

Optical Fingerprint Identification Module R307

with Finger Induction

Product introduction

R307 Fingerprint Identification Module is mainly composed of optical fingerprint sensor, high-speed DSP processor, high-performance fingerprint comparison algorithm and large-capacity FLASH chip. It features stable performance and simple structure. It is able to enter the fingerprint, process images, align fingerprints, search and store templates.

The fingerprints were collected with a dark background of blue.

Shipping list: a fingerprint module, a wire.

Product features

- ◆ Perfect function: independently complete the functions of fingerprint collection, registration, comparison (1:1) and search (1: N).
- ◆ Small volume: small volume, no external algorithm DSP chip circuit board, integrated design for less errors, easy to install.
- ◆ Ultra-low power consumption: the power consumption is very low to satisfy many requirements.

- ◆ Strong anti-static ability: the anti-static index is above 15KV.
- ◆ Simple development: developers can develop their own fingerprint applications according to their commands without professional knowledge of fingerprint identification.
- ◆ Adjustable security level: the security level can be adjusted by the user as needed.
- ◆ Signal output is sensed via finger touch, and it is enabled at low. Induction circuit standby current is lower than 5 uA.

R307 Fingerprint Identification Module Description

1.Fingerprint capacity:

The storage capacity of the R307 module is 1,000 pieces.

2.Description of interfaces:

R307 module communicates by dual interfaces -- RS232 and USB2.0. The later can be connected to computer. As for RS232, it is the TTL level with a default baud rate of 57600(changeable, fro details refer to the Communication Protocol). It can be connected with MCU with serial ports, such as ARM and DSP, or directly connects to 3.3V / 5V controllers.

Connecting to the computer requires a level conversion. For example, the MAX232 circuit.

3.Power supply

The module circuit board is marked with 2 contacts short circuit of 3.3V, which means DC3.3V are adopted.

Technical parameters

Power supply voltage: DC 4.2~6.0V

Power supply current:

Operating current: 50 mA (typical value)

Peak current: 80 mA

Fingerprint image input time: <0.3 seconds

Window area: 14 × 18 mm

Matching method:

Comparison (1:1)

Search (1: N)

Feature file: 256 bytes

Template file: 512 bytes

Storage capacity: 1,000 pieces

Safety level: Level 5 (from low to high: 1,2,3,4,5)

False accept rate (FAR): $<0.001\%$

False rejection rate (FRR): $<1.0\%$

Search time: <1.0 seconds (average value at 1:1000)

Upper computer interface: UART \ USB1.1

Communication baud rate (UART): $(9600 \times N)$ bps, $N=1\sim12$ (default $N=6$,
i.e. 57600bps)

Working environment:

Temperature: -20°C - $+40^{\circ}\text{C}$

Relative humidity: 40% RH-85% RH (no condensation)

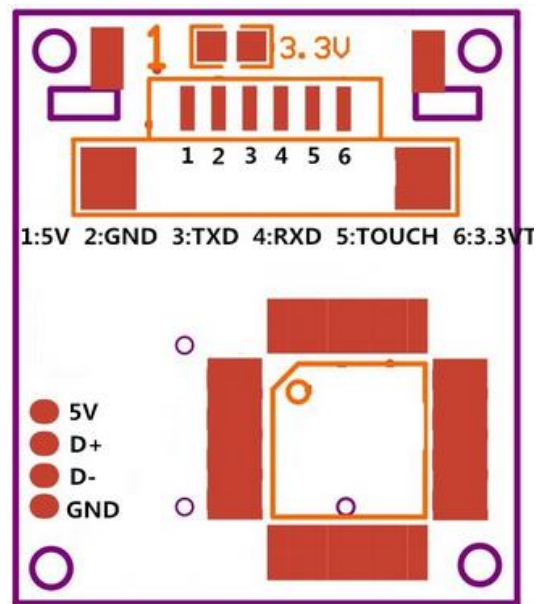
Storage environment:

Temperature: -40°C - $+85^{\circ}\text{C}$

Relative humidity: $<85\% \text{H}$ (no condensation)

Suitable for fingerprint locks and fingerprint safe boxes.

Schematic diagram of circuit board:



Dimension diagram:

