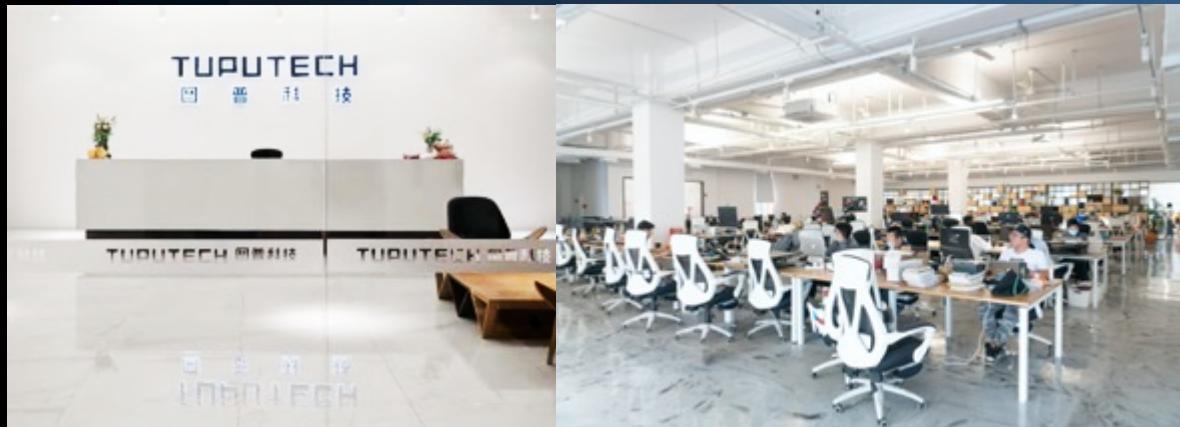


Face Recognition & Thermometric Access Control Solution

TupuCheck Terminal + Tupu Face Access Platform



ABOUT TUPUTECH



An **AI** enterprise founded in 2014. Leveraging its state-of-the-art artificial intelligence and computer vision technologies, Tuputech has excelled in applying its technologies into business practices, empowering **online content moderation, business intelligence and security**.

In April 2018, Tuputech rank 1st in face recognition MegaFace global ranking organized by the University of Washington. Nowadays Tuputech processes over **2 billion images** per day with over 100 billion images reviewed to date, making Tupu **the largest** cloud platform of image recognition in China.



Pre Series-A Funding

2014

Tuputech was founded

2015

Launched online content moderation platform which were used by 60% live streaming platforms in China.

2016

Named in CCF's Top 25 AIR(AI and Robotics) enterprise

2017

Series-A Funding



2018

Rank 1st in MegaFace Benchmark in April 2018; Dedicated to pushing business boundary in internet, new retail and security.

2019

Face Recognition & Thermometric Access Control products are launched

2020

WHY CHOOSE TUPUTECH

World-leading AI company with advanced deep-learning algorithms

University of Washington

MegaFace*

April, 2018

Rank 1st with
99.087% accuracy

Identification Rate vs. Distractors Size

Algorithm	Date Submitted	Set 1	Set 2	Set 3	Data Set Size
TUPUTECH V1 (BUG cleaned data)	4/24/2018	99.087%			Large
TUPUTECH v2	4/25/2018	99.078%			Large
BingMMILab V1(BUG cleaned data)	4/10/2018	98.989%			Large
Orion Star Technology (clean)	3/21/2018	98.355%			Large
iBUG_DeepInsight	2/8/2018	98.003%	98.058%	98.053%	Large
ULUface	5/7/2018	97.4860%	97.4860%	97.4860%	Large
MTDP_ITC(Clean)	4/17/2018	97.6807%			Large
EM-DATA	4/4/2018	96.653%			Large
SuningUS_Atlab	3/21/2018	96.2618947%	96.2618947%	96.2618947%	Large
Kankan AI Lab	4/24/2018	95.045%			Large
StartDT-AI	4/16/2018	93.8226%			Large
Intellivision	2/11/2018	93.125%	93.123%	93.138%	Large
ULSee - Face Team	3/21/2018	92.172%			Large
Vocord - deepVi V3	04/27/2017	91.763%	91.711%	91.704%	Large
MTDP_ITC	12/21/2017	97.098%	83.877%	87.184%	Large
TUPUTECH	12/22/2017	96.558%	86.557%	86.579%	Large



ReID Dataset

Market-1501*

(Rank-1/mAP)

97.5% / 96%

Best published results

TOP100

Notable AI Companies in the Globe

Awarded by Synced and Comet Labs

TOP50

Innovative Companies in China

Awarded by Fast Company

NEW TECH-CV Enterprise

New Tech: Enterprise Computer Vision Software In China

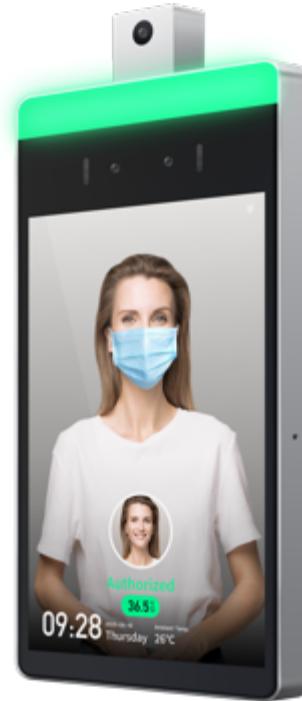
Report released by Forrester in 2019

*The MegaFace database is one of the largest global publicly available testing benchmarks for evaluating the performance of face recognition algorithms

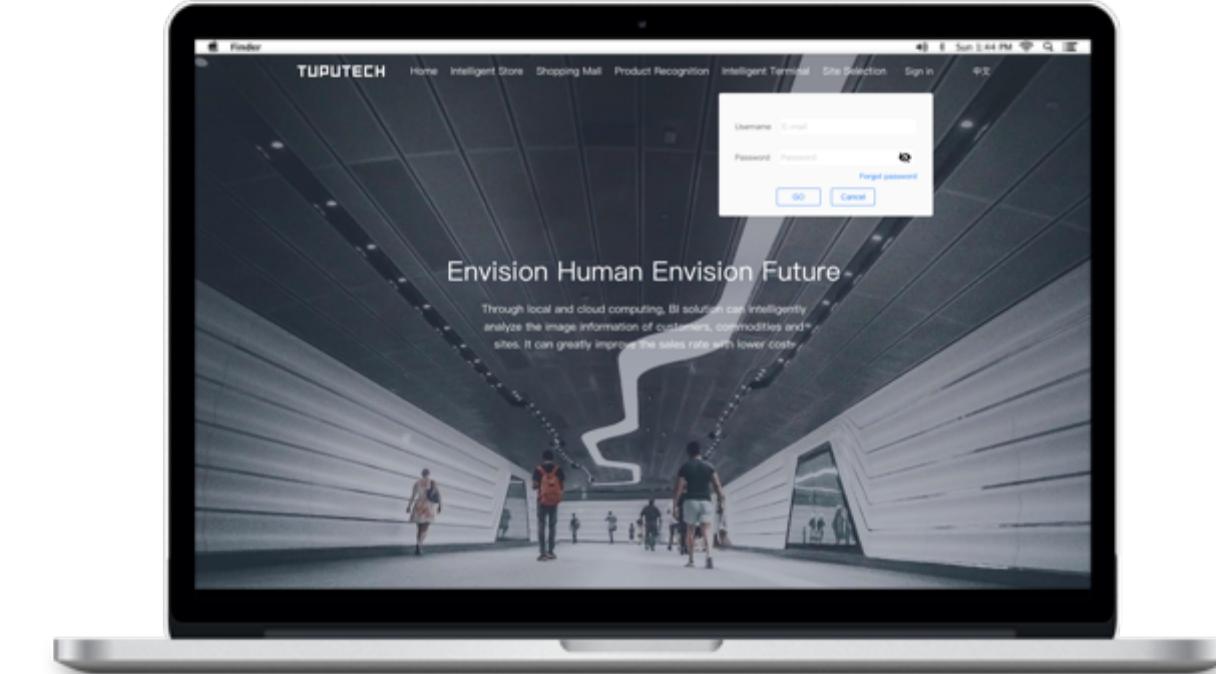
*The Market-1501 dataset is a dataset for person re-identification, which was collected in front of a supermarket in Tsinghua University.

ONE-STOP SOLUTION FOR ACCESS CONTROL

TUPUTECH
图普科技



TupuCheck Terminal



Tupu Face Access Platform

Powered by advanced facial recognition and infrared thermography technologies, TupuCheck provides a fast, accurate and contactless access control solution based on facial identification and body temperature measurement, with easy integration into existing access control devices and systems.



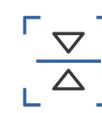
Mask Detection



Infrared Thermography



Fever Alarm



Offline Recognition

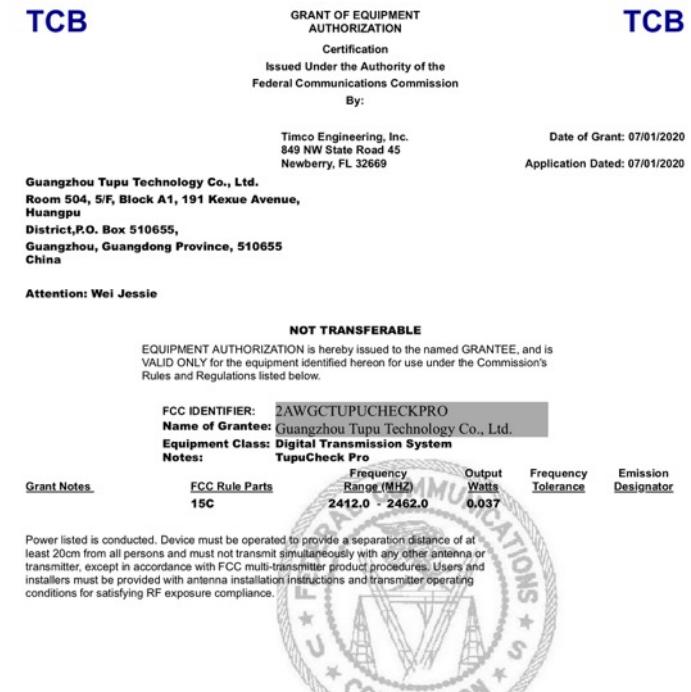


Anti-Spoofing



Visitor Management





RoHS

CE

FCC

Masked Face Recognition Powered by TUPUTECH® AI Algorithm

TUPUTECH
图普科技



Masked Faces Recognition

Tuputech's exclusive AI deep-learning algorithms for face detection with mask to extract face information by analyzing key points of human face and mask, which is applicable when there's mask on a face.

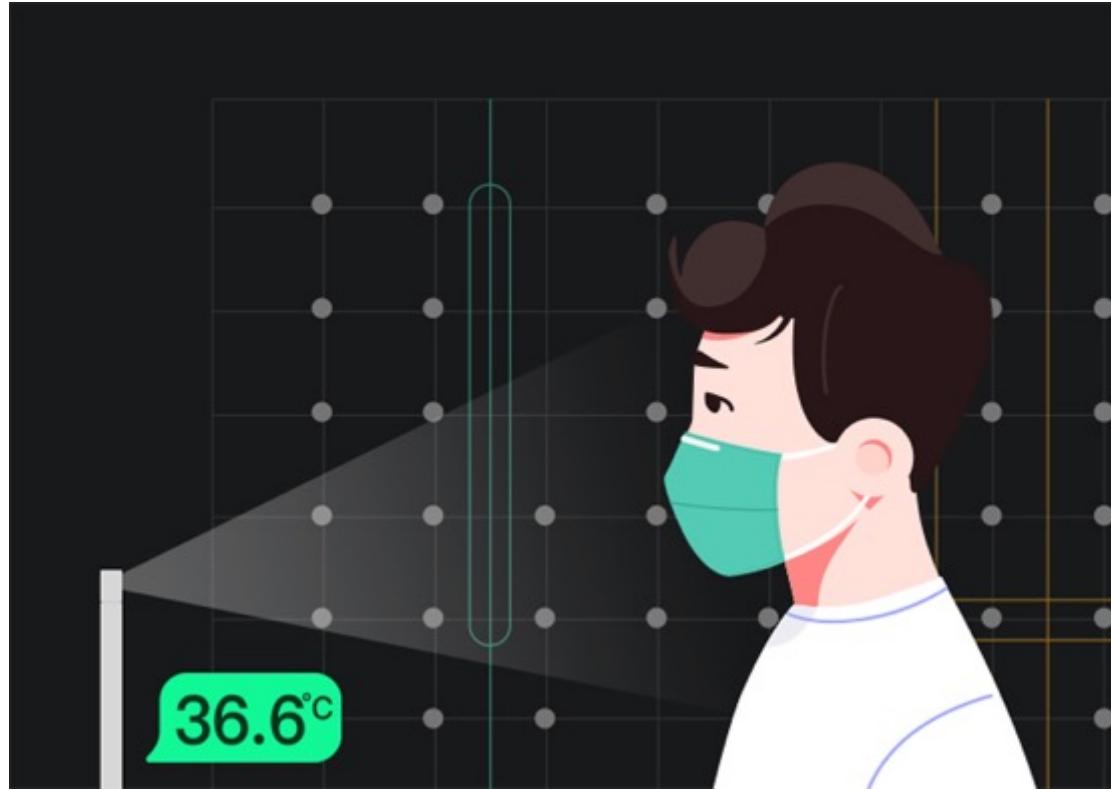
Mask Wearing Reminder



No mask: visual & audio alerts triggered

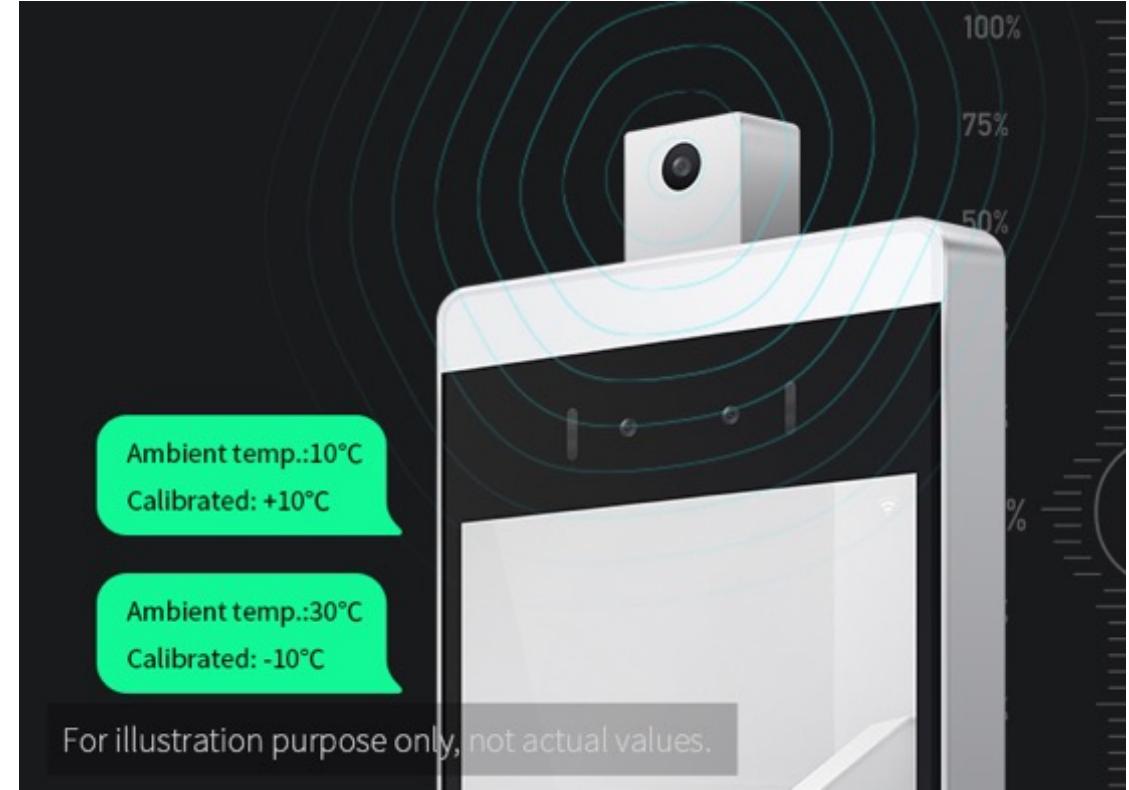


Mask wearing: access authorized



For distance effect

Exclusive AI algorithm propelling temperature calibration against distance effect.



For environmental effect

Exclusive AI algorithm propelling temperature calibration against environmental effect.

Temperature Detection & Fever Alarm

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(Hot water in the mug to simulate body with elevated temperature)

Fever

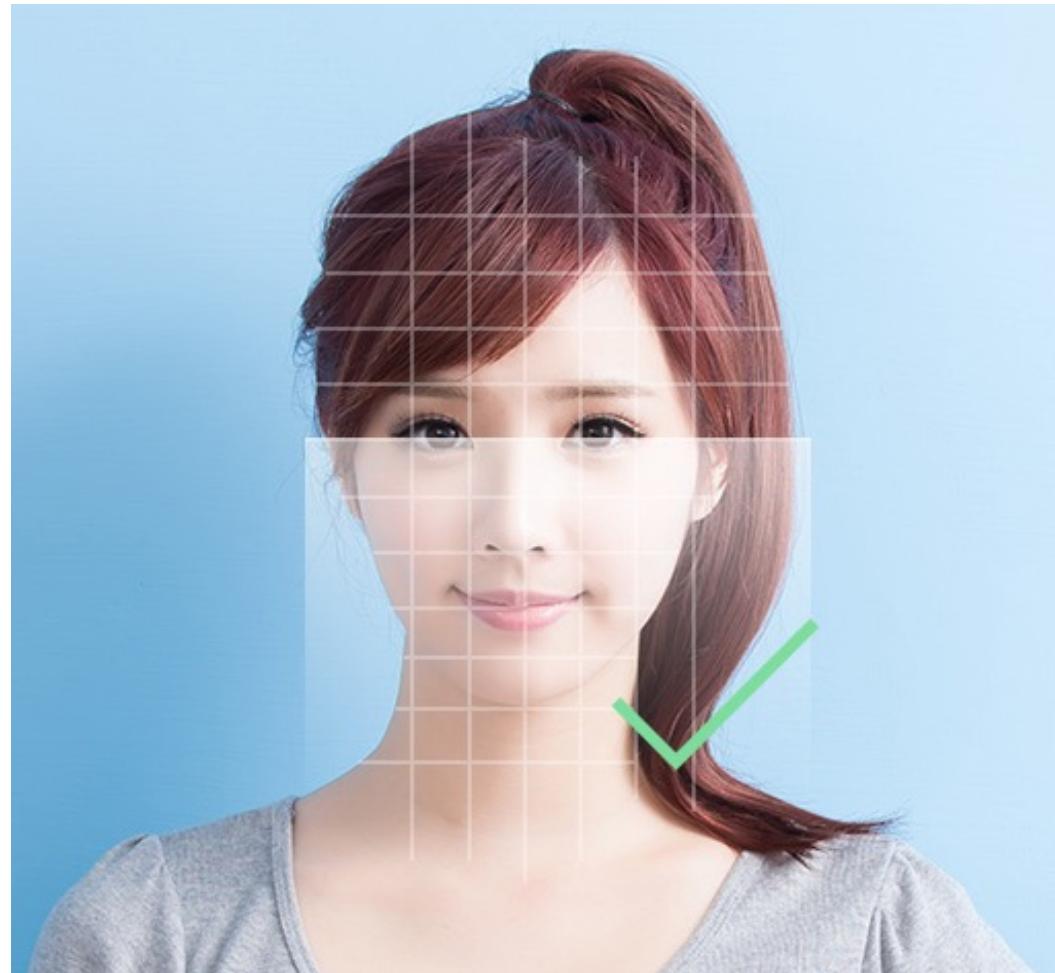
Alarm red light + audio prompt



Normal Body Temperature

Green light

Liveness Detection & Anti-Spoofing



Stereo camera and embedded AI deep-learning algorithm to provide liveness detection against spoofing with photos, cards, videos, etc., for a higher-lever security.

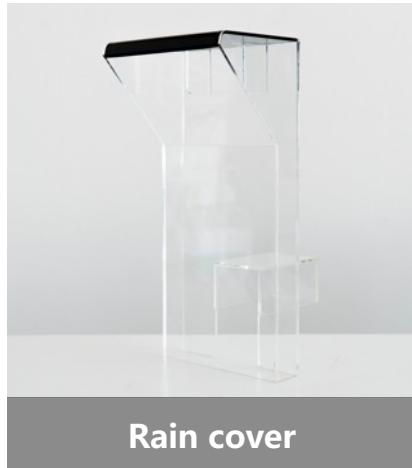
Full Range of Accessories



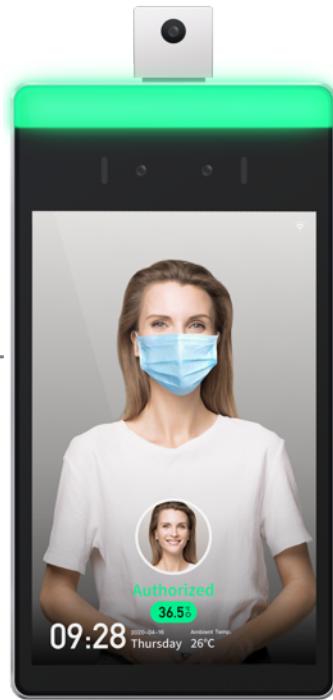
Wall mount bracket



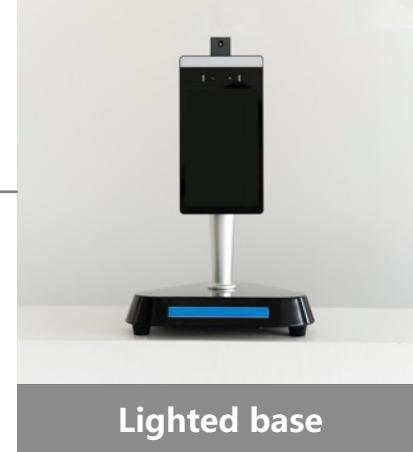
Bracket for turnstile



Rain cover



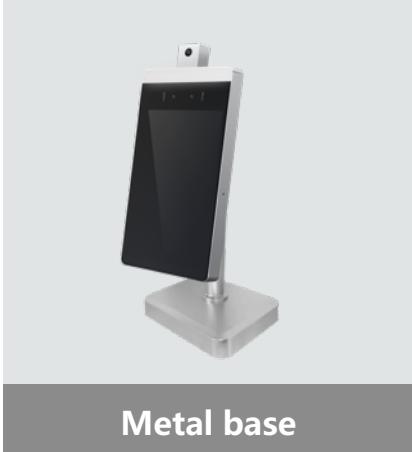
Lighted base



Metal base



Lighted floor stand



Floor stand

One Unibody for Multiple Scenarios



Standalone

1



Wall-mounting

2



Turnstile

3

Product Photos

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Tupu Face Access Cloud Management Platform

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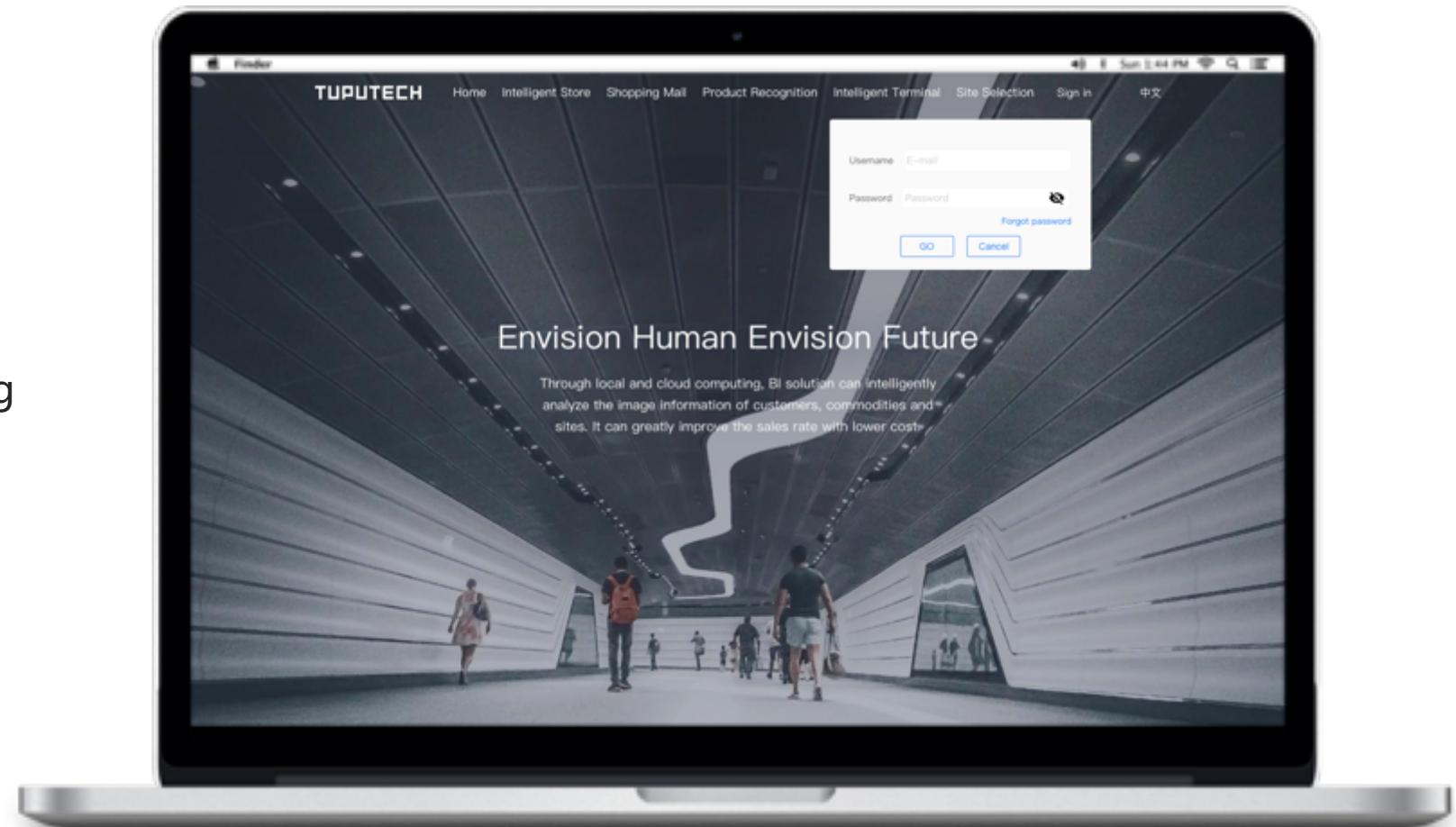
Terminal remote
management



Events & personnel log



Records export



Device Management

TUPUTECH | Face Access Manage Captures **Devices** Passport User Group Personnel Alarm OPS Organization

English ▾

Keyword Use MAC, VPN, SN to search ...

+ Add Device

▼ TUPUTECH

Device 1

Serial Number:

Product Model:

Relay

Device 2

Serial Number:

Product Model:

Relay

Device 3

Serial Number:

Product Model:

USB Relay

Device 4

Serial Number:

Product Model:

+

EditDevice

General

Name

Advanced

Custom

Extra

Event Trigger

VPN . . .

MAC : : : : :

About

Face Capture:
CID: 5c7360796bd91a6b893dbecf
Firmware Version: v1.8.15_alpha_20191231_faceaccess_b1

Cancel Ok

MAC: Offline

VPN:

Record Capture & Export

TUPUTECH | Face Access Manage **Captures** Devices Passport User Group Personnel Alarm OPS Organization English Logout

Region: develop - jinxin

Filtering: Temperature 0-36°C Add criteria

Keyword: Name

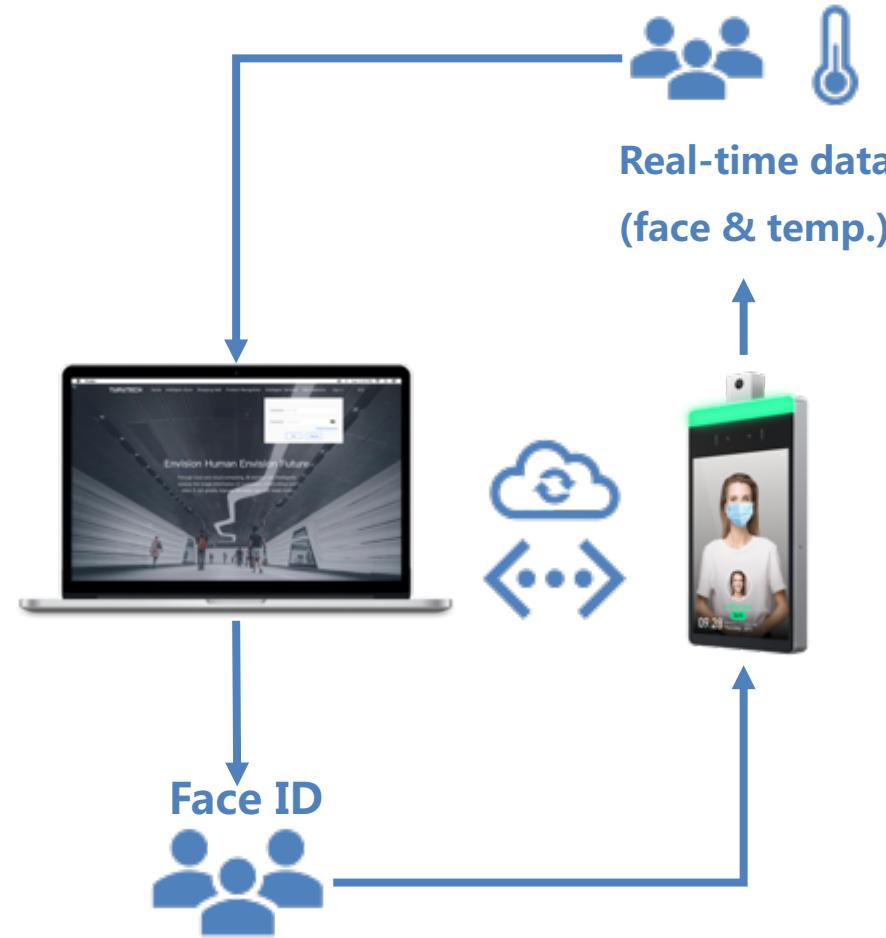
Recognition: Identified face Unknown face OK Output

Date Range: 2020-03-28 00:00:00 ~ 2020-04-27 23:59:59

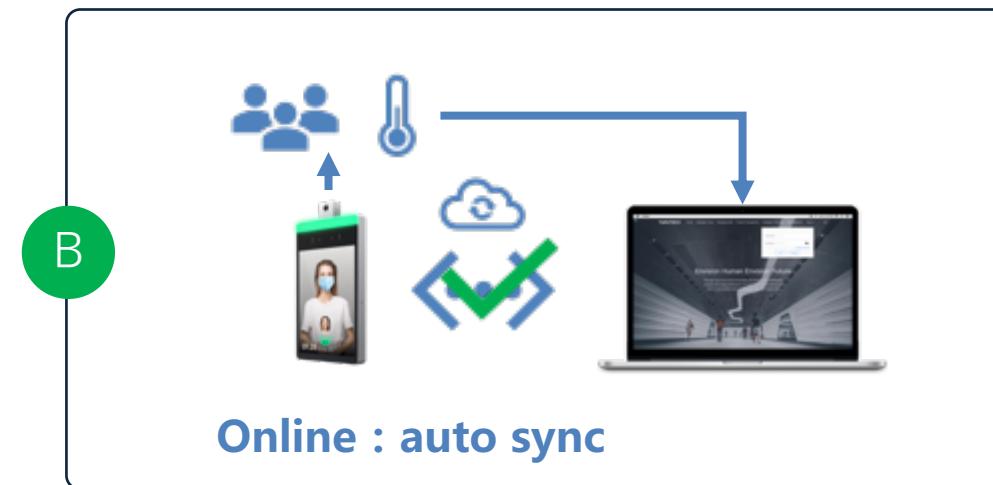
Detail Total Display 30 lines

Capture time	Capture	Status	Attributes	Camera	Affiliated node	Action
2020-04-27 17:20:57		customer	No temperature data	develop - jinxin		Register
2020-04-27 17:20:57		customer	Temperature 36.1 °C	develop - jinxin		Register
2020-04-27 17:20:56		customer	No temperature data	develop - jinxin		Register

Terminal-Platform Synchronization



Data synchronization between different terminal-platform's database.





Smart Community



Smart Campus



Smart Building



Smart Hotel



Smart Hospital



Smart Government

Application Scenes

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Store



Agency



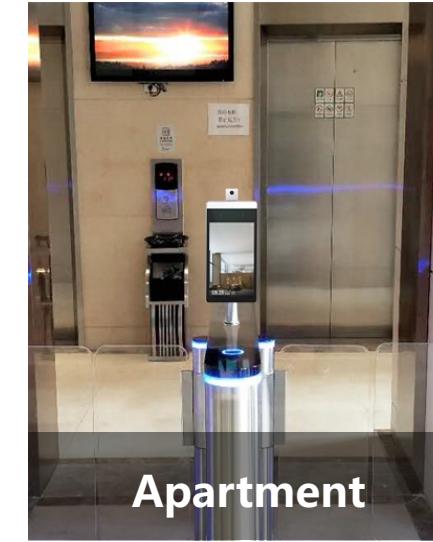
Office



Building



Campus



Apartment



Factory/construction



AI FOR A SMARTER WORLD



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