CAN-Bluetooth® Beacon Gateway

1 CAN Port (SAE J1939)
Can receive messages from 8 Bluetooth® Low-Energy v5.2 sensors simultaneously
P/N: AX141156

Features

- Receives messages from tire pressure sensors or other Bluetooth® beacons and transmits them over a machine's CAN (SAE J1939) network
- Supports up to 8 beacons simultaneously
- Uses Bluetooth® Low Energy (BLE) V5.2 standards
- Connection range up to 50 m (164 ft.) (May vary. See details below.)
- 6 to 80 Vdc (12, 24, or 48 Vdc nominal) with load dump
- 6-pin TE Deutsch equivalent connector
- Operating temperature: -30 to 85 °C
- Compact, laser-welded, IP67 enclosure
- FCC, ICES, RED compliance
- CE / UKCA / Giteki markings
- Vibration and shock compliance for off-highway applications
- Configurable via Axiomatic CAN2BLE Configuration application on compatible Apple iOS or Android devices using Bluetooth® Low Energy (BLE).

Ordering Part Numbers

CAN-Bluetooth® Beacon Gateway - P/N: **AX141156**

Accessories:
- **AX070119** Mating Plug Kit
- **CAN2BLE Configuration** application available for Android and iOS devices (see User Interface below).
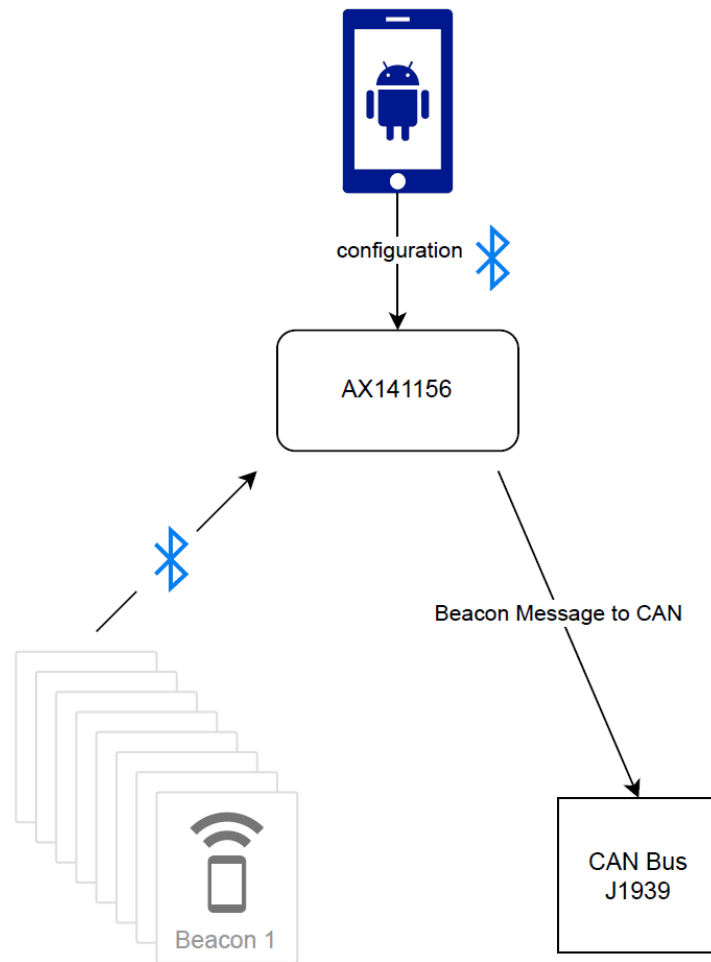
Description

The CAN-Bluetooth® Beacon Gateway receives messages from tire pressure sensors or other Bluetooth® beacons and transmits them over a machine's CAN (SAE J1939) network. It supports up to 8 beacons simultaneously. It uses Bluetooth® Low Energy (BLE) V5.2 standards.

The device can be configured wirelessly using the CAN2BLE Configuration app (available on both the Google Play Store and Apple App Store for a fee). This app enables users to manage all device functionalities, including setting PIN codes, configuring beacons, and defining forwarding rules. Users can configure specific bytes from the beacon frames or transmit the entire frame.
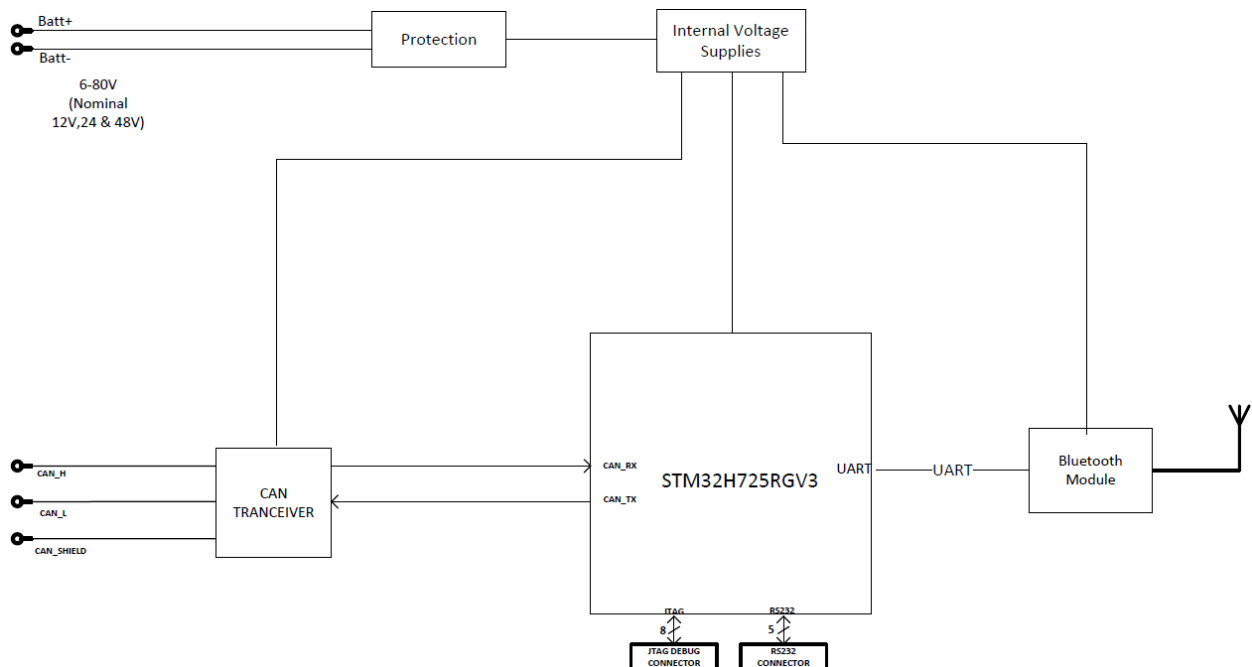
SAE J1939 is the CAN bus protocol for operation. It supports baud rates of 20, 50, 100, 125, 250, and 500 kbps as well as 1 Mbps and features auto-baud-rate detection.

It has rugged packaging and performance for IP67, high vibration and off-highway machine environments. It operates from -30 to 85°C (-22 to 185°F). The unit carries CE, UKCA, and Giteki markings.

Topology Diagram

configuration (Bluetooth)

AX141156

Beacon Message to CAN

CAN Bus
J1939

Beacon 1

Block Diagram

Batt+

Batt-

6-80V
(Nominal
12V,24 & 48V)

Protection

Internal Voltage
Supplies

CAN_H

CAN_L

CAN_SHIELD

CAN
TRANCEIVER

CAN_RX

CAN_TX

STM32H725RGV3

UART

UART

Bluetooth
Module

JTAG

RS232
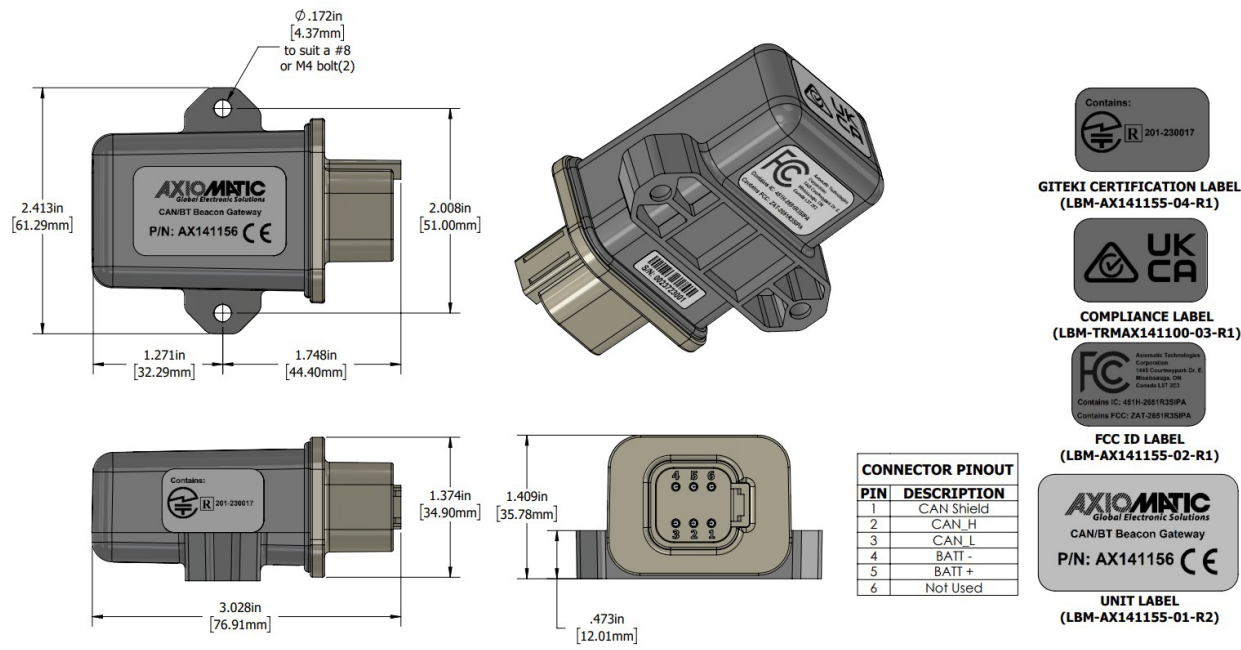
8

5

JTAG DEBUG
CONNECTOR

RS232
CONNECTOR

Technical Specifications

Specifications are indicative and subject to change. Actual performance will vary depending on the application and operating conditions. Users should satisfy themselves that the product is suitable for use in the intended application. All our products carry a limited warranty against defects in material and workmanship. Please refer to our Warranty, Application Limitations & Return Materials Process as described on https://www.axiomatic.com/service/.

Power Supply Input	12Vdc, 24Vdc, or 48Vdc nominal (6 to 80 VDC power supply range)
Quiescent Current	47 mA @ 12 Vdc; 37 mA @ 24 Vdc; 20 mA @ 48 Vdc (Typical)
Protection	Load dump protection is provided. Reverse polarity protection is provided. Overvoltage protection up to 88 V is provided.
Microcontroller	STM32H725RGV3, 32-bit, 1024 kbit flash memory
CAN	1 CAN port (SAE J1939) Baud-rate can be configured. Supported baud-rates include 20, 50, 100, 125, 250 (default), 500, and 1000 kbps with auto-baud-rate detection.
Bluetooth®	TI CC2651R3SIPA Bluetooth® LE V5.2 compliant Serial Port Profile (SPP) Internal antenna Connection Range*: Up to 50 m (164 ft.) Operating Range*: Up to 150 m (492 ft.) @ 13 dbm (Class 1) ***Range depends on the operating environment and actual results may vary.**
Control Logic	User programmable functionality. Refer to the User Manual.
User Interface	CAN2BLE Configuration Application is available for a fee from Google Play for Android devices. It uses Bluetooth® Low Energy (BLE) standard. (https://play.google.com/store/apps/details?id=com.axiomatic.can2bt) CAN2BLE Configuration Application can be downloaded for a fee from Apple's App Store for iOS devices. It uses Bluetooth® Low Energy (BLE) standard. (https://apps.apple.com/us/app/can2ble-configuration/id6478509202). In addition to the above, Axiomatic Electronic Assistant KIT (P/Ns: AX070502 or AX070506K) may also be used to configure baud-rate.
Operating Temperature	-30°C to 85°C (-22°F to 185°F)
Storage Temperature	-50°C to 125°C (-58°F to 257°F)
Weight	0.1 lb. (0.045 kg)
Approvals	CE / UKCA / Giteki marking TI CC2651R3SIPAT0MOUR Bluetooth® SIG Contains: CE-RED (Europe) Contains: FCC (US) ZAT-2651R3SIPA Contains: ICES (Canada) 451H-2651R3SIPA Contains: Japan (Telec) R201-230017 RoHS
Protection	IP67
Enclosure	Molded enclosure, integral connector Nylon 6/6, 30% glass, laser welded 3.02 in x 2.41 in x 1.41 in (77 mm x 61 mm x 36 mm) L x W x H includes the integral connector. Refer to Dimensional Drawing. Flammability rating: UL 94 HB
Electrical Connections	6-pin connector (equivalent TE Deutsch P/N: DT04-6P) **Pin** / **Description** 1 / CAN Shield 2 / CAN H 3 / CAN L 4 / Power - 5 / Power + 6 / Not Used
Mating Plug Kit	Axiomatic P/N: **AX070119** (includes 1 plug DT06-6S, 1 wedgelock W6S, and 6 sockets 0462-201-16141)
Network Termination	It is necessary to terminate the network with external termination resistors. The resistors are 120 Ohm, 0.25W minimum, metal film or similar type. They should be placed between CAN H and CAN L terminals at both ends of the network.
Mounting	Mounting holes are sized for #8 or M4 bolts. The bolt length will be determined by the end-user's mounting plate thickness. The mounting flange of the controller is 0.425 in. (10.8 mm) thick. It should be mounted with connectors facing left or right to reduce the likelihood of moisture entry. All field wiring should be suitable for the operating temperature range. Install the unit with appropriate space available for servicing and for adequate wire harness access (6 in. or 15 cm) and strain relief (12 in. or 30 cm).

Dimensional Drawing

CONNECTOR PINOUT

PIN	DESCRIPTION
1	CAN Shield
2	CAN_H
3	CAN_L
4	BATT -
5	BATT +
6	Not Used

GITEKI CERTIFICATION LABEL
(LBM-AX141155-04-R1)

COMPLIANCE LABEL
(LBM-TRMAX141100-03-R1)

FCC ID LABEL
(LBM-AX141155-02-R1)

UNIT LABEL
(LBM-AX141155-01-R2)

Note: Bluetooth® is a registered trademark of Bluetooth SIG.

Form: TDAX141156-06/20/2025