EN4000 EchoStream® Serial Receiver
Installation Instructions - 05853A

1 Overview
The EN4000 serial receiver is a gateway that uses reliable frequency-hopping, spread-spectrum technology to decode radio frequency (RF) transmissions from end devices and high-power repeaters, and then output the decoded data to the application controller in a common serial data format. The EN4000 is used for all one way Inovonics applications.

1.1 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

2 Select the Frequency Band
EchoStream products are able to use a range of radio frequencies, and must be configured for your geographic area. To configure the serial receiver:

1. Use a small screwdriver to press the housing release tab (Fig. 1A); separate the housing.
2. Place a selection jumper on the appropriate frequency band selection pins (Fig. 1B);
   - Leave the jumper off the pins to set the frequency range to 902-928 MHz for North America.
   - Place the jumper on the right two pins, marked AUS, to set the frequency range to 915-928 MHz for Australia.
   - Place the jumper on the left two pins, marked NZ, to set the frequency range to 921-928 MHz for New Zealand.
3. If the serial receiver is powered on, remove the power source to reset.

3 Connect the Serial Cable
Caution: Long cable runs should not be adjacent to high current power feeds. Keep cable lengths as short as possible to minimize noise pickup. Measure voltage at the serial receiver on long cable runs.

1. Connect a serial cable to either the serial data port (Fig. 1C) or the serial data terminal (Fig. 1D). Cabling should meet the following specifications:
   - Cable requirements: 4-conductor 20AWG (or larger) stranded-tinned copper with PVC insulation rated to 300 volts at 26°C (80°F). (Belden #8205, for example).
   - Maximum cable length: 30.5 meters (100 feet).
2. Route the cabling through either the bottom cabling knockout (Fig. 1E) or the side cabling knockout (Fig. 1F).

4 Mount the Serial Receiver
Caution: Mount the serial receiver in a location removed from metal. Metal objects (duct work, wire mesh screens, boxes) will reduce RF range.

1. Use the provided anchors and screws to mount the serial receiver in a location accessible for future maintenance.
2. Close the serial receiver housing.

5 Serial Receiver Operation
Caution: 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.

The following LEDs are used to monitor serial receiver operation. Transmit LED Lit when the serial receiver is transmitting data to the application controller (Fig. 1G). Receive LED Lit when the serial receiver is receiving data from the application controller (Fig. 1H). Decode LED Lit when the serial receiver is decoding an RF transmission from another Inovonics Wireless device (Fig. 1I).

6 Specifications
Housing dimensions: 6.38" x 3.60" x 1.10" (162.0 mm x 91.4 mm x 27.9 mm)
Weight: 133 g (4.7 oz)
Power requirement: 10-14 VDC at 100mA
Radio: Inovonics Wireless EchoStream
Operating frequency: 902-928 MHz (USA) 915-925 MHz (AUS) 921-928 MHz (NZ)
Operating environment: 0-60°C, (32-140°F) up to 90% relative humidity (non-condensing)

7 Warranty and Disclaimer
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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.

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