

CAN isolator gateway

Version 1.1 [2026/09/15]



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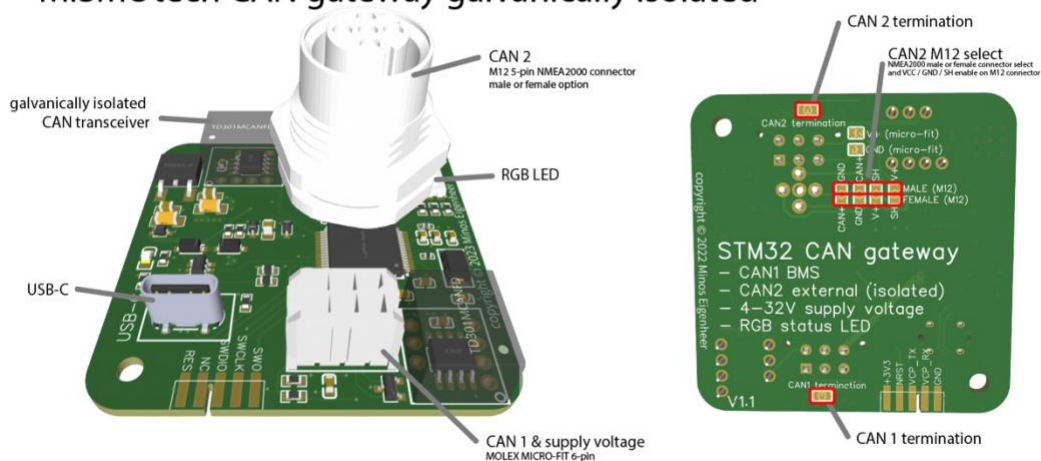
1 Hardware overview

A galvanically isolated CAN gateway with two independent CAN channels usually used to translate or filter signals between two protocols.

The CAN Gateway is available with a variety of standard CAN protocols and custom protocols are possible on request.

- ✓ Two independent CAN channels (CAN1 BMS, CAN2 isolated)
- ✓ Baudrate 125, 250, 500 and 1000 kbit/s
- ✓ 4–32 V supply voltage for 12 or 24 V systems
- ✓ Two analog inputs
- ✓ RGB status LED
- ✓ USB-C for firmware updates
- ✓ 6-pin micro-fit connectors or NMEA2000 M12 5p connector

MISMOtech CAN gateway galvanically isolated

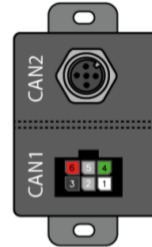


2 Pinout

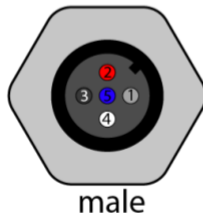
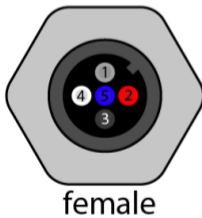
CAN 1 micro-fit 6p.



- 1 CAN Low
- 2 Analog input 1
- 3 GND
- 4 CAN High
- 5 Analog input 2
- 6 Voltage supply 12V



CAN 2 galvanically isolated NMEA2000 M12 5p. connector



- 1 Shield (optional SJ) not isolated!
- 2 PWR (optional SJ) not isolated!
- 3 GND (optional SJ) not isolated!
- 4 CAN H isolated
- 5 CAN L isolated

or

CAN 2 micro-fit 6p.



- 1 CAN2 Low
- 2 -
- 3 GND (optional SJ)
- 4 CAN2 High
- 5 -
- 6 12V (optional SJ)



CAN bus notes

>> Use twisted and shielded cable for the CAN bus.

>> Don't use drop cables longer than 0.5m.

>> Make sure you have two 120-ohm termination resistors connected on each CAN bus!

The gateway has on-board termination resistors (split terminator type) which can be enabled with a solder jumper on the back of the PCB.

3 RGB status LED

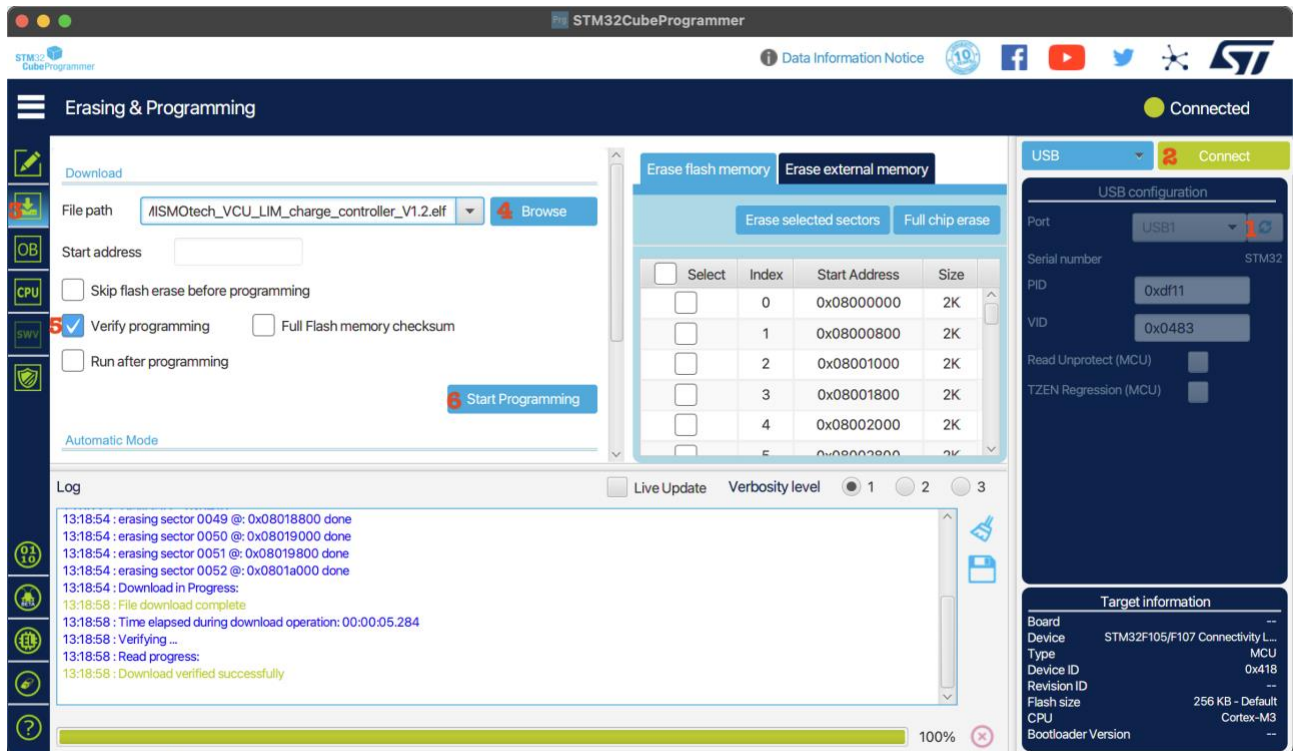
Yellow dimmed	No connection
Green breath	Ready
Off	No Power supply

4 CAN gateway software update process

The controller software can be updated with a USB-C data cable. **Make sure the cable has actually data wires and not only power!**

The device is also powered by the USB during the software update.

1. Download and install STM32CubeProgrammer for your operating system.
<https://www.st.com/en/development-tools/stm32cubeprog.html>
2. Disconnect the CAN cables from the gateway to turn it off. Remove the case with the two screws at the bottom.
3. Connect a USB-C cable from your computer to the device. The status LED should be blue.
4. Select USB as the communication method in STM32CubeProgrammer. It sometimes takes a few seconds before the device is recognized in DFU mode, just press the refresh button a couple of times until you see USB1 device.
>> Try a different USB cable if it does not work.
5. Press "Connect" to establish a connection to the device.
6. Move to the Erasing & Programming tab on the left and press "Browse" to select the *.elf image with the new software.
7. Select "Verify programming".
8. Make sure "Run after programming" is **not** selected.
9. Press "Start Programming" and wait until the process finishes. Do not disconnect the device during the download process!
10. You should get a few pop-ups with the "File download complete" and "Download Verified successfully" messages and your VCU should be updated at this point. You can press "Disconnect" and remove the USB-C cable.
11. Put controller back in the case and reconnect the CAN cables.



5 Revision history

Revised on	Version	Description	Approved by
01-06-2023	0.1	Initial document creation	ME
08-06-2026	1.0	Publish document	ME
15-09-2026	1.1	Addes description and features, cleaned up, updated pinout	ME