

CAN-Bluetooth Converter

*Transfers Wireless Data to a PC, Smartphone, Display, or Tablet
Apple iOS and Android Interface*

P/N: AX141150

Features

- CAN SAE J1939 in Interface Mode or CAN (protocol independent) in Bridge Mode
- Configurable baud rate
- Bluetooth® (Classic & BLE)
- Connection range up to 50 m (164 ft.) (May vary. See details below.)
- 6-80Vdc (12V, 24V or 48Vdc nominal) with load dump
- Operating temperature: -30 to +85°C
- IP67
- Compact, ultrasonic welded enclosure
- 6-pin TE Deutsch type connector
- CE / UKCA marking
- 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).
- Configurable via Axiomatic CAN2BT Configuration application on compatible Android devices using Bluetooth® Classic. (This application is no longer updated.)



Ordering Part Numbers

CAN-Bluetooth Converter, Apple iOS & Android Interface, SAE J1939 with Configurable Baud Rate, P/N: **AX141150**

Accessories:

- **AX070119** Mating Plug Kit
- **CAN2BLE Configuration** application available for Android and iOS devices (see User Interface below).
- **CAN2BT Configuration** application (no longer updated) available from Google Play

Description

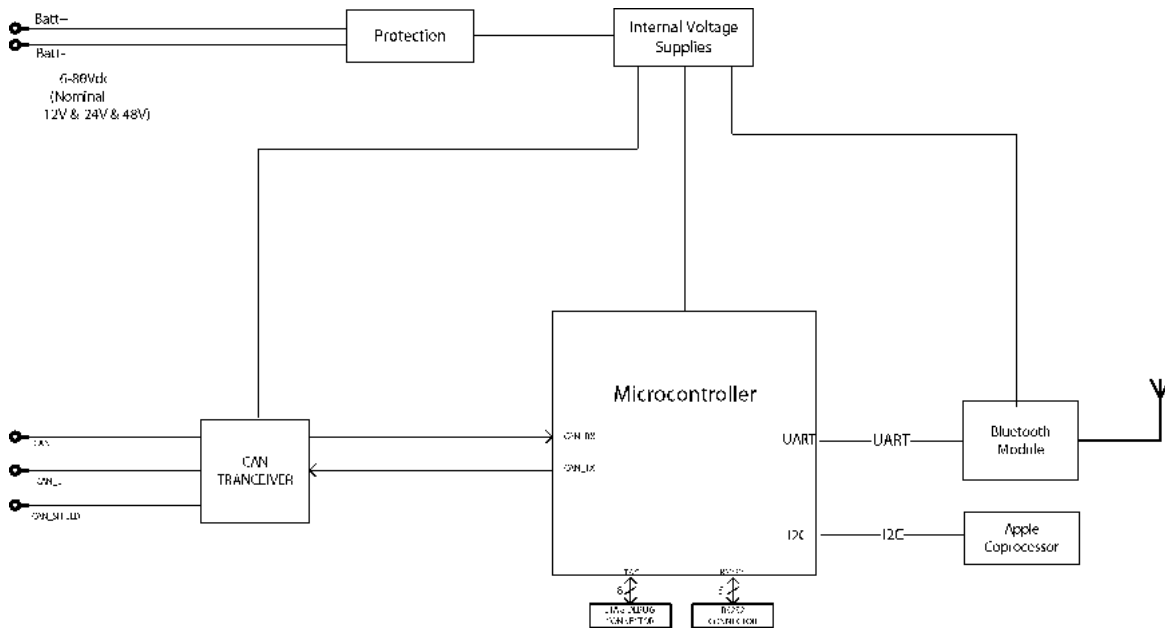
The CAN-Bluetooth Converter transfers wireless data to a PC, smartphone, display, or tablet. The setpoints are configurable using the CAN2BLE Configuration Android and iOS application or via CAN2BT Configuration Android application.

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 a configurable baud rate.

The device uses both Bluetooth® standards, Classic and Low Energy (BLE). Axiomatic smart phone applications are available only for both standards on Android platform, but only for BLE standard on iOS. It has rugged packaging and performance for IP67, high vibration and off-highway machine environments.



Block Diagram



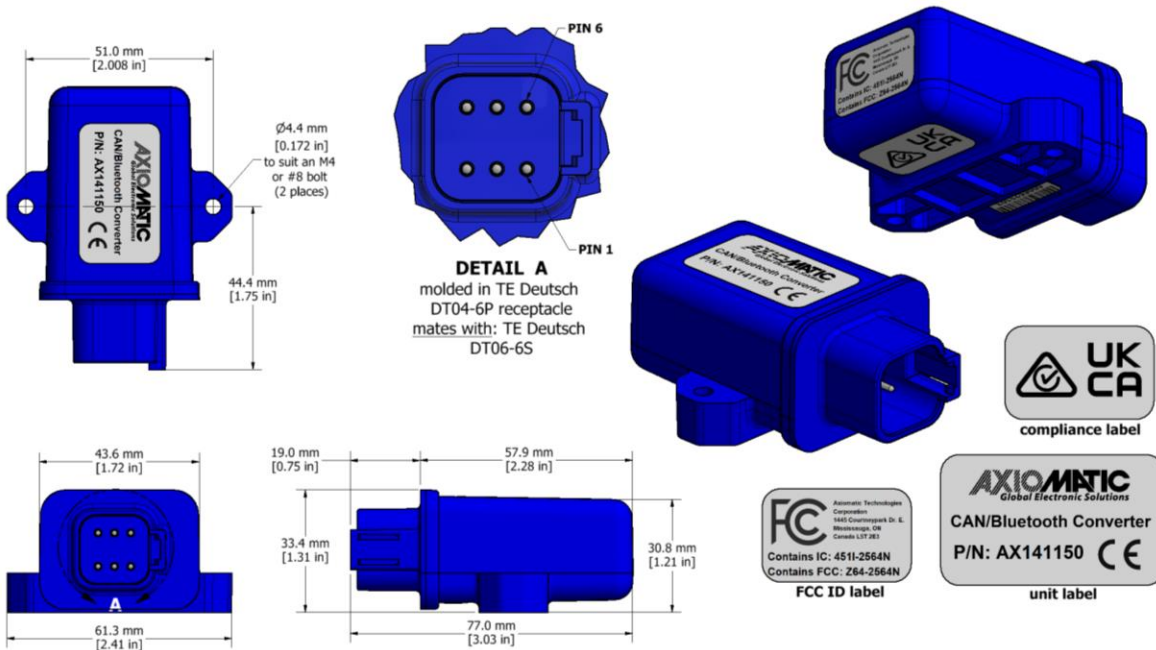
Technical Specifications

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 - Nominal	12Vdc, 24Vdc or 48Vdc nominal (6...80 VDC power supply range) Load dump protection is provided.
Quiescent Current	15 mA @ 24Vdc Typical
Protection	Reverse polarity protection is provided. Overvoltage protection up to 88V is provided.
Microcontroller	STM32F405RGT7 32-bit, 1024 Kbit program flash
CAN	1 CAN port (SAE J1939) CAN bus - In Interface Mode- SAE J1939 or in Bridge Mode – CAN (protocol independent) CAN bus configuration allows changing the CAN interface baud rate. The list of available baud rate options includes 50k, 100k, 125k, 250kbps (default), 500k and 1Mbps.
Bluetooth®	TI CC2564MODA Bluetooth® Host Controller Interface Module Bluetooth LE V4.1 compliant Dual-Mode Bluetooth® V4.0 with classic Bluetooth® and BLE 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). CAN2BT Configuration application is available from Google Play. It uses Bluetooth® Classic. This application is no longer updated. (https://play.google.com/store/apps/details?id=com.axiomatic.can2btconfiguration) In addition to the above, Axiomatic Electronic Assistant KIT (P/Ns: AX070502 or AX070506K) may also be used to configure baud-rate.

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.														
Operating Temperature	-30°C to 85°C (-22°F to 185°F)														
Protection	IP67														
Weight	0.15 lb. (0.06 kg)														
Approvals	CE, UKCA, RCM FCC: Based on TI CC2564MODACMOG compliance - Z64-2564N IC: Based on TI CC2564MODACMOG compliance - 4511-2564N BT SIG: Based on TI CC2564MODACMOG compliance - Bluetooth® 4.1 Controller Subsystem Qualified (CC2564MODA: QDID 64631). Compliant up to the HCI Layer.														
Vibration	MIL-STD-202G, Method 204D test condition C (Sine) and Method 214A, test condition B (Random) 10 g peak (Sine) 7.68 Grms peak (Random)														
Shock	MIL-STD-202G, Method 213B, test condition A 50g (half sine pulse, 9ms long, 8 per axis)														
Enclosure	Molded Enclosure, Ultrasonic welded Nylon 6/6, 30% glass Integral 6-pin connector Refer to the dimensional drawing.														
Electrical Connections	6-pin connector (equivalent TE Deutsch P/N: DT04-6P) <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Pin #</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CAN Shield</td> </tr> <tr> <td>2</td> <td>CAN H</td> </tr> <tr> <td>3</td> <td>CAN L</td> </tr> <tr> <td>4</td> <td>BATT -</td> </tr> <tr> <td>5</td> <td>BATT +</td> </tr> <tr> <td>6</td> <td>Not Used</td> </tr> </tbody> </table>	Pin #	Description	1	CAN Shield	2	CAN H	3	CAN L	4	BATT -	5	BATT +	6	Not Used
Pin #	Description														
1	CAN Shield														
2	CAN H														
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4	BATT -														
5	BATT +														
6	Not Used														
Mating Plug Kit	Axiomatic P/N: AX070119 (includes 1 plug DT06-6S, 1 wedgelock W6S, and 6 sockets 0462-201-16141)														
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: TDAX141150-09/12/2024