

GW4 Gateway

NextCentury 5G Cellular Gateway

Operation and Installation Guide



A 15 VDC Power C USB C Port E 3rd Party Port
B Ethernet Port D LED Indicators F Antenna Port

1| Product Overview

The NextCentury GW4 Gateway introduces the next generation of superior wireless utility management.

The GW4 Gateway's embedded 5G cellular modem provides an instant data connection right out of the box, making setup fast and simple.

Simple to Connect

The GW4 Gateway is your property's Gateway to the NextCentury Cloud. Utility data received from NextCentury meter end-point devices is kept in sync using one of 3 available data connections:

- Ethernet (Gigabit)
- WiFi (2.4/5 GHz)
- Cellular (5G & LTE)

2| Technical Specifications

2.1 – Certifications

FCC ID: 2AB8I-GW4 IC: 20949-GW4

Contains FCC ID: RI7WE866C6 IC: 6131A-WE866C6

Contains FCC ID: N7NHL78 IC: 2417C-HL78

2.2 – Wireless Communication

- Two-way NextCentury RF Connect™
- 902-928 MHz Unlicensed Band

2.3 – Cellular Data Communication Option

- 5G & LTE
- Simple to manage cellular subscription
- No contracts or hidden fees

2.4 – LAN Data Communication Options

- Gigabit Ethernet
- WiFi (2.4 GHz and 5.0 GHz b/g/n/ac)

2.5 – In-Field Configuration

- Direct Connect configuration using the iOS or Android mobile app

2.6 – Dimensions

- 5.1in x 1.2in x 7.7in (129mm x 31mm x 195mm)

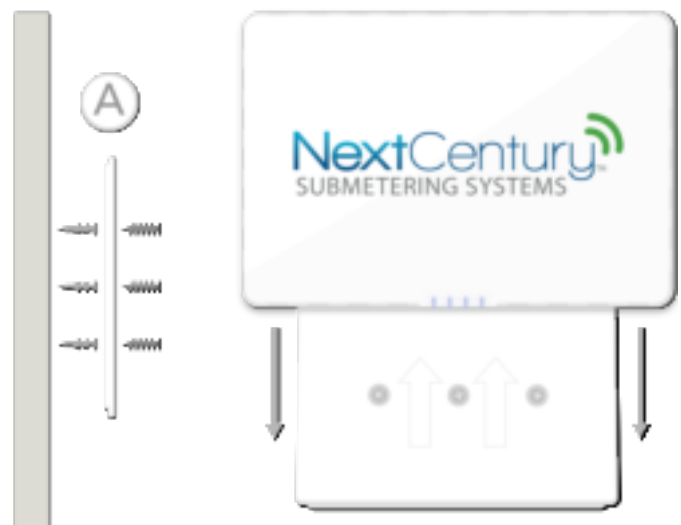
2.7 – Operation Environment:

- -20°C to 60°C (-4°F to 140°F)
- Should be installed in an indoor, dry environment

3| In-Field Installation

3.1 – Mounting Plate Installation

Each Gateway comes with a mounting plate and can be installed using the mounting screws and anchors to secure the Mounting Plate to the wall.



3.2 – Mount External Cellular Antenna

- Attach magnetic base of cellular antenna to the wall.

3.3 – Power the Gateway

- Plug Power Supply into the 15-volt power port (Figure 1-A).

5|Direct Connect

5.1 - Connect with Gateway Using Mobile App

When the internet connection being provided to the Gateway requires set parameters (WiFi, network static IP, etc.) then a direct connection can be established with the Gateway using an Android or iOS device and the NCSS mobile app.

1. Your mobile device's Bluetooth must be turned on and within 10 feet proximity to the Gateway.
2. Open the NCSS mobile app and select "Direct Connect" from the menu.
3. Tap the Gateway device as it appears (fig. 3).
4. Tap the Settings icon and adjust the connection parameters as needed.

Figure 3 Viewing Nearby GW4 Using NCSS Mobile App

A The NCSS mobile app is available for Android or iOS devices.

B Nearby devices can be selected in order to establish a direct connection.

6|Data Connection Options

Determine your preferred internet connection type to establish NextCentury Cloud connectivity.

Option 1: Integrated Cellular

- Enable cellular data plan for the Gateway by navigating to the property settings using the NCSS mobile app or by navigating to the NextCentury web portal on your browser.



Note: The data plan is available on a month-to-month basis and can be canceled at any time. Cellular can also be turned on remotely at any time through the web portal.

Option 2: Ethernet

1. Plug Ethernet cable into the Ethernet port (Figure 1-B).
2. If the property network requires a static IP, or other configuration parameters, then use the "Direct Connect" feature available from the NCSS mobile app (section 4).

Note: The Gateway does not need a static IP address unless required by the network configuration. It can be placed on either a WAN or LAN network and use a DHCP address.

Option 3: WiFi

1. Using the "Direct Connect" feature on the NCSS mobile app to select a nearby GW4 (section 4).
2. Tap on the "Settings" icon to access network settings.
3. Tap "Find Network" under the WiFi section and then select from the available WiFi networks. A password can then be entered.

Note: On unrestricted networks the Gateway will automatically connect to the NextCentury Cloud. If the Gateway does not connect, please be sure that the network does not require proxy login information and that TCP traffic is not blocked. If a proxy login or firewall is present on the network, a whitelist policy will need to be created by the IT manager for the property.

7|Gateway LED Operation

The GW4 Gateway comes equipped with four LED lights on the front/side edge.

Power Indicator

LED Pattern	Description
Solid Green	Powered on but NOT connected to NextCentury Cloud
Solid Blue	Powered on and connected to NextCentury Cloud
Solid Red	Power has been disconnected and the unit is running on backup power
No Light	Power is off

Setup Indicator

LED Pattern	Description
Solid Green	Programmed to a property
Green Blinks	Programmed to a property: Mobile App directly connected to Gateway
Yellow Blinks	Not programmed to a property: Mobile App directly connected to Gateway
No Light	Not programmed to a property

RF Activity Indicator

LED Pattern	Description
Green Flash	Unprogrammed NCSS device communicating
Yellow Flash	Programmed 3 rd party device communicating

Blue Flash	Programmed NCSS device communicating
Red Flash	Unprogrammed 3 rd Party devices communicating
No Light	No Real-time RF activity

communicating (sending or receiving messages) with an unprogrammed NCSS device (RE-201 Repeater or TR-201 Transceiver). The LED will *briefly flash blue* when the Gateway is communicating with a programmed NCSS device.

7.4 - 5G/LTE Indicator

- The 5G/LTE indicator will be red, yellow, or green depending on the available signal strength. *Red* is an indication of poor signal strength, *yellow* is fair, and *green* is a good cellular signal. The indicator will *breathe red, yellow or green* (to indicate poor, fair, good signal strength respectively) if the cellular connection is currently active/enabled.

3G/LTE Indicator

LED Pattern	Description
Solid Green	Good Cellular Signal
Green Breathing	Cellular enabled, Good Cellular Signal
Solid Yellow	Fair Cellular signal
Yellow Breathing	Cellular enabled, Fair Cellular Signal
Solid Red	Poor Cellular Signal (Not recommended)
Red Breathing	Cellular enabled, Poor Cellular Signal (Not recommended)
No Light	No Cellular Signal

**Note: If the Cellular Indicator is on (red, yellow or green) then the Gateway has a cellular signal and is actively able to ping (communicate with) the NextCentury Servers.*

7.1 - Power Indicator

- When the Gateway is plugged in, the Power Indicator LED (Table 1) will be solid green indicating the device is powered on but not connected with the NextCentury Cloud. A *solid blue* Power Indicator LED signifies the device is powered on and has connected with the NextCentury Cloud. The Power Indicator will turn *red* if a loss of power occurs. If the Gateway is being reset, the Power Indicator LED will *blink red one time*.

7.2 - Setup Indicator

- When the Gateway has been programmed to a property, the Setup LED indicator (Table 1) is *solid green*. If the LED is *blinking green* then the Gateway is programmed to a property AND the Mobile App is directly connected to the Gateway. If the LED is not on after the device has powered on, then the unit has not yet been programmed to a property. If the LED is *blinking yellow* then the Gateway has not been programmed to a property but the Mobile App is directly connected to the gateway. or been able to sync with the NextCentury Cloud.

7.3 - RF Activity Indicator

- This LED will be off when the Gateway does not detect any real-time RF activity (if the Gateway is not sending or receiving messages from any repeater or transceiver onsite).
- 3rd Party Device Transmissions: The LED will *briefly flash red* when the Gateway is communicating (sending or receiving messages) with an unprogrammed 3rd party device. The LED will *briefly flash yellow* when the Gateway is communicating with a programmed 3rd party device.
- Next Century (NCSS) Device Transmissions: The LED will *briefly flash green* when the Gateway is

8| Television and Radio Interference

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Company Name may void the user's authority to operate the equipment.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

As per 47 CFR §15.19

(All other devices shall bear the following statement in a conspicuous location on the device:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

As per 47 CFR §15.21

The user's manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.

ISED Statement

This radio transmitter (identify the device by certification number) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types approved for use with the transmitter, indicating the maximum permissible antenna gain (in dBi).

8.4 User Manual Notice for Licence-Exempt Radio Apparatus

User manuals for license-exempt radio apparatus shall contain the following text, or an equivalent notice that shall be displayed in a conspicuous location, either in the user manual or on the device, or both:

This device complies with Innovation, Science and Economic Development Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and*
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.*

Cet appareil est conforme aux flux RSS exemptés de licence d'Innovation, Science et Développement économique Canada. L'opération est soumise aux deux conditions suivantes:

- (1) Cet appareil ne doit pas provoquer d'interférence; et
- (2) Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

ISED Radiation Exposure Statement

[English] Radiation Exposure Statement: This equipment complies with the IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

[French] Énoncé d'exposition aux rayonnements: Cet équipement est conforme aux limites d'exposition aux rayonnements ioniques RSS-102 Pour un environnement incontrôlé. Cet équipement doit être installé et utilisé avec un Distance minimale de 20 cm entre le radiateur et votre corps.

9| Contact Information

For any questions or concerns, please contact NextCentury Submetering Solutions Product Support:

- Phone: (844) 538.8203
- Email: support@nextcenturymeters.com