LumInsight IoT Gateway and Base Station – Cellular
Setup Guide (Cellular Configuration)
Models 100150-211 and 100150-291

Introduction
LumInsight IoT Gateway and Base Station are a set of Echelon’s Edge Servers for use with the LumInsight 2 Central Management System (CMS). The Gateway or Base Station manages a network of lighting controllers and other devices over a LumInsight RF network. The data from the Gateway or Base Station is back-hauled over a Ethernet or Cellular connection. This guide is used to set up the Cellular connection.

NOTE: Before you begin using this setup guide, note that Gateways and Base Stations that are a part of the LumInsight pilot kit come with a cellular connection enabled and activated for the duration of the pilot. Only use this guide with your own cellular provider.

Setup Guide Overview
This document provides the instructions needed for cellular configuration for access by the LumInsight CMS. The cellular configuration is end-user specific and requires a cellular data plan for M2M.

It is recommended that the selected data plan utilizes a private IP address that is accessible via a VPN configured by your network provider. The LumInsight IoT Gateway and Base Station are certified for use with most carriers.

Parts and Accessories
The following parts and accessories are required for the LumInsight IoT Gateway and Base Station cellular configuration:

- Desktop or laptop (recommended) computer with an Ethernet port
- CAT 5 patch cable
- T-10 Torx screwdriver (if installing a SIM card)
- LumInsight IoT Gateway (Cellular model number 100150-211) or Base Station (Cellular model number 100150-291)

Technology Specific Configuration

CDMA Technology
1. Provide the MEID from the CloudGate label, which is located inside the enclosure, to your Mobile Virtual Network Operator (MVNO), and add the MEID to a new or existing M2M data plan.
2. Obtain the IP address that is associated with the MEID once it has been activated from the network operator.
3. Proceed to the Cellular Settings Configuration steps.

GSM Technology
1. Obtain a SIM card from your network provider, as well as the network information associated with the SIM card including IP address, APN, and VPN connection details.
2. Install the SIM card into the CloudGate device using the steps that follow.

NOTE: For some UMTS and 3G operators, such as AT&T, T-Mobile, and European operators, you must install a SIM card that is associated with the service plan.

For other wireless operators, such as Sprint or Verizon Wireless, make sure a service plan is associated with the device before continuing with the installation.
3. Use a T-10 Torx screwdriver to remove the four screws from the top plate on the back panel, and then remove the plate (refer to the figure below).
4. Insert the SIM card into SIM slot.
5. Re-assemble the top cover plate and screws.

6. Proceed to the Cellular Settings Configuration steps.

Cellular Settings Configuration

CAUTION: Make sure that the computer being used is not connected to any other network and is configured to receive an IP address from a DHCP server.

To configure the cellular settings for a LumInsight IoT Gateway and Base Station, perform the following steps:

1. Open the IP66 enclosure and locate the CloudGate device inside (refer to the figure that follows).
2. Connect one end of the Ethernet cable to the CloudGate.

3. Connect the other end of the Ethernet cable to a computer (refer to the figure below).

![Ethernet Cable Connection](image)

4. Connect the power adapter to the CloudGate and apply power.

   As the CloudGate boots, the system state LED turns orange; *wait until it turns green.*

   When the boot process completes, the computer will have an active network connection with a valid IP address.

5. Open a browser window and go to the address `http://192.168.1.1`.

   A CloudGate Login page should appear as shown in the screen below, confirming a good Ethernet connection to the CloudGate.

   ![CloudGate Login Page](image)

6. Enter the following credentials to login to the CloudGate web interface:

   ```
   Username: admin
   Password: @Echelon123!
   ```

7. On the CloudGate Landing page, click the *Back* button in the lower left as shown in the screen below.

   ![CloudGate Landing Page](image)

   The CloudGate Home page should appear.

8. On the CloudGate Home page, click the *Interfaces* menu item and then select the *3G Connection* option as shown in the screen below.

   ![CloudGate Home Page](image)

   At this point, the settings on the CloudGate 3G Connection page should appear as shown in the screen that follows.

   ![CloudGate 3G Connection Page](image)
9. Scroll down to the **Radio Firmware Selection** section and select the appropriate radio firmware as follows:
   - Select “Verizon Wireless” for Verizon CDMA.
   - Select “UTMS Generic” for all others when using a SIM-based service.

10. Click the **Save Changes** button to save settings.

11. In the **Network Settings** section, enter the APN provided by your network provider in the APN field.

   **NOTE:** The cellular service from your network provider should provide access to pool.ntp.org and nist.time.gov.

12. Click the **Save Changes** button to save settings.

13. The device will reboot.

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### Cellular Settings Verification

1. Open a browser window and go to the address [http://192.168.1.1](http://192.168.1.1).

2. Enter the following credentials to login to the CloudGate web interface:
   
   **Username:** admin  
   **Password:** @Echelon123!

3. From the CloudGate Landing page, click the **Back** button to reach the CloudGate Home page, which should appear with a successful connection status as shown in the screen below.

   ![Successful Connection Status Display](image)

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### LumInsight 2 CMS Connection

The step-by-step instructions in this document describe setting up the cellular connection to the Gateway or Base Station.

After completing the steps in the document, additional considerations include:

1. The Gateway or Base Station must be set up to connect through the Internet to the LumInsight Cloud CMS. Doing so requires a valid LumInsight Cloud subscription. Contact Echelon Support for setting up and connecting to the Cloud CMS.

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### Additional References and Contact

Additional information and related documentation can be found on the Echelon web site at [www.echelon.com](http://www.echelon.com).

Please refer to the Echelon Customer Support web site at [http://echelon.com/support](http://echelon.com/support) for more information.

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