CEM USER MANUAL

Face Recognition Temperature Monitor

AI-321

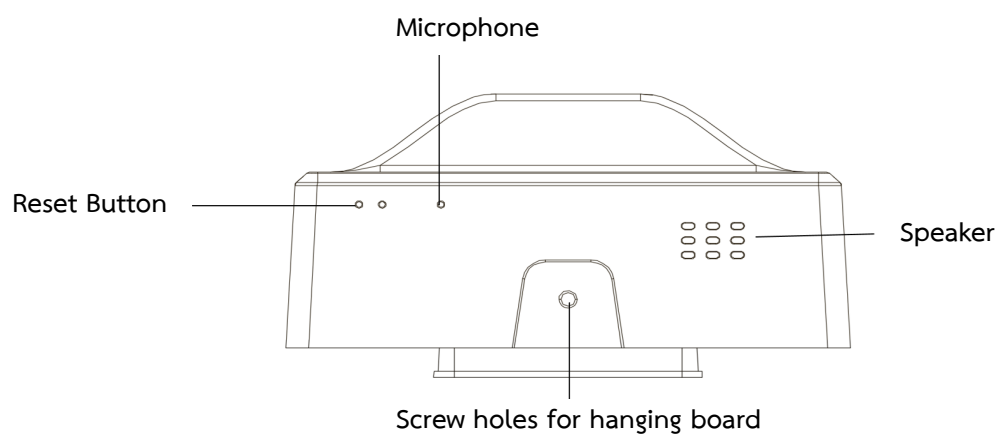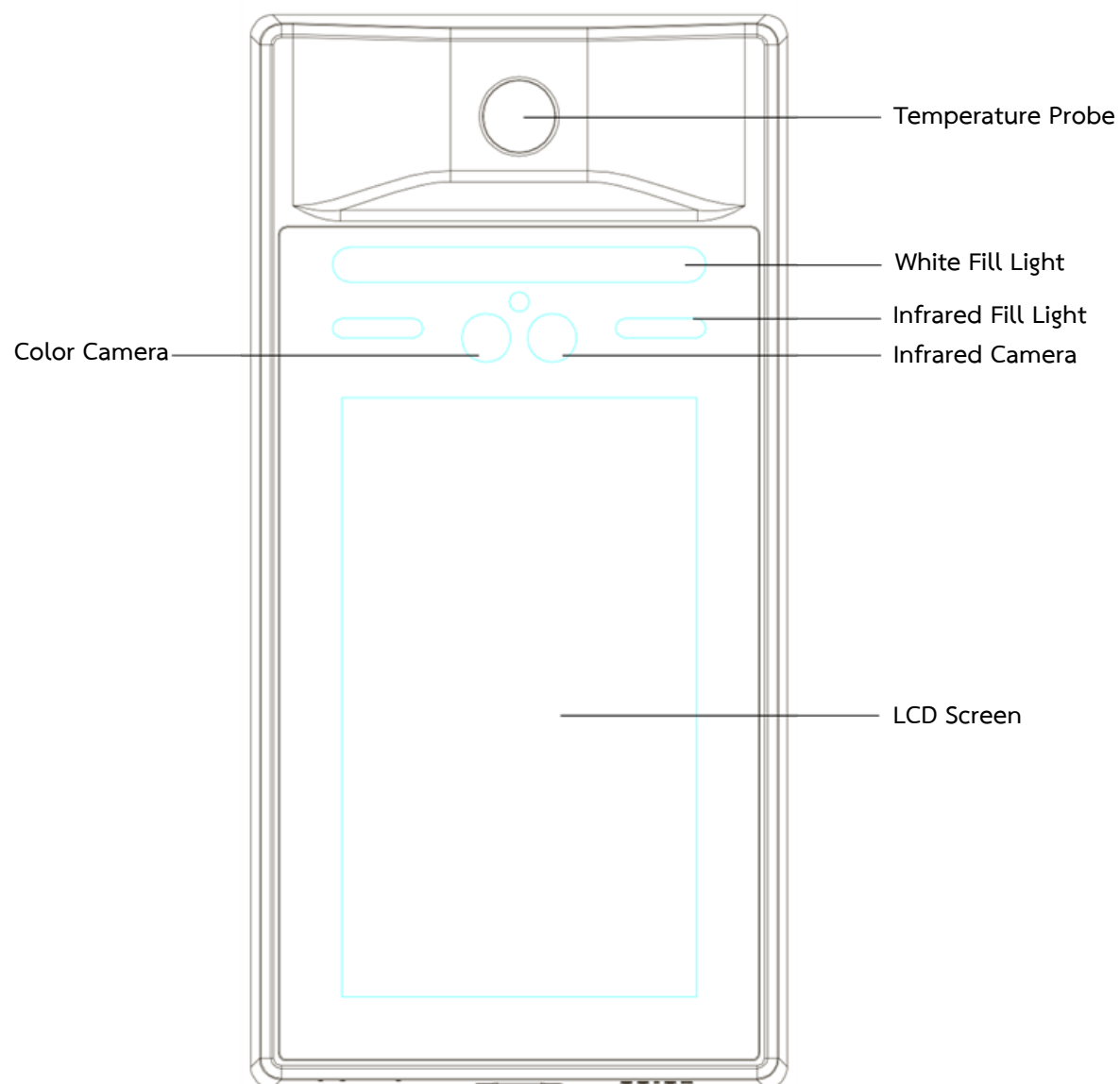# Face Recognition Temperature Monitor AI-321 user's manual

The Face Recognition Temperature Monitor effectively combines traditional infrared temperature measurement with AI face recognition. It only requires the user to stand in front of the device to quickly complete user identification and temperature measurement. Once the temperature exceeds the normal value, it will alarm and prohibit passage. In order to be suitable for more scenarios, this device supports 3 usage modes, and is equipped with different platform softwarefor more powerful functions.

1) Access Control & Attendance for Company | Equipped with Attendance & Access Control Management Platform Software for Company.
2) Access Control & Attendance for School | Equipped with Attendance & Access Control Management Platform for School.
3) Quick Temperature Check | Equipped with Temperature Cloud APP to monitor abnormal data and snapshot. (Only temperature detection for scenes that do not require face recognition)

Notice:
• During installation and use, all electrical safety regulations of the country and the region of use must be strictly observed.
• When wiring, disassembling and other operations, please be sure to disconnect the power supply, do not operate with electricity.
• If the device emits smoke, produces unusual odors, or makes noises, immediately turn off the power and unplug it, and contact the dealer or service center in time.
• If the equipment is not working properly, please contact customer service, do not disassemble or modify the equipment in any way. (The company does not assume any responsibility for problems caused by unauthorized modification or maintenance)
• Do not drop objects on the device or vibrate the device vigorously to keep the device away from magnetic interference.
• Avoid installing the device where the surface vibrates or is vulnerable to shock.
• Avoid installing the device at the air outlet of the air conditioner or in a place with large airflow fluctuations.
• Try to ensure that the equipment is installed vertically.
• Please do not use the device in high temperature, low temperature or high humidity environment.
• Please do not aim the lens of the device at strong light objects such as the sun, incandescent lamp, etc., otherwise it will cause lens damage.
• Avoid placing the device in direct sunlight, poorly ventilated locations, or heat source accessories such as heaters or heaters.
• Biometric products cannot be 100% suitable for any anti-counterfeiting environment. High security level places, please use combination authentication.
• Do not touch the temperature probe with your fingers or blow the probe.
• Please make sure no hair, sweat, or hat cover your forehead before measuring temperature.
• If the forehead is cold, wait for the forehead to become warm before taking the temperature measurement. Such as: after washing the face, after applying ice, after entering the room from the outside in winter.

Product Appearance

Temperature Probe

White Fill Light

Infrared Fill Light

Color Camera

Infrared Camera

LCD Screen

Microphone

Reset Button

Speaker

Screw holes for hanging board

Install Instruction

Box 86 for Wall-Mounted Installation

1. Install stickers on the wall, and make holes in the wall according to the height and position of the stickers to install Box 86.

2. Align the outlet of the hanging board with the center of the Box 86, punch four mounting holes on the wall according to the punching size diagram, and insert four wall plugs.

3. Use four KA4*25 screws to fix the hanging board to the wall. Connect the cable of the external device to the cable, arrange the cable, and determine the cable outlet method.

4. Hook the device from top to bottom on the mounting plate, and make sure that the upper part of the hanging plate is inserted into the groove on the back of the device.

5. Fix the device and the hanging plate from the bottom with a screw.

Wall punching size chart

Device   Hanging board   Box 86   Wall
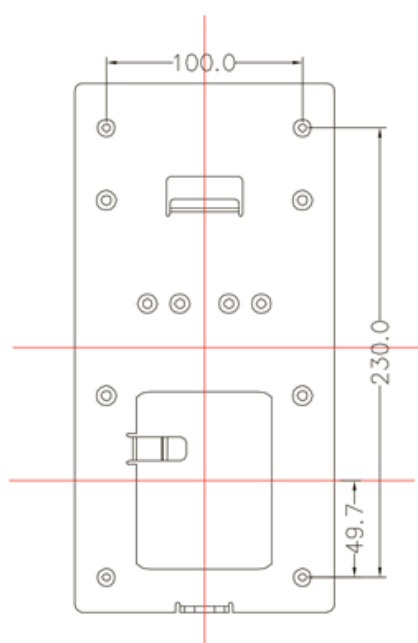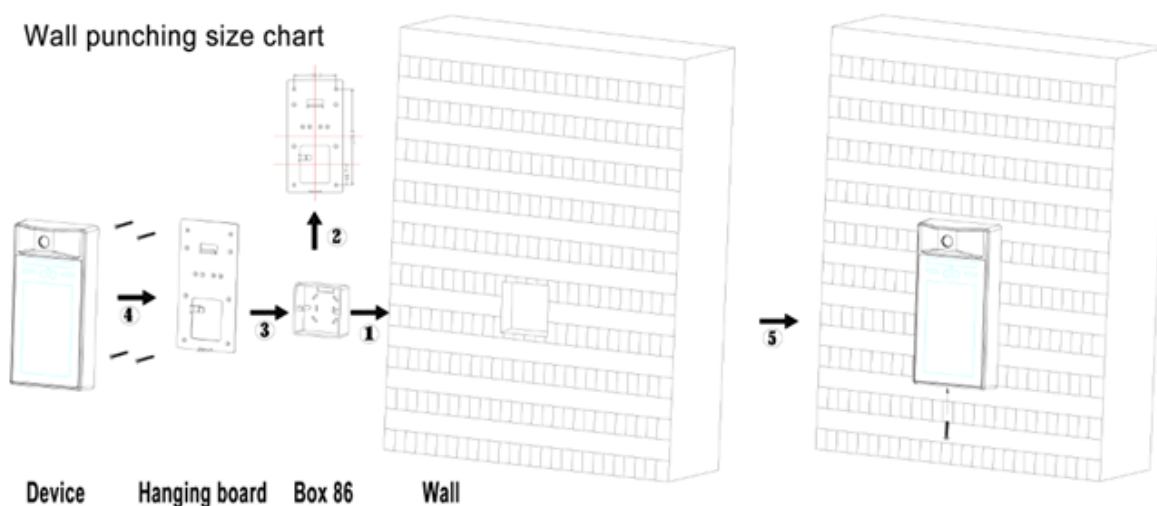
Wall punching size chart

Wall-Mounted Installation

1. Attach an installation sticker to the wall, make holes in the wall according to the height and position of the sticker, insert a wall plug, and install 4 hex screws.
2. Fix the hanging board on the wall with four KM4*10 screw.
3. Hook the device from top to bottom on the hanging board, and make sure that the upper part of the hanging board is inserted into the groove on the back of the device.
4. Use a screw to fix the device and the hanging plate from the bottom.
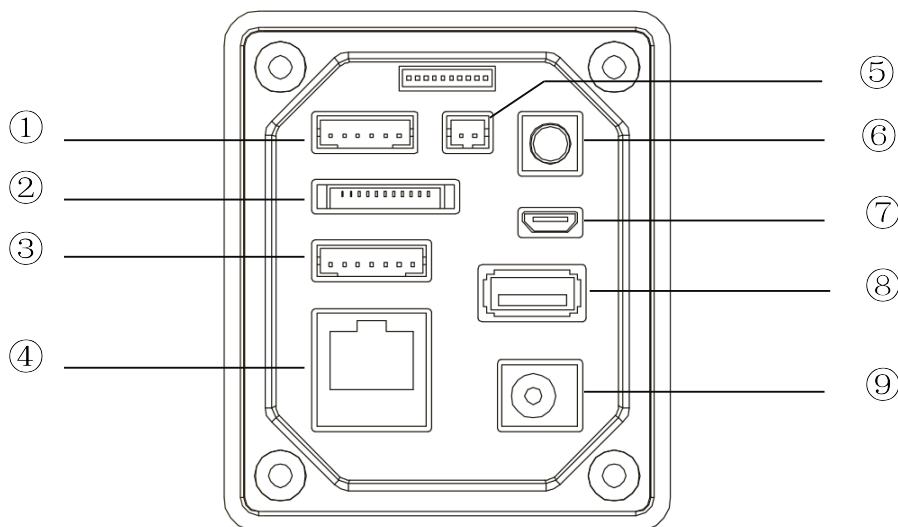

Wall punching size chart

Device   Hanging board   screw   Wall
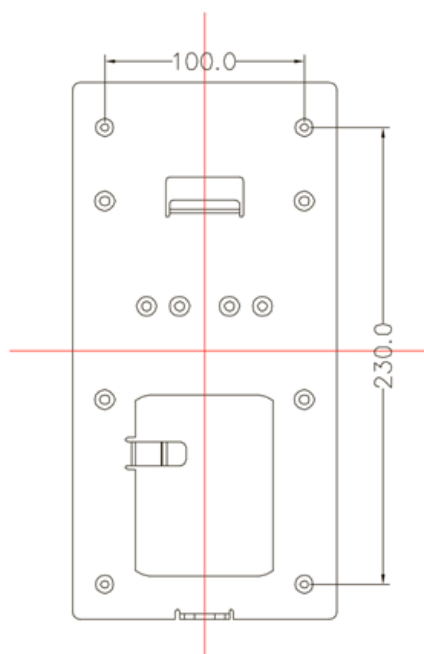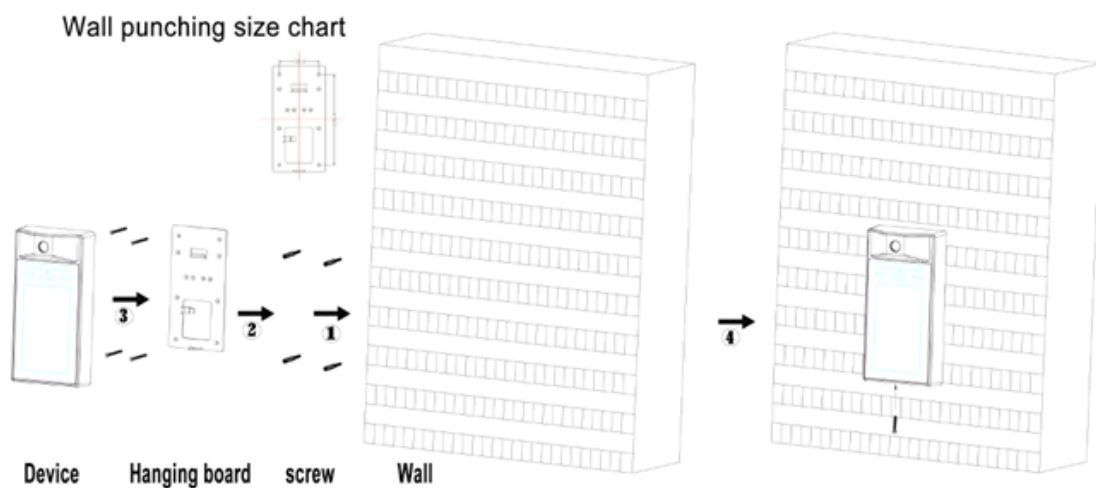
Wall punching size chart

Interface Instruction

① **6 PIN Door Button , Door Sensor , Alarm Interface**

1	2	3	4	5	6
5V	GND	NC	Door Button	Door Sensor	Alarm

② **11 PIN Reversed IO**

1	2	3	4	5	6	7	8	9	10	11
	PWRON	IO7	GND	3.3V	IO6	IO5	IO4	IO3	IO2	IO1

③ **7 PIN 12V Power Supply , Relay Interface**

1	2	3	4	5	6	7
COM	NO	NC	GND	GND	12V	12V

④ **Ethernet Port**

⑤ **2 PIN 485 Interface**

1	2
485A	485B

⑥ **Temper Key**

⑦ **Micro-USB Port**

⑧ **USB-A Port**

⑨ **12V Adapter Socket**

Wiring Instruction

Door Button — PIN4

PIN1 485A
PIN2 485B

Press

PIN2 GND

Door Sensor

PIN5

Power Supply — PIN1 COM

Cathode Lock — + PIN2 NO
-

+ PIN3 NC

Anode Lock /Magnetic Lock
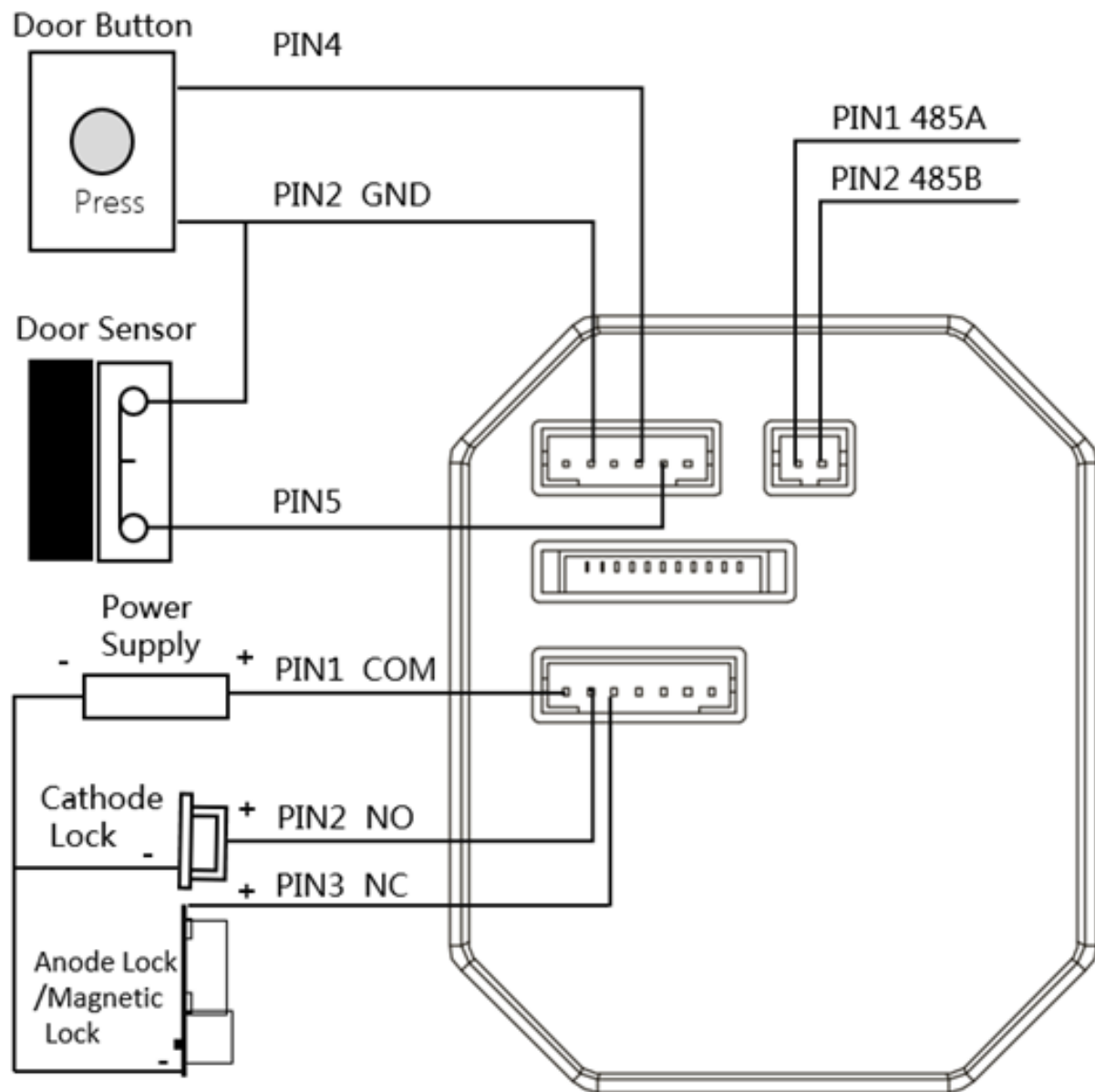
Technical Specifications

	AI-321
	Single point infrared temperature measurement
Temperature measurement module parameters	
Measuring range	32°C~45°C/89.6°F~113°F
Measurement accuracy	±0.5°C/±0.9°F
Measuring distance	20~50cm
Measure time	0.5S
System hardware parameters	
Processor	4-core A7
Operating system	Android 8.1
Memory size	1GB LPDDR3
Storage size	16GB EMMC
Camera parameters	
Resolution	Color 200W (1920 * 1080) Infrared 130W (1280 * 960)
Imaging device	Color AR0230 Infrared AR0130
Lens	2.9mm
Recognize height	1m ~ 2m
Recognition distance	0.3m ~ 1.2m
Angle of view	Horizontal: 89 ° Vertical: 57 ° Diagonal: 98 °
Face angle	± 30 °
Minimum illumination	Color ≥0.01LUX at F1.2 Infrared: ≥0.01LUX at F1.2
Signal to noise ratio	Color ≥41dB Infrared: ≥44dB
Wide dynamic range	Color≤105dB Infrared: ≤83.5dB
Interface parameters	
Network interface	1 RJ45 10M / 100M adaptive Ethernet port
USB interface	1 USB interface
Wireless connection	WIFI + BLE4.0
RS485 interface	1 RS485 interface
Relay interface	1 relay interface
Fire alarm door check button	1 fire alarm door check button
I0 reserved	1 11pin terminal
Power supply	DV12V / 3A
Smart functions	
Face recognition capacity	50000 people
Offline record	100000
Recognition accuracy	99.83%
Face liveness detection	Support binocular near infrared live detection
Face detection	1080P @ 25fps, support face detection tracking, optimization
Face recognition speed	About 200ms
Face liveness detection speed	About 400ms
Occlusion adaptation	Supports wearing glasses, wigs, makeup, etc., wearing masks
Basic parameters	
Screen size	7 inch
Product size (length * width * height)	268 * 135 * 45 (mm)
Operation humidity	10%~90%
Operation temperature	10~40°C/50~104°F

Access Control & Attendance for Company

At this mode, User need to login to the Attendance & Access Control Management Platform Software for Company to add the device ID, import employees' information and their face photos and configure this device as an attendance device for employees. After the configuration is complete, the user can use the device to synchronize data. After synchronization is complete, face recognition/temperature measurement/access control/attendance can be started.

For detailed instructions, please refer to the guidance of the Face Recognition Temperature Monitor and the instructions of the Attendance & Access Control Management Platform Software for Company.

Access Control & Attendance for School

At this mode, User need to login to the Attendance & Access Control Management Platform Software for School to add the device ID, import students and teachers' information and their face photos and configure this device as an attendance device for them. After the configuration is complete, the user can use the device to synchronize data. After synchronization is complete, face recognition/temperature measurement/access control/attendance can be started.

For detailed instructions, please refer to the guidance of the Face Recognition Temperature Monitor and the instructions of the Attendance & Access Control Management Platform Software for School.

Quick Temperature Check

At this mode, fast temperature detection and automatic recording of data and face photos can be performed. User need to download the Temperature Cloud APP to add the device ID. Scan the QR code as follow to download the APP.

Temperature Cloud APP

Scan the QR code as follow to get the guidance of the Face Recognition Temperature Monitor and the instructions of the Attendance & Access Control Management Platform Software.