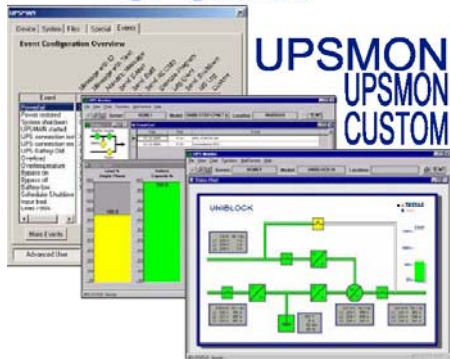
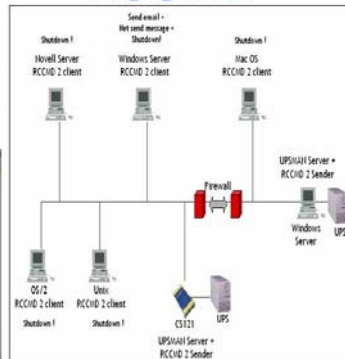


UPSMAN



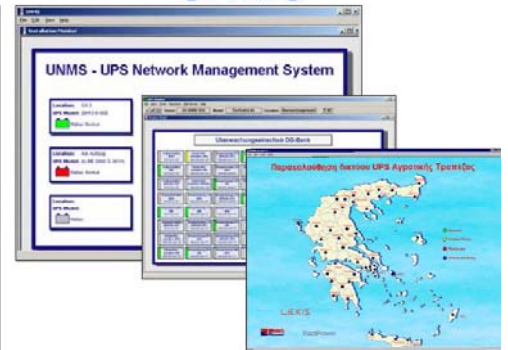
event and scheduling configuration module and graphical monitoring interfaces

RCCMD



network shutdown messaging and command client module for heterogeneous networks

UNMS

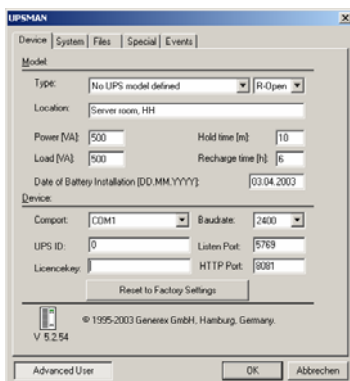


multiple UPSMAN administration tool UNMS LIGHT (free version), UNMS PRO (SNMP enabled) and UNMS CUSTOM (tailored interface)

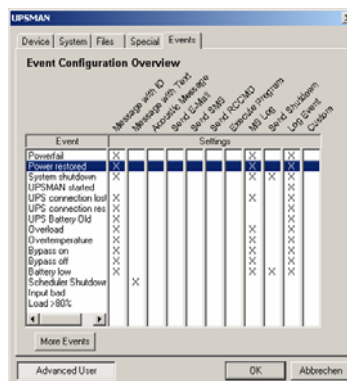
Description

The **UPS-Management Software** is a collection of client/server modules for networks and local workstations for monitoring the status of system resources and managing operations in response to changing conditions. While just one single component module, UPSMAN, would suffice for managing a simple UPS system at the most basic level, the collection of different modules can be scaled and combined to form very elaborate and sophisticated intelligent facility management systems. These systems can range from one server serially connected to single UPS in one building to a wide area network consisting of thousands of clients of various operating systems secured by diesel aggregates, battery conglomerates and other alternative UPS systems spread out over international borders.

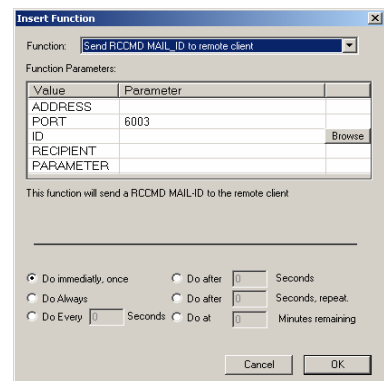
The server module of the UPS-Management Software is **UPSMAN**, which communicates via RS-232, USB or SNMP with the UPS or the UPS SNMP adapter. When UPSMAN begins, it collects the messages sent from the UPS and interprets received messages to alarm the administrator/user. Graphically all the UPSMAN actions can be monitored using the client modules Windows UPSMON or UNMS, JAVAMON and USW or any web browser. The UPSMAN is able to manage UPS systems with potential free contacts or serial interfaces (RS-232) from more than 50 UPS manufacturers. 80% of the UPS products in the world are supported through UPSMAN or the CS121 today.



UPSMAN configuration - Main page



UPSMAN Event configuration - comfortable overview of all events and their corresponding actions.

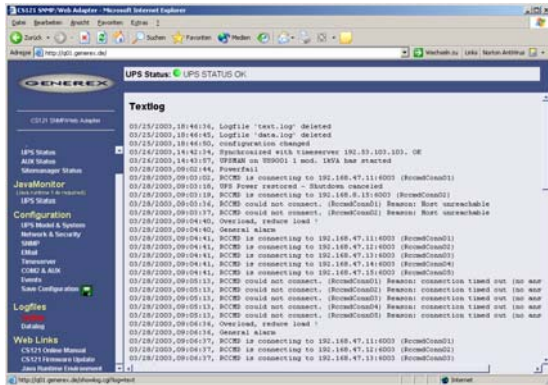


UPSMAN insert Event function – every event can be individually programmed with responses, such as text log entry, email/SMS notification etc.

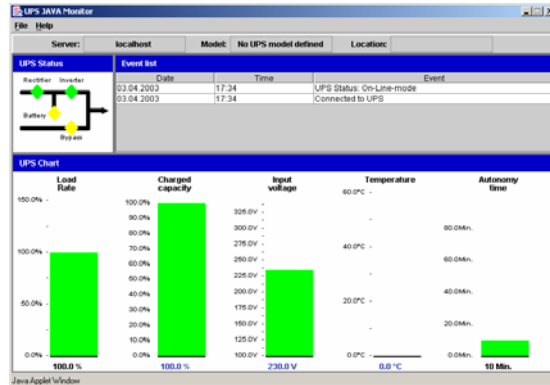
Description

If UPSMAN detects voltage variations, power loss or any other UPS condition it can respond with a wide variety of **ACTIONS** to each different **EVENT**, which for example may shutdown the server or send warnings and emails to connected users. The user can alter the configuration in respects to network messaging, sending of email or SMS, **RCCMD** (Remote Console Command) shutdown, etc.

At the moment 12 languages are supported. UPSMAN for Windows NT/ 2000/XP/2003Server, Novell Netware and UNIX have an SNMP proxy agent, which translates all UPS data into SNMP format. This allows for NMS software like HP Openview, IBM Netview and others to utilise its own processing tools. Every UPSMAN comes with its own WEB-server, that allows the monitoring or configuration from remote using any standard WEB-browser. UPSMAN runs also on less widely spread platforms like DEC VMS/Compaq and APPLE MAC X – and of course, inside the CS121 web adapter.

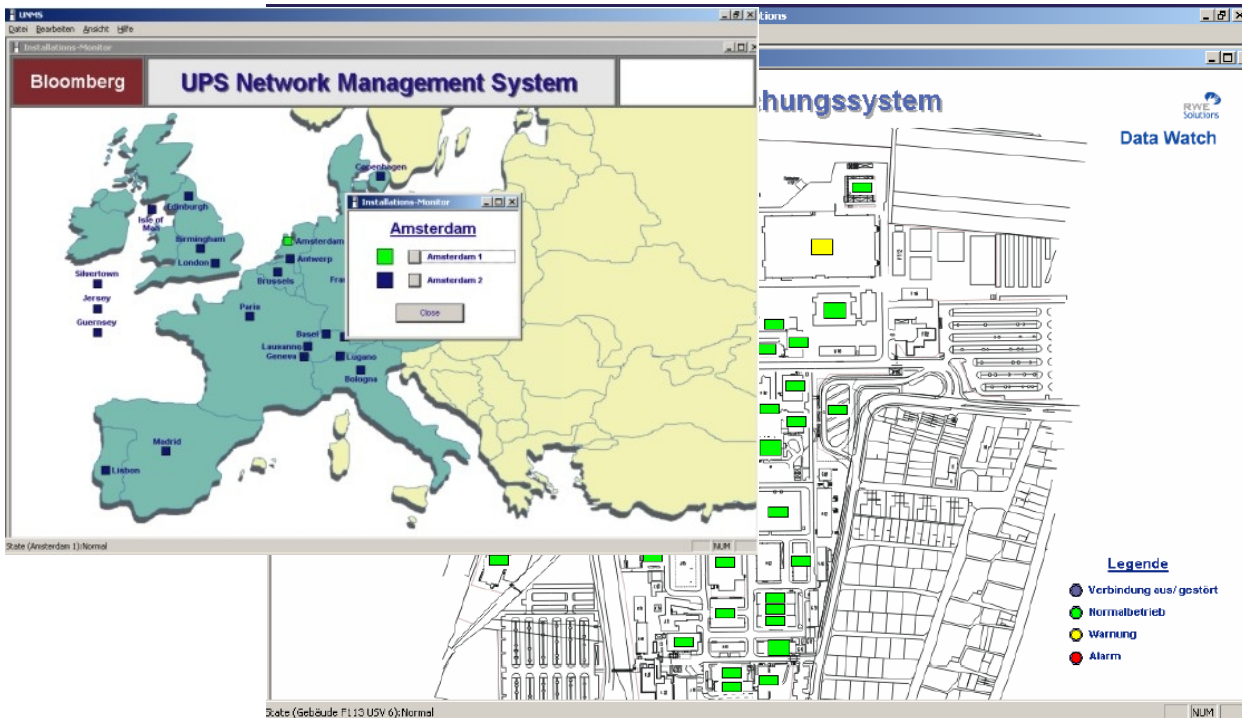


CS122 UPS Status text log file viewed via web browser



JavaMon plug-in, monitoring the UPS via web browser remotely

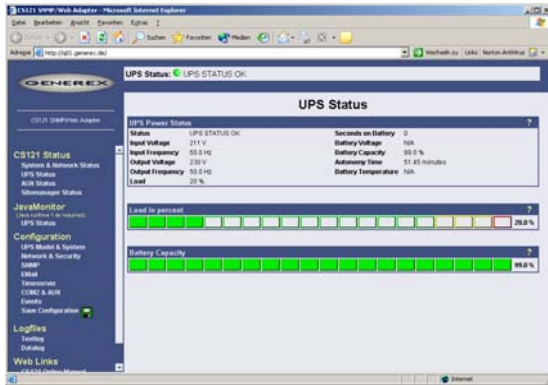
The UPS Network Management System, **UNMS**, is the solution to managing multiple UPSMAN installations. The free version included with every UPSMAN/UPSMON installation UNMS LIGHT already provides a good amount of flexibility and functionality and UNMS PRO with the addition of SNMP functionality can be scaled to meet the needs and size of any organisation. Finally, when it is of utter importance to keep large scale operations in the blink of an eye under surveillance then nothing comes close to UNMS CUSTOM.



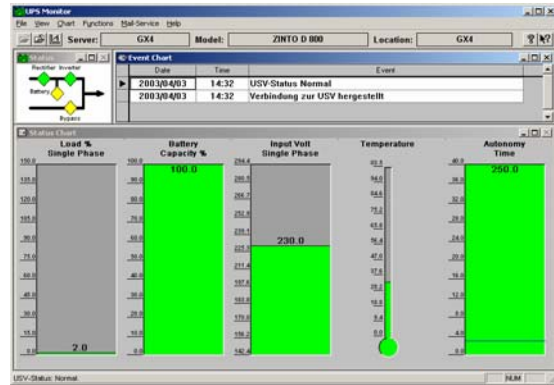
International UPS system overview with local ariel sub interfaces for thousands of networked UPSMAN installations.

Description

UPSMON is the graphical Windows client for operating and monitoring the active UPSMAN software connected to an UPS. UPS-Routine schedules can be programmed (e.g. define dates for automatic UPS-tests, shutdown the system at defined dates, etc.) to check the status of the UPS, and execute different programs or create power quality statistics. With UPSMON you can evaluate the event protocol (log file) that is permanently updated by UPSMAN. The data communication to the UPSMON is achieved via TCP/IP, IPX, Netbeui or SNMP. The integrated Java tool **JAVAMON** for UPSMON and **web server/HTML** for the CS121 series are alternative graphical administration interfaces that can be conveniently accessed via the network/internet.



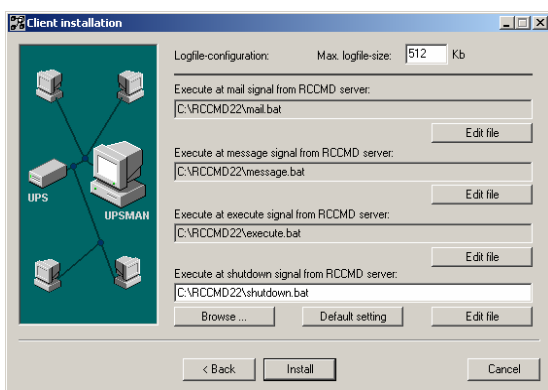
UPSMAN on CS121 - Web browser configuration/monitoring



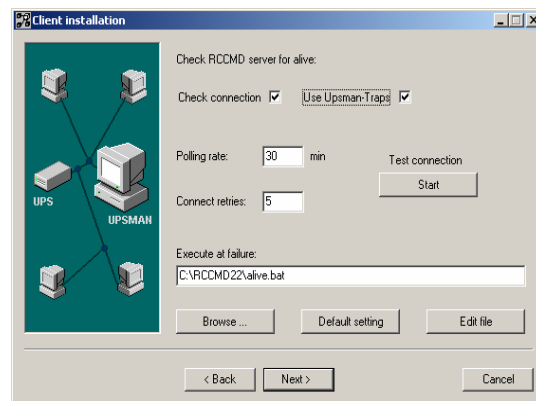
Windows UPSMON monitoring a simple network UPS

Every UPSMAN includes an **RCCMD Server** ("Remote Console Command"). The counterpart is an additional client module, which executes a command on a remote system, similar to the Remote Shell-Program (RSH) known in the Unix world. RCCMD is used to provide a simultaneous and secure shutdown of several servers and/or workstations on almost any platform. RCCMD is also capable of relaying messages and commands to remote LAN/WAN RCCMD clients. Using the specially developed RCCMD network protocol, RCCMD is the most successful UPS shutdown solution for networks and available for more than **35 operating systems**. With its latest extension (since January 2003) RCCMD is now more flexible and offers more functions, such as:

- ✓ Message transfer via TCP/IP between different operating systems: An alarm message from a Windows network maybe also distributed in Unix and Mac X networks. This is particular applicable when using SNMP adapters, which normally only respond by sending SNMP traps to an operator. Via RCCMD 2 a CS121 can now react via Windows network message and Unix X-message and warn/inform users.
- ✓ Automated remote maintenance from network computers without user accounts or login: RCCMD 2 can execute any program on a remote computer - No login required.
- ✓ Graphical configuration interface of all functions, also for Unix and Mac OS X (from 10.x)
- ✓ Alive-Check - RCCMD 2 clients may periodically check if the UPSMAN sender is available.



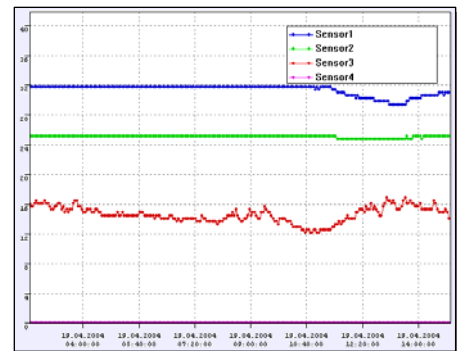
Comfortable RCCMD client installation – showing the batch and log file configuration



Comfortable RCCMD client installation – showing Check connection configuration mask.

Features

- ✓ Available for Windows 9x, NT (INTEL, ALPHA, MIPS), 2K, XP, 2003 Server, Netware, Mac OS 9.x and 10.x, 15 UNIX versions and Open VMS and IBM OS/2.
- ✓ Monitoring of UPS-systems with potential free contacts or serial interface
- ✓ Automatic shutdown Multiserver Shutdown: Unlimited shutdown manager for RCCMD clients – for more than 40 different operating systems. This makes it possible for an UPSMAN Server to inform and shutdown any type of computer in a given network which can then be used to centralise the administration of large networks while greatly reducing both the amount of organisational work and the amount of consumed network time for communications. Different methods are available for conducting shutdowns and system start ups:
 1. Coldboot (Computers are directly cut-off from or connected to the power supply. This option may require a SiteSwitch.)
 2. Warmboot (Using RCCMD operating systems are prompted to shutdown or restart.)
 3. Wake on LAN (Using data packages other computers in a local network are prompted to start-up.)
- ✓ Program execution, messaging, logging etc. of local and remote computers in the network. (Master/Slave via RCCMD module).
- ✓ Graphic display of input voltage, and frequency with min., -max. and average values.
- ✓ Display of the autonomy time and user notification of warnings for low battery, battery error, over temperature, and hardware errors. Log files have a date/time stamp and the UPSMON tool bar has a counter for power failures, battery low, system shutdowns and test failures.
- ✓ SMTP compatible system with transmission of information via Email, Email to SMS or other external services.
- ✓ Integrated SNMP-Agent (RFC 1628 or private MIB) for NetWare, Windows NT/2000, Linux and SUN.
- ✓ Event dependent sending of network messages, logging, E-Mail, program execution, etc.
- ✓ Logging of all UPS information and measurement values in CSV, comma separated values, format for MS-Excel, Lotus, GChart (<http://www.generex.de/e/download/cs12x/qchart.html>) and the like.
- ✓ Scheduler for time controlled execution of functions, such as battery test, reboot, shutdown etc.
- ✓ Scheduling of up to four electrical sockets (special UPS types or optional hardware type SS4 required http://www.generex.de/e/products/facilities/site_switch/Site_switch_p.html)
- ✓ Password protection of all UPS remote functions
- ✓ Multiple-start possible to control several UPS from one computer
- ✓ Configuration and "look & feel" is identical on all platforms (UNIX, Windows, Netware, VMS, MAC OS)
- ✓ User messages in 12 languages
- ✓ UNMS compatible – UPSMAN can communicate with UNMS and send UNMS Traps – UNMS is the multiple UPS -Management software for heterogeneous networks.
- ✓ UPSMAN can work with extension modules such as the SensorManager (temperature/humidity and other sensors), RASManager (modem solution), Siteswitch (power distribution and switching unit), UPS SNMP Watch (software for parallel redundant UPS), HP Openview snap-in, etc.
- ✓ Supports nearly all UPS devices of all-important UPS manufacturers using RS-232 protocol and contact closure interfaces.



UPS-Management software – CS121 Web

	UPS - Management software for Windows 95/98/2000/NT/XP	UPS-Management software for Novell Network	CS121 SNMP Web Manager	UPS-Management software for Unix/Mac OS systems
Network Protocol	TCP/IP, Netbeui, SNMP	IPX, TCP/IP, SNMP	TCP/IP, FTP, TELNET, PPP, SNMP, ARP, and others	TCP/IP, FTP, TELNET, PPP, SNMP, ARP, and others
Remote UPS monitoring	✓	✓	✓	✓
RCCMD - Shutdown support	✓	✓	✓	✓
RCCMD 2 – Extended remote shutdown functions	✓	-	✓	✓
HP Openview	✓	-	✓	✓
LAN support	✓	✓	✓	✓
Network Messaging	✓	✓	✓	✓
UNMS - Multi-system remote control	✓	✓	✓	✓
Modbus Facility Management capability	-	-	✓	-
Web browser management	✓	-	✓	✓
Scheduler shutdown	✓	✓	✓	✓
History/ Event log file	✓	✓	✓	✓
Multi-language text log files and network messages	✓	✓	only English	✓
Unattended installation available (for automatic scriptbased installations)	✓	-	-	✓
Password protected remote functions eg. Emergency off, reboot, tests, etc.	✓	✓	✓	✓

UPSMAN/UPSMON – CS121 Web /Adapter UPS functions

	UPS-Management software For Windows 95/98/2000/NT/XP	UPS-Management software for Novell Netware	CS121 – SNMP Web Manager	UPS-Management software for Unix/Mac OS systems
UPS - Standard functions/warning: e.g. <i>battery low</i> <i>power failure overload</i> <i>UPS connection restored</i> <i>System shutdown</i>	✓	✓	✓	✓
UPS Extended functions/warnings e.g. <i>Inverter overload</i> <i>Fuse blown</i> <i>Rectifier mains fault</i> <i>Inverter feeding</i> <i>Battery switch open</i>	✓	✓	✓	✓
UPS – send UPS shutdown signal	✓	✓	✓	✓
UPS – SNMP redundancy capability (USW software)	✓	✓	✓	✓
Graphic display UPSMON/HTML/JAVA	✓	✓	✓	✓
Environmental monitoring – Facility management e.g. Generex Sitemanager, Sitemonitor, Tempman, Siteswitch	✓	-	✓	-
Qualified hotline in english, german, korean and japanese language.	✓	-	✓	✓