

Aixcel_Mini_Sense_Board_User_Startup_Guide

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1、Preparation:

Hardware Preparation:

- ①: Aixcel_Mini_Sense_Board
- ②: Computer or Laptop
- ③: USB-to-UART bridge module(eg: CP2102、CH340)
- ④: USB-to-485 bridge module
- ⑤: USB-to-CAN bridge module
- ⑥: Oscilloscope(eg: RIGOL DS1102Z-E)

Software Preparation:

- ①: Aixcel_Mini_Sense_Board_HW_Check:
https://github.com/AixcelStudio/Aixcel_Mini_Sense_Board_HW_Check
- ②: SerialTool V1.4.0Alpha:
<https://github.com/gztss/SerialTool>
- ③: USB-to-CAN supporting software

Tips:

The Aixcel_Mini_Sense_Board's HW-Check-Firmware is built in before delivery, if user has wiped or rewrite the MCU's flash, user also could download the HW-Check-Firmware's source code from the following link:
https://github.com/AixcelStudio/Aixcel_Mini_Sense_Board_HW_Check

2、 Get SN from 485 Interface:

A : Connect Aixcel_Mini_Sense_Board's 485 Interface to computer through USB-to-485 bridge module;

B : Send 2 bytes "A5 5A"(HEX Format) from computer side(by SerialTool V1.4.0Alpha, Baudrate : 115200bps, 8n1), Aixcel_Mini_Sense_Board will return 16 bytes SN (HEX Format), which is like:

Computer Send : A5 5A

Computer Recv : 41 54 44 01 C9 79 59 03 00 40 94 74 13 07 8C 07

3、 Loopback Test on CAN Interface:

A : Connect Aixcel_Mini_Sense_Board's CAN Interface to computer through USB-to-CAN bridge module;

B : Send any CAN frame from computer side, Aixcel_Mini_Sense_Board will return the same CAN frame, which is like:

	ID	Len	Data
Computer Send :	101	08	11 22 33 44 55 66 77 88
Computer Recv :	101	08	11 22 33 44 55 66 77 88

	ID	Len	Data
Computer Send :	18FF1001	08	11 22 33 44 55 66 77 88
Computer Recv :	18FF1001	08	11 22 33 44 55 66 77 88

4、 Get SN from UART Interface:

A : Connect Aixcel_Mini_Sense_Board's UART Interface to computer through USB-to-485 bridge module;

B : Send 2 bytes "AA 55"(HEX Format) from computer side(by SerialTool V1.4.0Alpha, Baudrate : 115200bps, 8n1), Aixcel_Mini_Sense_Board will return 16 bytes SN (HEX Format), which is like:

Computer Send : AA 55

Computer Recv : 41 54 53 01 C4 79 59 03 00 40 94 74 13 07 AC 07

5、 GPIO Check:

A : When Aixcel_Mini_Sense_Board power-up,

MCU_SDA_1/MCU_SDA_2/MCU_SDA_3/MCU_SDA_4/MCU_SDA_5/MCU_SDA_6/MCU_SDA_7/MCU_SDA_8/MCU_TIO_1/MCU_TIO_2/MCU_TIO_3/MCU_TIO_4 signal pin will constantly output 1KHz 50% PWM, use oscilloscope could have a quick look;

B : When Aixcel_Mini_Sense_Board power-up,

MCU_SCL_1/MCU_SCL_2/MCU_SCL_3/MCU_SCL_4/MCU_SCL_5/MCU_SCL_6/MCU_SCL_7/MCU_SCL_8/MCU_AIO_1/MCU_AIO_2/MCU_AIO_3/MCU_AIO_4 signal pin will constantly toggle high level and low level which period is 500ms, use oscilloscope could have a quick look;