



UPS / Lighting Inverter Communication Products Overview

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NetMinder CS121 Series Communication Adapters



The **NetMinder CS121** series of adapters integrate a Controlled Power UPS or lighting inverter into an Ethernet TCP/IP, MODBUS TCP, or MODBUS RS485 network with a specific IP address. The NetMinder CS121 adapters provide remote monitoring of UPS / Inverter status, alarm conditions and electrical measurements via a web browser, without the need for any external software. Remote notification of alarms and status are available via SNMP, e-mail, and network broadcast messaging. The CS121 series of adapters also perform an unattended graceful shutdown of critical servers when used in conjunction with the NetMinder RCCMD client.

Advanced versions of the CS121 adapter accommodate contact closure inputs for additional monitoring. When used in a lighting inverter application, advanced versions will report inverter battery test pass/fail results for NFPA life safety system requirements. The NetMinder CS121L version also provides a temperature and humidity sensing interface.

The **NetMinder CS121** series of adapters are available in three different versions:

NetMinder CS121B – Basic Ethernet / SNMP / TCP/IP communications used in UPS applications where neither MODBUS nor auxiliary contact closure inputs are required.

NetMinder CS121L - Advanced version, Ethernet / SNMP / TCP/IP communications, MODBUS TCP communications, temperature and humidity sensing, and 4 auxiliary contact closure inputs. The CS121L is used in emergency lighting inverter applications where battery test pass/fail reporting is required. It is also used in UPS and inverter applications where MODBUS TCP communications are required.

NetMinder CS121L-485 - Advanced version, Ethernet / SNMP / TCP/IP communications, MODBUS TCP or RS485 communications and 4 auxiliary contact closure inputs. The CS121L-485 is used in emergency lighting inverter and UPS applications where MODBUS communications are required over an RS485 connection. Temperature and humidity sensing is not available on this version.

The following is a list of all alarms, status indications and electrical parameters sorted by UPS/Inverter type:

UltraLITE (Standard Monitor), UltraUPS, EL-U

Available Alarms and Status Indications

CS121L/CS121B Alarms

Powerfail / On Battery
UPS OK
Power restored
CS121 UPSMAN started
UPS connection lost
UPS connection restored
UPS Battery Old
Overload
Load Normal
Bypass on
Bypass off
Battery low
Scheduler Shutdown

Load >80%
Load >90%
Battery Time Remaining

CS121L Only Alarms

AUX Port 1 High
AUX Port 2 High
AUX Port 3 High
AUX Port 4 High
AUX Port 1 Low
AUX Port 2 Low
AUX Port 3 Low
AUX Port 4 Low
SM_T_COM Sensor High (Temperature High)
SM_T_COM Sensor Low (Temperature Low)

Electrical Parameters Displayed (CS121L / CS121b)

Input Voltage	% Load
Output Voltage	% Battery Capacity
Input Frequency	Battery Voltage
Output Frequency	Output VA
	Output Watts (MODBUS only)

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UltraLITE (Intellistat Monitor), eLITE ELE, HV Series, EL-H

Available Alarms and Status Indications

CS121L/CS121B Alarms

Powerfail / On Battery
UPS OK
Power restored
CS121 UPSMAN started
UPS connection lost
UPS connection restored
UPS Battery Old
Bypass on
Bypass off
Battery low
Scheduler Shutdown
Battery Time Remaining

General Alarm
General Alarm Cancelled

CS121L Only Alarms

Battery Test Pass (UltraLITE and eLITE only)
Battery Test Fail (UltraLITE and eLITE only)
AUX Port 3 High
AUX Port 4 High
AUX Port 1 Low
AUX Port 2 Low
AUX Port 3 Low
AUX Port 4 Low
SM_T_COM Sensor High (Temperature High)
SM_T_COM Sensor Low (Temperature Low)

LT, LT/M, LTN, LTR, MD, MDR, ELN

Available Alarms and Status Indications

CS121L/CS121B Alarms

Powerfail / On Battery
UPS OK
Power restored
CS121 UPSMAN started
UPS connection lost
UPS connection restored
UPS Battery Old
Overload
Load Normal
Battery low
Scheduler Shutdown
Load >80%

Load >90%
Battery Time Remaining

CS121L Only Alarms

AUX Port 1 High
AUX Port 2 High
AUX Port 3 High
AUX Port 4 High
AUX Port 1 Low
AUX Port 2 Low
AUX Port 3 Low
AUX Port 4 Low
SM_T_COM Sensor High (Temperature High)
SM_T_COM Sensor Low (Temperature Low)

Electrical Parameters Displayed (CS121L & CS121B)

Input Voltage
Output Voltage
Input Frequency

Output Frequency
% Load
% Battery Capacity
Output VA

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NetMinder UPSMAN UPS Management & Monitoring Suite



The NetMinder UPS Management & Monitoring Suite is a real-time software package that includes 4 different programs that monitor the status and operation of the UPS, as well as provide remote monitoring, alarm notification, and unattended server shutdown. In the event of a system problem, power problem or power failure, NetMinder will send e-mails, SNMP traps or a network broadcast message notifying key personnel of the condition. If power is not restored or the system problem has not subsided, NetMinder can be instructed to shutdown computers which are connected to the network. NetMinder is network and internet compatible, which enables key personnel to check the status of the UPS and/or view the electrical measurements of the system, i.e. voltage,

% battery, % load etc. from anywhere on the network or in the world over the internet! NetMinder is easy to install and runs on over 31 different operating systems. NetMinder can run locally on a single server connected to a UPS, or over the network with an Ethernet adapter.

NetMinder UPSMAN UPS Management & Monitoring Suite consists of the following programs:

NetMinder UPSMAN – Communicates with the UPS via serial, USB or TCP/IP in order to receive UPS status information and electrical measurement data. UPSMAN notifies authorized personnel of UPS status and alarm conditions via e-mail, SNMP, and text messaging. UPSMAN records all events into a log-file to provide the data to applications on the network or for viewing by authorized personnel. During a power failure, the UPSMAN monitors the remaining battery time of a UPS and if necessary, initiates local or network shutdowns of protected computers.

Electrical Parameters Measured (LT, LT/M,LTR, LTN, MD, MDR and UltraUPS only.)

Input Voltage
Output Voltage (L1-N, L2-N, L1-L2)
Output Frequency
% Load
% Battery Capacity
Battery Voltage (UltraUPS Only)
Output VA
Battery Time Remaining

Available Alarms

Powerfail / On Battery
Power restored
UPSMAN started
UPS connection lost
UPS connection restored
UPS Battery Old
Overload
Bypass on
Bypass off
Battery low
General Alarm (HV Series Only)

NetMinder UPSMON – UPSMON is a GUI application program that communicates with UPSMAN to retrieve UPS information for viewing. With UPSMON, personnel can view UPS status, alarms, electrical parameter data and event logs.

NetMinder RCCMD - Program for graceful unattended shutdown of servers. Must be used in conjunction with UPSMAN or a NetMinder CS121 Ethernet adapter.

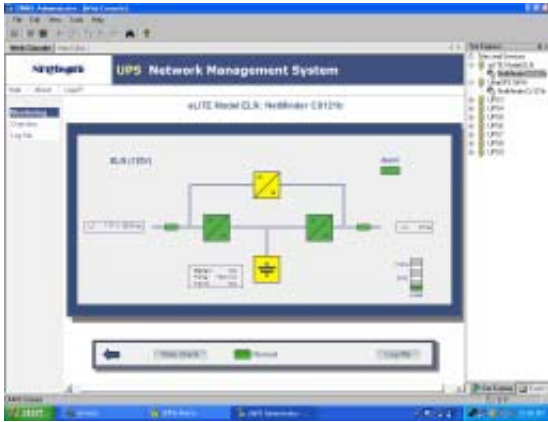
NetMinder UNMS II (Basic version) – Program for monitoring multiple (up to 9) Controlled Power UPS's and/or lighting inverters running UPSMAN or a CS121 from one terminal. The user can monitor the status, electrical measurements and alarms via a workstation running Windows. A user can be notified of all alarms and status conditions via e-mail or network broadcast message without having to manually check each unit. A full, customizable alarm and event log is available as well.

NetMinder UNMS II (Advanced version) – The Advanced version of UNMS II has all of the features of the basic version plus the monitoring of an unlimited number of UPS's and lighting inverters and SNMP notification. One of the key features of the Advanced version of UNMS II is the ability to monitor multiple UPS's from different manufacturers. UNMS II will monitor not only Controlled Power UPS's and lighting inverters but nearly all other manufacturers' units which have a network card installed in them.

For more information on UNMS II see description on the next page.

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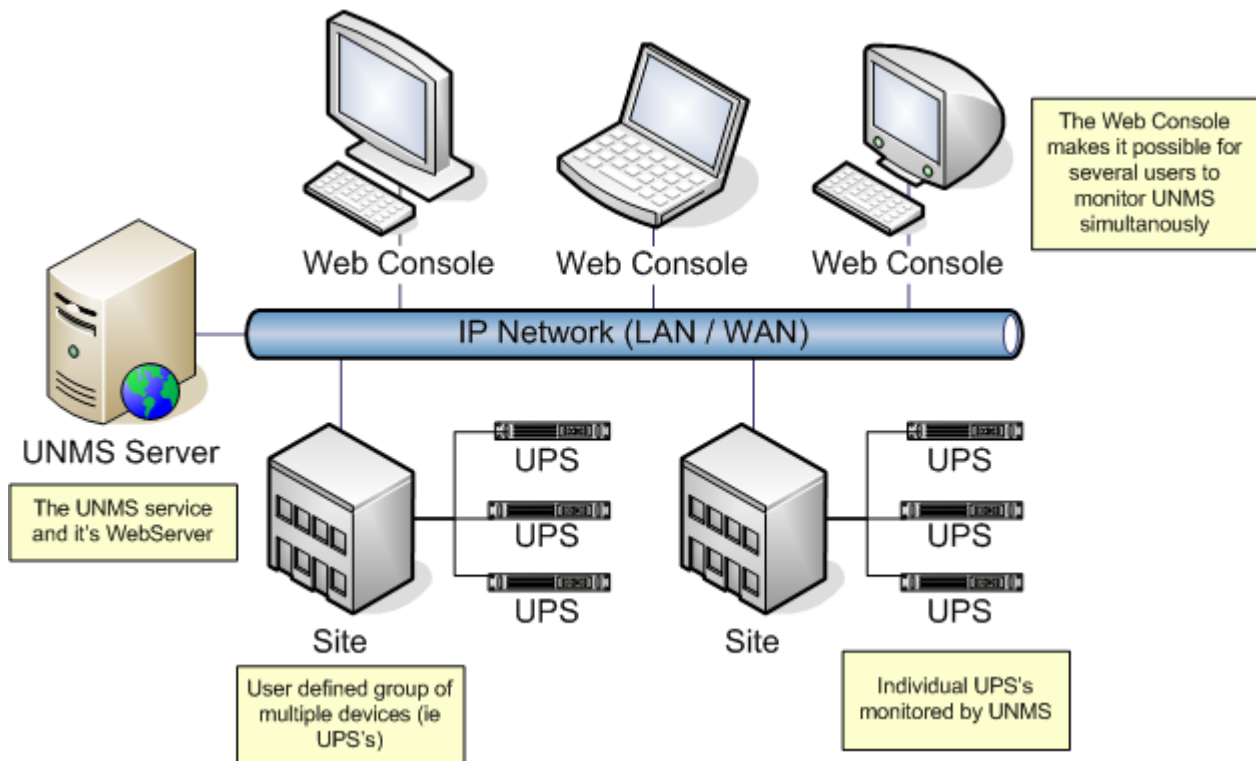
NetMinder UNMS II (UPS Network Management System)



NetMinder UNMS II is a centralized monitoring software package which provides users the ability to monitor multiple UPS's and/or lighting inverters from a single computer terminal. If a company has multiple Controlled Power UPS's or lighting inverters with a NetMinder Ethernet adapter or any systems running NetMinder UPS Management Suite on the same network or over the internet, NetMinder UNMS II provides system status and full monitoring of all available UPS and/or inverter parameters from one workstation. In addition to CPC products, if a facility has other manufacturers' UPS's or inverters with network capability utilizing the RFC1628 protocol, these can be monitored as well from the same terminal, eliminating the need for multiple monitoring systems and software solutions. In addition to UPS's and inverter systems, NetMinder UNMS II can also be configured to provide monitoring support for facilities monitoring equipment, generators and network devices.

In the event of an alarm or change in status condition of the device, UNMS II will display on the home screen the device which has the alarm condition. The user can click on the device and the real-time status of the device will be displayed on the screen. UNMS II can also be programmed to send an email or SNMP message to key personnel, reporting the alarm or the status condition. If a detailed analysis of events are required over a specific time period, UNMS II keeps a log of all alarms and system events which are classified according to severity. These logs can be charted locally using the UNMS II software or can be exported to a CSV file for further trending and data analysis. UNMS II Advanced version has customizable interface screen which can be modified to reflect the devices that are being monitored as well as the facility itself. UNMS II is configured and priced according to the number of UPS's, inverters and other devices which are being monitored. UNMS II runs on Windows 2000/XP/2003/VISTA and incorporates SSL technology for enhanced security.

Below is a drawing of a typical UNMS application:



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Peripherals and Accessories

Multifunction Communication Modem (MCM)



Meeting NFPA standards for system testing is critical in today's business infrastructure. To assist in meeting these standards, Controlled Power Company is offering the Multifunction Communications Modem. The Multifunction Communications Modem can send a fax, an email, dial a phone number and play a prerecorded message, or report system test results to a web page. With the Multifunction Communications Modem, system test results can be recorded and then faxed automatically providing a written test report sufficient for meeting NFPA guidelines for stored energy emergency lighting system testing. The Multifunction Communications Modem accepts up to 8 digital inputs. Not only can the lighting inverter be monitored, but 6 other devices can be as well.

Automatic Message Dialer



System monitoring is critical. In some cases where email or a computer network is not available, the Automatic Message Dialer fills the gap. The automatic message dialer is an optional device available on our UPS/lighting inverter product lines that provides 24/7 monitoring via a telephone line. In the event there is an alarm condition with the UPS or lighting inverter, the Automatic Message Dialer dials up to 3 numbers and plays a customizable pre-recorded voice message.

USB Adapter



The USB adapter allows for flexible connectivity from a server running NetMinder UPSMAN to any Controlled Power Company UPS, without the need of a serial port.
Note: Size and color of adapter may vary from one shown. Not available on HV UPS's.

Temperature Sensor & Temperature / Humidity Sensor



Temperature and Temperature/Humidity sensors are available as options on the NetMinder CS121L. Both of these sensors measure either the ambient temperature and/or humidity and display the results on a network computer. If the temperature or humidity exceeds the predefined, programmable thresholds, the CS121L will send an e-mail, SNMP trap, or RCCMD command for shutting down servers. This keeps personnel informed and critical equipment protected.

MIU4 (4X Port Expander)



The MIU 4 is available with the CPC line of UPS's and lighting inverters. The MIU 4 gives you the flexibility to use the NetMinder UPSMAN or CS121, an Automatic Message Dialer, plus 2 other ports for a remote annunciator or another alarm monitoring device from one UPS. With the MIU4, there are no worries about running out of status signals.