

User Manual and Installation Guide

Walk through Metal Detector with Turnstile

ZK-MD6000 Series

Date: October 2022

Doc Version: 1.2

English

Thank you for choosing our product. Please read the instructions carefully before operation. Follow these instructions to ensure that the product is functioning properly. The images shown in this manual are for illustrative purposes only.



For further details, please visit our Company's website
www.zkteco.com.

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If there is any issue related to the product, please contact us.

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About the Company

ZKTeco is one of the world's largest manufacturer of RFID and Biometric (Fingerprint, Facial, Finger-vein) readers. Product offerings include Access Control readers and panels, Near & Far-range Facial Recognition Cameras, Elevator/Floor access controllers, Turnstiles, License Plate Recognition (LPR) gate controllers and Consumer products including battery-operated fingerprint and face-reader door locks. Our security solutions are multi-lingual and localized in over 18 different languages. At the ZKTeco state-of-the-art 700,000 square foot ISO9001-certified manufacturing facility, we control manufacturing, product design, component assembly, and logistics/shipping, all under one roof.

The founders of ZKTeco have been determined for independent research and development of biometric verification procedures and the productization of biometric verification SDK, which was initially widely applied in PC security and identity authentication fields. With the continuous enhancement of the development and plenty of market applications, the team has gradually constructed an identity authentication ecosystem and smart security ecosystem, which are based on biometric verification techniques. With years of experience in the industrialization of biometric verifications, ZKTeco was officially established in 2007 and now has been one of the globally leading enterprises in the biometric verification industry owning various patents and being selected as the National High-tech Enterprise for 6 consecutive years. Its products are protected by intellectual property rights.

About the Manual

This manual introduces the operations of **Walk through Metal Detector with Turnstile ZK-MD6000 Series**.

All figures displayed are for illustration purposes only. Figures in this manual may not be exactly consistent with the actual products.

Document Conventions

Conventions used in this manual are listed below:

GUI Conventions

For Software	
Convention	Description
Bold font	Used to identify software interface names e.g. OK , Confirm , Cancel .
>	Multi-level menus are separated by these brackets. For example, File > Create > Folder.
For Device	
Convention	Description
< >	Button or key names for devices. For example, press <OK>.
[]	Window names, menu items, data table, and field names are inside square brackets. For example, pop up the [New User] window.
/	Multi-level menus are separated by forwarding slashes. For example, [File/Create/Folder].

Symbols






Convention	Description
	This represents a note that needs to pay more attention to.
	The general information which helps in performing the operations faster.
	The information which is significant.
	Care taken to avoid danger or mistakes.
	The statement or event that warns of something or that serves as a cautionary example.

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1 Note

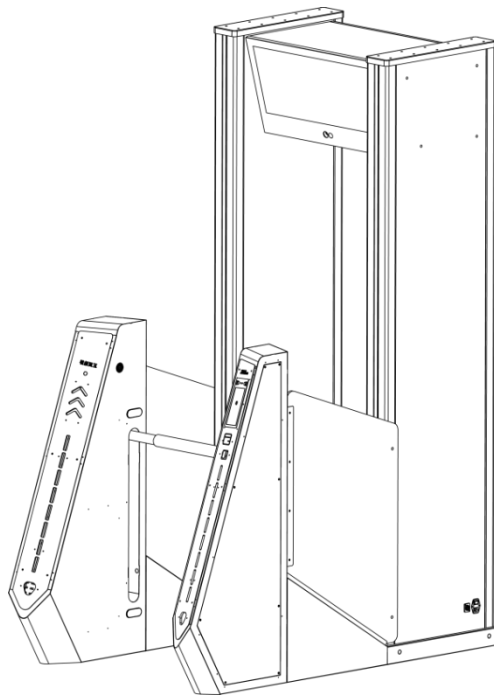
PLEASE READ THE FOLLOWING INSTRUCTION CAREFULLY BEFORE OPERATION:



1. This walk through metal detector can be used indoors, and be careful to avoid long-term outdoor work affecting the service life of the equipment.
2. It must be used in an indoor environment with a temperature between 10°C and 35°C.
3. To avoid the thermal imaging temperature measurement function malfunctioning, do not operate in an environment where the reflection or light is not strong enough to affect face recognition.
4. Choose a stable installation location to avoid false alarms caused by excessive shaking of the product.
5. Make sure that there are no large metal objects or strong magnetic fields within 2 meters of the detector.
6. Before installation, make sure that the left and right door panels are placed at the correct location.
7. Please tighten the bolts and screws of the connection part of the product to make sure that the overall installation is stable and free from shaking.
8. Please check if the product wiring is properly connected and not loose.
9. The operating frequency cannot be the same when multiple products are installed and used simultaneously.

- 10.Wait for 1 minute and perform self-diagnosis after the metal detection function is activated.
- 11.Do not hit the device, as it may cause false alarms.
- 12.This is not a medical device and the data cannot be used for medical purposes. It is just used to check your body temperature.

2 Product Specification



ZK-MD6000 series Walk through Metal Detector with Turnstile is a new product independently developed by ZKTeco Co., Ltd.

The ZK-MD6000 series is based on the Android platform and with various kinds of functions, including metal detection, thermal imaging

temperature measurement, real-time monitoring, entrance control, face and RFID verification, ambient gas detection.

Instructions to Pedestrians:

- 1) A line must be drawn at 50cm away from the detector. The pedestrians must pass through the detector one-by-one.
- 2) Pedestrians should line up one-by-one to ensure the smooth operation of the detector.
- 3) Pedestrians should walk at their normal speed. They must not intentionally form a crowd, rush, walk slowly, or crush the door panel.
- 4) Before passing through the metal detector, the pedestrians must remove all the carried metal objects (such as keys, mobile phone, watch, coins, etc.), and place it on the security chute or a table, and pick them up after the security check.
- 5) After the pedestrian verifies the identification successfully, the turnstile will open. The pedestrian needs to wait about 3 seconds, and the device will automatically measure the temperature of the pedestrian.
- 6) If the detector alarms when someone passes through, it indicates there is/are some metal object(s) hidden in the body. The security guard can use a hand-held metal detector to accurately detect the hidden position according to the alarm zones.

3 Installation Environment

1) **Stationary Metallic Items:**

When installing the product, keep it at least 1 meter away from stationary or fixed heavy metal items; otherwise, the sensitivity will be affected, resulting in false alarms. Metal items such as doors and windows made of aluminum alloy or stainless steel, etc.

2) **Movable Metallic Items:**

Large metal items can be relocated, but they should be kept at least 2 meters away from the device to avoid false alarms.

3) **Floor Vibration:**

The floor should be flat and fixed, to avoid false alarm after installation by the movement of people walking or moving and shaking of metal objects.

4) **Electromagnetic Radiation and Electromagnetic Interference:**

As the device uses bilateral transceiver technology, therefore, any electromagnetic interference sources and electromagnetic radiation source is not allowed to close the device; the recommended distance is 1 meter. The installation environment determines the distance parameters, and various installation environments have different parameters.

The electromagnetic interference sources and electromagnetic radiation sources are as follows:

Electrical Control Box, Radio Equipment, Interphone, High Power Motor, Power Transformer, Ac Power Lines, Thyristor Control Circuit (High Power Switching Power Supply, Inverter Welder), Engine, Motor etc.

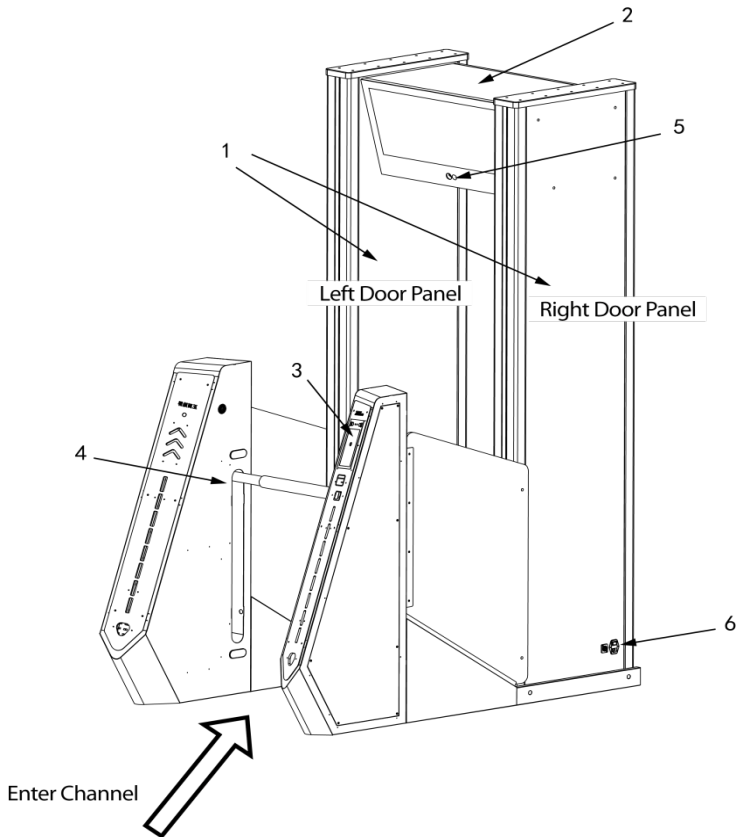
5) Side-By-Side Using:

When installing multiple products side by side, the distance between the products cannot be less than 50cm; the working frequency cannot be the same. The specific distance parameters should be adjusted according to the actual environment and the operating frequency selected by the walk through metal detector.

4 Performance and Features

- **Enhanced Detection:** 33 detection zones and 500 sensitivity levels.
- **Thermal Imaging:** Screen people with abnormal body temperature quickly and trigger an alert.
- **29 inches Monitor:** Real-time display and video recording.
- **Integrated Design:** Includes turnstile which restricts pedestrian access.
- **Face and RFID Verification:** Verify pedestrian identification information.
- **Gas Detection:** Real-time monitoring of ambient gases.

5 Parts

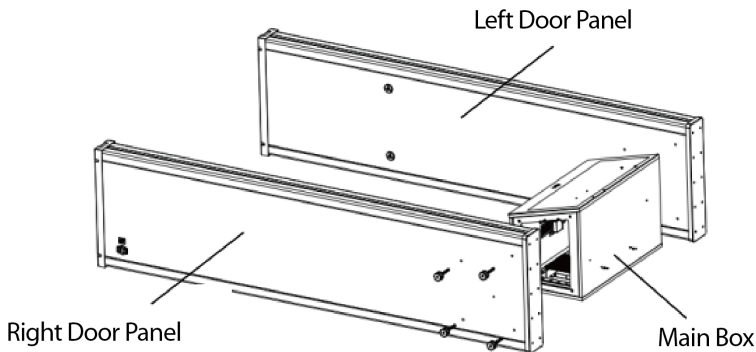


1. Door Panel	2. Main Box
3. Access Control Device	4. Entrance Control Device
5. Cameras and Thermal Imaging Probes	6. One Key Switch

6 Installation

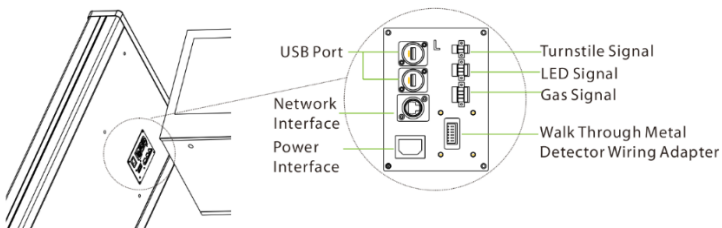
Please follow the installation steps below after reading the installation precautions and checking the packing list:

Step 1: Unpack the package, and place the left and right door panels on the ground, with the power boards of the two door panels facing outward, as shown in the figure below.

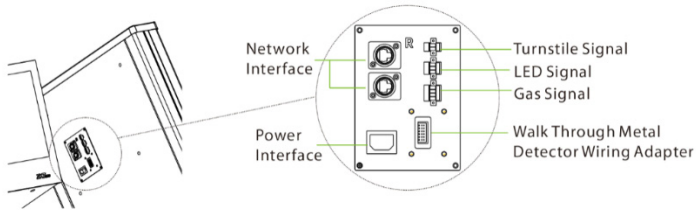


Step 2: Insert the wires inside the machine head into the corresponding positions.

Left door panel internal interface identification:

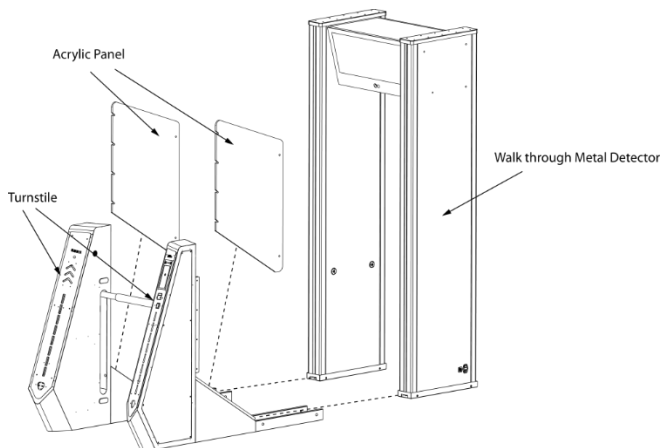


Right door panel internal interface identification:



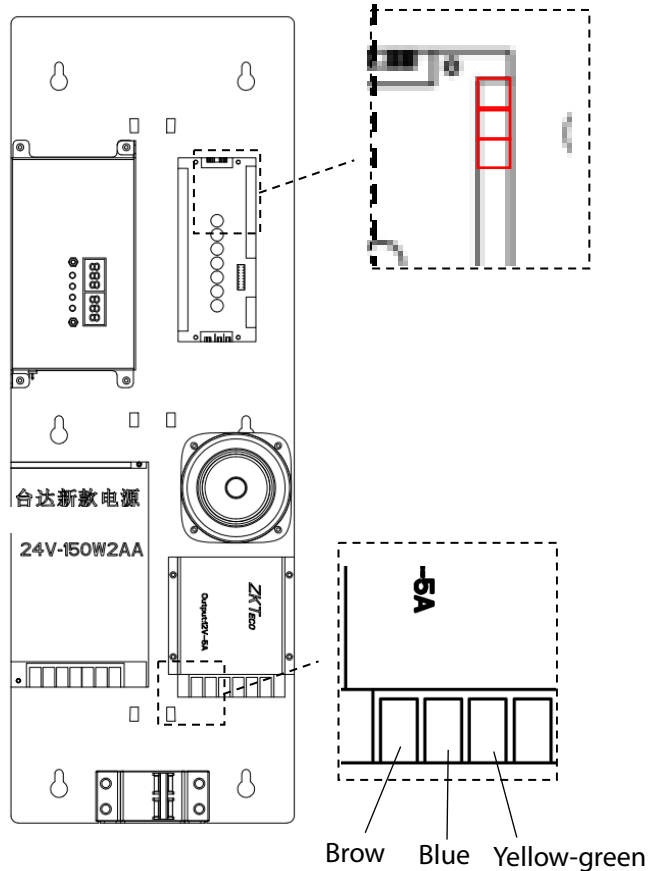
Step 3: Connect the chassis to the left and right door panels with the bolts, and then tighten the bolts.

Step 4: Place the walk through metal detector on the rear of the turnstile and insert the wires protruding from the lower part of the walk through metal detector into the left and right chassis from the back of the turnstile.



Step 5: Connect the wires inside the turnstile chassis, which are marked with 1, 2, 3, and other line marks numbers, and connect the wires with the same numbers.

Step 6: Insert the terminal head marked 4 on the left walk through metal detector into the terminal block on the upper right of the control board, as shown in the figure.

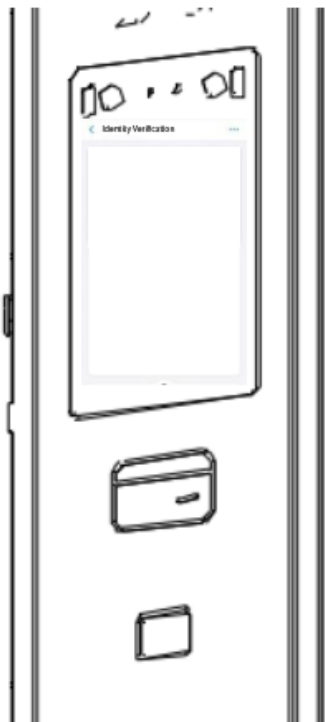


Step 7: Find the 12V-3A adapter power on the chassis of the turnstile, loosen the three screws on the side, connect the U-shaped interface cables in the order of brown, blue and yellow-green from left to right, and then tighten the screws.

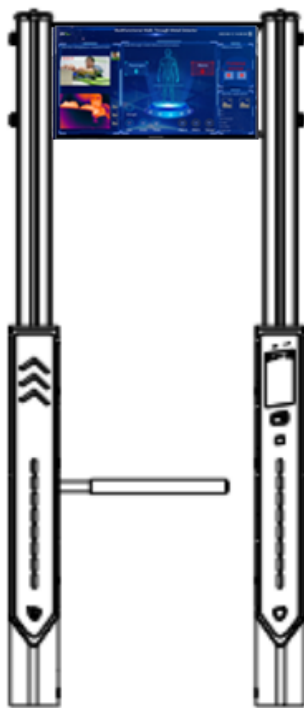
Step 8: Push the walk through metal detector into the groove of the turnstile and fix it with screws. At the same time, install the acrylic side plate to the plate armor and lock the side plate with screws.

On /Off

- 1) Before plugging in the power, check whether the cables are properly connected and not loose.
- 2) Connect the power plug of the console to 220V commercial power.
- 3) Press the "one key switch" button to switch on and off.



Access Control Device



Walk Through Metal Detector

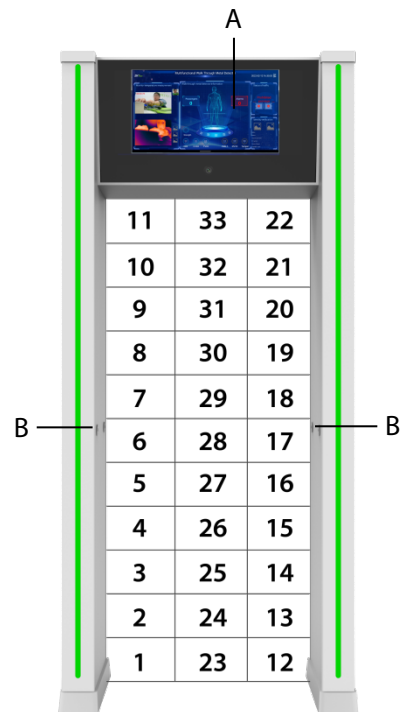
7 Detection Zones

A. Detection zone display:

There are four unique sets of precise positioning LEDs evenly distributed on the door panels, showing the status of 33 detection zones, as shown on the right. The zone indicators can be turned on or off. If the metal detector detects metals of the size that reach or exceed the preset value, the alarm indicator of the detection zone turns on, and an alarm is generated (No alarm is generated if the device is in mute state).

B. Infrared sensor:

The metal detector starts to function once it is linked to a power supply. When no person or object passing through the device, the infrared sensors stop alarming to avoid false alarm and accurately count passengers and alarm times.



8 Operation

The menu bar of the main interface of the system is: company Logo, walk through metal detector name, time display area, and menu bar.

The functional module is the primary section of the system's main interface:



- **Monitor Temperature Measurement:** These features Include camera real-time preview, surveillance video, video duration, face capture and display of binding measurement of human body temperature, thermal imaging preview screen, face capture and display of temperature measurement and high temperature alarm.
- **Walk through Metal Detector Information:** Displays the number of persons who pass by the metal detector every day, number of alarms, and real-time metal detection display. The bottom shows the intensity of nearby interference to the metal detection function and the concentration of surrounding gases.
- **Status of Traffic:** Displays if the turnstile is open or closed. The turnstile opens after the access control device and face verification

are successful. The blocklist is closed if the verification is unsuccessful.

- **Identity Verification:** Display the card number, photo, and name etc.

8.1 System Menu Bar

Click the menu bar to display the buttons for login, registration, password modification, and user logout.

- **Login**

Enter the super administrator account and password, and click the Login button.

Account: 211985(default)

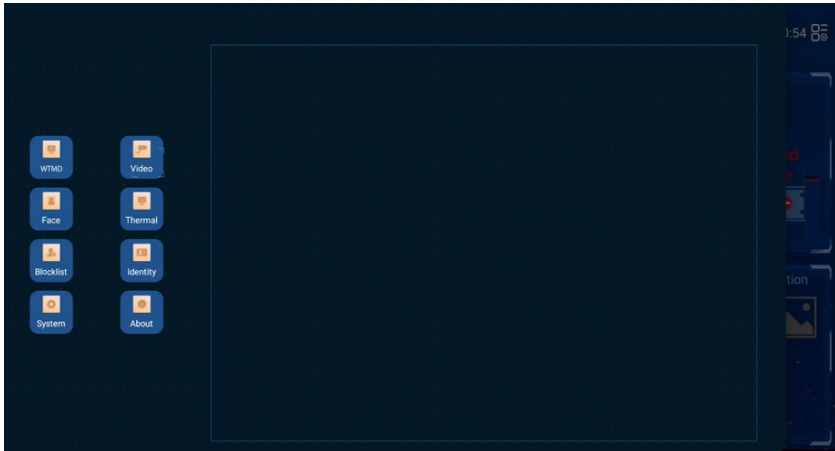
Password: 95278341(default)

The menu bar will be displayed after successful login, and the menu bar will not be displayed if the login fails.

The image displays two screenshots of a login interface. The top screenshot shows the login form with fields for account (211985) and password (masked), a 'Remember password' checkbox, and a green 'LOGIN' button. The bottom screenshot shows the login form with a large circular loading spinner in the center and the 'LOGIN' button at the bottom.

8.2 Main Menu Settings

It displays 8 menu functions including WTMD, Video, Face, Thermal, Blocklist, Identity, System and About.



1) WTMD:

You can set the alarm duration, volume, system channel, overall sensitivity, alarm mode, system defense zone, sensitivity of each area, all sensitivity settings (sensitivity value range is 1-500).

Alarm duration: 1-99.

Volume: 1-100.

System channel: 1-100.

System defense zone: 1, 6, 11, 18, 33.

Alarm mode: Continuous, Single Zone, Interval.

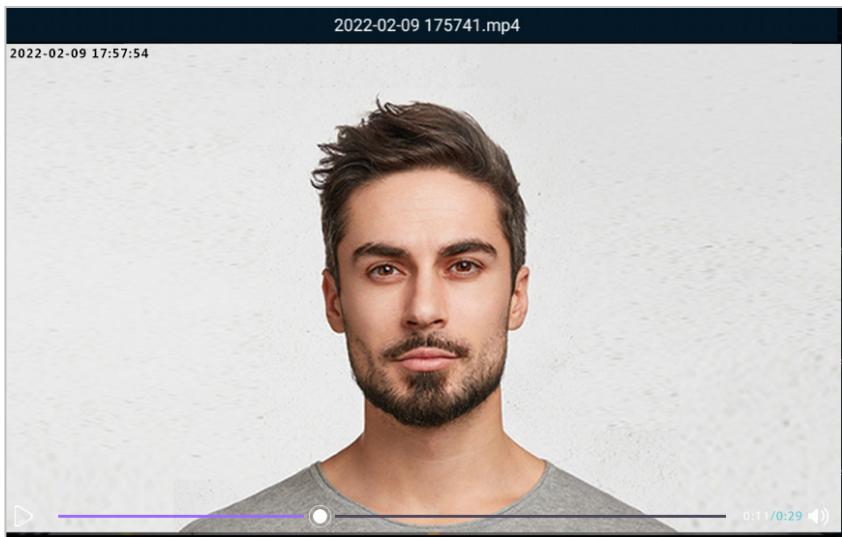


2) Video:

Display the saved surveillance videos, only load 30 at a time.

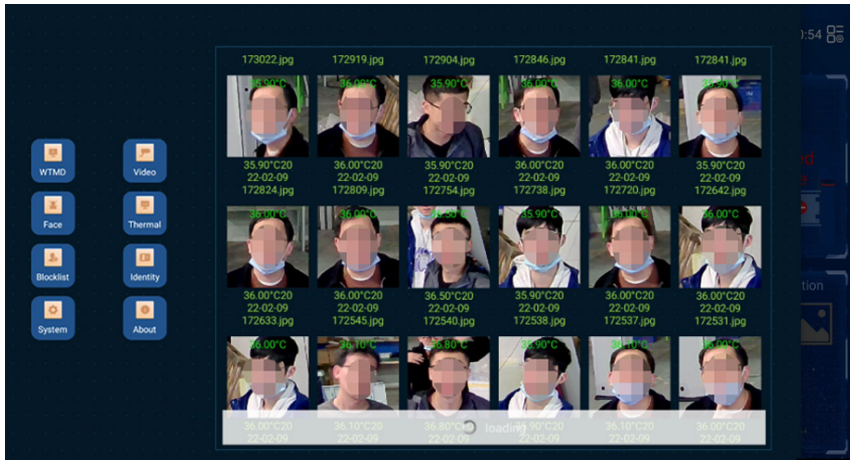


Click the monitoring video, after the loading is completed; the first frame of the video will be displayed, and then click the play button to start playing.



3) Face:

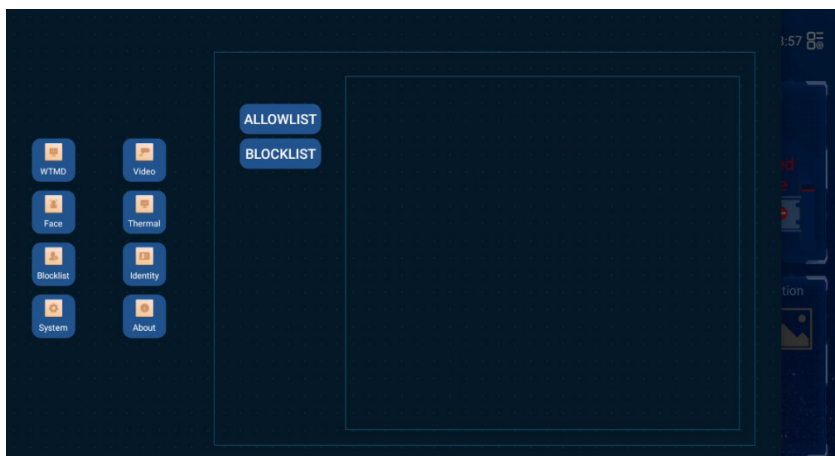
Displays the measured temperature, photos taken and time taken.



4) Thermal Imaging:

Display all photos whose temperature is higher than the temperature set by the system, and the text color is red. The display style is the same as the face recognition page.

5) BlockList:

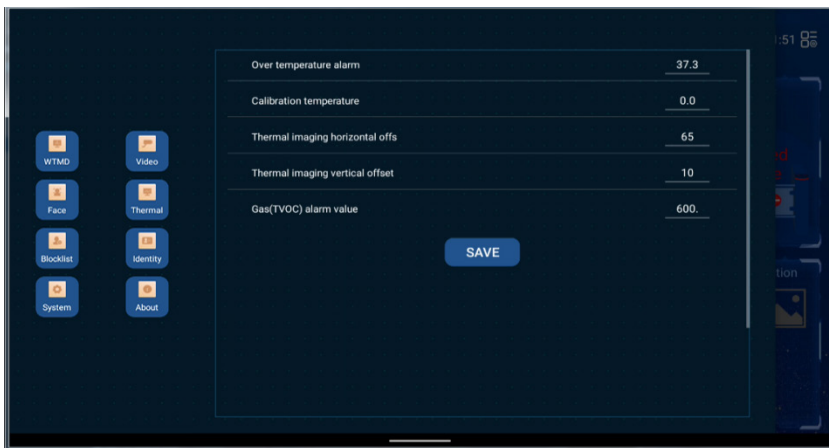


6) Identity:

Verified identity information can be queried.

7) System:

Set the alarm temperature, manual calibration temperature, calibration value of the horizontal and vertical directions of the visible light and thermal imaging fusion, and the alarm value of gas TVOC concentration.



8) About

Display company Logo, walk through metal detector name, device model, version number, manufacturer, copyright and other information.



9 Product Configuration

Model	ZK-MD6000	ZK-MD6000S
Operating System	Android (RAM: 2GB ROM:2TB)	
Monitor	29 inches	
Operating Temperature	10°C to 35°C	
Operating Environment	Indoor	
Input Voltage	100V to 240V, 50/60Hz	
WTMD Zones	33 Zones	
WTMD Working Frequency	5.7kHz to 9.6kHz	
WTMD Sensitivity	500 levels	
Temperature Detection Accuracy	$\pm 0.3^{\circ}\text{C}$ ($\pm 0.54^{\circ}\text{F}$)	
Temperature Detection Alarm Temperature	37.3°C (99.14°F)	
Temperature Measurement Distance	1000mm to 2000mm	

Entrance Control Motor	/	DC Brushless Motor
Entrance Control MCBF	/	2 Millions
Certifications	ISO9001; ISO 14001; CE; FCC	
Arm Type	/	One Drop Arm
Arm Length	/	620mm
Transparent Acrylic Board (L*W*H)	/	620mm*10mm*1098mm (2 PCS)
Detectable Gas	/	CO, CH ₂ O, H ₂ , NH ₃ , etc.
Capacity	/	30,000 Faces/30,000 Cards (ID & IC card)
Facial Recognition Speed	/	≤0.5s
Algorithms	/	ZKFace 5.6
Metal Detection	YES	
Thermal Imaging	YES	
Video Surveillance	YES	
Entrance Control	/	YES

Facial Recognition and RFID	/	YES
Gas Detection	/	YES
Supported Software	ZKBio SIS V2.0	
Dimension (L*W*H)	620mm*1046mm*2460mm	1730mm*1046mm*2460mm
Entrance Control Dimension (L*W*H)	/	1730mm*1046mm*1350mm
Dimensions with Packing (L*W*H)	Package1: 2550*720*458mm (Door Panel) Package 2: 860*580*486mm (Control Unit)	Package1: 2550*720*458mm (Door Panel) Package 2: 2100*530*1603mm (Control Unit and Turnstile)
Weight with Packing	Package 1: 140KG (Door Panel) Package 2: 31KG (Control Unit)	Package 1: 140KG (Door Panel) Package 2: 180KG (Control Unit and Turnstile)

10 Packing List

The package consists of the following items:

No	Component	Quantity
1	L Side Panel	1 set
2	R Side Panel	1 set
3	Main Box	1 pc
4	Accessory Box	1 pc
5	L Turnstile	1 set
6	R Turnstile	1 set

11 Warranty Card

- 1) Please keep this card with reasonableness, and show it when maintaining it.
- 2) This card will be invalid if without the signature or stamp of the designated dealer.
- 3) This card will be regarded as invalid if it has not been filled in details three guarantees and acknowledgment of receipt. Please confirm whether the data filled in the three guarantees and acknowledgement of receipt is correct or not when purchasing it, and then hand it over to the dealer.
- 4) This card will not be supplied again if losing it.

Model Number	
ID	
Date Acquisition	
User	
Post Code	
Address	
User's Phone Number	
Fax	

Date of Maintenance	Record of Maintenance	Maintainer

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