USB2CAN Module on Apple Computers User Manual

1. General Description:

USB2CAN module is a plug and play and bi-directional port powered USB to CAN converter which realizes long-distance communication between your Apple computer and other devices stably though CAN- Bus connection.

With small size and convenient operation, It's a cost-effective solution that are safe and reliable for all your data-conversion / device-protection applications for any experienced engineer interfacing to expensive industrial equipment yet simple enough for home use by an amateur hobbyist.

Support Mac OS version equal or above 10.11 and provide development library for help customer develop own applications.

Support wider CAN baud rate, From 20Kbps to 1Mbps. USB2CAN module has three mode: Normal mode, Silent mode and Loopback mode.

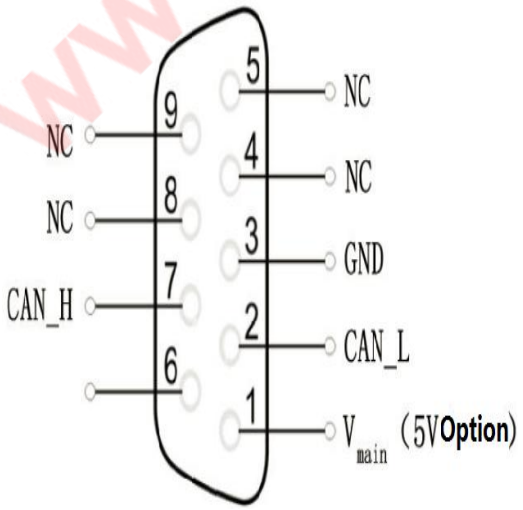
USB2CAN can also be applied to obtain the data of car via the OBD connector, but you need to configured and secondary development by yourself.

2. Technical Specification

Connector	
CAN	D-SUB, 9 pins
USB	USB 2.0 Full-Speed, Micro USB
CAN Features	
Specification	2.0A (standard format) and 2.0B (extended format), ISO 11898-2 High-speed CAN
Data Rate	From 20kbps to 1Mbps can be programmed arbitrarily.
Isolation Voltage	1.5K VDC/min, 3K VDC/1s
Microcontroller	STM32F0, 48MHz
Termination	120 Ohm resistor selectable jumper
CAN Transceiver	ISO1050DUBR ,Texas Instruments
Other	
Work Temperature	-40° ~ 85°
Relative humidity	15-90%, not condensing
PCBA Size (L * W * H)	56.50mm * 31.20mm * 14.20mm
Weight	15.5 g

3. Hardware Description

3.1 CAN connector Pinout



Pin	Description
1	5V/150ma output . Weld 0Ω resistor on R9 to enable this function(close to the jumper).
2	CANL bus line (dominant low)
3	CAN_GND
4	NC
5	NC
6	NC
7	CANH bus line (dominant high)
8	NC
9	NC

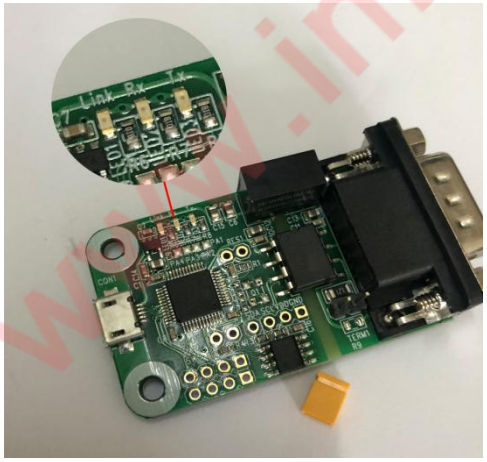
3.2 120 Ohm Resistor Setting.

A High-speed CAN bus (ISO 11898-2) must be terminated on both ends with 120 Ohms. The USB2CAN module with a on-board 120 Ω selectable jumer.

Disable 120 Ohm Resistor.

Enable120 Ohm Resistor.

3.3 LED Indicate

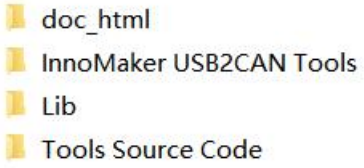


LED Name	Description
Link	Red led is normally on to indicate the module is started successfully
Tx	Red led flash to indicate send data.
Rx	Red led flash to indicate receive data.

4. Download Tools And Library

Download the tools and SDK of Mac Os from below link:
https://www.jianguoyun.com/p/DVvY6VIQpdSrBxjyqKUB

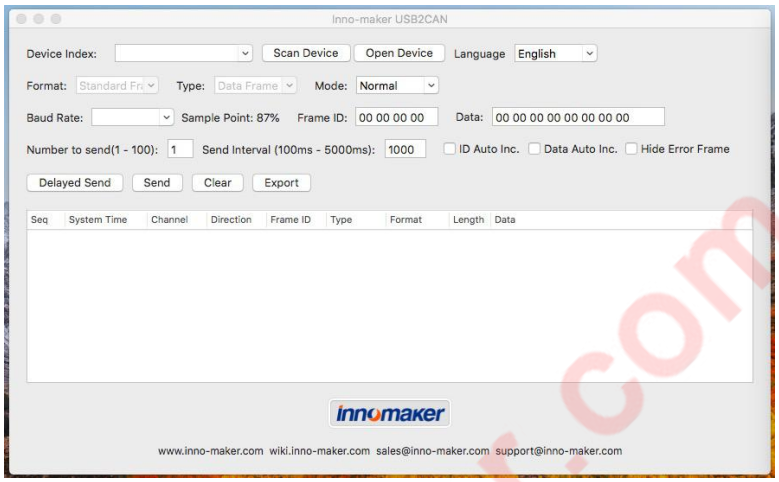
There are consists of four parts:



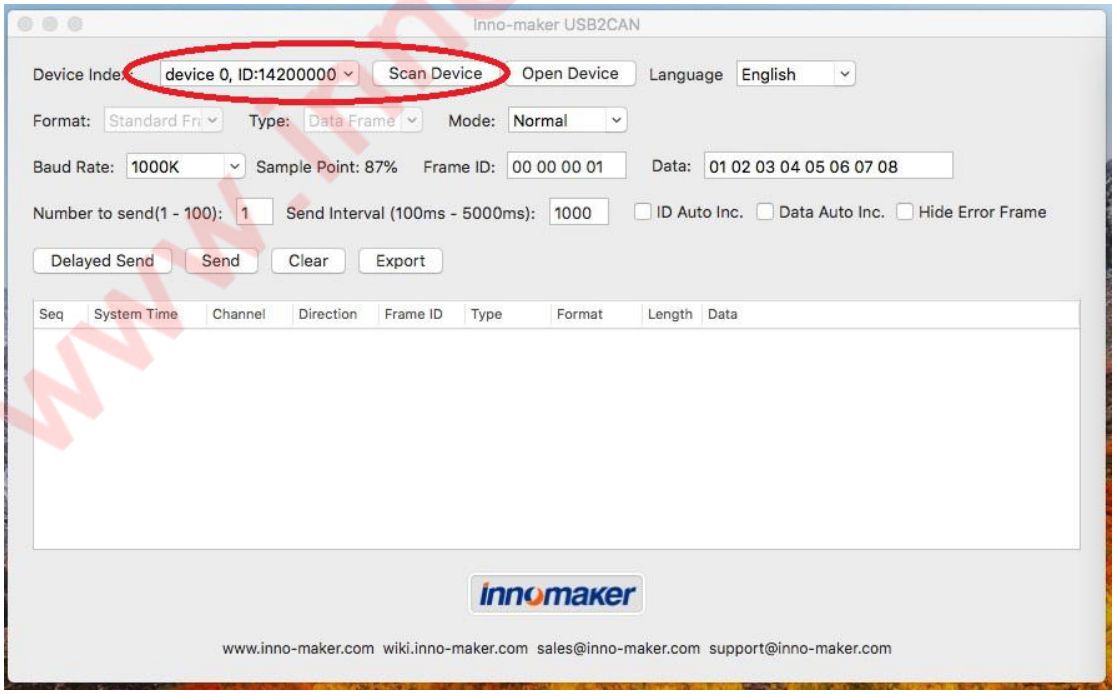
Folder name	Description
InnoMaker USB2CAN Tools	InnoMaker USB2CAN test tools, You can run natively on Mac OS version equal or above 10.11. If Mac os
Tools Source Code	The source of InnoMaker USB2CAN test tools, to show you how to use the SDK to develop a usb to can application.
Lib	The Library function for develop USB2CAN applications. These libraries are not open source. If you have any problem and suggestion, feel free to contract us.
doc_html	Simple document for library description.

5. InnoMaker USB2CAN Tools

5.1 Open the USB2CAB tools.



5.2 Plug the USB2CAN module into the USB port, click ‘Scan Device’ button. Find the USB2CAN device.

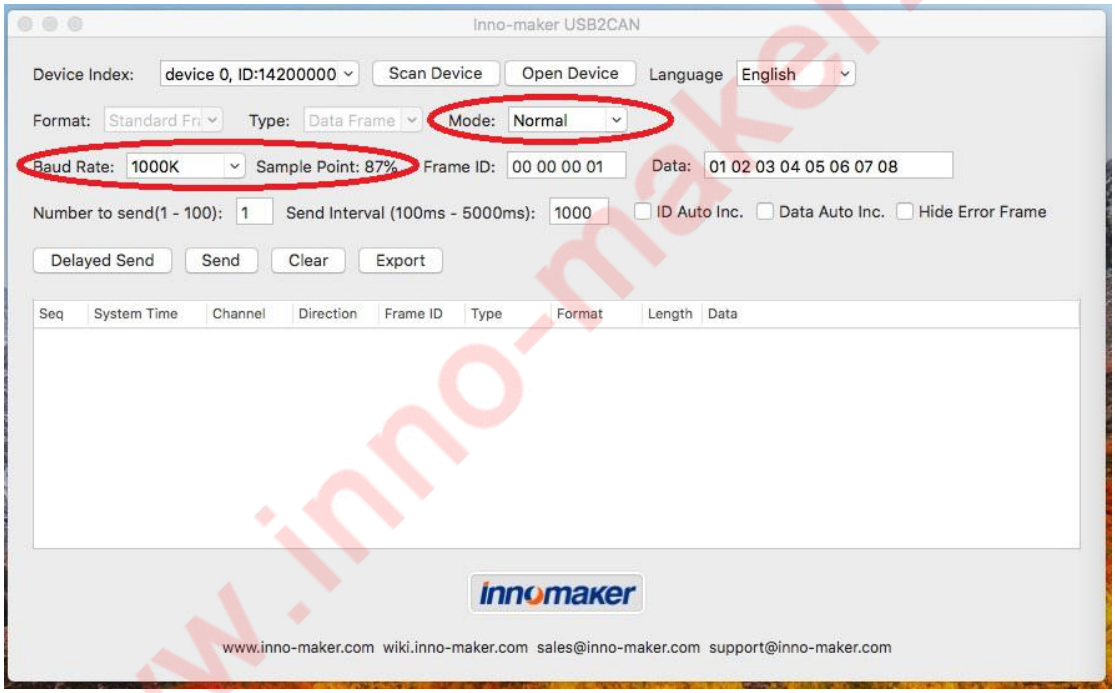


5.3 Setting the BandRate and work mode.

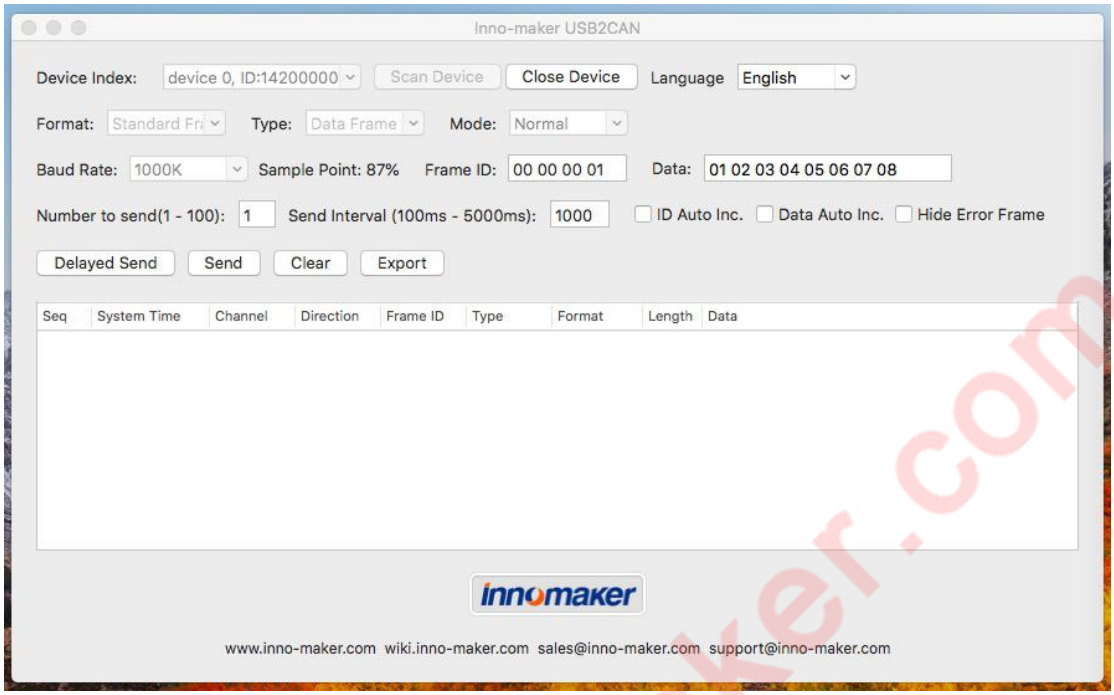
Normal mode: The CAN module will appear on the CAN-bus, and it can send and receive CAN messages， communication with other CAN devices directly.

Silent mode: The module will appear on the CAN-bus, but in a passive state. It can receive CAN messages, but cannot transmit CAN messages or answer. This mode can be used as a bus monitor because it does not affect CAN-bus communications but can observe the CAN-bus states.

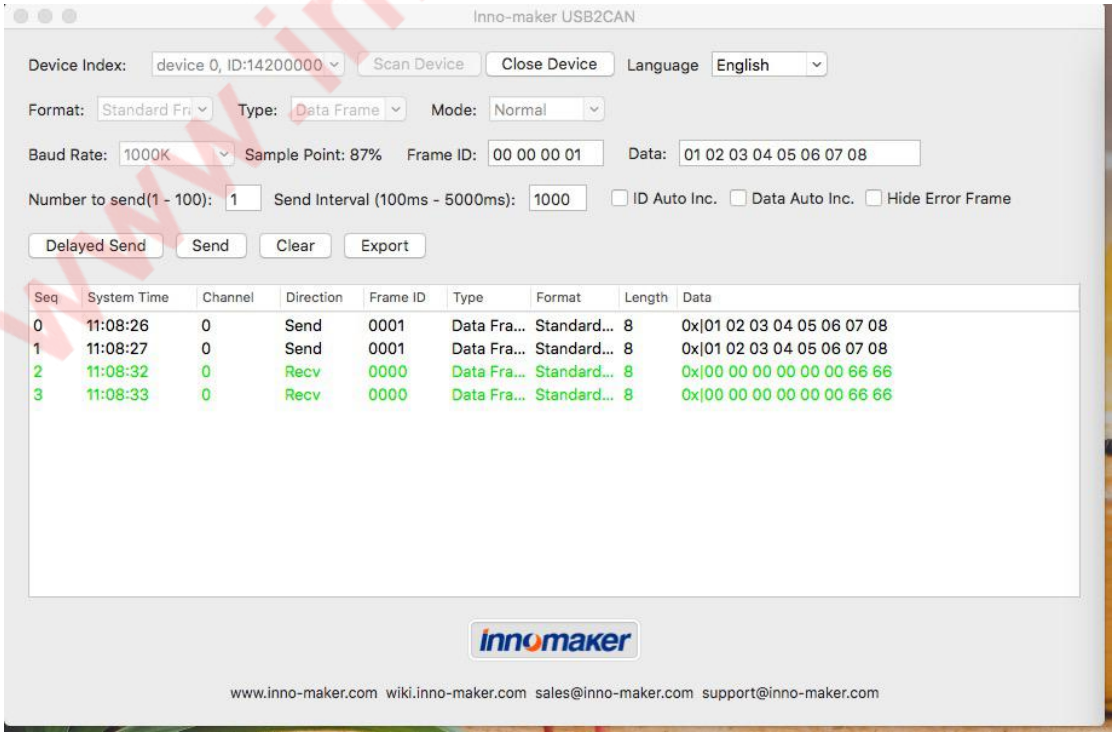
Loopback mode: For USB2CAN self-test, CAN module receives its own messages.
In this mode, the send part of the CAN module is connected internally with the reception one.



5.4 Click the Open Device to boot the USB2CAN.



5.5 The communication result will be displayed at the bottom of the window. The send data will be marked in black, Receive data will be marked in green. Error Frame will be marked in red.



6. InnoMaker Development Library

If you are not familiar with the CAN communication and Apple software development, it is strongly recommended you that use the application we provide or entrust us with the development.

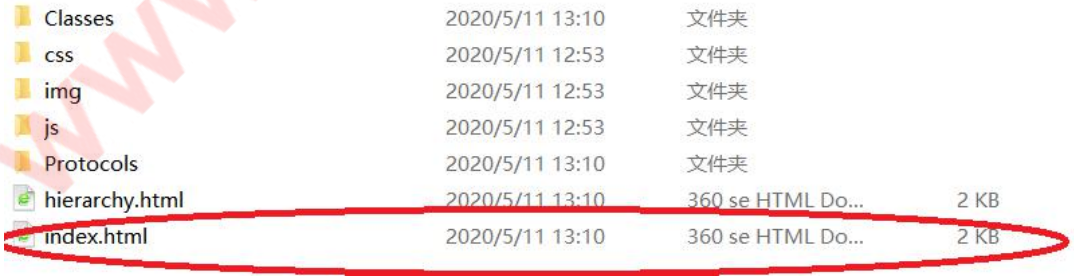
6.1 Library

Open the Lib folder, There are three files in it:

Filename	Description
UsbIO.h	**USB Common Interface**
USBIO+USBCAN.h	**USB Special For CAN Interface**
libInnoMakerUSBIOLib.dylib	**Dynamic library file**

6.2 Document

Open the doc_html folder and open the index.html files. You can see InnoMakerUSB IO LIB reference.



Hierarchy

InnoMakerUSBIOLib Reference

Class References

- InnoMakerDevice
- UsbIO

Protocol References

- InnoMakerDeviceDelegate

Generated by appledoc 2.2.1 (build 1334).

7. User Manual Version Descriptions

Version	Description	Date	E-mail
V1.0.0.1		2020.05.10	support@inno-maker.com sales@inno-maker.com

If you have any suggestions, ideas, codes and tools please feel free to email to me. I will update the user manual and record your name and E-mail in list. Look forward to your letter and kindly share.