CAN-Bluetooth® Converter

Transfers Wireless Data to a PC, Smartphone, Display, or Tablet
Apple iOS and Android Interface
P/N: AX141155

Features

- CAN SAE J1939 in Interface Mode or CAN (protocol independent) in Bridge Mode
- Bluetooth® (Low Energy V5.2)
- 164 ft. range (May vary. See details below)
- 6 to 80Vdc (12V, 24V or 48Vdc 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 marking
- Vibration and shock compliance for off-highway applications
- Can be accessed and configured via Axiomatic's CAN2BT Configuration application on compatible Apple iOS or Android smartphones or tablets

Ordering Part Numbers

CAN-Bluetooth® Converter for Apple iOS & Android, SAE J1939 with auto-baud-rate detection, P/N: **AX141155**

Accessories:
- **AX070119** Mating Plug Kit
- **CAN2BT Configuration** Android smartphone application is available from Google Play. A configuration application for Apple iOS is also available.

Description

The CAN-Bluetooth® Converter transfers wireless data to a PC, smartphone, display, or tablet. The setpoints are configurable using the CAN2BT Configuration application on an Apple iOS or Android smartphone or tablet.

It has rugged packaging and performance for IP67, high vibration and off-highway machine environments.

SAE J1939 is the CAN bus protocol for operation in interface mode. However, the CAN-Bluetooth® Converter also handles CAN frames with standard IDs for operation in bridge mode. It features auto-baud-rate detection.

The device supports Bluetooth® Low Energy (BLE) standards. The CAN-Bluetooth® devices can be used as a pair for creating a bridge for CAN data.

Block Diagram
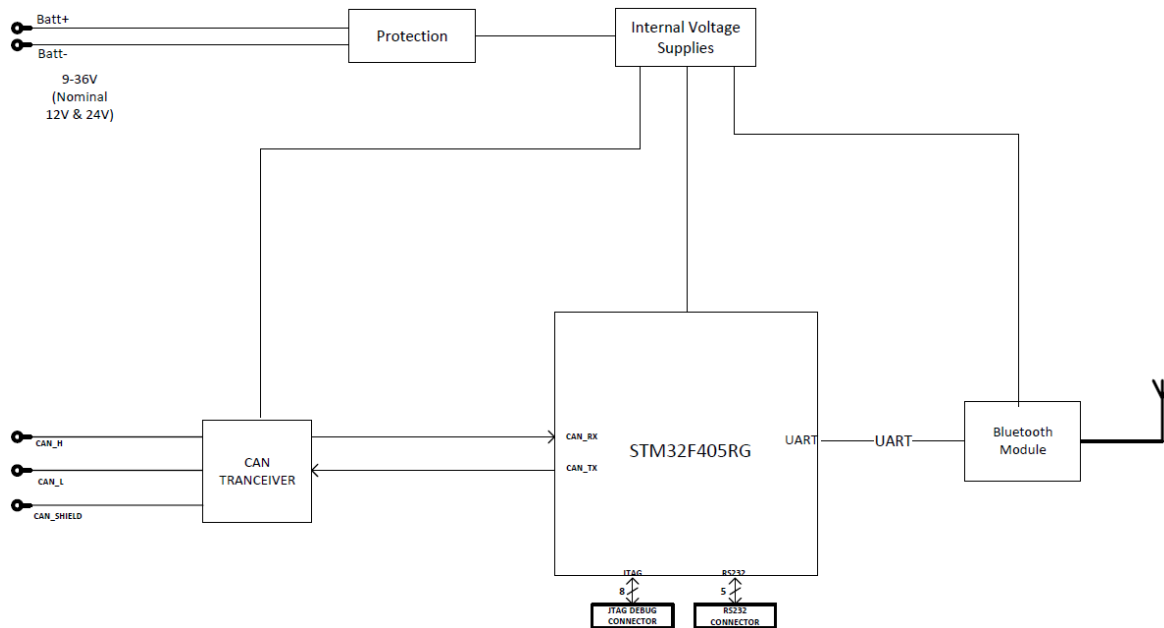
Technical Specifications

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) Load dump protection is provided.
Quiescent Current	34.5 mA @ 12 Vdc; 18.7 mA @ 24 Vdc; 11.7 mA @ 48 Vdc (Typical)
Protection	Reverse polarity protection is provided. Overvoltage protection up to 88V is provided.
Microcontroller	STM32H725RGV3 32-bit, 1024 Kbit program flash
CAN	1 CAN port (SAE J1939) CAN SAE J1939 in Interface Mode or CAN (protocol independent) in Bridge Mode CAN bus configuration allows changing the CAN interface baud-rate. Supported baud-rates include 50k, 100k, 125k, 250kbps (default), 500k, and 1Mbps with auto-baud-rate detection.
Bluetooth®	TI CC2651R3SIPA Bluetooth® LE V5.2 compliant 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. Average Latency: • AX141155 - AX141155 (Bridge): 8 ms to 20 ms • AX141155 - Smart Device: 14 ms to16 ms Serial Port Profile (SPP)
Control Logic	User programmable functionality. Refer to the User Manual.
User Interface	CAN2BT Configuration Application is available from Google Play. https://play.google.com/store/apps/details?id=com.axiomatic.can2btconfiguration A configuration application for Apple iOS is also available.
Software Flashing	New software can be flashed over the CAN bus using the Axiomatic Electronic Assistant.
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 marking TI CC2651R3SIPAT0MOUR Bluetooth® SIG Contains: CE-RED (Europe) Contains: FCC (US) ZAT-2651R3SIPA Contains: ICES (Canada) 451H-2651R3SIPA RoHS
Vibration	Pending
Shock	Pending
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)

CAN and I/O Connector

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 inches (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 inches or 15 cm) and strain relief (12 inches or 30 cm).

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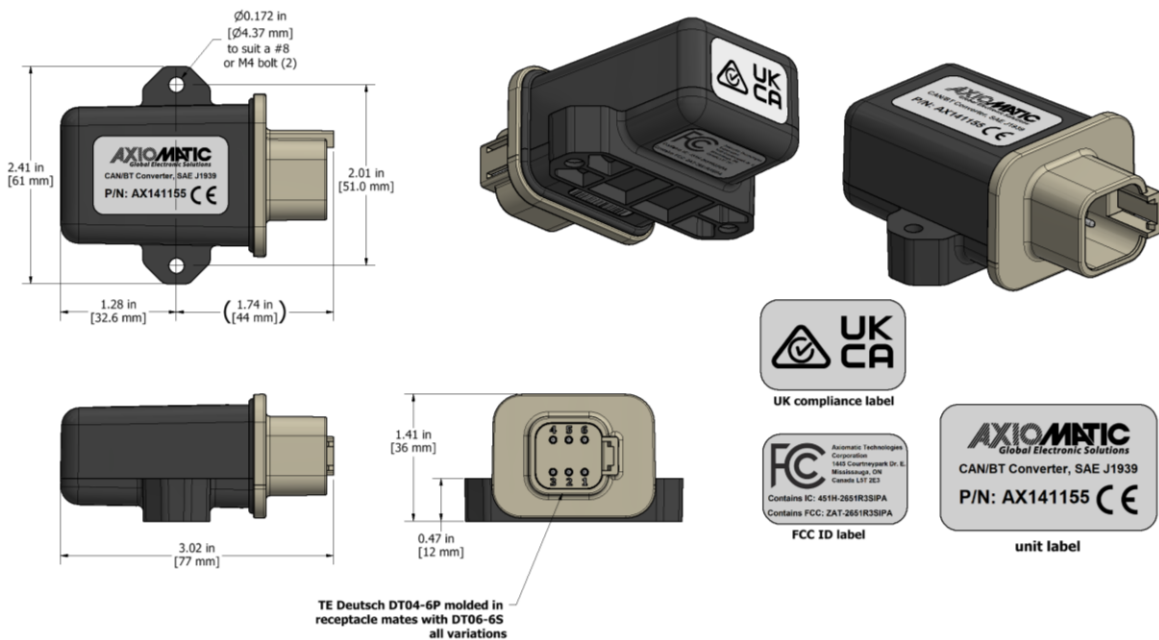
Note: Bluetooth® is a registered trademark of Bluetooth SIG.

Form: TDAX141155-05/07/2024