



E-Senza[®]
Technologies

Leveraging Power of Wireless[®]

SenzaBlock SB140

Wireless Adapter with Serial RS232 Interface

The SenzaBlock SB140 is a RS232 modem for interfacing to meters, machines and local controls.

Its integrated low power IEEE 802.15.4 transceiver provides bi-directional communication and seamless wireless connectivity in hard to reach areas, when portability is essential, or in locations where running cables is inconvenient or not cost-effective. Enabled by our industrial-grade SenzaNET mesh networking protocol, the SB140 provides highly reliable performance even in harsh environments to ensure delivery of critical measurements.

SB140 comes with a RS232 serial interface for wirelessly transmitting data from virtually any device.

Software controllable settings for the RS232 interface allow the SB140 to be easily interfaced with meters, data loggers and devices.



Features and Benefits

- Self-forming, self-healing mesh network topology for maximum resilience
- Ideal for M2M applications
- Can function as a standalone router
- Ideally suited for distributed control applications

Application Areas

- Water and Waste Water Plants
- Chemical Industry
- Oil & Gas
- Power Plants
- Production & Plant Automation
- Mechanical Engineering
- Solar & Wind Power Plants

SB140 nodes are available with a choice of enclosure ratings, antenna types and operating temperature ranges to suit most applications. In addition the packaged version, E-Senza also offers a functionally equivalent OEM module for integration in custom designs.



Antenna type	External	-
Antenna connector	Reverse-SMA	Hirose U.FL
Enclosure rating	IP54	OEM module
Dimensions ¹	114 x 72 x 33 mm (4.9 x 2.8 x 1.3")	104 x 43 x 15 mm (4.1 x 1.7 x 0.6")
Weight	120 grams (3.8 oz)	40 grams (1.3 oz)
Operating temperature range ²	-20 °C to +65 °C	-40 °C to +85 °C
Order code	SB140-E54	SB140-O

¹ Excluding antenna

² -40 °C to +85 °C available on request

Specifications

Wireless		General	
Radio type	IEEE 802.15.4 compliant	Baud-rate	1200 / 2400 / 4800 / 9600 / 14400 / 19200 / 28800 / 38400 / 57600 / 115200 Software-configurable
Frequency band	2.4 GHz	Data bits	7 or 8 Software-configurable
Standby current	20 µA	Parity	Odd / even / none Software-configurable
Active measurement current	2 mA	Stop bits	1 or 2 Software-configurable
Transmit current	55 mA	Start / Stop character	Programmable
Receive current	50 mA	Handshake	None
Node-to-node hops (max.)	3	Power source	External 12 - 24 V, 60 mA
Line of sight range (max.)	250 m (820') node-to-node	RS232 connector	DE-9 Socket (female)
In-building range (typical)	70 m (230') node-to-node	EMC noise immunity	According to DIN-EN61000
Receiver sensitivity	-92 dBm	EMC compatibility	According to EN55011, Class A
Output power (max.)	2 dBm	Certifications	FC R&TTE 1995/5/EC, EN300 440-2 V1.1.2, ETSI EN301 489-03 V1.4.1, EN60950-1:2001 + A11:2006, EN50371:2002, CE, FCC Title 47 Part 15 authorized for use in Europe & USA
Output power (typical)	0 dBm		

Complementary E-Senza Products and Accessories

A SenzaGate device is required to establish and manage the wireless mesh network and to provide connectivity to backend systems.

Accessory	Order Code	Accessory	Order Code
Antenna extension cable, 1 m (3')	ACC-RC-S-100	External power adapter	ACC-PS-SG
Antenna extension cable, 3 m (10')	ACC-RC-S-300		
2 dB dipole antenna, IP54	ACC-AT-S-54		
2 dB dipole antenna, IP65	ACC-AT-S-65		
5 dBi dipole antenna, IP54	ACC-AT-H-54		
9 dBi dipole antenna, IP54	ACC-AT-H9-54		
2-way Antenna Splitter	ACC-AT-SP		

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