Introduction of Dot matrix module

1. Working principle

The dot matrix module is composed of two 8*8 dot matrixes. The HT16K33 is used as a dot matrix control chip. It needs to use the dot matrix modulo software to obtain the mode of the displayed image, which can be displayed normally after being sent to the HT16K33 through I2C.

8X8 dot matrix display principle:

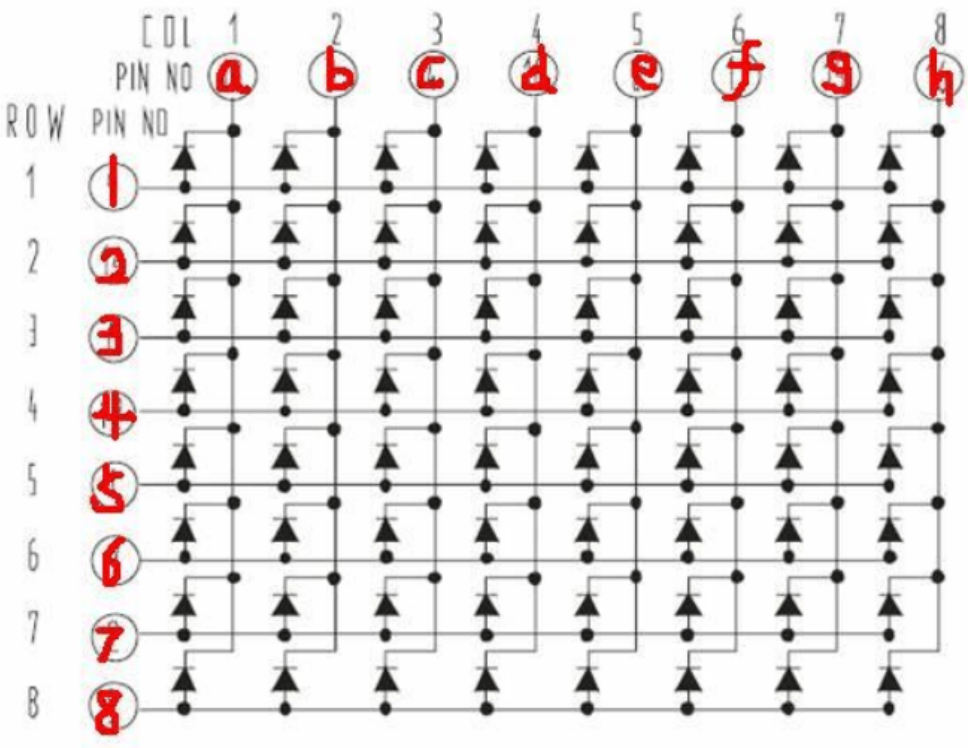
The 8X8 dot matrix is composed of 64 LEDs, and each LED is placed at the intersection of the row and column lines. When a corresponding row is set to 1 (HIGH)level and a column is set to 0(LOW) level, the corresponding diode will be light on.

Eg:

If you want to light up the first point, the PIN 1 is connected to the 1(HIGH) level and PIN a is connected to the 0(LOW) level. Then, the first point will be lit.

If you want to light up the first row, the PIN 1 is connected to the 1(HIGH) level and (a, b, c, d, e, f, g, h) these pins are connected to 0(LOW) level, then the first row will be lit.

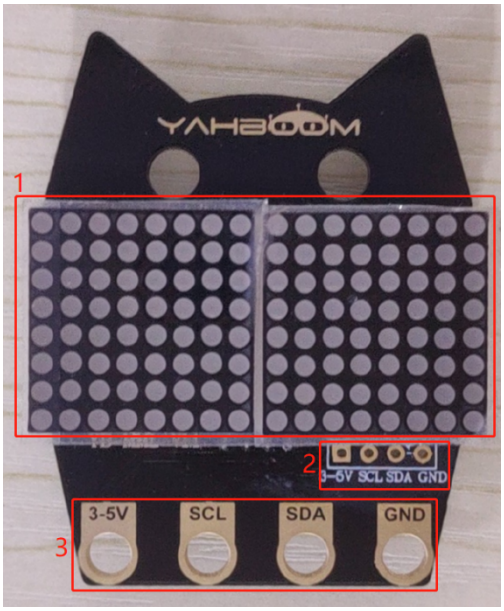
If you want to light up the first column, the PIN a is connected to the 0(LOW) level and (1, 2, 3, 4, 5, 6, 7, 8) these pins are connected to 0(HIGH) level, then the first column will be lit.

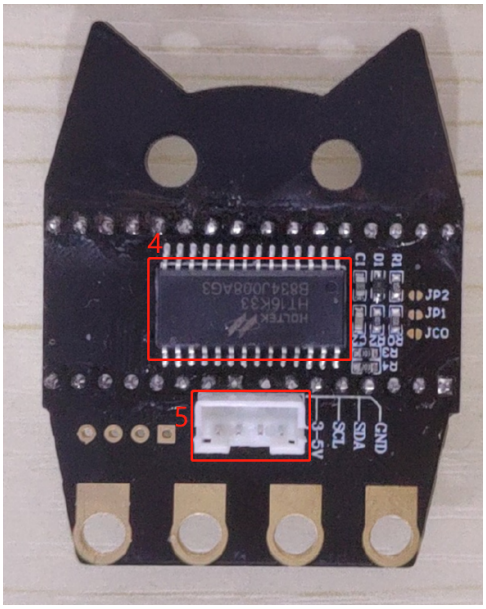


2.Practical application

2.1 Display pattern

3.About module





3.1 Dot matrix: be used to display

3.2 4 pin holes are reserved, which can be used after welding.

3.3 Dot matrix module possess 4 Alligator clip port, Corresponding to GND, 3-5V, SCL and SDA. **SCL and SDA are pins for transmitting data in I2C communication.**

3.4 HT16K33 chip, controls the display of the contents of the dot matrix.

3.5 I2C socket, can be directly plugged into the cable connection.

Working Voltage: 3.3V/5V