POWERWARE®
UNINTERRUPTIBLE POWER SYSTEMS

PowerVision®
UPS Power Management Software for Enterprises

Features and Benefits

▶ Real-time, enterprise-wide monitoring analyzes critical power conditions and identifies problems

▶ Drill-down monitoring of individual meter or status for the UPS isolates the issue and speeds diagnosis

▶ Monitoring via client (local or remote), server, the Web (computer or PDA) or optional Building Management System interface provides easy "anywhere/anytime" access

▶ PowerVision's scalable architecture allows network managers flexibility in extending the umbrella of protection across the enterprise.

NEW ▶ Supports Powerware 9315 Hot Sync Parallel Redundant UPS monitoring

NEW ▶ Optional Emergency Computer Shutdown provides graceful, unattended, enterprise-wide shutdown of computers to protect critical data.

▶ Alarm notification through any combination of alphanumeric paging, SMTP email or optional SNMP traps speeds corrective action

▶ Customizable alarms tailor notification to user needs

▶ Powerful data collection, graphing and report writing toolset provides trend analysis and diagnosis of chronic power problems

With the increasing complexity of today's networks, power issues are becoming more critical to IT, Process and Manufacturing Control and Telecom functions. Seamlessly integrated, enterprise-wide power protection systems are needed to protect business-critical information. Well-engineered UPS hardware, redundant power systems and advanced battery technology, while very important, are simply not enough to assure system availability. With PowerVision, an umbrella of protection can be placed on the entire business moving it closer towards zero downtime.

PowerVision is a Windows®-based client/server software package that provides real-time monitoring of critical power conditions for the entire enterprise down to a single channel (or parameter) of the UPS. Channels consist of either meter or status information. Users are immediately notified of an alarm condition through graphical or textual means via pop-up dialog box, audible alarms or blinking, color-coded icons. Configuration flexibility allows users to tailor the system to meet their needs. PowerVision's optional Modbus®, gateway provides full-integration with popular Building Management Systems (BMS).

PowerVision users can take advantage of a variety of alarm and message management utilities for rapid problem reporting. These methods include: alphanumeric paging, SMTP email and optional Simple Network Management Protocol (SNMP) traps. Customization of alert mechanisms aid network managers in developing strategies unique to their businesses.

Complementing PowerVision's monitoring and alarm features is an optional operating system shutdown capability. This feature provides unattended, enterprise-wide, graceful shutdown of computers to protect data in the event of an extended power failure. Numerous popular operating systems are supported.

PowerVision's integrated data analysis tools provide dynamic, intuitive and intelligent information that can be used to identify trends and develop cause-and–effect relationships. This aids in the trouble shooting and ultimate resolution of power problems. The suite of capabilities includes: real-time/historical graphing and report generation. Data files are created in an ODBC compliant format for sharing with other database programs.

With PowerVision, companies can be confident that they have implemented a comprehensive, fully integrated monitoring system that will help ensure the highest availability of power for their mission-critical systems.

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Real-time Monitoring

PowerVision provides a powerful set of tools for monitoring all of the UPSs in a power system. It gives system managers the flexibility to monitor critical power conditions from a top-level view of an entire enterprise down to a single channel of the UPS. Blinking/color coded icons and text messages alert users immediately of an alarm condition so that further investigation may be initiated and corrective action taken. PowerVision supports a full array of UPS systems (see back cover) ranging from 1 to 750 kVA.

PowerVision Monitoring

The PowerVision monitoring user interface is simple and intuitive yet powerful. It consists of a series of easily navigable screens that provide a key method of notification of a problem and a quick way to investigate this problem.

▶ The System Overview consists of a set of icons representing the monitored UPSs. If a problem occurs the icon(s) blinks and changes color alerting the observer. The user customizes this screen not only by naming the UPSs but also by grouping UPSs into folders, if desired. This grouping feature helps visually simplify complex networks by seg-regating equipment by physical location or other user-defined criteria. Double-clicking on a folder reveals the UPSs it contains.

▶ The One-Line View is an image of the major components of a UPS.

▶ The Meters View is a real-time summary of key parameters and their values.

▶ The Status View is a real-time indicator of the current state of critical channels.

System Overview

One-line View

**Status View**

Meters View
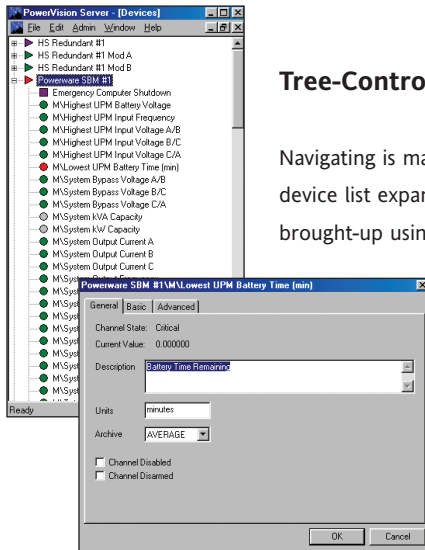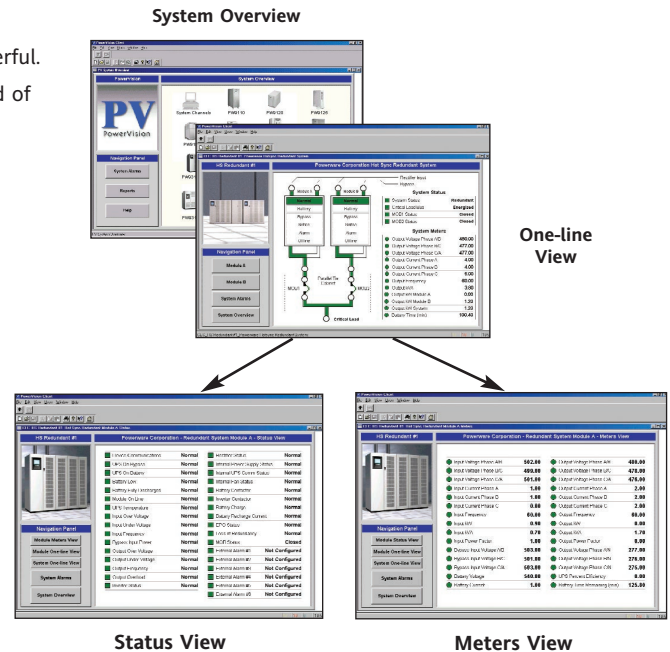
Tree-Control Navigation

Navigating is made easy through the Device window. The window displays all the UPSs and status information. The device list expands to retrieve more detailed information for a particular UPS. Channel-specific data may then be brought-up using the properties dialog box.

Monitoring Via the Web

Monitoring the Powervision Server via the Web is quick and easy. A device page containing links to all devices (on the server), alarms and reports provides the user with password protected access to critical information. Detailed meter and status information are contained in a single view. The PowerVision Server application also supports remote monitoring by popular personal digital assistants (PDAs).
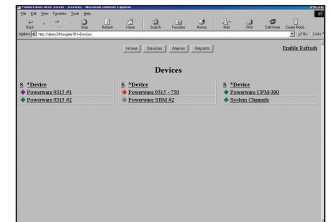
Data Trend Analysis and Reporting

PowerVision's integrated data analysis tools provide dynamic, intuitive and intelligent information that can be used to identify trends and develop cause-and–effect relationships to aid in the trouble shooting and ultimate resolution of power problems. Data files are created in ODBC compliant format for sharing with other database programs.

Real-Time and Historical Graphing

PowerVision has powerful built-in graphing capabilities to help in problem analysis including:

▶ Burst Graph – real-time graph of up to 20 channel traces; e.g. input voltage, battery voltage, etc.

▶ Historical Graph – extrapolation of historical data to determine trends and help predict potential future alarm conditions

▶ Projection Graph - accurately predict battery runtime and/or proactively size future UPS capacity based on extrapolation of current power trends

Historical

Burst

Projection
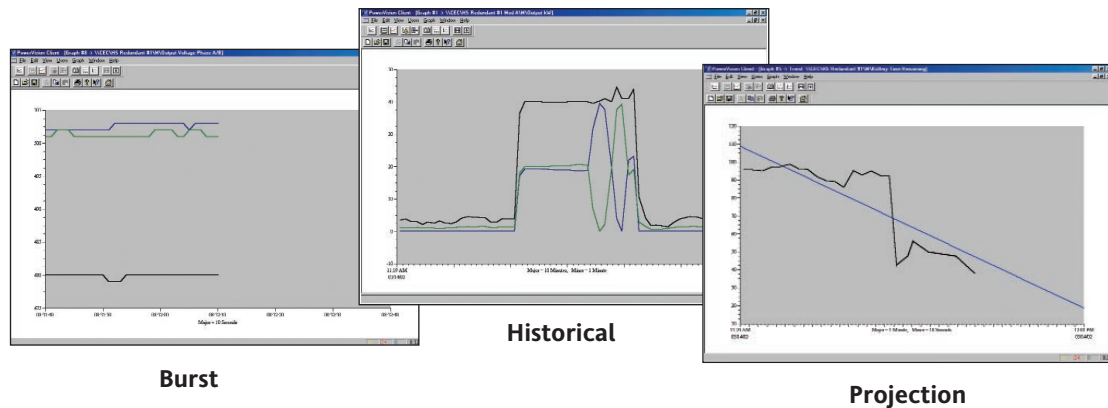
Report Generation

PowerVision has a robust, built-in report writing tool. Users may choose from a variety of predefined reports such as: Alarm History (1, 7 or 30 day), Notes History (1, 7 or 30 day) and a log file report of administrative functions such as logon/off, alarm acknowledgement, etc. Users may also develop custom reports. Reports are in ASCII format and may be viewed by any standard text viewer.

UPS Alarm Log

Notes History

System Alarm History

System Requirements/ Technical Summary

Supported Operating Systems for Emergency Computer Shutdown
Microsoft® Windows 98 & Me
Microsoft Windows NT 4.0, 2000 & XP
Novell® NetWare® 4.11 (TCP/IP required) and higher
IBM® AIX® 4.2 and higher
Sun™ Solaris™ (SPARC) 2.6 and higher
HP-UX 10.2 and higher
Linux (with kernel version 2.2)

Supported UPSs
Powerware 9 Prestige
Powerware 9110
Powerware 9120
Powerware 9125
Powerware 9150
Powerware 9170+
Powerware 9305
Powerware 9315 Reverse Transfer Module
Powerware 9315 Hot Sync Parallel Redundant Module
Powerware 9315 Hot Sync Parallel Capacity UPM
Powerware 9315 Hot Sync Parallel Capacity SBM
Powerware 9330
Powerware 9340

Typical Data Channels	
Meters	**Status**
Input/output voltage	AC input under voltage status
Battery voltage	UPS on battery status
Percentage load	UPS on Bypass status
Bypass voltages	UPS output under voltage status
Frequency	UPS output current over 100% status
Battery runtime remaining	UPS over temperature status
Phase-to-phase neutral/phase-to-phase voltages	

System Requirements

The following minimum system configuration is necessary:

▶ A personal computer with mouse, CD-ROM, and a 200 MHz Pentium processor or compatible (Recommended: 366 MHz)

▶ An 800 x 600 VGA monitor (Recommended: 17", 1024 x 768, 256-color super VGA with a 1 MB video card)

▶ Microsoft Windows 95/98 or Windows NT operating system

▶ 32 MB RAM (Recommended: 64 MB)

▶ 256k CPU cache

▶ 250 MB of available hard disk space (Recommended: 1.5 GB; depending on the number of devices being monitored)

▶ Network interface card for Ethernet or Token-Ring

Optional equipment includes:

▶ ConnectUPS™ SNMP/Web Card

▶ ConnectUPS SNMP Module

▶ Serial hub expander for connections to an Ethernet network

▶ Tape back-up for archiving data and system configurations

▶ Local printer for hard copy outputs

▶ Sound card for assigning sounds to specific alarm conditions

▶ 28,800-baud modem for remote access

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