DOCTYPE	VERSION	DATE	CONFIDENTIALITY	
Specification	V1.1	2019-11-21	Public	

T-CHIP TECHNOLOGY

Face Recognition All-In-One PC

Face X1

V1.1

Version	Date	Updated content
V1.1	2019-11-21	Update installation method

Directory

1. Product Overview

Face X1 adopts RK3399 six-core 64-bit CPU, equipped with aluminum CNC case, IPS high-end screen and wide dynamic binocular camera. It has powerful face recognition performance, high-efficiency recognition, stable and reliable operation, and open related material to facilitate the facial recognition project.

1. Six-core 64-bit Processor

Uses RK3399 six-core 64-bit“server-level”processor, frequency up to 1.8 GHz, integrates quad-core Mali-T860 GPU. It supports multi-format video coding and decoding, and has better processing performance.

2. Efficient Identification And High Accuracy

Supports various face recognition algorithms smoothly, and the response to detection speed is efficient. Recognition speed is less than 200 ms and recognition accuracy is more than 99.77%.

3. Support Multiple Recognition Modes

Maximum supports identify 100,000 face database and multiple recognition modes(1:1, 1: N, M: N) to realize multi-person recognition and detection at the same time easily.

4. Equipped with Management System

Equipped with face recognition program (APK), PC background management software and mobile phone management software (WeChat APP). They can be directly applied to the project by matching the whole machine.

5. Wide Dynamic Binocular Camera

Built-in wide dynamic binocular camera which with 1/2.7″ CMOS light-sensitive chips, 2 million pixels(1920×1080), greater than 100dB wider dynamic range, 0.1LUX at F1.8 super low illumination. It's suitable for various complex light environment.

6. High-Quality IPS HD Screen

With 8-inch fully fitted IPS screen, 800x1280 resolution, full-view HD display, vivid color reproduction, clear and smooth picture. It supports multi-touch and with sensitive and stable touch.

7. Aluminum CNC Case

Adopts aluminum alloy high-precision CNC case, after 38 processes, surface oxidation treatment, fanless design, effective heat conduction, stable operation under high-temperature aging of 60℃ for 7x24 hours. IP54 protection to satisfy the indoor or outdoor operating requirements.

8. Convenient Installation

Face X1 can be installed of stationary type or of wall mounting type, which is so easy and could be quickly used in various occasions.

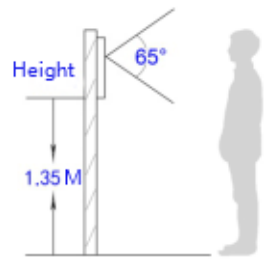
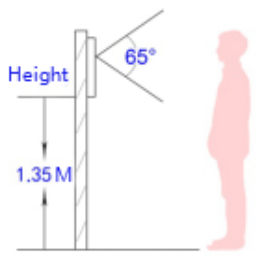
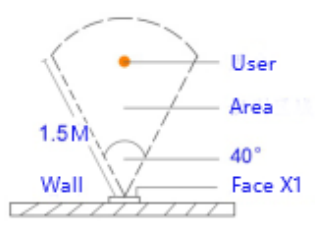
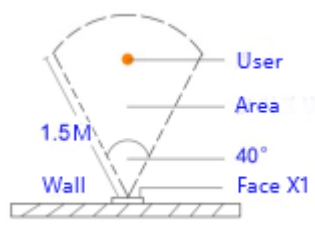
9. Rich Expansion Interfaces

Supports Wiegand interface (26bit)/RS485 (switching through relay), LED driver interface (white light, infrared light), light sensor (I2C interface), 4G LTE network (optional), etc.

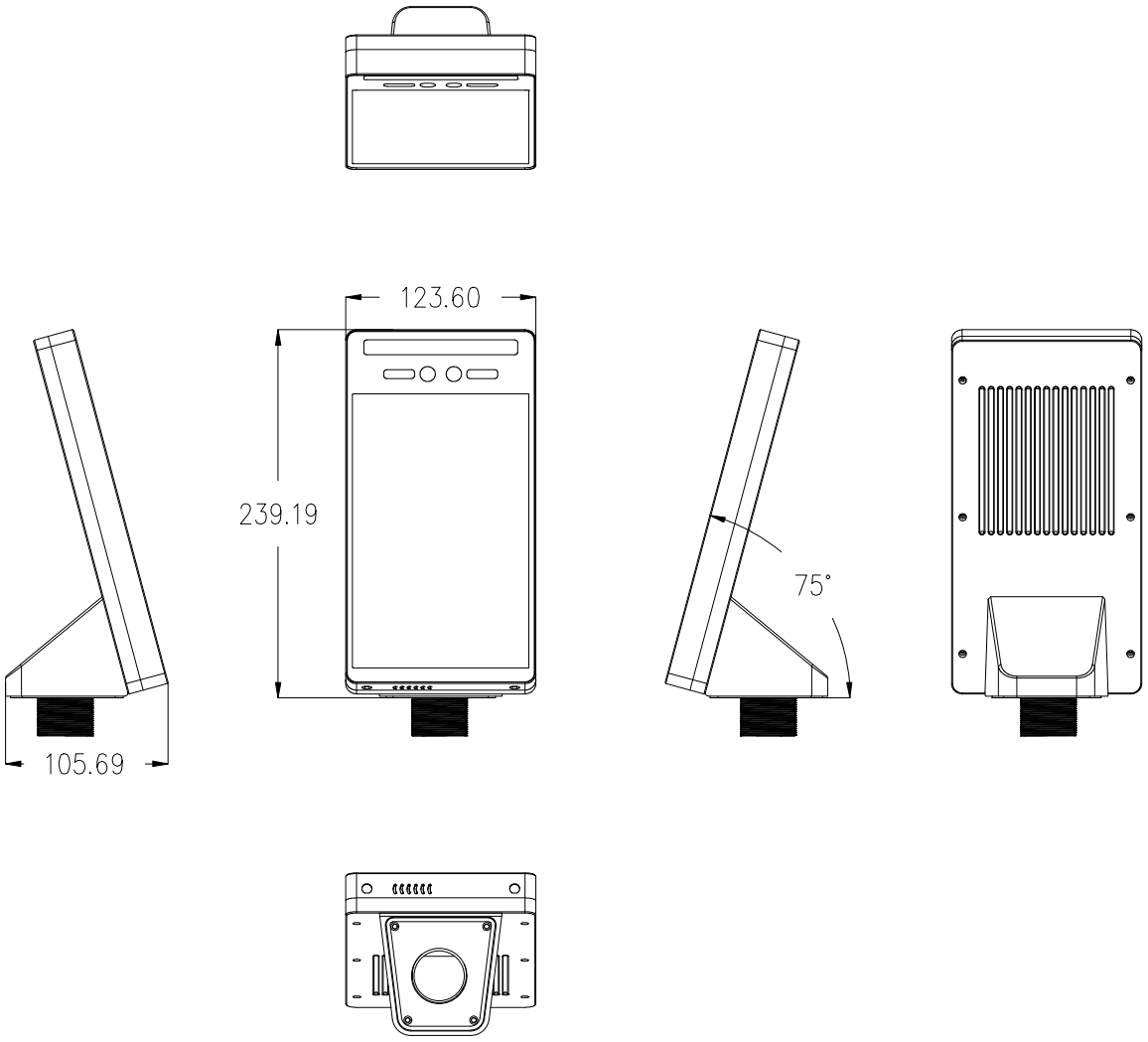
10. Applications

Face X1 can be applied in buildings, communities, campuses, construction sites, factories and other occasions that require access control, attendance, and face payment, etc.

2. Specification

Face Recognition All-In-One PC			
Product	Model	Face X1	
Screen	Size	8-inch, full-view, IPS LCD screen	
	Resolution	800 × 1280	
Binocular Camera	Type	RGB Camera	IR Camera
	Sensor	1/2.7″ CMOS	1/2.7″ CMOS
	Pixel	2 million pixels（1920×1080）	2 million pixels（1920×1080）
	Minimum illumination	⩾0.1LUX at F1.8	⩾0.1LUX at F1.8
	Frame rate	30fps	30fps
	Signal-to-noise ratio	⩾45dB	⩾45dB
	Output format	MIPI 8bit YUV422	MIPI 8bit YUV 422
	White balance	Automatic	Automatic
	Wide dynamic	⩾100dB wider dynamic range suitable for various complex light environment	-
	Vertical wide angle		
	Horizontal wide angle		
Main Parameter	CPU	RK3399 six-core 64-bit 1.8GHZ processor（Dual-core Cortex-A72+ Quad-core Cortex-A53）	
	RAM	2GB LPDDR4	
	Storage	16GB eMMC， Support TF card expansion	
	Fill light	White fill light, IR fill light, Red and green indicator light	
	Wireless network	2.4GHz WiFi, support 802.11 b/g/n protocol 3G/4G LTE network (optional)	
	Wired network	10 / 100M Ethernet	
Interface	Wiegand interface	Support Wiegand 26 (shared with RS485, switched by relay)	
	USB	USB 2.0 Host x 1， USB 2.0 OTG x 1	
	RJ45	RJ45（10 / 100M Ethernet）	
	Power	DC 5.5mm*2.5mm	
Software Features	1：N Face recognition	99.7％ recognition accuracy	
	Stranger detection	Support	
	Face anti-spoofing	Support	
	UI interface configuration	Support	
	Remote upgrade	Support	
	Deployment method	Support LAN, public network use	
Other	Power	DC 9-16V 2A	
	Power consumption	22W MAX	
	Operating temperature	0˚C～60˚C	
	Operating humidity	10%～90 %RH (non-condensing)	
	Size	238 mm × 123.6 mm × 27 mm	
	Mounting type	Wall mounted、Desktop mounted 、Column mounted	

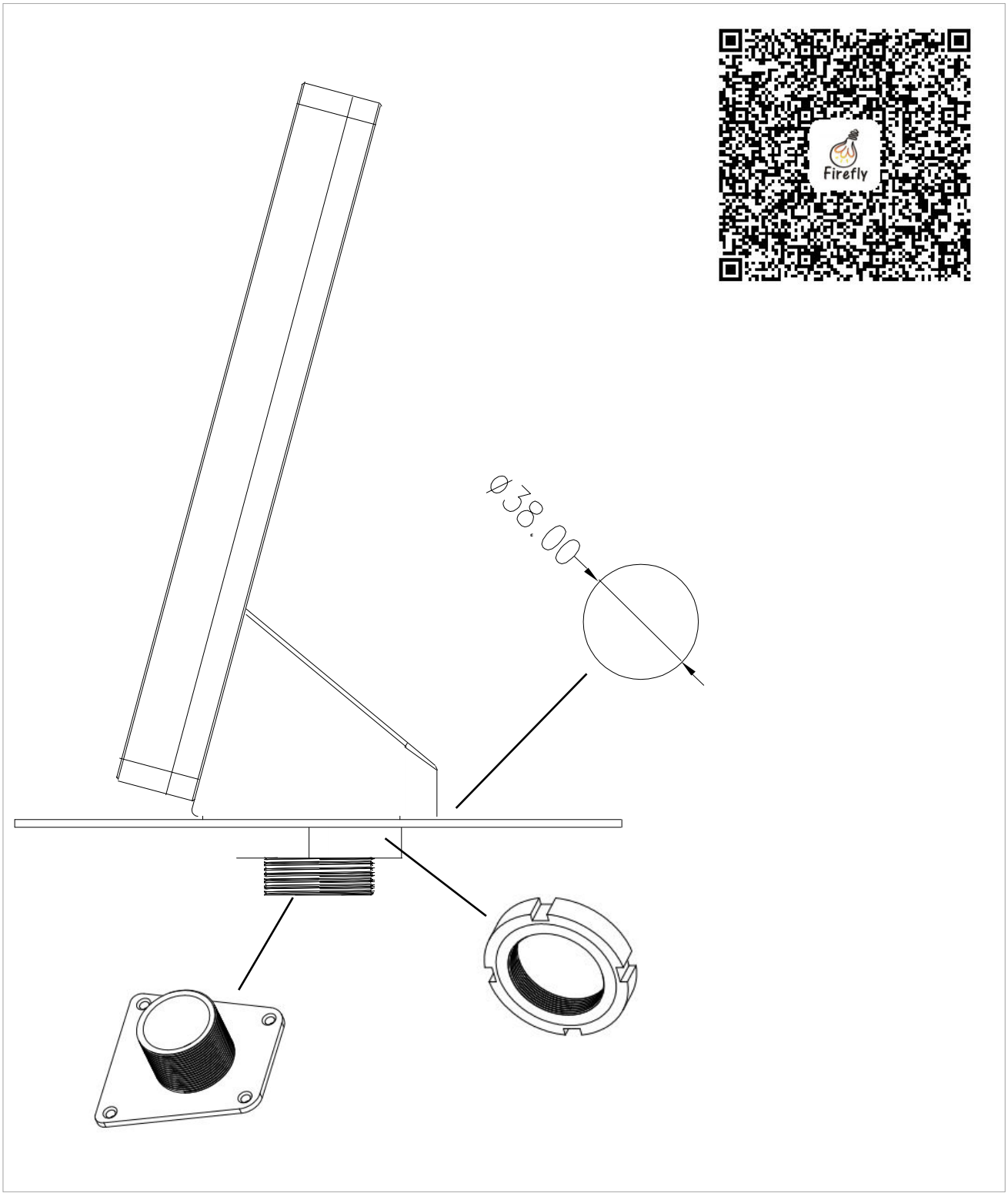
3. Size



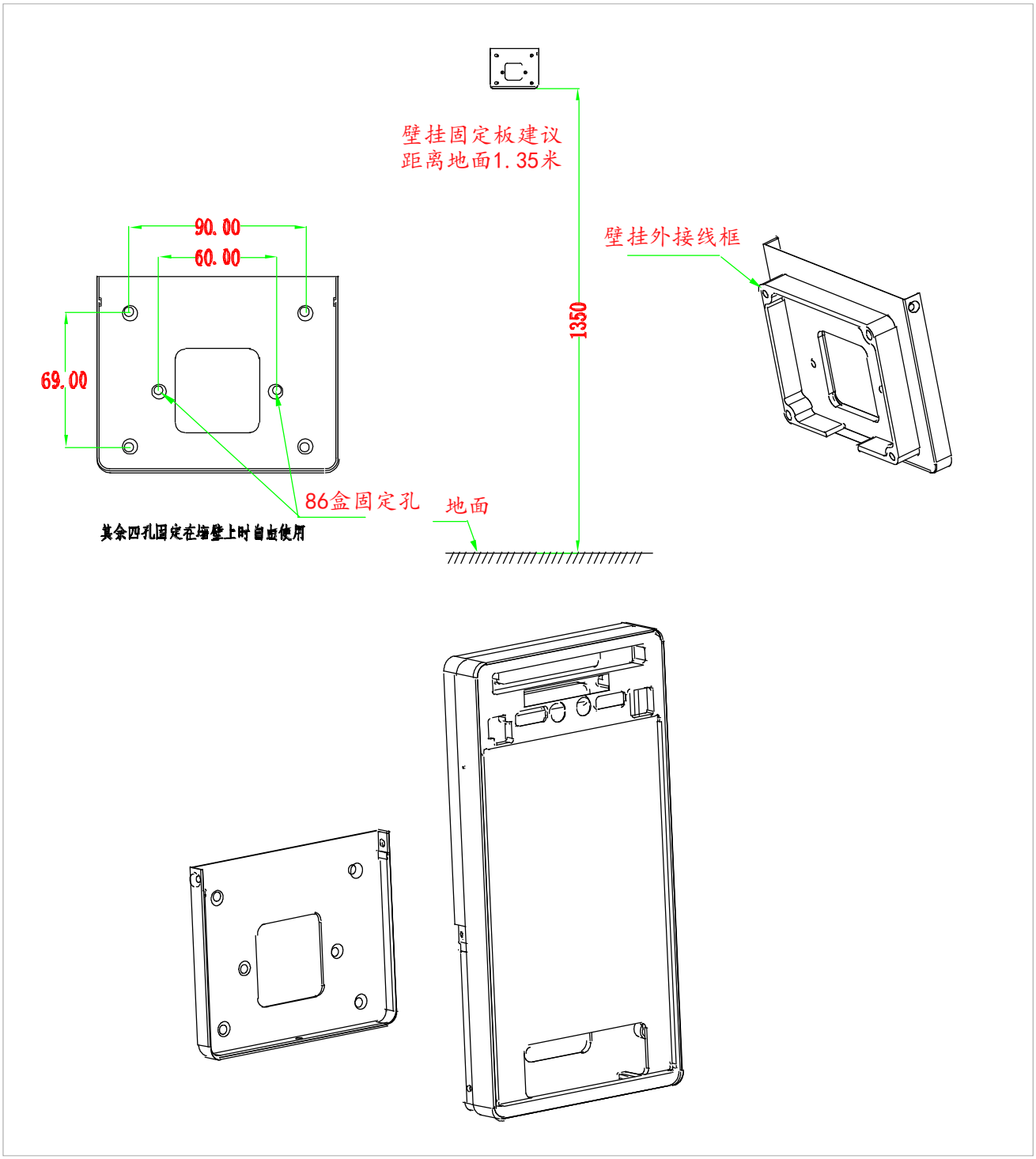
4. Mounting type

There are three installation methods ： Desktop mounted 、 Wall mounted、 Column mounted

1. Desktop mounted



2. Wall mounted

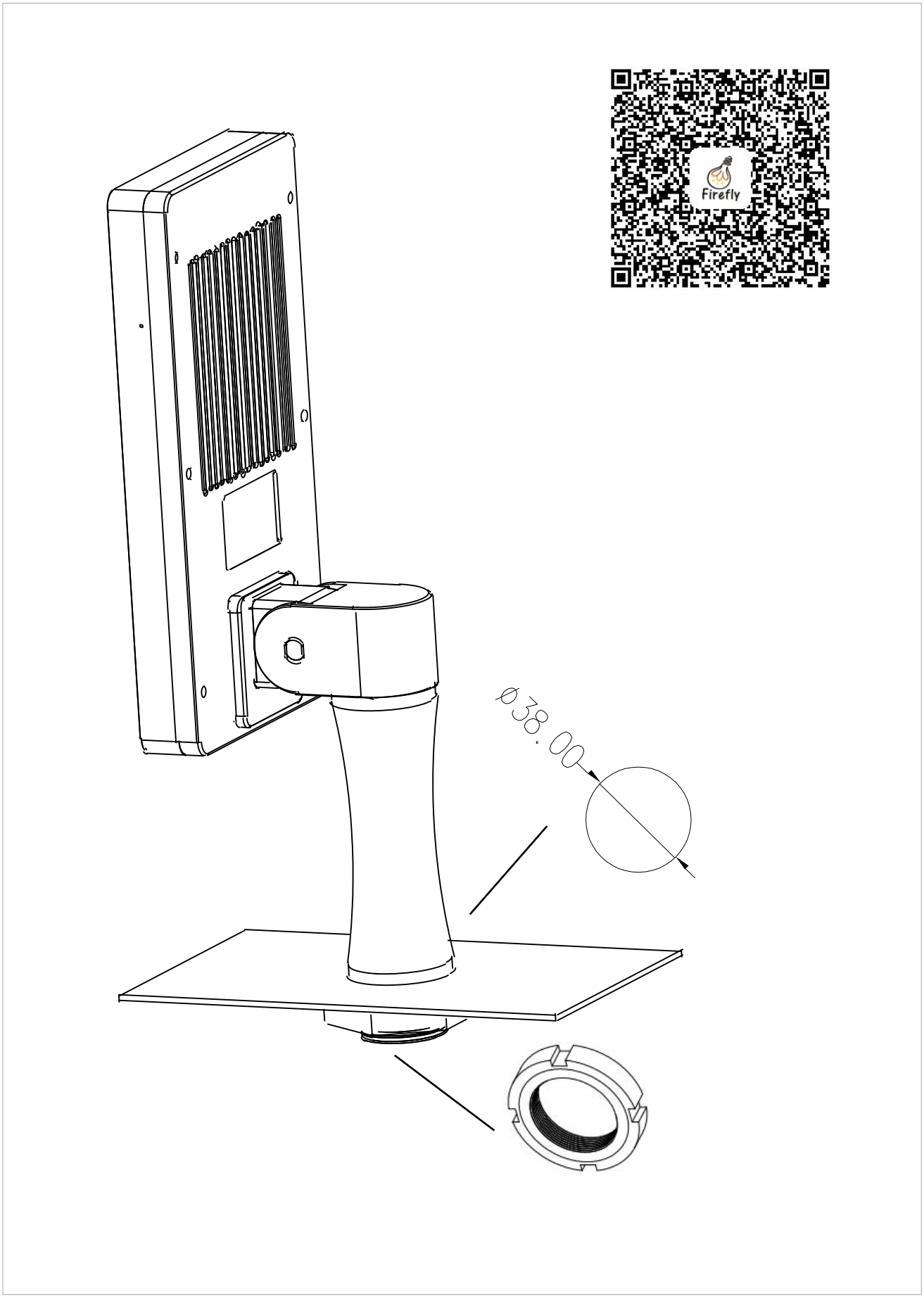


Video display:

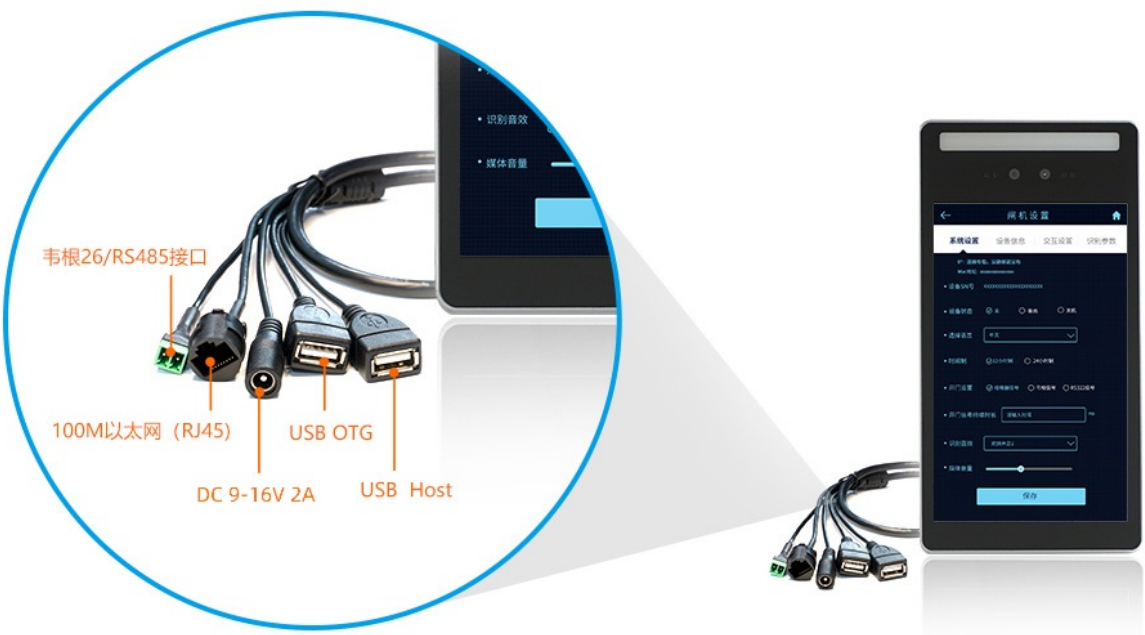
① 安装到86型布线盒
Mounted to 86 type of switch box

② 安装到墙面
Mounted to the wall

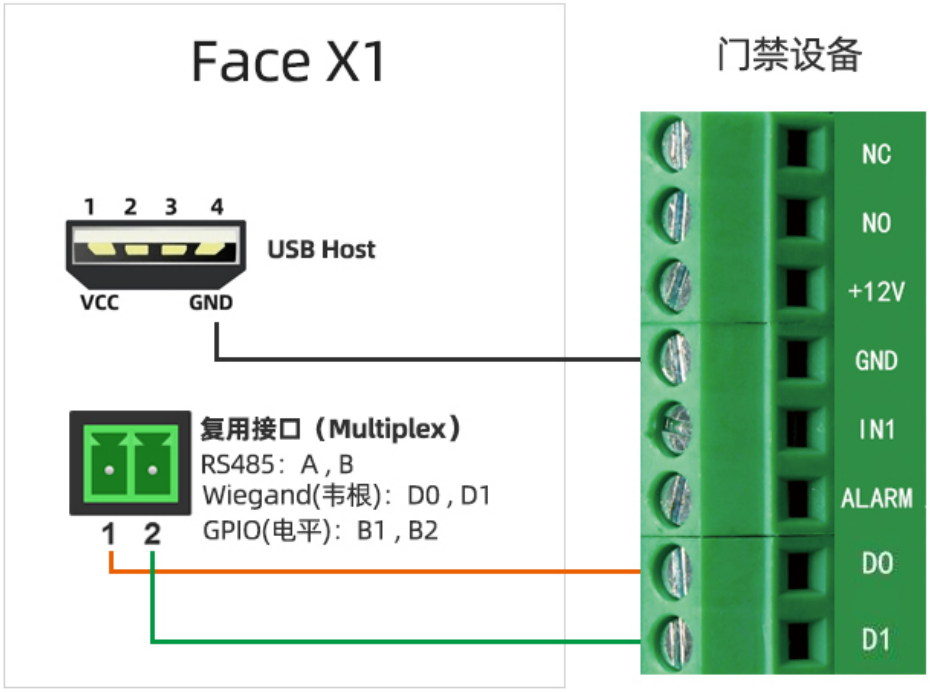
3. Column mounted



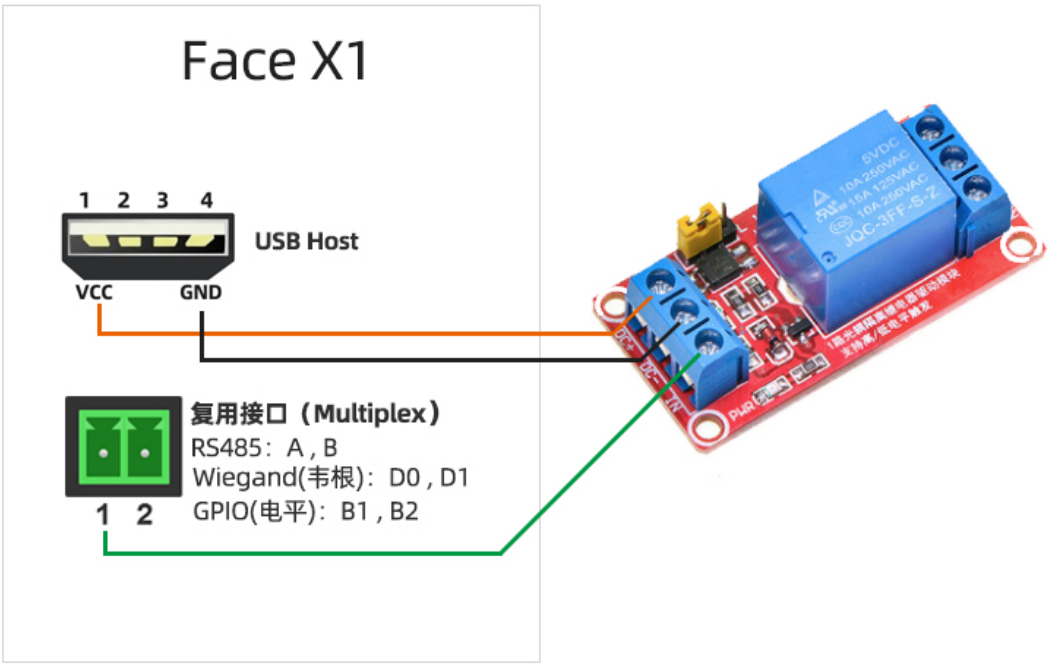
5. Appearance and interface



Face X1-韦根接口连接方法



Face X1-（GPIO）继电器连接方法



Appendix

1. Company Profile

T-Chip Intelligent Technology Co., Ltd. was founded in 2005. It has more than 10 years of research and development experience in scientific and technological products, has 6 invention patents and more than 30 computer software copyrights, and is a national high-tech enterprise. We focus on the research and development, design, production and sales of open source intelligent hardware, internet of things and digital audio products, and provide the overall solution for intelligent hardware products meanwhile.

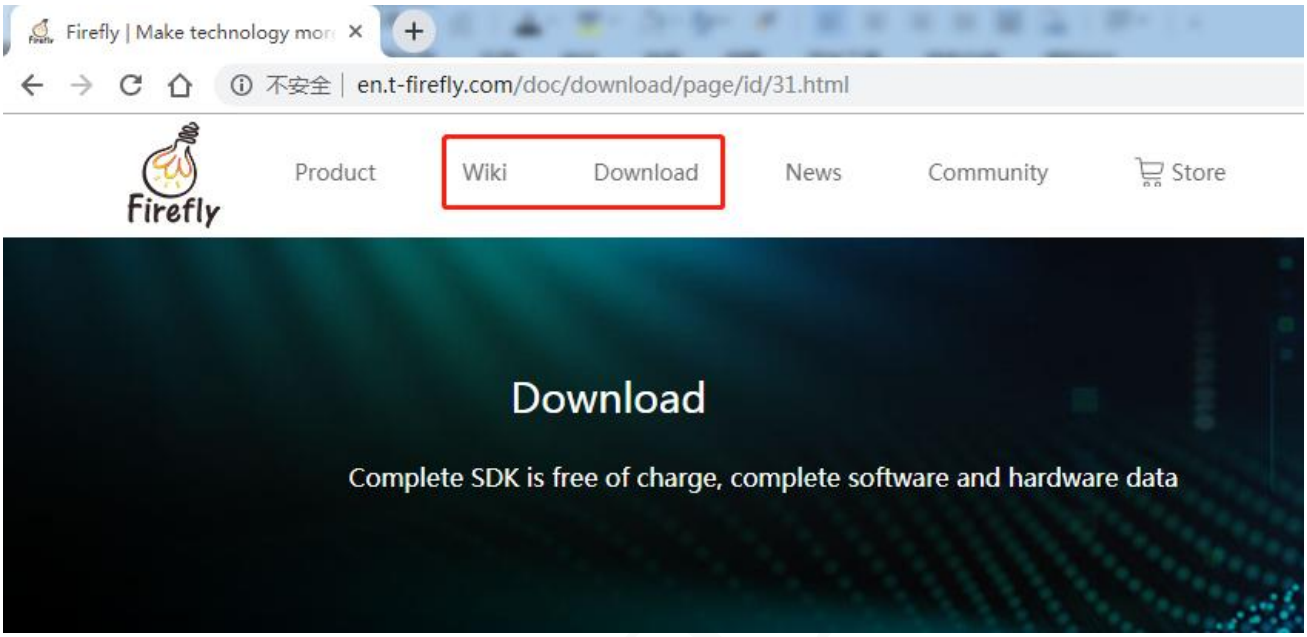
Firefly is a brand owned by T-chip Technology. It operates open source products, open source communities and online stores. It has a large number of enterprise users and developer users, and its products are well received by users. Firefly open source products include open source boards, core boards, industry mainboards, etc. The open-source board series is the recommended board card by chip original factory Rockchip and obtain the support of native SDK. The core boards and industrial mainboards are widely used in commercial displays, advertisement integrated machines, intelligent POS, face recognition terminals, internet of things, intelligent cities, etc. At present, there are more than 100,000 users, including over 2,000 enterprise users. And well-known users include ARM, Google, Baidu, Tencent, Alibaba, etc.

Firefly team has more than 60 research and development members and has the research and development capabilities in schematic design, PCB layout, mainboard production, embedded development, system development, application program development, etc., which accelerates the research and development process for many technology entrepreneurs and start-ups, and provides professional technical services..

" Make technology more simple, Make life more intelligent " is the idea of Firefly team. We hope to make the research and development of various technology products efficient and simple, and let intelligent technology integrate in our lives through the open source products and technical services of Firefly.

2. Source code acquisition

Please visit the official website : (please click here)



3.Contact Us

Company	T-chip Intelligent Technology Co.,Ltd.
Address	Room 2101,No.1Hongyu Building, #57 Zhongshan 4Rd, East District, Zhongshan, Guangdong
Mobile	(+86) 186 8811 7175
National service hotline	4001-511-533
Telephone	0760-89881218
Zip code	528400
Business	sales@t-firefly.com
Website	www.t-firefly.com