# PaHUB SKU:U040

Description

PaHUB, is a expander for I2C GROVE PORTA(red port on M5Core). 1-to-6. If you want connect mutiple I2C slave devices and some of them may sharing the same address, this unit can resolve I2C address conflicts.

At the Unit PaHUB's heart is an TCA9548A produced by TI. The TCA9548A device has eight bidirectional translating switches that can be controlled through the I2C bus. The SCL/SDA upstream pair fans out to downstream pairs, or channels. Any individual SCn/SDn channel or combination of channels can beselected, determined by the contents of the programmable control register.

Technically this Unit allows mutiple levels of nesting, for example you can wire PaHUBs to the root PaHUB to get more seats for your I2C slave devices, if you have 7 of them you can have up to 36 I2C GROVE ports, which makes it easier to get your project more organized.

The I2C address of this unit is 0x70 (changable by resistors).

Notice: Please pay attention to the channel order while programing
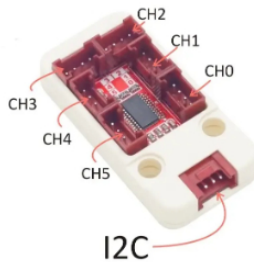
Product Features

I2C GROVE PORTA Expander
Two Lego - compatible   holes
Nested   allowed
1 - to - 6

Include
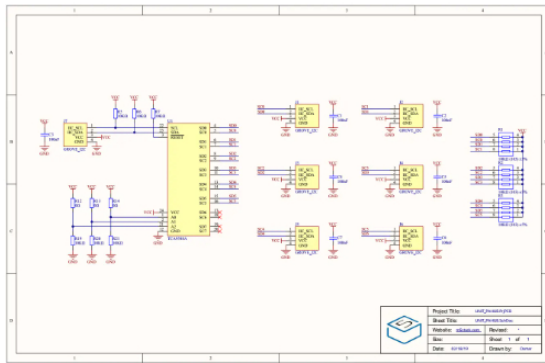
1x PaHUB Unit
1x Grove Cable

Specification

| Resources	Parameter
net weight	7g
Gross weight	19g
Product Size	48*24*12mm
Package Size	67*53*12mm

Links

Datasheet   - **TCA9548A**

Schematic

Referring to the schematic diagram and the TCA9548A data sheet, it can be seen that the Unit can modify the I2C address of the device by controlling the level combination of the A0 ~ A2 pins. (Default address is 0x70)

Three chip resistance welding positions are reserved on the PCB of the Unit, which are A0-A2, as shown in the figure below.
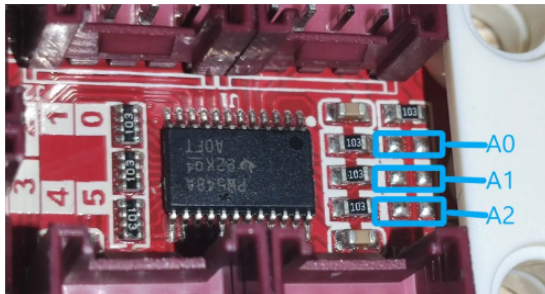
After soldering a 0 ohm resistor, the corresponding pin will change from low to high, and the pin level combination and its corresponding I2C address are shown in the table below.

INPUTS			I²C BUS SLAVE ADDRESS
A2	A1	A0	
L	L	L	112 (decimal), 70 (hexadecimal)
L	L	H	113 (decimal), 71 (hexadecimal)
L	H	L	114 (decimal), 72 (hexadecimal)
L	H	H	115 (decimal), 73 (hexadecimal)
H	L	L	116 (decimal), 74 (hexadecimal)
H	L	H	117 (decimal), 75 (hexadecimal)
H	H	L	118 (decimal), 76 (hexadecimal)
H	H	H	119 (decimal), 77 (hexadecimal)

Example

```
protovol type  - I2C
address   - 0x70
```

EasyLoader

click to download EasyLoader

1.EasyLoader is a simple and fast program burner. Every product page in EasyLoader provides a product-related case program. It can be burned to the master through simple steps, and a series of function verification can be performed. .

After downloading the software, double -click to run the application, connect the M5 device to the computer through the data cable, select the port parameters, click **"Burn"** to start burning. (**For M5StickC burning, please Set the baud rate to 750000   or 115200**)

3. Currently EasyLoader is only suitable for Windows operating system, compatible with M5 system adopts ESP32 as the control core host. Before installing for M5Core, you need to install CP210X driver (you do not need to install with M5StickC as controller) Click here to view the driver installation tutorial

1. Arduino IDE

The code below is incomplete. To get complete code, please click here

2. UIFlow

If you want the complete code, please click here