



NetLight SNMP Management

User Guide

Web-based Access for the
Management Application



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About This Manual

Scope

This manual explains how to manage a NetLight (e.g., NetLight 100-880, NetLight 155-1900, NetLight G-2300, NetLight 155-5400, using the web-based NetLight management software.

Audience

This manual is intended for the use of network technicians who have working knowledge of SNMP management and NetLights. There are three different user types who have different levels of access to the software – see page 17 for full details.

Related Documents

NetLight User Manual: The Operator Guide that is supplied with each NetLight. There is a separate manual for each model.

MegaVision NetLight Management User Guide: The User Guide that explains how to use the MegaVision network management software with NetLights.

Acronyms

Term	Description
CLI	Command Line Interface
DHCP	Dynamic Host Configuration Protocol
MAC Address	Media Access Control Address
SFP	Small Form-factor Pluggable (optical transceiver module)
SNMP	Simple Network Management Protocol
Telnet	Telecommunication network protocol
TFTP	Trivial File Transfer Protocol

Introduction

The new generation of NetLights, including the NL100-880 series, is already equipped with an SNMP card. The MegaVision application can be used to manage a NetLight, and it is now possible to use a web-based interface as well, as described in this manual.

Software Versions & Licensing

The web-based application has two versions: Basic and Extended. The following license types are available:

Part Number	Description
JT-SNMP-SW/B	License for the NetLight's web-based SNMP software, Basic version.
JT-SNMP-SW/E	License for the NetLight's web-based SNMP software, Extended version.
JT-SNMP-SW/UP	Upgrade the license for the NetLight's web-based SNMP software from the Basic version to the Extended version.

Basic Version

The Basic version allows the user to view data without carrying out any actions, such as Reset or Loopback.

The following products are supplied with the Basic version by default: NL100-880, NL155-1900.

Extended Version

The Extended version allows access to almost all of the application's functionality and modules (with the exception of the Data Log and Measurements modules). It is possible to carry out actions such as Reset and Loopback and use the data logging options.

See the table on page 18 for the differences between the Basic and Extended versions.

The following products are supplied with the Extended version by default:

NL/G-1000, NL/G-2300, NL155-5400, NL/G-3500.

The following products are *not* supplied with either version by default:

NL100-880, NL/G-2300.

When no license is supplied, you can order the Basic or Extended license (see part numbers in the table above). When the Basic license is supplied by default, you can order the Extended version. Upgrading can be carried out at any time, even after the NetLight has been installed.

It is important to note that the license is supplied according to the NetLight's MAC address so it is not possible to use the license for another product. Therefore, if you wish to purchase or upgrade a license you need to supply the product's MAC address.

Fusion License

Another innovation for the new generation of the NetLight product line is the ability to upgrade to the Fusion version (PN: NL-FUSION). This can be done simply by entering a code via the CLI interface, without the need to send the product to Netronics. No hardware upgrade is required either.

If the physical port for Fusion is unavailable, e.g., in the case of the SFP optical interface, you can purchase it separately or you can order it from Netronics.

There are two codes for activating Fusion:

- The code for the Basic version.
- The code for the Extended version.

You will receive the code according to the software version that you have.

General

The NetLight is a communication link that can carry voice, data, and video transparently over a photonic beam. The link consists of two heads that face each other, each containing a transceiver, and the beam interconnects them. A wide range of models is available to support various frequencies, operating ranges, and eye-safety compliance. There are models that support data rates of up to 1 Gbps and operating ranges of up to 5 km.

Requirements

The following cables are required:

- SNMP NMS with a 10/100Base-T NIC/port and MS-DOS program.
- Custom RS-232 cable (see page 8).
- Category 5 *straight* cable, as shown in Figure 1 below. Not longer than 100 m (328 ft) if the NetLight is to be connected to the SNMP NMS via a DCE, e.g., a switch.
- Category 5 *cross* cable, as shown in Figure 1 below. Not longer than 100 m (328 ft) if the NetLight is to be connected to the SNMP NMS directly. The SNMP NMS, e.g., a PC, is a DTE.

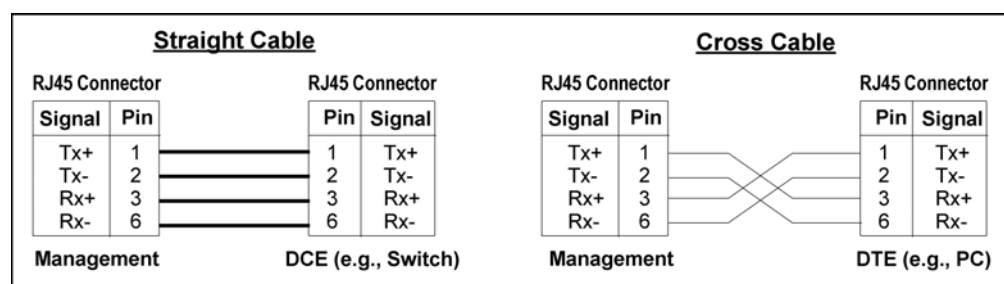


Figure 1: Straight and cross cable wiring

Initial Setup

It is recommended to carry out the initial set up steps described below in the lab or office, prior to installing the NetLight in the field.

The first step is to open the rear panel as explained in the NetLight User Manual. The setup is carried out by connecting an RS-232 cable between a computer and the NetLight; the commands are transmitted to the computer via a CLI.

There are a number of actions that you need to carry out, such as defining the RS-232 settings, and the NetLight and network IP addresses. This is all described below.

RS-232 Setup

Commands are transmitted from a computer to the NetLight via a custom RS-232 cable supplied by Netronics. The wiring is shown below:

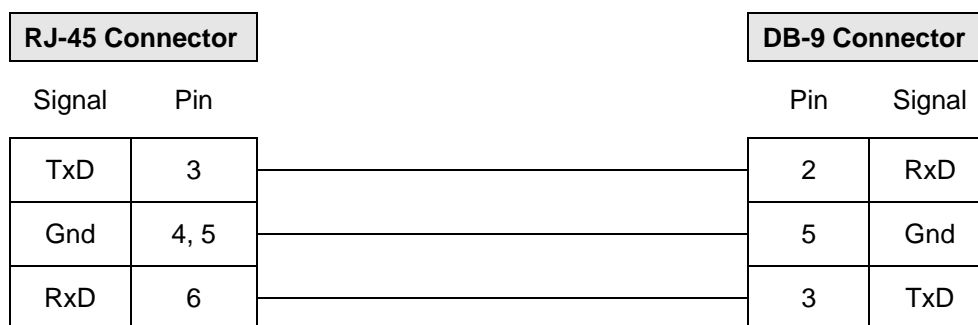


Figure 2: Null-modem RS-232 cable wiring

>> **To connect the RS-232 cable**

- Connect the RS-232 cable's DB-9 connector to the computer and the RJ-45 connector to the EIA-232 port of the NetLight. The EIA-232 port is towards the bottom left of the NetLight, as shown in Figure 3 below.

NOTE: If your computer does not have a serial port for connecting the RS-232 cable, use a USB-serial port adapter.

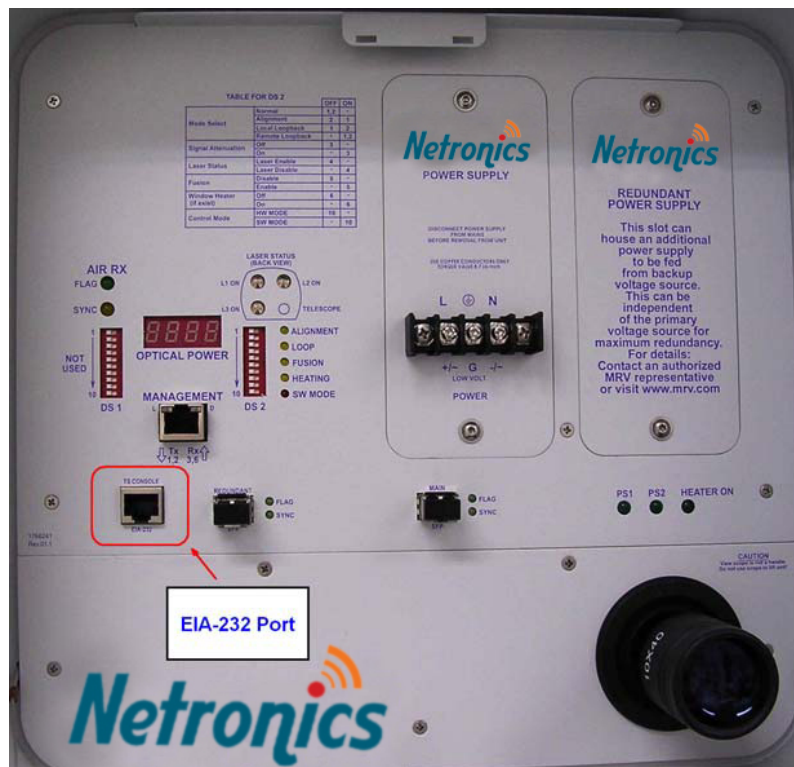


Figure 3: Connecting the RS-232 cable



Figure 4: Connecting the RS-232 cable – NL100-880

>> **To define the RS-232 settings**

Prior to sending commands via RS-232 you need to define the speeds using third party software.

1. Open a terminal program for defining the RS-232 speeds, such as Tera Term Pro or HyperTerminal. Tera Term 4.x can be downloaded from standard download sites on the Internet.

2. Configure the Console as a VT100 compatible terminal with the following settings:

Setting	Value
Baud rate	19,200
Data	8 bits
Parity	None
Stop bit	1
Flow control	None

3. In order to set the above using Tera Term 4.6, select **Setup > Serial port** from the menu.
4. Set the terminal to use the correct serial port.

Next you need to define the IP address of the NetLight and the network IP addresses. This is described in the next section: "CLI Commands".

CLI Commands

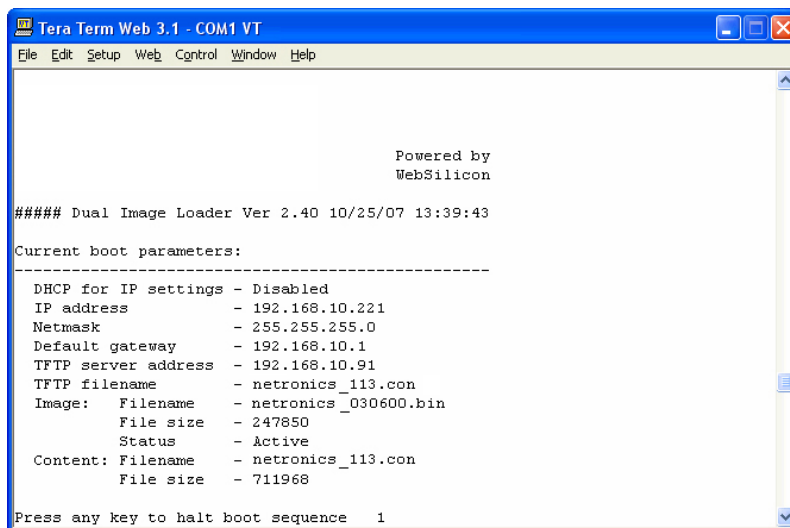
After setting up the RS-232 connection, you can turn the NetLight on and use the CLI interface to send various commands, including the following:

- Enable or disable DHCP support
- Set the network IP addresses
- Enter the product license number
- Name the SNMP Read (Get) and Write (Set) communities
- Erase the log file
- Set the IP address of the NetLight
- Change the CLI access password
- Download new image and content files
- Set the IP address of the TFTP server

>> *To open the CLI interface*

1. Open a terminal application on the computer, such as Tera Term Pro.
2. While the RS-232 port is connected, connect the NetLight to the electricity.

The boot application starts and the following screen appears:



```
Tera Term Web 3.1 - COM1 VT
File Edit Setup Web Control Window Help

                                Powered by
                                WebSilicon

##### Dual Image Loader Ver 2.40 10/25/07 13:39:43

Current boot parameters:
-----
DHCP for IP settings - Disabled
IP address           - 192.168.10.221
Netmask              - 255.255.255.0
Default gateway      - 192.168.10.1
TFTP server address  - 192.168.10.91
TFTP filename        - netronics_113.con
Image:  Filename     - netronics_030600.bin
       File size    - 247850
       Status       - Active
Content: Filename    - netronics_113.con
       File size    - 711968

Press any key to halt boot sequence  1
```

Figure 5: Booting up the NetLight

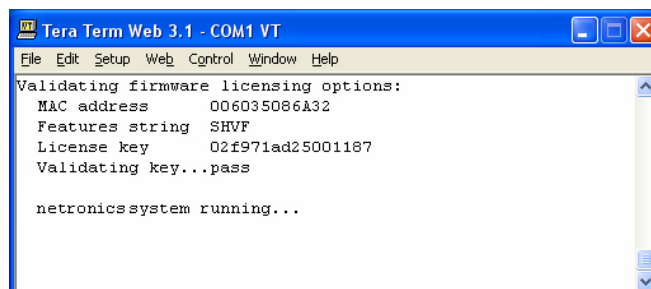
3. If you wish to use the CLI, immediately press any key to stop the boot sequence. Continue with “Logging In” below for actions you can carry out.

NOTE: If you did not press a key in time, unplug the NetLight, and after a moment plug it back in to re-start the boot application.

You can see following information:

Field	Description
DHCP	Enabled: The IP address of the NetLight is assigned automatically by the network server. Disabled: The IP address of the NetLight is assigned manually. Note: In this case, you do <i>not</i> have to set the NetLight's IP address.
IP Address	The IP address of the NetLight. This can also be changed in the Configuration module - see p. 23.
Netmask, Default gateway	Standard network settings for the IP network. The gateway IP address can also be changed in the Configuration module - see p. 23.
TFTP Server Name	The IP address of the server that is used for upgrading the NetLight software. This can also be changed in the Service module - see p. 35.
TFTP filename	The name of the most recent file that was installed by the TFTP server. This can also be seen in the Service module - see p. 35.
Image/Content	The software consists of an application image file (.bin) and a web server content file (.con). An upgrade can be just the image, just the content or both. The details that are displayed are of the currently installed files. The file names can also be seen in the Service module - see p. 35.

4. If you did not stop the boot sequence, you will also see the following, which displays the MAC address of the NetLight, the software license key and the Feature string.



```

Tera Term Web 3.1 - COM1 VT
File Edit Setup Web Control Window Help
Validating firmware licensing options:
MAC address      006035086A32
Features string  SHVF
License key      02f971ad25001187
Validating key...pass

netronicsystem running...
  
```

Figure 6: The feature string

TIP: Print the screen above with the license key so that you have a record of it. If you have printed this manual there is a space to write the license key on the page following the cover page.

The Feature string is a combination of letters that indicate the features that are installed on your system, e.g., SH, SHV, SHF, SHVF.

Field	Description
S	SNMP is enabled
H	HTTP: web-based access to the software is enabled. If the feature string does not include the letter H, you will not have access to the software that is described in this manual.
V	Advanced: The extended version of the software is installed. See page 6 for more details.
F	Fusion: The Fusion port is installed. See page 7 for more details.

Logging In

After stopping the boot process, you can log in and change settings. The first prompt is to enter the password.

>> *To log in and change the password*

1. Enter the password. The default is `weBPASS`.
2. You can change the password by pressing “Y”, if desired. Otherwise, press “N”.

CAUTION: If you forget the password you will no longer have access to the CLI.

Setting the NetLight IP Address

After entering and/or changing the password, the next automatic prompt is “Please enter IP parameters” for the IP address of the NetLight, the netmask and default gateway. Consult your network administrator if you need information on some of the settings.

>> *To set the IP address*

- In Steps 1 and 2 below, press “Enter” if you wish to keep a setting’s current value. Otherwise, enter the new value.
1. Enter the IP address of the NetLight.
 2. Enter the netmask IP address and then enter the IP address of the default gateway.
 3. To save the changes, type “C” at the prompt. To adjust the data just entered, type “M” and re-enter the IP addresses.

Setting the SNMP and TFTP Parameters

After the IP addresses, the next automatic prompt is “Please enter new boot parameters”. You can edit the following settings:

Field	Description
SNMP get community	The name of the SNMP get community. The current name is displayed; the default is “public”.
SNMP set community	The name of the SNMP set community. The current name is displayed; the default is “private”.
TFTP server address	The IP address of the TFTP server. Consult your network administrator if necessary.
TFTP file name	If you wish to download a file from the TFTP server, enter the file name.

NOTE: You can edit the TFTP settings and download files using the web interface. See page 35 for details.

>> *To set the SNMP & TFTP parameters*

- In Steps 1–3 below, press “Enter” if you wish to keep a setting’s current value. Otherwise, enter the new value.
1. Enter the name of the SNMP get community.
 2. Enter the name of the SNMP set community.
 3. Enter the TFTP server’s IP address.
 4. Press “3” if you are not going to download a file.
 5. To save the changes, type “C” at the prompt. To adjust the data just entered, type “M” and re-enter the information.

Downloading Files to the NetLight

Occasionally the Netronics support team sends software upgrades for the NetLight. When this happens, place the file(s) on the network’s TFTP server. When downloading a file, the TFTP server’s software must be active.

>> *To download a file to the NetLight*

1. Log in to the CLI, as explained on page 13 above.
2. Press Enter until you reach the prompt to enter a file name.
3. Enter the TFTP file name that you wish to download from the TFTP server to the NetLight. The image file has a .bin suffix and the content file has a .con suffix.
4. After entering a file name, press “1” to download an image file or “2” to download a content file. Press “3” if you decide not to download the file.

Entering the License Number

You need to enter the license number if it has not been pre-entered, or if you upgrade to a different version of the management software (see page 6) and have received a new license number.

If the license number for your installation has been entered, there is no need to re-enter it.

NOTES:

1. If you enter an incorrect license number, the software will not work. As with all software licenses, it is important to keep a record of the license number.
 2. The license number is tied to the MAC address of the NetLight.
-

>> *To enter the license number*

1. Type `setlic`.
2. At the prompt, enter the feature string (SHVF) – see page 13 for details.
3. Enter the case-sensitive, 16-character license key.
4. To save the changes, type “C” at the prompt. To adjust the data just entered, type “M” and re-enter the information. Type “E” to cancel.

If you entered a new license number to upgrade your installation, you need to reset the system in order to activate the changes. If you have access to the web-based application, you can reset the NetLight in the Control & Diagnostics module – see page 29.

Deleting the Log File

The log file records data such as the optical power, bias, temperature and status of the NetLight. It can be viewed via the Data Log module (p. 31, Technicians and Administrators only). When installing a NetLight it is highly recommended to delete the current log file so that you can start monitoring the system with fresh data. After working with the system you may wish to delete the log file periodically.

>> *To delete the log file*

- Type `erase` and press Enter.

NOTE: You can disconnect the RS-232 cable when you are not sending commands to the NetLight via the CLI.

Starting the Web-based Software

When working with the web-based software, ensure that the network cable is attached to the NetLight. The location of the port is shown below.

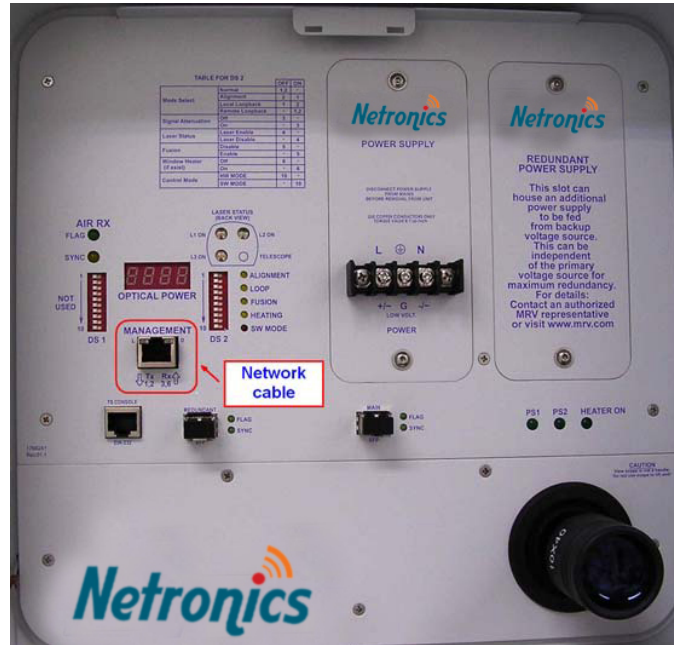


Figure 7: Connecting the network cable

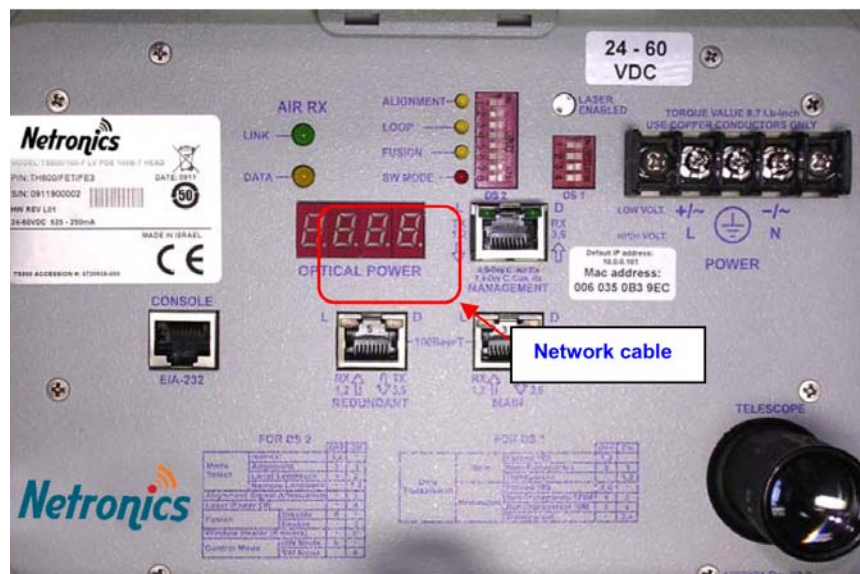


Figure 8: Connecting the network cable – NL155-1900

>> **To start the software**

1. Open a web browser.
2. Type the IP address of the NetLight and press Enter.

- If Java is not installed on the browser, Java is automatically installed from the Internet. If you have any installation problems, go to java.com and install from there.
3. The Login window opens:

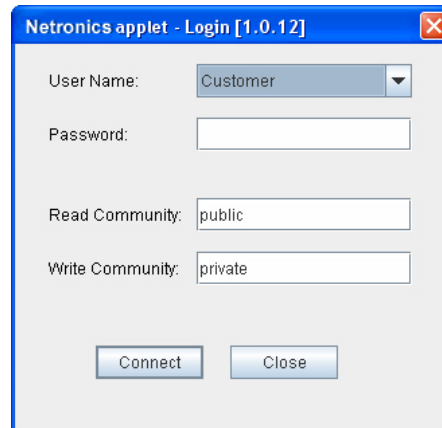


Figure 9: Login window

>> *To log in*

1. Select the user type. (See below for the different user types.)
2. Enter the password.
3. Enter the names of the **Read** and **Write** SNMP communities.

NOTES:

1. The default Read community is “public” and the default Write community is “private”, unless they were changed using the CLI (see page 14).
 2. In this context, “read” is synonymous with “get” and “write” with “set”.
-

User Types

There are three user types for the management software:

User Type	Description
Customer	End users at the site where the NetLight is installed with view-only access.
Technician	Technicians who are responsible for the installation and maintenance of the NetLight.
Administrator	Netronics personnel only or administrators who have received high-level permissions.

The default password for the customer user type is `cust` and for the technician it is `ter1107`. For details on changing these passwords see page 40.

The table below shows the exact rights for each user, for both the basic and extended versions.

Module	Basic Version			Extended Version		
	Customer	Tech	Admin	Customer	Tech	Admin
Configuration	R	R/W	R/W	R	R/W	R/W
Monitoring	R	R	R	R	R	R
Control & Diagnostics	R	R	R	R	R/W	R/W
Data Log	NA	NA	NA	NA	R/W	R/W
Installation	R	R/W	R/W	R	R/W	R/W
Service (software download)	R	R	R	R	R	R/W
Service (traps, date)	R	R	R	R	R/W	R/W
Measurements	NA	NA	NA	NA	NA	R

R: Read

W: Write

NA: Not available

SNMP Web Interface

The default SNMP settings are READ (GET) PUBLIC and WRITE (SET) PRIVATE. The names of the communities can be changed, as described in the CLI section on page 14.

You can view the system data via SNMP using one of the following methods:

1. The web-based management software, as described in this manual.
2. MegaVision – a Windows application for viewing the data and carrying out actions. See the MegaVision NetLight Management User Guide. For information about this application, contact your Netronics agent.
3. A standard MIB browser.

Main Screen

The Main Screen of the management software appears below:

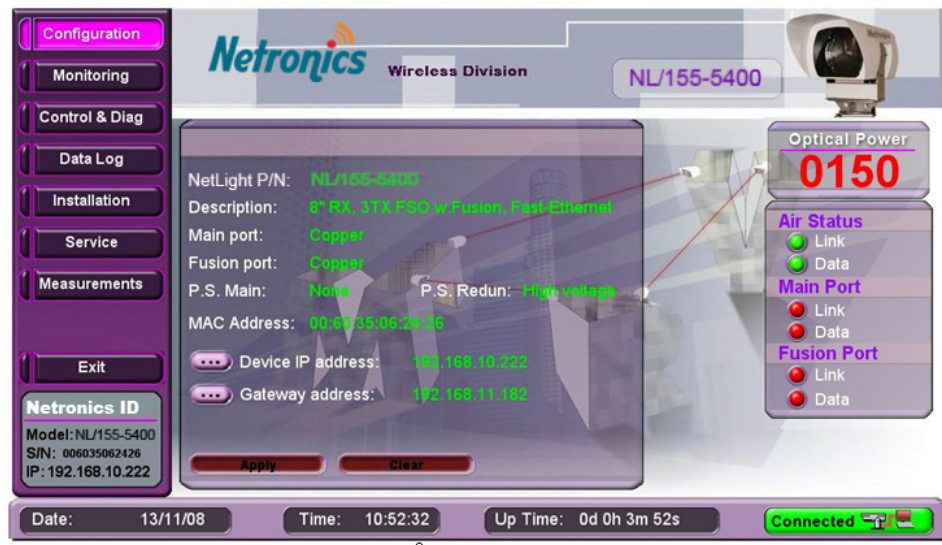


Figure 10: The Main Screen

The menu is on the left panel, and the product model number and a picture of the NetLight appear at the top right. The fields in the table below appear on all the screens.

Field	Description
Netronics ID	The product's model number, serial number of SNMP agent and IP address of the NetLight. To change the IP address, see page 23.
Optical power	The optical power (mV) received by the airlink receiver.
Status area	The Air Status, Main Port and Fusion Ports each have two LEDs and their status is identical to the status of these ports on the NetLight. See the picture below this table. For fiber-based products the indicators are Flag/Sync and for Ethernet copper products they are Link/Data.
Air status	Link/Flag: Data can be received by the airlink receiver. Green at the threshold level. Data/Sync: Turns on if there is synchronization between the received air data and the NetLight clock recovery.

Field	Description
Main port	<p>This is the main data port.</p> <p>Link/Flag: Data can be received by the fiber optic receiver. Green at the threshold level.</p> <p>Data/Sync: Turns on if there is synchronization between the received data from the fiber and the NetLight clock recovery.</p>
Fusion port	<p>This is the redundant port for the optional fusion connection to the back up system. It is only active if it has been specifically activated for your system. See page 26.</p> <p>Link/Flag: Data can be received by the fiber optic receiver. Green at the threshold level.</p> <p>Sync: Turns on if Fusion is active and there is synchronization with the received data from the backup system.</p>
Date, time	The date and time. This is set in the software – see page 37.
Uptime	The amount of time that has elapsed since the NetLight was activated.
Connection Status	Whether or not there is a network connection for this software.



Figure 11 (a, b, c): The status LEDs on the NetLight's back panel



Configuration

The Configuration module enables you to view basic configuration information and to set the IP address for the NetLight and the gateway.

See the table on page 18 to see the permissions for the customer, technician and administrator.

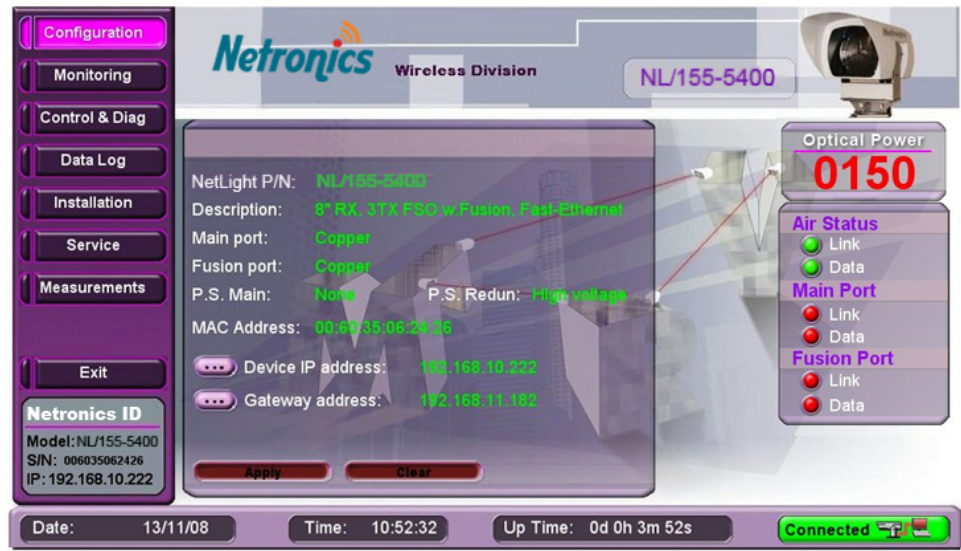


Figure 12: The Configuration module

Field	Description
NetLight P/N	The part number for the NetLight model.
Description	A brief description of the NetLight's main features.
Main port	Copper or SFP. If the SFP is connected, its description appears, e.g. 155 Mb/s MM1310nm. If it is not connected, "General Interface" appears.
Fusion port	Copper or SFP, as described above for the Main port.
PS Main	The main power supply. Possible statuses are High Voltage, Low Voltage, PoE (power over Ethernet) or None. If "None" and the redundant power supply is installed, it is operating from the redundant power supply.
PS Redun	The redundant power supply. Possible statuses are High Voltage, Low Voltage, PoE (power over Ethernet) or None. If "None", then the redundant power supply is not installed.
MAC Address	The NetLight's MAC address.
Device IP Address	The NetLight's IP address.
Gateway IP Address	The IP address of the gateway.

>> ***To change the NetLight's IP address (for Technicians and Administrators only)***

1. Click the purple button.
2. In the window that opens, enter the NetLight's IP address.
3. Click **OK**.
4. Click **Apply**.

>> ***To change the gateway's IP address (for Technicians and Administrators only)***

1. Click the purple button.
2. In the window that opens, enter the gateway's IP address.
3. Click **OK**.
4. Click **Apply**.

NOTES:

1. The changes will only be made after you reset the NetLight – see page 29.
 2. The device and gateway IP addresses can also be changed using the CLI. See page 23.
-

Monitoring

The Monitoring module enables you to view the current optical power, the link status and the mode. The NetLight's critical parameters are displayed here in a clear format. It is recommended to keep the application open to this screen so that you can monitor the system and immediately respond to any issues that arise.

See the table on page 18 to see the permissions for the customer, technician and administrator.

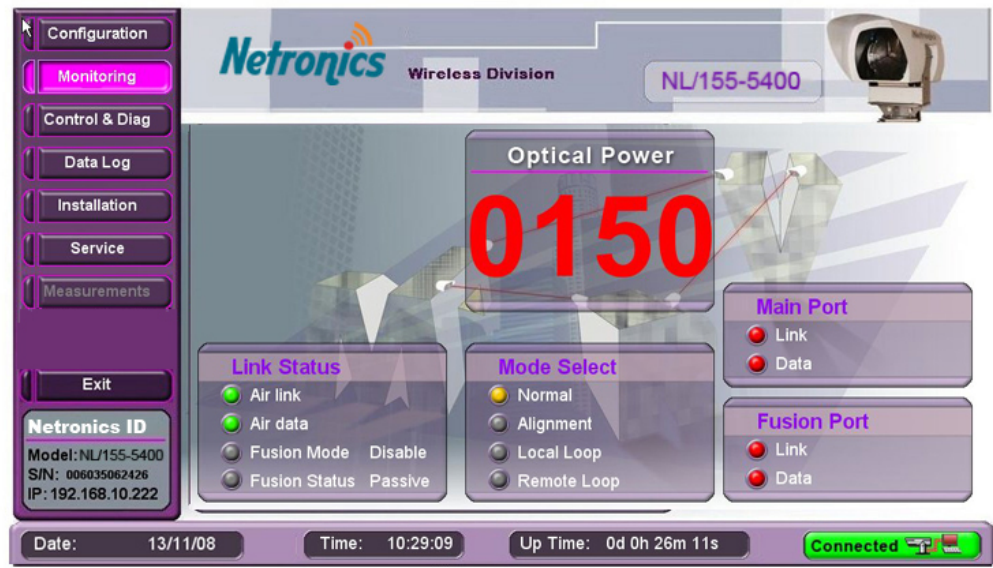


Figure 13: The Monitoring module

Field	Description
Optical Power	The optical power currently received by the NetLight. When you are viewing another module, this value appears on the right panel of the application.
Link Status	For fiber-based products the indicators are Flag/Sync and for Ethernet copper products they are Link/Data. When you are viewing another module, this data appears on the right panel of the application. Fusion Mode: Enabled or disabled depending on whether or not it is enabled for this installation. Fusion Status (when installed): Active: The back-up link is being used when the NetLight failed. Passive: The NetLight link is being used.

Field	Description
Mode Select	<p>The mode is chosen in the Control & Diagnostics module – see page 26.</p> <p>Normal: The signal that is received via the Fiber Optic port is transmitted through the Airlink TX. The signal that is received via the Airlink RX is transmitted through the Fiber Optic TX. This operating mode is the one to use normally.</p> <p>Alignment: A fixed signal is being transmitted. Data received by the Fiber Optic RX is directly returned through the Fiber Optic TX. Data received by the Air RX is returned through the Air TX.</p> <p>Local loop: The loop is on the main port and air port. The inverse of Loopback. I.e., the signal travels via the airlink and at the remote Air RX is returned via the Air TX to the local unit. The Fiber Optic RX of the remote unit is looped to its Fiber Optic TX.</p> <p>Remote loop: The loop is on the second machine's main port and air port.</p>

Control & Diagnostics

In the Control & Diagnostics module you can control some of the NetLight's settings and you can view some diagnostic data.

In this module you can also reset the NetLight.

See the table on page 18 to see the permissions for the customer, technician and administrator.



Figure 14: The Control & Diagnostics module

Control *(for Technicians and Administrators only)*

Field	Description
Mode	The possible modes are: Normal; Local loop; Remote loop and Alignment. The mode is also displayed in the Monitoring module – see page 25. To change the mode, click the purple button and choose the mode. Click OK .
Fusion	To enable or disable Fusion, click the purple button. Make your selection and click OK .
Caution: Do not adjust the Laser and Attenuation settings unless you have consulted the Netronics support team. The correct settings are critical for the link's performance.	
Lasers	The system has up to three lasers, labeled A, B and C. Yellow: On; Grey: Off To select the lasers, click the purple button. Select from "A on", "B on", "AB on", etc. Select "ABC off" to disable all the lasers. Click OK .

Field	Description
Attenuation	To enable or disable attenuation, click the purple button. Make your selection and click OK .
Window heat	In some installations, the glass panel at the front of the NetLight can be heated. Click the purple button to turn the heating function On or Off. Click OK .
Distance measured (Not currently active)	The distance between the two NetLights.

>> ***To keep the changes***


- Click **Apply** to keep any changes made in the Control section. The changes are made immediately.

NOTE: When configuration changes are made, the Optical Power display on the unit will dim momentarily.

Diagnostics

You can view the following diagnostic data:

Field	Description
Power supply main	Up/Down: The status of the main power supply.
Power supply redundant	Up/Down: The status of the redundant power supply, if installed.
Bias	The voltage of the photo diode.
Temperature	The temperature of the NetLight. Click to switch between °C/°F.
Data rate (not in all models)	The data protocol.

Field	Description
Control interface	<p data-bbox="687 271 1158 300">Displays how the NetLight is controlled.</p> <p data-bbox="687 324 1353 389">Software: The dip switch has been set to enable use of the software.</p> <p data-bbox="687 414 1353 669">Hardware: The dip switch has been set <i>not</i> to enable use of the software. In this case, all the buttons are grayed out and in the bottom right of the screen the following message is displayed: Unit controlled by Dip Switches only.</p> 

Resetting the NetLight *(for Technicians and Administrators only)*

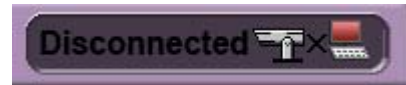
In order for some changes to be made, such as new product settings after entering a license key for an upgrade, you need to reset the NetLight.

NOTE: You can reboot the management software, without resetting the NetLight, via Telnet.
See page 40.

>> *To reset the NetLight*

- Click **Reset NL**.

During the reset process, the button in the bottom right appears as shown. When the system has reset the button returns to the Connected state.



Data Log *(for Technicians and Administrators only)*

The Data Log graph displays the received optical power over time. You can also see a log which is described below.

See the table on page 18 to see the permissions for the customer, technician and administrator.

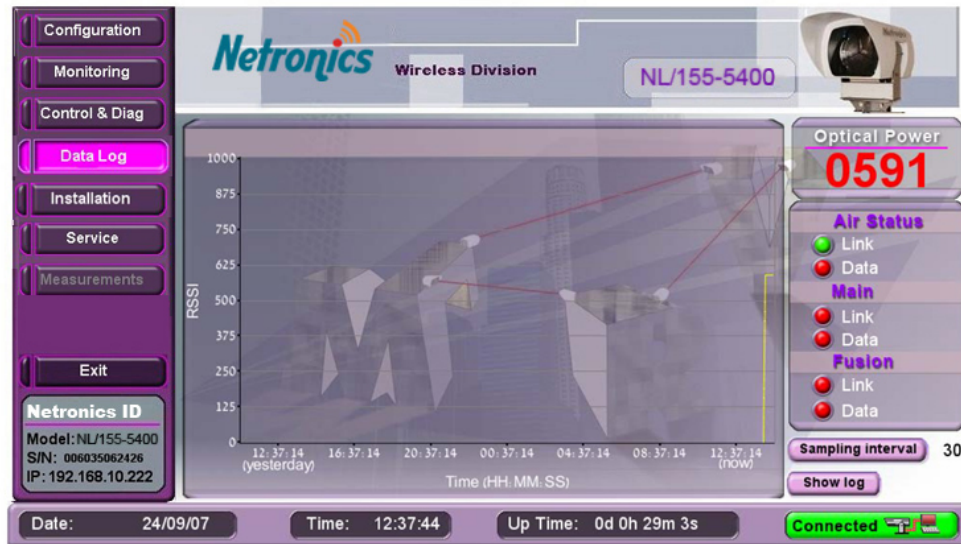


Figure 15: The data graph

>> *To change the sampling interval*

1. Click **Sampling Interval**. The interval can be in the range 30–21600 seconds (6 hours).
2. Click **OK**.

The Log

In order to view the log, pop-ups must be enabled on the browser.

>> **To open the log**

- Click **Show log**. The following window opens:

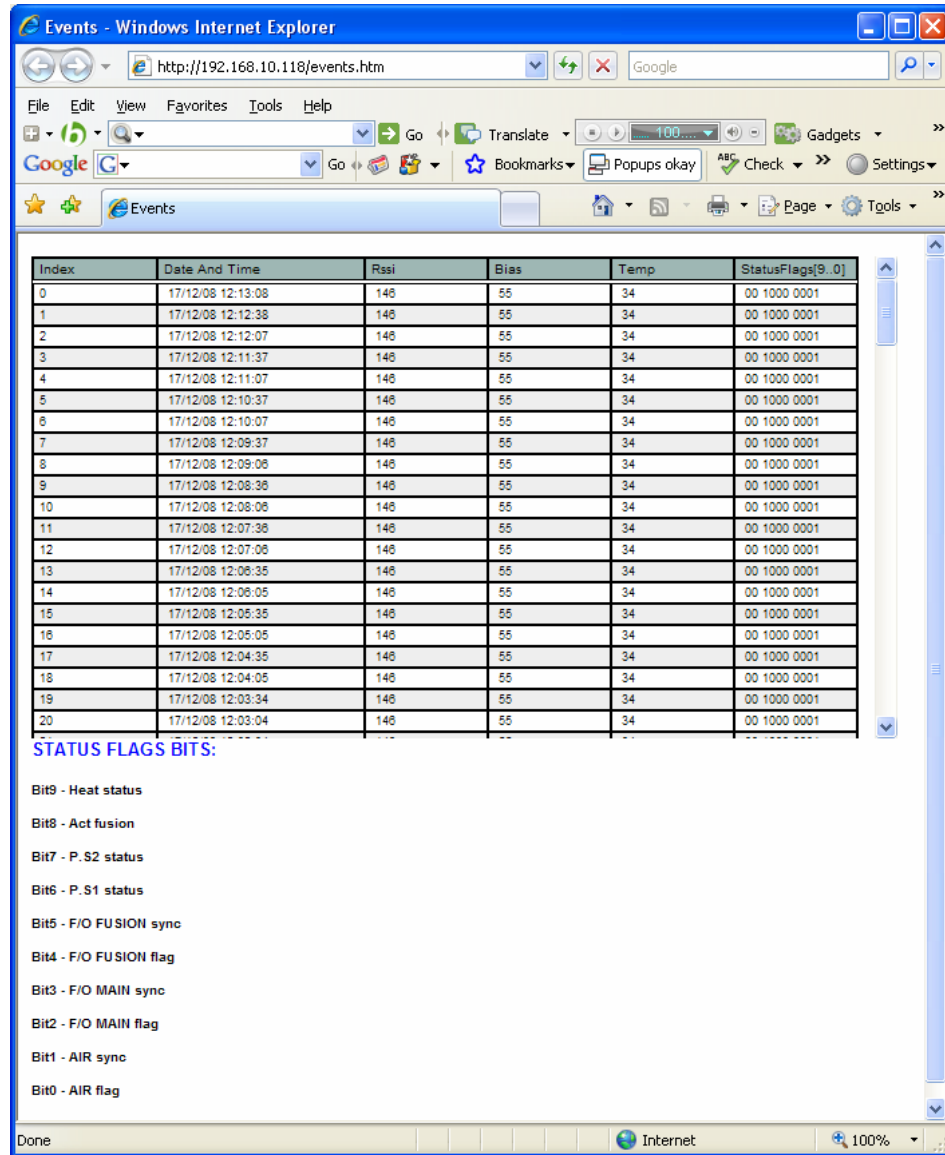


Figure 16: The log file

For each reading the following information is displayed: Date and time, RSSI, Bias, Temperature and a binary code for the status flag. The status flag is based on 10 binary bits which are described below.

Bit	Description
9 - Heat status	1: Heat is enabled for the front window. Available in products where heating was installed.
8 - Act fusion	1: The back-up system is active.

Bit	Description
7 - PS 2 status	1: Power Supply 2 is active.
6 - PS 1 status	1: Power Supply 1 is active.
5 - F/O fusion sync	1: Fusion port - sync is on.
4 - F/O fusion flag	1: Fusion port - data was received from the back-up system.
3 - F/O main sync	1: Main port - sync is on.
2 - F/O main flag	1: Main port - data was received from peripheral equipment.
1 - Air sync	1: Air Rx - sync is on.
0 - Air flag	1: Air Rx - data received.

Up to 10,000 events are displayed, after which the oldest events are deleted as new ones are generated. Certain events are recorded out of the sampling sequence, for example if the air flag falls.

To erase all the events in the log, use the CLI as described on page 15.

NOTE: The text displayed in the log is the same for both the Ethernet copper and fiber-based products.

Installation

The Installation module shows information about the location of the NetLight and the NetLight to which it transmits. It also includes details of the person responsible for the zone where the two NetLights are installed.

It is highly recommended to fill in the full details for Sites A and B so that you can immediately locate the relevant people at each site in the event of a fault, or during regular maintenance tasks.

See the table on page 18 to see the permissions for the customer, technician and administrator.

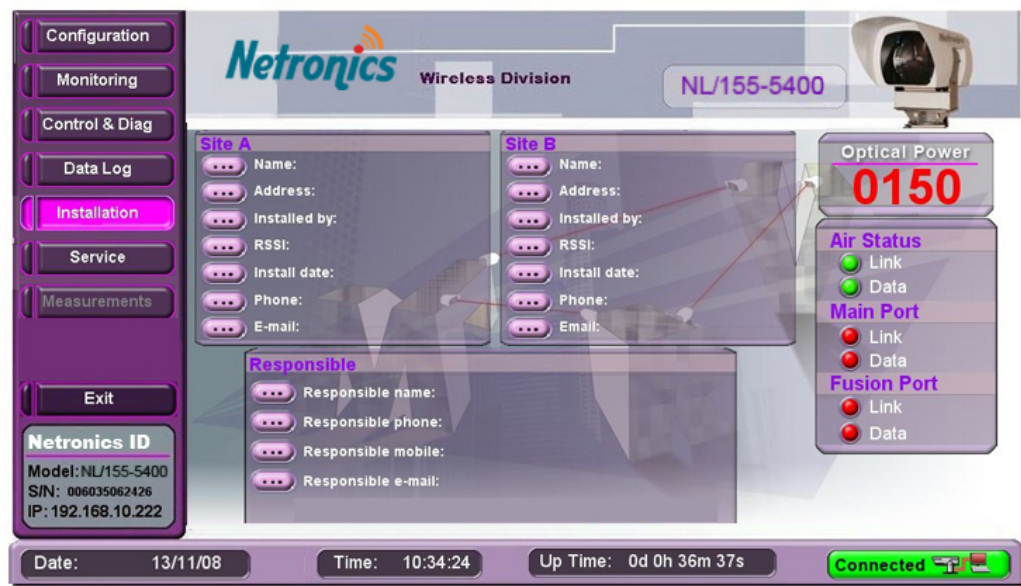


Figure 17: The Installation module

Field	Description
Site A/B	Enter the following information for this site (Site A) and the site to which it transmits (Site B): <ul style="list-style-type: none"> • Site name • Site address • Person or team that installed the NetLight • RSSI at time of installation • Date of installation • Phone number at site • E-mail for contacting the site
Responsible	Enter the following information for the site manager of the zone where sites A and B are located: <ul style="list-style-type: none"> • Name • Phone number • Mobile phone number • E-mail

>> ***To enter or edit information*** *(for Technicians and Administrators only)*

1. Click the purple button for the item you wish to edit.
2. In the window that opens, enter the data.
3. Click **OK**.

Service

The Service module enables you to manage the download of updates from the TFTP server. This can also be carried out via the CLI – see page 14.

You can also set to which IP addresses the system traps are sent.

See the table on page 18 to see the permissions for the customer, technician and administrator.

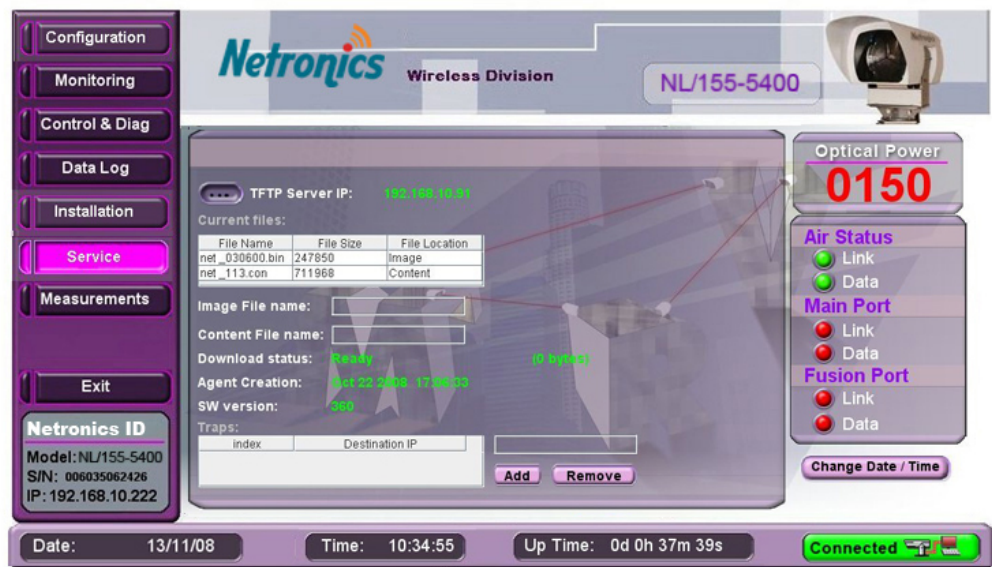


Figure 18: The Service module

Field	Description
TFTP Server IP	The IP address of the TFTP server. In order to download upgrades the files have to be on the server, and the FTP software on the server has to be active. To enter the IP address, click the purple button. Enter the IP address and click OK .
Current files	The current image and content files. The image file is the software for the agent. The content file is the software for the graphical environment in HTTP.
Image file name	Enter the file name that you wish to download, including the suffix.
Content file name	
Download status	The following statuses are possible: Ready: Downloading can commence. Downloading image/content: Files are being downloaded. The number of downloaded bytes is displayed. Successful: The download was successful. Failed – general error! The download failed.

Field	Description
Agent creation	The date and time of the image file.
Software version	The version number of the image file.

>> **To download a file** (for Administrators only)

Traps *(for Technicians and Administrators only)*

There are seven traps that the NetLight can send to computers at the IP addresses defined here. The receiving computer has to have software that can read the trap messages. Software for reading traps can be downloaded from www.ireasoning.com/download.shtml.

The traps are as follows:

Code	Trap	Description
0	Cold Start	The NetLight has been activated, power up.
1	Device Fail	The NetLight is down due to a power failure.
2	Air Link Down	The air link is below the reception threshold. This can be due to the weather conditions or because the link at the second site is no longer transmitting.
3	Fiber Optic Link Down	The main fiber optic link is down. There is probably a fault with the fiber optics or the peripheral equipment.
4	Fusion Down	The fusion link has gone from an active to non-active state. This is usually when the main link has started transmitting again.
5	Fusion Up	The fusion link has gone from a non-active to active state. This is when the main link has stopped transmitting.
6	PS2 Down	The second power supply is down.

>> **To add an IP address**

1. Type the IP address in the box above the Add/Remove buttons.
2. Click **Add**.

The IP address appears in the list of traps.

>> To remove an IP address

1. Type the exact IP address in the box above the Add/Remove buttons.
2. Click **Remove**.

The IP address is removed from the list of traps.

Adjusting the Date & Time of the NetLight *(for Tech. & Admin.)*

The date and time of the NetLight is not based on the computer where you view the web-based software, rather it is set here. This determines the date and time that is displayed in the bottom left of the software, and the date and time for log entries and traps, etc.

>> To set the date and time

1. Click **Change Date/Time**.

The following window opens:

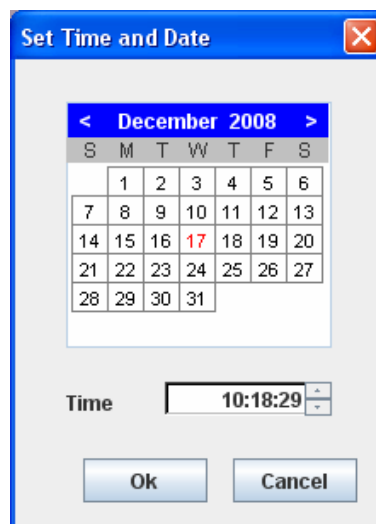


Figure 19: Setting the date and time

2. Use the calendar to enter the date.
3. Enter the time.
4. Click **OK**.

NOTE: If the NetLight has not been active for a period of approximately one week, you may need to reset the date and time.

Measurements *(for Administrators only)*

The Measurements module displays certain voltages and SFP data.

See the table on page 18 to see the permissions for the customer, technician and administrator.

Telnet

Six Telnet commands are available for the NetLight:

Telnet Command	Description
show version	Display the firmware version of the image file.
show ip	Display the IP address of the NetLight. The following additional information is displayed: <ul style="list-style-type: none"> • The MAC address of the NetLight • DHCP: Enabled/Disabled • IP address of the netmask and default gateway. This information is also available via the CLI. See page 11.
show http password	Display the customer and technician passwords.
set http password	Set the customer or technician passwords.
reboot	Reboot the management software, but not the NetLight. This enables you to carry out a more limited reset.
logoff	Close the Telnet application.

>> *To open the Telnet interface*

1. Select **Start > Run**.
2. Enter `telnet <IP address of NetLight>`.
3. Enter the password. The default is `weBPass`.
4. To view the list of commands type `"?"`.
5. Enter one of the above commands.

>> *To change the customer password*

1. Type `set http password cust <the new password>`.
2. Press Enter.

>> *To change the technician password*

1. Type `set http password tech <the new password>`.
2. Press Enter.

Troubleshooting

Cannot connect to the web-based software

Possible Actions:

1. Check that the computer is physically (or wirelessly) connected to the network.
2. Ping the IP address of the computer to see if it is reachable.
3. Check that Java is installed on the computer. There could be a Java-related problem.
4. Use the CLI to check the feature string. As the system boots, various information is displayed, including the feature string. See page 13 for a description of the feature string. If the string does not contain the letter “H” then web-based access is not permitted for this installation. Contact Netronics to upgrade your license.

License number is lost

Possible Actions:

1. Use the CLI to re-enter the license number – see page 15.
2. If you no longer have the license number, contact Netronic