

CAN-Bluetooth® Gateway with RTC

P/N: AX141100

CAN-Bluetooth® Gateway transfers wireless data to a PC, smartphone, display or tablet.

Features:

- CAN bus (SAE J1939)
- Configurable baud rate
- Bluetooth® (Classic & BLE)
- 164 ft. range
- RTC back up power (96 hours)
- 8-60Vdc (12V or 24Vdc nominal) with load dump
- -30°C to 85°C
- IP67
- Compact, ultrasonic welded enclosure
- 8-pin TE Deutsch type connector
- LED indicator
- CE, UKCA, RCM
- FCC, IC, BT SIG compliant
- Vibration and shock compliance for off-highway applications
- Configurable via CAN2BT Configuration Android smartphone application
- Can be used with BT MAP Tool Android smartphone application to configure many Axiomatic devices
- The CAN-Bluetooth® gateway can be accessed also using Apple smart phones using BLE for configuration purposes.



Ordering Part Numbers:

SAE J1939 CAN-Bluetooth® Gateway: **AX141100**

Accessories:

CAN2BT Configuration Android smartphone application is available from Google Play.

The CAN-Bluetooth® Gateway can access the configuration setpoints of other Axiomatic CAN devices connected to the CAN bus. The Android app for this is called the **BT MAP Tool** Android smartphone application, available from Google Play.

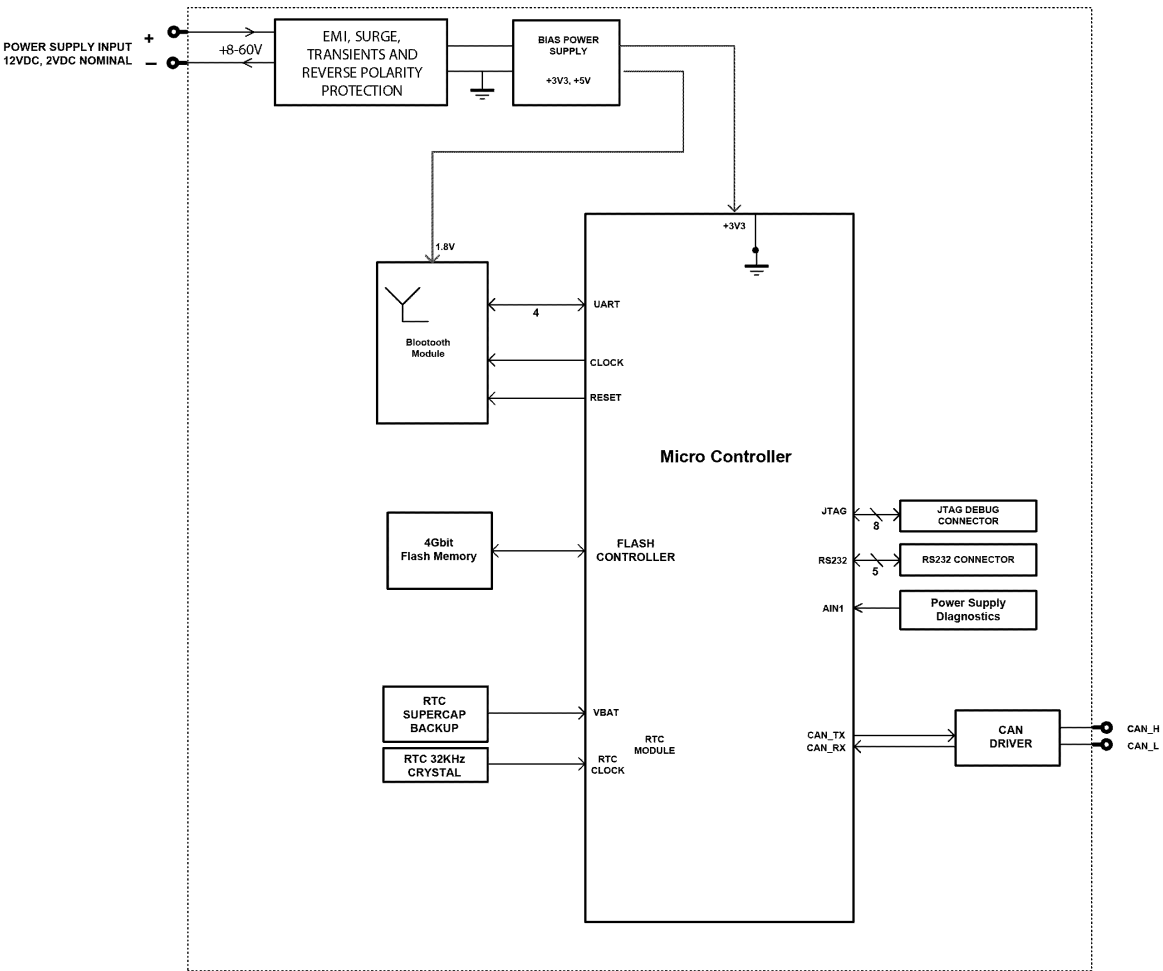
AX070112 Mating Plug Kit :1 DT06-08SA, 1 W8S, 8 0462-201-16141, 3 114017

Description: The CAN-Bluetooth® Gateway transfers wireless data to a PC, smartphone, display or tablet. It features a RTC with 4 Gbit of flash memory. The setpoints are configurable using the **CAN2BT Configuration** Android smartphone application. Additionally, the controller includes a configurable dual LED which is visible from outside the housing. It has rugged packaging and performance for IP67, high vibration and off-highway machine environments. SAE J1939 is the CAN bus protocol. The gateway has a configurable baud rate.

The device uses both Bluetooth® standards, Classic and Low Energy (BLE). The Axiomatic smart phone applications are available only for Android platforms and use the Classic Bluetooth® for data transfer. The CAN-Bluetooth® gateway can be accessed also using Apple smart phones using BLE. The BLE access provides all the configuration and data transfer options that the Classic Bluetooth® does, however on a much slower data rate. The BLE access is targeted for device configuration purposes only.

The CAN-Bluetooth® devices can be used as a pair for creating a bridge for CAN data. The bridge is always created using Classic Bluetooth® for high data throughput but does not limit simultaneous BLE access to the CAN-Bluetooth® device.

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 Approvals/Limitations and Return Materials Process as described on <https://www.axiomatic.com/service/>.

Power Supply Input - Nominal	12Vdc or 24Vdc nominal (8...60 VDC power supply range) Load dump protection is provided.
Protection	Reverse polarity protection is provided. Overvoltage protection up to 88V is provided.
CAN	SAE J1939 CAN bus configuration allows changing the CAN interface baud rate. The list of available baud rate options include 50 kbps, 100 kbps, 125 kbps, 250 kbps (default), 500 kbps and 1 Mbps.
Bluetooth®	TI CC2564MODA Bluetooth® Host Controller Interface Module Bluetooth® LE V4.1 compliant Dual-Mode Bluetooth® V4.0 with classic Bluetooth® and BLE Connection Range*: Up to 50 m (164 ft.) Operating Range*: Up to 150 m (492 ft.) @ 13 dbm (Class 1) Serial Port Profile (SPP) Internal antenna <i>*Range depends on the operating environment and actual results may vary.</i>
Microcontroller	STM32F407VGT7 32-bit, 1024 Kbit program flash
RTC	Real Time Clock back up power 96 hours 4 Gbit Flash Memory
Quiescent Current	15 mA @ 24Vdc Typical
LED Indicator	User configurable
Control Logic	User programmable functionality. Refer to User Manual.
User Interface	CAN2BT Configuration and BT MAP Tool applications are available from Google Play. https://play.google.com/store/apps/details?id=com.axiomatic.can2btconfiguration https://play.google.com/store/apps/details?id=com.axiomatic.btmaptool
CAN User Interface	Axiomatic Electronic Assistant KIT (P/Ns: AX070502 or AX070506K) for software reflashing.
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 Conditions	-30 to 85 °C (-22 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, integral connector Nylon 6/6, 30% glass, Ultrasonically welded 3.47 x 2.75 x 1.31 inches (88.2 x 70.0 x 33.3 mm) L x W x H including integral connector Refer to the dimensional drawing.

Electrical Connections	<p>Integral 8-pin receptacle (equivalent TE Deutsch P/N: DT04-08PA) 18 AWG wire is recommended for use with contacts 0462-201-16141.</p> <p>A mating plug kit is available. Ordering P/N: AX070112 is comprised of 1 DT06-08SA, 1 W8S, 8 0462-201-16141, and 3 114017.</p> <table border="1" data-bbox="592 283 1040 548"> <thead> <tr> <th>PIN #</th> <th>FUNCTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CAN_L</td> </tr> <tr> <td>2</td> <td>CAN_H</td> </tr> <tr> <td>3</td> <td>CAN_SHIELD</td> </tr> <tr> <td>4</td> <td>NOT USED</td> </tr> <tr> <td>5</td> <td>NOT USED</td> </tr> <tr> <td>6</td> <td>NOT USED</td> </tr> <tr> <td>7</td> <td>BATT +</td> </tr> <tr> <td>8</td> <td>BATT -</td> </tr> </tbody> </table>	PIN #	FUNCTION	1	CAN_L	2	CAN_H	3	CAN_SHIELD	4	NOT USED	5	NOT USED	6	NOT USED	7	BATT +	8	BATT -
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Mounting	<p>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 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).</p>																		

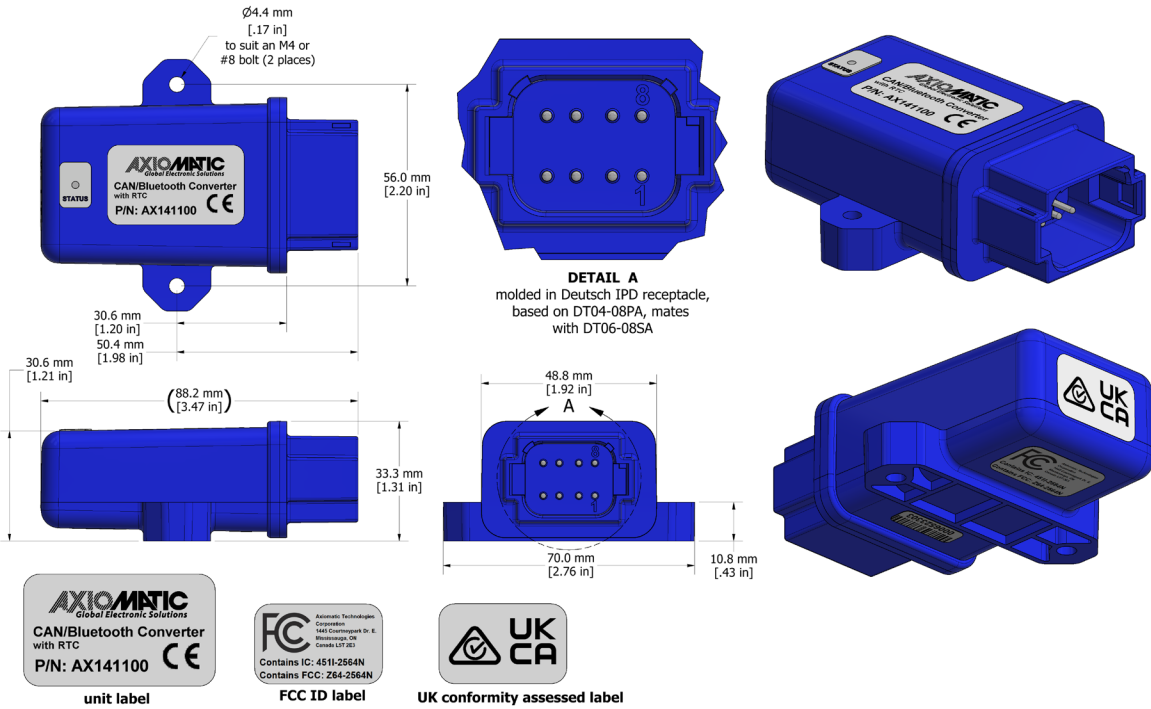


Figure 1.0. – Dimensional Drawing

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

Form: TDAX141100-06/28/23