



FD22 Face Module User Manual

FD22 Video Intercom Face Module Specification

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Huashengtong (Wuxi) Imaging Technology Co., LTD



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History of Versions				
edition	date	modifier	page nu- mber	revise content
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1 Module Overview

1. Features of 1 Module

FD22 high-performance visual intercom face module is a binocular living body face recognition solution customized for face recognition application scenarios, creating a more secure, reliable, easy to use and cost-effective biometric product.

The module employs dual-camera facial recognition technology with bionic algorithms, supporting UVC/UAC transmission of MJPEG video formats and two-way video intercom functionality. It achieves industry-leading security while delivering user-friendly features including fast recognition speed, low power consumption, strong environmental adaptability, and wide height coverage. Key specifications include:

- ✓ Supports binocular living face recognition, simple operation, fast identification, high accuracy, strong adaptability
- ✓ Low cost/high performance: The use of face recognition module can achieve the goal of low cost/high performance
- ✓ Supports UVC transmission of MJPEG video format and two-way voice intercom function

1.2 Applied Range

FD22 high performance video intercom face module is widely used

- ✓ Security: smart door lock, attendance system, safe deposit box, access control system
- ✓ Government affairs: medical insurance, pension, government software, authorization and license, etc



2 Parameter

2.1 Technical Parameters

		Table 2-1 Technical Parameters
project		technical parameter
	Module dimensions	40*20mm
	working voltage	5.0V~9.0V
	working current	300-335mA
	Time to power on	< 0.34s
joggle	UART	4pin, 3.3v TTL, 115200bps
	USB 2.0	5pin, UVC
RGB camera lens	resolution ratio	1/6.5", 1280H x 960V
	FoV	H 60.4°, V 47.6°, D 72.8°
IR camera lens	resolution ratio	1/6.5", 1280H x 960V
	FoV	H 60.4°, V 47.6°, D 72.8°
	user capacity	100
face recognition	Registration distance	35cm~100cm
	Distance to the equinox	40cm~100cm
	The rejection rate	< 0.1%
Vein recognition	Misidentification rate	< 0.001%
	1: N search time	<1s
	user capacity	100
	Registration distance	20cm~30cm
	Distance to the equinox	20cm~30cm
	The rejection rate	< 0.1%
Environment and reliability	Misrecognition rate	< 0.001%
	1: N search time	<1s
	Storage temperature	-40°C ~ 85°C
	working temperature	-30°C ~ 70°C
reliability	Humidity at work	<93%, no condensation
	static electricity	ESDHBM ±2000 V



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2.2 Supported Video Formats

Table 2 - 2 Supported Video Formats			
order number	type	pixel	frame rate
1	640*480	VGA	37
2	1280x720	720P	30



3 Hardware Interface

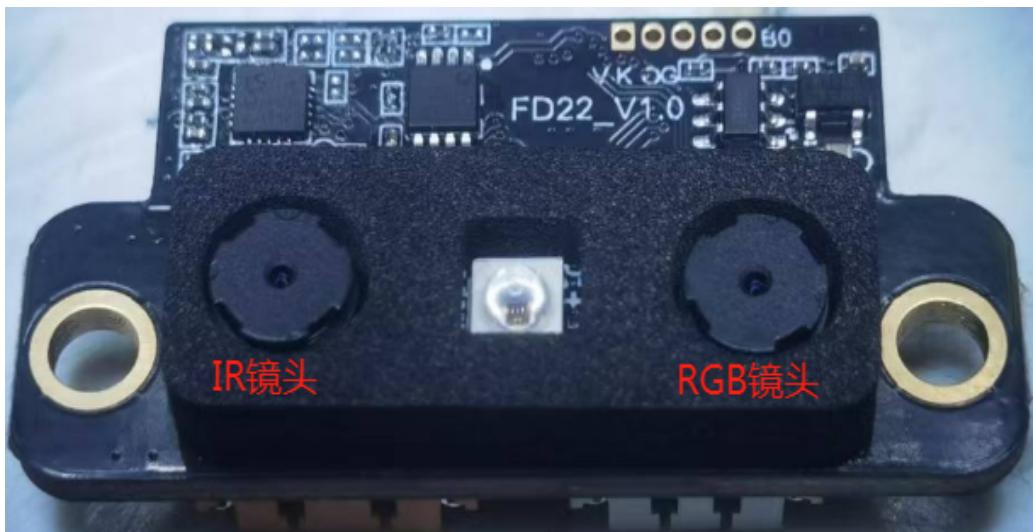


Figure 3-1 Front of F D 2 2 Module

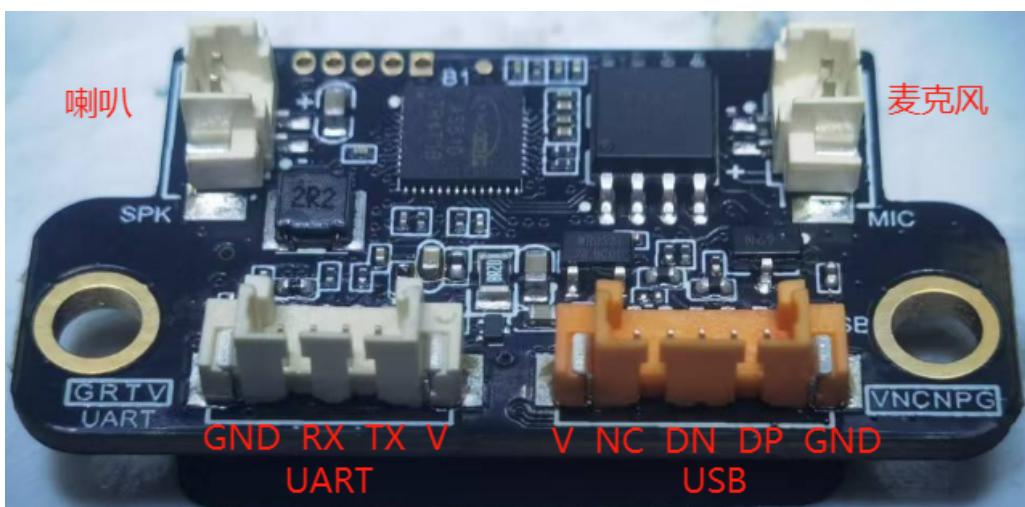


Figure 3-2 Back of FD22 Module

Note: The module uses UART serial port for external communication, TX is connected to the host computer RX, RX is connected to the host computer TX.



3.1 Cat Eye (USB) Interface

The USB interface cable sequence is shown in the figure, and the signal definition is as follows:

Table 3-1 FD22 USB Interface Definition

Port number	Port name	direction	explain
1	GND	-	the earth
2	USB DP	I/O	USB D+
3	USB DN	I/O	USB D-
4	NC	-	-
5	VUSB_5V	I	Power supply (5-12v)

The USB port is a UVC port.

3.2 Gorge Line (UART)

The sequence of the serial port cable is shown in the figure, and the signal definition is as follows:

Table 3-2 FD22 Debugging UART Interface Definition

Port number	Port name	direction	explain
1	VBUS_5V	I	Power supply (5-9v)
2	TXD	O	Serial output
3	RXD	I	Serial input
4	GND	-	the earth



4 Mechanical Dimensions Diagram

