

# QD3041

BACnet Building Manager

The QD3041 BACnet Building Manager connects the local site BACnet controller network with Ubiquity Cloud.



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<b>Installation</b> .....	<b>3</b>
Introduction .....	3
Material List.....	3
Mounting.....	3
Input Connections.....	3
QD3041 Power and Communication Connections .....	4
RS-485 Network Wiring .....	4
Three-Wire Network Wiring.....	5
Startup .....	6
Troubleshooting .....	6
Power LED Does Not Light Up .....	6
No Communications with Controllers on the Network .....	6
No LAN Link to the Internet .....	6
No Communication with RS-485 Ports (COM 1 and 2), Ubiquity Time-out, or No Data.....	7
<b>Configuration</b> .....	<b>8</b>
Introduction .....	8
QD3041 Configuration via Laptop.....	8
QD3041 Configuration via Command Line Interface (CLI) .....	13
<b>Appendices</b> .....	<b>16</b>
Appendix A: Local Management Port .....	16
Connection Setup .....	16
Appendix B: Revert Back to DHCP Settings.....	22
Appendix C: Monitor and Keyboard .....	25
Connection Setup .....	25

## Introduction

Congratulations on choosing the TCS QD3041 BACnet Building Manager! The QD3041 is a compact, versatile network controller that seamlessly connects with Ubiquity Cloud™ via BACnet.

This manual includes all the information you will need to properly install and set up your QD3041. As most units ship preconfigured, you will most likely only need to read the Installation section of this manual and you can skip the Configuration section. However, some customers do order their units without preconfiguration; for those customers, we include the comprehensive “[Configuration](#)” section which contains essential information they will need to set up the unit.

If you have any questions regarding your QD3041 or your network, do not hesitate to contact TCS Technical Support at 800-288-9383, ext. 2.

## Material List

- QD3041 BACnet Building Manager
- External Power Supply
- Wall Mounting Bracket
- Two 120 Ω terminating resistors for RS-485 network

## Mounting

The QD3041 is designed to be hung on a wall via the mounting screw holes in each unit. It may also be set on a shelf or table. **If mounting on a wall, do not allow the mounting screws to contact the circuit board inside the enclosure.**

When selecting a location to mount the QD3041, be sure to allow space for cable connections. Locate the QD3041 away from excessive dust, heat sources, moisture or direct sunlight. The ideal environment is a server room. The temperature of the room should not exceed 77°F (25°C); proper ventilation is mandatory.

## Input Connections

Refer to the “[QD3041 Power and Communication Connections](#)” on page 4 for the following input connections:

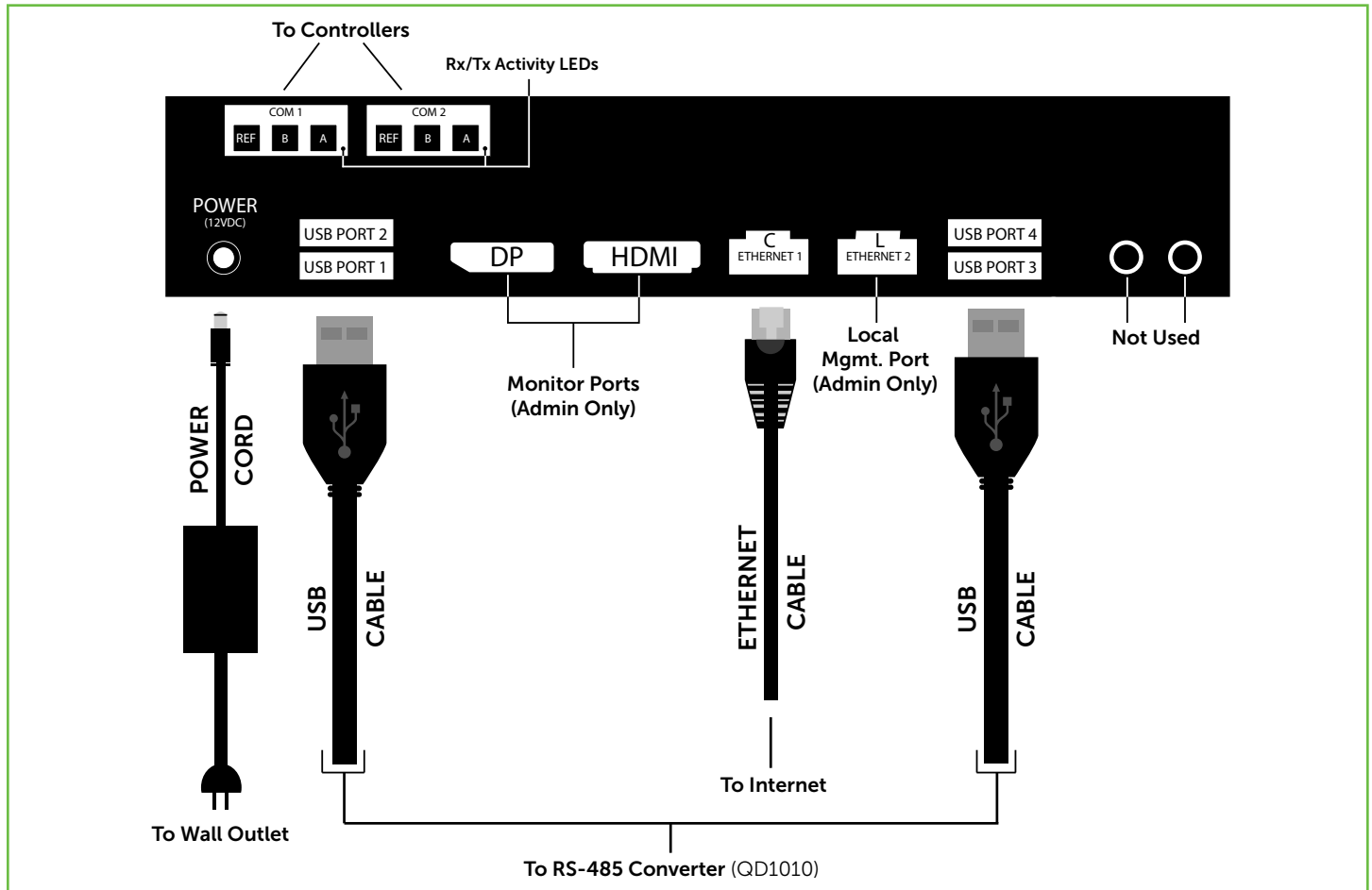
**Power:** Connect the included power supply to the back of the QD3041 and insert the power plug into a 120 VAC socket. A blue light will show on the front of the unit, indicating it is powered up. If the unit does not automatically power up, press the Power button on the front of the unit once.

**Ethernet:** Connect an Ethernet cable from your network port to the device’s Ethernet LAN port (C). **Do NOT connect to port L, which is reserved for Admin only.** If you are using a cellular modem, connect an Ethernet cable from the QD3041 Ethernet LAN port (C) to the Ethernet port on the Cellular Modem.

**RS-485 Network:** Connect an RS-485 network to one of the COM ports.

**NOTE:** The remaining ports on the QD3041 are unused or reserved for Admin only.

## QD3041 Power and Communication Connections



Power and Communication Connections

## RS-485 Network Wiring

All controllers connected to the network must be programmed with the same communication baud rate as well as a unique MS/TP communication address from 0 to 127.

Use 22 AWG, twisted shielded three-conductor cable for network wiring. Network wiring should start at one controller and go to the next and then go to the next, until the final controller is reached. Wiring is such that all "A" wires are connected to "A" wires, all "B" wires are connected to "B" wires, and all "REF" wires are connected to "REF" wires.

**NOTE:** "A" refers to the negative (-) RS-485 connection and "B" refers to the positive (+) RS-485 connection.

Place a 120 Ω terminating resistor at each of the two ends of the network directly across the "A" and "B" wires.

- If the QD3041 will be at one end of the network, hard-wire a 120 Ω terminating resistor across the "A" and "B" terminals of the QD3041 (See ["Three-Wire Network Wiring" on page 5](#)).
- If the QD3041 will be in the middle of the network, do not wire in the terminating resistor on the QD3041 terminal block.

Connect one end (ideally the furthest end from the QD3041) of the shield wire of the network wiring to earth ground.

**NOTE:** If you encounter issues with your network wiring or communications, contact TCS Technical Support (800-288-9383, ext. 2).

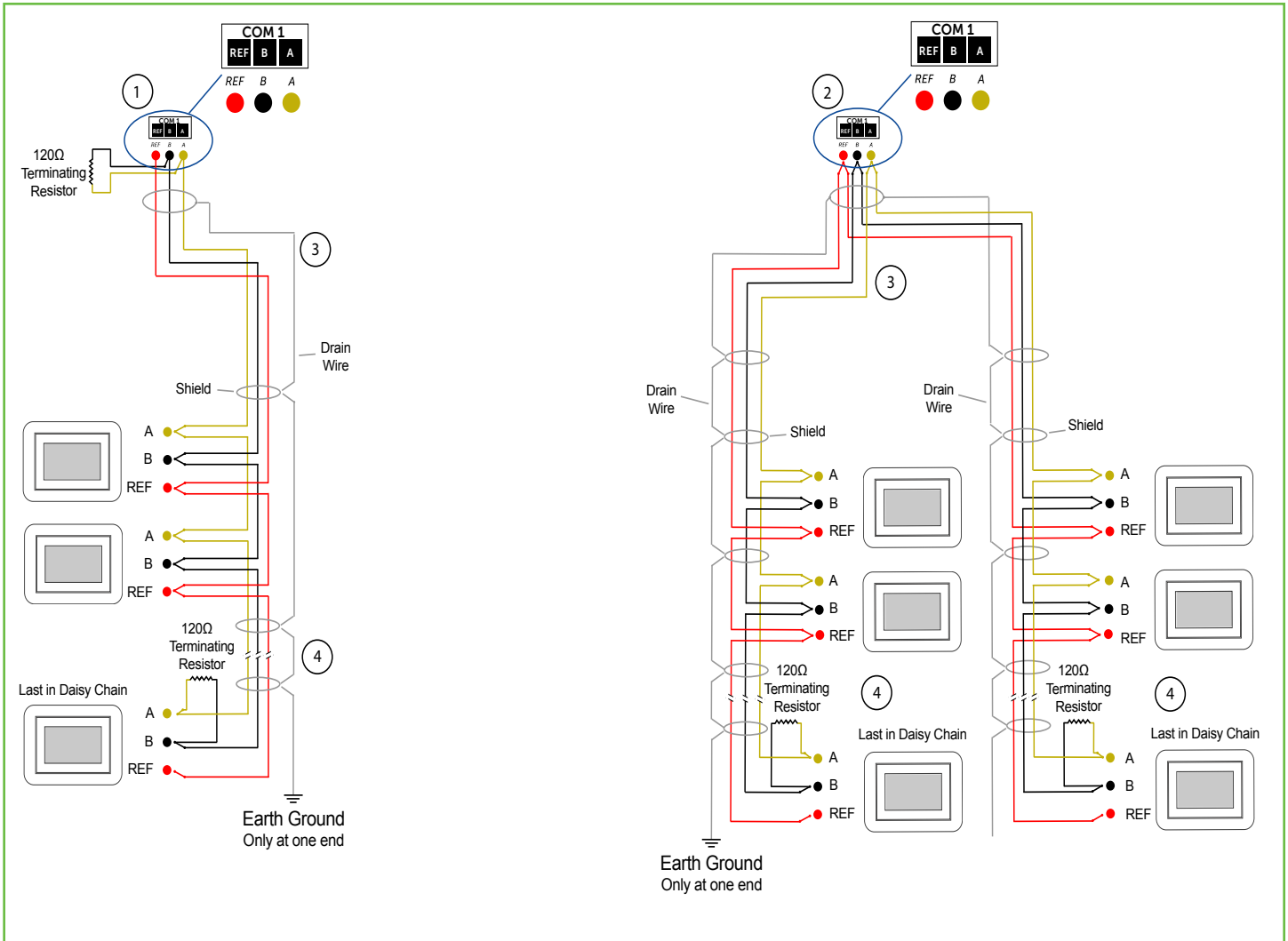
# Installation

## Three-Wire Network Wiring

Follow this wiring diagram for all three-wire systems.

**NOTES:** In the middle of the network, all network wiring shields should be twisted together and taped off to prevent accidental grounding. More than one ground on the network wiring can result in communication failure.

A maximum of two terminating resistors can be used.



Three-Wire Diagram

- ① QD3041 at end of the network.
- ② QD3041 in the middle of the network.
- ③ Shielded, twisted three-conductor communications wiring with one end earth grounded. (120 Ω terminating resistors provided.)
- ④ Shielded, twisted three-conductor communications wiring with one end earth grounded. (120 Ω terminating resistors provided.)

**NOTE:** Each controller must use the same baud rate and be assigned a unique BACnet MS/TP address and device ID.

## Startup

1. Verify all RS-485 connections from the controller network to the QD3041 are complete.

**NOTE:** Refer to [“QD3041 Power and Communication Connections” on page 4](#) for steps 2 through 5 below.

2. Verify that all 24V power wiring to the controller network has been completed; all controllers are powered on and each controller has been programmed with a unique BACnet MS/TP address and device ID.
3. Connect one end of the Ethernet cable to the Ethernet port (C) on the QD3041, and the other end to the network port provided by the customer, or to a cell modem (if utilized).
4. Connect the power source to the QD3041 and apply power. If your QD3041 shipped preconfigured, it will automatically go online and contact Ubiquity Cloud.
5. **You MUST call TCS Technical Support (800-288-9383 ext. 2) to verify connection and activate the unit.**
6. **If your QD3041 was not ordered preconfigured:** You can configure it at this time. See the [Configuration Section on page 8](#).

## Troubleshooting

### Power LED Does Not Light Up

Be sure that the power supply module included with the QD3041 is plugged in to a 120VAC outlet that has power and the 12V, 5A tip positive barrel socket is plugged into the unit. Press the power button on the front of the unit; a blue light should come on, indicating the unit is powered up.

### No Communications with Controllers on the Network

Make sure the baud rate selection for the QD3041 is set to match the baud rate of all the controllers on the network. All controllers on the network must have a unique MS/TP address and BACnet Device ID. Each port must be properly configured.

Check the network wiring, making sure to follow polarity; the wire that goes to A must go to A in all devices, as well as the wire that goes to B and REF.

### No LAN Link to the Internet

Verify the network cable is connected correctly and make sure the LEDs next to the Ethernet jack are properly illuminated. For example, a solid green LED at the RJ-45 LAN connector usually indicates that the QD3041 is either connected or receiving a signal. If the green light is flashing, this is an indication of data being sent or received.

If there are no lights, the QD3041 may not be connected properly, or may not be receiving a signal from the network. If, after checking the connections, the LED indicators are still off, the network adapter, port, or cable may be defective.

If there are lights but there is still no communication, this could be because the network communication is not set properly or there is a bad firewall proxy setting. Contact your IT department for support, or contact TCS Technical Support (800-288-9383, ext. 2) for assistance.

## No Communication with RS-485 Ports (COM 1 and 2), Ubiquity Time-out, or No Data

Verify each port on the QD3041 has the proper biasing resistors. Verify each port is also optically isolated, which cleans up the signal and protects the unit from taking stray voltage off the RS-485 lines.

A set of LEDs on each of the RS-485 ports in the QD3041 allow the building occupant to view operational status of the serial communication integrated board:

- GREEN – blinking indicates transmitting (Tx)
- YELLOW – blinking indicates receiving (Rx)

If neither of these lights are functioning, there could be a bad connection, a bad cable, a bad ground, or a bad component. This could also be a configuration issue. Contact TCS Technical Support (800-288-9383, ext. 2) for assistance.

**IMPORTANT:** If you ordered your QD3041 preconfigured, which is typical, you can skip this section! The Configuration section is for those who need to configure or reconfigure their unit.

## Introduction

The QD3041 utilizes an internal Gateway to communicate with Ubiquity Cloud and the attached device networks. This Gateway can be configured locally by connecting a laptop directly to the unit, or by connecting a monitor and keyboard. When using a laptop, you can configure the Gateway through the QD3041's internal web page. When using a monitor and keyboard, you can configure the Gateway via the text-based Command Line Interface (CLI).

**NOTE:** All Ubiquity Cloud services are accessed by logging into the Ubiquity Cloud Server ([www.ubiquitysystems.net](http://www.ubiquitysystems.net)), not by using the internal web page.

The QD3041 has a default Gateway login and password, which is supplied to customers upon request. It is the customer's responsibility to configure a custom login and password. Contact TCS Technical Support (800-288-9383, ext. 2) for information on managing login credentials.

## QD3041 Configuration via Laptop

Once you have made a connection and have logged in (see "[Appendix A: Local Management Port](#)" on page 16) you can configure the operation of the unit.

If you are unable to access the configuration page, contact TCS Technical Support (800-288-9383, ext. 2) for assistance.

## Installation Information

The BACnet Device Properties section contains unit-related information used to uniquely identify the unit when it is being serviced in the field. It also contains software/application-related information such as the software version and patch level.

### Installation Information

#### BACnet Device Properties

Vendor Name:	TCS	Vendor ID:	496
Model:	3041	Serial Number:	0123456
Application Software Version:	0.15.8_rc2	Build Date:	2021/11/15 04:11:11 UTC
BACnet Protocol Version:	1.14	Ethernet MAC:	00224DDAC38D
Valid License:	true		
TCS License Code:	d69b61ab6620abe596d7e786c612910c	TCS License Text:	BACNET
Device ID:	<input type="text" value="496000"/>		

[Update Device Info](#)

#### Site Time

Wait up to two minutes for the values to change.

Current Time and Date	2021/11/15 02:49:09 PM
Timezone	<input type="text" value="Chicago"/>

[Update Time Info](#)

Installation Information



**Device ID:** The Device ID is a BACnet address that identifies the unit on the BACnet network (similar to an IP address). This number must be a unique number. Once you have assigned a unique number to the unit, click the Update Device Info button to save the number.

The Site Time section is used by the local network and the QD3041 until the Ubiquity Cloud Server performs a time synchronization with the site.

Enter the timezone information in this section and click the Update Time Info button to save the setting.

## Network Information

This section contains settings which control how the QD3041 connects to the Internet. All of these settings are determined by your local network administrator or IT department.

**Network Information**

**Network Options**

IP Address Allocation:  Use DHCP

HostName:

**Proxy**

Use Proxy

Update Communication Info

*Network Information – Use DHCP*

### Network Options

The QD3041 supports both static IP and Dynamic Host Configuration Protocol (DHCP) IP address allocations. When utilizing DHCP addressing, the IP address settings are automatically assigned when communication is established. Enter host name if needed (typically left blank).

### IPV4 Network

If you are using a static IP address, deselect “Use DHCP” and fill in the static IP address information (IP Address, Gateway, Subnet, DNS1 and DNS2 settings) established by the LAN/ WAN network administrator prior to installation.

# Configuration

### Network Information

**Network Options**

IP Address Allocation:  Use DHCP

HostName:

**IPv4 Network**

IP Address:  /  DNS1:

Gateway:  DNS2:

Subnet:

**Proxy**

Use Proxy

Enable NTLM Authentication  Enable

Proxy Server  Proxy Port

Proxy Username  Proxy Password

[Update Communication Info](#)

Network Information – Static IP Configuration

## Proxy

If a proxy is required, select the “Use Proxy” check box and enter all the related details in the fields that appear. When you are finished entering information in this section, click the Update Communication Info button.

## Application Information

This section contains settings which define how the QD3041 interacts with the controller network, and how it communicates the data to Ubiquity Cloud.

### Application Information

**Application Options**

Central Server Location  ex: www.ubiquitysystems.net

Secure Communication  use SSL

**RS485 Network -- Port Configuration**

Port #	Serial Port	Protocol	Baud Rate (bps)	Timeout (ms)	Retries	MAC	Max Master	Max Info Frames
Port 1	<input type="text" value="C-PORT1"/>	<input type="text" value="BACnet"/>	<input type="text" value="38400"/>	<input type="text" value="7000"/>	<input type="text" value="3"/>	<input type="text" value="1"/>	<input type="text" value="127"/>	<input type="text" value="10"/>
Port 2	<input type="text" value="Disabled"/>	<input type="text" value="BACnet"/>	<input type="text" value="38400"/>	<input type="text" value="7000"/>	<input type="text" value="3"/>	<input type="text" value="1"/>	<input type="text" value="127"/>	<input type="text" value="10"/>

[Update Application Info](#)

Application Information

# Configuration

## Application Options

**Central Server Location:** Default is set to www.ubiquitysystems.net; do not change this setting.

**Secure Communication:** Secure Sockets Layer (SSL) Default is selected (SSL MUST be enabled and requires port 443 to be open).

## RS-485 Network - Port Configuration

The two RS-485 communication (COM) ports are configured in this section. While the QD3041 automatically detects the active COM ports, you must adjust the settings on each active port to ensure proper functioning of the network. You can also enable or disable either port from the drop-down menu.

**Protocol:** Select the communications protocol being used on each port. BACnet is selected by default and is the only protocol available on the QD3041.

**Baud Rate:** This is the data transmission speed on the network. The Baud Rate must be the same selection for the port configuration as it is on every device communicating to that port. The default baud rate is 38400. Other available baud rates are 9600, 19200, 57600 and 115200.

**Time-out Period:** This is the number of milliseconds the port on the QD3041 will wait for a response from the network devices before determining that a device is not communicating, or has "timed out." Select the time-out period for each port. TCS recommends 7000 ms.

**MAC:** This is the local MS/TP address. Default is set to 1, which may need to be changed if another device is using that address.

**Max Master:** This refers to the upper limit of addresses that the unit will communicate with. This number should always equal or exceed the highest device MS/TP address.

**Max Info Frames:** This setting controls how many token passing messages the device can send over MS/TP. TCS recommends not changing this setting. When you are finished entering information in this section, click the Update Application Info button.

## Security Information

This section contains settings which control the security of the QD3041 and whether it can be accessed through the web interface. This is also where you change the login credentials.

Security Information	
Application Security	
Select Remote Access Mode	Normal
Web Interface Username	admin
Web Interface Password	Retype Password

### Security Information

**Select Remote Access Mode:** This controls the kind of remote access you will allow to the QD3041:

- **Normal:** (Default checked) Allows access via web browser and SSH.
- **No Web Interface:** Turns off access via a web browser. Device is still configurable via SSH.
- **Black Box:** Restricts all access. Device is only configurable via the LAN Admin port (L).

**Web Interface Username/Password:** Use these fields to change the username and password.

**NOTE:** The QD3041 has a default Gateway login and password, which is supplied to customers upon request. It is the customer's responsibility to configure a custom login and password. Contact TCS Technical Support (800-288-9383, ext. 2) for information on managing login credentials.

Once you are finished entering information in this section, click the Update Security Info button.

## Commissioning Tools

You can access a separate page containing various commissioning tools by clicking the “Commissioning Tools” button at the bottom of the Security Information page. These tools provide you with access to managing the communication status of the QD3041 and the controller network connected to it.

### Commissioning Tools

#### Ubiquity Connection Status

Status: **ESTABLISHED**      Timestamp: 1620157597

#### Controller View

Port	Device ID	RS485 Addr	Model	Firmware	Vendor Name	Comm Status	Protocol	Protocol Version	Last Communication
0	0	0	tcsgateway	0.15.8_rc3	TCS	1	BACNET	1.14	2021/11/22 21:47:29 UTC
1	112	12	US4150	1908081505	TCS	1	BACNET	1.14	2021/11/22 21:47:41 UTC
1	2314	12	BASRT-B	3.0.8	Contemporary Control Systems, Inc.	1	BACNET	1.13	2021/11/22 21:47:35 UTC
1	245001	12	BASRT-B	2.7.11	Contemporary Control Systems, Inc.	1	BACNET	1.4	2021/11/22 21:47:46 UTC
1	469052	12	US4150	1908081505	TCS	1	BACNET	1.14	2021/11/22 21:47:37 UTC
1	496003	3	US4050	1.01.0	TCS Basys Controls	1	BACNET	1.14	2021/11/22 21:47:04 UTC
1	496004	12	US4150	1.04.1	TCS	1	BACNET	1.14	2021/11/22 21:45:39 UTC
1	496005	12	US4150	1909041029	TCS	1	BACNET	1.14	2021/11/22 21:47:40 UTC
1	496007	12	US4150	1909041029	TCS	1	BACNET	1.14	2021/11/22 21:47:44 UTC
1	496013	12	US4150	1907121519	TCS Basys Controls	1	BACNET	1.14	2021/11/22 21:47:43 UTC

#### System Commands

[Reboot Unit](#)   [Restart Application](#)   [Check For Update](#)

[Gateway Configuration](#)

### Commissioning Tools

#### Ubiquity Cloud Connection Status

This section displays the status of the connection between the QD3041 and the Ubiquity Cloud Server. You have three options for the message that will appear here:

1. **Error - No Route to Host:** The unit does not currently have an Ethernet connection.
2. **Connected:** The unit is able to communicate to the Ubiquity Cloud Server BUT is not being matched up with a specific site. Typically this indicates that the site is not initialized on the Ubiquity Cloud Server side yet. Contact TCS Technical Support (800-288-9383, ext. 2) to assign or initialize the QD3041 to a site.
3. **Established:** The unit is communicating with the Ubiquity Cloud Server AND is ready to go. All Ubiquity functions (monitoring, programming, alarming, etc.) should be available through the user interface at this point.

Clicking the Refresh button will refresh the connection status.



Refresh Button

## Controller View

This section allows you to see what controllers have been found by the QD3041. It also shows addressing and Device ID information, vendor information and communication status. This information allows the installer to verify that each controller has been found by the QD3041 and is communicating with the local network. Clicking the green Refresh button on the Controller View title bar will refresh each controller's status.

## System Commands

This section describes how to set up system flags for the QD3041. "Reboot Unit" sets a flag which will reboot the QD3041 within a five-minute cycle. "Restart Application" will restart the software running on the device. "Check for Update" contacts the Ubiquity Cloud Server for any updates relevant to its particular model number and software version. When an update has been downloaded, it is automatically applied; the unit will reboot if necessary.

**NOTE:** The "Check for Update" command requires that the QD3041 have Internet access to retrieve the update patch.

## QD3041 Configuration via Command Line Interface (CLI)

When you connect a keyboard and monitor to the QD3041 (See ["Appendix C: Monitor and Keyboard" on page 25](#)), you can configure it for your site by using the built-in CLI.

1. To establish a connection to the CLI, you must enter a login user name and password. If you have not changed the user name and password, you must enter the default credentials.

**NOTE:** If you do not have the default credentials for this unit, contact TCS Technical Support at 800-288-9383 ext. 2 for assistance.)

2. Once logged in, type in "tcssetup." This will open the CLI (see ["Command Line Interface Screens" on page 14](#)).
3. Type the number for the selection you want and press "Enter".
4. Type in new values on any field as needed. Pressing "Enter" will save the new value, or keep the current value.
5. When finished with a section, type "0" and press "Enter" to go back to the main menu.
6. After all programming is complete, navigate back to the main menu and type "8" and then press "Enter." This will save all changes. Typing "0" and pressing "Enter" at the main menu will exit programming without saving changes.

**NOTE:** After you have finished configuring the QD3041, you can revert your laptop back to its original DHCP settings, if desired. See ["Appendix B: Revert Back to DHCP Settings" on page 22](#).

## Command Line Interface Screens

```
Please enter a number selection for the menu displayed below
 0. exit
 1. device id
 2. network options
 3. proxy options
 4. app options
 5. serial options
 6. security options
 7. view device properties
 8. Save
Enter Selection: █
```

Configuration Screen 1

```
Current Device ID: 496999

 1. Change Device ID
 0. Back to main menu

Enter Selection: █
```

Device ID

```
Please enter a number Network selection for the menu displayed below
Mac Address: 00224DB5BAF1
 1. Hostname: tcs-building
 2. IPV4 DHCP Enabled: 1
 3. IPV4 Address: 0.0.0.0
 4. IPV4 Subnet: 0.0.0.0
 5. IPV4 Gateway: 0.0.0.0
 6. IPV4 DNS1: 0.0.0.0
 7. IPV4 DNS2: 0.0.0.0
100. Full List
 0. Back to main menu
```

Network Options

```
Please enter a number Network selection for the menu displayed below
 1. Enabled: 0
 2. Server: no.proxy.set
 3. Port: 80
 4. NTLM Authentication Enabled: 0
 5. Username:
 6. Password:
100. Full List
 0. Back to main menu
Enter Selection: █
```

Proxy Options

# Configuration

```
Please enter a number from the network selection for the menu display
  1. Ubiquity Server URL: www.ubiquitysystems.net
  2. Enable SSL: 1
 100. Full List
   0. Back to main menu
Enter Selection: █
```

## Application Options

```
Please enter a number for which port you would like to configure
  1. Port1: C-PORT1, Protocol: BACnet, Baud: 38400, Tim
    Retries: 3, MAC: 1, Max Master: 127
  2. Port2: Disabled, Protocol: BACnet, Baud: 38400, Ti
    Retries: 2, MAC: 10, Max Master: 127
   0. Back to main menu
Enter Selection: █
```

## Serial Options

```
Please enter a number from the security selection for the menu display
  1. Remote Access Mode: Normal
  2. Set Web Credentials: username (admin) password ( )
   0. Back to main menu
Enter Selection: █
```

## Security Options

```
BACnet Device Properties

Vendor Name:      TCS
Vendor ID:        496
Model:            tcsgateway
Serial Number:    0
Software Version: 0.12.0
Build Date:       2019/12/09 20:12:58 UTC
BACnet Protocol: 1.14
Ethernet MAC:     00224DB5BAF1

Press any key to return to main menu: █
```

## View Device Properties

## Appendix A: Local Management Port

The QD3041 can be configured locally at the device using a laptop computer. If using this method of configuration, you will need:

1. Laptop with a hardwired Network Interface Card (NIC).
2. Ethernet cable.

### Connection Setup

#### Ethernet Cable

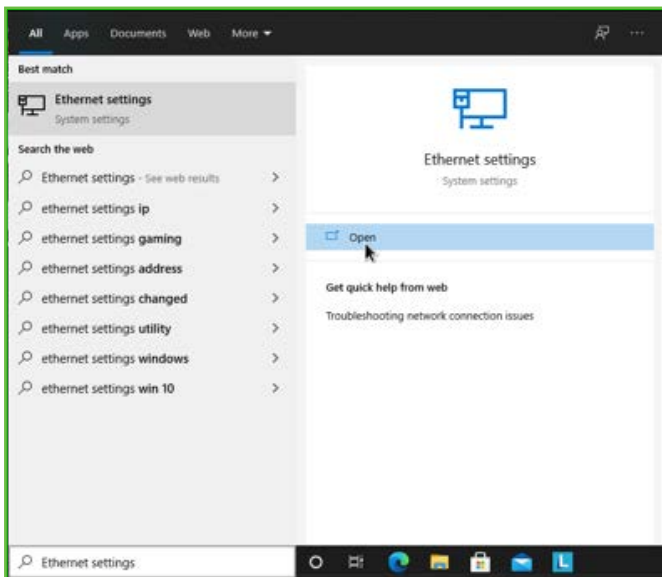
Connect one end of the Ethernet cable to the Local Management Ethernet Port on the QD3041 (see [“QD3041 Power and Communication Connections” on page 4](#)) and the other end to the laptop's Ethernet port.

#### Laptop

The steps below require changing the network settings of the laptop; this is done at your own risk.

Windows 10:

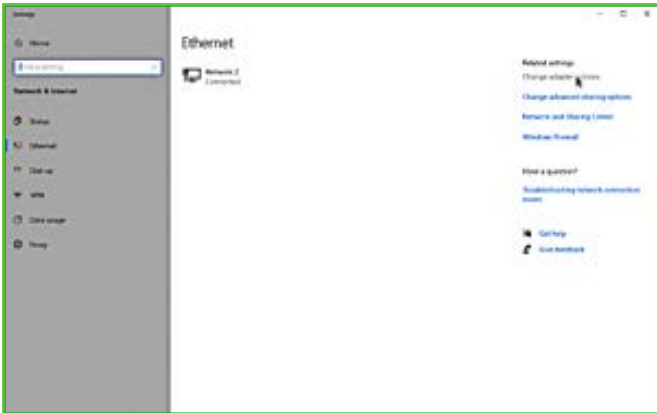
1. Search for Ethernet Settings and click the “Open” link.



*Ethernet Settings*

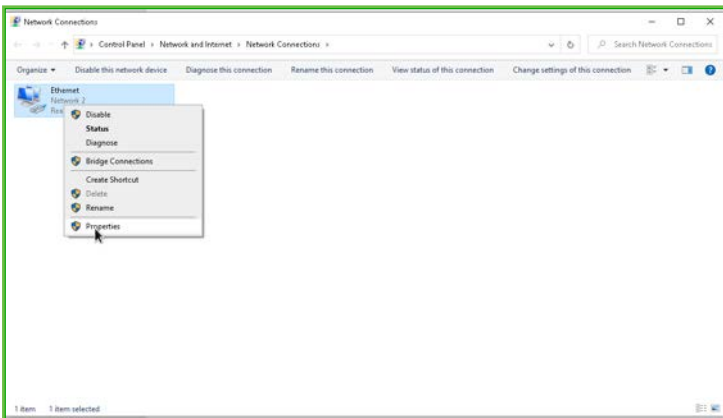
2. On the Ethernet Settings panel and click the “Change adapter options” link.





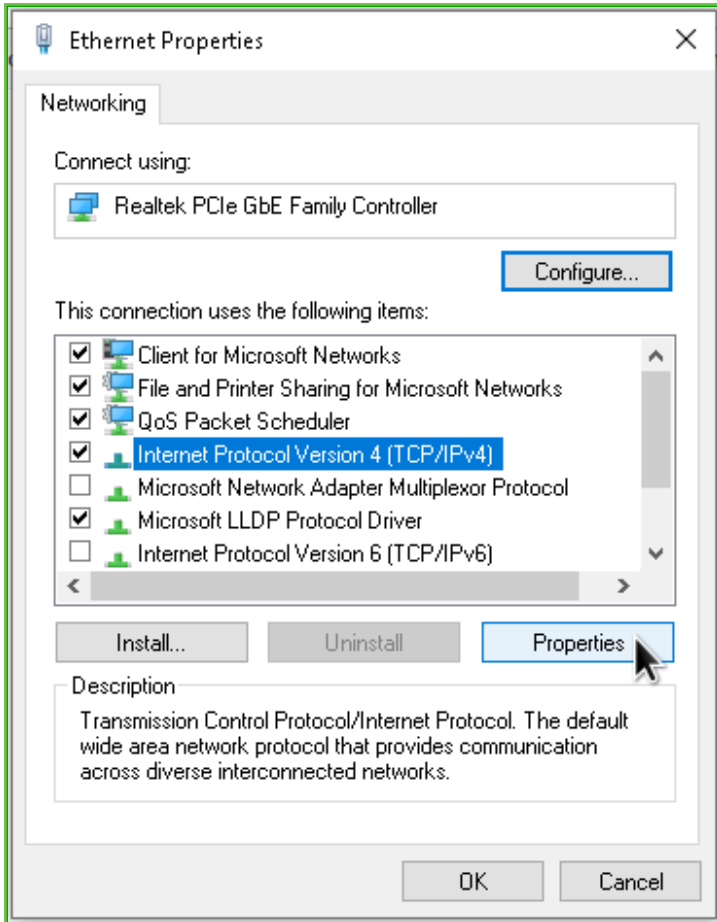
## Change Adapter Options

3. On the Network Connections panel locate the Ethernet interface that is connected to the cable. Right click on the item and select "Properties."



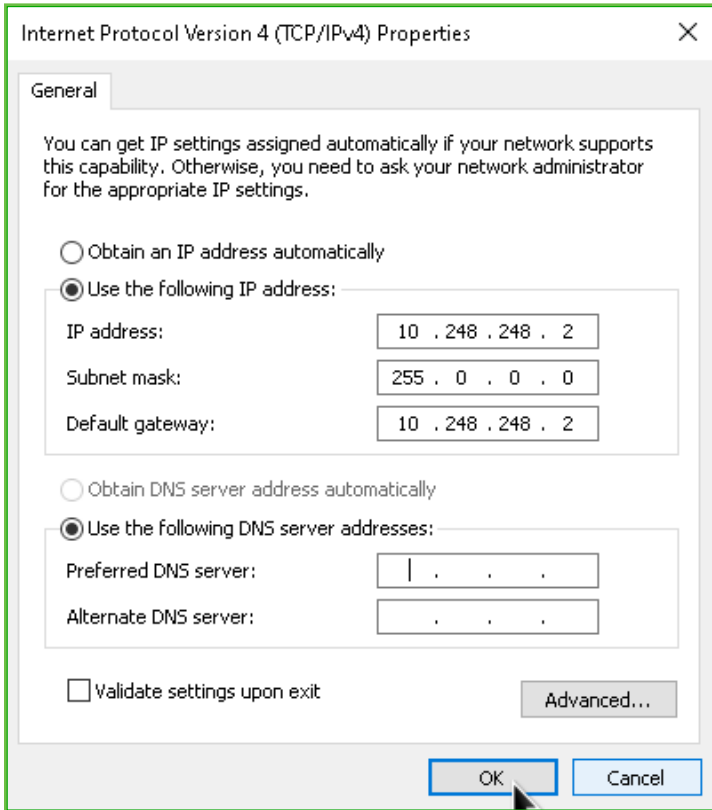
## Properties

4. On the Ethernet Properties panel locate the "Internet Protocol Version 4 (TCP/IPv4)". Select that option, then click on the "Properties" button.



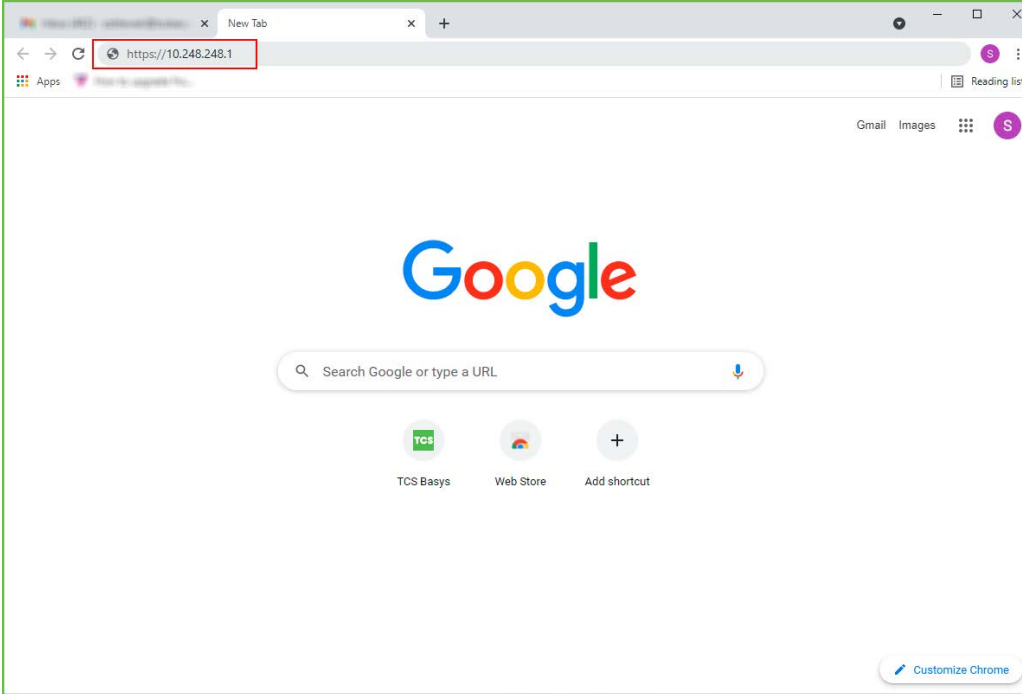
TCP/IPv4

- On the Internet Protocol Version 4 (TCP/IPv4) Properties change the IP schema to:
  - IP Address:** 10.248.248.2
  - Subnet Mask:** 255.0.0.0
  - Default Gateway:** 10.248.248.2
  - DNS:** Blank
- Click on the “OK” button and close the window.



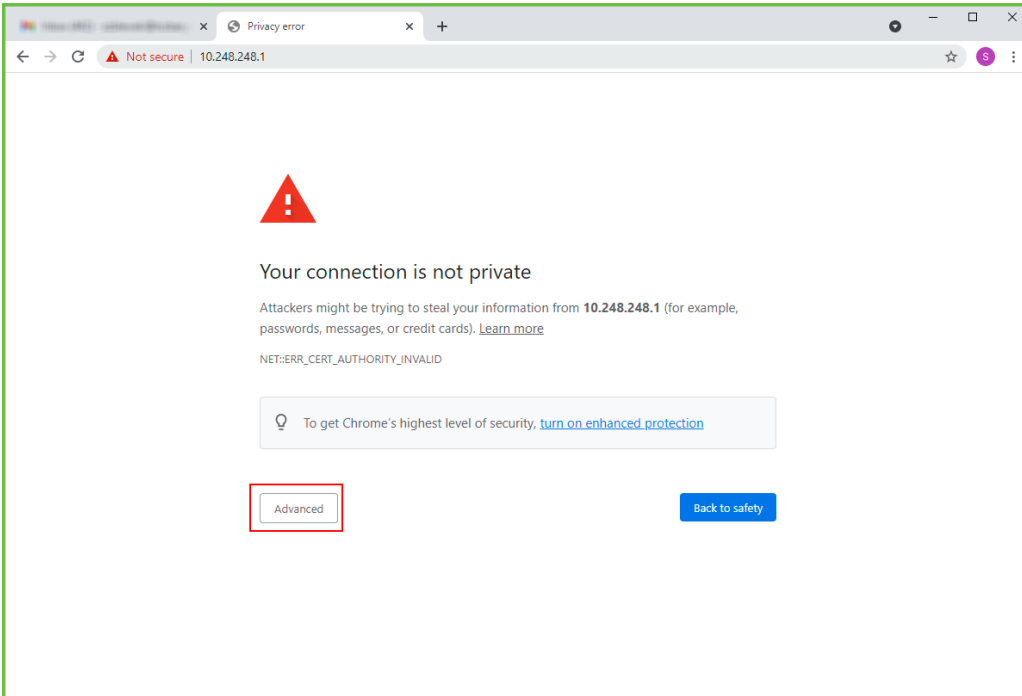
*Port to Static Settings*

7. Launch any web browser and type <https://10.248.248.1> in the address field.



## Device Address

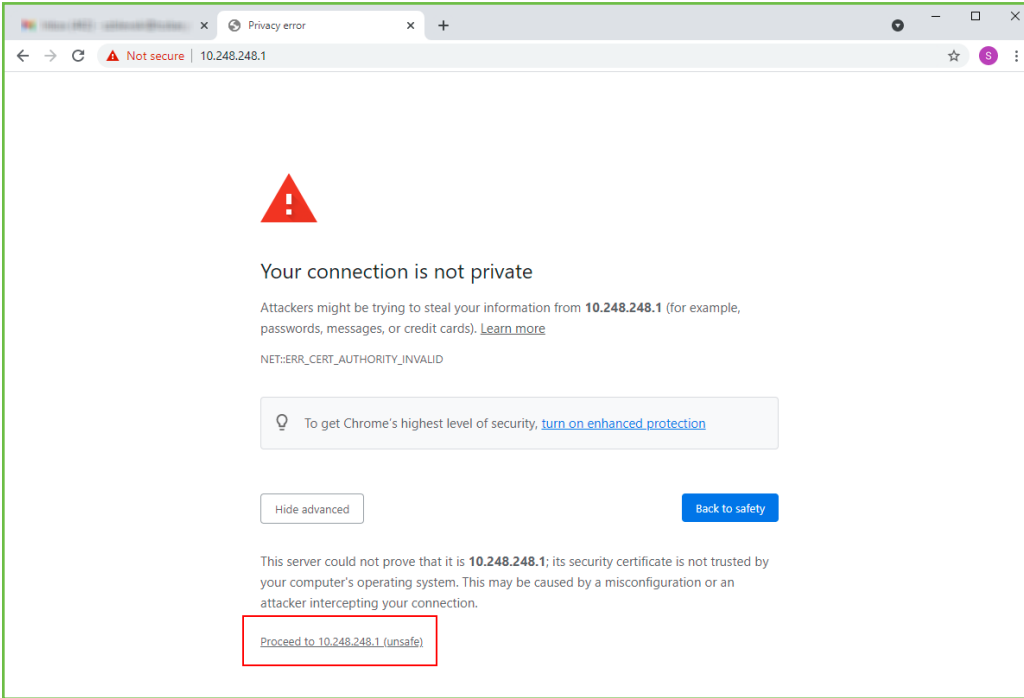
8. Depending on your browser's configuration, you may get the following screen:



## Privacy Error Warning Screen

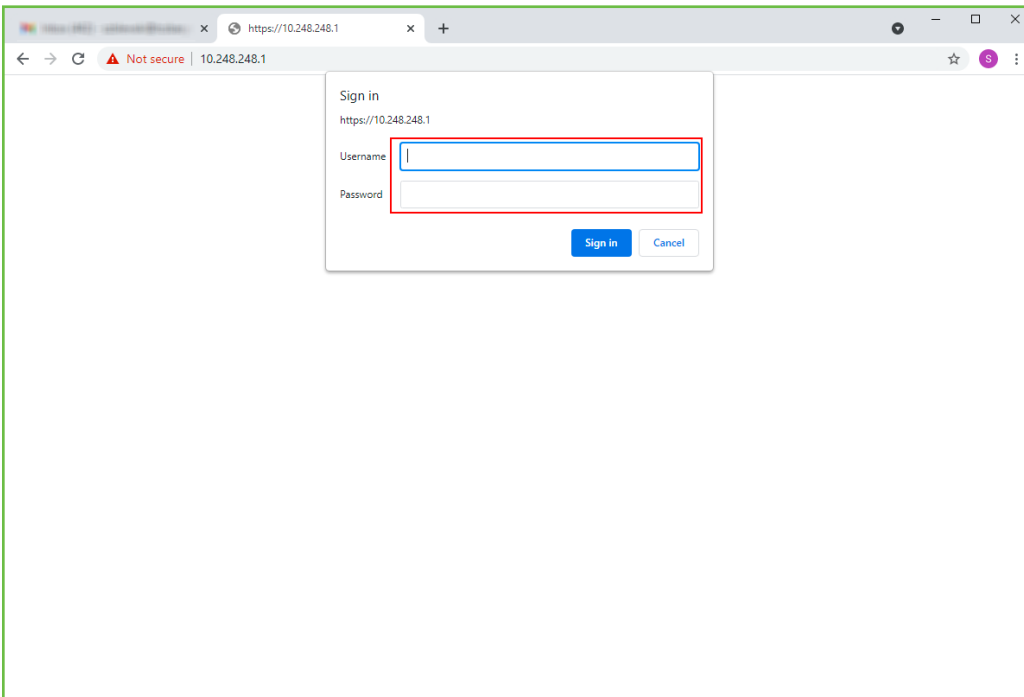
9. Click on the "Advanced" button in the Privacy Error Warning screen.

10. Click on the “Proceed” link to take you to the next screen.



*Proceed Screen*

11. Enter the Login user name and password.



*Login Screen*

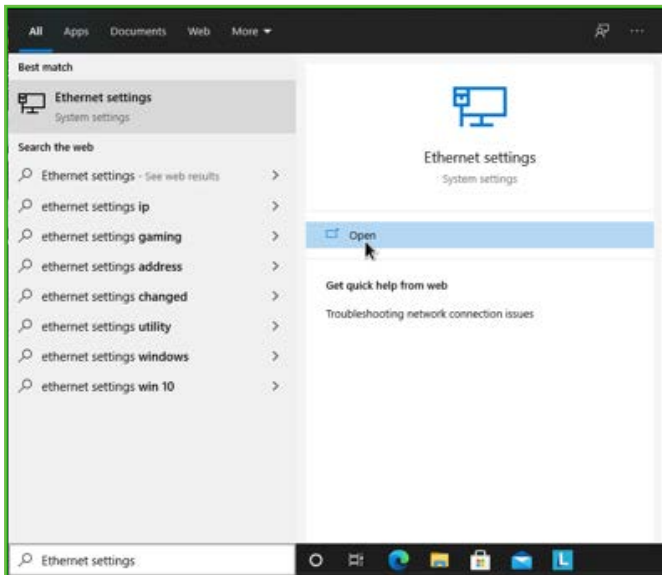
12. Configure the Gateway as needed. (See [“QD3041 Configuration via Command Line Interface \(CLI\)”](#) on page 13).

## Appendix B: Revert Back to DHCP Settings

If you have changed your laptop's network configuration (See [“Appendix A: Local Management Port” on page 16](#)) and wish to revert back to its previous configuration, follow the steps below:

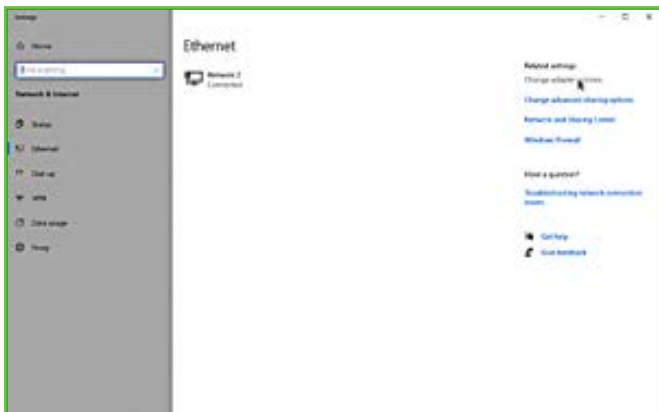
Windows 10:

1. Search for Ethernet Settings and click the “Open” link.



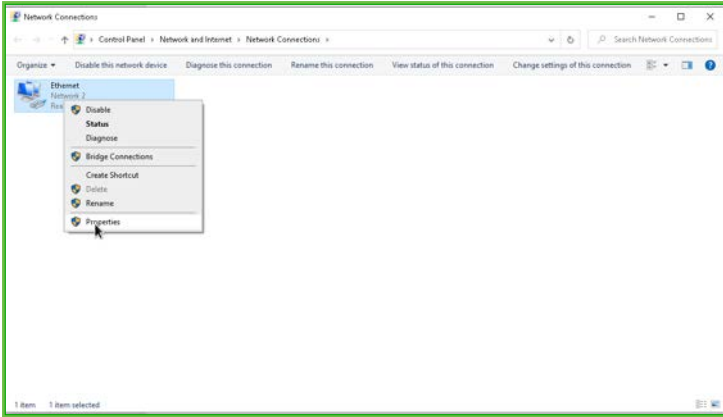
*Ethernet Settings*

2. On the Ethernet Settings panel and click the “Change adapter options” link.



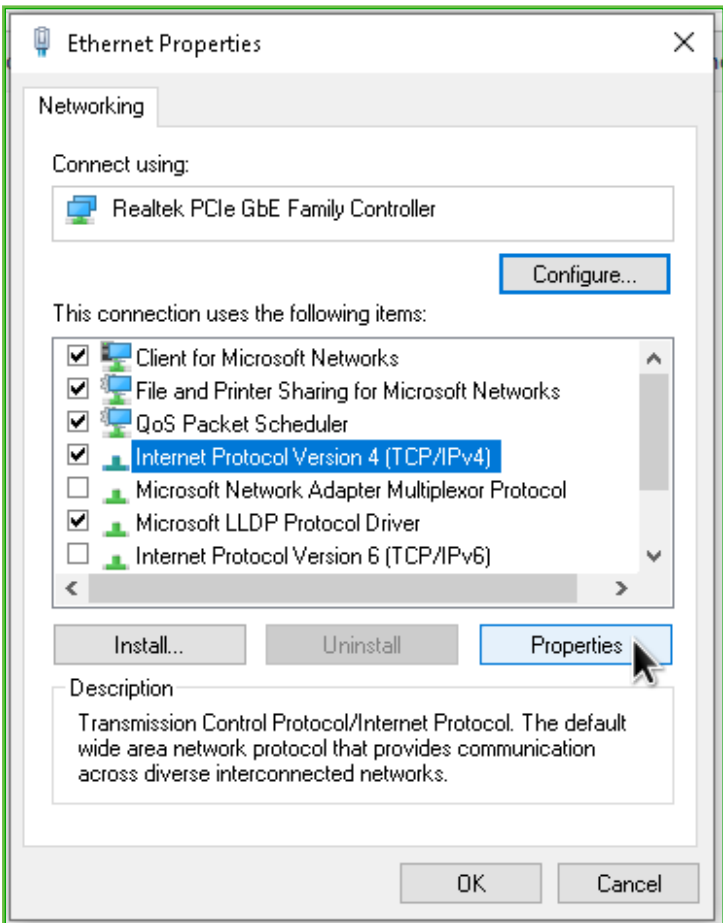
*Change Adapter Options*

3. On the Network Connections panel locate the Ethernet interface that is connected to the cable. Right click on the item and select “Properties.”



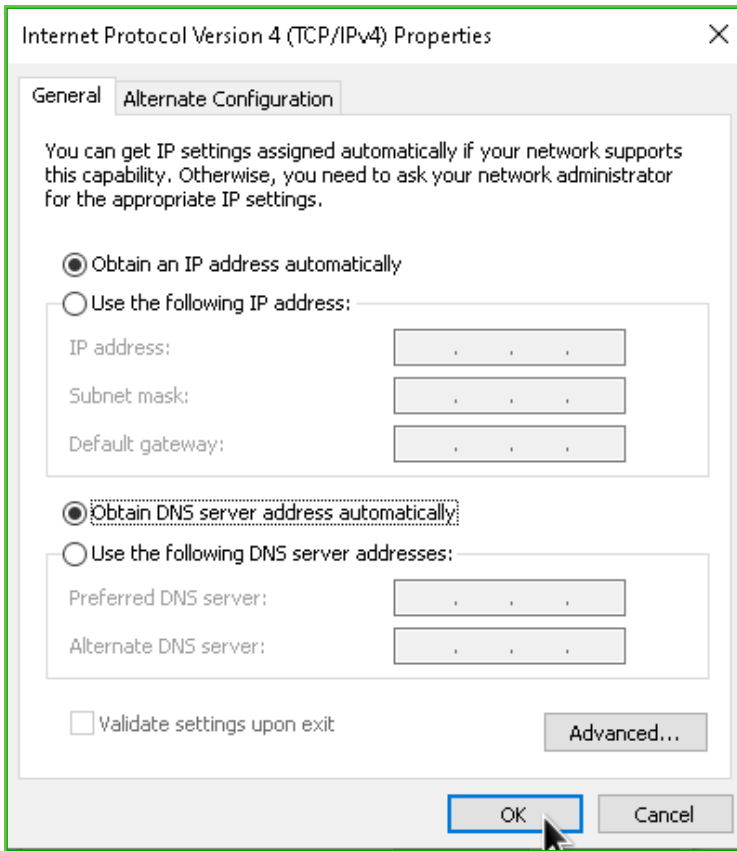
## Properties

4. On the Ethernet Properties panel locate the "Internet Protocol Version 4 (TCP/IPv4)". Select that option, then click on the "Properties" button.



## TCP/IPv4

5. On the Internet Protocol Version 4 (TCP/IPv4) Properties “General” tab:
6. Click on the “Obtain an IP address automatically” radio button
7. Click on the “Obtain DNS server automatically” radio button
8. Click on the “OK” button.



*Revert Back to DHCP Settings*



## Appendix C: Monitor and Keyboard

The QD3041 can be configured locally at the device using a keyboard and monitor. If using this method of configuration, you will need:

- Monitor with HDMI or DP(DisplayPort) connection (depending on your monitor, you may need a VGA-to-HDMI/DP adapter).
- HDMI-to-HDMI cable or DP-to-DP cable.
- USB Keyboard.

### Connection Setup

1. Connect the cable to the monitor and to the QD3041, matching up the corresponding ends (HDMI, DP). (See [“QD3041 Power and Communication Connections” on page 4.](#)) Power on the monitor and switch to the proper input, based on the cable used.
2. Plug the USB cable into a free USB port on the QD3041. Test keyboard connectivity by pressing Caps Lock to see if the LED on the keyboard illuminates.
3. Reboot the unit by pressing and holding the Power button until the unit turns off. Release the Power button and press it again to power the unit back on. This will cause the unit to recognize the monitor and keyboard.
4. Configure the QD3041 as needed. (See [“QD3041 Configuration via Command Line Interface \(CLI\)” on page 13.](#))