MSPM0-IO Method

Experimental preparation

1. TI's MSPM0G3507 motherboard
2. 8-channel patrol module
3. Several Dupont cables

MSPM0G3507 board needs to download the IO communication source code provided in the document**

Experimental purpose

The content of this experiment is mainly to use the MSPM0G3507 master control to receive the data of the 8-channel patrol module through IO.

Experimental wiring

MSPM0G3507 connected to the serial port assistant
If the type-c port of the msp does not have the function of downloading programs, you need to use a USB to TTL module to connect to the computer. The wiring is described in the following table

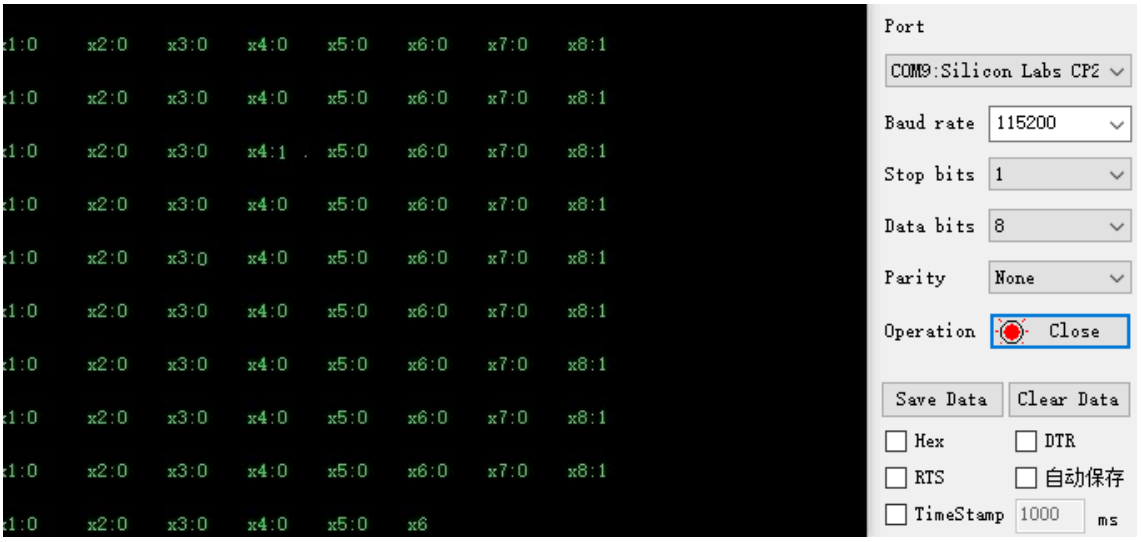
MSPM0G3507	usb to ttl
PA10	TX
PA11	RX
vcc	vcc
GND	GND
If the MSPM0G3507 MCU type has a download function, you can directly use the type-c to connect to the computer's serial port assistant	

MSPM0G3507	8-channel line patrol module
PA28	x1
PA31	x2
PA02	x3

MSPM0G3507	8-channel line patrol module
PB24	x4
PB20	x5
PB19	x6
PB18	x7
PA07	x8

Experimental steps and phenomena

1. After connecting the wires, open the serial port assistant and you can see the numerical data of the infrared module. Set the baud rate to 115200.
   As shown in the figure below



MSPM0 developers need to build the environment before compiling and running the project
Environment building tutorial:
https://wiki.lckfb.com/zh-hans/dmx/beginner/install.html

Experimental source code

```
//Main function
int main(void)
{
    SYSCFG_DL_init();


    //Wait for the infrared module to be normal
    delay_ms(1000);
    delay_ms(1000);
    delay_ms(1000);
    delay_ms(1000);

     //Clear the serial port interrupt flag
    NVIC_ClearPendingIRQ(MYUART_INST_INT_IRQN);
    //Enable serial port interrupt
```

```
    NVIC_EnableIRQ(MYUART_INST_INT_IRQN);



    while (1)
    {
                printf_LineWalking();
                delay_ms(200);

    }
}
```

The main function of the source code is very simple, reading the probe pins of the 8-way patrol line and printing them out.