

# SME RASPBERRY PI .96"OLED ADD-ON

## Overview



There are seldom OLED add-ons customized for Raspberry Pi in the open source hardware market. In a lot of projects, we only need to display little information such as the state of system or IP. What's more, when we have a high requirement for its portability, it's unsuitable to connect a big screen to Raspberry Pi via HDMI interface. Thus, a tiny OLED add-on can satisfy this demand.

OLED add-on with built-in 0.96" 128\*64 OLED and SSD1306 control chip is customized for Raspberry Pi. Every single pixel in OLED can be lighted up or off by this SSD1306 control chip.

We not only offer an easily-plugged add-on for Raspberry Pi, but also provide an SDK that help you transplant Arduino's driver into Raspberry Pi. After installing the SDK, you can drive this add-on as easily as you do on Arduino.

## Features

- Customized for Raspberry Pi, plug and play without wiring
- 0.96" OLED with 128\*64 pixels
- Stackable
- Coming with one Grove interface for Electronic bricks

## Specification

PCB size	48.35mm X 48.47mm X1.6mm
Interface	RPI 26pins Interface X2,UART

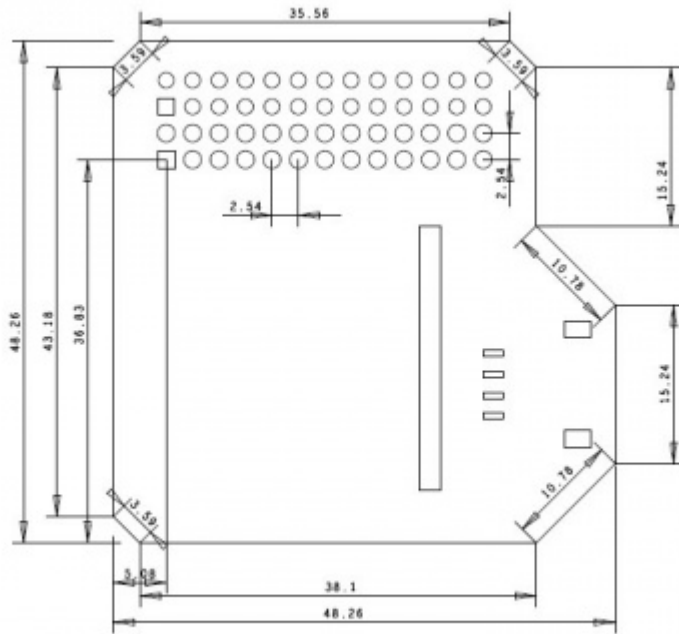
## Electrical Characteristics

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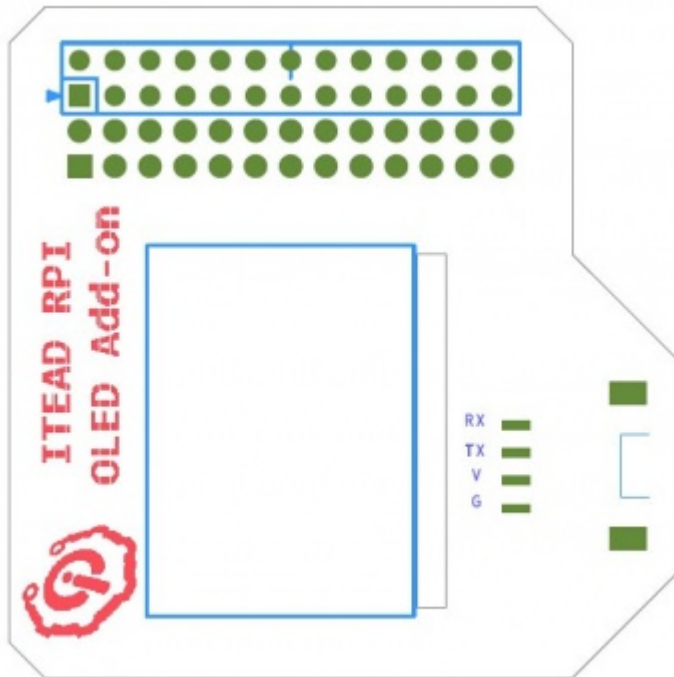
Characteristics	Symbol	Min	Typ	Max	Unit
Power supply voltage	VDD	3	3.3	3.5	V
High input voltage	VIH	0.8XVDD	-	VDD	V
Low input voltage	VIL	0	-	0.2XVDD	V
Operation current for VDD	IDD	-	180	300	uA

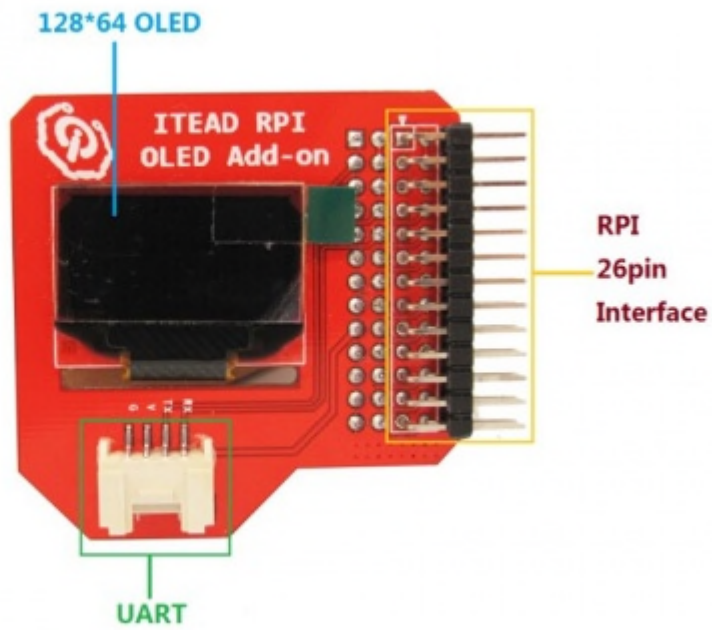
## Hardware

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Unit : mm





## Pin Map

Pin Index	Pin Name	OLED 2864 pin	Description
1	3V3	-	
2	5V	-	
3	SDA	SDA	
4	5V	-	
5	SCL	SCL	
6	GND	-	
7	GPIO7		UART TXD
8	TXD		
9	GND		

10	RXD		UART RXD
11	GPIO0		
12	GPIO1		
13	GPIO2		
14	GND		
15	GPIO3		
16	GPIO4	RST#	
17	3V3		
18	GPIO5		
19	MOSI		
20	GND		
21	MISO		
22	GPIO6		
23	SCK		
24	CE0		
25	GND		
26	CE1		

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# Instruction

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- Plug OLED add-on into Raspberry Pi and power it
- modify the file `/etc/modprobe.d/raspi-blacklist.conf`  
modified codes as below (please replace ^ into #)

```
^blacklist spi-bcm2708
```

```
^blacklist i2c-bcm2708
```

- modify `/etc/modules`  
add a line in the end as below:

```
i2c-dev
```

- reboot

- [Download](https://github.com/itead/SDK) the SDK from this link: <https://github.com/itead/SDK> and then install it
  - Enter into the directory `libraries/itead_SSD1306/examples/oled_Animation_Sample/`, modify this file `oled_Animation_Sample.ino`, change the parameter of `OLED_RESET` as below:

```
define OLED_RESET 16
```

Command as below to compile `oled_Animation_Sample.ino`

```
$ iteadcompile OLED oled_Animation_Sample.ino
```

Command to run this program

```
$ sudo ./OLED
```

- When the compilation is done, you can see a little man dancing on OLED.



## Download

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Schematic – See Schematic.pdf