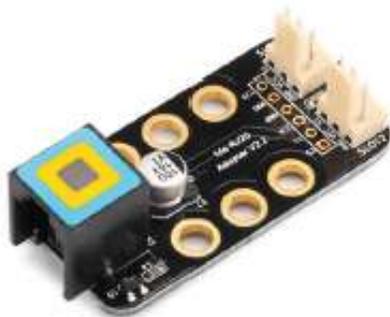


Me RJ25 Adapter



Overview

The Me RJ25 Adapter module converts the standard RJ25 port into six pins (VCC, GND, S1, S2, SDA, and SCL) so that they can be easily drawn out from MakeBlock port in compatible with electronic modules from other manufacturers, such as temperature sensor and servo module. This module should be connected to the ports with yellow, blue, or black ID on Makeblock Orion.

Technical specifications

- Operating voltage: 5V DC
- Maximum current: 3A
- Space between pins: 2.54 mm
- Module size: 51 x 24 x 18 mm (L x W x H)

Functional characteristics

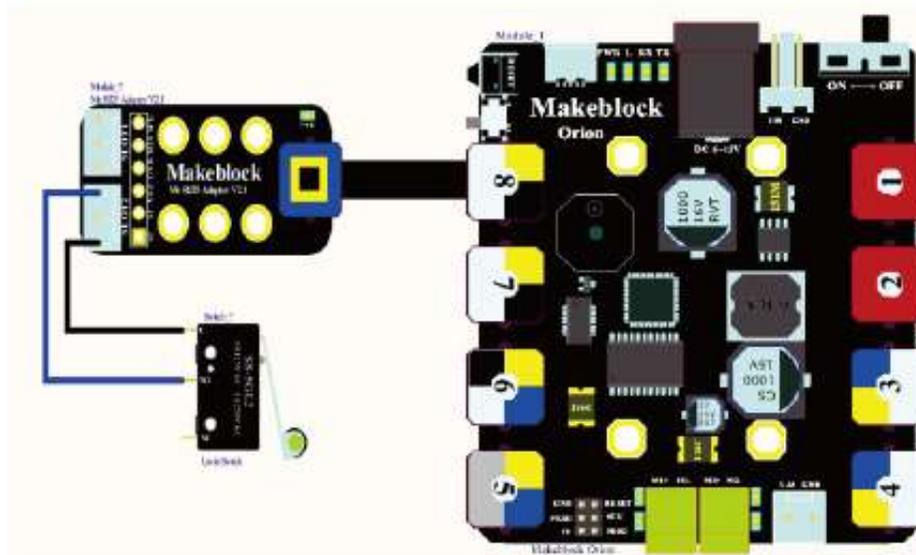
- Red LED is power indicator
- Provide I²C port and two digital/analog ports
- Can connect to electronic modules of other manufacturers
- White area of module is the reference area to contact metal beams
- Two 3-pin anti-reverse base
- Support mBlock GUI programming, and applicable to users of all ages
- Adopt RJ25 port for easy connection

Pin definition

The port of RJ25 Adapter module has 6 pins, and their functions are as follows:

No.	Pin	Function
1	SCL	I ² C clock bus
2	SDA	I ² C data bus
3	GND	Grounding
4	VCC	Power supply
5	S1	Digital/analog port
6	S2	Digital/analog port

Wiring mode



Connecting Me RJ25 Adapter to Makeblock Orion

Guide to programming

- **Arduino programming**

If you use Arduino to write a program, the library Makeblock-Library-master should be invoked to control the Me RJ25 Adapter.

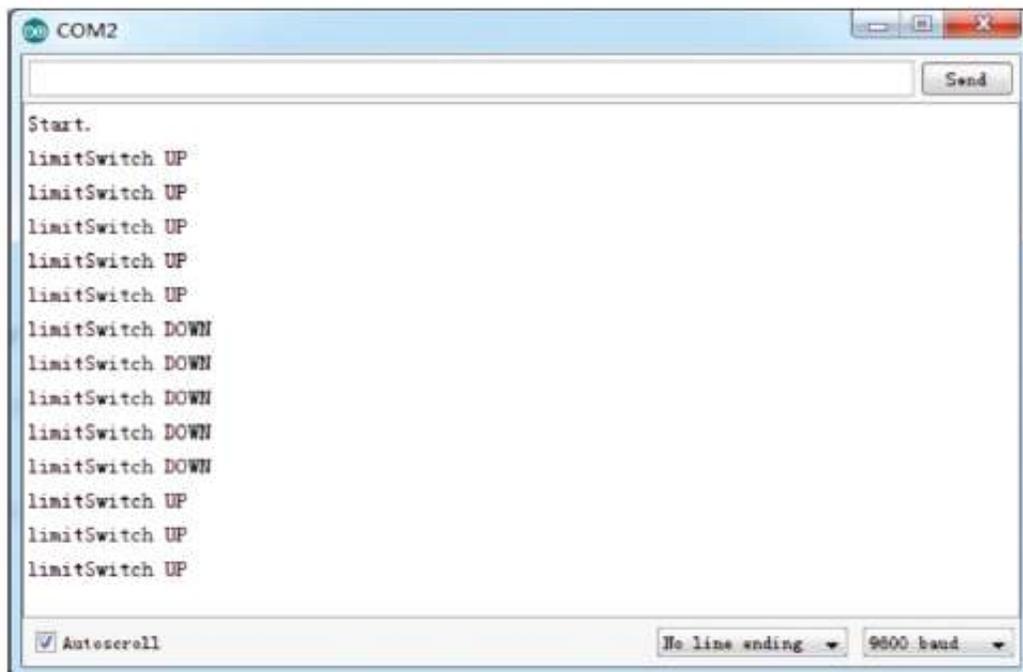
This program serves to read the state of Limit Switch and output results to the serial monitor in Arduino IDE through Arduino programming.

```
01 #include "MeOrion.h"
02 #include <Wire.h>
03 #include <SoftwareSerial.h>
04
05 MeLimitSwitch limitSwitch(PORT_8);
06
07 void setup()
08 {
09     Serial.begin(9600);
10     Serial.println("Start. ");
11 }
12
13 void loop()
14 {
15     if(limitSwitch.touched() )
16     {
17         Serial.println("limitSwitch DOWN");
18         delay(1);
19         while(limitSwitch.touched() )
20         {
21             }
22         delay(2);
23     }
24     if(!limitSwitch.touched() )
25     {
26         Serial.println("limitSwitch UP ");
27         delay(1);
28         while(!limitSwitch.touched() )
29         {
30             }
31         delay(2);
32     }
33 }
```

Function List of Me RJ25 Adapter

Function name	Function
MePort(uint8_t port)	Select a port
dRead1()	Read digital signal from SLOT1
dRead2()	Read digital signal from SLOT2
dWrite1()	Write digital signal from SLOT1
dWrite2()	Write digital signal from SLOT2
aRead1()	Read analog signal from SLOT1
aRead2()	Read analog signal from SLOT2
aWrite1()	Write analog signal from SLOT1
aWrite2()	Write analog signal from SLOT2

The function of the code segment is: to read the state of Limit Switch and output results to the serial monitor. Upload the code segment to Makeblock Orion, click the serial monitor and you will see the running result as follows:

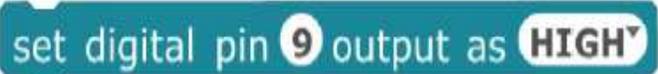


```

COM2
Start.
limitSwitch UP
limitSwitch UP
limitSwitch UP
limitSwitch UP
limitSwitch UP
limitSwitch DOWN
limitSwitch DOWN
limitSwitch DOWN
limitSwitch DOWN
limitSwitch DOWN
limitSwitch UP
limitSwitch UP
limitSwitch UP
  
```

• mBlock programming

Me RJ25 Adapter supports the mBlock programming environment and its instructions are introduced as follows:

Programming description	Introduction
	Parameters: set the number of digital port Function: read the value of specified digital port
	Parameters: set the number of analog port Function: read the value of specified analog port
	Parameter 1: set the number of digital port Parameter 2: set a value Function: write into the digital port
	Parameter 1: the number of analog port Parameter 2: set a value Function: write the analog signal (PWM wave)

Principle analysis

The Me RJ25 Adapter module lead out 6 IO ports of Makeblock Orion, they are SDA, SCL, GND, VCC, S1, and S2 respectively. S1 and S2 can be used as input/output of digital/analog signal; SDA is I²C data bus, SCL is I²C clock bus, and they can be connected to sensors which support I²C bus. For example, the Me Temperature Sensor-Waterproof module supporting I²C protocol can be connected to the I²C bus in series to construct a network for temperature measurement.

Schematic

