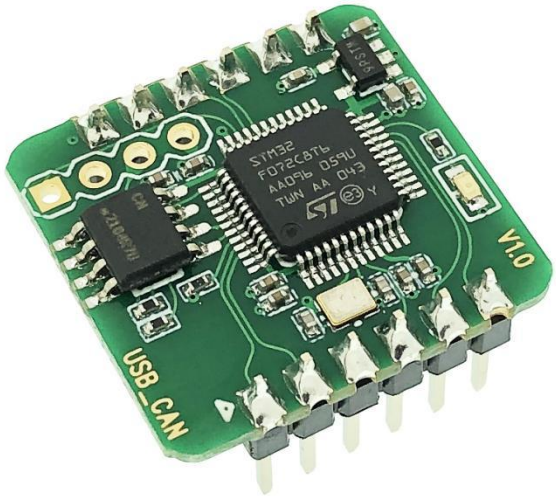
USB2CAN Core Module Hardware Design Guider



1. General

Ever since we launched our USB2CAN module in the March 2019, we received many favourable reviews from all over the world. We really appreciate the praise, advise, and criticism from all the users.

Based on these feedback, We designed this USB2CAN core module and hope it can helps more people to use this higher cost performance USB2CAN solution in their circuit design conveniently.

Features with small size and various welding modes, you can easy add this core module on your board like X86, ARM, CM4, Jetson Nano,etc, which with USB port and need add CAN-Bus communication function.

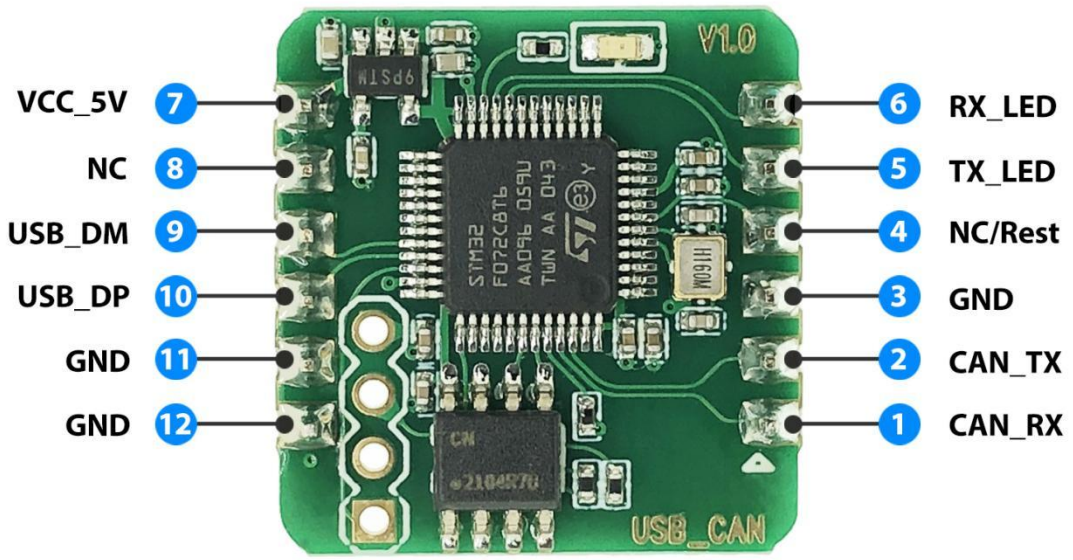
We also provide the ready-made high reliability reference design files based on this USB2CAN core module.

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)	22.00mm * 21.00mm
Weight	

3. Core Module Hardware Description

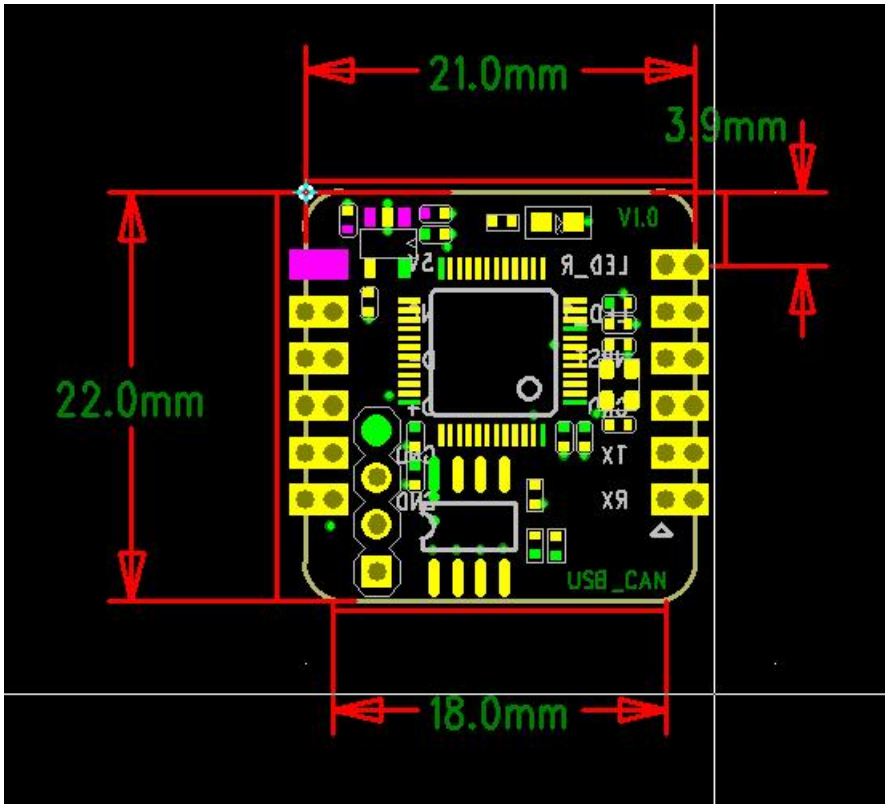
3.1 Module Pin Map



PIN	Symbol	I/O	Description
1	CAN_RX	Input	CAN receive data input,onected to CAN Transceiver
2	CAN_TX	Output	CAN receive data output,Conected to CAN Transceiver
3	GND	Input	GND Pin 3,Pin 11,and Pin 12 are interconnected.
4	NRST/NC	Input	Input low level pulse 10 ms to reset the module. You can let it suspended,if you do not need the reset function.
5	TX_LED	Output	Output High level pulse when the module send a frame, Output 3.3V/4mA, Connected to the indicate LED
6	RX_LED	Output	Output High level pulse when the module receive a frame, Output 3.3V/4mA, Connected to the indicate LED
7	VCC_5V	Input	Power 5V input
8	NC	NC	No connect
9	USB_DM	Input	USB DM(D-) signal input signal
10	USB_DP	Input	USB DP(D+) signal input signal
11	GND	Input	Pin 3,Pin 11,and Pin 12 are interconnected
12	GND	Input	Pin 3,Pin 11,and Pin 12 are interconnected

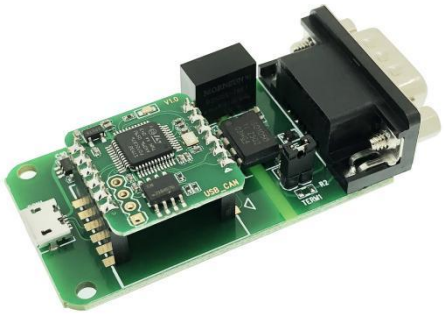
3.2 Module Size

PCB Thickness: 1.0 mm



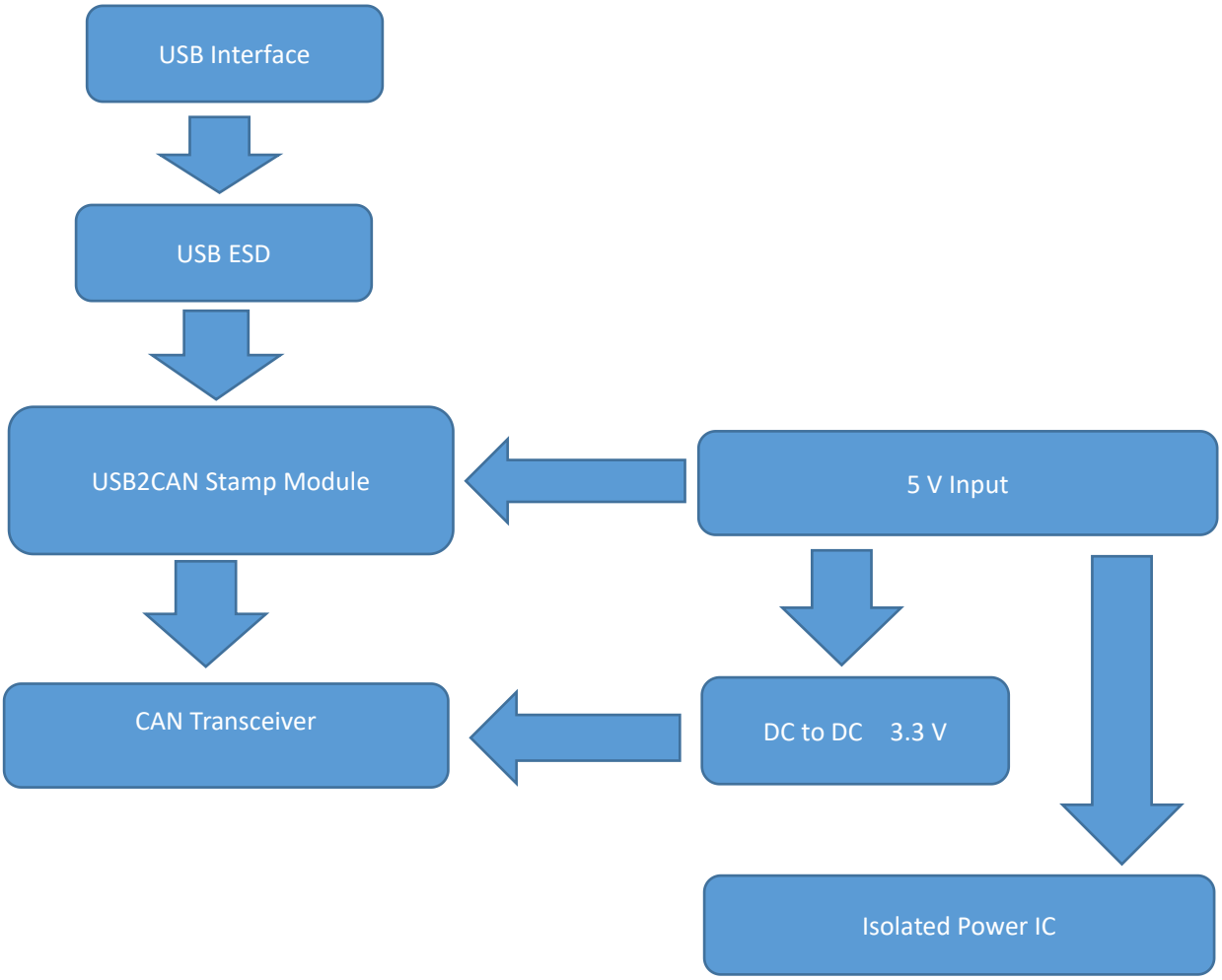
3.3 Soldering The Core Board

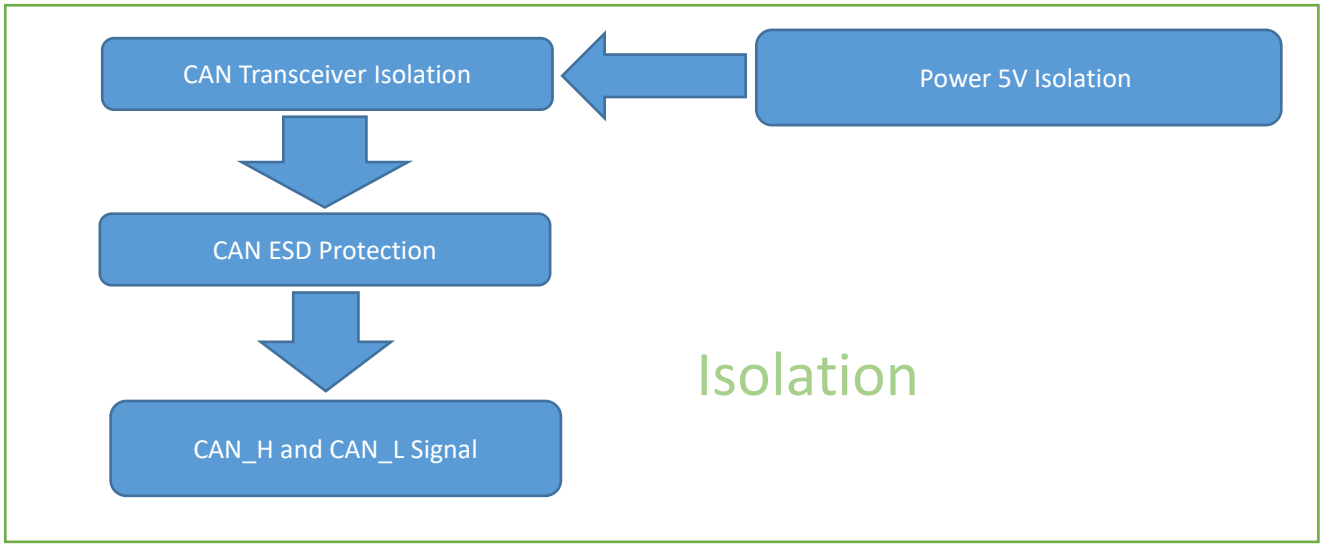
USB2CAN has two kinds of connection to the other board. One is though the pins header,and the other is though the stamp pins.



4. Reference Design Description

We provide the ready-made reference design files with format to user. If you have any question, feel free to contact to our support team(support@inno-maker.com)





5. User Manual Version Descriptions

Version	Description	Date	E-mail
V1.0	Initial Version	2021.05.15	support@inno-maker.com sales@inno-maker.com
V1.1	Initial Version	2023.05.30	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.