

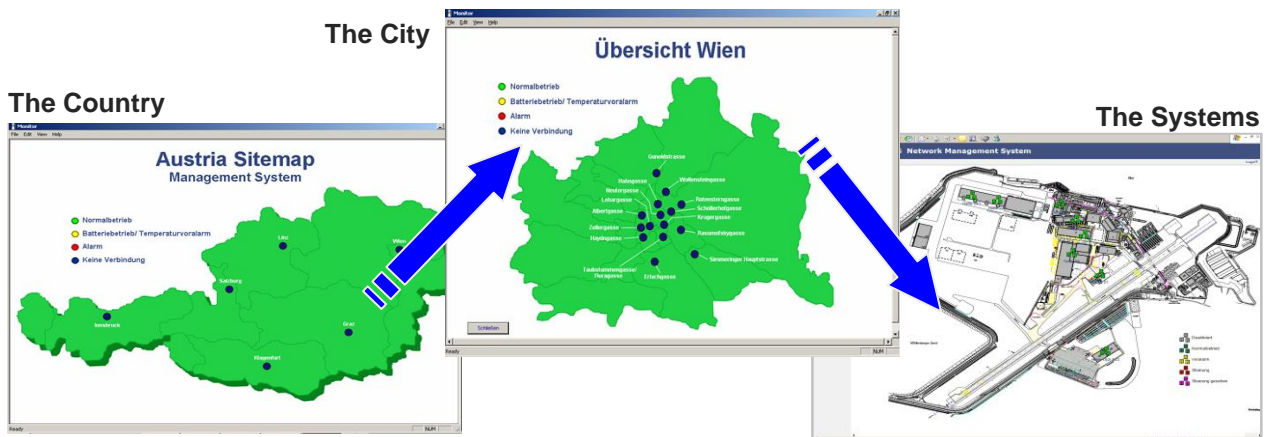
UNMS II

UPS NETWORK MANAGEMENT SYSTEM

Easy Management of Power Distribution in Network

- **Central Management of UPS, BACS, Environmental sensors & alarm contacts**
- **Communication via LAN/VPN, GSM, Email**
- **Customizable, user configurable graphical interface**

GENEREX provides a wealth of Software Management Service Tools to help its Channel Partners in providing performance data and control information to help them run their operational service group to support their customer base. These tools allow our Channel Partners to monitor and manage many system devices remotely via their own command center in live situations providing their engineers with critical data to make a discussion on the course of actions to be taken. These tools are vital part of any service operational strategy that not only increase productivity but also Customer satisfaction.



Picture: UNMS screens customized by the user, contains several levels, ideal for very large installations

Description

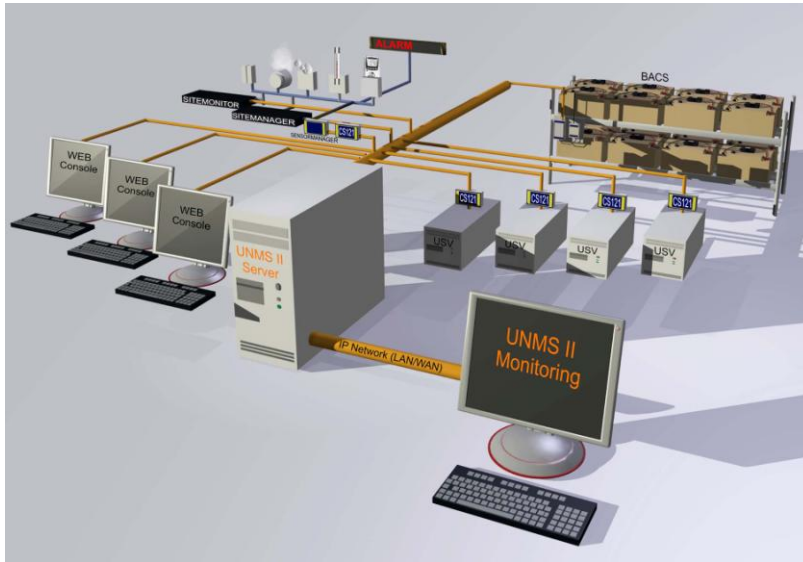
● UNMS II is a network monitoring and management software system that can be individually customized to manage your service operational requirements. Not only can UNMS II manage UPS systems and other power devices, but also things like environmental sensors and alarm contacts as well as BACS Battery Management System. This includes things like smoke alarms, motion detectors, door intrusion detectors and other devices in the GENEREX line of products. UNMS II runs as a system service on Windows since Vista and Windows Server 2008 and collects the status information of all system objects and determines the status of their condition and alarms. The status of the alarm devices are displayed on different graphic levels and can be configured to execute any user defined actions in case of an alarm.

● UNMS II is completely web based and can be operated from any WAN/LAN workstation. User groups can be defined and configured for controlling the authorization of different users, restricting certain parties to monitoring only and giving authorized users administration privileges. For example, the central administrator can monitor and if necessary take actions to manage all of the processes in the network.

● One unique feature of UNMS II is its ability to allow system administrators to freely design its user interface making it simple and intuitive enough that even users with practically no network experience can use it easily. The individual usage of backgrounds

and different graphical representations on various levels (i.e. overview country, city, building, room, UPS) quickly guide users to the source of problems in even the most complex systems and on the other side, makes the installation of integrating single devices into such complex systems much easier. This is an ideal product that any service operation should have to give up to date current status at anytime and help with the diagnostic of a problem situation that will allow the engineer to take the appropriate actions. No other network management system can do this! UNMS II is available for networks of different sizes (5, 9, 25, 50, 150, 250, 500, 1000, 2000, 3000, 4000 and for those with up to 5000 objects) for the management of UPS and BACS Battery Management systems. This is a very powerful service tool to help the user and the service company to manage the UPS and Battery system and to plan predictive maintenance.

● Then connection between the monitoring devices can be established in 4 different ways: A. TCP/IP Network connections via LAN, and . VPN tunnel via secured internet connection, B. Wireless GSM/EDGE network connection via VPN tunnel by the GENEREX DATASERVER portal, C. In the push mail mode "EmailTrap" with the usage of SMTP. D Modem Peer-to-peer solution. The UNMS II can run into all 4 modes at the same time and therefore all installed devices of an end-user can be monitored from anywhere.



Picture: UNMS SERVER principle. A single UNMS SERVER collects all UPS, Inverter, Rectifier, Battery-data from all devices in the LAN. By upgrading UNMS SERVER with a TELESERVICE License, access to remote LANs is possible also through VPN and GSM Routers and through EMAIL TRAP with any Email-server.

UNMS II Overview of Communicaton Ways

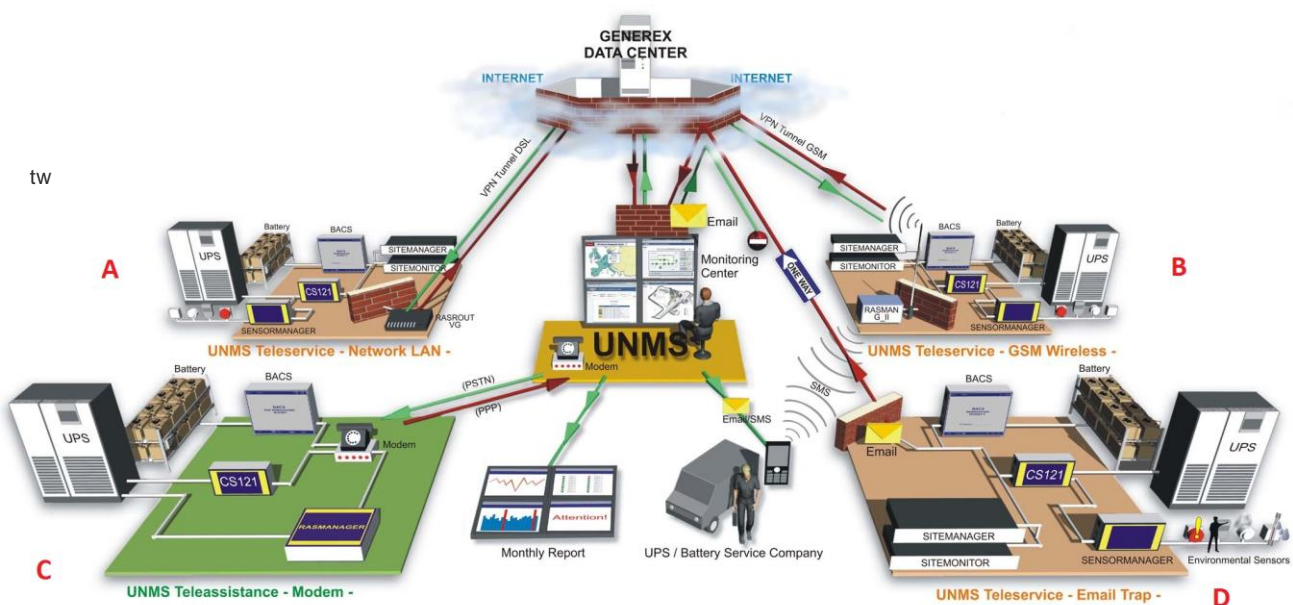
The following figure displays the UNMS II with all 4 communication ways in the version UNMS II Server with TeleService Module and Datacenter Module:

● **A – UNMS II Server:** This communication way is the default for the UNMS II Server version and displays the LAN/WAN network connections to the UPSs, batteries and environmental sensors, which will be established via TCP/IP. All common RCCMD modules are available for the end-user inside the network. The UPS can be controlled locally by the user. In addition the UNMS II provides the steady monitoring, alerting and logging of statistics of all devices via network protocol UPSTCP or SNMP. With the option UNMS II TeleService (RASROUT_VG) you can establish a secure connection with the DataCenter option to the devices of the end-user, so that exclusively these devices can be reached by the UNMS II.

● **B – UNMS II TeleService GSM Wireless:** The figure B displays the network connection A with a GSM wireless connection. A GSM router (RASMAN_G_II) can connect worldwide all UPS devices via secure VPN wireless connection and the DataServer module (optional).

● **C – UNMS II TeleAssistance Module:** This communication way is a „peer-to-peer“ connection via analog telephone line. A dial-in connection will be established between the modem of the UNMS II and the RASMANAGER_A, if alarms will occur.

● **D – UNMS II TeleService Email Trap:** This communication way is an unidirectional connection. All devices are sending email traps, which will be retrieved and analyzed by the UNMS II Server with TeleService module. This emails contain all device data, so that a live connection to the devices will be afforded, but intermittently of the incoming emails. At alarms the work cycle will be disconnected and emails will be triggered immediately. The UNMS II receives all measuring values of the end devices and is so able to react on alarms and to create statistics, but the send back of commands is impossible and is therefore an extremely secure and cheap communication way for a remote monitoring.



UNMS SERVER with DATASERVER connection + TELESERVICE module – 4 communication ways, 2 via GENEREX DataServer portal, which affords the secure connection between the UNMS II and the devices at the end-user.

A – LAN connection via VPN tunnel
C – modem connection

B – GSM connection via VPN tunnel
D – the Email Trap connection

Properties

UNMS II SERVER – Standard Functions

● **Complex power supply management made easy to use**
UNMS II can be set up by the user in such a way that even the most complex power supply systems can be displayed in a simple and well organized form. Different login levels allow for safe system operation even if inexperienced users are involved. This makes it possible for users to administer complex devices (i.e. 3 phase redundant UPS, building installations, rack systems and computer rooms) using a common simple web interfacespecialists can administer individual devices using device-specific operational interfaces and UNMS II permits only the specifically authorized users access to the individual devices. The internet protocol will become the common communications medium for all power supply devices.

● **Exchangeable Background Graphics**

Users can replace the background images for the different UNMS II levels by importing their own background image files.

● **UNMS Editor**

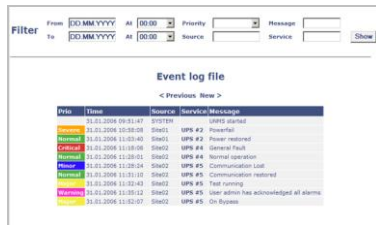
Using the powerful UNMS II editor, users can change the UNMS II functions. Alarm levels, groups and object names, new objects, colors and etc. can easily be changed directly in the graphical interface.

● **Group Display**

Several devices can be grouped and indicated by a single icon. The device with the highest alarm level will determine the alarm status of the group icon.

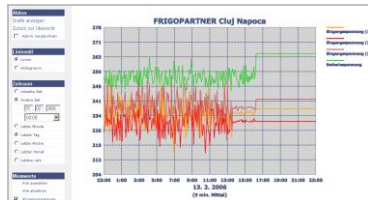
● **Data protocol**

UNMS II has a high performance data protocol that records all incoming alarms for an unlimited period of time. Using a filter function with many options, users can easily examine and sort through the protocol entries. This gives users the organizational ability to systematically manage the alarms of thousands of devices. A time server client insures a precise system time update so that all data protocol entries will be logged with the correct time.



● **Graphical statistical evaluation**

UNMS II makes it possible to centralize the logging of all measured values. The GCHART module creates graphs of all connected devices and sensors.



● **Economical Monitoring**

UNMS II costs considerably less than management software like HP Openview that is only SNMP capable. Furthermore, UNMS II is much easier to use with its graphical user interface.

● **Universally suited for all UPS models**

UNMS II supports most UPS models world wide. UNMS II can monitor both serial RS-232 protocols and contacts. Just about any device (also non UPS) can be monitored including things like air conditioning units, fire alarms, and the battery management system BACS.

● **Multiple network monitoring stations via web browser**

The UNMS II can be logged on to from any network workstation with a web browser so that all alarms will appear on that computer also. This makes it possible to use the monitoring console simultaneously from different locations.

● **Secure Communication**

For GENEREX devices, UNMS II implements a secure network protocol called „UPSTCP“. Other devices such as UPS SNMP adapters are managed via SNMP. UNMS is compatible with the SNMP adapters from Eaton PowerWare X_connect UPS, Emerson Liebert, GE SNMP Cards, Chloride & Masteguard ONEAC SNMP Cards, Riello/Aros NETMAN SNMP Cards, APC SNMP Cards, MGE SNMP

Cards, every chinese copy of Megatec SNMP Cards and most other SNMP devices that use RFC 1628. The Free UNMS II supports 3 foreign SNMP Cards, the commercial UNMS II supports an unlimited amount of foreign SNMP Cards, the commercial UNMS II version got unlimited support of foreign devices.

● **Alarming**

UNMS II alarms users via sounding alarms, network messaging, local warning messages with alarm signals and also by email. These alarms do not only occur on the UNMS server, but they are also relayed to each web browser in the network that is logged onto the UNMS II!

● **Email/SMS for the alarm forwarding**

The UNMS II can administrate 2 email accounts. One account for the forwarding and one account for the „Email Traps“. Using an integrated email-client, UNMS II can automatically send emails for each individual alarm. The email-client can use both company internal email-systems and external like Freenet, GMX, T-Online, and others that are compatible with SMTP email systems from MS Exchange, Lotus and many others.

● **ACK – Acknowledge Function**

Users that are tending to the UNMS II alarms can set the alarm status to acknowledged (ACK) from their work station. Operators at other work stations will see that the status of the alarm has been changed to show that the situation is being attended to. Once the problem has been remedied, the status of the alarm will automatically change to show that the problem has been corrected.

● **Multiserver Shutdown**

Shutdown for an unlimited number of RCCMD ("Remote Console Command") clients for more than 40 different operating systems can be managed by UNMS II. This way, every type of network computer can be informed and shutdown using UNMS II. This concentrates the administration of large networks into one device (UNMS II) and saves the need for having to conduct numerous configurations on the CS121/CS141. This tremendously simplifies the administration of large networks.

● **Optional: Redundancy Management**

UNMS II will take over the function of redundancy management which had previously been done with USW. UNMS II is capable of collecting different objects and handling them as part of a redundancy group. This means that only after a user-defined number of errors occur within a group (loss of redundancy) will an automated action such as the shutdown of computers be controlled by UNMS II.

Options

● **UNMS II Email Trap Client (TeleService Module)**

The UNMS II can administrate 2 email accounts. One account for the alarm forwarding and one for the „Email Traps“ – a SMTP connection to all CS121/CS141/BACS/SITEMANAGER/SITEMONITOR devices with this function. All measuring data of these devices can be sent from all over the world and will be analyzed by the UNMS II.

● **Optional: UNMS II RASMANAGER MODEM (TeleAssistance Module)**

Support for analog RASMANAGER_A modems for the remote monitoring and administration of UPS devices and BACS via modem. This function provides the parallel network monitoring by the end-user of its devices via modem. The network functions of the devices (shutdowns, emails etc.) are independly. Therefore the RASMANAGER_A can be used into the network environment as any CS121/CS141 or BACS. This modem function was acquired with the Teleassistance Module, but since 2012 this function is containing into the TeleService license.

● **Optional: UNMS II RASMANAGER GSM (TeleService Module)**

Support for analog RASMAN_G_II GSM router. Connection and monitoring via GENEREX DataServer. Steady secured online connection via GSM/Edge and automatic routing to the UNMS II, if operation will be done via DataServer. The operation mode is containing into the TeleService license, but not the usage of the DataServer. The DataServer requires a yearly fee per MAC address.