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› [innomaker USB2CAN-C USB to CAN Converter Cable User Manual](#)

**innomaker USB2CAN-C**

# innomaker USB2CAN-C USB to CAN Converter Cable User Manual

## 1. PRODUCT OVERVIEW

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The innomaker USB2CAN-C is a versatile USB to CAN converter cable designed for seamless communication between a host computer and a CAN bus network. This device offers broad compatibility with various single-board computers and operating systems, making it ideal for a wide range of applications from industrial automation to DIY projects.

Key features include:

- **Universal Compatibility:** Connects to Raspberry Pi 5/4/3B+/3/Zero, Jetson Nano, Tinker Board, other Single Board Computers (SBCs), desktops, and laptops.
- **Multi-OS Support:** Plug-and-play interface for Windows, Linux (Raspbian/Ubuntu), macOS, Android, and Venus OS.
- **Industrial-Grade Protection:** Features 3000V signal isolation and 2500V ESD shielding for robust performance in demanding environments. Includes a 120Ω configurable terminal resistor.
- **Programmable Baud Rate:** Supports CAN bus speeds from 20Kbps to 1Mbps and is compatible with CAN 2.0A/2.0B protocols. No external power supply is required.
- **Developer Toolkit:** Comes with C/Python SDK, SocketCAN drivers, and Mac OS (Big Sur) IOUSBKit demos to facilitate CAN bus development.



 <p><b>Windows</b> Win10 / Win8 / Win7</p> <p>WinUSB / LIBUSB C# / C++ Demo Test Tool</p>	 <p><b>Linux</b> Raspbian / Ubuntu</p> <p>Socket-CAN Device C/Python Demo CAN-Utills Tool All Socket-CAN tools</p>	 <p><b>Mac OS</b> (Above V10.11)</p> <p>IOUSBKit ObjC Demo Test Tool</p>
 <p><b>ANDROID</b></p>	 <p><b>Venus OS</b></p>	

Figure 1.1: The innomaker USB2CAN-C converter cable, highlighting its compatibility with Windows, Linux, macOS, Android, and Venus OS.

## 2. PACKAGE CONTENTS

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Please verify that all items are present in your package:

- 1 x innomaker USB2CAN-C Converter Cable
- 1 x DB9 to Terminal Block Adapter

# Packing List



Figure 2.1: Contents of the USB2CAN-C package, including the converter cable and the terminal block adapter.

## 3. SETUP INSTRUCTIONS

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### 3.1 Physical Connection

Connect the USB2CAN-C converter cable to your host device (e.g., Raspberry Pi, laptop) via the USB 2.0 port. The device is designed for plug-and-play functionality on most supported operating systems.

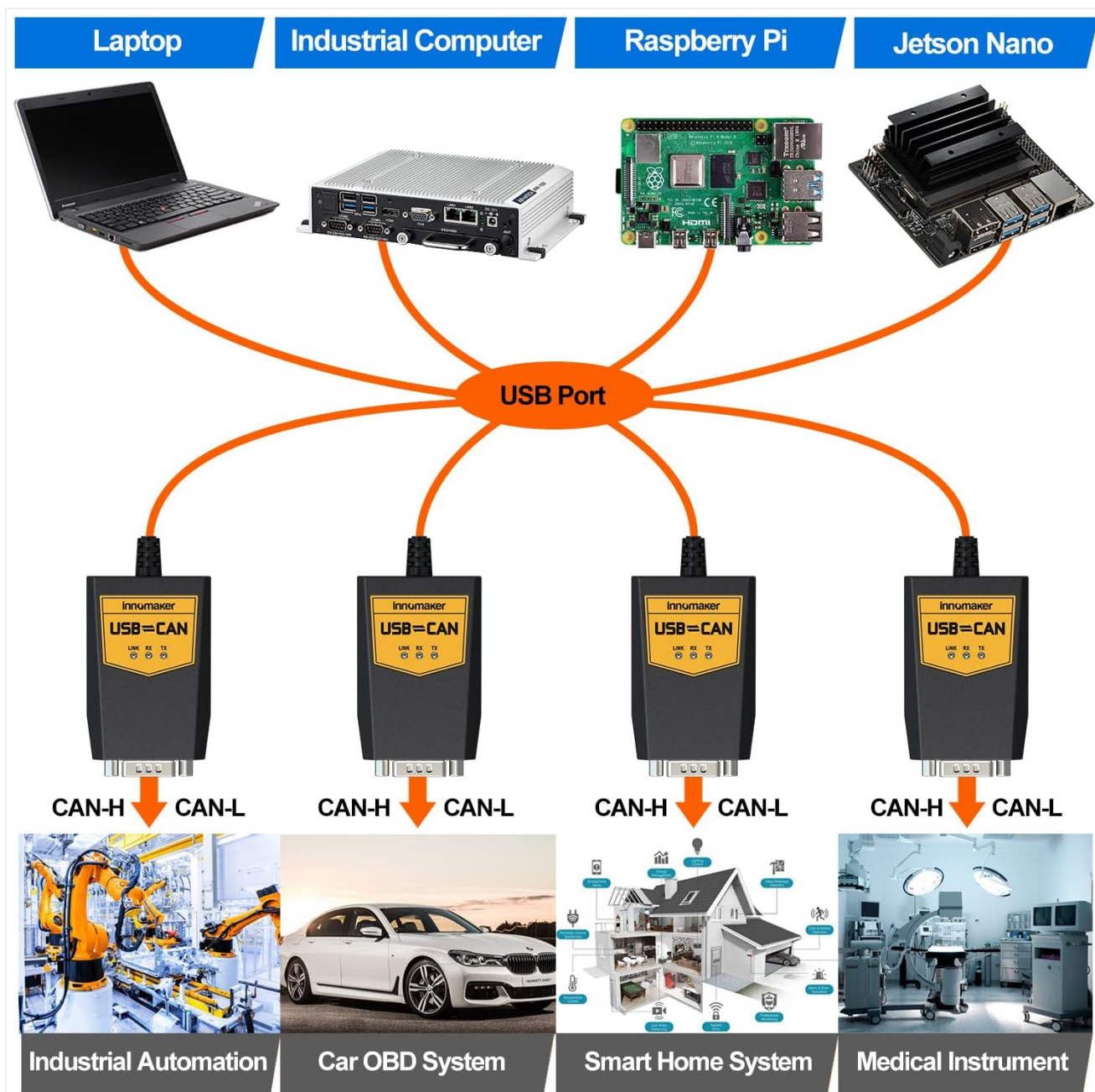


Figure 3.1: Connection diagram illustrating the USB2CAN-C's versatility with different host devices and CAN applications.

### 3.2 CAN Bus Wiring

The USB2CAN-C features a standard DB9 connector. Use the included DB9 to terminal block adapter for easy wiring to your CAN bus network. Ensure correct polarity for CAN\_H and CAN\_L connections.

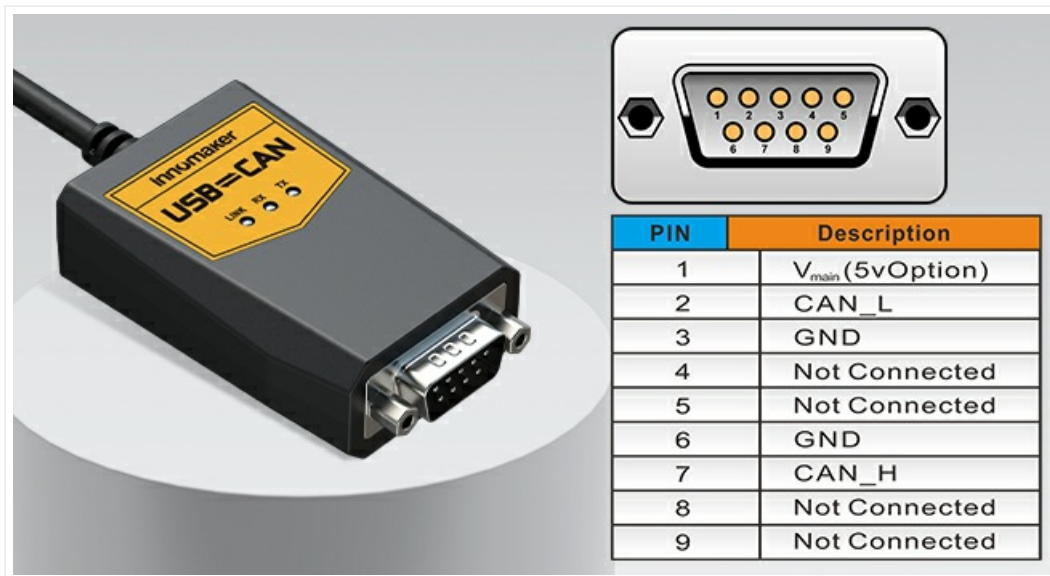


Figure 3.2: DB9 Pinout for the USB2CAN-C. Connect CAN\_L to Pin 2, GND to Pin 3, and CAN\_H to Pin 7. Pin 1 (Vmain) and Pin 5 (GND) are optional connections.

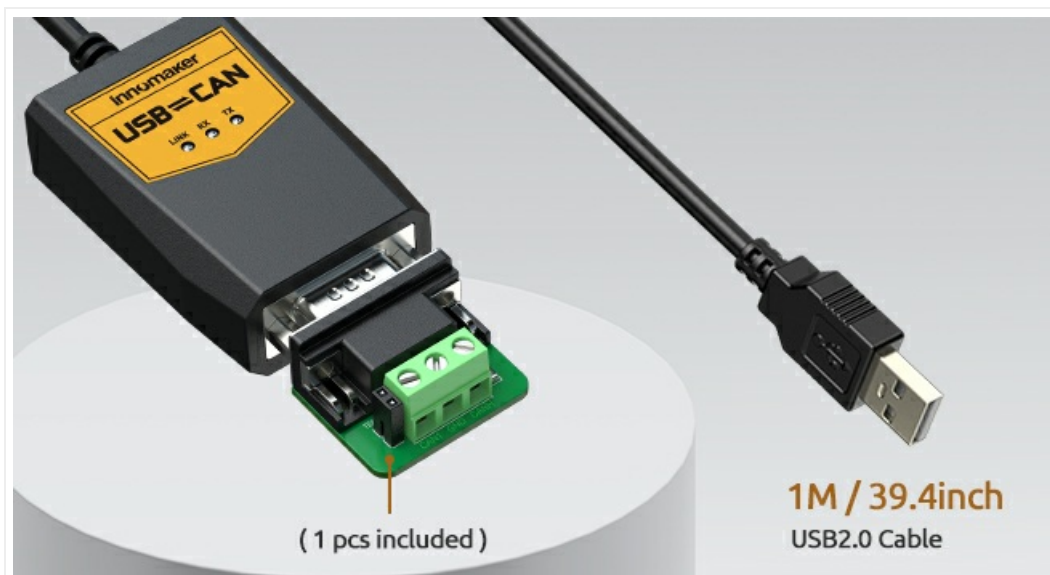


Figure 3.3: Terminal block connection for easy wiring of CAN\_H, CAN\_L, and GND.

### 3.3 Driver Installation

For Windows and macOS, specific drivers may be required. Refer to the innomaker support website for the latest drivers and installation guides. Linux systems typically support SocketCAN drivers, often providing plug-and-play functionality.

## 4. OPERATING INSTRUCTIONS

### 4.1 LED Indicators

The USB2CAN-C features LED indicators to provide visual feedback on its status:

- **LINK LED:** Indicates USB connection status.
- **RX LED:** Flashes when receiving CAN bus data.
- **TX LED:** Flashes when transmitting CAN bus data.

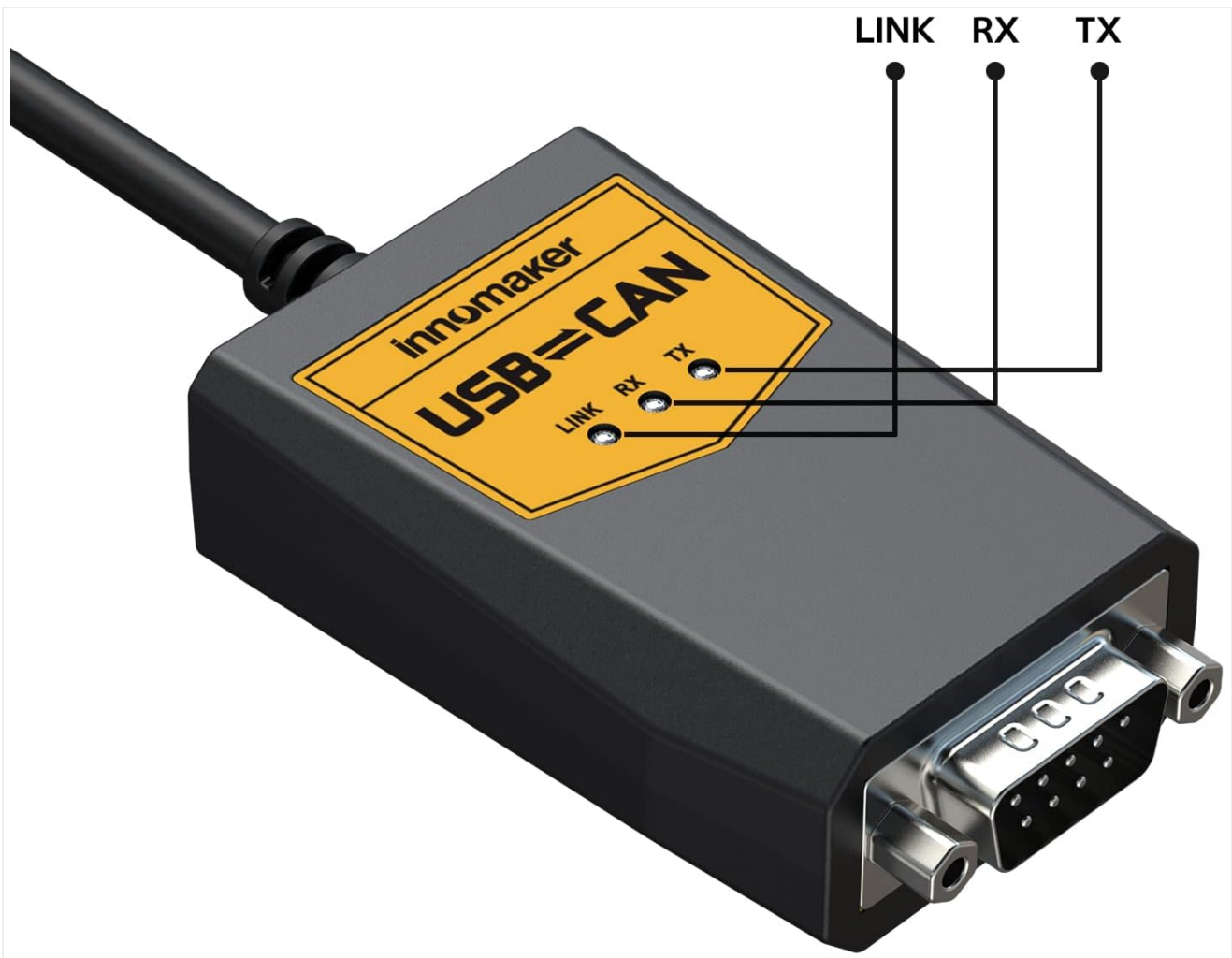


Figure 4.1: LED indicators on the USB2CAN-C for monitoring link, receive, and transmit activity.

## 4.2 Baud Rate Configuration

The device supports a programmable CAN bus baud rate from 20Kbps to 1Mbps. Configuration methods vary by operating system and software. Consult the provided SDK documentation for detailed instructions on setting the baud rate for your specific development environment (C/Python SDK, SocketCAN, IOUSBKit).

## 4.3 Software Usage

Utilize the provided SDKs and drivers to integrate the USB2CAN-C into your applications. For Linux, SocketCAN tools are widely used. For macOS, IOUSBKit demos are available. Windows users can leverage the C/C++ SDK for custom development.

## 5. MAINTENANCE

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The innomaker USB2CAN-C is designed for durability and requires minimal maintenance. Keep the device clean and free from dust and moisture. Avoid exposing it to extreme temperatures or physical shock. Ensure all connections are secure during operation.

## 6. TROUBLESHOOTING

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- **Device Not Recognized:** Ensure the USB cable is securely connected. Try a different USB port or cable. Verify that the necessary drivers are installed for your operating system.
- **No CAN Communication:** Check CAN\_H and CAN\_L wiring for correct polarity and secure connections. Confirm that the CAN bus baud rate is correctly configured in your software to match the network. Ensure the

120Ω terminal resistor is correctly configured if required by your CAN network.

- **Intermittent Connection:** Check for loose connections or electromagnetic interference. The device features industrial isolation, but proper grounding and shielding practices are still recommended for stable operation.

For further assistance, please refer to the innomaker support website or contact customer service.

## 7. SPECIFICATIONS

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Feature	Detail
Model Number	USB2CAN-C
CAN Bus Protocols	CAN 2.0A, CAN 2.0B
Baud Rate	20Kbps - 1Mbps (Programmable)
Signal Isolation	3000V
ESD Protection	2500V
Terminal Resistor	120Ω (Configurable)
Operating Systems	Windows, Linux, macOS, Android, Venus OS
Interface	USB 2.0 to DB9 (CAN)
Power Supply	USB Powered (No external power required)
Dimensions	Approximately 5.08 x 3.5 x 1.85 inches (Package)
Weight	Approximately 4.2 ounces

## 8. WARRANTY AND SUPPORT

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The innomaker USB2CAN-C comes with a standard manufacturer's warranty. For specific warranty terms, technical support, or to access additional resources such as drivers, SDKs, and FAQs, please visit the official innomaker website or contact their customer support team. Keep your purchase receipt for warranty claims.