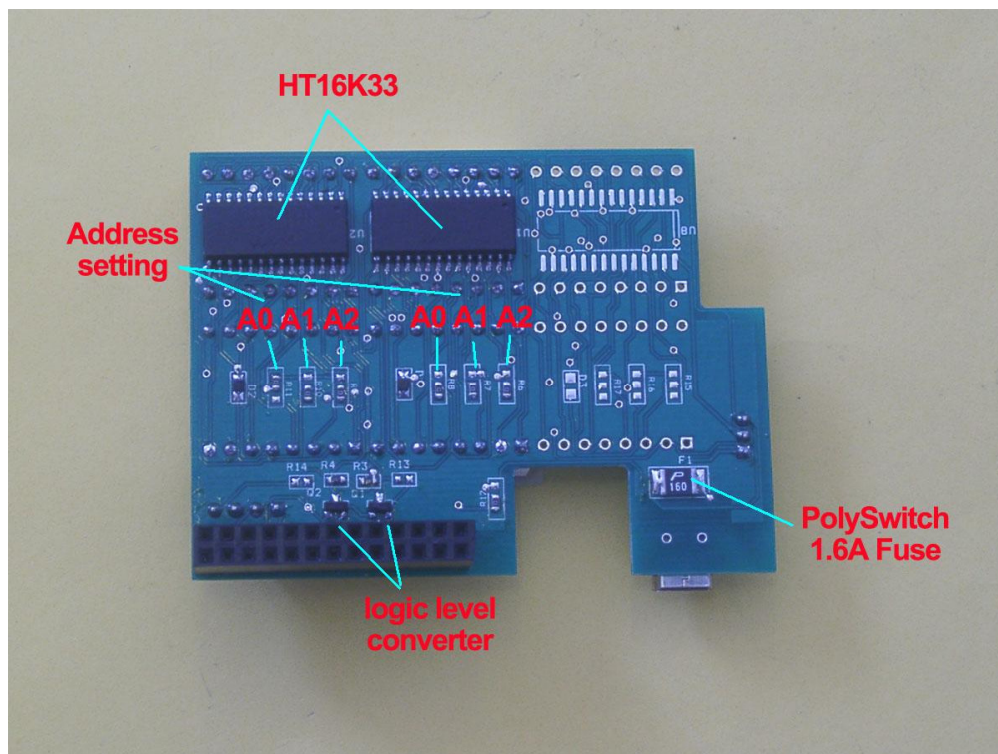
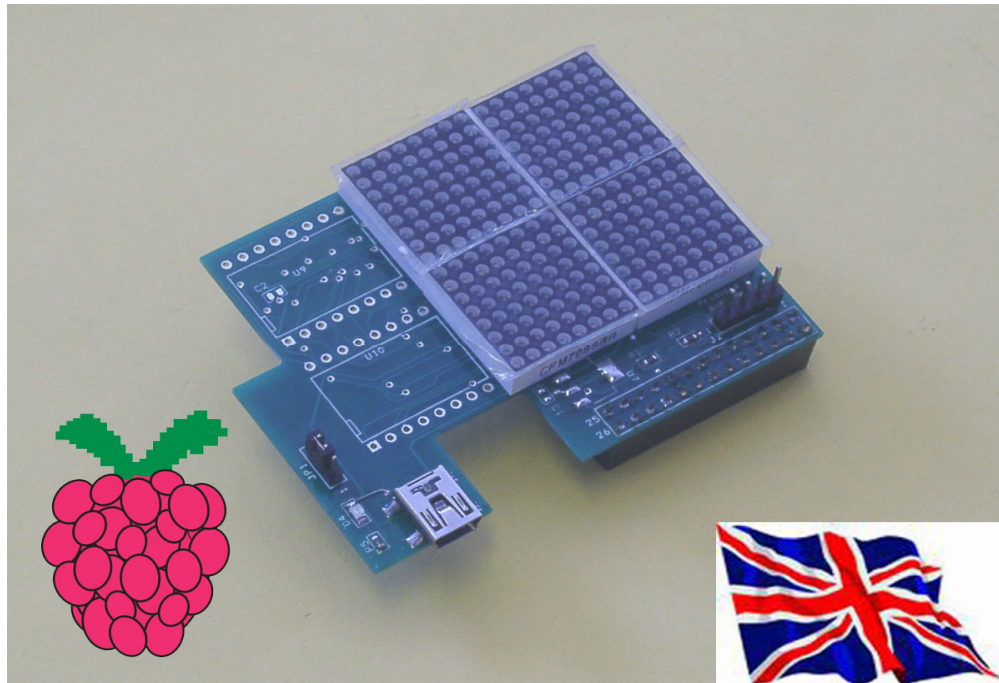
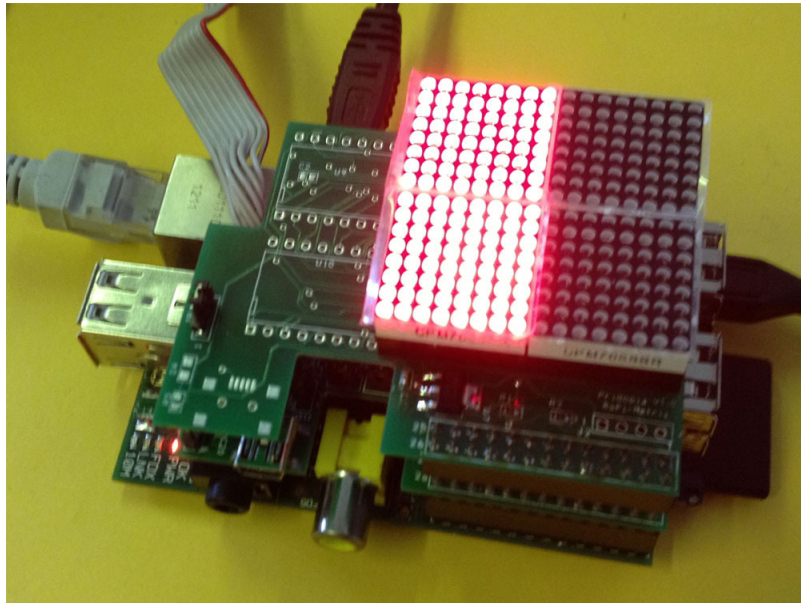


# Raspberry Pi - LED Matrix 16x16 Board

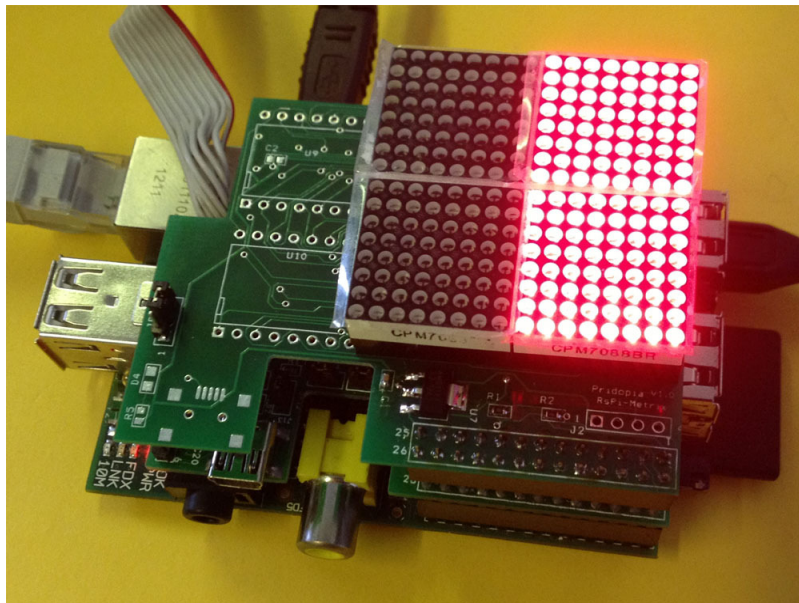
## Raspberry Pi - I2C LED Matrix 16x16 Board



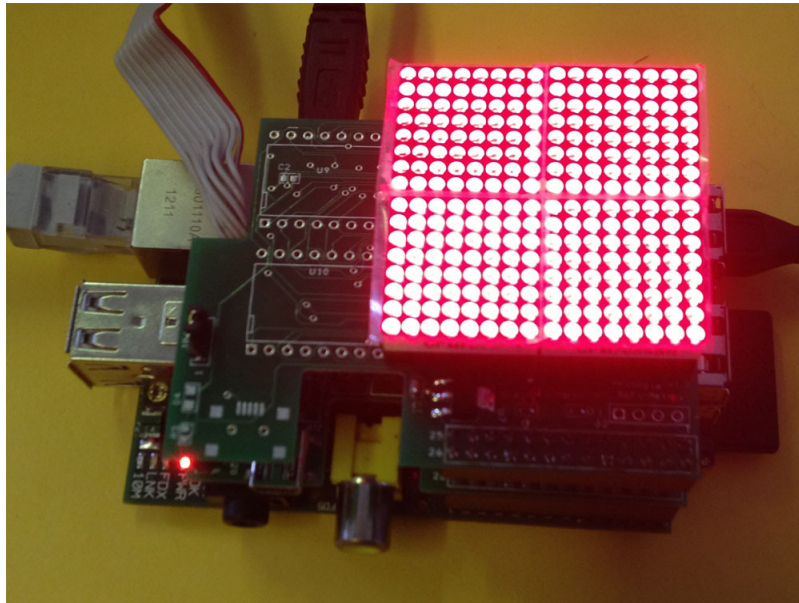
8x8 20mmx20mm Dot Matrix 1.9mm Common Anode Red



address 0x70 for 8x16

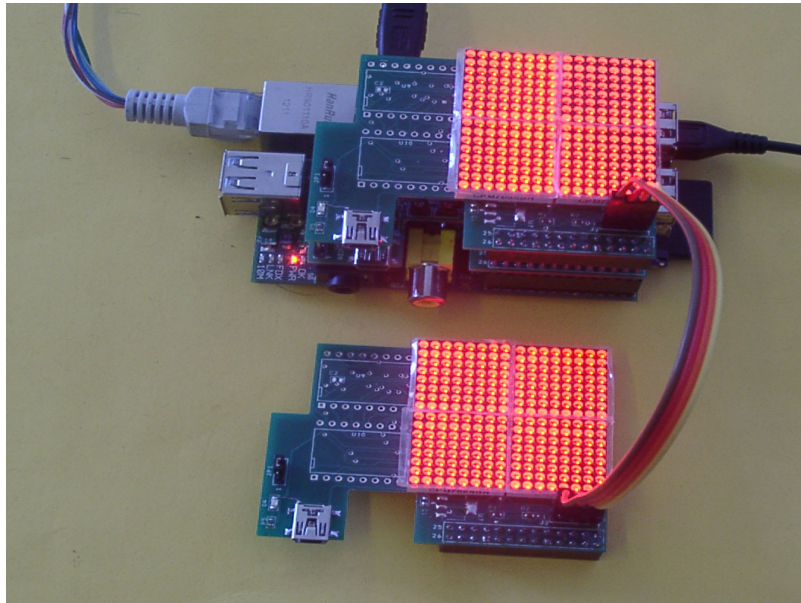


Address 0x71 for 8 x16

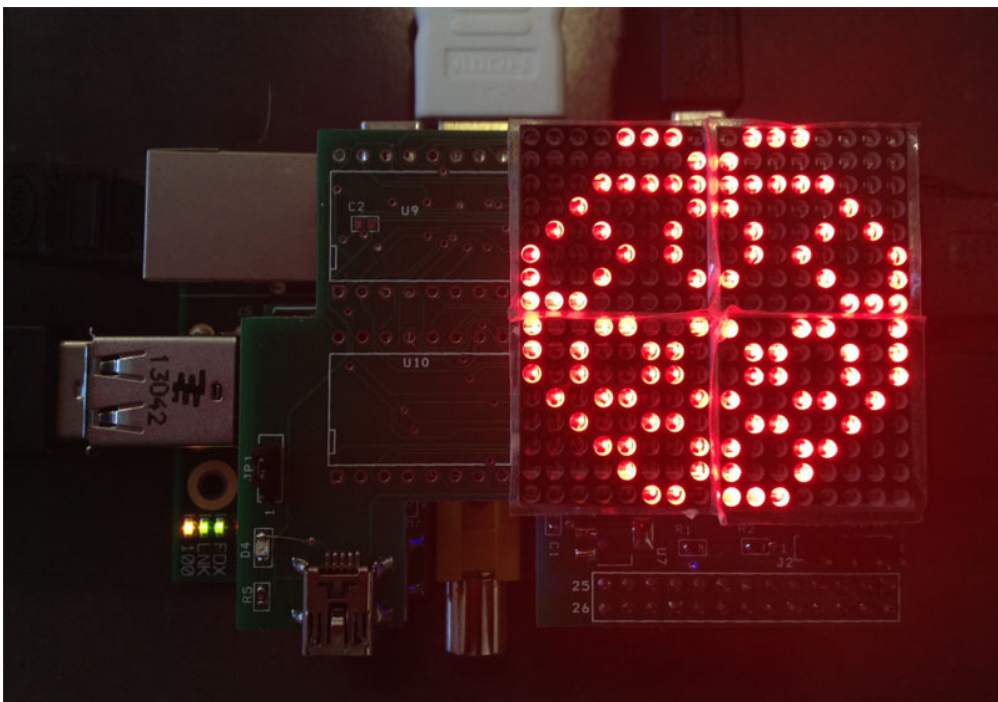


address 70, 71 for 16x16

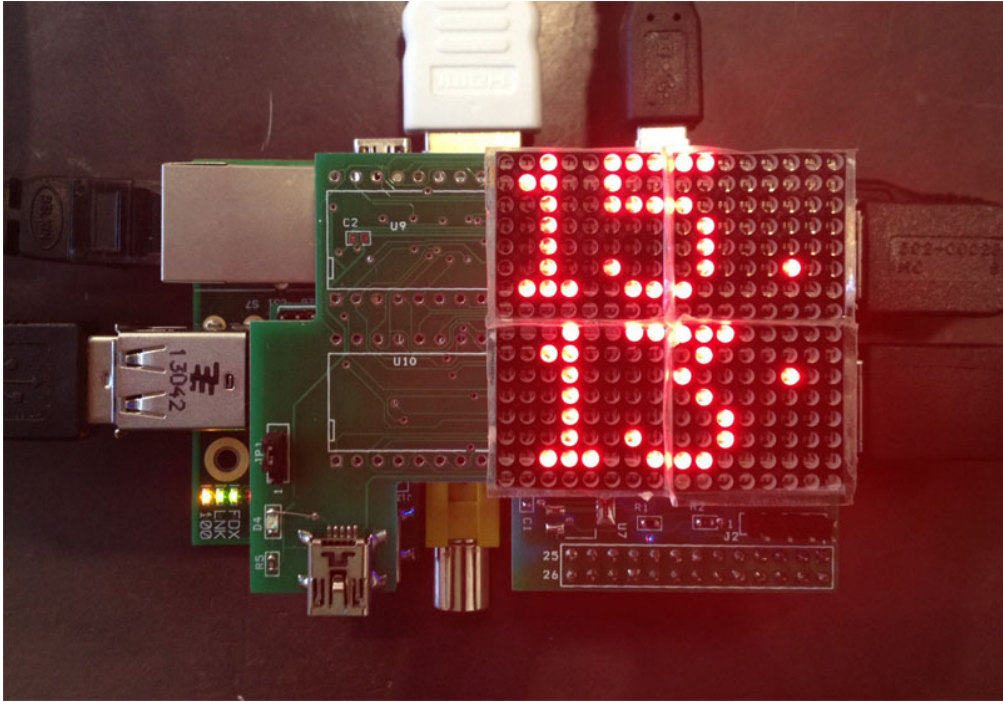
```
COM21 - PuTTY
Linux raspberrypi 3.1.9adafruit+ #10 PREEMPT Thu Aug 30 20:07:05 EDT 2012 armv6l
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Type 'startx' to launch a graphical session
root@raspberrypi:~# i2cdetect -y 0
   0 1 2 3 4 5 6 7 8 9 a b c d e f
00: -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
10: -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
20: -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
30: -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
40: -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
50: -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
60: -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
70: 70 71 -- -- -- -- -- -- -- -- -- -- -- -- --
root@raspberrypi:~#
```



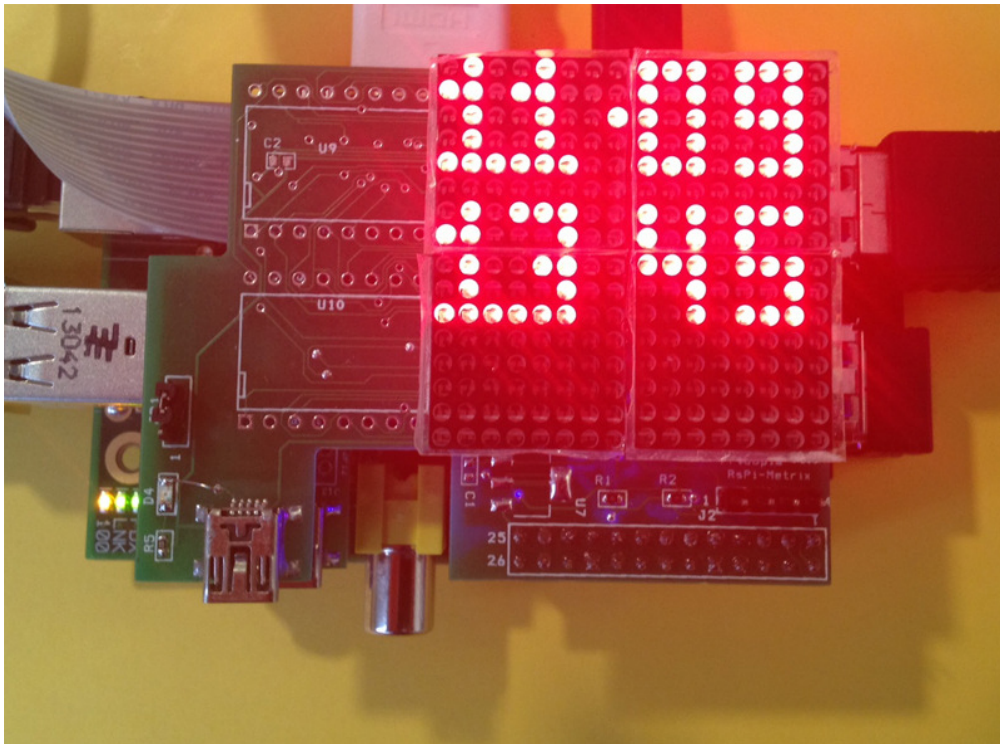
You can connect two 16x16 LED Matrix for 32 x16 LED Matrix



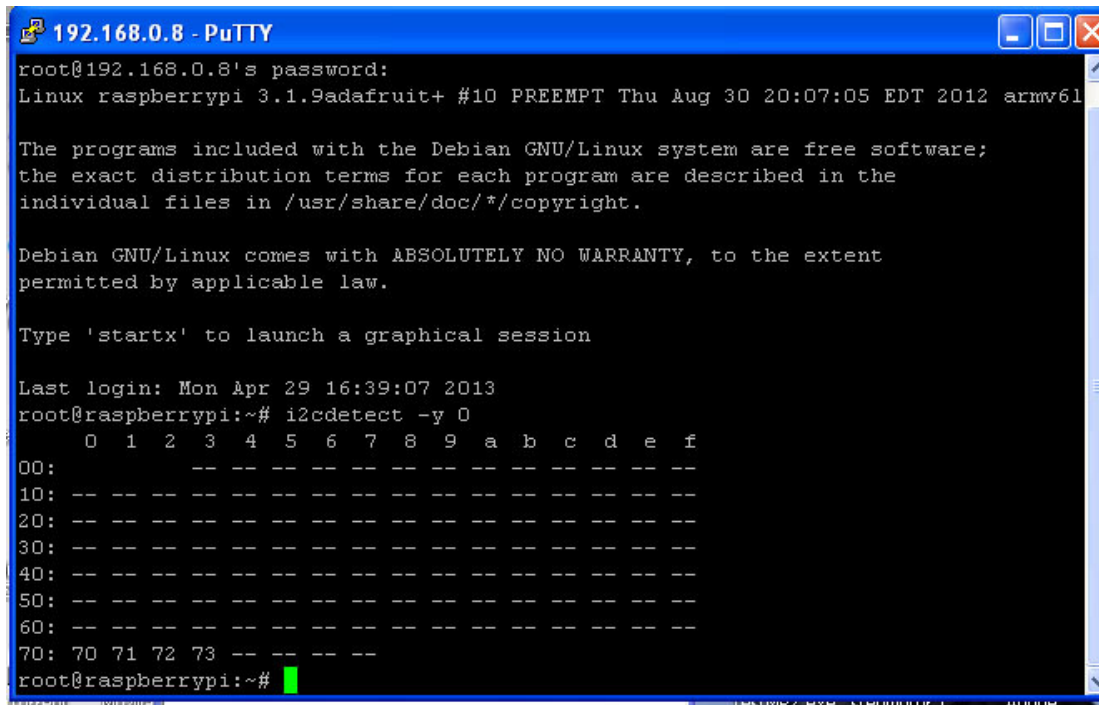
Display Image



Display Raspberry Pi RTC Time & Date



Display Raspberry Pi RTC Time & Date ( 3x5 small font)



```
192.168.0.8 - PuTTY
root@192.168.0.8's password:
Linux raspberrypi 3.1.9adafruit+ #10 PREEMPT Thu Aug 30 20:07:05 EDT 2012 armv6l

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

Type 'startx' to launch a graphical session

Last login: Mon Apr 29 16:39:07 2013
root@raspberrypi:~# i2cdetect -y 0
   0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
10:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
20:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
30:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
40:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
50:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
60:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
70: 70 71 72 73 -- -- -- --
root@raspberrypi:~#
```

70, 71 for two LED driver **HT16K33** [DataSheet](#)

The HT16K33 is a memory mapping and multi-function LED controller driver. The max. Display segment numbers in the device is 128 patterns (16 segments and 8 commons) with a 13\*3 (MAX.) matrix key scan circuit. The software configuration features of the HT16K33 makes it suitable for multiple LED applications including LED modules and display subsystems. The HT16K33 is compatible with most microcontrollers and communicates via a two-line bidirectional I2C-bus.

#### Feature

- Operating voltage: 4.5V~5.5V
- Integrated RC oscillator
- I2C-bus interface
- 16\*8 bits RAM for display data storage
- Max. 16 x 8 patterns, 16 segments and 8 commons
- R/W address auto increment
- Max. 13 x 3 matrix key scanning
- 16-step dimming circuit
- Selection of 20/24/28-pin SOP package types

Provide 14 Python Test Program (include 16x16 & 24x16)

- 1.led8x16\_j.py            24x16 moving image
- 2.led16x16-7172.py    16x16 test in address 71,72
- 3.led\_time.py            2 line Date & Time information
- 4.led16x16.py            16x16 test in address 70,71
- 5.led\_16x16\_v2.py    16x16 display time & date
- 6.led\_image.py          16x16 show image then Time & date
- 7.led24x16.py           24x16 line test
- 8.time\_check.py         sync RTC tiem & System Time
- 9.led8x16-70.py         8x16 test in address 70
- 10.led8x16-71.py        8x16 test in address 71
- 11.led\_single\_img.py   24x16 display image first then Time & date
- 12.led\_single.py        24x16 display Time & date
- 13.led\_16x16\_small.py   16x16 3x5 small font clock
- 14.led\_jd.py             24x16 input message test
  - (1) input "TEST" for display all characters
  - (2) input "Time" display Time & Date
  - (3) input "Smile" display 6 Smile face
  - (4) input "Cont" display 6 Block

Download [24x16 Matrix Test Program](#)

for Rs-pi V2 board [Matrix-v2](#) [User Manual](#)

## Package Content

1x Rs-Pi I2C LED Matrix 16x16 board

1x manual