



Face Recognition
with temperature detection
DJS-F10

Technical Specification V1.1

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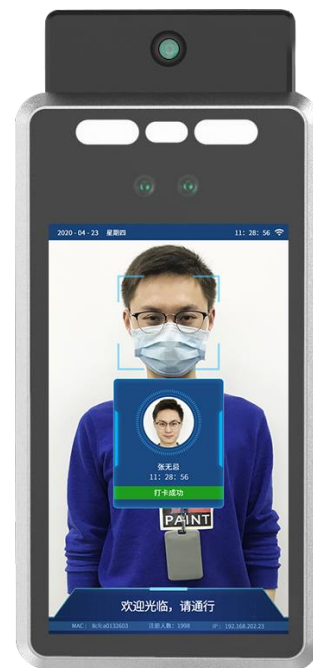
1. Product Overview

1.1 Introduction

This face recognition **DJS-F10** uses professional face recognition algorithms, with strong face recognition performance, fast recognition speed, long distance, non-contact, supports the advantages of wearing mask recognition, supports 1: 1 and 1: N face comparison and search, supports reminders without wearing masks, supports ID card readers, fingerprint readers, IC card readers, QR code readers. The expansion of various peripheral devices such as card readers, gate heads, and door magnets. It can truly realize efficient and fully automatic non-inductive recognition and passage in crowded places, and can be widely used in office buildings, communities, schools, factories, etc. related scenarios.



Face recognition and check-in without a mask



Face recognition and check-in with a mask

1.2 Application scenario



Face recognition access control



Face attendance



Face recognition barrier



Office building



Community



School

1.3 Multi-mode selection

Mode 1: Face recognition permission verification

Enter personnel information in the management platform → (access control point) face recognition to verify identity → judge access control authority
If the face recognition authentication fails, there is no access control; the management platform records access control data corresponding to the personnel.

Mode 2: Mask reminder mode

In mode one, click on the "mask detection attribute" in the management platform, you can realize the voice reminder for the person without the mask, without affecting face recognition and check in.

It is suitable for the entry and exit of designated personnel, such as factories, schools, office buildings, residential areas, etc., Satisfy the internal personnel face recognition requirements for entry ban.

2. Features

2.1 Strong face recognition performance

This face recognition DJS-F10 is built with face recognition algorithms, with high accuracy and fast speed. It also supports accurate recognition in the case of side faces, semi-occlusion, and blur. Especially in epidemic situations, it can detect whether to wear a mask first, send out a voice reminder for not wearing a mask, and then perform face recognition for the person who has worn a mask.

The relevant parameters are as follows:

Face recognition:

- Face recognition accuracy: 99.99% (1: 1, FRR 1%)
- Living body detection accuracy: 0.01% (false recognition rate)
- Living detection distance: 0.5-1.2 meters
- Recognition speed: <300ms (20000 face database)
- Intelligent recognition: support 1: 1 face comparison, support 1: N face search

Mask recognition:

- Face recognition rate:> 92% (20000 human database)
- Reminder: Without mask reminder

2.2 Maximum 50000 face database

Based on the 20,000 face database, the recognition speed of this face recognition terminal is less than 300 MS, and supports expansion to 50000 face database, which fully meets the needs of face recognition passage scenarios.

2.3 120DB ultrawide dynamic

This face recognition **DJS-F10** adopts 2 million pixels living body recognition binocular camera, built-in fill light, 120DB ultra-wide dynamic, no fear of backlight and dark light environment.

2.4 Online / Offline mode can be switched

The DJS-F10 supports both online and offline modes, and the DJS-F10 administrator can switch the identification mode according to the actual situation. In offline mode, face recognition can be achieved without internet connection.

2.5 Support multiple peripheral expansion

Support various peripheral expansion such as ID card reader, fingerprint reader, IC card reader, QR code reader, gate, door sensor, etc.

2.6 Built-in high-performance ISP

The built-in high-performance ISP can restore the scene details under different optical conditions and ensure the image quality.

2.7 Rich interface, worry-free installation

It has a full specification tail wire to meet the needs of most scenarios. It has a relay to control the door opening, including power supply, USB, RJ45, lock control and RS232 / UART (multiple interfaces, optional)



2.8 Exquisite appearance, three bases are optional

7-inch aluminum alloy shell, exquisite atmosphere, wear-resistant and anti-corrosion, provides three types of bases, wall-mounted, upright and desktop, and the **DJS-F10** supports an adjustable angle of 60 degrees to meet the installation needs of different scenarios.



2.9 Network background management system

Equipped with a powerful network management system, real-time recording whether to wear a mask, identification time and other information, built-in real-time monitoring, personnel management, equipment management, attendance management, data statistics and access rules and other functional modules to help managers quickly master data for unified remote management.

3 Technical Parameters

3.1 Technical parameters

| Basic parameters | |
|-----------------------------|---|
| SoC | High-performance AI SoC (4-core A7 + NPU + DSP) |
| Memory | 1GB DDR3 |
| Storage | EMMC 8GB |
| Identification requirements | |
| Recognition height | 1.2~2.2m , adjustable angle |
| Recognition distance | 0.5~1.2m |
| Face angle | 30 degrees left and right, 30 degrees up and down |
| Face recognition | |
| Face recognition accuracy | 99.99% (1:1 , FRR 1%) |
| Living body detection | support |
| Recognition speed | <300ms (20000 face library) |
| Face Library | default 20000, maximum 50000 |
| 1: 1 face comparison | support |
| 1: N face search | support |
| Recognition distance | 0.5m~1.2m |
| Operating temperature | -10~60°C |
| Screen | |
| Size | 7 inch LCD screen |
| Resolution | 600*1024 |
| Camera | |
| Resolution | 2 million pixels |
| Genre | 120DB wide dynamic binocular camera |
| Fill light | built-in fill light, no fear of backlight, dark light environment |
| Interface | |
| Power supply | DC 12V |
| Internet | 1 RJ45 10M / 100M adaptive Ethernet port |
| USB | 1 USB 2.0 interface |
| Lock control | 1 channel lock control signal |

| | |
|------------------------------|---|
| Optional | 1 interface, optional RS232 / UART |
| Function | |
| Mask recognition | support |
| No mask reminder | support |
| ISP image processing | support |
| Coordination | no need to cooperate to stand still and close |
| UI interface settings | support |
| Remote device upgrade | support |
| Deployment method | LAN use |
| Electrical parameters | |
| Voltage | DC 12V |
| Electric current | 500mA |
| Power | 15W |
| Storage temperature | -25~60°C |

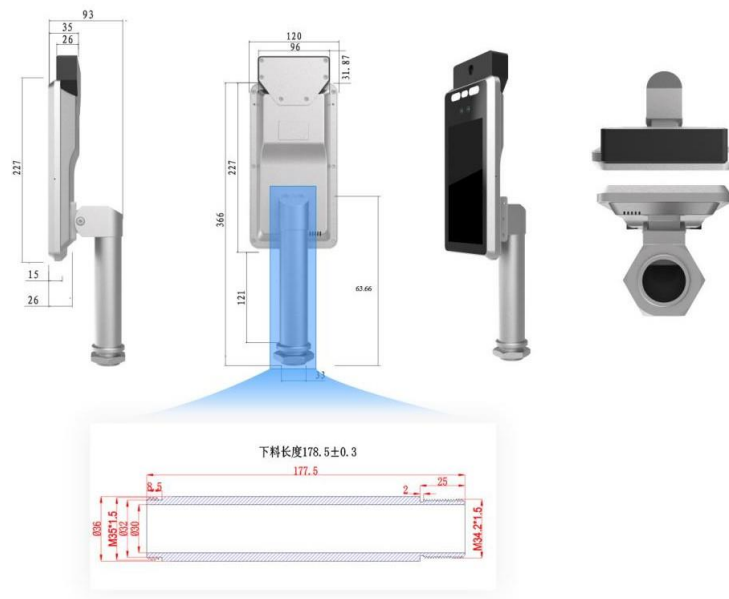
3.2 Other parameters

| Style | Host weight | Accessories weight | Total weight (including packaging and three brackets) | |
|-------------------------|-------------|----------------------------------|--|--|
| Upright | | Column bracket: 250g | | |
| Wall-mounted | 900g | Wall bracket: 130g | 1900g | |
| Desktop | | Desktop stand: 200g | | |
| Other parameters | | | | |
| Product Size | | 120*259*35mm | | |
| Single package size | | 450*170*125mm | | |
| Outer box size | | 530*510*320mm | | |
| Packing situation | | 4 sets/box ; total weight 9.2 Kg | | |

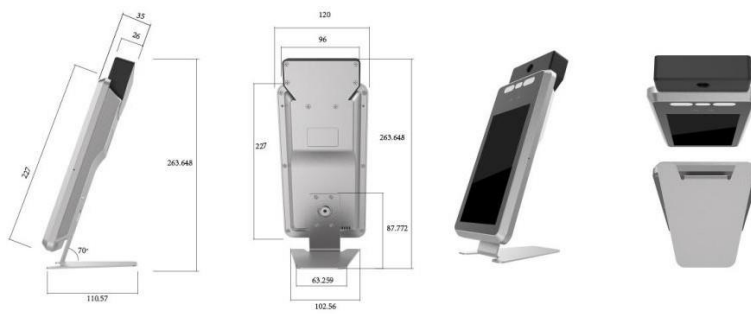
4 Physical Dimension

4.1 Product size chart

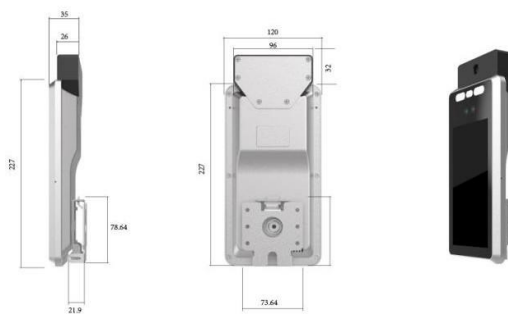
Upright



Wall-mounted

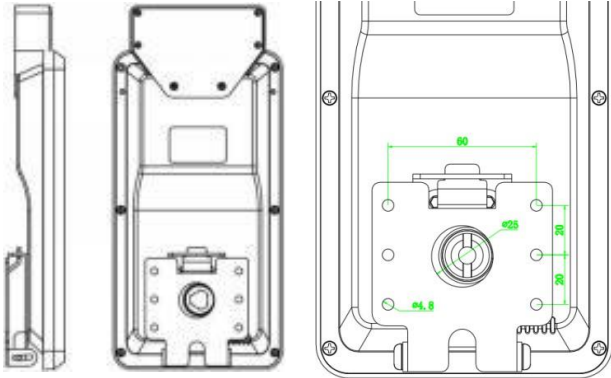
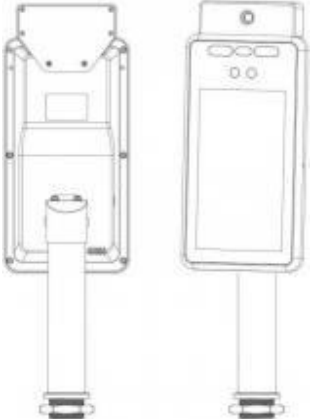
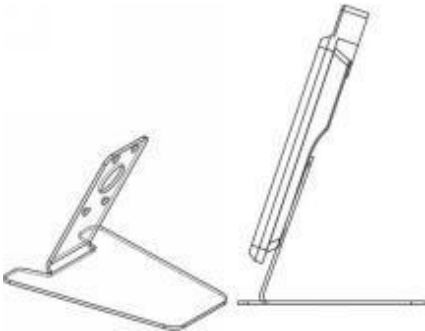


Desktop



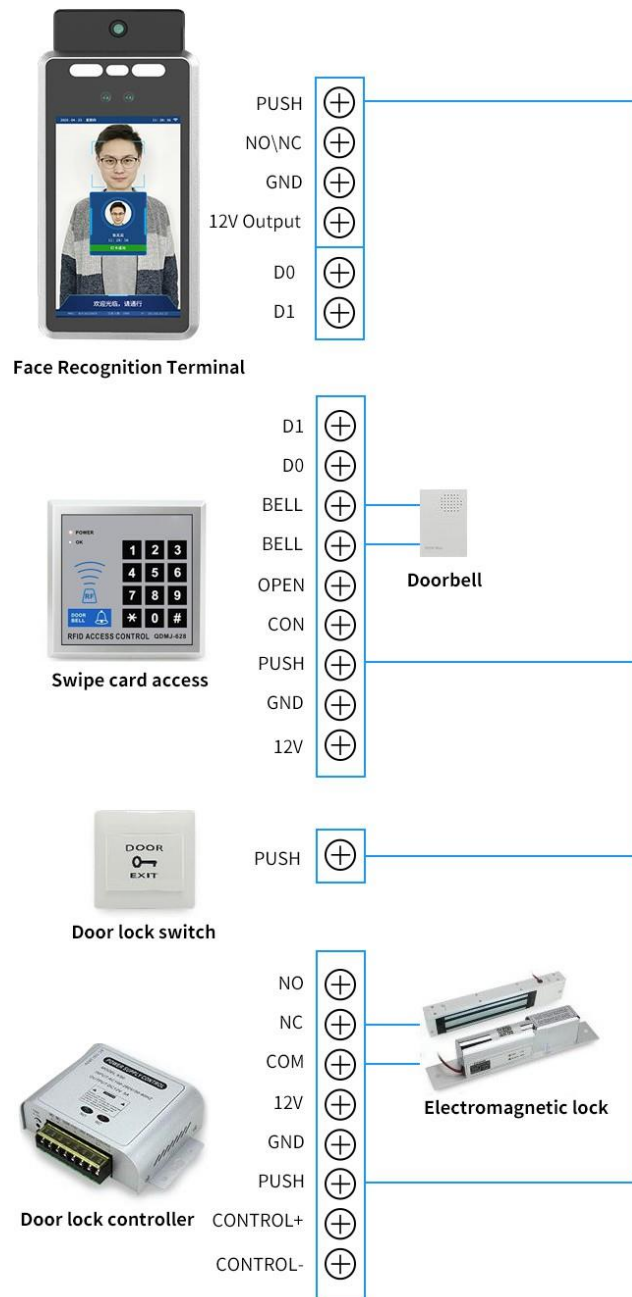
5 Installation method

5.1 Installation method

| Installation Method | Picture Display | Remarks |
|---------------------|---|--|
| Wall-mounted |  | Wall-mounted installation, can be fixed on the wall by installing the back plate |
| Upright |  | Upright installation, suitable for fixed equipment such as channel gate |
| Desktop |  | Desktop placement, can be moved at will, the scope of application is wider |

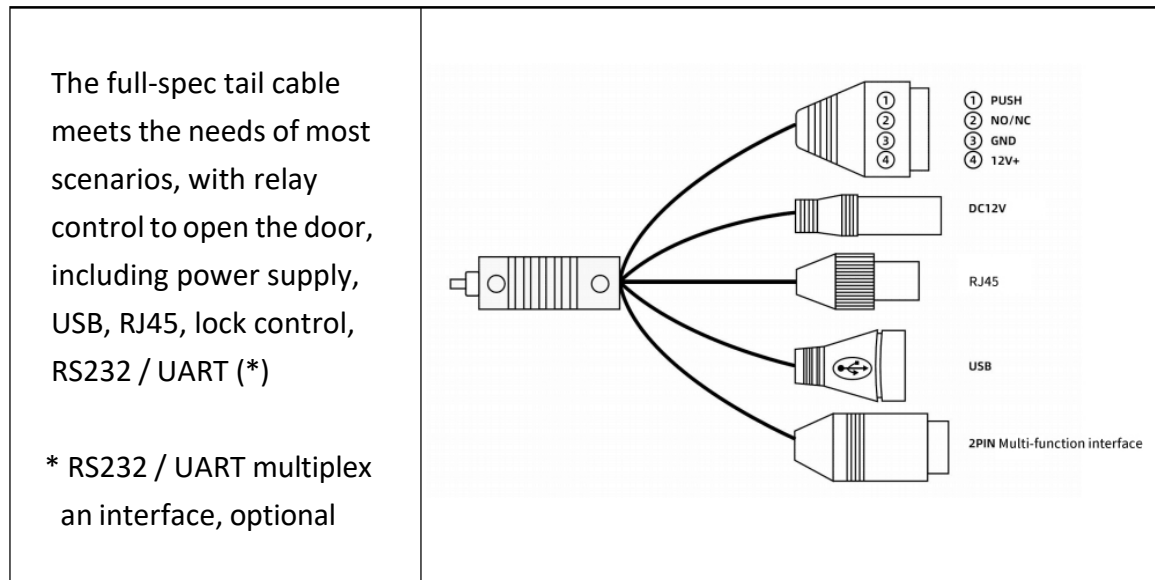
5.2 Device installation

Note: The power controller needs to be connected to 220V, and other accessories can be connected with a network cable



6 Interface Definition

6.1 Interface definition



| Line group | | Function group | Line sequence | Terminal name |
|------------|--------------------|-----------------------|---------------|---------------|
| A | 4 pin | Lock control signal | 1 | PUSH_OUT |
| | | | 2 | LOCK_NONC_12V |
| | | | 3 | GND |
| | | | 4 | 12V OUT |
| B | 5.5mm Round socket | power supply | 1 | 12V in |
| | | | 2 | GND |
| C | RJ45 | Ethernet | 1 | Ethernet |
| D | TypeA USB socket | USB Host | 1 | 5V |
| | | | 2 | DN |
| | | | 3 | DP |
| | | | 4 | GND |
| E | 2 pin | Optional RS232 / UART | 1 | D0 / TX |
| | | | 2 | D1 / RX |

7 Electrical Performance

7.1 Electrical performance

| Project Definition | | Minimal | Typical | Maximum |
|-----------------------|--|---------|---------|---------|
| Power Parameters | Voltage | -- | 12V | -- |
| | Electric Current | -- | -- | 2000mA |
| | Total Power | -- | -- | 15W |
| Electrical Parameters | Lock Control Signal Current | -- | -- | 500mA |
| Environment | Relative Humidity | -- | -- | 80% |
| | Face Recognition Operating Temperature | -10°C | -- | +60°C |
| | Storage temperature | -25°C | -- | +60°C |

8 Precautions

8.1 Precautions

1. After the DJS-F10 is turned on, it takes about 15 minutes to heat up the machine to reach the thermal equilibrium state before use.
2. Do not use the DJS-F10 outdoors, the machine does not have waterproof function.
3. During the installation and use of the DJS-F10, please strictly abide by the electrical safety regulations in the area of use.
4. Do not disassemble and repair the DJS-F10 by yourself, otherwise it will affect the equipment warranty.
5. Avoid extreme environments such as extreme high temperature (or low temperature), high humidity, vibration, radiation, chemical corrosion, etc. during installation and use.

9 Diagram

