![Liebert - Keeping Business in Business]

OpenComms Web Card

Table Of Contents

Introduction

ABOUT THIS USER MANUAL

Welcome to the User Manual for the OpenComms Web Card. This manual is available from Liebert's web site at www.liebert.com. The most recent version is always located online and you should consult the Web if you feel you have an older copy.

ABOUT THE QUICK START GUIDE

On the next two pages you will find a copy of the Quick Start Guide. The Quick Start Guide ships in the box with the OpenComms Web Card and provides the most important information you need to install and configure of the card. It is included in this manual for your reference.

INTRODUCTION

The OpenComms Web Card delivers SNMP (Simple Network Management Protocol) and Web support to the UPS in which it is installed. The card is designed for use in a Liebert UPS with an Intellislot bay. This include the PowerSure Interactive, UPStation GXT, UPStation GXT2U, and Nfinity.

The OpenComms Web Card requires an Ethernet network connection and supports both 10Mbit and 100Mbit communication speeds and either half or full duplex.

The OpenComms Web Card enables in-band communication via the Web from computers running web browser software.

The OpenComms Web Card enables in-band communication with network management systems (NMS) via SNMP.

The OpenComms Web Card integrates with Liebert's MultiLink™ software to provide notification for unattended, graceful operating system shutdown of PCs, servers, and workstations. MultiLink is available for most operating systems. For more information on MultiLink and a downloadable version of MultiLink software please visit www.liebert.com.

1 *INSTALL*

Locate the Intellislot bay on the back of your Liebert PowerSure Interactive, UPStation GXT, or Nfinity UPS (Use the Intellislot labeled COM1).

Remove the plastic Intellislot cover.

Insert the *OpenComms Web Card* into the Intellislot bay.

Secure the card with the previously removed screws.

Connect Ethernet cable.

DHCP: The card ships with DHCP service enabled. The MAC address is printed on a sticker affixed to the top of the card.

OR

Static IP: To assign a static IP address, you will need to use the **Service Terminal** to configure the card. Proceed to steps 2 & 3.

2 *CONNECT CABLE*

Locate the blue serial configuration cable (null modem) that shipped with the card.

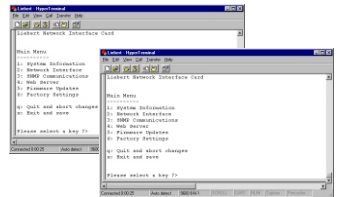Connect one end of the configuration cable to the DB-9 port on the card.

Connect the other end of the configuration cable to a COM port on your PC.

3 *CONFIGURE*

☐ Using a terminal emulation software package, like HyperTerminal™, open a direct connection to the card.

BAUD RATE:	9600
DATA BITS:	8
PARITY:	None
STOP BITS:	1
FLOW CONTROL:	None

☐ Press "ENTER" for the Main Menu.

☐ Select option "2" and follow the instructions to enter an IP ADDRESS, NETMASK, and GATEWAY.

☐ Return to the Main Menu and select option "x" to exit and save

OpenComms™ Web Card

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Worldwide FAX Support	+1 614-841-6755
U.S.A.	1-800 222-5877
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Web site	www.liebert.com

User Manual
This Quick Start Guide is designed to give you all of the information you need to install and configure the *OpenComms Web Card*. A full User Manual is available online at www.liebert.com and covers configuration and integration topics in further detail. It is highly recommended that new users consult the User Manual, which shows how to take full advantage of the extensive features offered by the *OpenComms Web Card*.

SNMP Support
The *OpenComms Web Card* enables SNMP management of the Liebert UPS in which it is installed. To integrate the card into your SNMP implementation, you will need to compile the Liebert Global Products MIB on your network management station (NMS). The Liebert Global Products MIB is included in this package on CD-ROM and supports both Windows and Unix file formats. Please consult the readme.txt file on the CD-ROM and the User Manual for more on SNMP.

MultiLink™ Support
The *OpenComms Web Card* works with MultiLink software to provide unattended graceful operating system shutdown. The card can be monitored by MultiLink over the network, eliminating the need for serial cables. Downloadable versions of MultiLink and information about installing and configuring MultiLink software is available online at www.liebert.com.

Web Support
WARNING: CHANGE THE USERNAME AND PASSWORD TODAY.
The *OpenComms Web Card* delivers Web management and control to the Liebert UPS in which it is installed. All users on your network will be able to view UPS STATUS information. CONTROL and CONFIGURATION capabilities are protected by a well known username and password combination. The default username is "Liebert" and the default password is also "Liebert". You can change the password from the Web or from the **Service Terminal**.

INSTALLATION

Installing the Card

The OpenComms Web Card is hot swappable and user-serviceable. Although you do not need to turn off the UPS, disconnect any loads, or restart the UPS to install or remove the card, discretion should be used.

CAUTION: The Intellislot Bay is located in close proximity to the UPS' output and the UPS' electrical receptacles. Whenever possible, you should turn the UPS OFF when installing the card.

To install the card:

1. Locate the Intellislot bay on the back of the UPS. For Nfinity, use the Intellislot labeled "1".
2. Remove the plastic Intellislot cover and save the screws for Step 4.
3. Insert the OpenComms Web Card into the Intellislot bay.
4. Secure the card with the screws you removed in Step 2.

NOTE: The card is powered by the UPS during both normal and on-battery operation. If the UPS is ON, the card will operate normally after a brief boot up period.

Connecting the Card to the Network

To connect the card to the network, simply plug an Ethernet cable to the RJ-45 connector on the card.

The card support 10Mbit and 100Mbit communication speeds at either half or full duplex. The card ships from the factory in an auto-sensing mode. In this mode, the card works to negotiate the optimal setting for your network environment. To turn off the auto-sensing mode and force the card's communication speed or duplex setting, you will need to open a Service Terminal connection to the card. Please refer to the Service Terminal section.

Configuring the Card

The card ships from the factory with DHCP service enabled. The MAC address is located on a sticker affixed to the top of card. To give the card a Static IP address, you will need to open a Service Terminal Connection to the card. Refer to the Service Terminal section for more details.

# Service Terminal

Opening a Service Terminal Connection

This section covers the Service Terminal in detail. From the Service Terminal, you can configure all settings of the card.

NOTE: You can also configure many of the setting discussed in this section from the Web. To specify that the card communicate at either 10Mbit or 100Mbit instead of it trying to auto-negotiate, you must use the Service Terminal

You access the Service Terminal by opening a direct serial connection to the OpenComms Web Card.

1.Locate the blue serial configuration cable that shipped with the card.

NOTE: If you have misplaced the cable provided, you can use a standard null modem cable with a DB-9F connector at both ends.

Null Modem Connection
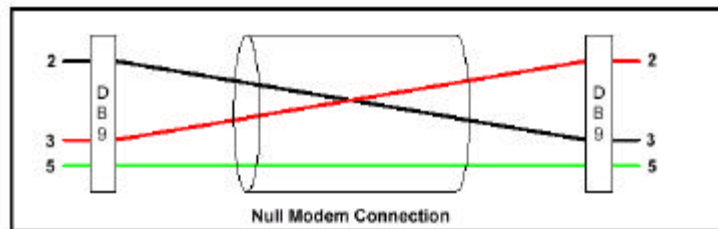
2.Connect one end of the blue serial configuration cable to the DB-9M serial port on the OpenComms Web Card.

3.Connect the other end of the blue serial configuration cable to a terminal or a PC running terminal emulator software, like HyperTerminal ™ or ProComm ™.

4.Use the following communication settings:

BAUD RATE:9600
DATA BITS:8
PARITY:NONE
STOP BITS:1
FLOW CONTROL:NONE

5. Press "Enter" to see the Main Menu.

If you do not see the Main Menu, press "Enter" again several times. If the Main Menu fails to appear, confirm that the blue configuration cable is installed properly, that your PC or terminal COM port is active, and that you are using the correct communication settings. If, after verifying the cable and your communication settings are correct you still do not see the Main Menu, reinstall the card in the Intellislot Bay.

NOTE: The card is powered by the UPS. If the UPS is ON, the card will operate automatically. If you have the cable connected while inserting the card, you will see initialization text scroll on your screen. If the card has already been powered, you will not see this information.

Main Menu

From the Main Menu screen, you will find configuration information functionally grouped.

Liebert Network Interface Card

Main Menu

1: System Information
2: Network Interface
3: SNMP Communications
4: Web Server
5: Firmware Updates
6: Factory Settings

q: Quit and abort changes
x: Exit and save

Please select a key ?>

Changes you make using the Service Terminal will only take effect after the card reboots.

Accordingly, always return to the Main Menu screen after making a change or changes and then select either option "q" or "x". If you select option "q" your changes will be aborted and the card will retain its previous settings. When you select option "x" the card will reboot and restart with your changes.

Selecting Option "1" from the Main Menu opens the System Information Menu.

Liebert Network Interface Card

System Information Menu

1: Name   Data Room UPS
2: Contact   Network Services x100
3: Location   Building 2, Floor 4
4: Description   Supporting Main Server

<ESC>: Cancel menu level

Please select a key ?>

The System Information Menu contains four user-defined data fields. The Service Terminal will report Uninitialized where you have not entered personalized data. The System Information Menu allows you to enter useful location and contact information. The data in these fields is available via SNMP and is presented in the support tab on the Web page.

A typical configuration includes:

Selecting option "1" to assign a name to the UPS.
Selecting option "2" to assign an administrative contact
Selecting option "3" to assign location information.
Selecting option "4" to assign a description.

The Name field can be up to 255 characters in length. The Contact, Location, and Description fields can be up to 64 characters in length.

If you have made changes, you need to press "Esc" to return to the Main Menu and then press "x" to exit and save changes.

Network Interface Menu

Selecting Option "2" from the Main Menu opens the Network Interface Menu.

Network Interface Menu

1: Speed/Duplex   Auto
2: Boot mode   DHCP
   IP Address   0.0.0.0
   Netmask   0.0.0.0

<ESC>: Cancel menu level

Please select a key ?>

From the Network Interface Menu you can configure the Network setting for the card

Select option "1" to change the communication speed of the card or the duplex setting.

Please select a key ?> 1
 Valid Selections:
 ----
 1. Auto
 2. 10Mbs/Half Duplex
 3. 10Mbs/Full Duplex
 4. 100Mbs/Half Duplex
 5. 100Mbs/Full Duplex
Select Speed and Duplex Setting:

The Speed/Duplex default setting is Auto and the card attempts to negotiate the optimal setting for your network environment. You can select a fixed setting for either 10Mbit or 100Mbit speed, at either full or half duplex.

Select option "2" to change Boot mode settings of the card.
Valid Selections:
 ----
 1. Static
 2. BootP
 3. DHCP

Select Boot Mode:

Your Boot mode setting options are Static, BootP, and DHCP.   The card
ships from the factory with DHCP service enabled. DHCP allows the card
to obtain an address dynamically from a DHCP server on your network.
The card also supports BootP dynamic configuration. If you are using
DHCP or BootP you may find want to configure your DHCP or BootP
server with the MAC Address of the card so that the server always
assigns the card a specific address. The MAC Address is printed on a
sticker affixed to the top of the card.

To assign the card a fixed IP address, you need to change the Boot mode
to STATIC and then provide an IP Address, Netmask, and Default Gate-
way.

Network Interface Menu

1: Speed/Duplex   Auto
2: Boot mode   Static
3: IP Address   126.4.1.102
4: Netmask   255.255.255.0
5: Default Gateway 126.4.1.1

If you have made changes, you need to press "Esc" to return to the Main
Menu and then press "x" to exit and save changes.

SNMP Communication Menu

Liebert Network Interface Card

SNMP Communications Menu

1: Authentication Traps   'no'
2: Display/Modify Communities
3: Display/Modify Trap Communities

<ESC>: Cancel menu level

Please select a key ?>

Selecting Option "3" from the Main Menu opens the SNMP Communications Menu.

From the SNMP Communications Menu you can configure the SNMP setting and behavior of the card.

Select option "1" to turn authentication traps on or off. Enter "y" to enable authentication traps. Enter "n" to disable authentication traps. (Authentication traps are desined to notify users of unauthorized SNMP access.)

Select option "2" to edit the list of devices you want to have access to the card via SNMP.

Display/Modify Communities Menu

 1: 126.4.1.100   write   MyCommunity

<ESC>: Cancel menu level
<a>dd <d>elete <e>dit

Complex lines allowed. e.g.
<a 198.1.1.1 write public> ?>

The options "a" "d" and "e" allow you to manage your list of network devices with access to the card. These options can be used as a complex instruction to add a single device, specify read/write access rights, and designate the Community String. For, example, entering:

"a 126.4.1.200 read NewCommunity"

adds device 126.4.1.200 to the community list. The menu will update:

Display/Modify Communities Menu

```
 1: 126.4.1.100        write   MyCommunity
 2: 126.4.1.200        read    NewCommunity
```

<ESC>: Cancel menu level
<a>dd <d>elete <e>dit

As you are adding communities, you need to consider access rights. Notice above, that 126.4.1.100 has write access when the device passes the correct Community String of MyCommunity. This means that this network device has both read and write access to the card, whereas 126.4.1.200 has only the ability to read information when providing the correct Community String. Devices with write access can control the UPS and reconfigure settings of the card.

Select option "3" to edit the list of devices you want to receive traps from the card via SNMP.

Display/Modify Trap Communities Menu

```
 1:  126.4.1.100        MyCommunity
```


<ESC>: Cancel menu level
<a>dd <d>elete <e>dit

Complex lines allowed. e.g.
<a 198.1.1.1 public> ?>

The options "a" "d" and "e" allow you to manage you list of network devices that will receive SNMP Traps from the card. These options can be used as a complex instruction to add a single device and designate the Community String. For, example, entering:

"a 126.4.1.200 NewCommunity"

adds device 126.4.1.200 to the trap community list. The menu will update:

Display/Modify Trap Communities Menu

```
 1:  126.4.1.100        MyCommunity
 2:  126.4.1.200        NewCommunity
```

<ESC>: Cancel menu level
<a>dd <d>elete <e>dit

It is important to remember that you will often need to add a network device to both the Communities Menu and the Trap Communities Menu for your SNMP implementation to work as designed.

MultiLink ™ Software

The OpenComms Web Card works with MultiLink software to provide unattended graceful operating systems shutdown. The card can be monitored by MultiLink over the network, eliminating the need for serial cables. Downloadable versions of MultiLink and information about installing and configuring MultiLink software is available online at www.liebert.com.

Please see Appendix A for more on MultiLink.

Web Server Menu

```
Web Server Menu
----------------
1: Web Server      'enabled'
2: Change Username/Password

<ESC>: Cancel menu level

Please select a key ?>
```

Selecting Option "4" from the Main Menu opens the Web Server Menu.

From the Web Server Menu you can enable/disable the Web functionality of the card and edit the Username/Password, which regulates access to the Web control and configuration tabs.

Select option "1" to turn the entire Web Server ON or OFF.

NOTE: If you select disabled, the card will be totally inaccessible from the Web, although it will continue to operate as an SNMP-only agent.

Select option "2" to edit the Username or Password that must both be entered correctly to control the UPS or to change configuration settings of the card from the Web.

The factory default User Name is Liebert and the Password is Liebert. Because this is a well-known username and password, you should change it as soon as possible. You can also change the Username or Password from the Web.

From the service terminal, you do not need to know the current Username of Password to make a change.

NOTE: When changing the Username or Password from the Service Terminal, it is possible to leave either field blank. However, blank fields are not recommended. Entering a blank User Name will result in the user name being equal to the last known name. Entering a blank for the passsord will result in a blank password.

If you have made changes, you need to press "Esc" to return to the Main Menu and then press "x" to exit and save changes.

Firmware Updates Menu

Firmware Updates Menu

1: Initiate XMODEM session...

<ESC>: Cancel menu level

Please select a key ?>

Selecting Option "5" from the Main Menu opens the Firmware Updates Menu.

From the Firmware Updates Menu you can reload the firmware of the card. Please consult the instructions you downloaded or received with you new firmware version.

Factory Settings Menu

```
Factory Settings Menu
----------------------
1: Reset to Factory Defaults

 Manufacture Date        OCT 27,2000
 MAC Address         00-00-68-16-00-03
 Serial Number    415981G101D2000OCT270003


<ESC>: Cancel menu level

Please select a key ?>
```

Selecting Option "6" from the Main Menu opens Factory Settings Menu.

The Factory Settings Menu displays information you may be asked by Liebert Technical Applications Support and is the only electronic place you can access the MAC address on demand. From the menu, you also have the option of resetting all the settings of the card the factory default. Selecting "1" will likely cause the card to be inaccessible from the network so its use should be applied with caution.

If you have made changes, you need to press "Esc" to return to the Main Menu and then press "x" to exit and save changes.

Opening a Web Connection

This section explains the Web interface in detail. From the Web, you can monitor and control the UPS in which the card is installed. You can also configure many settings of the card.

NOTE: To specify that the card communicates at either 10Mbit or 100Mbit, instead of it trying to auto-negotiate, you must use the Service Terminal.

You access the Web Interface of the OpenComms Web Card by opening a direct web browser. The card utilizes functionality of Microsoft Internet Explorer 5.0 or higher. Whenever possible, you should use the latest copy of IE.

1. Open your web browser software.
2. Enter the IP address or hostname of the card in the address line of your browser.

The first page you will see every time you open a new Web connection to the card is the Power Flow folder in the monitor tab. After your browser connects, you will see a screen very similar to below:
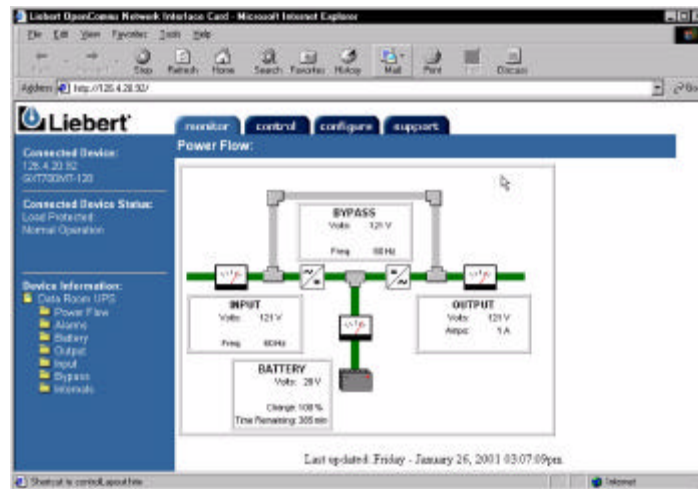
You will notice that information on the Web page is grouped in Tabs and Folders. The card organizes similar information together in folders, and similar functions in tabs.

Tabs: Across the top of the screen are four tabs, monitor, control, configure, and support. As the tab names suggest, different information is presented and different operations are available to you under each tab.

Folders: Within each tab, you will see a different list of folders on the left pane of your screen. Here, display, control, and configuration information grouped logically. If, for example you click the Input folder under the monitor tab, you will see only information about the UPS' input power.

A rigorous explanation of the information in the tabs and folders is not necessary, as you will quickly sort out why things are where they are. So, the discussion that will follow for the rest of the Web section touches on the important functionality delivered in certain areas.

Connected Device Information

Clicking between the monitor, contol, configure, and support tabs gives you access to folder lists on the bottom of the left pane. Although the folder list changes, depending on the tab selected, the top portion of the left pane remains constant. In the top or the left pane, connected device information and connected UPS status is always presented.
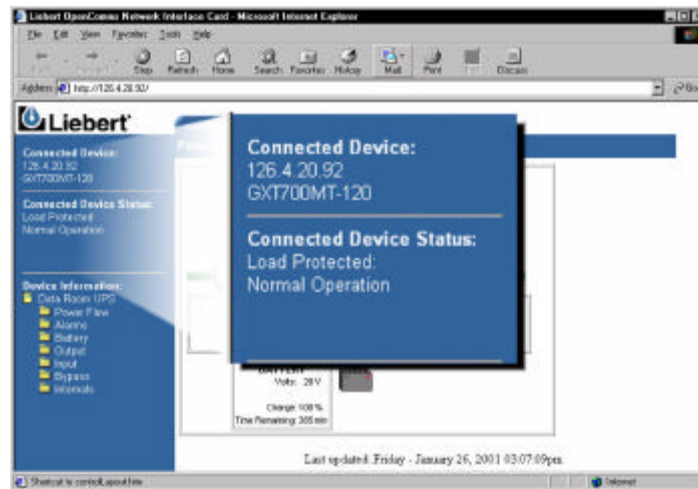
The IP address of the card and the Liebert UPS model type is presented under Connected Device:. In this example, the InOpenComms Web Card is installed in a UPStation GXT 700VA UPS and has been assigned the IP address, 126.4.20.92.

The current operating state of the UPS is presented under Connected Device Status: along with the most serious UPS alarm, if one if present. For our example above, the UPS is operating normally with the load protected.

Security

By opening a connection to the OpenComms Web Card, you are able to do three things. You can Monitor, Configure and Control the UPS.

The card allows any user with access to the network segment on which it resides to monitor the UPS. This means anyone on the segment can view the entire contents of the monitor and support tabs.

The card restricts access to the folders in the control and configure tabs. When a user clicks on a folder, they are prompted for a User Name and Password.

The factory default User Name is "Liebert" and the Password is "Liebert". Because this is a well-known username and password, you should change it as soon as possible. You should change the username and password as soon as possible. If you have not made this change from the Service Terminal, you can do so from the Web.
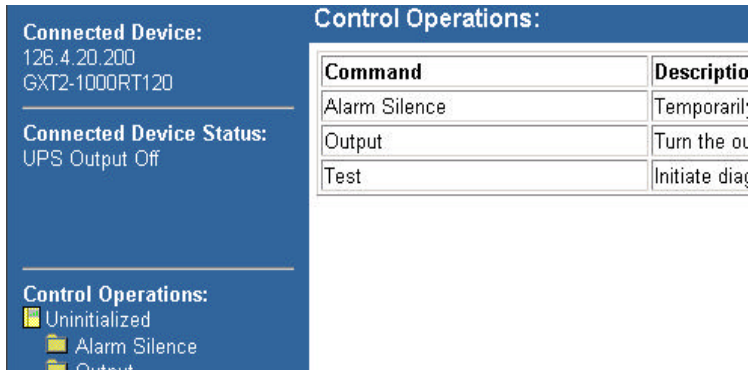
Monitor Tab

When you select the monitor tab, you are presented with Connected Device: and Connected Device Status: on the top of the left pane. The Folder list is at the bottom of the pane under Device Information:.

The first page you will see every time you open a new Web connection to the card is the Power Flow folder in the monitor tab. After your browser connects, you will see a screen very similar to below:
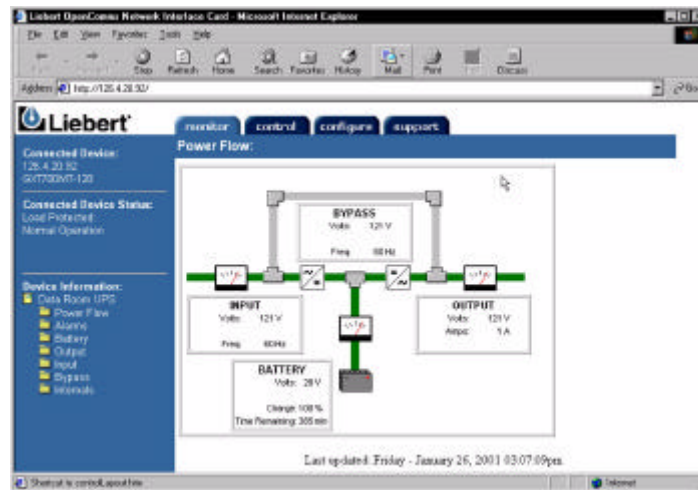
From the monitor Tab, you are able to view the parametric data of the UPS.

The Power Flow folder provides a graphical representation of the current state of the UPS along with useful information about Input, Output, and Battery voltages as well as Battery runtime information.

The Alarm folder provides a list or any present UPS alarms.

Clicking on the Battery, Output, Input, Bypass (not supported in Power-Sure Interactive UPSs), or Internals folder replaces the summary data presented on the graphical power flow pane with a tabular view of the complete list of data points reported by the UPS. Clicking on the Input folder presents a screen similar to:

In the tabular view data, like Input voltage, that changes over time is grouped as a Parameter. Values, which are known to the UPS, like Nominal input frequency, are reported in Information. Finally, condition parameters, like Utility failed, are together in a table labeled, Condition. The list of data in each of these sections and folders varies across UPS product lines and sizes and will change depending on the UPS in which you have installed the card.

Control Tab

When you select the control tab, you are presented with Connected Device: and Connected Device Status: on the top of the left pane. The Folder list is at the bottom of the pane under Control Operations:.

As detailed in the Web Security section, a Username and Password protect the folders in the control tab.

From the control tab you can silense alarms remotely, turn the UPS' output ON or OFF or Reboot the UPS.
Each folder represents a different control behavior and this list will vary across UPS product lines and sizes.

Configure Tab

When you select the configure tab, you are presented with Connected Device: and Connected Device Status: on the top of the left pane. The Folder list is at the bottom of the pane under Configuration Categories:.

As detailed in the Web Security section, a Username and Password protect the folders in the configure tab.

When you click on a folder under Configuration Categories: you will be able to edit network and device settings, including SNMP community lists. The folder list is shown below:
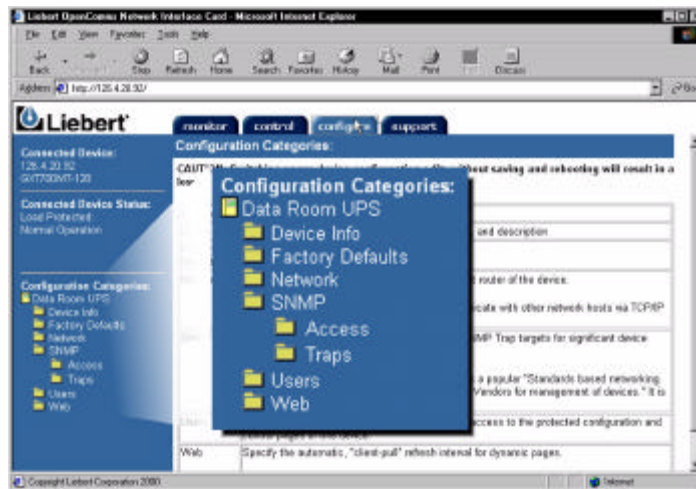
Device Info

Clicking on the Device Info folder allows you to edit the Name, Contact, Location, and Description fields.

Factory Defaults

Clicking on the Factory Defaults folder allows you to reset the card to the factory settings.

Network

Clicking on the Network folder allows you to reset the card to the factory settings.

SNMP

Clicking on the SNMP folder allows you to enable authentication traps.

Clicking on the Access or Traps folder allows you to configure the devices you want to have access to the card via SNMP and devices you want to receive traps from the card. The Access folder is shown below:

As you are adding communities, you need to consider access rights. Notice above, that 126.4.1.100 has write access when the device passes the correct Community String of MyCommunity. This means that this network device has both read and write access to the card, whereas 126.4.1.200 has only the ability to read information when providing the correct Community String. Devices with write access can control the UPS and reconfigure settings of the card. In order for a device you have added to the Access folder to also receive notification from the card via SNMP Traps for UPS alarms and condition changed, you also need to add the device toe the Traps folder.

Users

Clicking on the Users folder allows you to edit the Username or Password that must both be entered correctly to control the UPS or change configuration settings of the card from the Web.

The factory default User Name is Liebert and the Password is Liebert. Because this is a well-known username and password, you should change it as soon as possible. You can also change the Username or Password from the Web.

From the Web, you need to know the current Username of Password to make a change.

Web

Clicking on the Web folder allows you to modify the Web browser refresh rate. Due to the static nature of the Web, the card instructs your Web browser to refresh many areas of the card's web page at a specific interval.

Configure Tab - Making and Saving Configurations

Similar to configuring the card using the Service Terminal, every time you make a configuration change, the card will have "save and reboot" for that change to take effect. As you navigate between the card's control web pages, you will notice that configuration screens include Edit and Save buttons and a Reinitialization folder. As an example, the screen shot below shows the edit fields available under the configure tab when you select the SNMP folder:

The Edit button allows configuration and parameter changes.

Once the Edit button is selected, a Save button will appear in its place. The Save button can be used at any time during the (re)configuration process. Once the Save button is selected, the user will be prompted to reinitialize the card, so that the new settings will take effect. During this time, the card is unavailable on the network. When this process begins, your web browser may be instructed to open a new page.
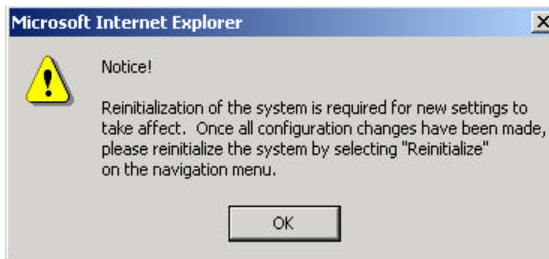
Configure Tab - After Reinitialization

Once card reinitialization is selected and confirmed, the card is unavail-able on the network. As the card reboots, it first begins communicating on the network and it will begin communicating with the UPS in which it is installed. The card will present to you some helpful information during the period of time that it is restarting.

Liebert

The network interface card is attempting to reinitialize.

r more then 2 minutes, you may need to restart your browser
network administrator for assistance.

If further assistance is necessary, visit Liebert Web Site.

Support Tab

When you select the support tab, you are presented with Connected Device: and Connected Device Status: on the top of the left pane. A single device list is at the bottom of the pane under Support:.

The support tab displays the Name, Location, and Description fields as well as relevant contact information for Liebert Technical Applications support.

SNMP

The OpenComms Web Card utilizes a SNMPv1 agent and is MIB-II compliant. The card supports the open standard UPS MIB RFC1628, with additional functionality and support through the Liebert Global Products MIB. A copy of the Liebert Global Products MIB is included on the CD included with your purchase. Likewise, the latest version of Libert Global Products MIB can be obtained at www.liebert.com.

Appendices

MultiLink Support

The most frequently asked question about configuring MultiLink to monitor a SNMP device, like the OpenComms Web Card, across the network is, what community string do I use?

NOTE: Use the community string LiebertEM for MultiLink.

Configuring for MultiLink support from the Service Terminal

From the Main Menu, select option "3" for SNMP Communications Menu. In order for MultiLink to monitor the card, the network address information of the machine on which MultiLink is installed needs to be added to both the Display/Modify Communities and the Display/Modify Trap Communities.

As an example, you have installed MultiLink on a PC and you will monitor, across the network, the OpenComms Web Card you are now installing. Your PC has the IP address of 126.4.1.1.

Select option "2" from the SNMP Communications Menu and add 126.4.1.1 with the community string Liebert EM.
Select option "3" from the SNMP Communications Menu and add 126.4.1.1 with the community string Liebert EM.

If you have made changes, you need to press "ESC" to return to the Main Menu and then press "x" to exit and save changes.

Adding to both the Communities list and the Trap Communities list is necessary for MultiLink to work properly.

Configuring for MultiLink support from the Web

Open a web connection to the OpenComms Web Card. Click on the Configure tab. In order for MultiLink to monitor the card, the network address information of the machine on which MultiLink is installed needs to be added to both the Access and Traps selection folders as stated in the above examples.

Liebert

Keeping Business in Business

OpenComms™ Web Card

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Netherlands	+31 (0) 475 503333
E-mail	monitoring@liebert.com
Web site	www.liebert.com

User Manual

This Quick Start Guide is designed to give you all of the information you need to install and configure the *OpenComms Web Card*. A full User Manual is available online at www.liebert.com and covers configuration and integration topics in further detail. It is highly recommended that new users consult the User Manual, which shows how to take full advantage of the extensive features offered by the *OpenComms Web Card*.

SNMP Support

The *OpenComms Web Card* enables SNMP management of the Liebert UPS in which it is installed. To integrate the card into your SNMP implementation, you will need to compile the Liebert Global Products MIB on your network management station (NMS). The Liebert Global Products MIB is included in this package on CD-ROM and supports both Windows and Unix file formats. Please consult the readme.txt file on the CD-ROM and the User Manual for more on SNMP.

MultiLink™ Support

The *OpenComms Web Card* works with MultiLink software to provide unattended graceful operating system shutdown. The card can be monitored by MultiLink over the network, eliminating the need for serial cables. Downloadable versions of MultiLink and information about installing and configuring MultiLink software is available online at www.liebert.com.

Web Support

WARNING: CHANGE THE USERNAME AND PASSWORD TODAY.

The *OpenComms Web Card* delivers Web management and control to the Liebert UPS in which it is installed. All users on your network will be able to view UPS STATUS information. CONTROL and CONFIGURATION capabilities are protected by a well known username and password combination. The default username is "Liebert" and the default password is also "Liebert". You can change the password from the Web or from the **Service Terminal**.