



Broadcast Equipment

FMCS-1L
ALL-IN-ONE
FM MODULATION MONITOR
LITE (Remote Management)

WARRANTY, FACTORY RECALIBRATION AND FACTORY SERVICE

FOR ASSISTANCE:

- **CONTACT YOUR BELAR SALES REPRESENTATIVE**
- **CUSTOMER SERVICE AT THE BELAR FACTORY.**

Immediately upon receiving your equipment, please make a careful inspection for any shipping damage. If damage is found or suspected, please notify the carrier at once and then contact your dealer or the **BELAR** factory. We strongly encourage you to save the shipping carton and shipping materials supplied with your equipment. They are specially designed to protect your equipment, and in the event that you need to return it for service, only these OEM shipping materials can ensure its safe return to our factory.

All **BELAR** products are warranted against defects in materials and workmanship. This warranty applies for three years from the date of delivery, FOB factory or, in the case of certain major components listed in the instruction manual, for the specified period. **BELAR** will repair or replace products which prove to be defective during the warranty period provided that they are returned to **BELAR** pre-paid. No other warranty is expressed or implied. **BELAR** is not liable for consequential damages.

A RETURN MATERIAL AUTHORIZATION NUMBER MUST BE OBTAINED FROM BELAR IN ADVANCE OF RETURN.

- Please call (610-687-5550) or email (sales@belar.com) to request an RMA number to display on the outside of your shipping carton and all paperwork.
- A written statement with the name, address, telephone number & email address together with a brief description of the work requested, must accompany all returns.
- The customer shall be responsible for all costs of transportation and insurance to and from the **BELAR** factory, and all such costs must be prepaid.

PLEASE VISIT: WWW.BELAR.COM AND REGISTER YOUR PRODUCT SO WE MAY KEEP YOU INFORMED OF THE LATEST HARDWARE AND SOFTWARE UPDATES.

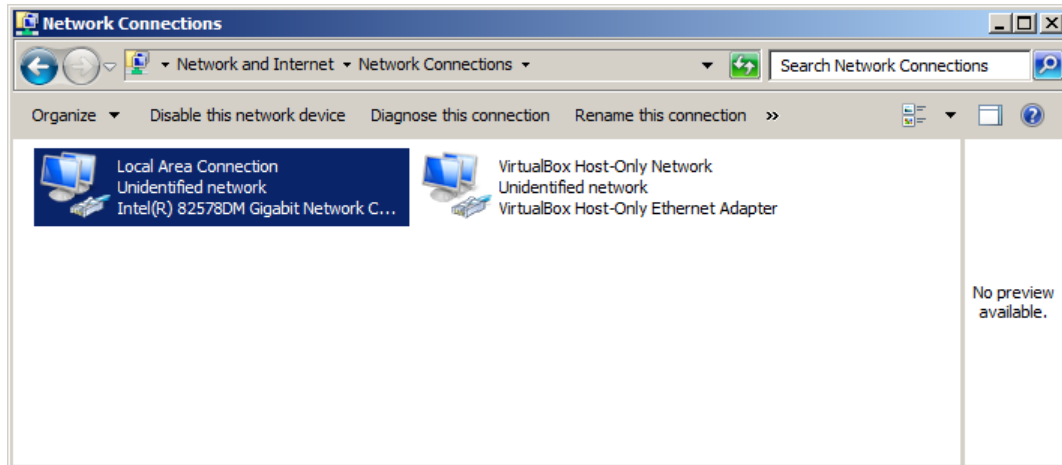
We no longer ship PC Control Software with the units. Please visit **www.belar.com** and download the latest **WizWin®** and **Server PC Control Software**. Software updates will be posted on our website periodically. The **FMCS-1** can be updated in the field using the PC Software.

Initial Setup

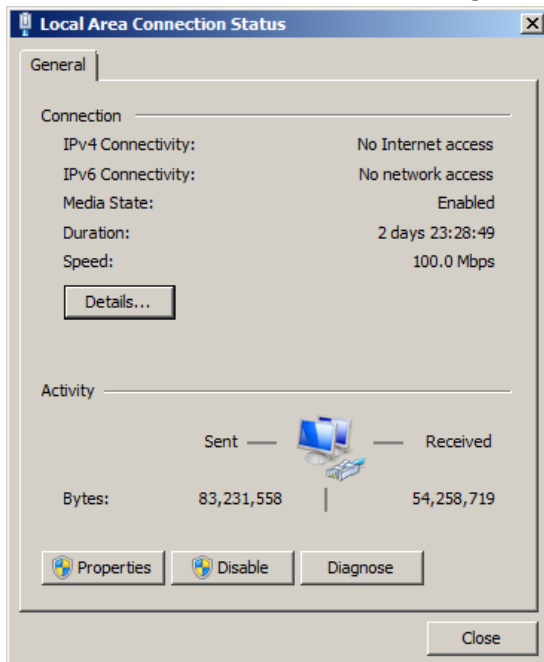
The **FMCS-1L** is shipped with a static IP of 192.168.1.252 with a subnet mask 255.255.255.0 and must be configured to work properly on your network. To configure the network settings requires a computer and either a crossover cable or a switch/router connected to both devices. It is recommended that the initial configuration be done standalone with only the computer and PC on the network.

Configure your PCIP address of your computer to 192.168.1.xxx . any address other then 192.168.1.251 is fine and a subnet mask of 255.255.255.0. The example below is using Windows 7.

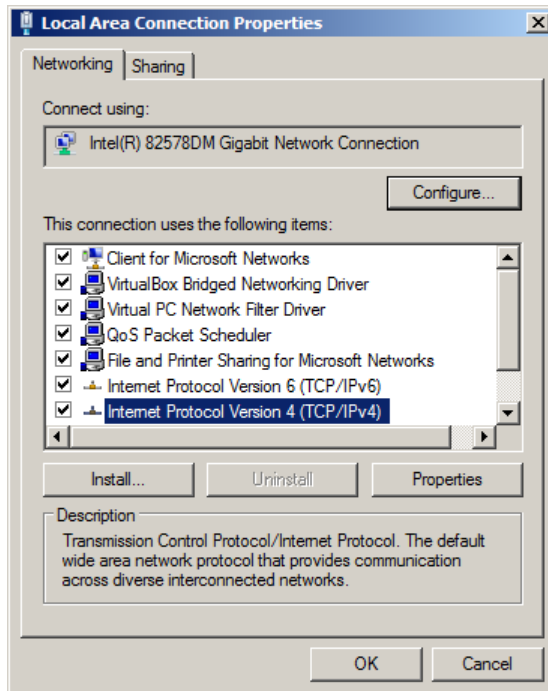
- 1) Navigate to Network Connections



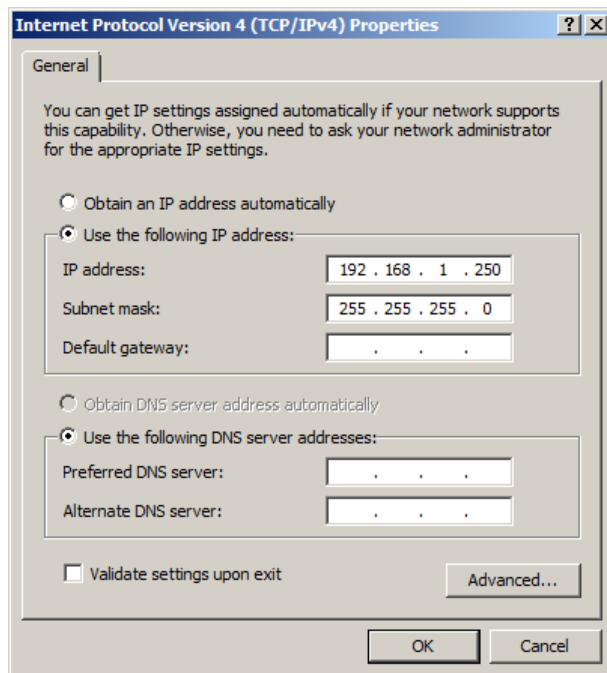
- 2) Double click on LAN connection to bring of status dialog box click on properties.



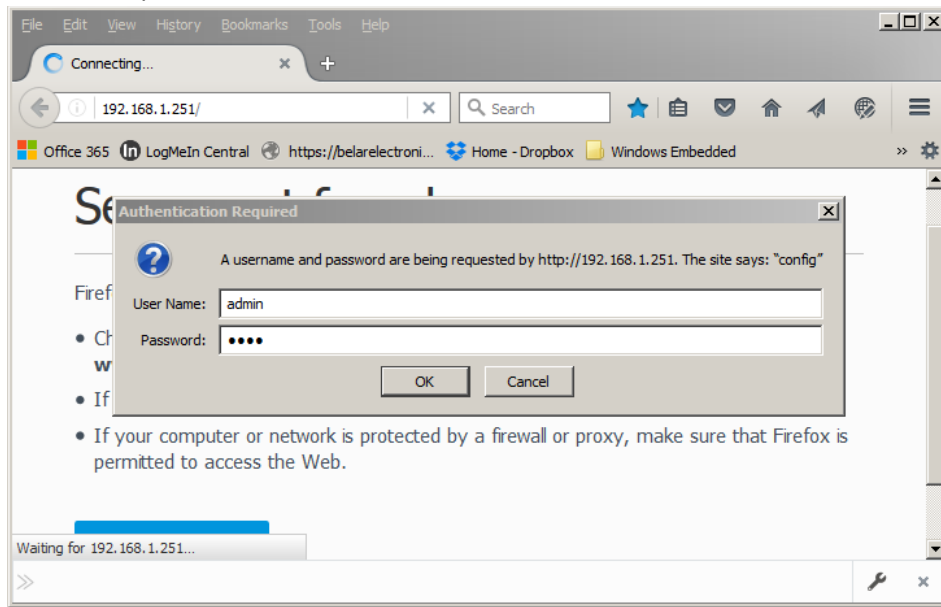
- 3) Select and click on Internet Protocol.



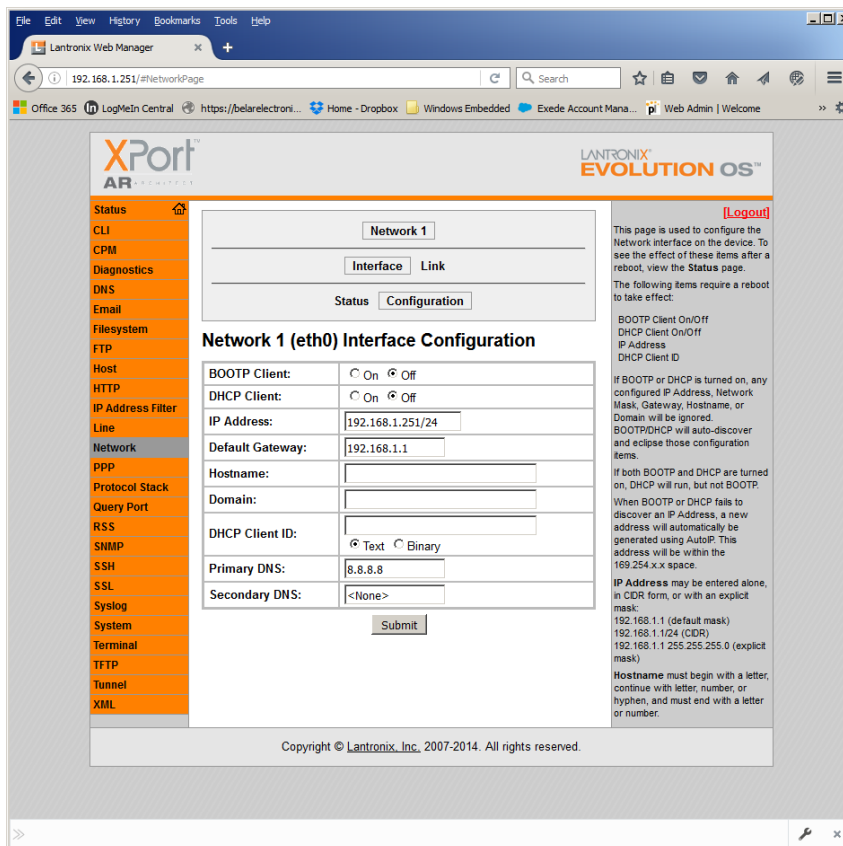
- 4) Enter an IP address 192.168.1.xxx other than 192.168.1.252. Set the subnet 255.255.255.0 and click Ok.



- 5) Type the units IP address 192.168.1.252 into any web browser. Enter the default username: admin and password: PASS and click Ok.



- 6) Select Network on the left hand side and Configuration at the top. Enter the unit's new IP address, subnet, default gateway, and DNS settings



- 7) Reboot the unit and the IP settings should be configured.
 - a. If for some reason the unit becomes unreachable then push the 'Default Reset' microswitch in (located on the back panel), for 1 sec and the defaults IP settings will be reloaded.

IP Address: 192.168.1.252

Subnet: 255.255.255.0

Username: admin

Password: PASS

Belar WizWin® Software, Setup & Firmware Updates

Initial Software Installation

- 1) **DOWNLOAD** the **Belar WizWin® Software** from the BELAR website at: <http://www.BELAR.com/update/index.html>
- 2) Locate and **RUN** the **setup.exe** file. Follow the screen prompts.
- 3) If connecting to the unit using the RJ-45 network connector, download the Lantronix Device installer using the link on our webpage. Also available from Lantronix at: http://ltxfaq.custhelp.com/app/answers/detail/a_id/644
- 4) Install the Device Installer software.

Connecting the Unit to your computer

1) Network Connection

- a. **DHCP:** If connecting to a network with a DHCP server in place (the Unit is shipped with DHCP enabled) connect the Unit to your network, on the same subnet as the computer you loaded the **Belar WizWin® Software**, then power cycle the unit.
- b. **APIPA:** If your network does not have a DHCP server the Unit will select an APIPA (Automatic Private IP Address) address in the 169.254.xxx.xxx range with a subnet of 255.255.0.0 You can then use an isolated (non DHCP) switch or a crossover cable to connect the **FMCS-1** to your computer.
- c. You must set the computer IP to the same 169.254.xxx.xxx range with the 255.255.0.0 subnet. (Most computers set to DHCP enabled will default to an APIPA address if no DHCP server is present when they are booted up)
- d. **Static IP:** Currently static IP's must be set using the Lantronix Device Installer software. (Please see Section 0 Setting a Static IP)

2) USB Connection

- a) Connect a USB A-Male to Mini-B cable

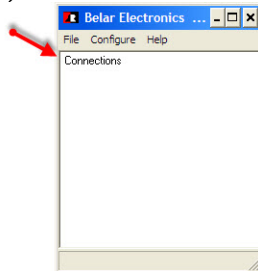
Configuring the Belar WizWin® Software

1. Finding the Unit's IP address

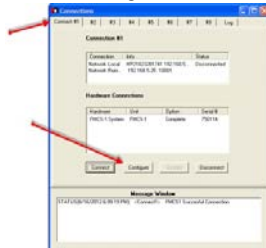
- To Obtain the IP address of the FMCS-1, activate the Unit's popup menus, then go to the "Settings" > "Network" submenu to display the current network information. In order for the unit to correctly assign a DHCP or APIPA address the unit must be power cycled after the RJ-45 cable is connected to the unit.

2. RUN the Belar WizWin® Software:

a) Then 'SELECT' "Connections"



b) A pop-up dialog box will appear 'SELECT' Connection #1 then 'CLICK' the "Configure" Button



c) Under the individual Tabs in the Configure Dialog Box

'SELECT' or ENTER the following information.

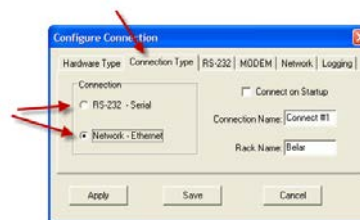
i. Hardware Type:

'SELECT' FMCS-1



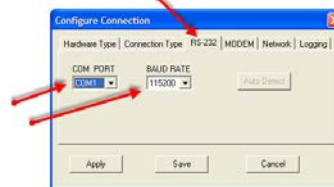
ii. Connection Type:

'SELECT' Network – Ethernet or RS-232 – Serial



iii. RS 232 Connection

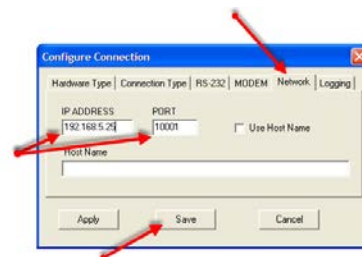
If using the serial connection on the FMCS-1, CHECK the appropriate option, then 'SELECT' the RS-232 tab, 'SELECT' the appropriate "Com Port" and 'SET' the "Baud Rate" to 115200



iv. Network Connection

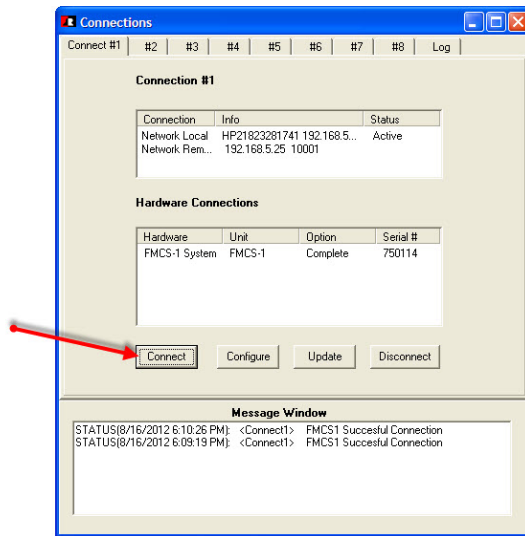
'ENTER' the IP Address of the FMCS-1 obtained from the Network Settings menu. For a direct connection to the unit using Belar WizWin® Software, the port number should be set to 10001.

If connecting to the BELAR Server Program, the IP address will be the address of the hosting computer and the port will be set between 81 & 88 to correspond with the listening port set in the Server Program. Alternatively, a Host Name can be substituted for the IP address. If so, please check the 'Use Host Name' box.

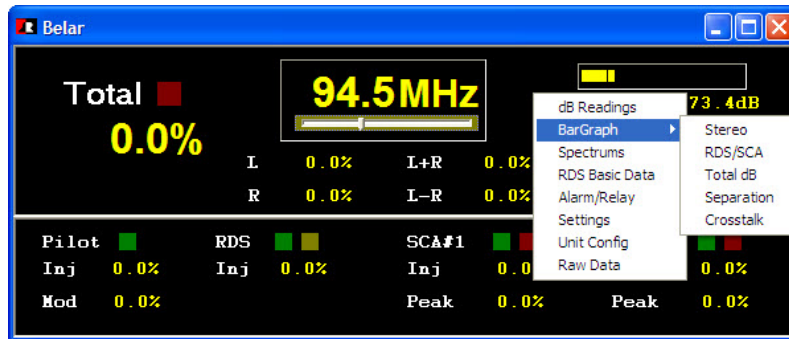


3) then 'CLICK' "Save" to save and close the "Configure Connection" dialog box.

- 4) 'CLICK' on the "Connect" button in the Connections Window. The Unit should connect and bring up a virtual front panel of the Unit.



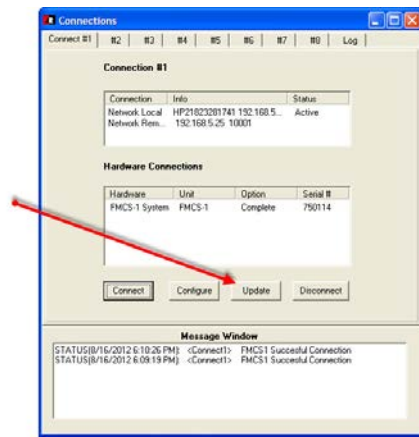
- 5) 5) You can navigate around the unit controls by right clicking on the unit and selecting screens and functions from the drop down menus that appear.



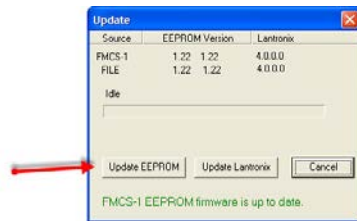
Updating the FMCS-1 Firmware

The update file is embedded in the **Belar WizWin® Software**. In order to update the unit a connection must first be established using the **Belar WizWin® Software** program. (See section 0)

- 1) In the Connections Window, **'SELECT'** the **"Update"** button.



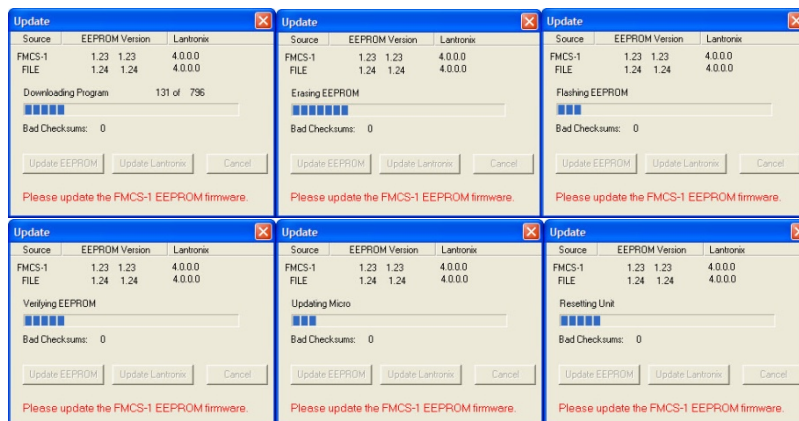
- 2) An Update Dialog Box will pop-up, **'CLICK'** the **"Update EEPROM"** button to start the update process.



If you are attempting to install a firmware version older than or equal to your current version a warning box will appear, **'SELECT'** the **"Confirm"** button if you want to continue.

The front panel of the Unit will show the updating progress which takes about 10-20 minutes to complete. Afterwards the unit should reboot automatically.

DO NOT INTERRUPT THE UPDATE PROCESS AFTER IT HAS STARTED

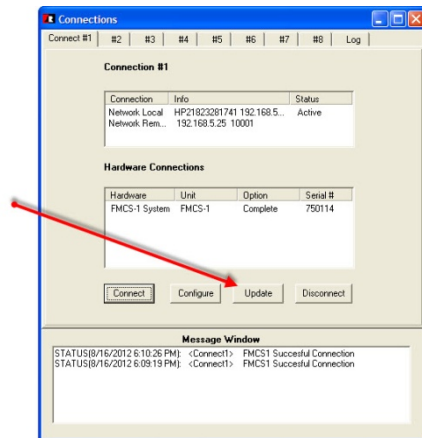


Updating Lantronix Network Interface Controller

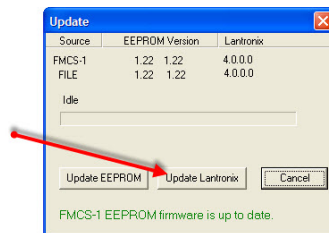
Some older units have Lantronix firmware below version 4.0.0.0. We recommend updating these Lantronix to Version 4.0.0.0. In order to update the Lantronix using **Belar WizWin® Software**, the **FMCS-1** must be version **1.18** or higher. Please update the unit's firmware first, if necessary. (See section 0)

The update file is embedded in the **Belar WizWin® Software**. In order to update the unit, a connection must first be established using the **Belar WizWin® Software** program. (See section 0)

- 1) In the Connections Window, 'SELECT' the "Update" button.

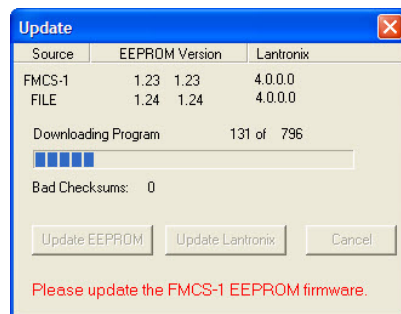


- 2) An "Update Dialog Box" will pop-up. The **FMCS-1**'s Lantronix version is displayed on the first line, the update version is displayed on the second line. 'CLICK' the "Update Lantronix" button to start the update process.



The front panel of the Unit will show the updating progress which takes about 20 minutes to complete. Afterwards, the unit should reboot automatically.

DO NOT INTERRUPT THE UPDATE PROCESS AFTER IT HAS STARTED



The Lantronix update will save the IP settings present before the update and reconfigure the Lantronix after the update, then reboot the device. During the update process, the Network connection will be closed and after the unit reboots a new connection will be established. If the Lantronix was configured for DHCP this may result in the unit's IP address changing. If this occurs, use the Lantronix Device installer or the unit's Network Settings menu to determine the new IP address. The **Belar WizWin® Software** will have to be reconfigured using this new IP address before the software can connect to the unit. (See section 0)

Setting a Static IP address using the Lantronix Device Installer Web Interface

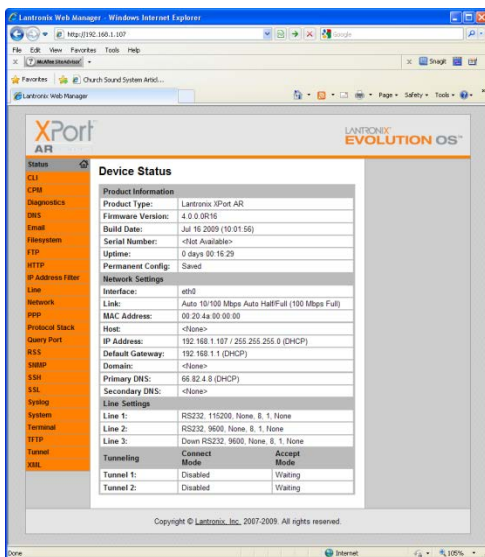
In order to use the Lantronix Device Installer Web interface the Lantronix must be running firmware version 4.0.0.0 or higher. Please update the Lantronix firmware before continuing if required. (See section 0). The Lantronix web interface may be accessed from the device installer, or from a standard web browser. The default user name and password are:

User name: **admin**

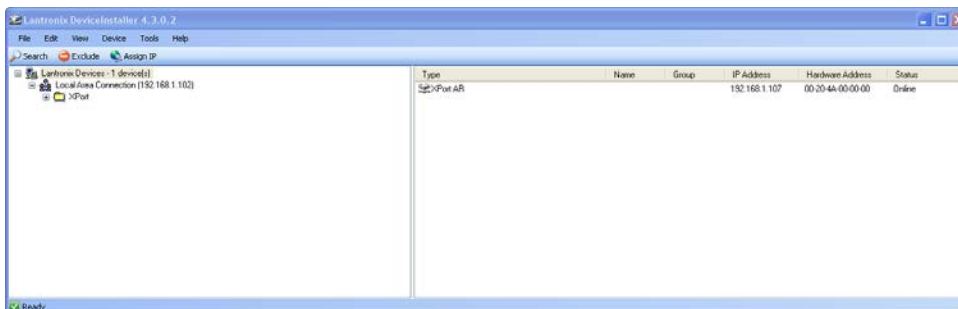
Password: **PASS**



To access the Web interface using a web browser just enter the unit's IP address in the address bar, in the example below the IP address is 192.168.1.107. The browser will then prompt for a username and password as mentioned above.

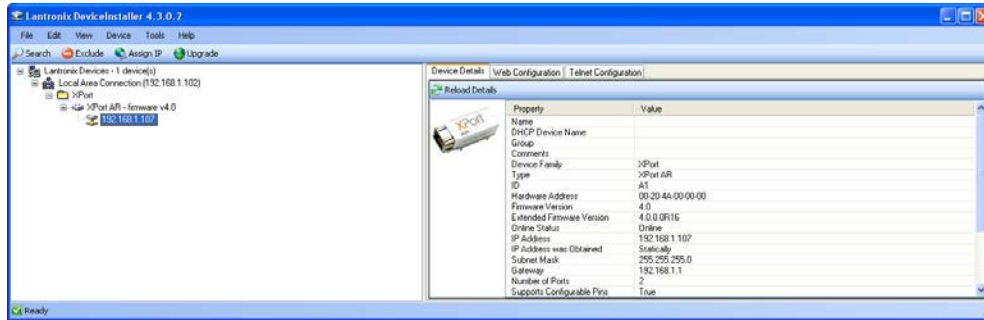


To use the Lantronix Device Installer software, install and run the software, the Lantronix will appear as **XPort** on the left and **XPort AR** on the right side. **DOUBLE CLICK** the **XPort AR** symbol on the right hand side.

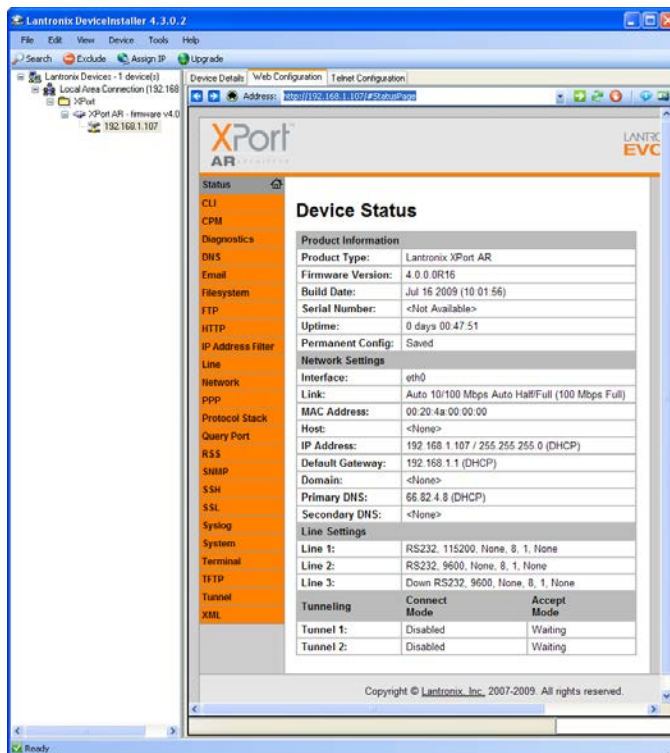


Type	Name	Group	IP Address	Hardware Address	Status
XPort AR			192.168.1.107	00:20:4A:00:00:00	Online

‘CLICK’ on the “Web Configuration Tab”, and then ‘CLICK’ the green right hand arrow on the tool bar. A username/password box will pop-up as displayed above. ENTER the default username and password.

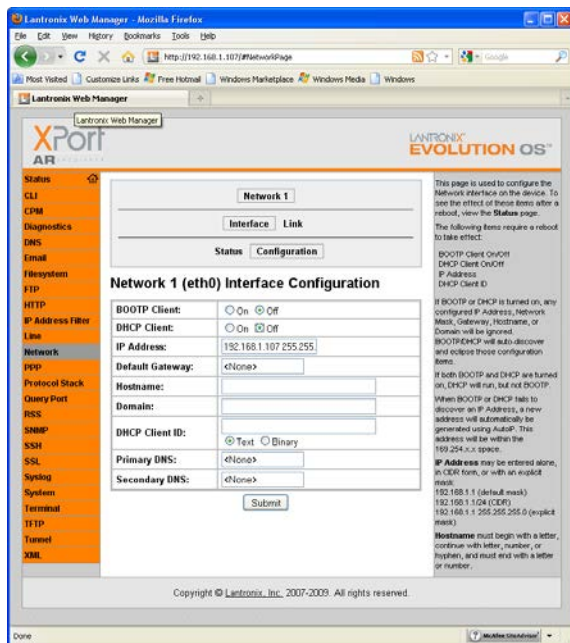


Both the Web browser and Device Installer display the same information in the same format. The Web Browser is quicker if you already know the Unit's IP address.

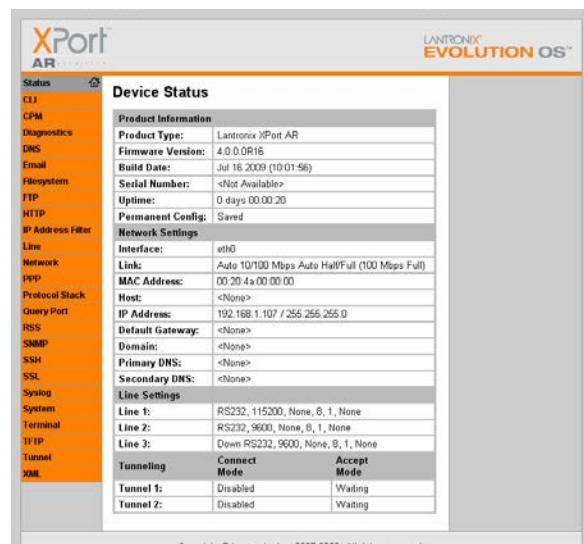
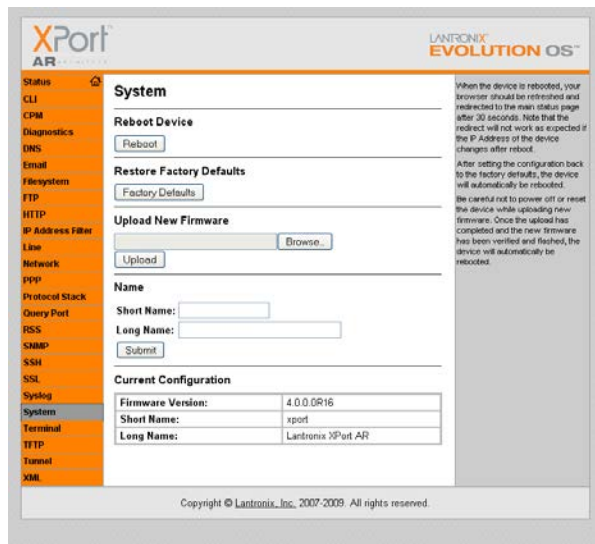


To set the Static IP ‘CLICK’ on the “**Network**” button on the left hand side. Next, ‘**SELECT**’ the “**Configuration**” box in the center. From this screen, **ENTER** the static IP address and subnet mask in the “IP Address” box using the format xxx.xxx.xxx.xxx xxx.xxx.xxx.xxx.

In the example below, I have entered “192.168.1.107 255.255.255.0”. Make sure the BOOTP and DHCP Client are both in the “**Off**” position. A Default Gateway, Hostname, or Primary DNS can also be set at this time. After all the settings are correct ‘**CLICK**’ the “**Submit**” button at the bottom of the screen. The changes will take effect on the next reboot.



To reboot the Lantronix, power cycle either the unit or ‘**CLICK**’ on the “**System**” button on the left. ‘**CLICK**’ the “**Reboot**” button under the system menu. After a prompt, the Web Interface will close and then re-open showing the Device Status. Check to make sure the settings are correct. The unit should now be set to this Static IP address.





BELAR ELECTRONICS LABORATORY, INC.

