

CAN to USB-C Converter, DIN Rail Mount

Enables Communication between an HMI (or a Computer) and a CAN Network
Linux Kernel Drivers
P/N: AX070550

Features

- Enables communication between an HMI (or a computer) and CAN devices
- *Linux* kernel drivers
- Intended to provide communication link between a CAN network and a USB port to allow HMI software to communicate with devices on the CAN network in industrial equipment.

Applications

- Allow an HMI or other user-level software to communicate with CAN devices in industrial equipment.
- Communication link between a CAN network and a USB port on a *Linux* machine

Description

The converter has one high-speed USB 2.0 Type-C port (up to 480Mbit/s) and one high-speed CAN port (with configurable baud rates up to 1Mbit/s). All standard and extended CAN frames, including data and remote frames, are supported. Galvanic isolation of the CAN port ensures no electrical interference between the HMI (or a computer) and equipment connected to the CAN port.

The converter is powered from the USB port. The internal state of the converter is displayed by an LED indicator on the housing. The industrial temperature range (-40°C to 85°C) is suitable for a field environment.



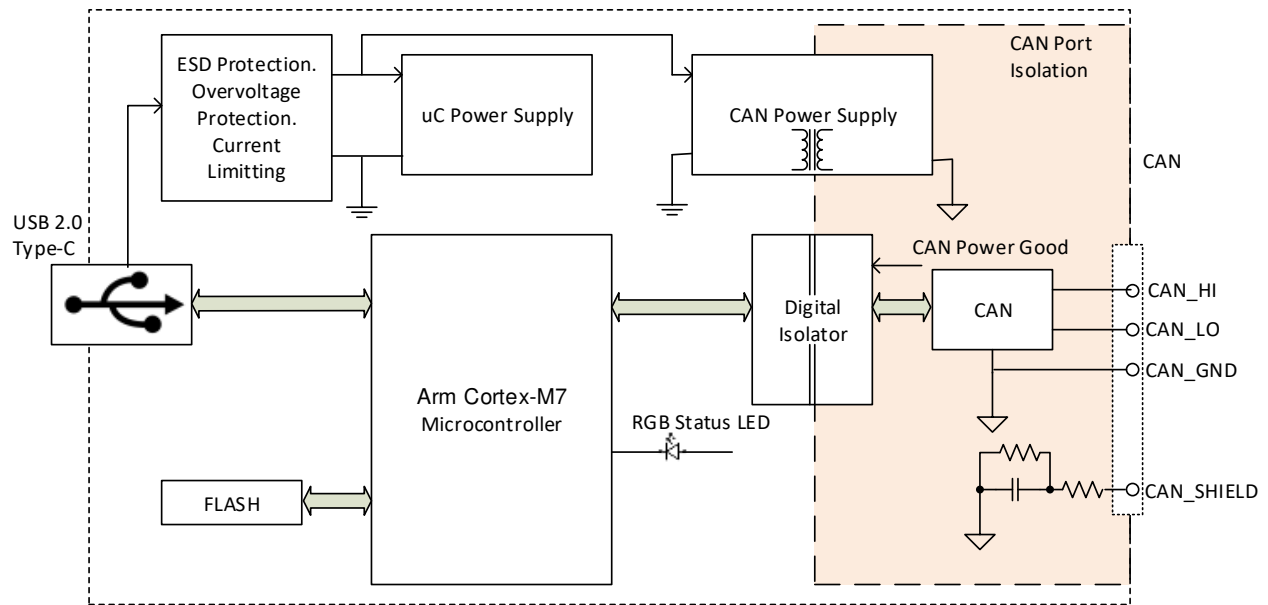
Ordering Part Number

CAN to USB-C Converter, DIN Rail Mount - P/N: **AX070550**

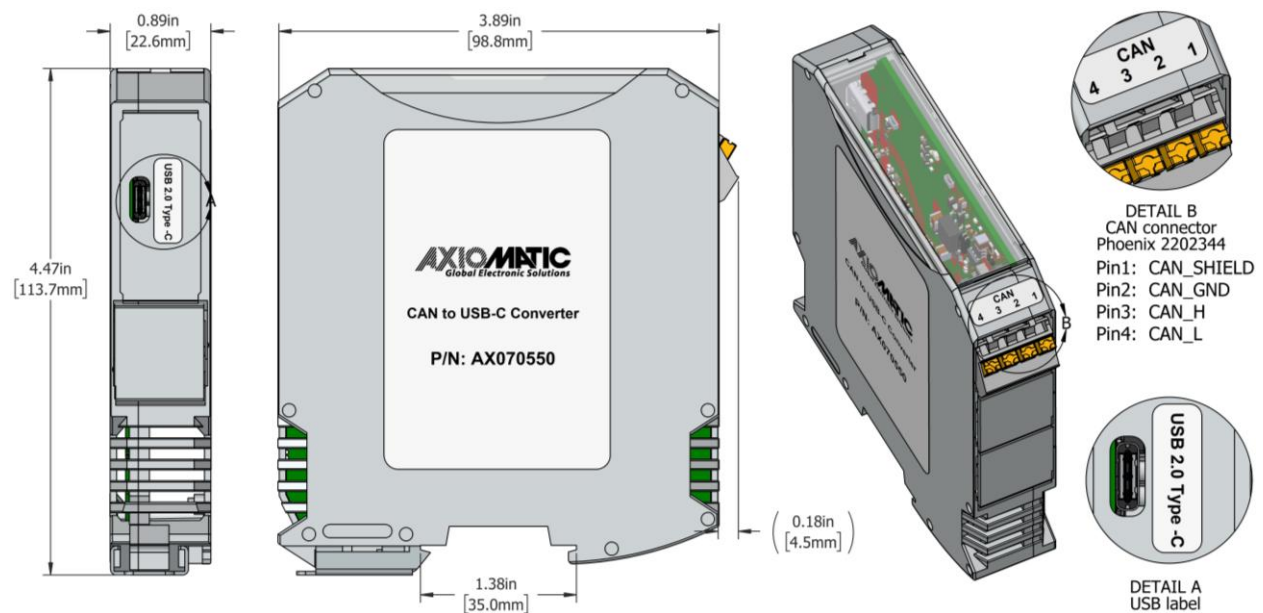
Accessories.

USB-CAN Linux Kernel Drivers - P/N: **AX070552**

Hardware Block Diagram



Dimensional Drawing



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/>.

General Specifications

Microcontroller	STM ARM Cortex-M7
LED Indicator	3-color RGB LED Displays the status of operation, USB, CAN, Bootloader Mode, etc.
Compliance	RoHS
Operating Temperature	-40°C to 85°C (-40°F to 185°F)
Weight	0.20 lb. (0.09 kg)
Enclosure	DIN Rail enclosure Refer to Figure 2 for dimensions.

USB Port

Parameter	Value	Remarks
USB Standard	USB 2.0 High-Speed (HS) or Full-Speed (FS)	Data rate: In HS - up to 480 Mb/s In FS - up to 12 Mb/s
Connector	USB Type-C receptacle	USB 2.0 Type-C
Supply Voltage	4.3 V to 5.5 V	5 V nominal Provided by USB port
Supply Current	100 mA / 300 mA	Current limit in Non-Configured / Configured states
	150 mA	Maximum steady current in Configured state at 5 V
	2.5 mA	Maximum current in Suspended state at 5 V
Overvoltage Protection	22 V	Maximum overvoltage protection voltage
ESD Protection	±8 kV / ±15 kV	IEC 61000-4-2, Contact / Air, Data lines
	±30 kV	IEC 61000-4-2, Contact, Power lines
Communication Protocol	Proprietary ¹	Linux kernel driver is provided.

¹Described in O. Bogush, "USB to CAN Converter Communication Protocol. Document version: 3," Axiomatic Technologies Corporation, April 12, 2022.

CAN Port

Parameter	Value	Remarks										
Number of Ports	1	Galvanically isolated										
Port Isolation	400 VAC 3 kV DC	Functional isolation, IEC 60950-1 Isolation withstand voltage, 1 minute										
ESD Protection	±15 kV	IEC 61000-4-2, contact										
Maximum Bus Fault Voltage	±32 V	Maximum steady-state voltage on the CAN bus the transceiver can tolerate										
Common Voltage	±30 V	Maximum receiver common mode input voltage										
Connector	Phoenix Contact P/N: MSTBO 2,5/ 4-G1R THRR44 BK	Mating CAN Connector: 4-pin connector, Phoenix Contact P/N: PSPT 2,5/ 4-ST KMGY (supplied) <table><tr><th>Pin</th><th>Description</th></tr><tr><td>1</td><td>CAN Shield</td></tr><tr><td>2</td><td>CAN Ground</td></tr><tr><td>3</td><td>CAN H</td></tr><tr><td>4</td><td>CAN L</td></tr></table>	Pin	Description	1	CAN Shield	2	CAN Ground	3	CAN H	4	CAN L
Pin	Description											
1	CAN Shield											
2	CAN Ground											
3	CAN H											
4	CAN L											
Port Type	High Speed, ISO 11898-2 compatible	Connected to 120 Ω terminated twisted pair, baud rate up to 1 Mbit/s. External 120 Ω terminating resistor is required. Shield connection is provided if shielded cable is used.										
Baud Rate	1000, 800, 667, 500, 250, 125, 100, 50, 20, 10 or a custom value	kbit/s										
Protocol	CAN 2.0A and 2.0B	Data frames and remote frames with Standard and Extended IDs are supported										

Form: TDAX070550-01/20/2025