

EN6080 Area Control Gateway Installation Instructions

1 Overview

The Inovonics EN6080 area control gateway bridges the proprietary Inovonics commercial mesh network to a standard TCP-IP over Ethernet LAN. Featuring a PSIA-compliant set of RESTful web services, the EN6080 area control gateway is designed to ensure interoperability with other IP-enabled devices across the security industry.

1.1 Installing an Inovonics Security System

An EchoStream survey kit should be used to establish an EchoStream system. The EchoStream survey kit measures the signal strength of high-power repeater and sensor messages to help optimize your EchoStream system.

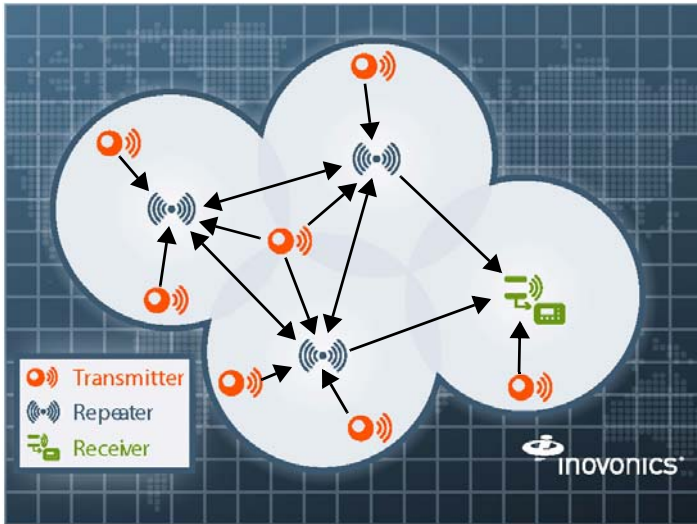


Figure 1 Sample EchoStream system

The EchoStream survey kit provides you with two signal strength measurements: signal level and signal margin.

Signal level

The signal level is the measurement of the overall decibel level of the message.

Signal margin

The signal margin is the measurement of the decibel level of the message, minus the decibel level of any interfering signals. Inovonics equipment should be placed within a facility such that all end-devices produce signal margin readings of at least 4 decibels.

Both the signal level and signal margin are measured in decibels. Because signal strength and signal margin are measured on a logarithmic scale, the difference between a decibel level of 3 (Weak) and a decibel level of 4 (Good) is a much larger difference than it would be on a linear scale.

Note: For more information about the EchoStream survey kit, see the *EN/EE7016SK EchoStream® Survey Kit Installation and Operation Manual*.

1.2 Inovonics Wireless Contact Information

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

- E-mail: support@inovonics.com
- Phone: (800) 782-2709; (303) 939-9336

1.3 EN6080 Area Control Gateway Front Panel

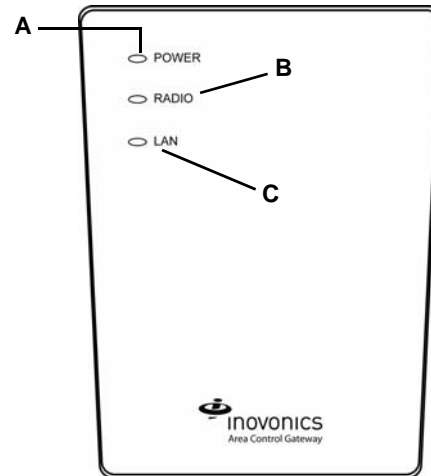


Figure 2 EN6080 front panel

A Power LED B Radio LED C LAN LED

Operation LEDs

Power LED: Green indicates the presence of line power or power over Ethernet.

Radio LED: Green indicates that the device is decoding messages from the wireless network.

LAN LED: Green indicates Ethernet link.

1.4 EN6080 Area Control Gateway Internal Components

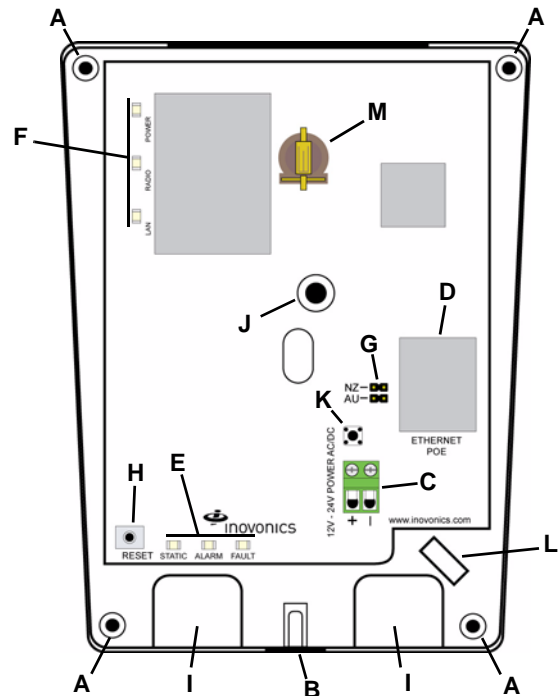


Figure 3 IBEX internal components

- | | | |
|---------------------------------|-------------------------------|---------------------|
| A Wall mount holes | B Housing cover release screw | C Power connections |
| D RJ45 Ethernet jack | E Operation LEDs | F Diagnostic LEDs |
| G Frequency band selection pins | H Reset button | I Cabling port |
| J Wall tamper mounting hole | K Housing tamper switch | L Cabling tie loop |
| M Battery holder | | |

Diagnostic LEDs

Static LED: Yellow indicates the EN6080 is using a static IP address; green indicates the EN6080 is using a dynamic IP address obtained from the network; no illumination indicates the EN6080 has been configured to use a dynamic IP address but has not obtained one from the network, or there is no Ethernet connection.

Alarm LED: Red indicates an alarm in the wireless network.

Fault LED: Yellow indicates a tamper, low battery, or repeater line power loss fault in the wireless network.

1.5 What's In The Carton

- One 14VAC/120AC transformer
- One CR1220 backup battery
- Five drywall anchors
- Five mounting screws
- One frequency band selection jumper

2 Installation and Startup

2.1 Installation Notes

- These products are designed to be maintained by professional security technicians
- Products are tested for indoor use
- All products should be manually tested weekly

2.2 Connect Power Cabling And Install Backup Battery

Note: The EN6080 area control gateway is Power over Ethernet capable on any network supporting the IEEE 802.3af-2003 PoE or IEEE 802.3at-2009 PoE+ standard. Power over Ethernet will only function when line power is not present.

To use line power, you will need to connect a power source to the EN6080 area control gateway:

1. Use a Phillips screwdriver to loosen the housing cover release screw (Figure 3).
2. Lift the cover off the hinges on the top of the housing.
3. Connect power cabling to the Vs and GND connections (Figure 3).
4. Ensuring the polarity corresponds, connect DC power cabling to the + and - connections; AC power does not require specific polarity and can use either connection (Figure 3).
 - Use 14-22 gauge wire for all cabling and ensure torque on the screw terminals does not exceed seven inch-pounds.
5. Route the power cabling through the cabling ports on the bottom of the housing (Figure 3).
6. Connect the power cabling to your power source.
 - The power source must be 12-24 VAC or VDC. The power supply must be unswitched, uninterrupted, and regulated.
7. Insert the backup battery in the battery holder (Figure 3).

2.3 Select the Frequency Band

EchoStream products are able to use a range of radio frequencies, and must be configured for your geographic area. This product ships with a default frequency range of 902-928 MHz for use in North America. If you are using the product in North America, skip to 2.4, "Connect Ethernet Cabling"; if you are using the product in Australia or New Zealand, you will need to configure the transmitter.

8. Place a selection jumper on the frequency band selection pins appropriate to your geographic area (Figure 3).
 - Place the jumper on the top two pins, marked NZ, to set the frequency range to 921-928 MHz for New Zealand
 - Place the jumper on the bottom two pins, marked AUS, to set the frequency range to 915-928 MHz for Australia.
9. Press the reset button to complete configuration (Figure 3).

2.4 Connect Ethernet Cabling

The EN6080 area control gateway connects to network components in a wired local area network (LAN) using the RJ45 Ethernet jack. To connect to a LAN:

10. Connect one end of a RJ45 patch cable to the RJ45 Ethernet jack on the EN6080 area control gateway (Figure 3).
11. Route the Ethernet patch cable through the cabling ports on the bottom of the housing (Figure 3).
12. Connect the other end of the RJ45 patch cable to an RJ45 Ethernet jack connected to your LAN.

13. To relieve stress on the Ethernet and power cabling, secure it to the cabling tie loop with a tie (Figure 3).

2.5 Mount the EN6080 Area Control Gateway

Caution: Mount the EN6080 area control gateway in a location removed from metal. Metal objects (duct work, wire mesh screens, boxes) will reduce RF range.

Caution: Per FCC RF exposure requirements, the EN6080 should be mounted in a location where it will be no more than 100cm from nearby persons.

The EN6080 area control gateway includes a wall tamper. If the EN6080 area control gateway is removed from the wall, the cutout on the back of the housing will detach, activating a tamper alarm. The wall tamper will only work if the EN6080 area control gateway is properly installed. To ensure the EN6080 is properly installed, carefully follow the mounting instructions:

14. If mounting the EN6080 area control gateway to drywall, install the drywall anchors included in the installation packet.

Caution: If the EN6080 area control gateway is mounted to drywall, the drywall anchors must be used. Without the drywall anchors, the back tamper will not activate if the device is removed from the wall.

15. Use the provided screws to mount the EN6080 area control gateway, making sure the EN6080 area control gateway is flush with the wall (Figure 3).
16. Attach the included screw to the wall through the wall tamper mounting hole (Figure 3).

Caution: Tighten the wall tamper screw to a snug fit without over-tightening it. Overtightening the wall tamper screw can break the wall tamper cutout, disabling the wall tamper.

17. Check that the housing tamper spring is in place and makes contact with the top of the housing (Figure 3).

18. Close the housing.

2.6 Connect to the Ethernet

19. Open a web browser on a computer connected to the same network to which the EN6080 area control gateway is connected.
20. Direct the browser to the default IP address: 192.168.60.80
21. Navigate to <http://www.inovonics.com/area-control-gateway.aspx> to open the *EN6080 Area Control Gateway User Manual* which will guide you through setup and configuration.

3 US Patent Numbers

- 7,154,866
- 7,554,932
- 7,746,804

4 Specifications

Compatible repeater, transmitters: EN5040-T, EN1210, EN1210W, EN1210EOL, EN1212, EN1215, EN1215W, EN1215EOL, EN1215WEOL, EN1216, EN1223D, EN1223S, EN1224, EN1224-ON, EN1233D, EN1233S, EN1235D, EN1235DF, EN1235S, EN1235SF, EN1236D, EN1238D, EN1240, EN1242, EN1247, EN1249, EN1260, EN1261, EN1261HT, EN1262, EN1265

Dimensions: 5.25x6.75x1.25"

Weight: 12 oz

Interface: 10Base-T Ethernet

Event log size: 1000 alarm events; 1000 fault events

Number of devices supported: 3000

Operating environment: -4°-140°F (-20°-60°C), 90% relative humidity, non-condensing.

Power requirement: 12-24 VDC/AC; 500mA

Operating frequency: 902-928 MHz, Frequency hopping spread spectrum

Tamper: Type B, fixed device

5 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:

- 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.

6 FCC Part 15 and Industry Canada Compliance

This device complies with part 15 of the FCC Rules and Industry Canada 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, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie 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.

7 Warranty and Disclaimer

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

Inovonics Wireless Corporation ("Inovonics") warrants its products ("Product" or "Products") to conform to its own specifications and to be free of defects in materials and workmanship under normal use for a period of thirty-six (36) months from the date of manufacture. Within the warranty period, Inovonics will repair or replace, at its option, all or any part of the warranted Product. Inovonics will not be responsible for dismantling and/or reinstallation charges. To exercise the warranty, the User ("User", "Installer" or "Consumer") must work directly through their authorized distributor who will be given a Return Material Authorization ("RMA") Number by Inovonics. Details of shipment will be arranged directly through the authorized distributor.

This warranty is void in cases of improper installation, misuse, failure to follow installation and operating instructions, alteration, accident or tampering, and repair by anyone other than Inovonics.

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express, or implied. There is no warranty by Inovonics that Inovonics product will be merchantable or fit for any particular purpose, nor is there any other warranty, expressed or implied, except as such is expressly set forth herein. In no event shall Inovonics be liable for an incidental, consequential, indirect, special, or exemplary damages, including but not limited to loss of profit, revenue or contract, loss of use, cost of down time, or interruption of business, nor any claim made by distributor's customers or any other person or entity.

This warranty will not be modified or extended. Inovonics does not authorize any person to act on its behalf to modify or extend this warranty.

This warranty will apply only to Inovonics Products. Inovonics will not be liable for any direct, incidental or consequential damage or loss whatsoever, caused by the malfunction of Product due to products, accessories, or attachments of other manufacturers, including batteries, used in conjunction with Inovonics Products.