

DynoSure CAN Bridge

Model: CAN Bridge (Dual-Channel CAN Bus Bridge & Router)

The DynoSure CAN Bridge is an intelligent dual-channel CAN bus bridge and router powered by the Raspberry Pi RP2350 microcontroller. Featuring two independent CAN channels (CAN0 and CAN1) on a single rugged DB9 connector, it enables real-time message forwarding, filtering, ID translation, baud rate conversion, and bus isolation between two separate CAN networks without needing a PC.

Specifications

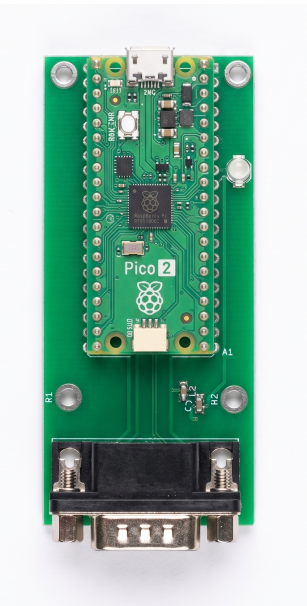
Parameter	Details
Microcontroller	Raspberry Pi RP2350
CAN Interfaces	2 Independent Channels (CAN0 & CAN1)
CAN Protocols	CAN 2.0A (11-bit ID), CAN 2.0B (29-bit extended ID)
Bitrates	Configurable per channel (up to 1 Mbps)
USB Interface	USB 2.0 (For firmware flashing / UF2 bootloader)
Power Modes	• Bridge Mode: Requires +12V DC (DB9 Pin 9 & 3) • USB Mode: USB-powered (firmware programming)
Firmware Update	Drag-and-drop .uf2 into RP2350 USB drive

Key Applications

- **Baud Rate Conversion:** Bridge buses operating at different speeds (e.g. 250 kbps to 500 kbps).
- **ID Filtering & Routing:** Block or pass select frames between networks to control bus load.
- **Network Isolation:** Protect critical ECU subnets from non-critical or diagnostic traffic.

Firmware Update Procedure

Connect device to PC via USB cable. Device automatically enumerates as an **RP2350** mass storage drive. Simply copy and paste the .uf2 firmware file to flash automatically.



DB9 CAN & Power Pinout



DB9 Pin	Assignment
Pin 1	CAN1-L (Channel 1 Low)
Pin 2	CAN0-L (Channel 0 Low)
Pin 3	GND (Power Ground)
Pin 7	CAN0-H (Channel 0 High)
Pin 8	CAN1-H (Channel 1 High)
Pin 9	+12V DC (Power Input)
Others	Not Connected

Operation Modes Summary:

- **Bridge Mode:** Connect +12V DC power supply via DB9. Device starts acting as CAN bridge immediately.
- **USB Mode:** Plug into PC via USB cable to program/flash firmware.

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