eaton relay products that provide alarm information via Form-C dry contacts that are connected the customer alarm panel.

Management/Shutdown

IBM AS/400 computer shutdown is achieved by using the computer port on the Eaton relay cards for use with all X-Slot compatible UPS models along with the appropriate cable. For information on AS/400 cables available for all relay products please refer to either the Eaton single- or three-phase UPS price lists.

Integration

Simple integration with building management systems or building alarm systems can be achieved by connecting the Form-C dry contact outputs from the relay product to the digital inputs on the I/O controller provided by the BMS or security alarm vendor.

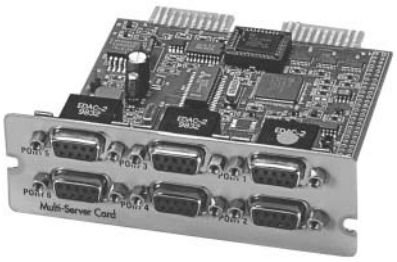
Ordering Information

Table 33.4-3. Ordering Information

Product Name	Part Number
Relay card (X-Slot)	1018460
Relay card (BD)	1014018
Relay interface adapter	103001185-002
Industrial relay card	103003055

Serial Protocol Products

Multi-Server Card



Multi-Server Card

General Description

The multi-server card is a power quality connectivity product designed to enable multiple devices connected to a single UPS system to be managed and controlled independently.

This multi-server card is designed to function with any Eaton UPS that has an X-Slot communication device, and is also compatible with Eaton expansion chassis. The multi-server card has six serial ports, three of which correspond with the multiple load segments of your Eaton UPS. By using multiple serial cables and LanSafe software, you can perform simultaneously yet independent monitoring and control of up to six servers with a mixture of operating systems.

Application Focus

Single UPS module and parallel systems (single/three-phase UPS)

Key Product Features

- Multiple serial ports provide greater power management control and flexible monitoring
- LanSafe compatibility provides simultaneous monitoring of computer loads
- Allows user to configure each server to provide a graceful shutdown at the optimum time desired
- Works with multiple operating systems
- Independent control of serial ports gives load shedding capability for maximum runtime of critical loads
- Simultaneously provides RS-232 monitoring and relay output monitoring
- Plug and Play (PnP) protocol for easy configuration

Monitoring

Monitoring is achieved through RS-232 serial communications between the connectivity device and the host computer running LanSafe.

Table 33.4-4. Technical Specifications—Dimensions in Inches (mm)

Part Number	05146447-5502
Description	X-Slot card with multiple Serial connections for serial communications with Eaton UPS
UPS compatibility	PW 5125, PW 9125, PW 9330, PW 9340, expansion chassis
Serial cable	PN 124102022-002
O/S supported for shutdown	All O/S supported by Eaton Lan Safe operating temperature 0–40°C
Operating humidity	10–80% noncondensing
Power input	9 Vdc unregulated
Power consumption	1.5 Walls
L x W x H	4.7 x 4.5 x 1.5 (120 x 114 x .39)
Weight	7 oz.
Regulatory	FCC Class A

33

Eaton Modbus Card

Eaton Modbus Card

General Description

The Eaton Modbus Card is an X-Slot Eaton UPS connectivity device that provides continuous, reliable and accurate remote monitoring of a Eaton UPS system through a building management system (BMS) or industrial automation system (IAS).

The card provides the means to integrate data from the Eaton UPS into the user-provided management system using Modicon®, Modbus RTU protocol. Key power quality and UPS status information may be monitored in real-time to aid in the management of the UPS and notification of potential power problems.

33

Application Focus

- Single UPS module and parallel systems (single/three-phase UPS)
- BMS/IAS integration

Key Product Features

- Real-time monitoring of power conditions through building management systems (BMS)
- Supports Modbus RTU/Jbus protocol
- Seamless data integration via included Profiler software package
- Flexible input/output communication methods: RS-232 and RS-485 multi-drop (network)
- Optically isolated communication ports
- User-selectable communication topologies
- Supports wide range of UPSs via native Eaton X-Slot UPSs or via Eaton expansion chassis
- Eaton Modbus profiler utility provides exact UPS parameter list (register map) for BMS data integration
- Supports both commands 02 (read input status) and 04 (read input register) from a BMS query
- Compatible with common BMS platforms such as: Siemens Apogee, JCI Metasys, Honeywell EBI, Liebert SiteScan, and Invensys Climate Controls

Requirements

Eaton expansion chassis required for UPS models without communication slots.

Note: Modbus Card is included with the expansion chassis as standard.

Integration

UPS data is easily integrated into the building management system by connecting the UPS into the RS-485 power and environmental device network which in turn gets converted to Ethernet for easy access by the BMS host computer running the management software.

Table 33.4-5. Ordering Information

Product Name	Part Number
Modbus Card	103002510-5501

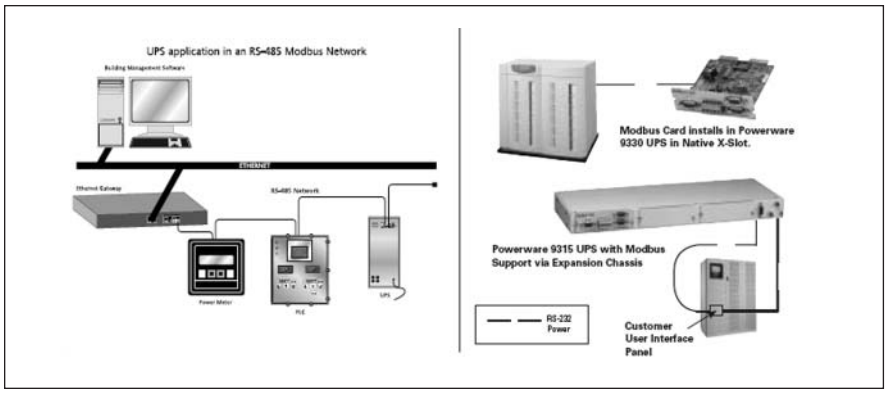


Figure 33.4-1. Typical Configurations and Installation Methods

Table 33.4-6. Technical Data and Specifications

Part Number	103002510-5501		
Description	X-Slot card providing integration with Modbus network and monitoring of associated UPS through building management system (BMS)		
Modbus command support	Read input status (alarms and status points, function 02) read input register (meters, function 04)		
Profiler	Automatically generates Modbus register map for each UPS (Windows 32 application)		
Configuration	Via VT-100 terminal emulation through DB-9 port		
Baud rate	Selectable 1200 to 19.2 k		
Slave address	Selectable 1 to 247		
Network connections	RS-485 through isolated terminal block or DB-9 port RS-232 through DB-9 port		
Communications topology	Selectable two-wire or four-wire		
Additional hardware features	Selectable termination resistance Selectable polarity resistance		
UPS compatibility via native X-Slot	Eaton 5125, 9125, 9170+, 9330, 9340, 9390		
UPS compatibility via expansion chassis	Eaton Prestige 9	Eaton 5115	Eaton 9315 Hot Sync parallel redundant module
	Eaton Plus 12, 18, 36	Eaton 9120	Eaton 9315 Hot Sync parallel capacity UPM;
	Eaton 9315 reverse transfer module	Eaton 9170+	Eaton 9315 Hot Sync parallel capacity SBM
Operating temperature	10° to 40°C		
Operating humidity	20–80% relative humidity (noncondensing)		
Power input	9 Vdc unregulated		
Power consumption	1.5 Watts		
Dimensions in inches (mm)	4.70 L x 4.50 W x 1.50 H (119.4 L x 114.3 W x 38.1 H)		
Weight	7 oz		
Regulatory	FCC Class B		

Expansion Chassis

Expansion Chassis

General Description

The expansion chassis is a three-slot power quality peripheral device that expands communication methods for a UPS through its support for X-Slot cards. It comes pre-configured with a card that conforms to the Modicon, Modbus protocol.

Application Focus

- Single UPS module and parallel systems (single/three-phase UPS)

Key Product Features

- Creates wide array of communication options for UPSs
- Primary focus on Eaton 9315 UPS models to enable use of new X-Slot communication cards
- Acts as the framework for protocol conversion via compatible X-Slot cards to: Modbus; SNMP; HTTP
- Built-in Modbus card provides integration of UPS information into building management systems
- Compatible with X-Slot cards: Modbus card (one included); ConnectUPS-X SNMP/Web adapter; ConnectUPS-M SNMP module; single port serial card; multi-server card
- Flexible mounting options
- Redundant power inputs

Integration

The expansion chassis and associated cards effectively act as a protocol converter easily integrating the Eaton UPS into open architecture management systems. This device may be placed on or close to the associated UPS system using the included mounting feet. The kit includes brackets for rack and wall mounting.

Two additional slots are available for use with any of the following cards:

- A ConnectUPS™-X SNMP/Web adapter—monitor via SNMP or the Web
- A ConnectUPS-M SNMP module—monitor via simple network management protocol (SNMP)
- A single port serial card—connect an additional server for monitoring and graceful shutdown
- A multi-server card—connect up to three servers for monitoring and graceful shutdown, supports load segment control and RS-232 signals for low battery and AC fail
- A Modbus card—connect to another Modbus network, monitor via BMS

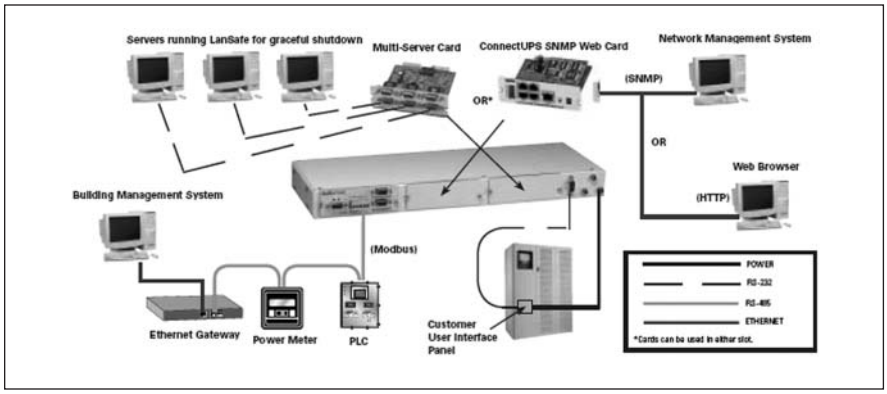


Figure 33.4-2. Typical Configuration

Table 33.4-7. Technical Data

Part Number	**05147063**
Description	Adds Modbus card plus two additional slots for X-Slot communication cards to supported UPSs
Included card	Modbus card
Optional cards	ConnectUPS-Web/SNMP-X xHub card
	ConnectUPS-M SNMP module
	Single port serial card
	Multi-server card
	Additional Modbus card
Communication with UPS	DB-9 via Included serial cable
UPS compatibility	Eaton 5115; Eaton 5125; Eaton 9120; Eaton 9125; Eaton 9155; Eaton 9170+; Eaton Prestige 9; Eaton Plus 12, 18, 36; Eaton 9315 Reverse Transfer Module; Eaton 9315 Hot Sync Parallel Redundant Module; Eaton 9315 Hot Sync Parallel Capacity UPM; Eaton 9315 Hot Sync Parallel Capacity SBM; Eaton 9320; Eaton 9335; Eaton 9390
Mounting	Stand-alone (ft), rack (19 inches, 483 mm), or wall mount
Operating temperature	10° to 40°C
Operating humidity	20 to 80% relative humidity (noncondensing)
Power input	Switchable 230/120 Vac, 50/60 Hz (via included transformer)
Power consumption	6 watts maximum
Dimensions in inches (mm)	18.00 x 1.75 x 6.00 (457.2 x 44.4 x 152.4)
Weight	6 lbs (including 1 lb for power supply)
Regulatory	FCC Class B

This page intentionally left blank.