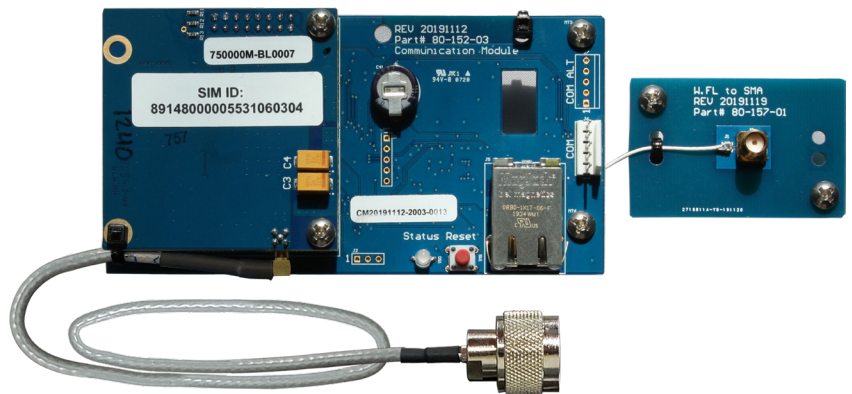


Cloud Network Module Installation and Configuration Guide

The Cloud Network Module is available for use on the BaseStation 1000, the BaseStation 3200, the FlowStation and the SubStation. It mounts internally to the top of X-cabinet enclosures and to the back plate of pedestal enclosures. Power is supplied by the 5-pin connector, along with any communication lines that are being used.



The Cloud Network Module provides multiple communication channels that can be used by controllers or other devices. The following channels are currently available for use:

- Cloud Network Ethernet
- Cloud Network Wi-Fi
- Cloud Network Cellular

Please ensure the firmware version of your Baseline controller meets the minimum required firmware version to ensure device compatibility. Minimum required versions are as follows:

- BaseStation 3200 V17.12
- BaseStation 1000 V1.25
- FlowStation V3.5
- SubStation V2.3

Materials Provided

- Cloud Network Module
- Antenna with cable
- 5-pin serial cable
- Zip Ties

Tools Needed

- Phillips screwdriver
- Crescent wrench
- Needle nose pliers

We recommend that you back up your current configuration before starting this process in case you need to restore your system.

- Refer to Backing Up the Controller Programming in the BaseStation 1000 User Manual.
- Refer to Backing Up Your System in the BaseStation 3200 User Manual.

You will also need to halt all watering while you install the Cloud Network Module.

- BaseStation 1000: Press the OFF button.
- BaseStation 3200: Turn the dial to the OFF position.

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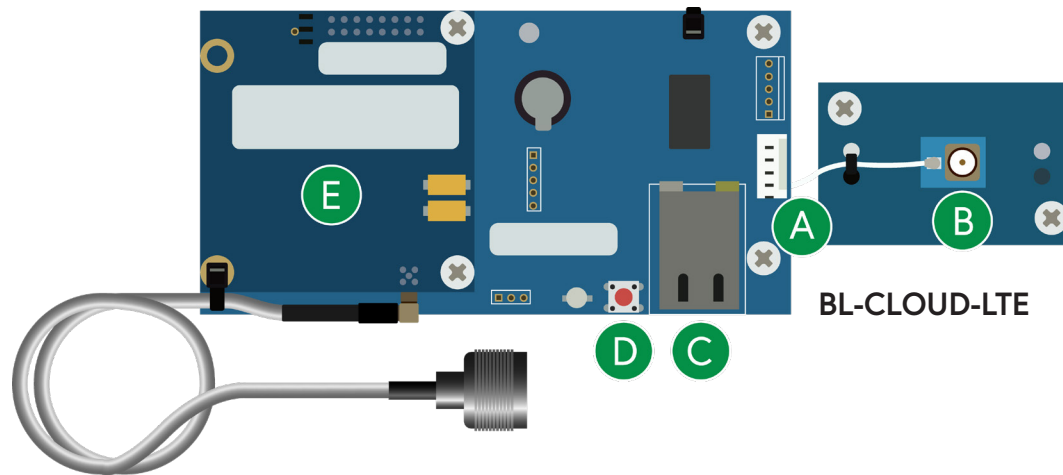
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Installing the Cloud Network Module into an X/XS cabinet	4-7
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Cloud Network Module Diagram

Before beginning, familiarize yourself with the parts labeled in the illustrations below.

Two types of communication boards available. The Cloud Network Module with 4G LTE configuration and the Cloud Network Module with Wi-Fi configuration.

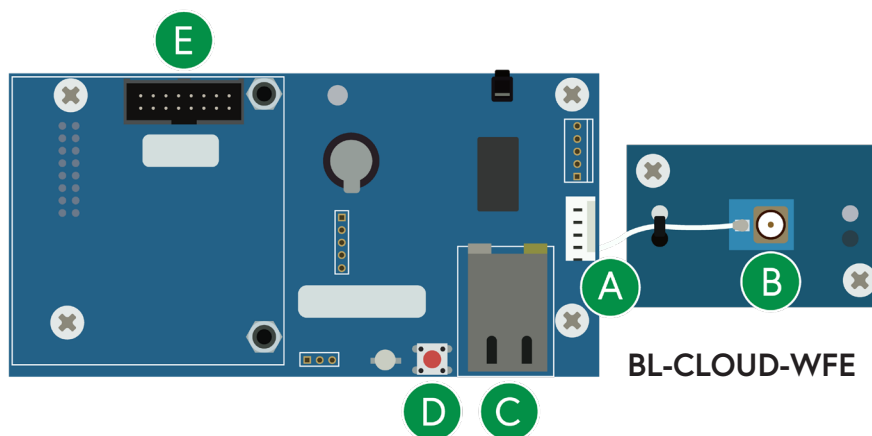
Cloud Network Module with 4G Configuration



- A. 5-pin connector for cable to the controller board (Com labeled connector)
- B. Connector for the Wi-Fi antenna (not used for cell configuration)
- C. Ethernet connector
- D. Reset switch and status LED
- E. Cell module with antenna cable adaptor

When receiving the Cloud Network Module, inspect the antenna cable on the back of the Cloud Network Module to ensure that it is securely connected.

Cloud Network Module with Wi-Fi Configuration

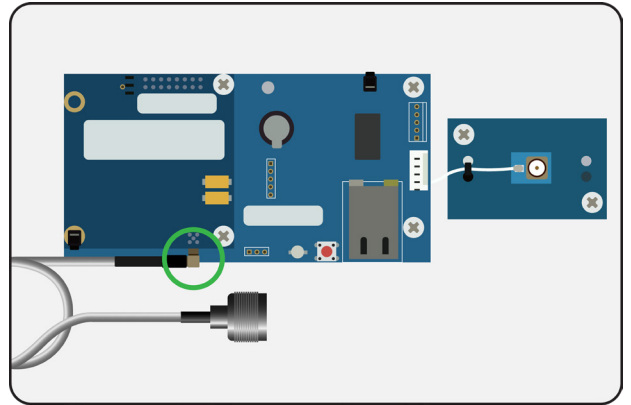


- A. 5-pin connector for cable to the controller board (Com labeled connector)
- B. Connector for the WiFi antenna
- C. Ethernet connector
- D. Reset switch and status LED
- E. Connector for the cell module (not used for Wi-Fi configurations)

Installing the Cloud Network Module into a X/XS Cabinet

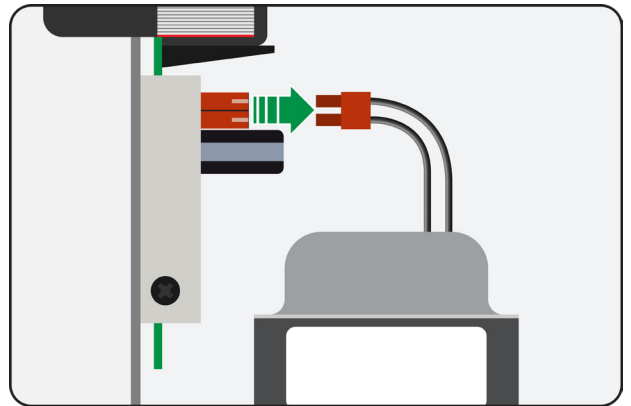
1

For LTE Cloud Network Module installations, make sure that the antenna is securely connected before beginning. If the module is powered up with a loose or disconnected antenna, damage may occur to the circuitry. **This damage is not covered by warranty.**



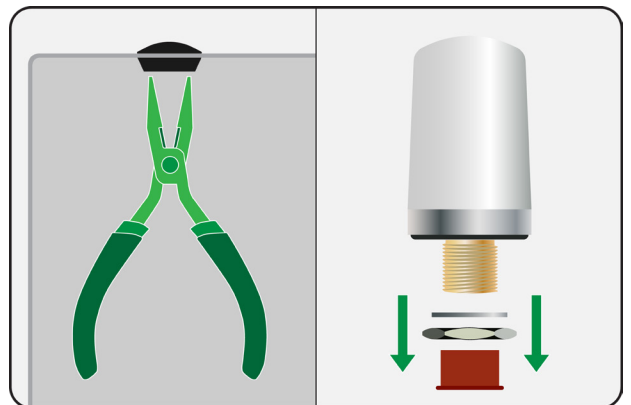
2

Power down the controller.



3

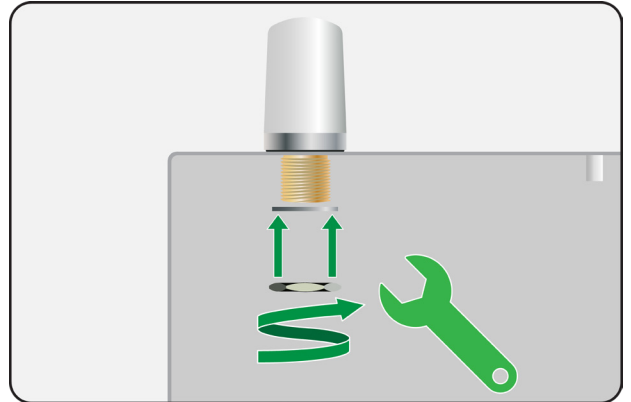
1. Use needle-nose pliers to remove the rubber plug from the antenna port on the top of the cabinet.
2. Remove the nut and the lock washer from the bottom of the antenna, and then insert the stem of the antenna into the port on the top of the cabinet.



Installing the Cloud Network Module into an X/XS Cabinet, Cont.

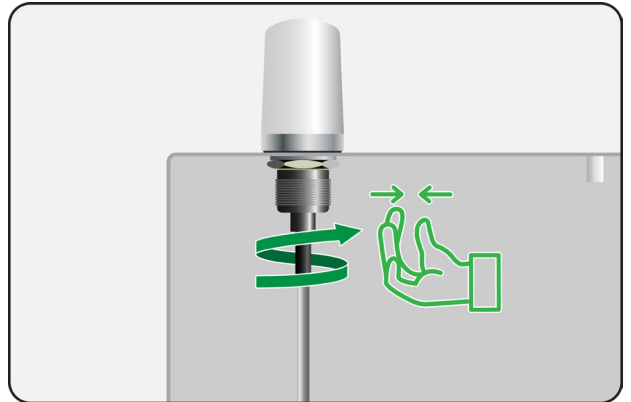
4

From the inside of the cabinet, place the lock washer on the stem of the antenna, and then thread the nut onto the stem. Use a wrench to tighten the nut sufficiently to ensure that the antenna makes good contact with the outside of the cabinet.



5

Thread the coax connector that is attached to the antenna cable onto the stem of the antenna and hand-tighten it.

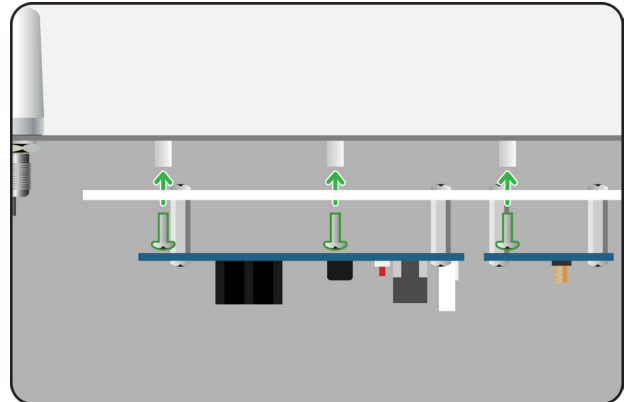


BASELINE CLOUD NETWORK MODULE

Installing the Cloud Network Module into an X/XS Cabinet, Cont.

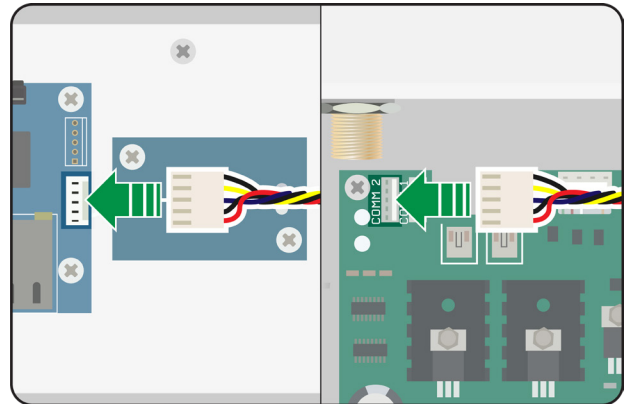
6

Align the mounting holes on the Cloud Network Module with the posts on the cabinet. Use the screws provided to securely attach the unit inside the cabinet.



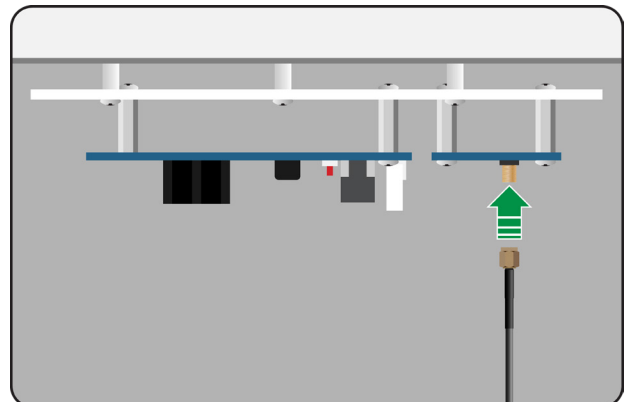
7

Plug the 5-pin connector from the Cloud Network Module into the Comm 2 connector on the left side of the controller board as shown.



8

For Wi-Fi installations, attach the cable from the antenna to the antenna cable port on the Cloud Network Module as shown.

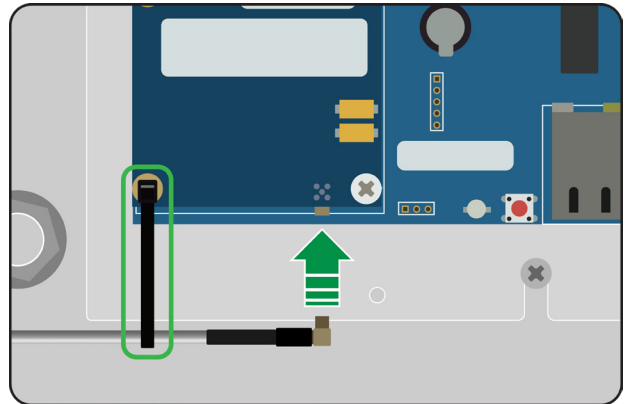


BASELINE CLOUD NETWORK MODULE

Installing the Cloud Network Module into an X/XS Cabinet, Cont.

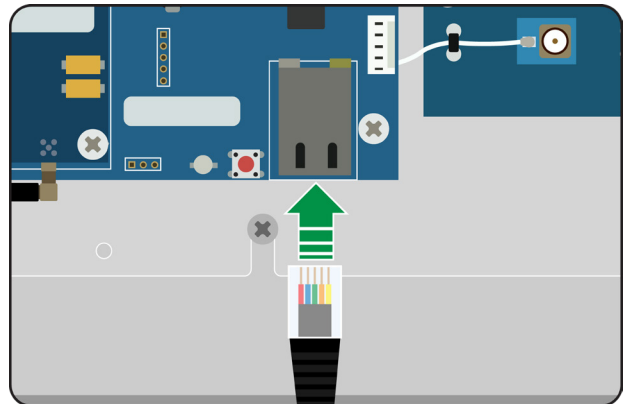
9

1. For Cell Modem connections, attach the cable from the antenna to the antenna cable port on the Cloud Network Module as shown.
2. Zip tie the antenna cable through the left corner hole in the Cloud Network Module.



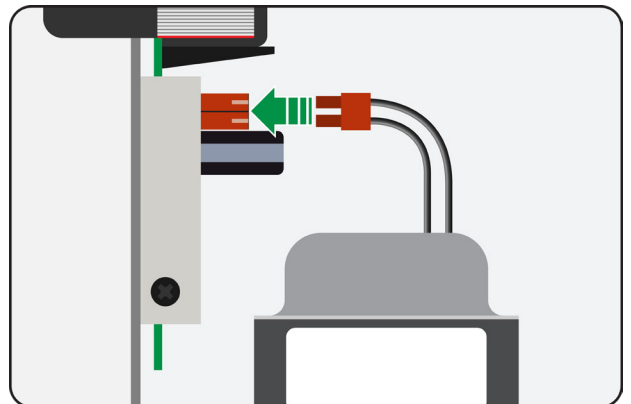
10

1. For Ethernet connections, attach the cable to the port on the Cloud Network Module as shown.



11

Power-up the controller.



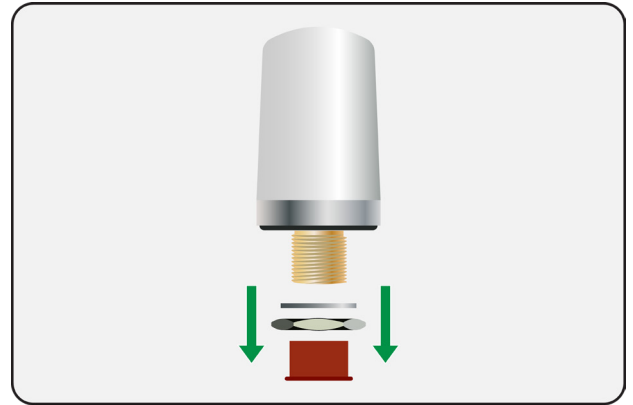
12

Follow the instructions in the Cloud Network Configuration portion of the guide to complete the setup.

Installing the Cloud Network Module into a Pedestal Cabinet

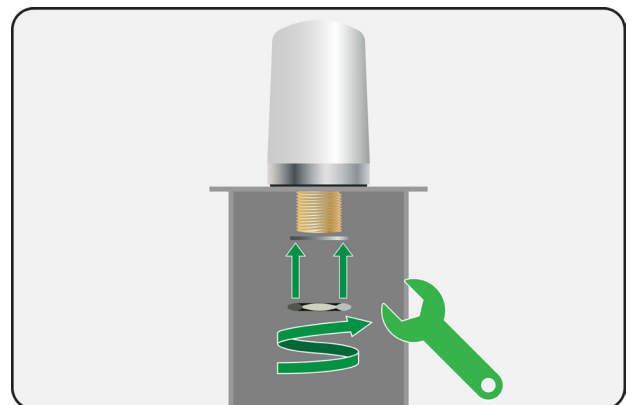
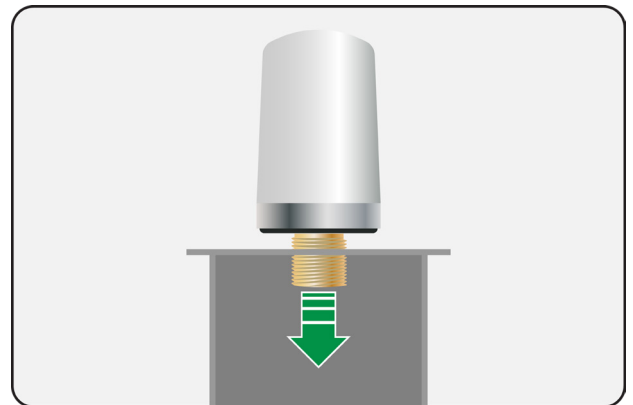
1

1. Remove the antenna riser assembly and the antenna from its packaging.
2. Remove the plastic cap, the nut, and the lock washer from the stem of the antenna.



2

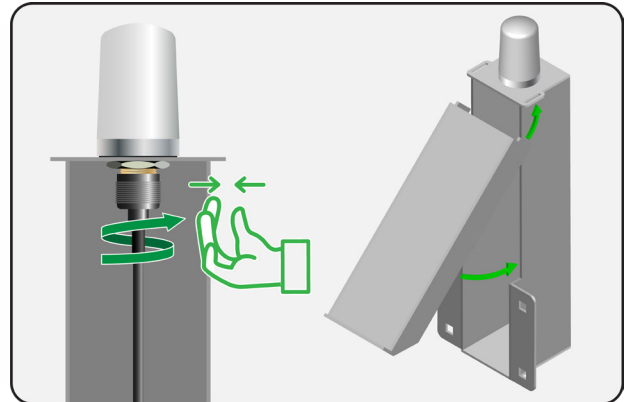
1. Put the stem of the antenna through the mounting hole on the top of the antenna riser so the antenna is positioned on top of the riser.
2. Put the lock washer onto the stem of the antenna, and then thread the nut onto the stem. Use a wrench to tighten the nut sufficiently to ensure that the antenna makes good contact with the antenna riser.



Installing the Cloud Network Module into a Pedestal Cabinet, Cont.

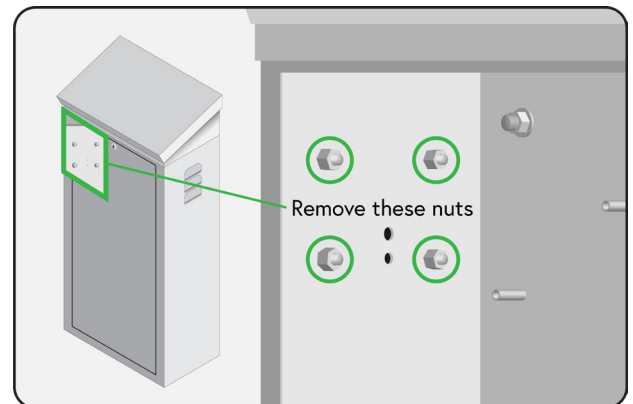
3

1. Thread the coax connector on the antenna cable onto the stem of the antenna and hand-tighten it. Route the antenna cable towards the bottom of the antenna riser.
2. Insert the tabs on the backing plate into the holes at the top edge of the riser and make sure the plate is snug along the back of the riser



4

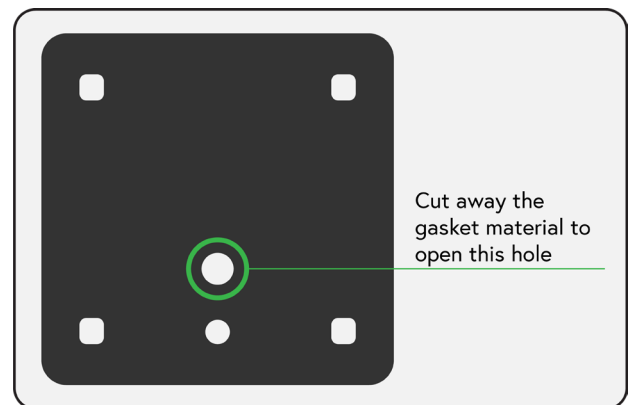
1. Open and remove the front door on the lower part of the pedestal.
2. On the inside left wall of the pedestal, remove the nuts from the bolts that secure the cover to the outside wall. Set the nuts aside to be replaced in a later step.
3. Remove the bolts that are holding the cover on the outside wall. Set the bolts aside to be replaced in a later step.
4. Remove the cover from the outside wall, making sure that the gasket stays in place.



5

1. On the inside left wall of the pedestal, note the hole that is covered by the gasket.
2. On the outside left wall of the pedestal, find the location of the hole and use a sharp hobby knife to remove the gasket material that is covering the hole.

Note: This opening is used to route the antenna cable inside the pedestal in order to connect it to the Cloud Network Module. Make the hole large enough to pass the cable through, but small enough to maintain the seal.



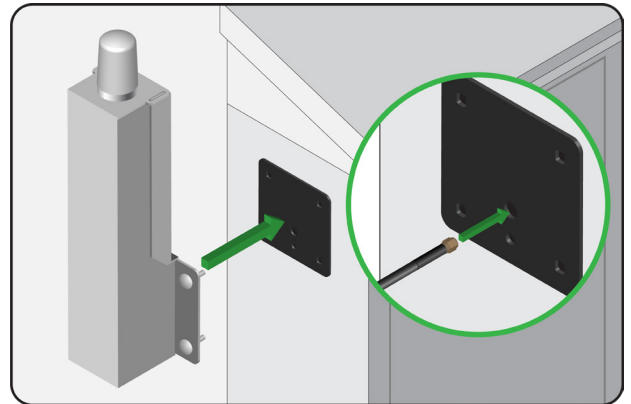
BASELINE CLOUD NETWORK MODULE

Installing the Cloud Network Module into a Pedestal Cabinet, Cont.

6

Align the holes at the bottom of the antenna riser with the holes in the gasket at the mounting location on the outside left wall of the pedestal.

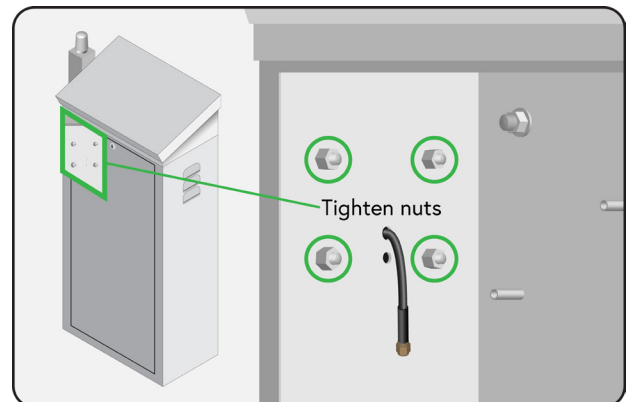
Feed the free end of the antenna cable through the small hole that you made in the gasket and into the inside of the pedestal.



7

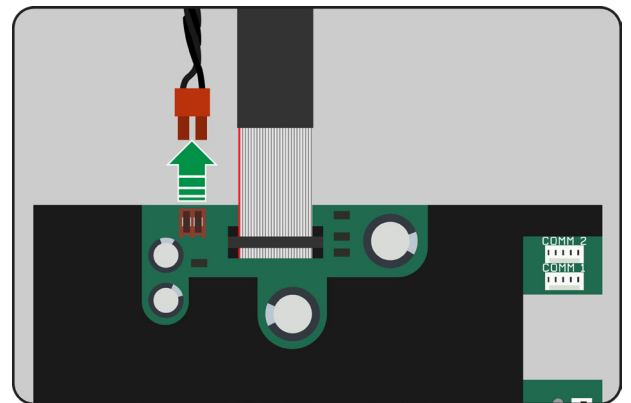
Working from the outside of the pedestal, insert the bolts that you removed earlier into the four holes.

Working from the inside of the pedestal, thread the nuts that you removed earlier onto the four bolts. Tighten the nuts snugly.



8

Find the orange power connector on the wires coming from the transformer. Gently pull the connector away from the board to disconnect the power.

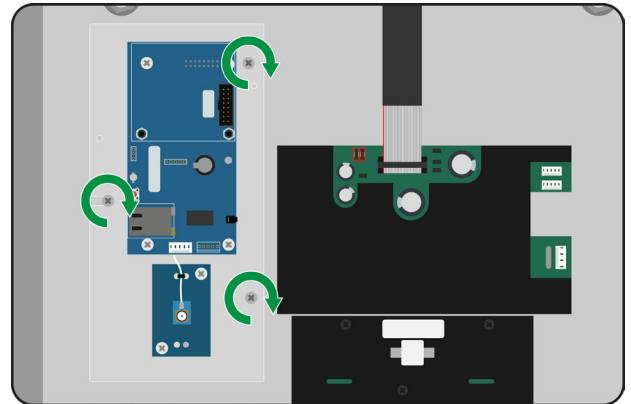


BASELINE CLOUD NETWORK MODULE

Installing the Cloud Network Module into a Pedestal Cabinet, Cont.

9

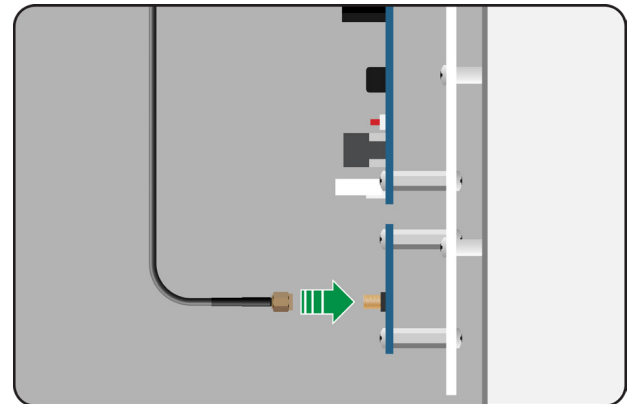
With the WI-Fi antenna on the bottom side of the Cloud Network Module, align the three mounting holes on the Cloud Network Module with the standoffs on the back wall of the pedestal. Use the screws provided to secure the unit to the enclosure.



10

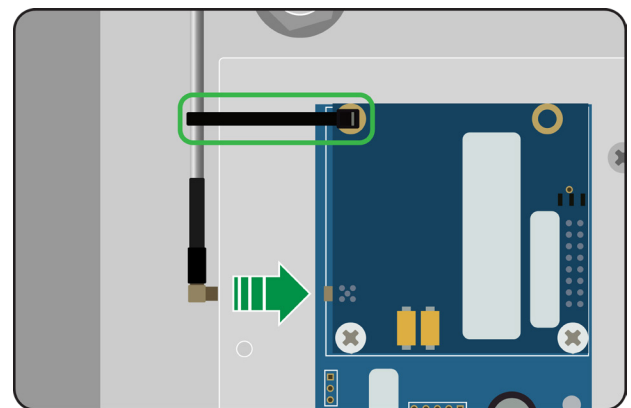
Securely attach the antenna cable to the Wi-Fi connector on the Cloud Network Module.

Important: Make sure the antenna cable remains securely attached to the connector on the Cloud Network Module. If the module is powered up with a loose or disconnected antenna, damage may occur to the circuitry. The damage is not covered by warranty.



11

1. For Cell Modem connections, attach the cable from the antenna to the antenna cable port on the Cloud Network Module as shown.
2. Zip tie the antenna cable through the left corner hole in the Cloud Network Module.

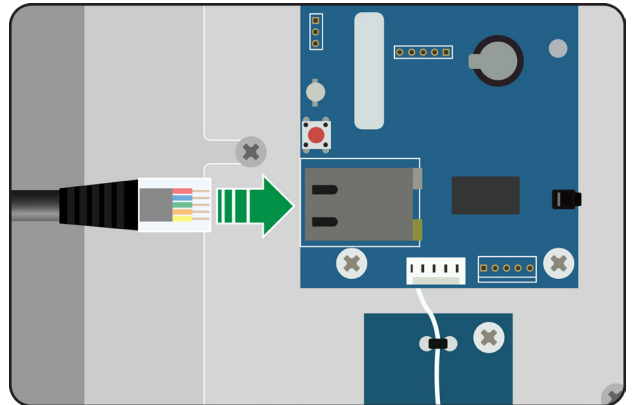


BASELINE CLOUD NETWORK MODULE

Installing the Cloud Network Module into a Pedestal Cabinet, Cont.

12

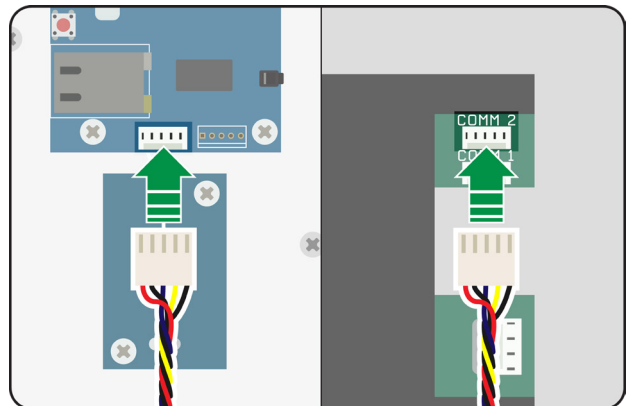
1. For Ethernet connections, attach the cable to the port on the Cloud Network Module as shown.



13

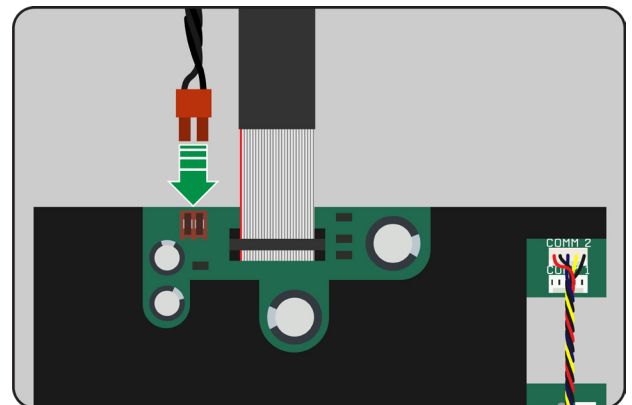
Plug the 5-pin connector from the Cloud Network power cord into Comm 2 connector on the right end of the controller board.

Note: If another connector is attached to the upper 5-pin terminal block, disconnect it and then reconnect it to the Comm 2 connector.



14

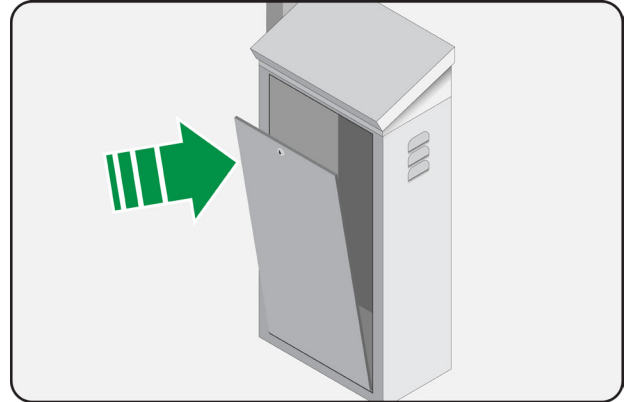
Reconnect the orange power connector to the board in order to restore power to the controller.



Installing the Cloud Network Module into a Pedestal Cabinet, Cont.

15

1. Replace the pedestal door, and then restart the controller
 - BaseStation 1000: Press the RUN button.
 - BaseStation 3200: Turn the dial to the RUN position.



Cloud Network Module Configuration Guide-BaseStation 3200

Setting Up a CN Ethernet Connection

A Cloud Network (CN) Ethernet connection allows your controller or device to automatically obtain an IP address through the cloud, which enables the connection to the internet. Every time you restart your controller or device, it retrieves a new IP address.

1

1. Plug an Ethernet cable into the Ethernet port on the back of the display board and plug the other end of the cable into a live Ethernet jack.
2. On the controller, turn the dial to the Network position.
3. The Communication Setup option should be highlighted. If it is not, press Next until it is highlighted.

Network Setup	Network
Communication Setup	Pump Station Setup
BaseManager Server Setup	
FlowStation Setup	
SubStation Setup	
Help	

2

1. Press **Enter**. The Communication Setup screen displays.
2. In the Comm Type field, press + or – to select CN_Ethernet.

Communication Setup	Network
Comm Type (+/-)	CN_Ethernet
CN Module	Version 0.10
Comm Type Status	Is Available
	Connected
(Enter to edit)	IP Setup
Help	

3

1. Press **Next** to select IP Setup.
2. Press **Enter**. The IP Setup screen displays. The controller uses the Dynamic Host Configuration Protocol (DHCP) to establish the network connection. The DHCP protocol automatically configures the network settings. Relevant fields are masked in gray and completed according to your own network settings.

IP Address Mode	DHCP
IP Address	10 11 12 160
Subnet Mask	255 255 255 0
Default Gateway	10 11 12 1
Preferred DNS Server	8 8 8 8
Preferred DNS Server	192 168 50 13
MAC Address	0008EE408115
Help	

Setting Up a Static Ethernet Connection

A static IP Ethernet connection is a permanent IP address that does not change. In some cases, private network configurations or network security issues might require that you configure a static IP address for your controller.

1

1. Plug an Ethernet cable into the Ethernet port on the back of the display board and plug the other end of the cable into a live Ethernet jack.
2. On the controller, turn the dial to the Network position.
3. The Communication Setup option should be highlighted. If it is not, press Next until it is highlighted.

Network Setup	Network
Communication Setup	Pump Station Setup
BaseManager Server Setup	
FlowStation Setup	
SubStation Setup	
Help	

2

1. Press **Enter**. The Communication Setup screen displays.
2. In the Comm Type field, press + or – to select CN_Ethernet.

Communication Setup	Network
Comm Type (+/-)	CN_Ethernet
CN Module	Version 0.10
Comm Type Status	Is Available Connected
(Enter to edit)	IP Setup
Help	

3

1. Press Next to select IP Setup.
2. Press **Enter**. The IP Setup screen displays.
3. In the IP Address Mode field, press + or – to select Static IP.
4. Complete the fields for IP Address, Subnet Mask, Default Gateway, and Preferred DNS Server. Ask your administrator for the settings.

IP Address Mode	DHCP
IP Address	10 11 12 160
Subnet Mask	255 255 255 0
Default Gateway	10 11 12 1
Preferred DNS Server	8 8 8 8
Preferred DNS Server	192 168 50 13
MAC Address	0008EE408115
Help	

Setting Up a CN Cell Connection

A Cloud Network (CN) Cell connection allows your controller or device to obtain an internet connection through a cellular device.

1

1. On the controller, turn the dial to the Network position.

2. The Communication Setup option should be highlighted. If it is not, press Next until it is highlighted.

Network Setup	Network
Communication Setup	Pump Station Setup
BaseManager Server Setup	
FlowStation Setup	
SubStation Setup	
Help	

2

1. Press **Enter**. The Communication Setup screen displays.

2. In the Comm Type field, press + or – to select CN_Cell.

Communication Setup	Network
Comm Type (+/-)	CN_Cell
CN Module	Version 0.10
Comm Type Status	Is Available Connected
(Enter to view)	Cell Status
Help	

3

Press **Next** to select Cell Status, then Enter to view. The Cellular Modem screen displays, showing pertinent information about your cellular connection .

Cell Network	Network
Cellular Modem: CN Module	
SIM: 89148000005511617953	
Provider: Verizon Wireless	
Signal Quality: 10	
Signal Strength: -57dBm, 100%, Excellent	
Signal to Noise: -3dB, 83%, Excellent	
Network: Connected	
IP: 100.72.56.207	
Version: M0B.800003	
Help	

16

866 294 5847 | baselinesystems.com | support@baselinesystems.com

Setting Up a CN Cell Connection, Cont.

4

In the Find Network field, press Enter to search for the network. The asterisks represent signal strengths as indicated below:

- *** Maximum level signal strength
- ** Middle level signal strength
- * OK level signal strength

WiFi Networks	Network
WiFi Access Points	
*** BLTest	
** _ Baseline	
** _ BL_PRESO_2G	
** _ BLsecure	
** _ AdlerOffice	
_ _ belkin.706	
(Enter to select)	
Help	

5

- Press + or – to highlight the desired network, then Enter to select it.
- The Security screen displays. Enter in the network password, then click OK to finish.

Keyboard Entry	Network
Set Security Code for BLTest	
' 1 2 3 4 5 6 7 8 9 0 - =	
q w e r t y u i o p [] \	
a s d f g h j k l ; ' _	
z x c v b n m , . /	
Shift	Del
Space	OK

Setting Up a CN Wi-Fi Connection

A Cloud Network (CN) Wi-Fi connection allows your controller or device to obtain an internet connection wirelessly through the cloud.

1

1. On the controller, turn the dial to the Network position.
2. The Communication Setup option should be highlighted. If it is not, Press Next until the **Communication Setup** option is highlighted.

Network Setup	Network
Communication Setup	Pump Station Setup
BaseManager Server Setup	
FlowStation Setup	
SubStation Setup	
Help	

2

1. Press **Enter**. The Communication Setup screen displays.
2. In the Comm Type field, press + or – to select CN_Wi-Fi.

Communication Setup	Network
Comm Type (+/-)	CN_Wi-Fi
CN Module	Version 0.10
Comm Type Status	Is Available Not Connected
(Enter to edit)	IP Setup
(Enter to edit)	WiFi Setup
Help	

3

1. Press **Next** to select Wi-Fi Setup.
2. Press **Enter**. The Wi-Fi Setup screen displays.

WiFi Setup	Network
Find Network	Enter to Search
Network	
Security Key	
Security:	WPA2
Status:	Connected
Error:	
Help	

Setting Up a CN Wi-Fi Connection, Cont.

4

In the Find Network field, press Enter to search for the network.

WiFi Setup	Network
Find Network	Enter to Search
Network	
Security Key	
Security:	WPA2
Status:	Connected
Error:	
Help	

5

1. . Press + or – to highlight the desired network, then **Enter** to select it.

WiFi Networks	Network
WiFi Access Points	
*** BLTest	
**_ Baseline	
**_ BL_PRESO_2G	
**_ BLsecure	
**_ AdlerOffice	
___ belkin.706	
(Enter to select)	
Help	

6

1. The Security screen displays. Enter in the network password, then click **OK** to finish.

Keyboard Entry	Network																																																																
Set Security Code for BLTest																																																																	
<table border="1"><tr><td>`</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>0</td><td>-</td><td>=</td></tr><tr><td>q</td><td>w</td><td>e</td><td>r</td><td>t</td><td>y</td><td>u</td><td>i</td><td>o</td><td>p</td><td>[</td><td>]</td><td>\</td></tr><tr><td>a</td><td>s</td><td>d</td><td>f</td><td>g</td><td>h</td><td>j</td><td>k</td><td>l</td><td>;</td><td>'</td><td></td><td></td></tr><tr><td>z</td><td>x</td><td>c</td><td>v</td><td>b</td><td>n</td><td>m</td><td>,</td><td>.</td><td>/</td><td></td><td></td><td></td></tr><tr><td colspan="3">Shift</td><td colspan="3">Del</td><td colspan="3">Space</td><td colspan="3">OK</td></tr></table>		`	1	2	3	4	5	6	7	8	9	0	-	=	q	w	e	r	t	y	u	i	o	p	[	]	\	a	s	d	f	g	h	j	k	l	;	'			z	x	c	v	b	n	m	,	.	/				Shift			Del			Space			OK		
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z	x	c	v	b	n	m	,	.	/																																																								
Shift			Del			Space			OK																																																								

Cloud Network Module Configuration Guide: BaseStation 1000, FlowStation, SubStation

Setting Up a CN Ethernet Connection

A Cloud Network (CN) Ethernet connection allows your controller or device to automatically obtain an IP address through the cloud, which enables the connection to the internet. Every time you restart your controller or device, it retrieves a new IP address.

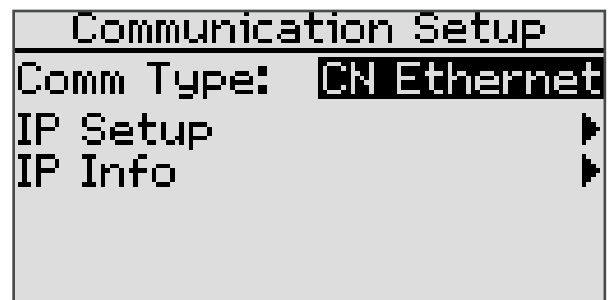
1

1. Plug an Ethernet cable into the Ethernet port on the back of the controller board and plug the other end of the cable into a live Ethernet jack.
2. On the controller, press **System Setup**. The System Setup menu displays.
3. Press ↓ to highlight the **Network Setup** option and then press **OK** to select it. The Network Setup menu displays.
4. The **Communication Setup** option should be highlighted. If it is not, press ↓ or ↑ to highlight it. and then press **OK**. The Communication Setup screen displays.



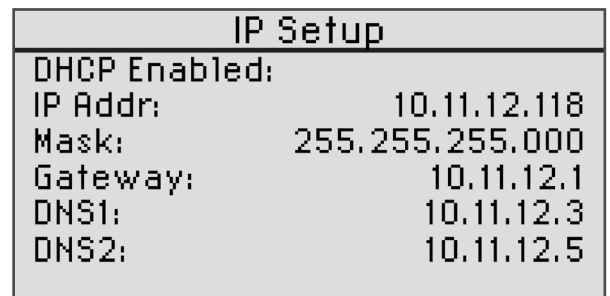
2

1. Press **OK**. The Communication Setup screen displays.
2. In the Comm Type field, press + or – to select CN_Ethernet.



3

1. Press ↓ to select IP Setup.
2. Press **OK**. The IP Setup screen displays. The controller uses the Dynamic Host Configuration Protocol (DHCP) to establish the network connection. The DHCP protocol automatically configures the network settings.



Setting Up a Static Ethernet Connection

A static IP Ethernet connection is a permanent IP address that does not change. In some cases, private network configurations or network security issues might require that you configure a static IP address for your controller.

1

1. Plug an Ethernet cable into the Ethernet port on the back of the controller board and plug the other end of the cable into a live Ethernet jack.
2. On the controller, press **System Setup**. The System Setup menu displays.
3. Press ↓ to highlight the **Network Setup** option and then press **OK** to select it. The Network Setup menu displays.
4. The **Communication Setup** option should be highlighted. If it is not, press ↓ or ↑ to highlight it.



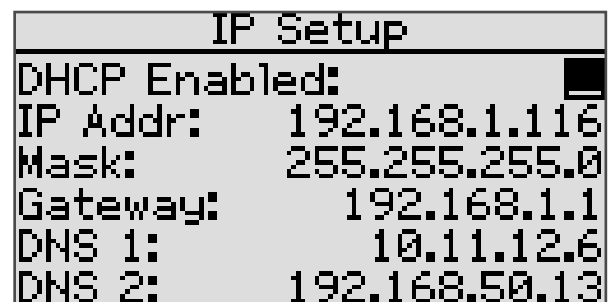
2

1. Press **OK**. The Communication Setup screen displays.
2. In the Comm Type field, press + or - to select CN_Ethernet.



3

1. Press ↓ to select IP Setup.
2. Press **OK**. The IP Setup screen displays.
3. In the **DHCP Enabled** field, press + or - to remove the checkmark.
4. Press ↓ to highlight the first digits in the IP Addr field. Press ← or → to move the digits that you want to change. Press + or - to change the value in the field.
5. Press ↓ to move to the other fields you need to change. Complete the fields for IP Address, Mask, Gateway, and Preferred DNS Server. Ask your administrator for the settings.



Setting Up a CN Cell Connection

A Cloud Network (CN) Cell connection allows your controller or device to obtain an internet connection through a cellular device.

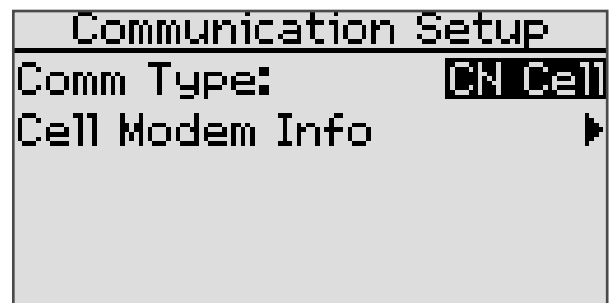
1

1. On the controller, press **System Setup**. The System Setup menu displays.
2. Press ↓ to highlight the **Network Setup** option and then press **OK** to select it. The Network Setup menu displays.
3. The **Communication Setup** option should be highlighted. If it is not, press ↓ or ↑ to highlight it.



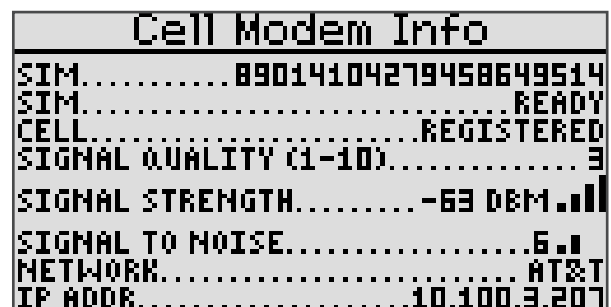
2

1. Press **OK**. The Communication Setup screen displays.
2. In the Comm Type field, press + or – to select **CN_Cell**.



3

Press ↓ to select **Cell Modem Info** then **OK** to view. The Cell Modem Info screen displays, showing pertinent information about your cellular connection .



Setting Up a CN Wi-Fi Connection

A Cloud Network (CN) Wi-Fi connection allows your controller or device to obtain an internet connection wirelessly through the cloud.

1

1. On the controller, press **System Setup**. The System Setup menu displays.
2. Press ↓ to highlight the **Network Setup** option and then press **OK** to select it. The Network Setup menu displays.
3. The **Communication Setup** option should be highlighted. If it is not, press ↓ or ↑ to highlight it.



2

1. Press **OK**. The Communication Setup screen displays.
2. In the Comm Type field, press + or – to select CN_WiFi



3

1. Press ↓ to select WiFi Setup.
2. Press **OK**. The Wi-Fi Setup screen displays.

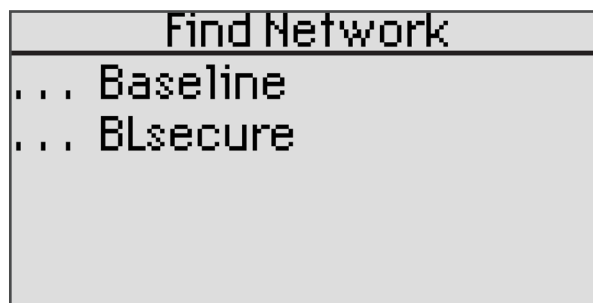


Setting Up a CN Wi-Fi Connection, Cont.

4

1. In the Find Network field, press OK to search for the network. A list of networks will diisplay. Bars next to each network represent signal strength.

4 bars Maximum level signal strength
2 bars Middle level signal strength
1 bar OK level signal strength



5

1. Press ↓ or ↑ to highlight the desired network, then **OK** to select it.
2. The Security screen displays. Use the ↑ and ↓ buttons and the ← and → buttons to set the network password, then click **OK** to finish.





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