

Non-contact temperature measurement & face recognition for access control system

Disadvantages of conventional temperature measurement method



Risk of virus infection from short distance

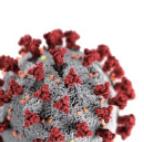


Low efficiency due to manual measurement



Difficult data/record management and overhead cost

Smart Pass Summary



Smart Pass

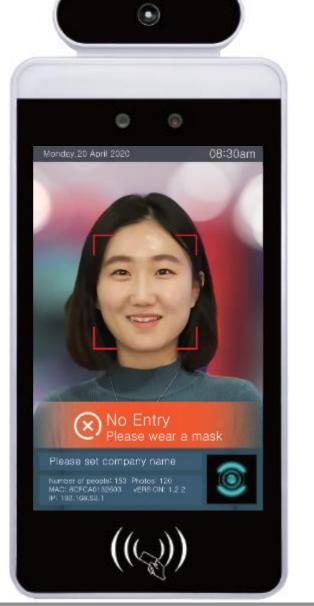
As wearing a mask becomes more common due to COVID-19, it is a state-of-the-art AI-based face recognition and temperature measurement access control system that accurately recognizes people, thanks to deep learning technologies, even though they cover half of their faces with mask or wear glasses & mask at the same time.

SenseTime (No. 1 in the world) AI-based face recognition technology + Heimann (Germany) IR temperature measurement sensor + Korean manufacturing & software technologies = The Best "temperature measurement & face recognition" SMART PASS







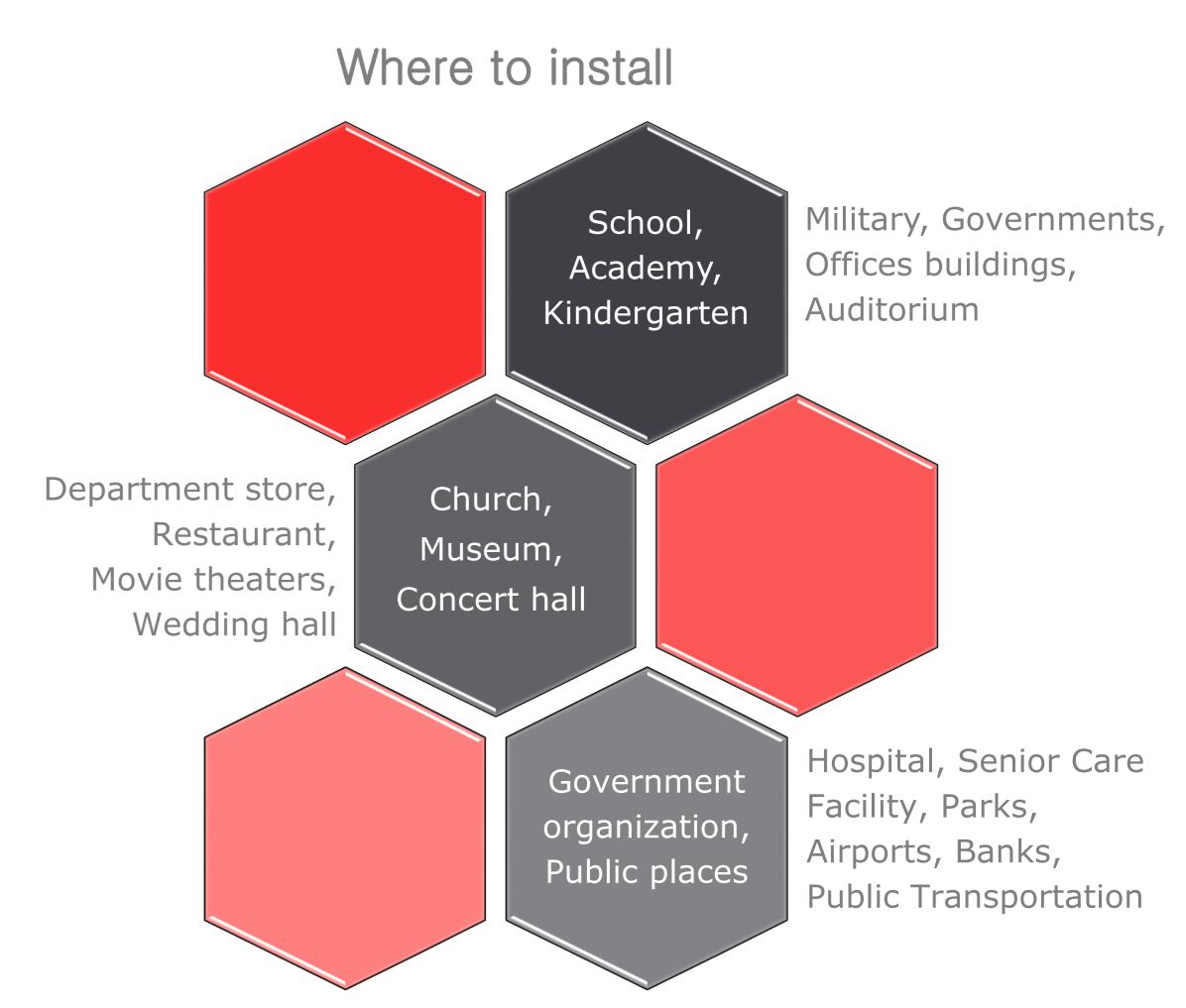




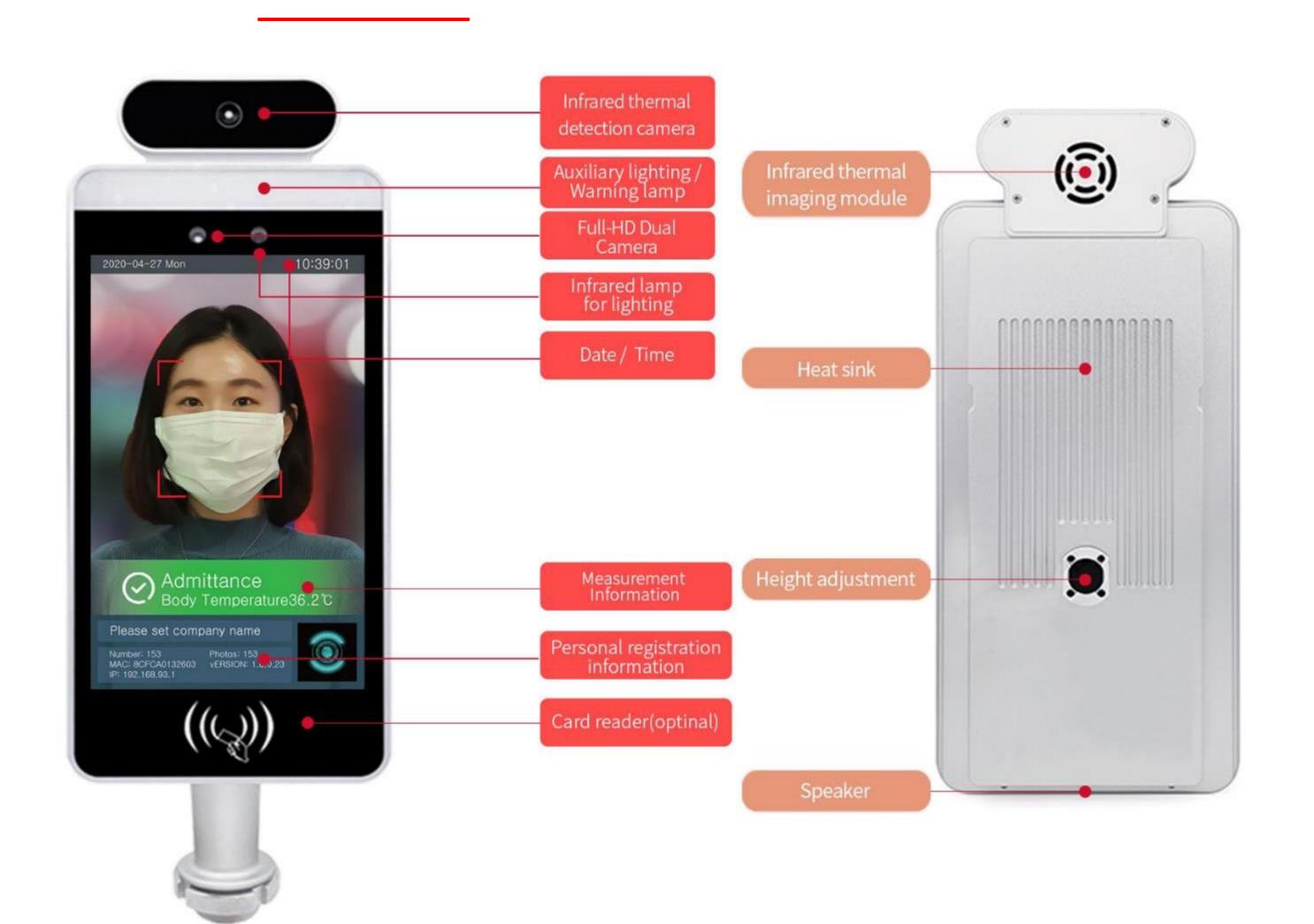
- To determine whether access allowed after temperature measurement (heat detection camera) and face recognition.
- Access will be denied by showing the message "Please wear a mask" if people wear mask only on chin or mouth or don't wear mask.
- Even if people wear mask, it can accurately recognize face 99% in 0.5 seconds. And access will be denied if body temperature is over 37.5 degrees Celsius (if set to 37.5 degrees).

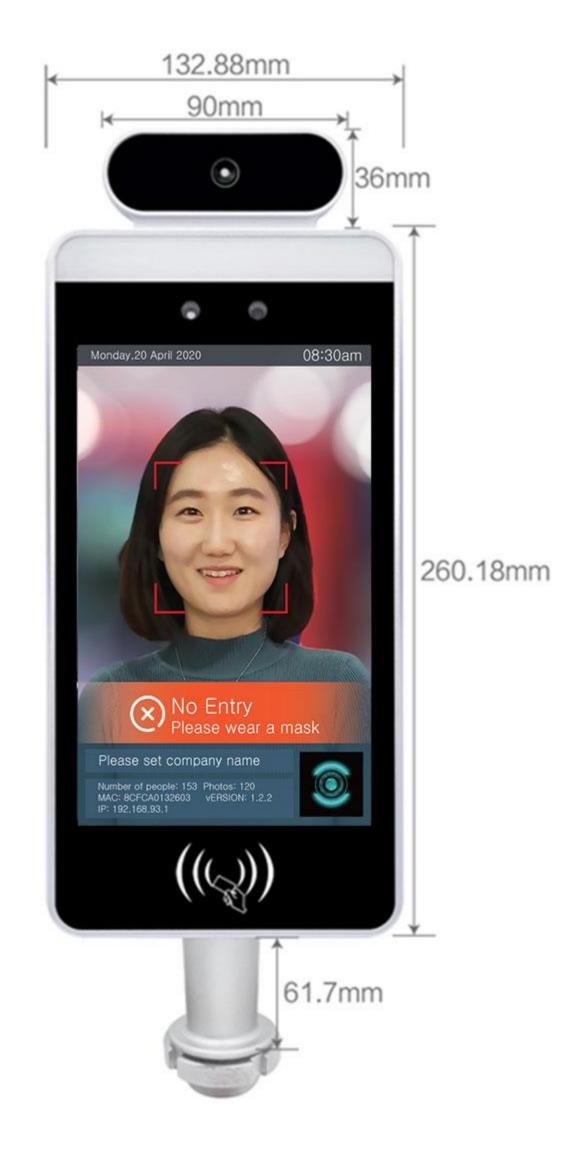
Smart Pass Summary

- ◆ Where to use main entrance in densely populated area, installed to effectively prevent epidemics by conducting real-time temperature monitoring of employees, customers, visitors and other personnel.
- ◆ Features precise and accurate temperature measurement sensor, high quality infrared from Heimann using 2 megapixel wide-angle dynamic camera, and adopting world's No. 1 face recognition AI technologies from SenseTime, it provides detection range from 0.5 meter to 1 meter while measuring temperature at the same time.
- ◆ Prevention of infection after presetting thresholds for high temperature (abnormal), product alarm goes off if measured temperature exceeds preset value. And people with high temperature are not allowed to enter as it warns the risk of infection, effectively protects the health, and improve the epidemic situation.



Description

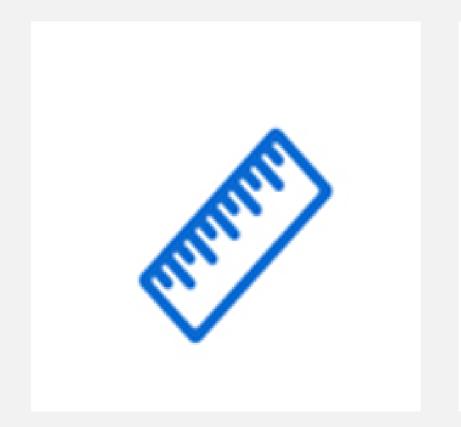




Features

1	8-Inch IPS FULL-VIEW LCD display
↓ 2 ↑	Powerful processor: Rockchip RK3288 Quad Core
↓ 3 ↑	Stable and reliable aluminum exterior, waterproof and dustproof design
4	30,000 face database support
5 ^	Face comparison recognition rate exceeds 99.7%, liveness detection accuracy rate is 98.3%@1%
6	Supports accurate face recognition and comparison while wearing a mask
√ 7 ↑	Industrial binocular wide dynamic camera and night infrared and LED double photo floodlight
8	Optimal distance for temperature measurement is 0.5 meter, max. 1 meter, measurement error \pm 0.5 $^\circ$
9	Automatic alarm for abnormal body temperature and guidance when the mask is not worn
10	Temperature measurement data is exported in real time
11	Supports various peripheral expansion such as ID card reader, fingerprint reader, IC card reader, 2D code reader

Infrared thermal imaging temperature measurement











▶ Distance : 0.5m (~ 1m)

► speed < 1 second

Accuracy $\leq \pm 0.5^{\circ}$ C

Range: 10°C~42°C (recommendation 15°C~30°C)

Automatic alarm for abnormal temperature

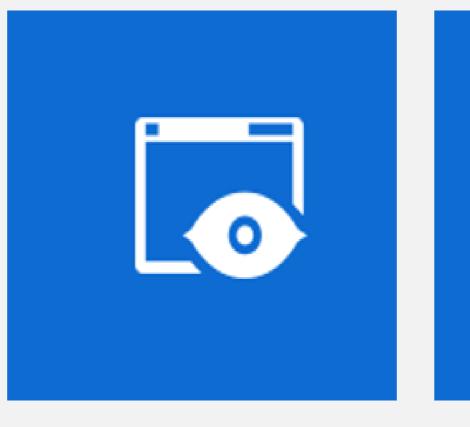
Millisecond-accurate face recognition



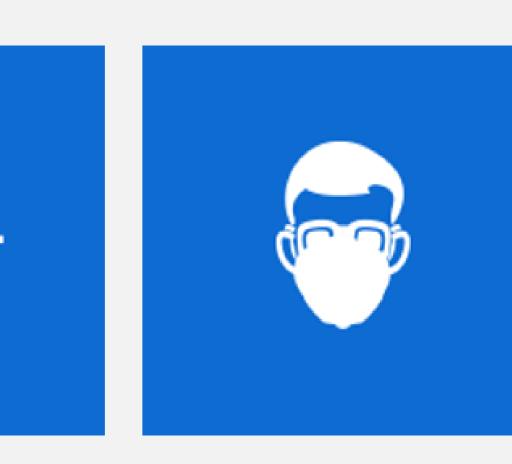




Recognition rate: 99.7%



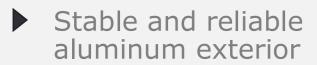
Liveness detection rate: 98.3%

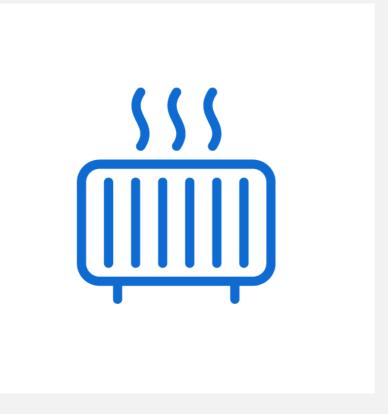


Detection if mask is not worn

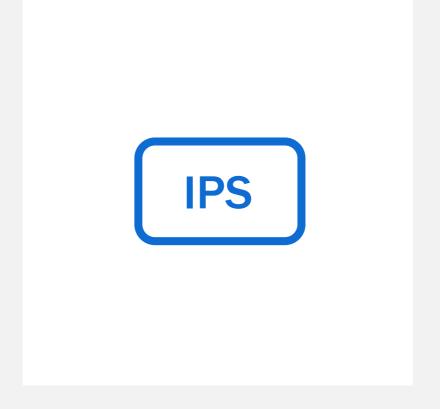
Superior hardware configuration







Built-in heat sink for efficient heat conduction



► IPS Full-view LCD





Wide dynamic binocular camera









- ▶ 30 frames without smear
- Data encryption

- Built-in dual anticounterfeiting power camera
- Night infraredLED dual light support

Installation

Floor stand

Desk stand

Floor stand (for child) Entrance (gate)

Wall mounted



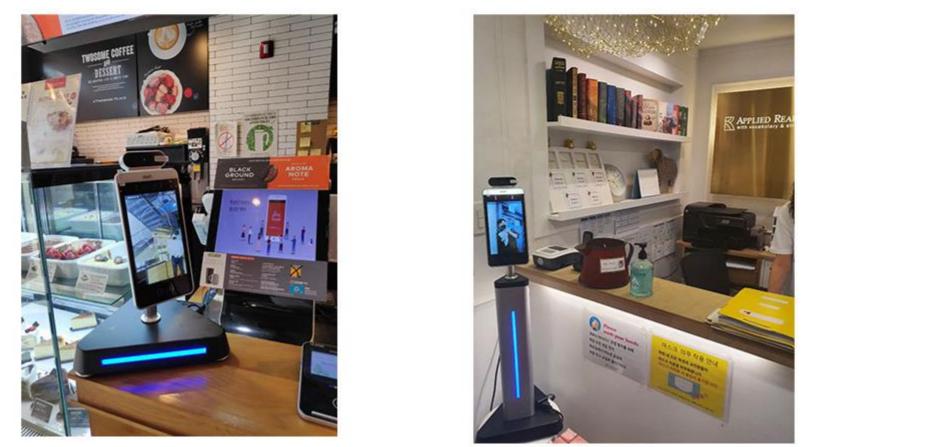


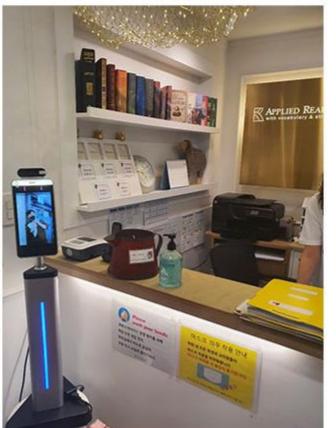












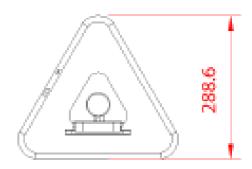


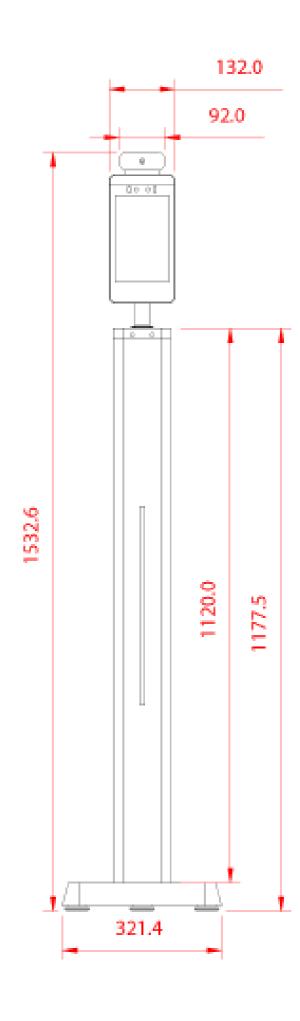


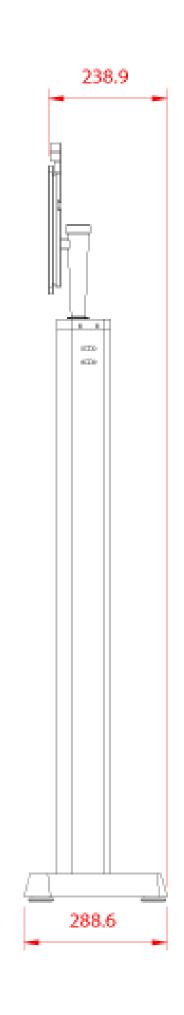
Floor stand







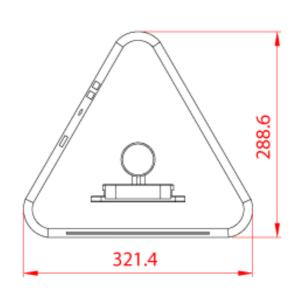


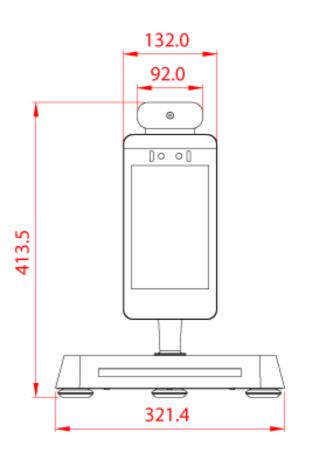


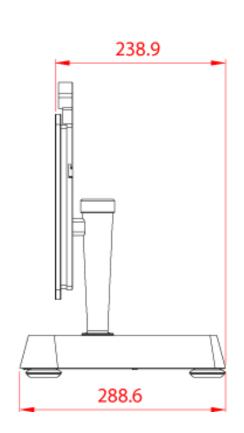
Desk stand





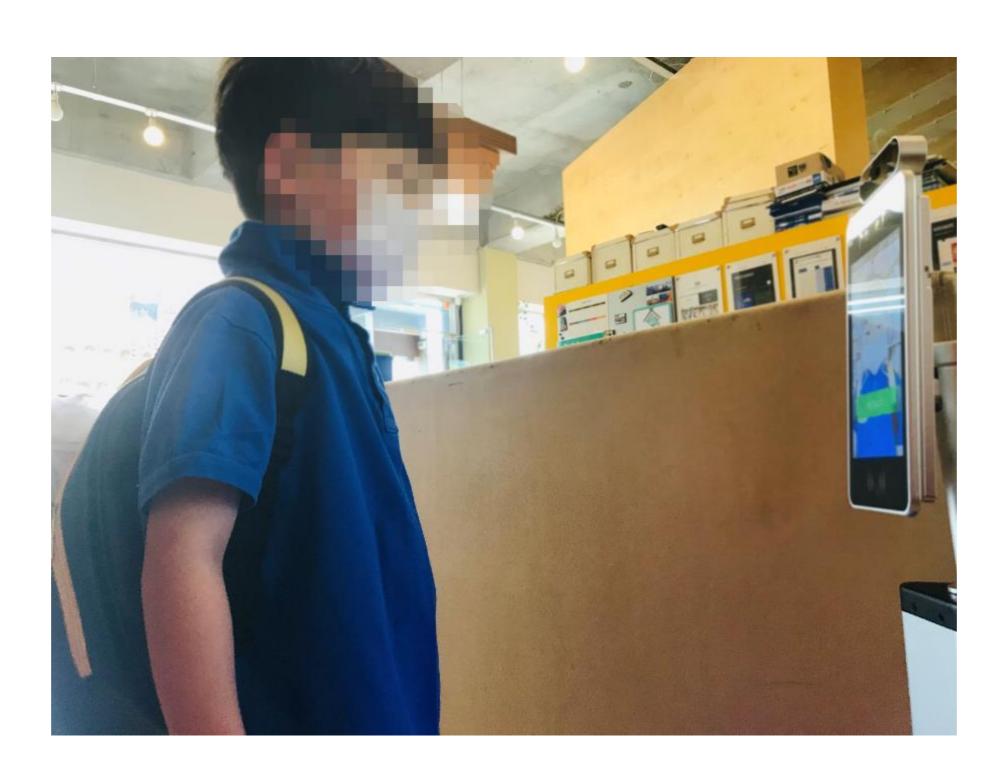




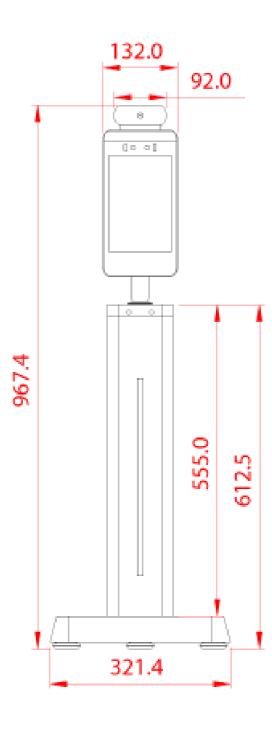


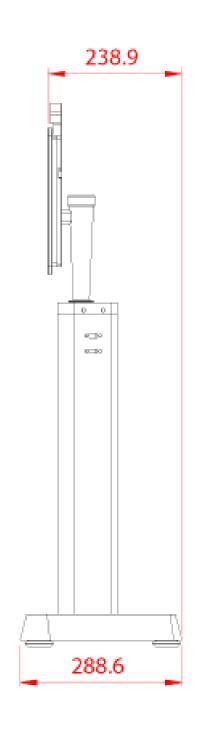
Floor stand (for child)





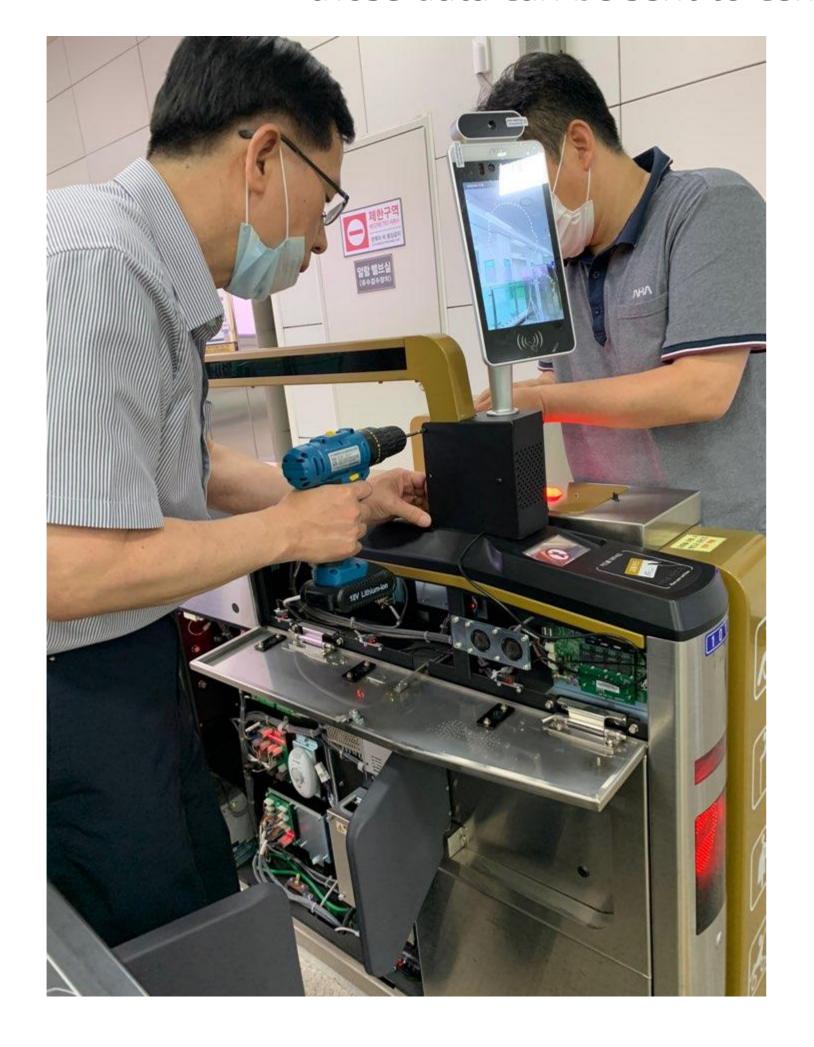


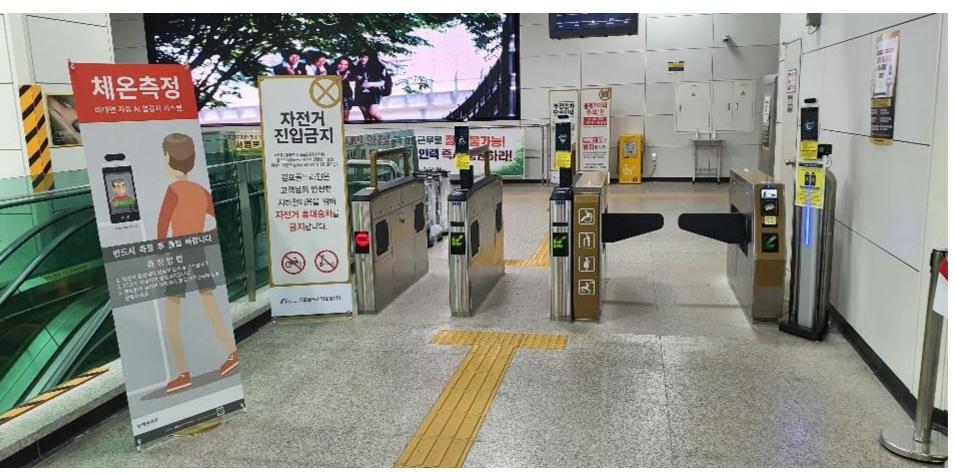




Entrance (Gate)

After measuring body temperature and identifying the person by face recognition for access control, those data can be sent to central server for use as an electronic attendance



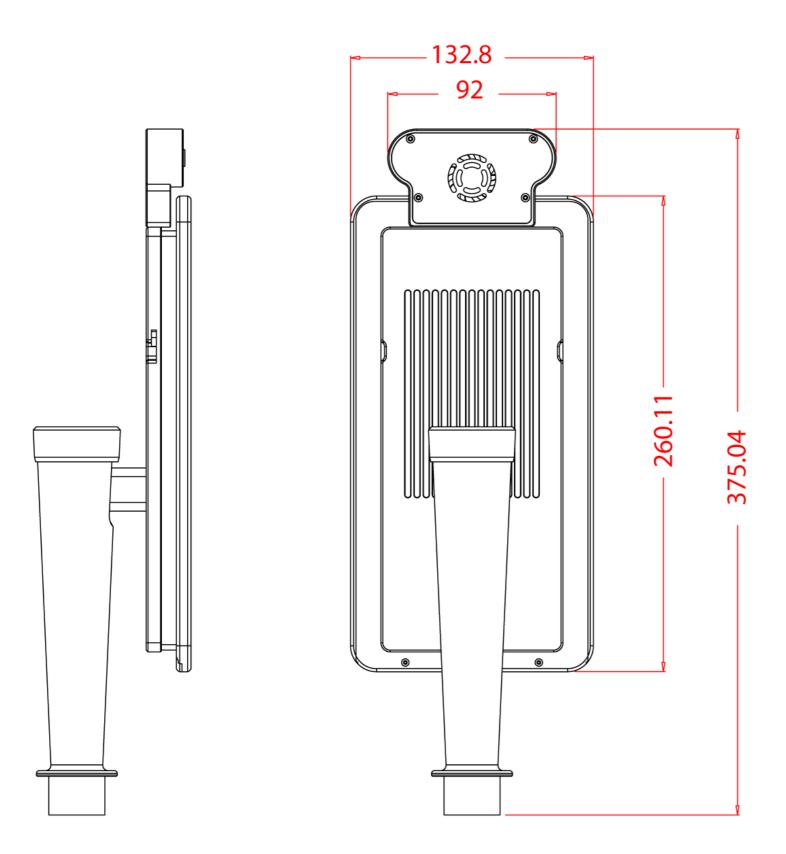


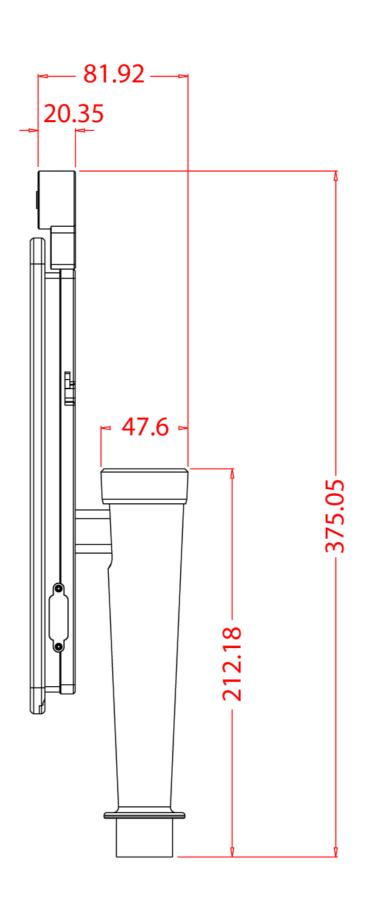


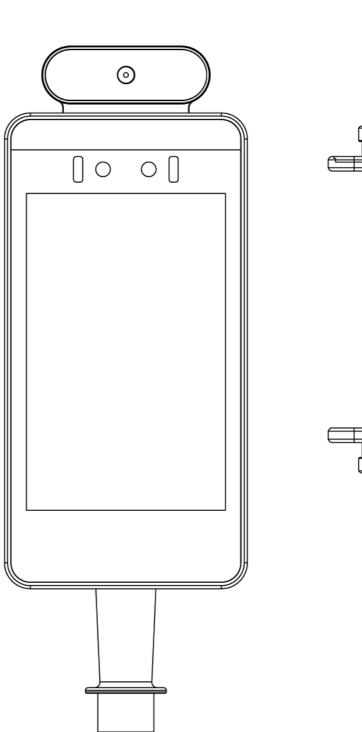
Wall mounted

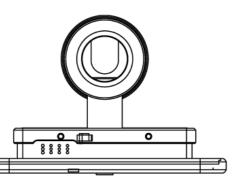


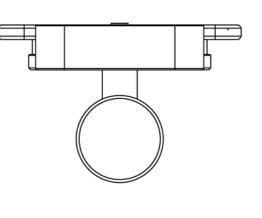
Dimension



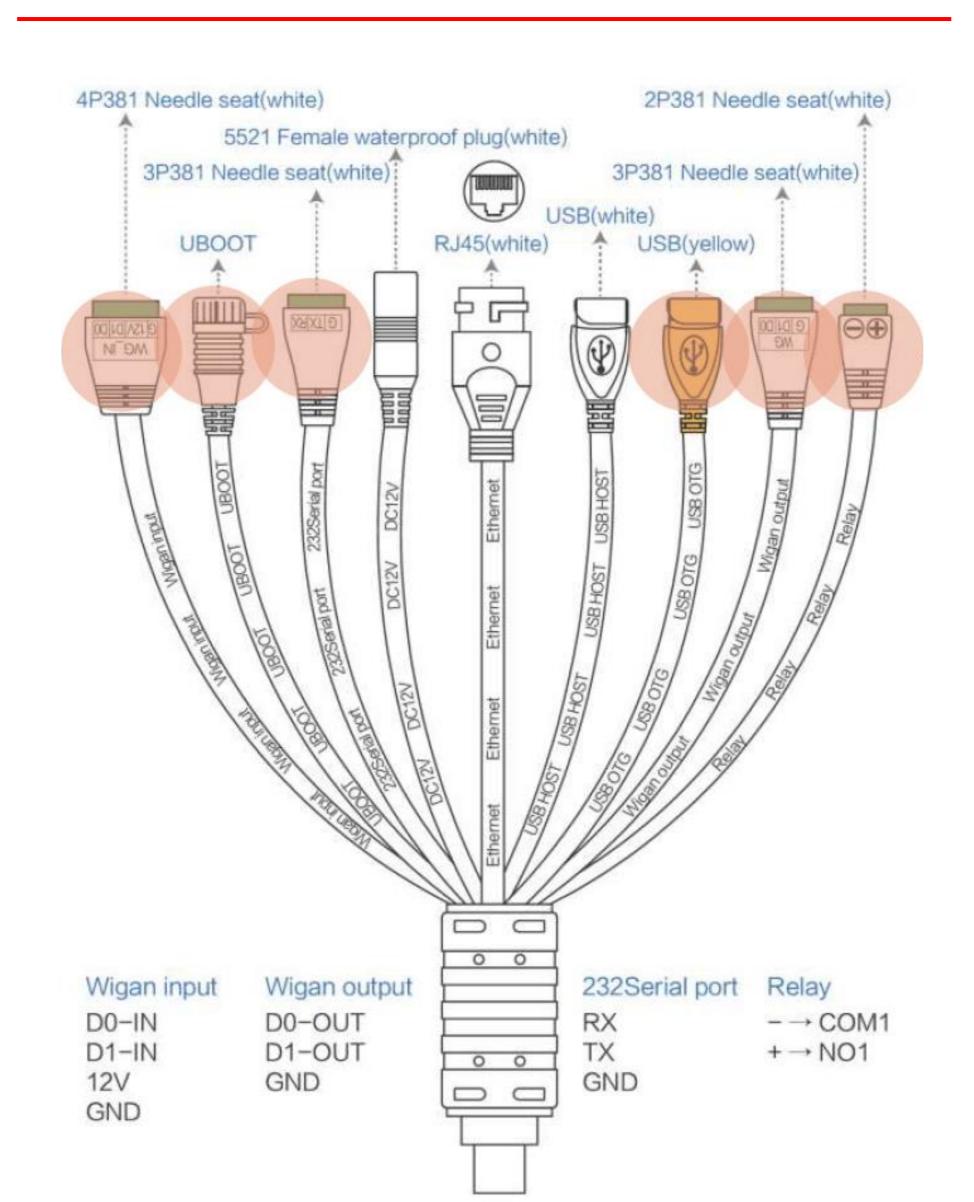








Various interfaces



Specifications

Camera	
Resolution	2 million pixels
Type	Dual wide dynamic camera
Aperture	F2.4
Focusing distance	50-150 cm
White balance	Auto
Photo flood light	LED and IR dual photo flood light
Screen	
Size	8 inch IPS LCD screen
Resolution	800 x 1,280
Processor	
CPU	RK3288 Quad-core (optional, RK3399 6 Core, MSM8953 8 Core)
Storage	EMMC 8G
Audio	2.5W / 4R speaker
USB	USB OTG x 1, USB HOST standard A Type x 1
Serial communication	RS232 serial Port x 1
Relay	1 point contact (2A 30VDC, 0.28A 220VAC)
Wiegand	Wiegand 26/34 output x 1, Wiegand 26/34 input x 1
Upgrade button	Support Uboot upgrade button
Wired network	RJ45 Ethernet socket x 1
Card reader	No (optional, IC card reader, ID card)

Specifications

Function	
Face detection	support
Face library	Up to 30,000
1:1 face comparison	support
Stranger detection	support
Distance detection	support
UI interface configuration	support
Remotely upgrade	support
Interface	Device management interface, HR/ photo management, record inquiry
Data management tool support	LAN, Stand-alone, Support for use in conjunction with existing access control systems
Infrared thermal imaging module	
Temperature detection	support
Temperature measurement distance	1 meter (optimal 0.5 meter)
Temperature measurement accuracy	≤ ±0.5°C
Temperature measurement range	10°C ~ 42°C (15°C ~ 30°C optimal)
pixel	1024 (32 x 32)
Gate Open when it's normal temperature	support
Abnormal temperature alarm	support (temperature alarm value can be set)

Specifications

General Power	DC12V (±10%)
Operating temperature	10℃~40℃
Storage temperature	-20℃~60℃
Power consumption	13.5W (Max)
Installation method	Gate bracket, on the wall, floor stand, desk stand installation
Size	296.18*132.88*25 (mm)
Packaging	
Main body * 1, Power adapter* 1, manual * 1	



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