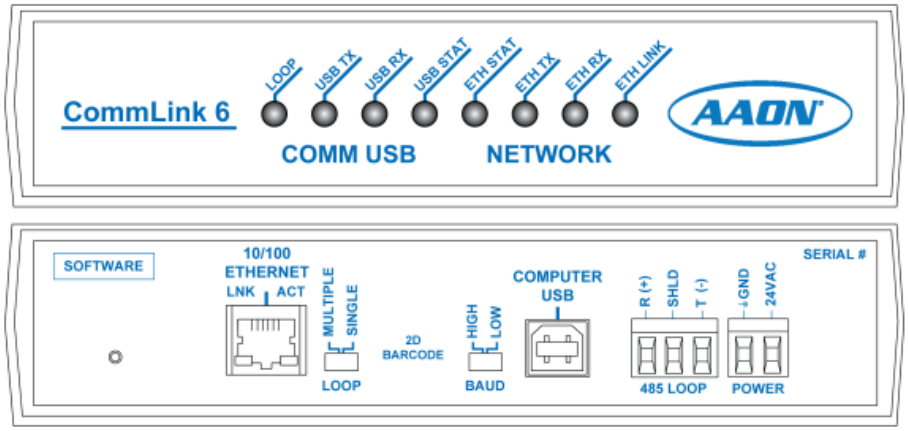
Contents [hide]

AAON VCCX-454 Series CommLink 6



Specifications

- Compatible with VCCX-454 Series

- Compatible with VCCX/VCCX-IP Series
- Part Description: MiniLink PD 5
- Part Number: ASM01626
- E-BUS Cable Assembly available in various lengths ranging from 1.5 ft. to 1000 ft.

Product Usage Instructions:

Overview and System Requirements:

The ASM07420 CommLink 6 is designed to facilitate communication between controllers or local loops within your control system. It also serves as an interface for connecting a computer to the system.

Communication Capabilities:

The CommLink 6 enables communication with the control system via a computer running Prism 2 software. It offers TCP IP Internet and/or intranet connectivity for Ethernet networked computer systems, enabling seamless communication with your control system.

Installation:

Quick Start Guide:

1. Refer to the provided manual for detailed installation instructions.
2. Connect the CommLink 6 as per the wiring diagram provided in the manual.
3. Ensure proper power supply and network connection for the CommLink 6.
4. Install any necessary software on the connected computer for communication.

Connections and Wiring:

Refer to Figure 1 in the manual for detailed wiring instructions. Ensure proper connections are made to establish communication between the controllers or local loops and the computer system.

Troubleshooting:

CommLink 6 LEDs:

Refer to Figure 2 in the manual to interpret the status of the LEDs on the CommLink 6

for troubleshooting purposes.

Connection:

If facing connectivity issues, ensure that all connections are secure and that the network settings are configured correctly on both the CommLink 6 and the connected computer.

COMMLINK 6 TECHNICAL GUIDE	
REVISION AND DATE	**CHANGE**
Rev. A, August 15, 2024	Initial release
Rev. B, August 30, 2024	Added IP configuration information, cosmetic updates
Rev. C, October 22, 2024	Added CommLink configuration information for Windows® 10 and later

PRODUCT NAME PARTS REFERENCE	
PART DESCRIPTION	**PART NUMBER**
AAON Unit Controllers	Varies
MiniLink PD 5	ASM01626
E-BUS Cable Assembly E-BUS Power & Comm 1.5 ft., 3 ft., 10 ft., 25 ft., 50 ft., 75 ft., 100 ft., 150 ft., 250 ft., and 1000 Foot Spool	G029440 (1.5 ft.), G012870 (3 ft.), G029460 (10 ft.), G045270 (25 ft.), G029510 (50 ft.), G029530 (75 ft.), G029450 (100 ft.), G029470 (150 ft.), V36590 (250 Ft.), G018870 (SPOOL)

www.aaon.com

- This manual is available for download from www.aaon.com

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- Tulsa, OK 74107-2728
- Factory Technical Support Phone: 918-382-6450 Controls Support Phone: 866-918-1100

- It is the intent of AAON to provide accurate and current product information. However, in the interest of product improvement, AAON reserves the right to change pricing, specifications, and/or design of its product without notice, obligation, or liability.
  Rev. C

GENERAL INFORMATION

Overview and System Requirements

- The ASM07420 CommLink 6 is used to transfer communications between controllers or local loops on your control system. It can also be used as an interface for connection of a computer to your system.
- The CommLink 6 provides communication with the control system through any computer that is running Prism 2 software.
- The CommLink 6 communication interface, provides TCP IP Internet and/or intranet connection for Ethernet networked computer systems, allowing them to communicate with your control system.
- Using standard TCP/IP Protocol, with AAON's Prism 2 software, you are able to monitor and configure your controllers without a modem or a direct connection from a PC. Utilizing existing routers, proxies, or firewalls allows a PC running Prism 2 to connect to a controller in a remote accessible location or building. Several IP

connection profiles can be created to facilitate monitoring several CommLink 6 devices.

WARNING: Verify the wiring matches the backplate description to confirm that the polarity is correct when wiring 24 VAC power to the CommLink power terminal block or serious damage to the product will result.

System Requirements To program the CommLink 6 to work with Prism 2, you will need:

Standard Items (Required)

- CommLink 6 with USB cable and power adapter (supplied)
- A PC with an Ethernet communications port or USB port (supplied by others)
- Microsoft Windows® 10 (must be installed on the computer you are going to use)
- Prism 2 software (can be downloaded for free from www.aaon.com)

Optional Items

- MinkLink PD 5

NOTE: AAON Controls Support cannot troubleshoot internal PC and/or Windows®-based operating system problems.

INSTALLATION

Quick Start Guide

NOTE: If you are using the CommLink 6 without utilizing Prism 2, you need only perform Steps 1-3.

Step 1: Set your CommLink's Loop switch to Multiple or Single. .

- Multiple when there is a single CommLink 6 with at least one MiniLink PD 5 installed in the system.
- Single when there is a single CommLink 6 with no connected MiniLink PD5 modules.

Step 2: Set your CommLink's Baud rate switch to High or Low

- High when only using VCCX2, VCCX-IP, or VCCX-454, or GPC-XP controllers.
- Low when using older generation or a combination or older generation and newer controllers. Refer to the individual controllers technical guide for baud rate settings.

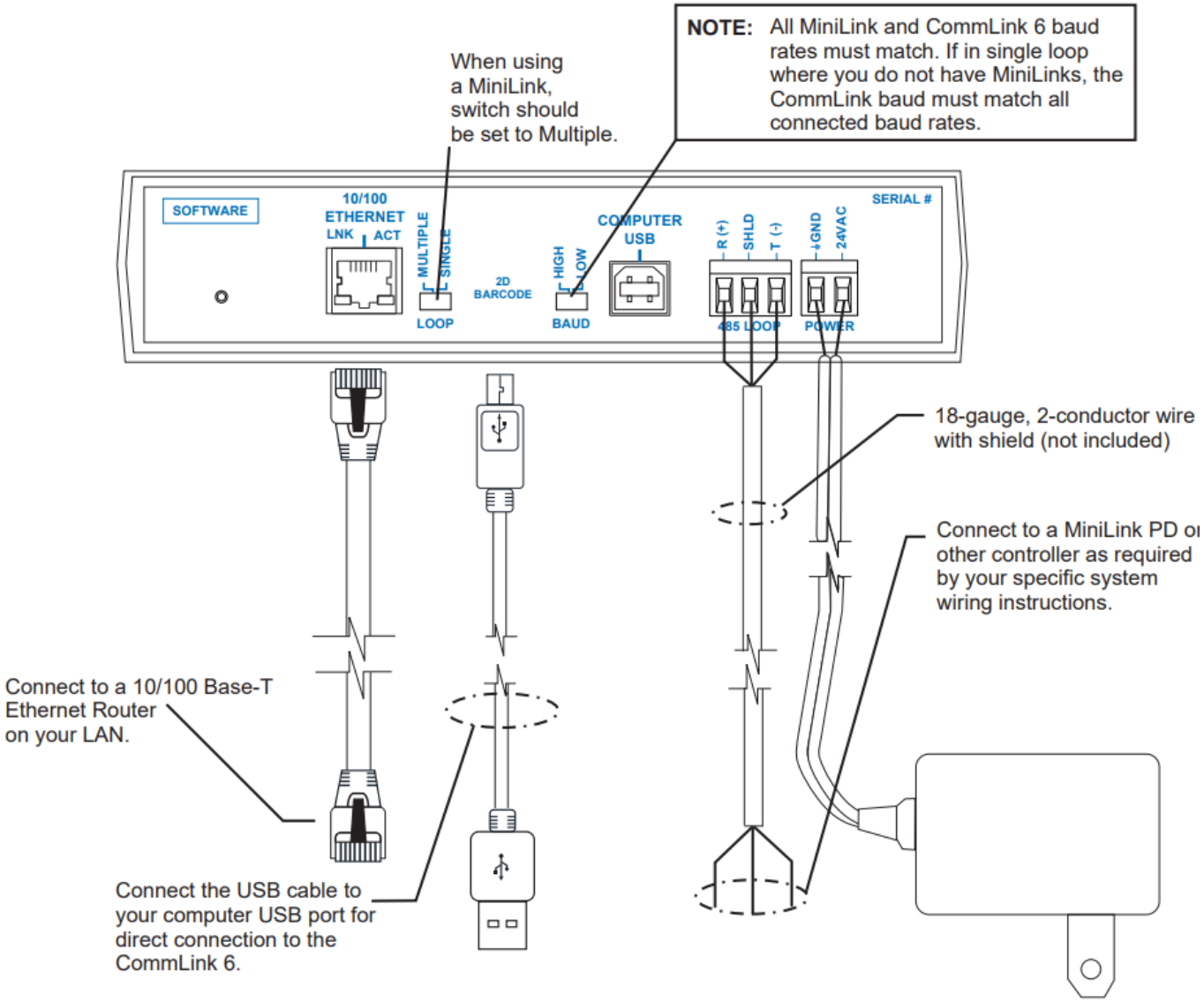
Step 3: Wire your CommLink to the appropriate controller on your system, and plug the CommLink into a power supply.

WARNING: Verify the wiring matches the backplate description to confirm that the polarity is correct when wiring 24 VAC power to the CommLink power terminal block or serious damage to the product will result.

Step 4: Install Prism 2 software on your computer.

- **WARNING:** If you are replacing an earlier version of the CommLink with a CommLink 6, ensure the R(+) and T(-) terminals on the communications terminal block are wired the same as the back plate instructions. Incorrect wiring could lead to damage of the equipment.
- **NOTE:** AAON Controls Support cannot troubleshoot internal PC and/or Windows®-based operating system problems, firewalls, routers, and/or problems on a customer's internal or external network. An IT professional may need to be consulted.

CONNECTIONS AND WIRING



WARNING!

- If you are using the IP Module with your CommLink, do not have your ethernet and USB connected at the same time. This could cause unreliable communications.
- You must always confirm that the polarity is correct when wiring 24 VAC power to the CommLink power terminal block or serious damage to the product will result.

Figure 1: CommLink 6 Wiring

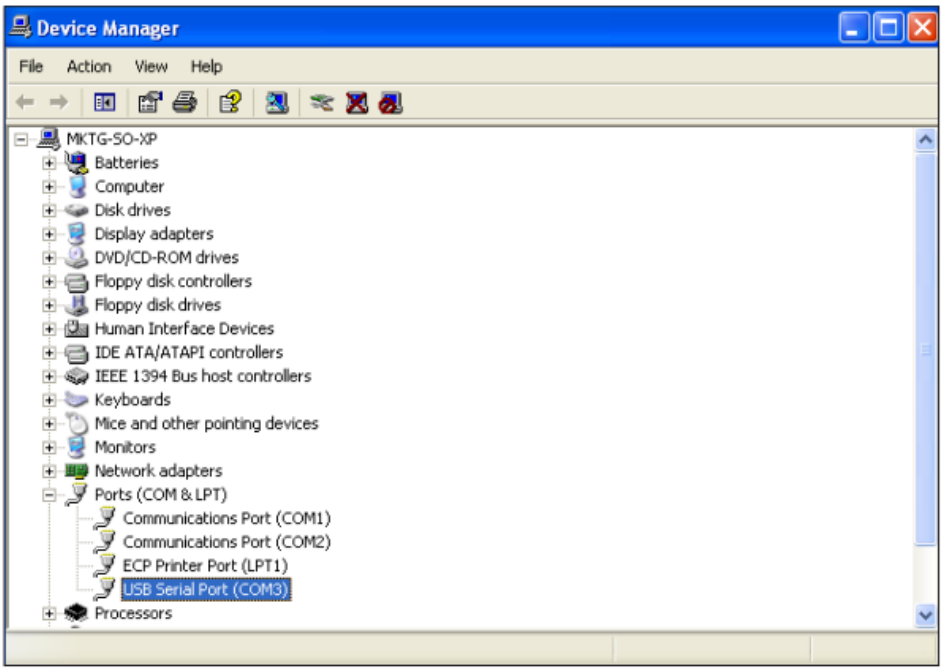
SETUP

COM Port

Finding What COM Port Number the CommLink 6 is Using (Windows® 10)

- **Step 1:** Right-click on the Windows® icon, located on the bottom left or top left of the

Windows Tool Bar.

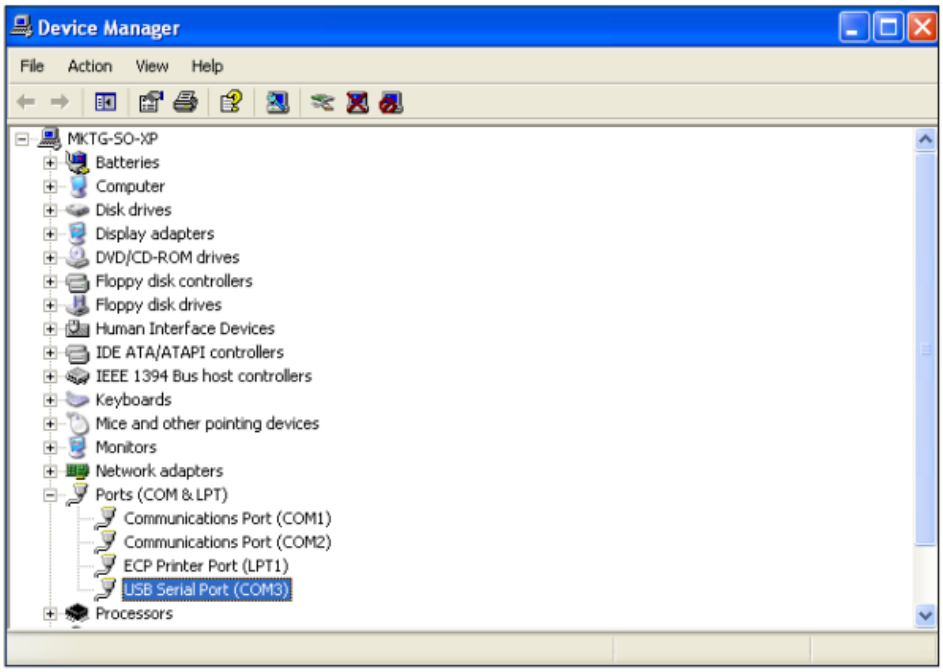
- 

Step 2: Select <Device Manager>.

- **Step3:** Click on the plus sign next to Ports to see all of the common ports.
- **Step 4:** Locate the USB Serial Port (COM#). The COM# in parentheses is the port it is located on. Write this COM port number down. You will need to know this when setting up the Prism 2 software.
- **Step 5:** If the COM port number is 10 or greater, go to “Changing the USB COM Port Number” in the Troubleshooting section.

Changing the USB COM Port Number When the CommLink 6 is first plugged in, it will be assigned a COM port number to be used for communicating with the Prism 2 software. If the port number is 10 or greater, it needs to be changed to a value less than 10 to be recognized by Prism 2.

- **Step 1:** Right-click on the Windows® icon and select <Device Manager> to get to the Device Manager Window



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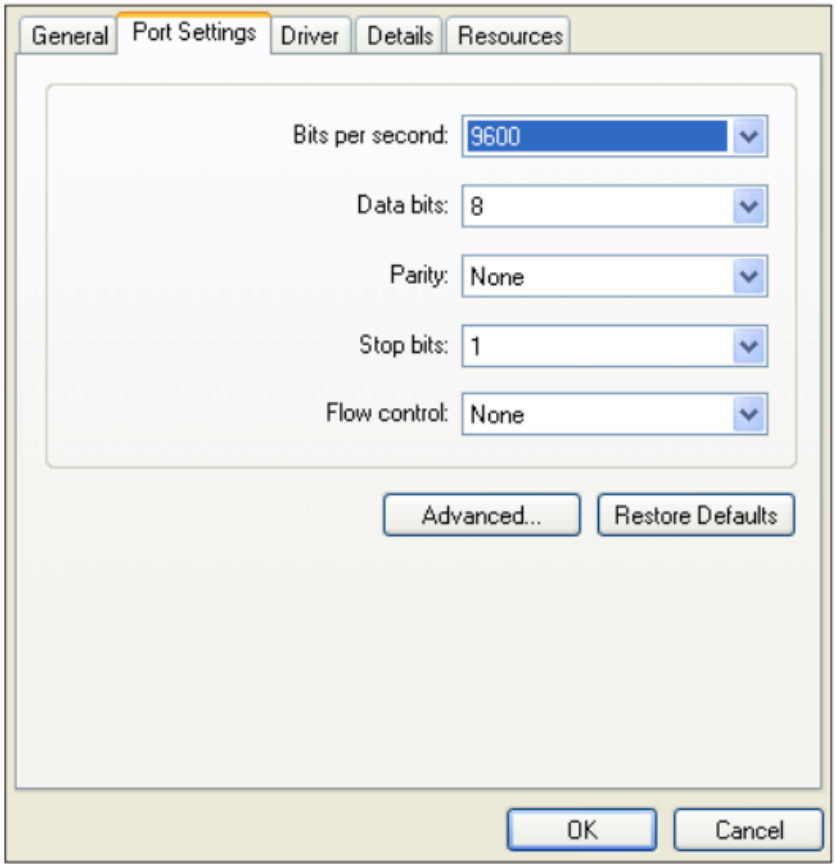
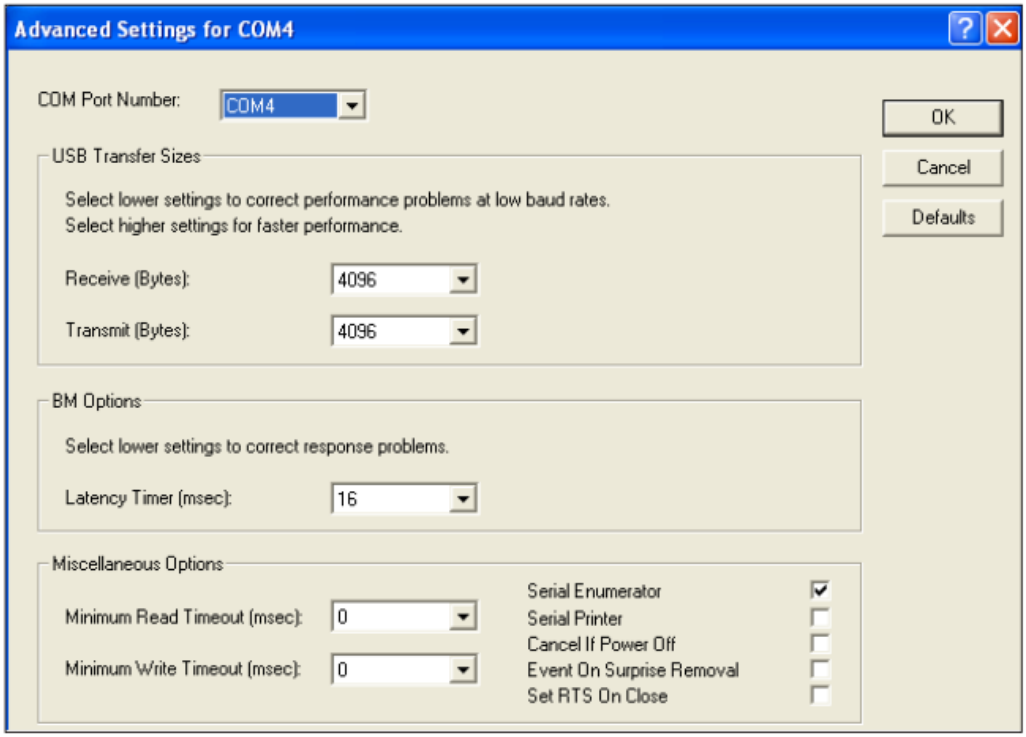
- Step 2: Click on the plus sign next to Ports to see all of the COM ports.
- Step3: Right-click on “USB Serial Port (COM#)” and select <Properties>. In the Properties Window, select the <Port Settings> tab.



- Step 4: To assign a port number less than 10, click on <Advanced>. The Advanced Settings Window will appear.



- **Step 5**: In the COM Port Number drop box, select which COM port you wish to use. Make sure to select a COM port number that is not currently in use (the ports are listed in the Device Manager Window). Select a port number that is less than 10.

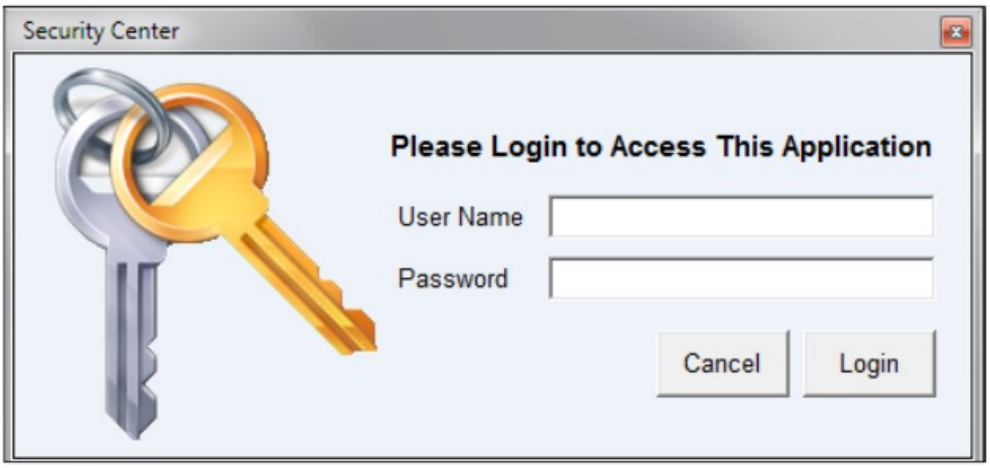
NOTE: Windows® will assign a port number to every device that has ever been installed on your computer. So if there are no available ports below 10, choose a port number less than 10 for a device listed that you know you are not currently using.

- **Step 6:** Once you select the correct COM port number, click <OK> and close any windows opened in the process of changing the port number. Make note of this number because you will need it for your Prism 2 setup.

SETUP

Prism 2

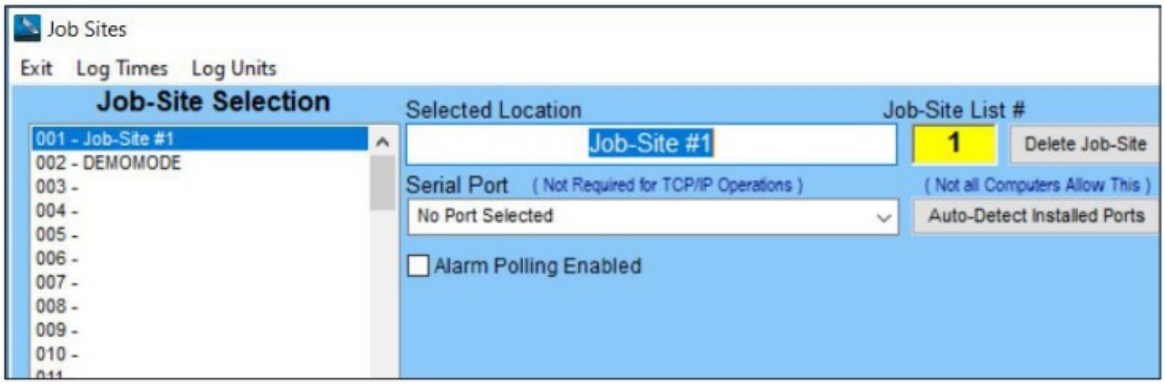
- Step 1: Open your Prism 2 software.
- Step 2: Click the <Login> button and type in the Level 9 User Name and password (default is “admin, admin”). Click <Login>.



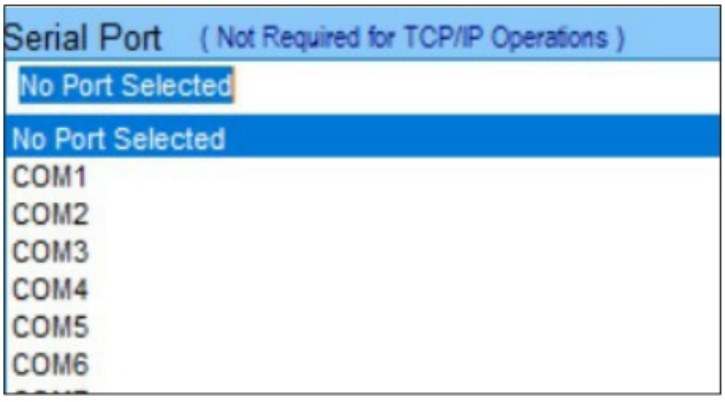
- Step 3: If Prism 2 is online, click the<ON LINE> button to make it go <OFFLINE>.

- Step 4: Click the <Job-Site> button to open the Job-Sites Window.

- Step 5: Click on any empty location in the Job-Site Selection Window and then type in a job name in the Selected Location box and press <Enter>.



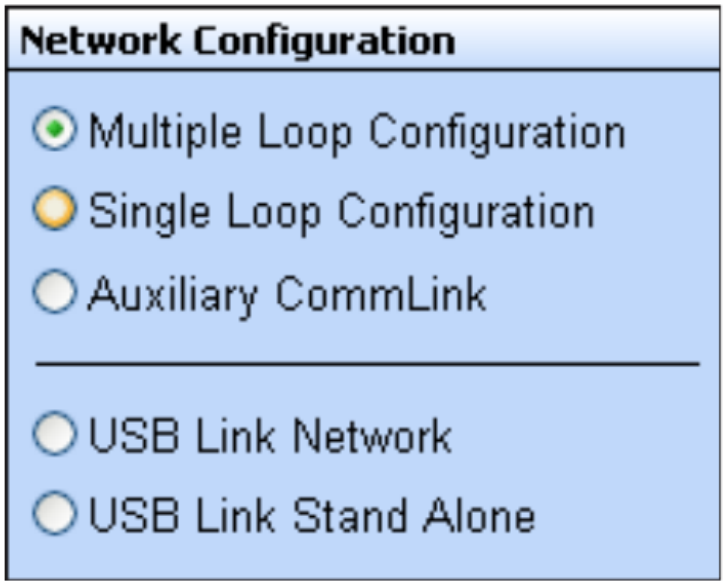
- Step 6: In the Serial Port field, click on the pull down box and select the COM Port number that the CommLink 6 is using.



- Step 7: In the Type of CommLink selection box, select the radio button next to

CommLink 6.

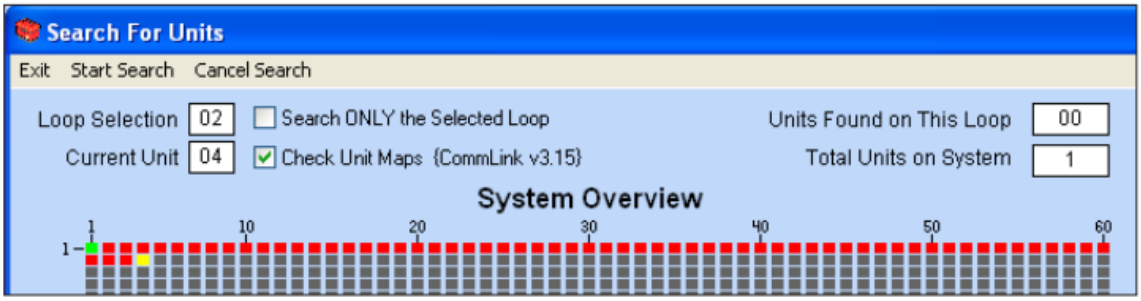
- Step 8: In the Network Configuration selection box, select the type of system configuration you are using. The only options applicable to CommLink 6 are Multiple Loop Configuration (Network) or Single Loop Configuration.



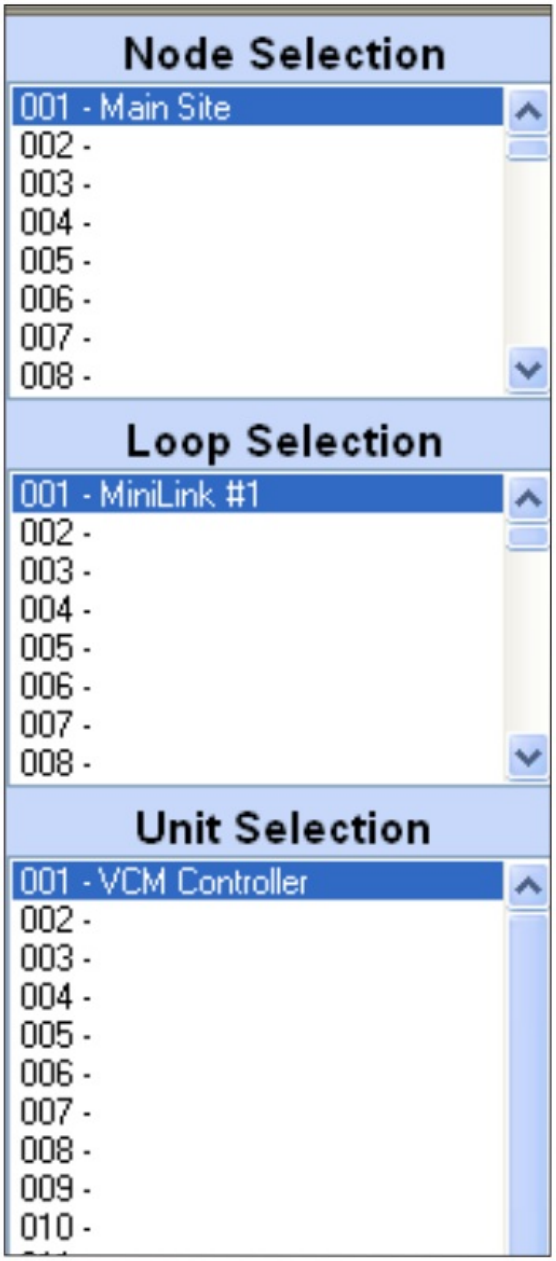
- Step 9: Click <Exit> to close out of the Job Sites Window.
- Step 10: Click the <OFFLINE> button to go <ON LINE>.

- Step 11: From the <Communications> menu, select <Search for Units>.

- Step 12: The Search for Installed Units Window will pop up. Click <Start Search> located in the upper left-hand corner of the window to initiate an automatic detection of all installed controllers on your system.



- Step 13: If everything is working correctly, Units Found on this Loop should increase. You will also see green boxes indicating units that have been found..
- Step 14: If Units Found on this Loop stays at zero, check the wiring to the CommLink 6 and the AHU/RTU Controllers and/or read through these directions again to make sure all steps were followed.
- Step 15: To stop a search, click <Cancel Search>.
- Step 16: Once you are done searching for units, close out of the window or click <Exit>.
- Step 17: A window will pop up that asks, “Do you want to save the search results?” Click <Yes> if you wish to save the results. Click <No> if not.
- Step 18: You can now access any installed unit from the Main Prism 2 Screen by selecting a loop from the Loop Selection Window with a single-click and by selecting the unit from the Unit Selection Window with a double-click



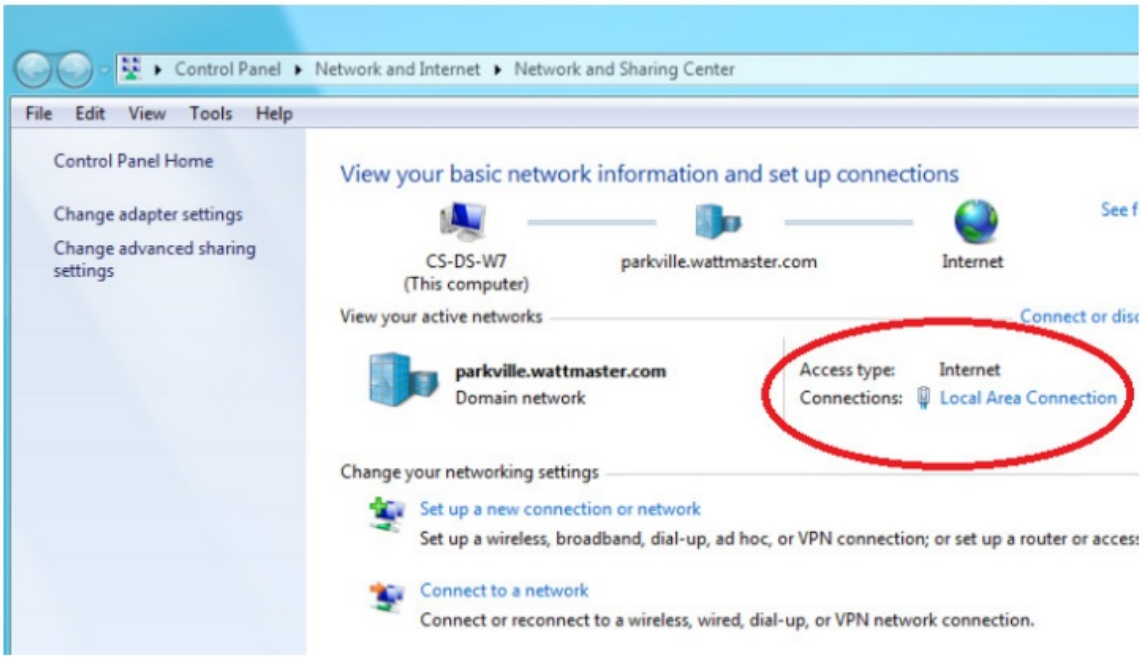
CommLink Configuration

Computer IP Address Set-up for Windows® 10 and later.

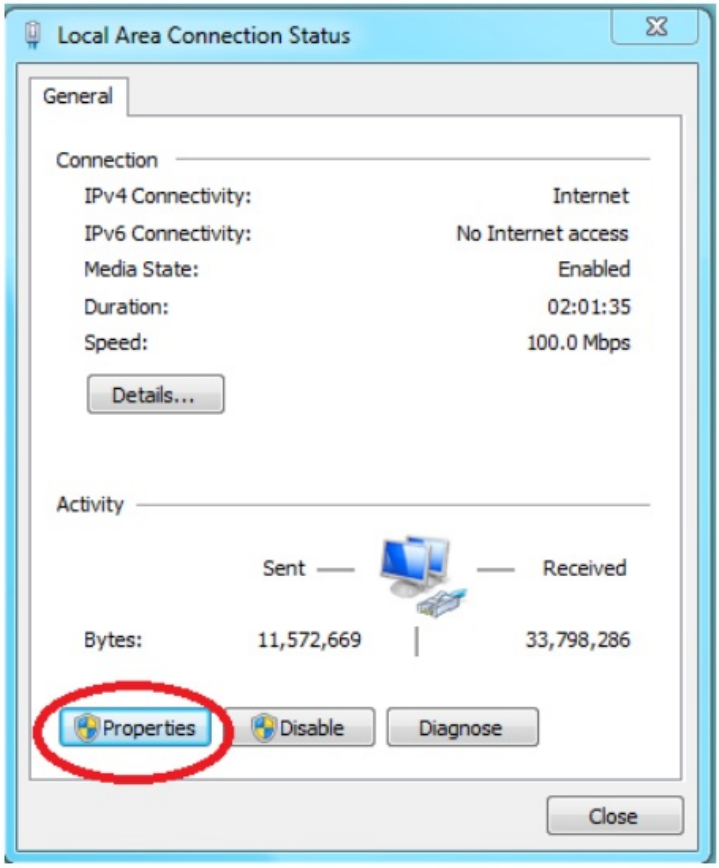
In order for the CommLink to communicate properly, you must set the IP address of the CommLink and computer to be within the same net mask. The following instructions explain how to change your computer's IP address.

- Step 1: Right click the Windows icon or <start>; then click <Network Connections>.
- Step 2: Then click <Network and Sharing Center>. The Network and Sharing Center Window will appear.
- NOTE: If any wireless connections are listed, disable them by right-clicking the connection and selecting <Disable>.
- Step 3: In the Network and Sharing Center Window, select the Local Area Connection

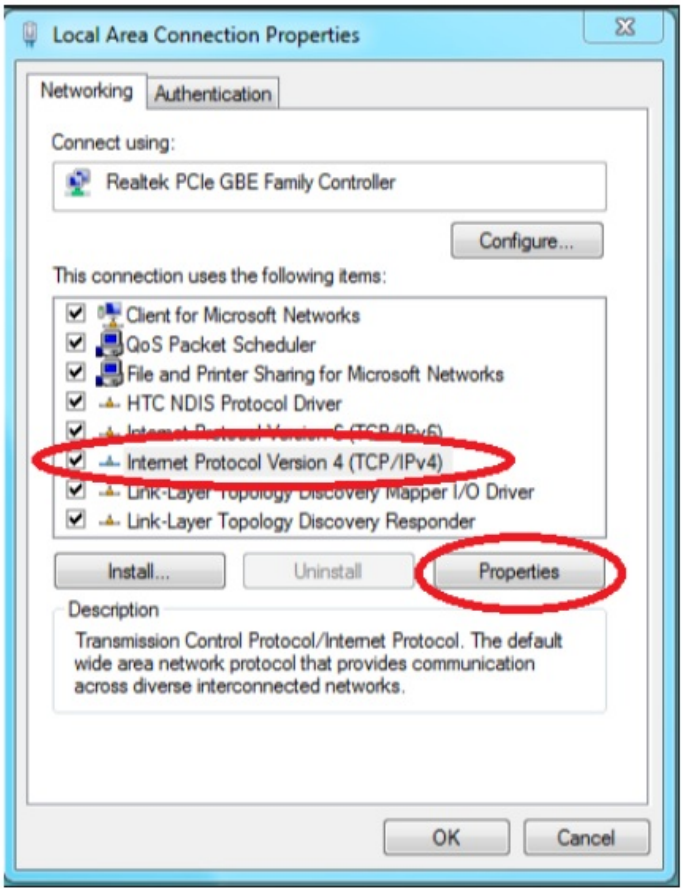
entry. The Local Area Connection Status Window will appear.



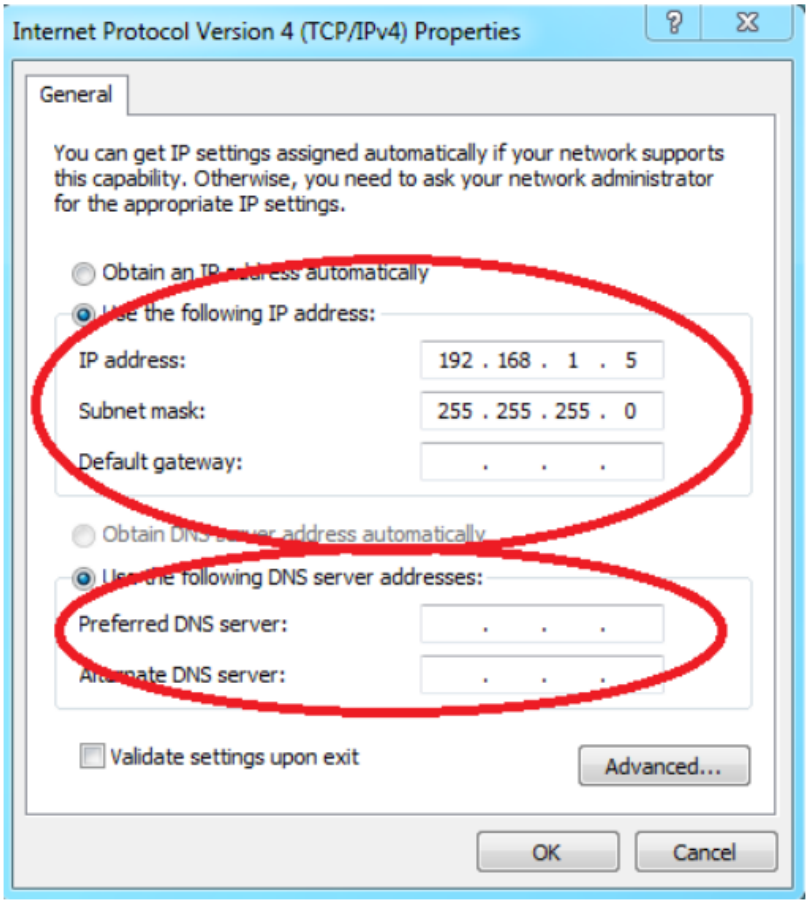
- Step 4: Click the <Properties> button. The Local Area Connection Properties Window will appear.



- Step 5: In the Connection Items List Box (Figure 9), be sure the Internet Protocol Version (TCP/IPv4) is checked. Click on Internet Protocol (TCP/IP v4) to highlight it and then click <Properties>. The Internet Protocol Properties Window will appear.



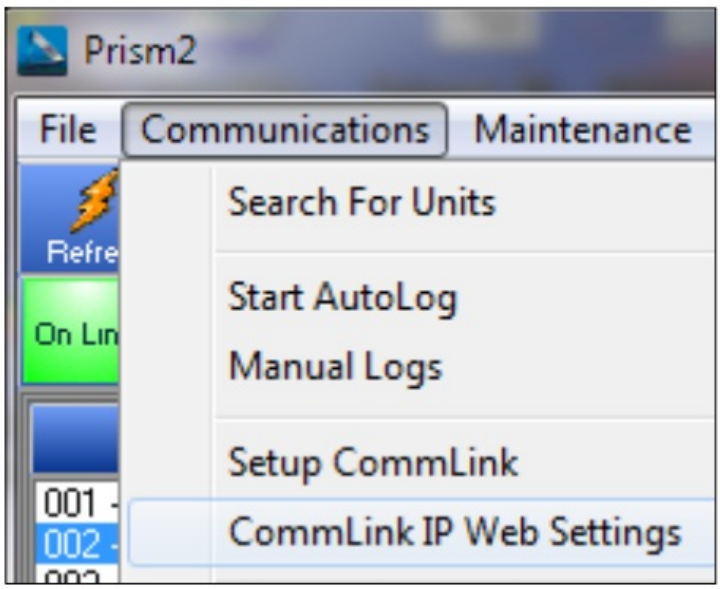
- Step 6: Type in the following information:
  - Make the IP address 192.168.1.5
  - Make the Subnet mask 255.255.255.0
  - Blank out the Default gateway setting (leave the setting blank as shown in Figure 10).
  - Blank out the Preferred DNS server setting and the Alternate DNS server setting (see Figure 10).



- Step 7: Select <OK> until all of the above windows are closed. You may have to reboot the computer before the new values are valid.

IP Network Configuration

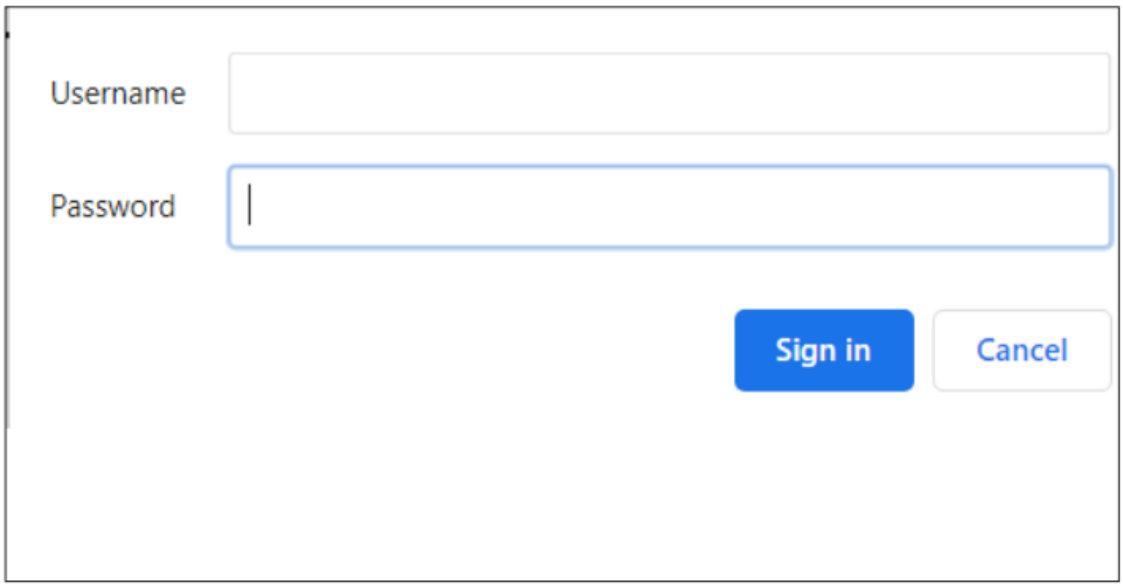
- Step 1: Run the Prism 2 program, open the Job Sites Window, and type the default IP address 192.168.1.25 in the Node IP Address field. See the Prism 2 Technical Guide if needed for further instructions. To access the IP Module web page, click on the <Communications> tab and then click <CommLink IP Web Settings> (see below).



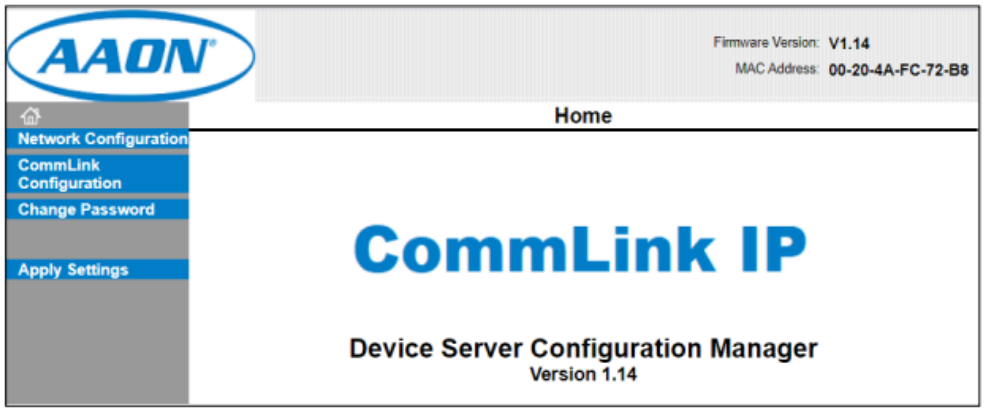
- Step 2: The Sign In Window, shown below, will pop up before you can have access to

the CommLink IP Module Webpage. Leave the username blank, and in the Password field, enter the password located on the bottom of the CommLink. Then click <OK>.

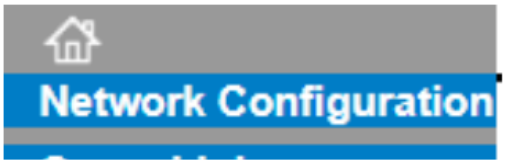
- NOTE: If there is no password label on the bottom of your CommLink, open the CommLink and look at the IP Module label for the MAC Address. The MAC address is the 12 digit dashed alphanumeric number The password is 8500 plus the MAC address with no spaces or dashes.

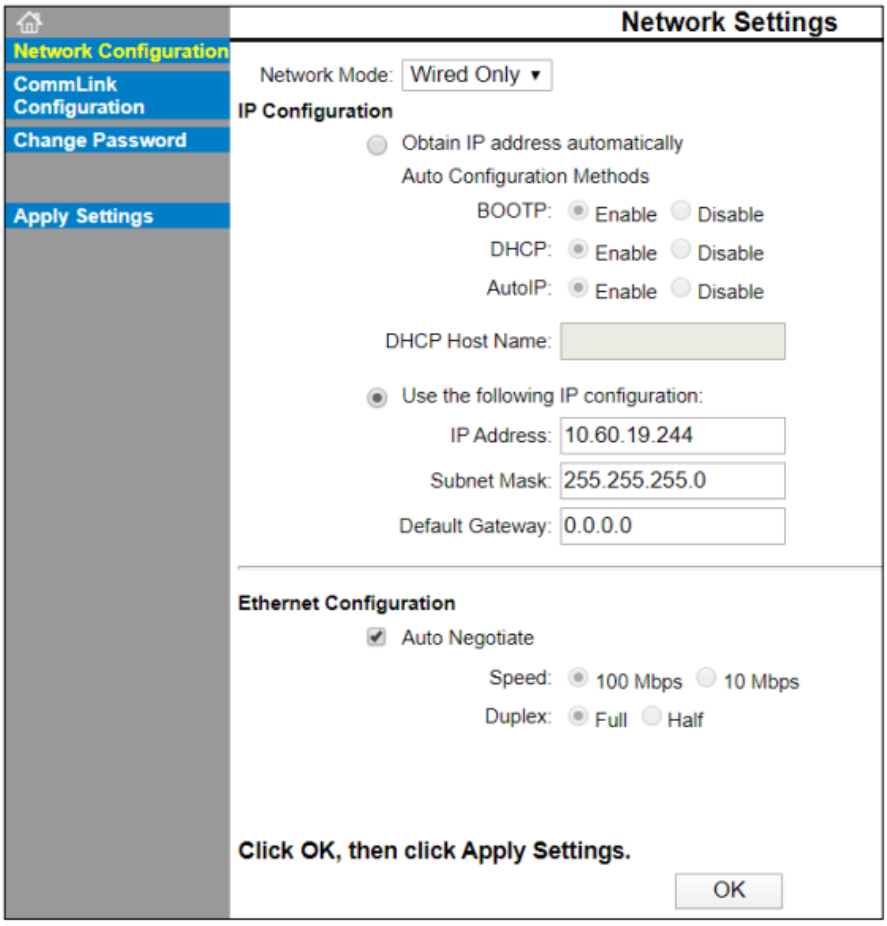


- Step 3: The CommLink IP Module Window, shown below, will appear if a connection is established.

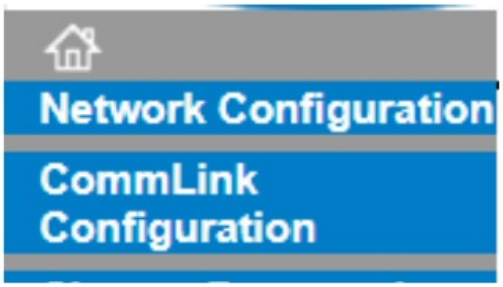


- Step 4: Click <Network Configuration> found in the menu bar on the left side of the web page.

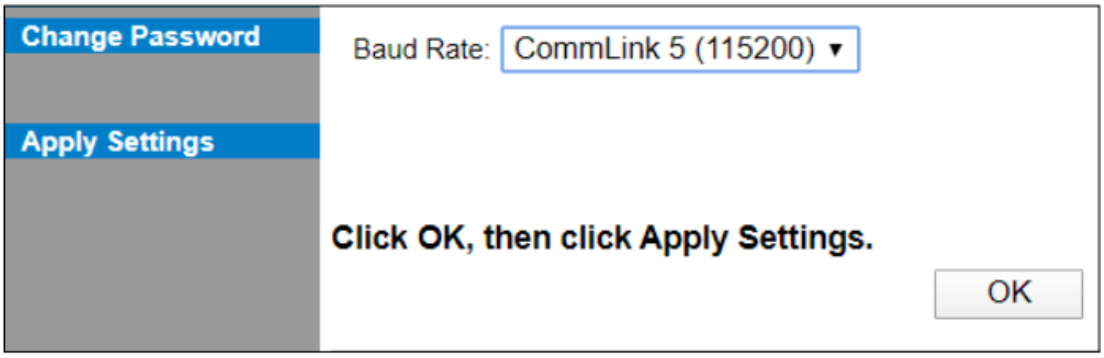




- Step 5: Under IP configuration, select the radio button in front of the option <Use the following IP configuration> and type in the IP address, Subnet Mask, and Default Gateway as provided by the jobsite IT staff.
- NOTE: Be sure all other settings are set to default.
- Step 6: Click <OK> at the bottom of the Network Settings Screen once the changes have been made.
- Step 7: Click <CommLink Configuration> found in the menu bar on the left side of the web page.



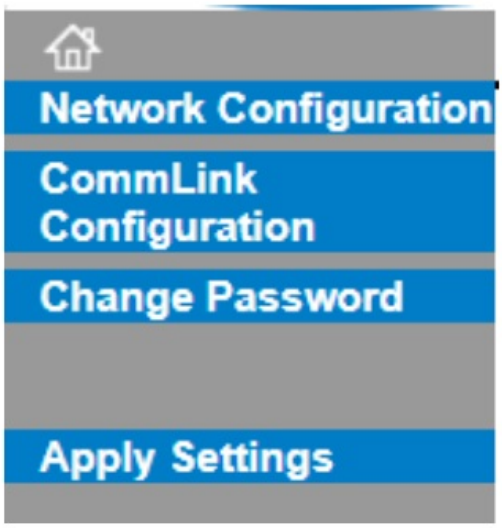
- Step 8: Under Port Settings, in the Baud Rate drop down menu, select the appropriate baud rate and click OK.

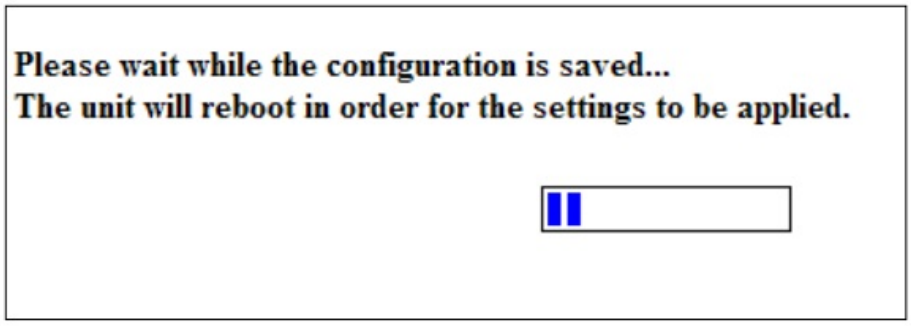


- Step 9: Click <Change Password> found in the menu bar on the left side of the web page.
- Step 10: The Change Password Window will appear. Type in a new password in both fields—the New Password field and Retype Password field and press <OK>. A message will appear if the password change is successful. Make sure to write the new password down.

- NOTE: If for some reason you forget or lose the password, you can press the reset button on the back of the CommLink (located next to the DIAG button). This will reset the password to the factory-set password and will also reset ALL factory settings. As a result, all factory settings will need to be reconfigured.

- Step 11: After you are done modifying all of the IP settings, click <Apply Settings> in the menu bar to the left.





TROUBLESHOOTING

CommLink 6 LEDs

USB LEDs

- **LOOP:** Indicates communication activity on local controller network. This LED flickers when data is exchanged with the controller network.
- **USB TX:** Indicates transmitted data status of USB connection.This LED only flashes when your CommLink 6 is connected to a computer and data is sent to Prism from the CommLink 6 via USB.
- **USB RX:** Indicates received data status of USB connection. This LED only flashes when your CommLink 6 is connected to a computer and data is sent from Prism to the CommLink 6 via USB.
- **USB STAT:** Indicates connection to your computer. This LED will turn on solid once you plug the USB cable into your computer as long as the connection is not lost.

Network LEDs

ETH STAT: Indicates connection to your ethernet. This LED will turn on solid once you plug the ethernet cable into the CommLink 6 and remain lit as long as the connection is not lost.

ETH TX: Indicates activity on the local area network. This LED flashes on when LAN is transmitting and receiving data and is only operational with an Ethernet connection.

ETH RX: Indicates local area network is connected. This LED is on when connected to LAN and is only operational with an Ethernet connection.

ETH LINK: Indicates wireless connection to the local area network. This LED flashes on when LAN is transmitting and receiving data and is only operational with an Ethernet connection.

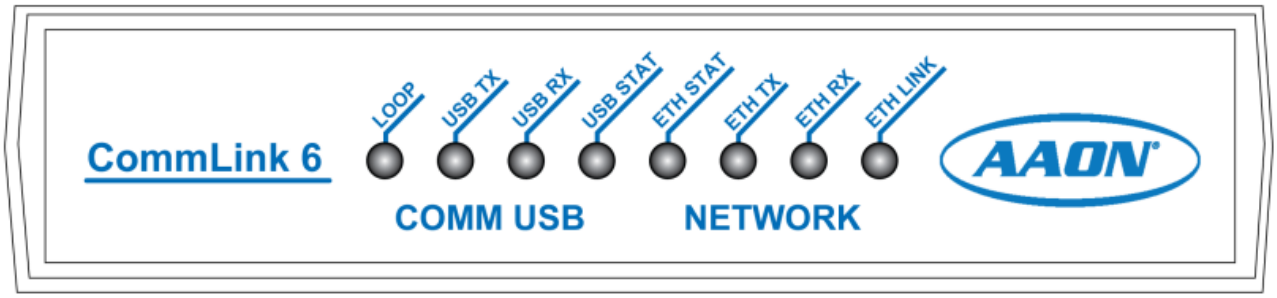


Figure 2: CommLink 6 LEDs

Connection

Proxy and Firewall Compatibility

- Proxy and Firewall configurations may become necessary when the CommLink 6 is connected to a LAN/WAN that is protected by a commercially available Firewall, Proxy, or NAT enabled router. Examples of these would include Cisco, NetGear, LinkSys, or
- WatchGuard Technologies. Also, some ISPs provide IP Address ranges that are already fire-walled at the NOC or ISP Head-End. Make sure that your IT Department or ISP can create a mapped TCP port 39288 on your firewall/proxy to TCP port 39288 on the assigned IP Address of the CommLink 6.
- Only with proper configuration of the Firewall/Proxy are connections to the CommLink 6 from outside of the local area network going to be possible. Check that the Firewall/Proxy TCP port 39288 is not set to time out or reset after a specified amount

of time when there is no traffic from the remote PC.

Problems with Prism 2 Software

- Verify that the correct COM port, created by the USB connection, is selected in the Job-Sites Window. Verify the COM port number by right-clicking on the Windows® icon, selecting <Device Manager>, and viewing <Ports>.
- Verify that the radio button <CommLink 6> is selected for the Type of CommLink in the Job-Sites Window.
- Verify that the correct CommLink mode is selected under Network Configuration in the Job-Sites Window. Select <Multiple Loop> or <Single Loop>.

Problems with USB Connection

- Verify that the USB TX and USB RX are blinking when you perform a Search for Units or try to open a status screen in Prism 2.
- If the USB LEDs fail to blink, disconnect and reconnect the USB connection.

Problems Viewing Multiple Controllers on a Network

- Make sure that the CommLink's communication switch on the back of the CommLink is set to Multiple Loop.
- In Prism 2, make sure that Multiple Loop Configuration is selected for Network Configuration in the Job-Sites Window.

Support Information

- AAON Controls provides Prism 2 installation and configuration support. Call 866-918-1100 for free, direct telephone support or 816-505-1100 to talk to a Controls Support Representative. Support for all telephone services is available Monday through Friday, 7:00 AM to 5:00 PM central standard time.

NOTE: AAON Controls Support cannot troubleshoot internal PC and/or Windows®-based operating system problems.

NOTE: AAON Controls Support cannot troubleshoot firewalls, routers, and/or problems

on a customer's internal or external network. An IT professional may need to be consulted.

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AAON Controls Support:

- 866-918-1100
- Monday through Friday, 7:00 AM to 5:00 PM Central Time
- Controls Support website:
- www.aaon.com/aaon-controls-technical-support
- AAON Factory Technical Support:
- 918-382-6450 | techsupport@aaon.com
- **NOTE:** Before calling Technical Support, please have the model and serial number of the unit available.
- **PARTS:** For replacement parts, please contact your local AAON Representative.

FAQS

Where can I download the manual?

The manual is available for download at www.aaon.com

Documents / Resources

	AAON VCCX-454 Series CommLink 6 [pdf] User Guide VCCX-454 Series, VCCX-VCCX-IP Series, VCCX-454 Series CommLink 6, VCCX-454 Series, CommLink 6

References

- Commercial & Industrial HVAC | AAON
- User Manual

AAON, CommLink 6, VCCX-454 Series, VCCX-454 Series CommLink 6, VCCX-VCCX-IP Series

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