1 | Overview

The B820 SDI2 Inovonics Interface Module allows a control panel to interface with an Inovonics EN4200 EchoStream Serial Receiver through the SDI2 bus.

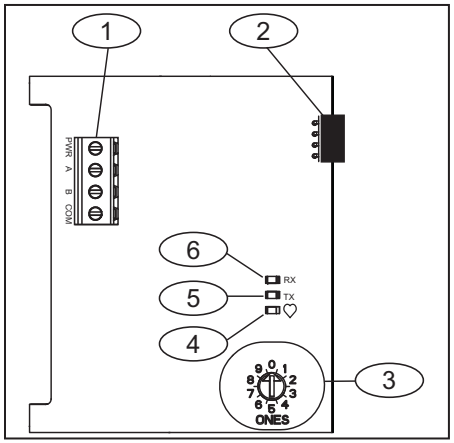

Figure 1.1: Module overview

Callout – Description
1 – SDI2 Terminal strip (to control panel)
2 – Serial data port (to Inovonics receiver)
3 – Address switch
4 – Heartbeat LED (blue)
5 – TX (transmit) LED (green)
6 – RX (receive) LED (green)

2 | SDI2 address settings

The address switch determines the address for the B820 module. The control panel uses the address for communications. Use a slotted screwdriver to set the address switch.

Set the address for the module to 1 prior to installing it in the EN4200 housing. *Figure 2.1* shows the address switches setting for address 1.



Figure 2.1: Address switch

NOTICE!
The module reads the address switch setting only during power up. If you change the switch after you apply power to the module, you must cycle the power to the module in order for the new setting to be enabled.

3 | Installation

After you set the address switch for the proper address, install the module in the EN4200 housing, and then wire the module to the control panel.

CAUTION!
Remove all power (AC and battery) before making any connections. Failure to do so might result in personal injury and/or equipment damage.

3.1 | Install the B820 into the EN4200 housing

Installing the module into the housing:

1. Use a slotted screwdriver to press the housing release tab and separate the housing. Refer to *Figure 3.1*.
2. Remove the backing from the Velcro piece found in the product packaging to reveal the Velcro adhesive.
3. Place the Velcro's adhesive side onto the back of the module.
4. Remove the remaining backing to use to secure the module in the housing.
5. Insert the B820 module into the EN4200 housing, connecting the B820's serial data port to the EN4200's serial data port. Refer to *Figure 3.2*.
6. Gently apply pressure to the B820 module to snap it into the housing clips and to apply the Velcro adhesive to the housing.

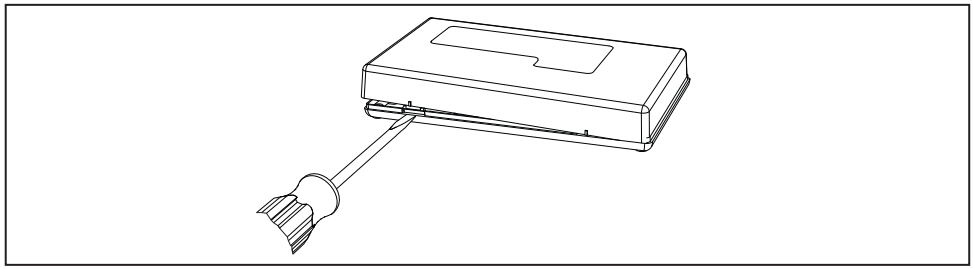

Figure 3.1: Opening the EN4200 housing

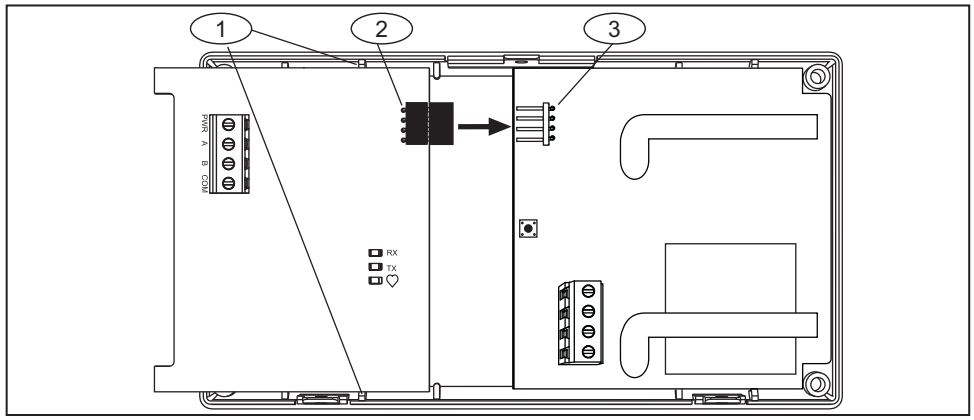

Figure 3.2: Installing the B820 in the EN4200 housing

Callout – Description
1 – Housing clips to secure the module
2 – B820 serial data port
3 – EN4200 serial data port

3.2 | Wire the B820 to the control panel

When you wire a B820 to a control panel, use the control panel SDI2 terminals labeled R, Y, G, B (PWR, A, B, COM). Connect them to the module terminals labeled PWR, A, B, COM. Refer to *Figure 3.3*.

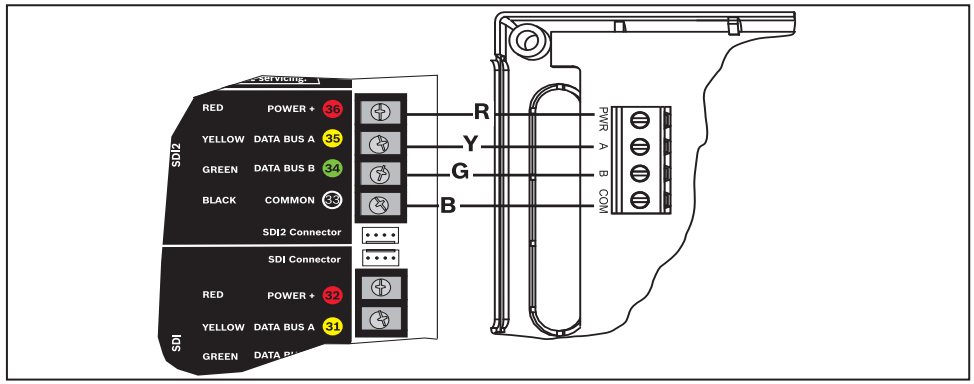

Figure 3.3: Wiring to the control panel (GV4 Series control panel shown)

3.3 | Mount the EN4200 housing

Refer to the *EN4200 EchoStream Serial Receiver Installation Instructions* for mounting instructions.

4 | LED descriptions

The B820 module includes three LEDs: TX (transmit) LED to indicate data transmission, RX (receive) LED to indicate data receipt, and Heartbeat LED to indicate the status of the SDI2 connection. Refer to *Tables 4.1* and *4.2*.

Flash pattern	Function
TX (transmit) ON steady	Occurs when transmitting data to the receiver.
RX (receive) ON steady	Occurs when receiving data from the receiver.
RX (receive) 3 quick flashes	Occurs when a wireless device is detected.

Table 4.1: TX and RX LED descriptions

Flash Pattern	Function
Flashes once every 1 second	Normal state. Indicates normal operation state.
3 quick flashes every 1 second	Communication error state. Indicates (the module is in a “no communication state”) resulting in an SDI2 communication error.
ON steady	LED trouble state. Module is not powered (for OFF Steady only), or some other trouble condition prohibits the module from controlling the heartbeat LED.
OFF steady	

Table 4.2: Heartbeat LED descriptions

5 | Show the firmware version

To show the firmware version using an LED flash pattern:
- Remove the cover to the EN4200 housing. Refer to *Section 3.1*.
- If you removed the cover previously, press and release the tamper switch spring.

The heartbeat LED stays OFF for 3 seconds before indicating the firmware version. The LED pulses the major, minor, and micro digits of the firmware version, with a 1 second pause after each digit.

In the following example, the version 1.4.3 shows as LED flashes:
[3 second pause] ***__****__*** [3 second pause, then normal operation].

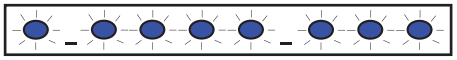

Figure 5.1: Firmware LED flash patterns

6 | Certifications

Region	
US	UL 365 - Police Station Connected Burglar Alarm Units and Systems
	UL 609 - Local Burglar Alarm Units and Systems
	UL 636 - Holdup Alarm Units and Systems
	UL 985 - Household Fire Warning System Units
	UL 1023 - Household Burglar Alarm System Units
	UL 1076 - Proprietary Burglar Alarm Units and Systems
	UL 1610 - Central Station Burglar Alarm Units
	CSFM - California Office of The State Fire Marshall
	FCC Part 15 Class B
Canada	CAN/ULC S303 - Local Burglar Alarm Units and Systems
	CAN/ULC S304 - Signal Receiving Centre and Premise
	ICES-003 - Information Technology Equipment (ITE)
	ULC-ORD C1023 - Household Burglar Alarm System Units
	ULC-ORD C1076 - Proprietary Burglar Alarm Units and System

7 | Specifications

Dimensions	3.2 in x 2.8 in x 0.60 in (82.5 mm x 70 mm x 15.25 mm)
Voltage (operating)	12 V nominal
Current (maximum)	110 mA total for B820 module and the EN4200
Operating temperature	+32°F to +122°F (0°C to +50°C)
Relative humidity	5% to 93% at +90°F (+32°C) non-condensing
Terminal wire size	12 AWG to 22 AWG (2 mm to 0.65 mm)
SDI2 wiring	Maximum distance - Wire size: 600 ft (183 m) - 22 AWG (0.65 mm) 1000 ft (305 m) - 18 AWG (1.02 mm) (Unshielded wire only)
Compatibility	B9512G/B9512G-E B8512G/B8512G-E B6512 B5512/B5512E B4512/B4512E B3512/B3512E D9412GV4 D7412GV4 (Each control panel supports one B820.)

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WPP



SDI2 Inovonics Interface Module
B820

BOSCH

en Installation Guide

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