

## EN7380 Senior Living Gateway Installation and Operation Manual

### 1 Overview

The EN7380 senior living gateway combines the functionality of an Inovonics receiver with the flexibility of an IP appliance, enabling cloud-based Inovonics senior living solutions to be delivered via API to your application software.

#### 1.1 Inovonics Contact Information



For product and installation videos visit us at [www.inovonics.com/videos](http://www.inovonics.com/videos) or use the QR code below.

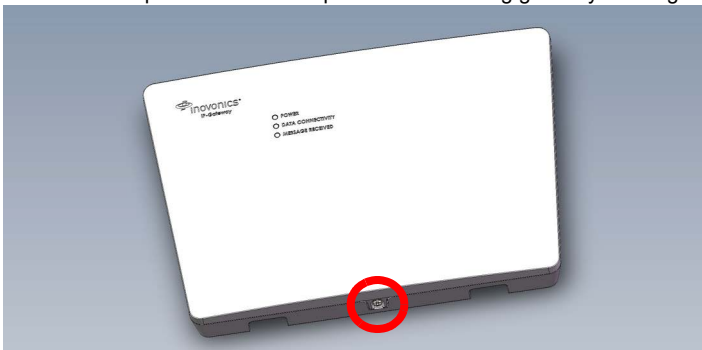


If you have any problems with this procedure, contact Inovonics technical services:

- E-mail: [support@inovonics.com](mailto:support@inovonics.com).
- Phone: 1.800.782.2709, option 2.

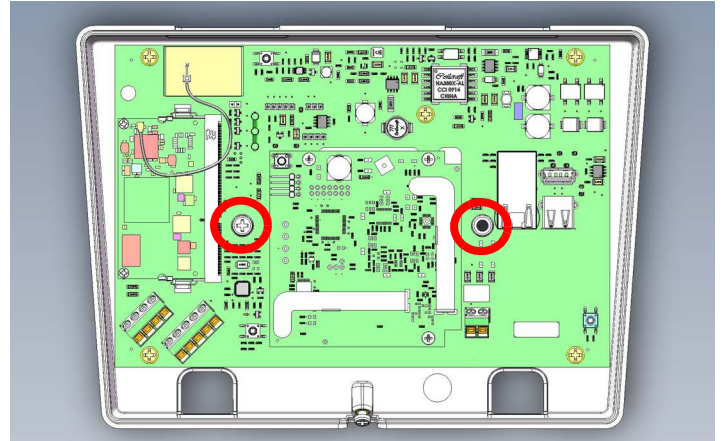
### 2 Installation and Startup

1. Review all installation instructions, as well as section 3, “Tips and Notes” on page 2, before beginning installation to ensure you are familiar with the process and have everything you need to install the senior living gateway.
2. Record the following information for future reference:
  - The appropriate MAC addresses and serial number from the label on the back of the housing.
  - The eight-character alphanumeric authorization code from the label on the lower right-hand portion of the printed circuit board, just above the Inovonics logo.
3. Use a Phillips screwdriver to open the senior living gateway housing.



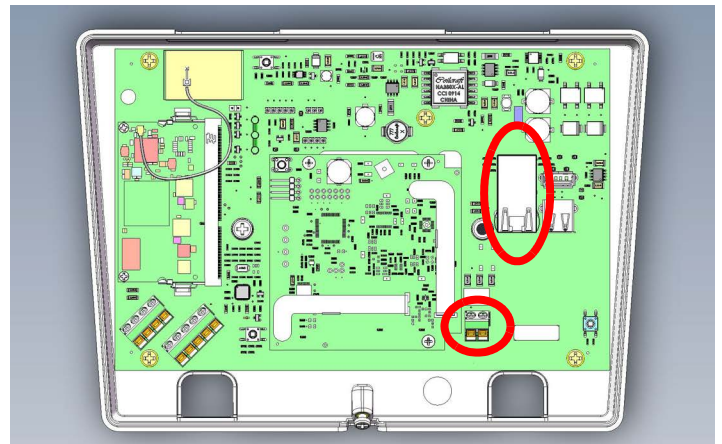
**Figure 1** Open the housing

4. Use the included screws and drywall anchors to flush-mount the senior living gateway.



**Figure 2** Senior living gateway mounting holes

5. Connect power to the senior living gateway, routing cabling through the gateway’s housing knockout.
  - If using line power, connect the included Inovonics ACC610 transformer and power cabling to the power terminal block.
  - If using Power over Ethernet (PoE), connect one end of a RJ45 Ethernet cable to the RJ45 Ethernet jack, and connect the other end to a PoE capable network switch. Ensure 10/100BASE-T Ethernet with Dynamic Host Configuration Protocol (DHCP) network management protocol.
  - Inovonics recommends an Internet connection with a minimum of 512 Kbps up and down, and no filtering or proxying of HTTPS outgoing connections.



**Figure 3** RJ45 Ethernet jack and power terminal block

6. If using line power, connect one end of a RJ45 Ethernet cable to a RJ45 Ethernet jack, and connect the other end to your LAN to establish Internet connectivity.
  - Ensure 10/100BASE-T Ethernet with DHCP network management protocol.
7. The senior living gateway is able to use a range of radio frequencies, and is shipped from Inovonics set for your geographic area using the frequency band selection pins.
  - A jumper will be set on the left two pins, marked AUS, to set the frequency range to 915-928 MHz for Australia.
  - A jumper will be set on the right two pins, marked NZ, to set the frequency range to 921-928 MHz for New Zealand.
  - The jumper will be removed to set the frequency band to 902-928 MHz for North America.



- a. Ensure the frequency band is set for your geographic area.
- b. If the frequency band is not set for your geographic area, place a selection jumper on the appropriate frequency band selection pins to select Australia or New Zealand, or remove it for North America.
- c. If you have changed the frequency band, press the reset button to complete configuration.

- c. Wait for the green LED to flash.
- d. Insert the USB flash drive into either of the senior living gateway's USB ports.
- e. When the red LED is solidly lit, indicating the gateway has finished processing the configuration file, remove the USB drive.

**Note:** If the red LED is not solidly lit, the yaml file did not load. Please check formatting, ensure you are using Notepad ++ or a similar yaml editor and use a yaml validator such as [yamllint.com](http://yamllint.com).

**13.** Use a Phillips screwdriver to close the senior living gateway housing. Once the senior living gateway is functional and all transmitter TXIDs have been registered, the LEDs will function as follows:

- Green: Blinks when powering up; solid when power up is complete.
- Orange: Blinks while establishing an IP connection; solid when IP connected.
- Red: Blinks upon message receipt from any transmitter.

### 3 Tips and Notes

#### 3.1 Installation Notes

- These products are designed to be maintained by professional technicians.
- Products are tested for indoor use.
- Inovonics recommends registering and testing end devices prior to installation, using a floor plan or something similar to indicate installation locations. Consider marking or applying descriptive labels to the end device cases to ensure proper installation. Conduct a site survey with an Inovonics survey kit prior to installation to assist with RF gateway, repeater and end device placement.
- Use a brand name USB flash drive with a FAT32 (vfat) filesystem for configuration.
- The senior living gateway configuration file is YAML formatted. See [yaml.org](http://yaml.org) for details.
- If using line power, keep cable length to less than 10 feet to minimize noise pickup.
- To resolve connectivity issues, check for loose/disconnected cabling, ensure power to Ethernet routers and/or switches, and connect a laptop to the Ethernet cable attached to the senior living gateway's RJ45 port and attempt to open a web site. If you are still unable to establish an Internet connection, contact a facility IT representative.
- Metal will reduce radio frequency (RF) range. Mount the senior living gateway in a location removed from metal, including duct work, wire mesh screens, IT closets, metal boxes, and etc. For additional information, see the "EchoStream Device Installation Recommendation" tech note at [www.inovonics.com](http://www.inovonics.com).
- The EchoStream system should be tested regularly to ensure operation. To test, place the system in test mode, activate an end device, and ensure an appropriate response.

### 4 Specification

Dimensions: 9.556" x 6.65" x 1.208" (243 mm x 169 mm x 31 mm).  
 Power requirements: Line power: The Inovonics ACC610 transformer, or a 12-14V AC intrinsically safe power supply capable of supplying at least 16W, or a 12-15V DC power supply capable of supplying at least 15W; POE: IEEE 802.3af-2003 compliant.

Ethernet: 10/100 BASE-T, DHCP, static IP.

WiFi: 802.11b/g/n, 2.4GHz, WPA/2-Personal, DHCP, static IP.

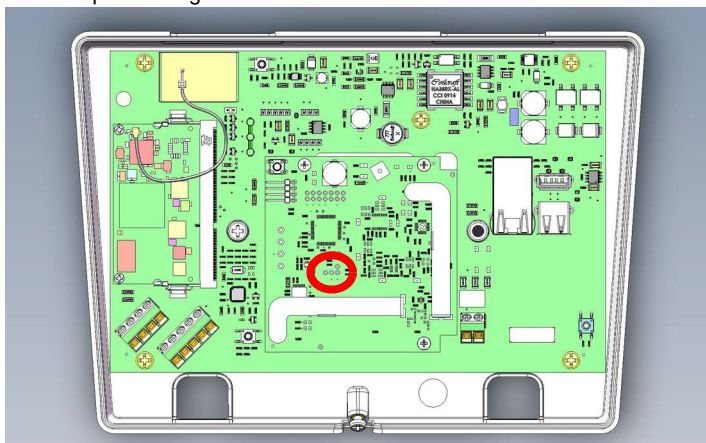
Operating frequencies: EchoStream: 902 - 928 MHz North America, 915 - 928 MHz Australia, 921 - 928 MHz New Zealand; Wi-Fi® and Bluetooth®: 2.400 GHz to 2.485 GHz.

Operating environment: Temperature: 32°F to 140°F; humidity: Up to 90% non-condensing.

Regulatory certifications: FCC, RoHS, RCM, ISED.

**Note:** Specifications and data are subject to change without notice.

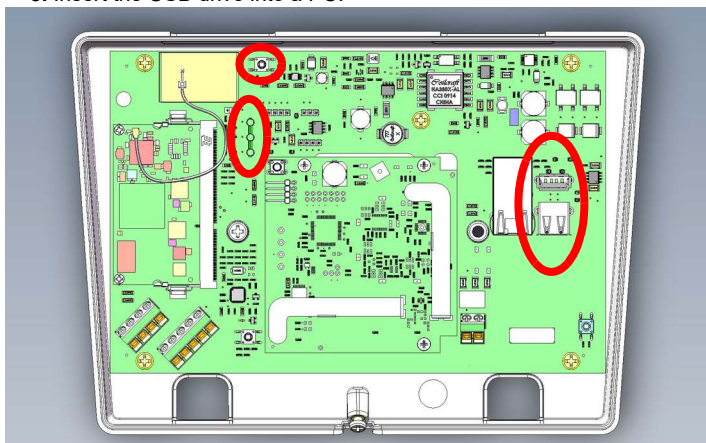
**Note:** Inovonics supports recycling and reuse whenever possible. Please recycle these parts using a certified electronics recycler.



**Figure 4** Frequency band selection pins

**Note:** Steps 8 through 12 are required for EchoStream directed networking support.

- 8.** If using an existing EN7380 configuration file, open the configuration file and proceed to step 11; if using a new configuration file:
  - a. Press the senior living gateway's reset button.
  - b. Wait for the green LED to flash.
  - c. Insert a USB flash drive into either of the senior living gateway's USB ports.
  - d. When the red LED is solidly lit, remove the USB drive.
  - e. Insert the USB drive into a PC.



**Figure 5** Reset button, LEDs and USB ports

- 9.** On your PC, open the configuration file from the USB drive.
  - It will be named en7380-XX-config-YYYYMMDD-HHMMSS.yaml, where XX is the last two hex digits of the Ethernet MAC address, as shown on the label on the back of the housing, and YYYYMMDD-HHMMSS is the current date and time.
- 10.** Enter the configuration information into the .yaml file:
  - Configure the network connectivity as desired. By default, only Ethernet is enabled with DHCP; WiFi is disabled.
  - Configure the senior living gateway for a directed network by setting the NID value in the .yaml file. The keyword NID and value is required in the radio section of the configuration file.

**Note:** When using the senior living gateway with a directed network, the EN6040 network coordinator needs to remain powered at all times to ensure continuous operation.

- 11.** Save the configuration file onto the USB drive as en7380-config.yaml.
- 12.** Load the configuration file onto the senior living gateway:
  - a. Safely eject the USB drive from the PC.
  - b. Press the senior living gateway's reset button.

## 5 Regulatory Compliance

### 5.1 Television and Radio Interference

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:

- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### 5.2 FCC Part 15 and Innovation, Science and Economic Development Canada (ISED) Compliance

This device complies with part 15 of the FCC Rules, and ISED license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

### 5.3 Radiation Exposure Limits

#### FCC

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm during normal operation and must not be co-located or operating in conjunction with any other antenna or transmitter.

#### ISED

This equipment complies with ISED RSS-102 radiation exposure limits set forth for an uncontrolled environment. This transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme avec ISED RSS-102 des limites d'exposition aux rayonnements définies pour un environnement non contrôlé. Cet émetteur doit être installé à au moins 20 cm de toute personne et ne doit pas être colocalisé ou fonctionner en association avec une autre antenne ou émetteur.

### 5.4 Wi-Fi and Bluetooth Module

This device includes an LSR Sterling-LWB module (FCC ID: TFB-1003 / ISED ID: 5969A-1003) and an LSR FlexNotch 2 dBi Antenna, PN 001-0015.

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

To comply with FCC and ISED RF exposure limits for general population / uncontrolled exposure, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

## 6 Open Source Software Notice and Information

To obtain the source code under GPL, LGPL, MPL, and other open source licenses that is contained in this product, please contact Inovonics technical services. In addition to the source code, all referred license terms, warranty disclaimers and copyright notices are also available.