Face Recognition Device
Model:F0802-PLUS
Specification Sheet

Bozz

Bozz Technology（Shenzhen）Co., Ltd.

Version:V1.1

Date:2020.05.27

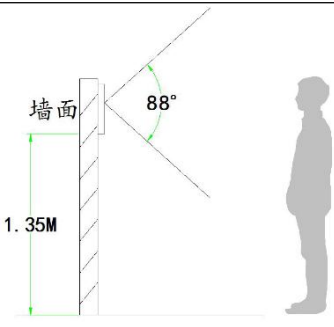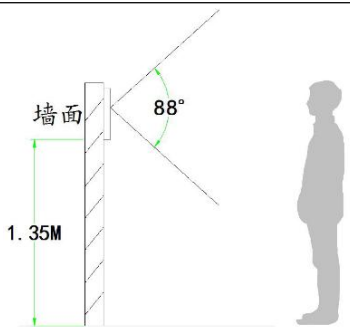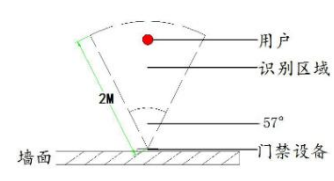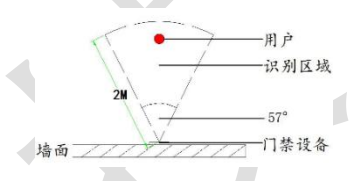# Model:F0802-PLUS Description

I. application scenarios

Applicable to office areas, hotels, office buildings, schools, shopping malls, stores, communities, public services and other places that require access control privileges, human verification management.

II. Characterization of the equipment

- Wide dynamic binocular camera, supports live monitoring.
- Efficient infrared fill light.
- Optional temperature monitoring module.
- Optional human movement detection module.
- Optional external NFC card reader, ID card reader, sunshade, 86 mounting box.
- Support RS-485 serial port, standard Wegen interface, built-in relay, multiple I/O inputs and outputs, door magnetic output.
- Support the use of public network, LAN deployment mode, optional 4G communication module.

iii. Equipment specification sheets

Integrated Face Recognition Terminal			
equipment model		Model:F0802-PLUS	
Screen	Dimensions	8 inches Full View	
	Resolution	800*1280	
	Type	Color	Infrared
	Resolution	2 megapixels	1.3 megapixels
	Aperture	F2.4	F2.4
	Focal length	3.0MM	3.0MM
	White balance	Automatically	Automatically
	Wide Dynamic	Support	Support

Camera	Vertical wide angle		
	Horizontal wide angle		
basic specifications	operating systems	Android 7.1　BOZZ OS	
	Processor	3288 A17*4 clocked at 1.8GHz & Mali T764 Optional Configurations:RK3399 A72*2+ A53*4 1.8GHz & Mail T864	
	Memory	2G DDR+32G EMMC Optional: 4G DDR+16G/32G/64G EMMC	
	equipment power supply	DC 12V/2A	
	equipment power consumption	9.8W　Max	
	relative humidity	0%-90% (in non-condensing state)	
	Operating Temperature	-10°C ~ 55°C	
	Storage temperature	-20°C ~ 70°C	
	level of protection	IP66	
	the environment in which it is used	Indoor, outdoor	
	equipment dimensions	243.8mm*130mm*26.4mm	
	identification method	Faces	
		USB Type-A *1	
		RJ45 LAN port*1	
		Micro-USB debugging port*1	
		DC power supply port *1	

hardware configuration	Interface	RS485*1
		Relay switching interface*1 ,
		Standard Wergen interface*1
		I/O ports*2
		SIM card slot*1
	Infrared fill light	Support
	Two-color status indicator light	Support
	White filler light	Support
	temperature monitoring	Support (optional: customized procurement required)
	Speakers	2W*1
Basic parameters	WIFI	2.4G supports IEEE 802.11b/g/n
	Bluetooth	Support Bluetooth 2.1/3.0/4.0/4.2
	means of communication	4G Full Netcom(Optional:Customized purchase required)
packaging parameters	Weight	1.92Kg
	Dimensions	368*193*105MM

IV. Model:F0802-PLUS Terminal Type Diagram
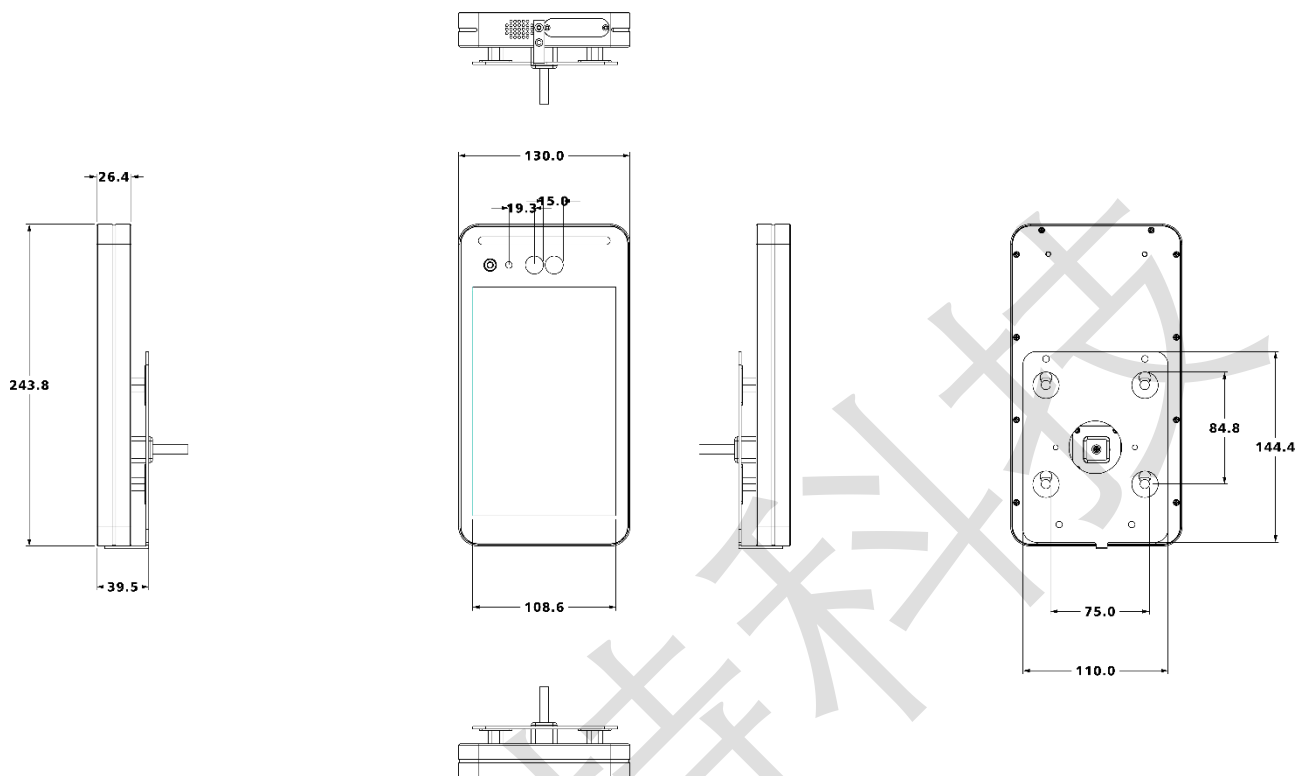
①Wall mounted version.

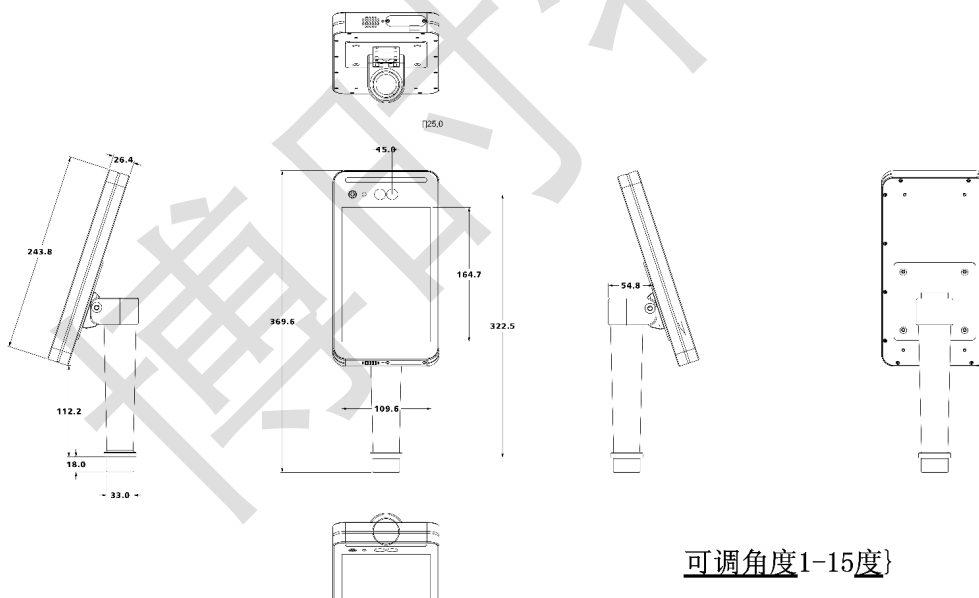②Gate version (gate bracket is non-standard, need to be customized procurement).

V. Model No.:F0802-PLUS Access Control Machine External Dimensions

①Wall-mounted version shape and size（243.8mm*130mm*26.4mm）

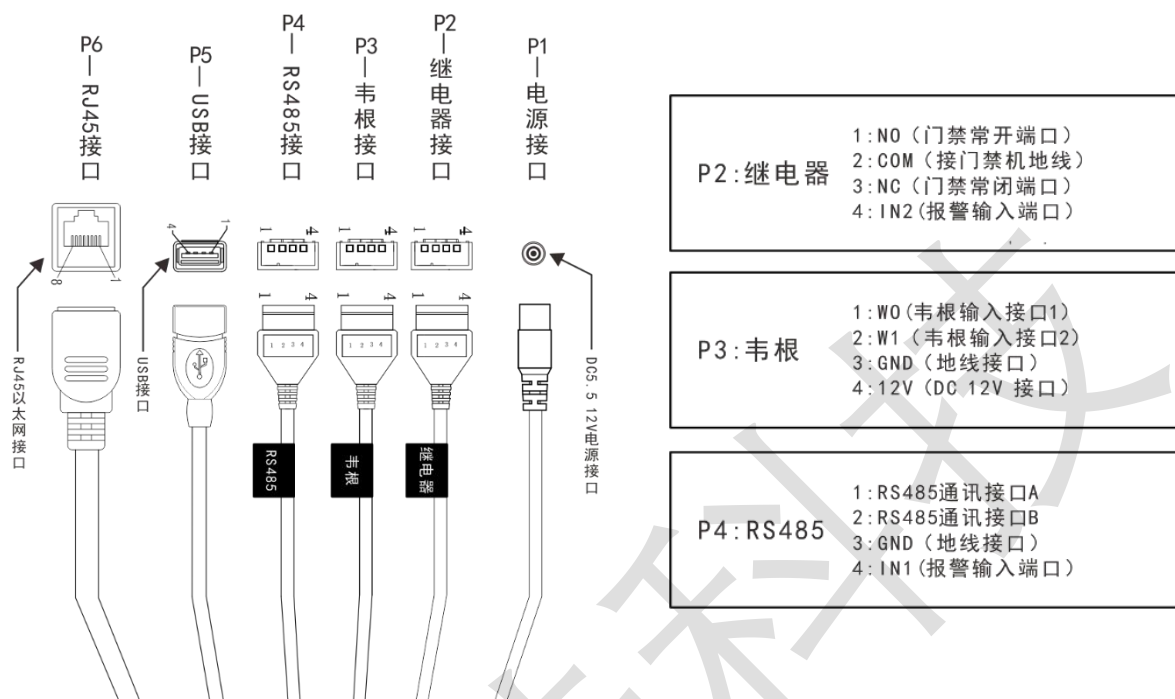②Shape and size of gate version（243.8mm*130mm*26.4mm）

可调角度1-15度}

VI. Exterior part indication and wiring instructions

（i）Description of the front part of the access control machine

宽动态双目摄像头

红外补光灯

双色状态灯 —————— 白色补光灯

体温监测模块 —————

8寸触摸显示屏

SIM卡槽

USB调试口

(ii) access control integrated wiring harness wiring instructions

P6 — RJ45接口
P5 — USB接口
P4 — RS485接口
P3 — 韦根接口
P2 — 继电器接口
P1 — 电源接口

RJ45以太网接口
USB接口
RS485
韦根
继电器
DC5.5 12V电源接口

| P2:继电器 | 1:NO（门禁常开端口）
2:COM（接门禁机地线）
3:NC（门禁常闭端口）
4:IN2（报警输入端口） |

| P3:韦根 | 1:W0（韦根输入接口1）
2:W1（韦根输入接口2）
3:GND（地线接口）
4:12V（DC 12V 接口） |

| P4:RS485 | 1:RS485通讯接口A
2:RS485通讯接口B
3:GND（地线接口）
4:IN1（报警输入端口） |

## Points to note.

1, relay interface control access control on and off (similar to the switch), itself can also be powered.

2、Weingart interface meets the input and output signals corresponding to Weingart protocol, and W0 and W1 are used as a group, and cannot be used individually by W1 or W2.

3、RS485 interface can communicate with external access control corresponding RS485 interface.

4, alarm input port (IN1/IN2) is a selective connection port, can also be turned into an output port, according to the need to choose to connect or not connect, does not affect the use.

VII. Installation steps

(a) Model: F0802-PLUS Installation of wall-mounted version for access control

①Description of the dimensions of the wall mounting bracket.

110.0
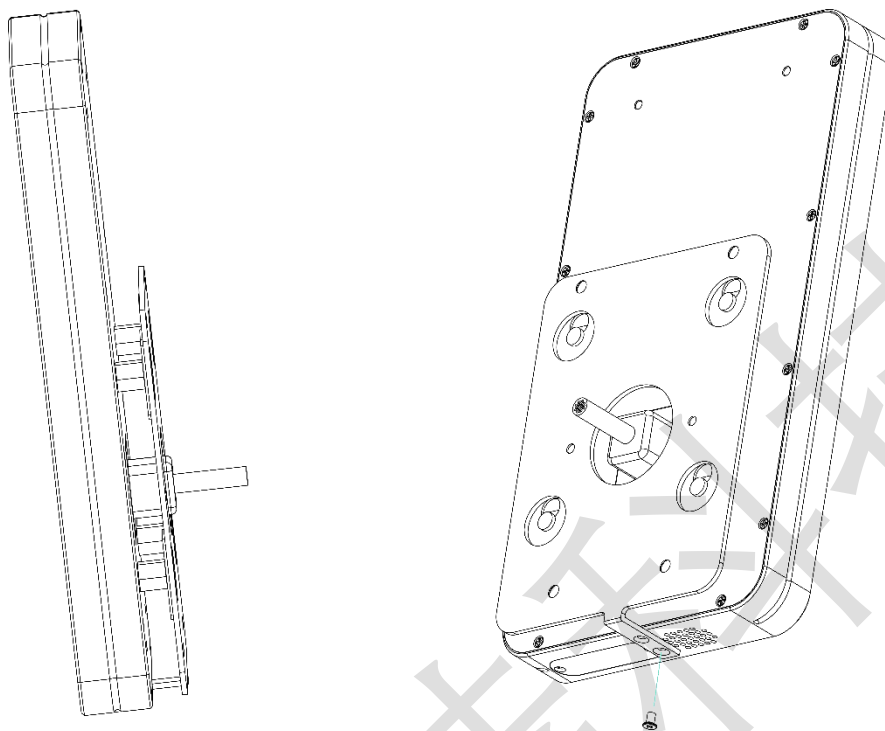
72.4

65.1

144.4

60.4

13.4

55.0　86盒安装固定孔
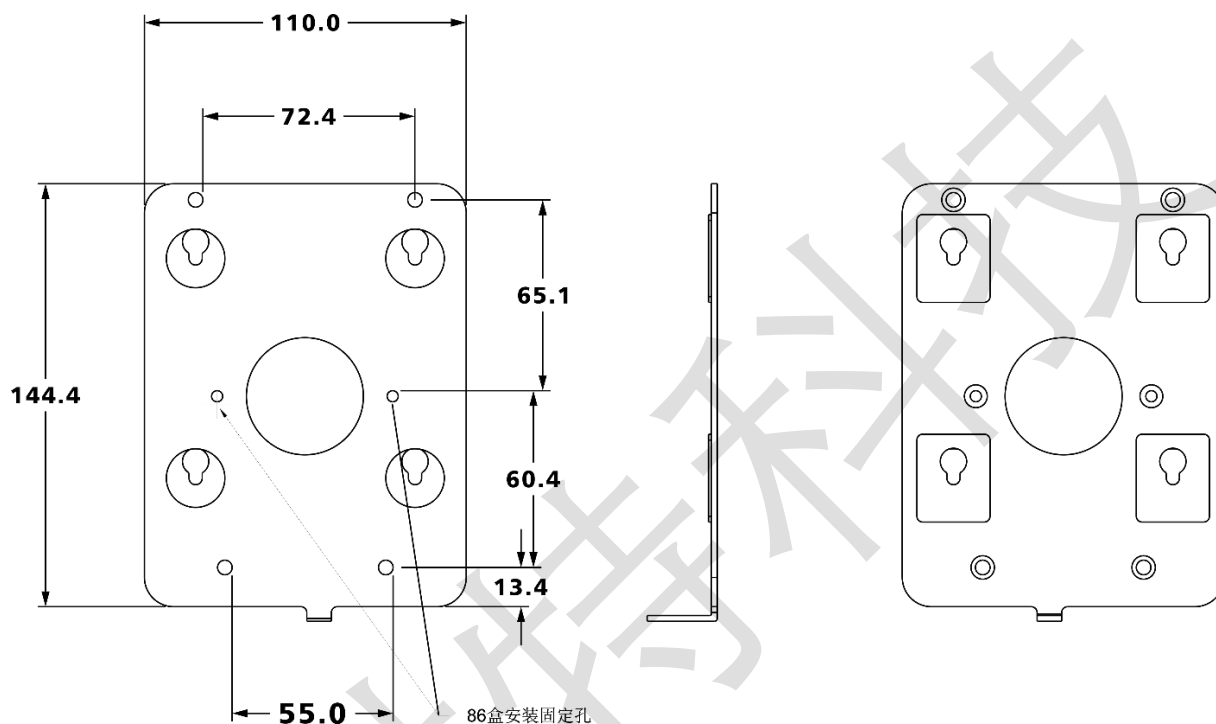
Note: If the device is equipped with 86 box, the package comes with 86 box screws and plastic expansion screws.

②Instructions on the mounting position of the wall bracket.

壁挂支架距离地面的安装尺寸为1.3米；
（以上为建议尺寸，可根据实际使用情况进行调整）
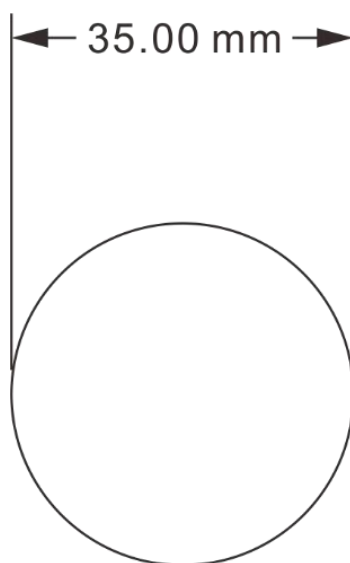
1300

Bozz Technology(She

地面

③ Fixing method of wall mounting bracket and equipment terminal.

Note: The fixed terminal can be fixed with one M3 anti-tampering screw, and the package comes with it.

(ii) Model: F0802-PLUS Installation of access control gate version

The gate fixing hole needs to be punched with φ35 through-hole, and GB812 nuts can be used to fix the column.

VIII. Packaging of access control machines and instructions for use

(i) List of materials/tools

Serial number	Name of material/tool	Dosage	Description
1	Mainframe and self-contained accessories	1	Comes with accessories including:12V adapter, accessory screws, wall bracket, desiccant, warranty card, inspection certificate, packing list and so on.
2	Outdoor switch (optional: requires outsourcing)	1	For use when going out (if you already have one, you don't need another one)
3	Electromagnetic lock (optional: to be purchased)	1	Power off to open the door, power on to lock the door (if you already have, do not need to match)
4	Magnetic lock power supply (optional: need to be purchased)	1	Power is supplied to the solenoid lock, and at the same time can be supplied to the Uface mainframe (not required if already in place)
5	Network cable (optional: to be purchased)	Several	for laying out Ethernet and other residual alignments
6	Network cable clamp, network tester, diagonal pliers, electrical tape, wire snap (optional: need to purchase)	Several	for laying out Ethernet and other residual alignments
7	Drilling tools (optional: to be purchased)	Several	For installing equipment, wiring alignments

(ii) Magnetic door wiring

1. Schematic diagram of the installation of the magnetic door system.
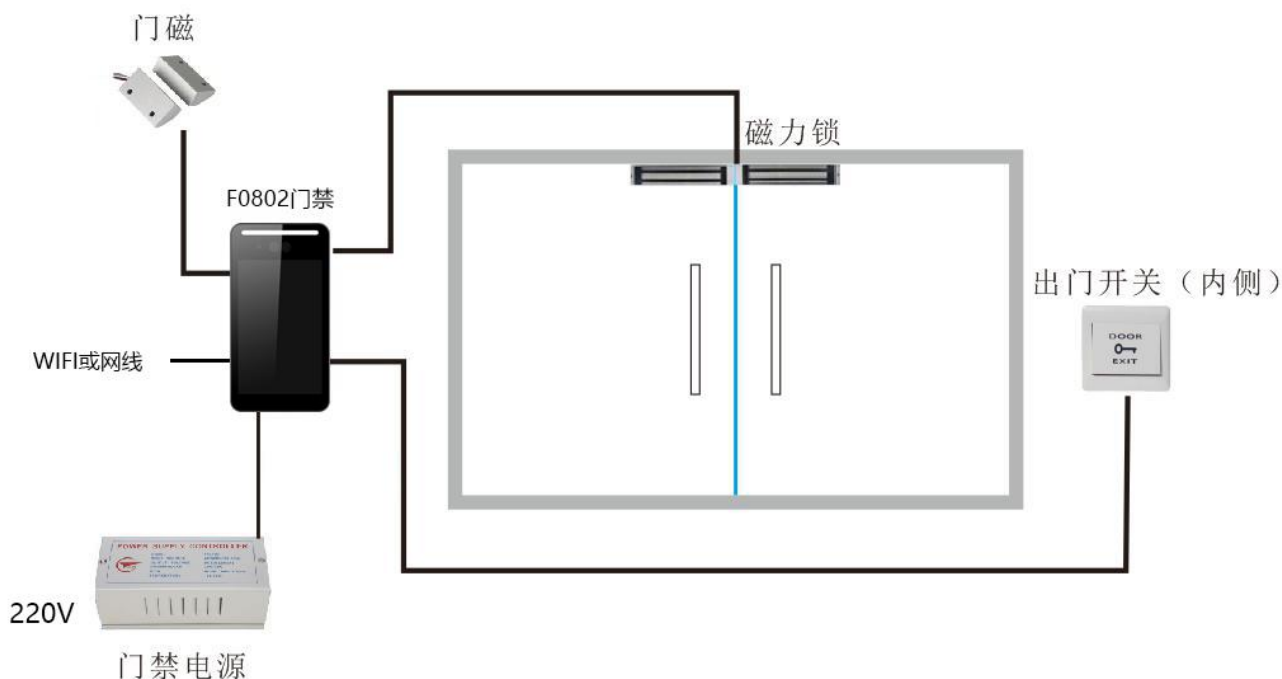
IX. installation considerations

1, face recognition access control system wiring must be reasonable and neat, reliable

installation, effectively prevent the occurrence of electrical safety accidents.

2, the actual wiring, if the host of the 12V power supply line does not use a "special power

extension cord" and a longer distance, resulting in cable equivalent resistance is too large, it is

easy to terminal voltage (≤ 11V), the host repeatedly restart, crash and other abnormal

phenomena.

3, must do a good job of anti-interference design, the installation of facial recognition access

control machine to consider lighting light, computers and printers and other equipment,

electromagnetic signal interference communication transmission. Recommended access

control recognition equipment and power supply installation distance of not less than 30CM.

4, the equipment built-in relay device, its magnetic lock (or other access control unit) load maximum voltage can not exceed DC12V, the maximum current can not exceed 2A, if more than the relay will be broken, resulting in can not open the door.

5. The device comes with a power adapter with a total length of 1.8 meters.

- The extension of the power cord should not exceed 3 meters, otherwise it will lead to insufficient voltage supply to the host side of the equipment, repeated reboot, crash and other abnormal phenomena.

- If you use other adapters, such as 9V, 1A, insufficient voltage and low current will cause the device to restart repeatedly. The

- The cable to be used should not be too thin (e.g., thin wire for network cables), and it is recommended to connect multiple strands of the same cable in parallel or to use a cable with a thicker copper core to ensure that the voltage is >11V.
  Note: If you use a network cable, use 4 strands of network cable as positive pole and 4 strands as negative pole for the extension cable.

- If you are not sure how to extend the power supply, please contact your supplier to replace the "Specialized Power Extension Cord".

X. Option specifications and installation instructions

(i) Shape and size of optional sunshade version (243.8mm*130mm*26.4mm)
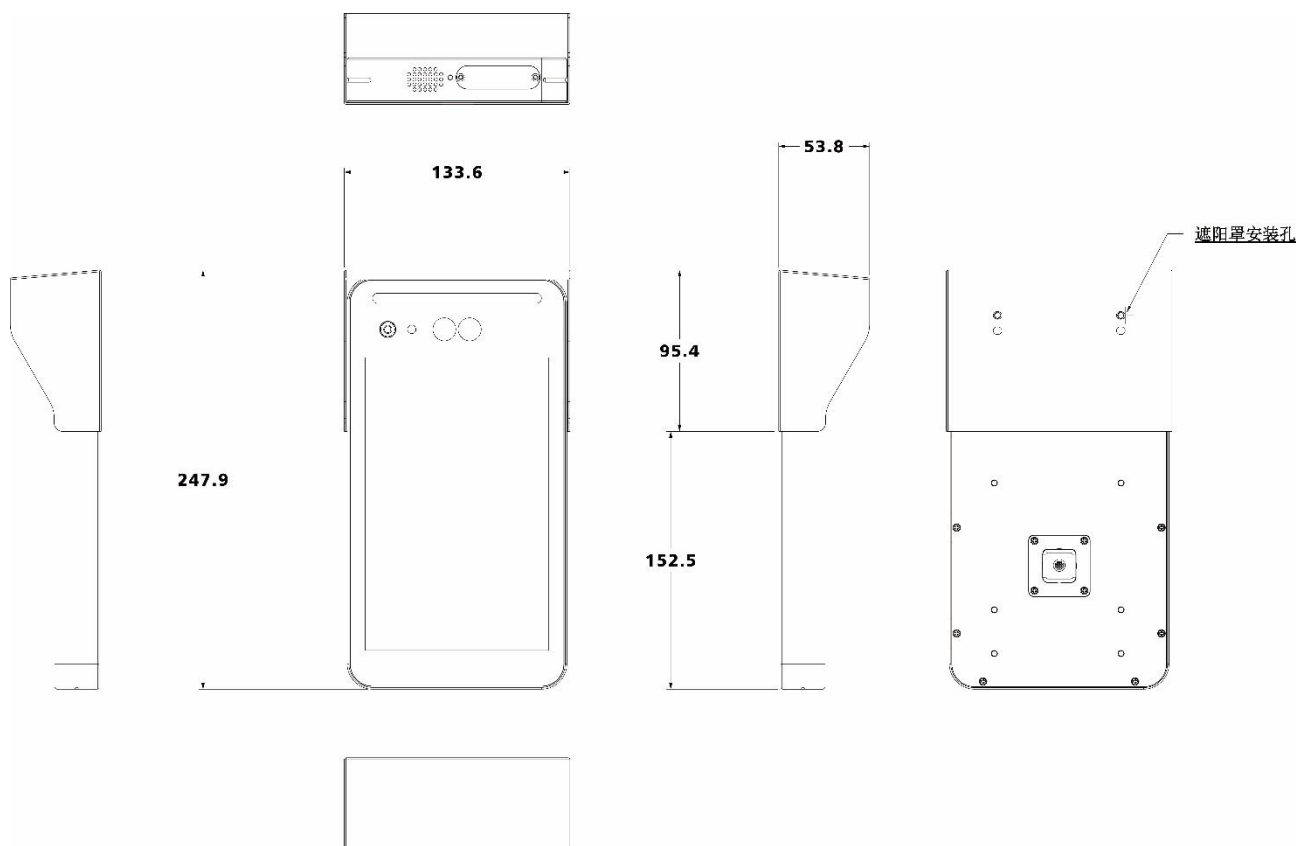
(ii) Development instructions for the optional body temperature measurement module

Chapter 1: Introduction to Human Body Temperature.

Generally speaking, excluding all kinds of diseases, especially colds and fevers and other illnesses, the human body temperature is constant, but only with the body type, some slightly higher, some slightly lower, basically can be maintained at 36 degrees or so. In fact, if seriously from the microscopic point of view, within a day, human body temperature is not constant, there is a slight difference, but the change is not big, not easy to be noticed. Let's learn more about this first.

In daily life, it is important to note that body temperature is not fixed, and that programs and changes are also factors that affect body temperature. It can also be said that the body

temperature in life is relatively constant. Therefore, it is possible to check the body temperature in daily life to observe changes in the patient's condition and to anticipate certain diseases.

The temperature of the human body is relatively constant, normal people in 24 hours of body temperature fluctuations, generally not more than 1 degree difference. Under physiological conditions, the body temperature is slightly lower in the morning and slightly higher in the afternoon. After exercise, eating, before menstruation or during pregnancy, the temperature is slightly higher, while the temperature of the elderly is lower. Body temperature above normal is called fever, 37.3 ~ 38 degrees Celsius for low fever, 38.1 ~ 39 degrees Celsius for moderate fever, 39.1 ~ 41 degrees Celsius for high fever, 41 degrees Celsius or more for ultra-high fever. The relative constancy of human body temperature is one of the important conditions to maintain normal life activities, such as body temperature is higher than 41 degrees Celsius or lower than 25 degrees Celsius will seriously affect the functional activities of various systems (especially the nervous system), and even jeopardize the life. The body's heat production and heat dissipation, is regulated by the nerve center, many diseases can make the normal regulation of body temperature dysfunction and make the body temperature change. Clinical examination of the patient's body temperature and observation of its changes are important for diagnosis of diseases or to determine the prognosis of certain diseases.

Normal body temperature.

There are differences in body temperature between morning and evening, between different parts of the body and between men and women. Normal body temperature has a stable range, but it is not constant. Normal human forehead surface temperature of about 35.0 ℃ ~ 36.6 ℃, by the environment and the detection of the greater distance between the

influence of the oral temperature (also known as oral temperature) for 36.2 ℃ ~ 37.2 ℃, the armpit temperature than the oral temperature is lower than the temperature of 0.2 ℃ ~ 0.5 ℃, rectal temperature (also known as the temperature of the anus) than the oral temperature is higher than the temperature of 0.2 ℃ ~ 0.6 ℃. Throughout the day, 2 ~ 5 in the morning when the body temperature is the lowest, 5 ~ 7 in the afternoon when the highest, but the temperature difference within a day should be less than 0.8 ℃. In addition, women's body temperature is generally higher than men's by about 0.35℃. Women's body temperature also changes slightly during menstruation, and the body temperature during pregnancy increases with the secretion of hormones.

In a healthy state, such as normal diet, appropriate clothing, the body temperature is generally relatively constant, that is, to remain in the 37 ℃ up and down (roughly between 36 ℃ ~ 37.2 ℃), and not due to changes in the external environmental temperature changes. Normal body temperature in the average between 36 ~ 37 ℃ (armpit), beyond this range is fever, 38 ℃ or less is low fever, 39 ℃ or more is high fever.

From the above, it is easy to see that a person's body temperature is different in the morning and evening, day and night, and the temperature of various parts of the body is also different. So there are no absolutes in the world. With this knowledge, you can judge your own health condition. If you find a disease, you will be able to cooperate with your doctor for timely treatment. Therefore, the body temperature should not be ignored.

Chapter 2: Principle of Temperature Monitoring Function of

Model: F0802-PLUS is a high-performance, intelligent face recognition equipment with a wealth of expansion interfaces, it integrates binocular camera, and far-infrared temperature monitoring module, access control disconnect, Weigen protocol, RS485, and other rich interfaces, the use of aluminum casing, beautiful and atmospheric, applied to face recognition access control, attendance, gates and other scenarios, in the face recognition at the same time as the personnel for the Body temperature monitoring.

Far infrared heat sensor principle: **any object within the charged particles are in constant motion, when the object temperature is higher than the thermodynamic temperature 0 (-273 degrees Celsius), it will continue to electromagnetic radiation to the surrounding. Objects of spontaneous radiation, room temperature is mainly infrared radiation, commonly known as infrared, it is invisible to the human eye light, has a strong thermal effect, it is also known as thermal radiation. Thermal radiation characteristics are mainly determined by the temperature, so it is called temperature radiation, is the basis of optical temperature sensing. Model: F0802-PLUS formally utilizes the energy radiated from the human body to determine the temperature of the surface heat balance of the target object.**

As introduced in the above chapter, the human body's internal temperature is constant at about 37, according to the principle of thermodynamics, the human body through conduction, radiation, convection, evaporation of different ways at different temperatures in the environment and the environment to achieve thermal equilibrium to ensure that their own body temperature is constant, such as being blown by the wind will make people feel cool (air

convection will take away the human body's heat), need to increase the clothing to keep warm in the heat of the day we sweat (evaporation), etc., Model: F0802-PLUS. F0802-PLUS utilizes far infrared thermal sensors to detect the surface temperature of the human body and report it to the upper layer application, which in turn passes it to the cloud for data analysis and monitoring.

Due to the monitoring of the human body's thermal radiation energy from the surface of the human body, in order to accurately monitor the temperature of the human body, so the installation of the equipment environment and the human body to be measured is a certain requirement, as follows.

1. As introduced in the above chapter, the same person in different states, the body temperature will exist within 1 degree of temperature change, such as intense exercise, or physiological or pregnancy, there will be differences, so Model: F0802-PLUS is only as a rapid temperature screening of an intelligent tool, not a medical testing equipment, data can not be used as a medical final judgment, for reference only; such as found that the person who has a high fever, you can If you find a person with high fever, you can get the person and make an early warning, retest or measure the axillary or oral temperature for further screening.

2. Requirements for the measured person in the measurement before, maintain a stable mood, bare skin can not be exposed for a long time in the overheating (higher than the body temperature) or too cold (far below the body temperature, such as 0 degrees) in the environment, the reason is that this kind of environment, the human skin through the air convection, or by the influence of radiation from external heat sources, the skin

temperature has been deviated from the human body's normal body temperature, Model: F0802-PLUS detected the temperature values Objectively there is no problem, but can not truly reflect the body temperature of the person under test. If the person under test stays in a low or high temperature environment for a long time, it is necessary to return to normal before measurement.

3. Equipment assembly environment requires no strong heat source, or the existence of strong convection (wind, air conditioning wind), these factors will affect the body temperature of the person under test. Test environment temperature range is recommended in 10 ~ 30 within the best; more than the human body temperature of the environment, such as 37 degrees and above, the measured human body temperature data objectively does not have a problem, but no longer has the monitoring significance, in the environment of strong convection, the air will quickly take away the surface heat of the human body, resulting in the measured surface temperature of the human body is low, affecting the backend monitoring system on the temperature of the person being measured Misjudgment.

4. The installation place of the equipment needs to maintain ventilation and good heat dissipation structure and space, the equipment itself and the environment temperature difference is too large, will affect the measurement accuracy.