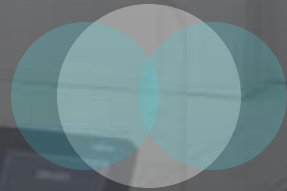




ayonix

THE NEW AGE OF FACE RECOGNITION



# AYONIX Biometric Access control

Ayonix Corporation  
Jan 1, 2021

Ayonix Access is AI-based Face recognition access control and time attendance application. A Camera located at the entrance of the gate authenticates registered people and allow them to access to facility seamlessly.



Ayonix Access recognizes people and open gate while approaching to gates



### CAPTURE



Obtains facial images from video streams (CCTV surveillance cameras)

### ASSESS



Assesses frames of video, detects faces and analyses.  
  
Creates a small template for each unique face

### MATCH



Compares face template image against an enrolled image database until a match is found.  
  
Maintains a history of matches

### REACT



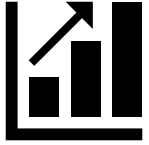
Open a door or send a message by email or by other means

**ONE SECOND PROCESS**

# Why Face recognition



Speedy and easy verification under a second



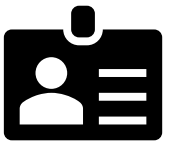
High work efficiency by other information like gender, age, smile, IN/OUT people counting



Temperature measurement to prevent COVID-19 or similar virus-infected people



Smart verification, prevents tailgating, keep an history of people



No touch and the most hygienic Access control system in the world



Human friendly. Fully compatible with disabled people

# Why Ayonix Access



## Deep Learning

Ayonix smart learning algorithm learns people faces simultaneously



## On-edge Recognition

Product prices are almost half compared to competitors



## Mask face verification

High accuracy, high speed for Masked people



## History management

List events, number of incoming/outgoing people, VIP recognition



# Key advantages



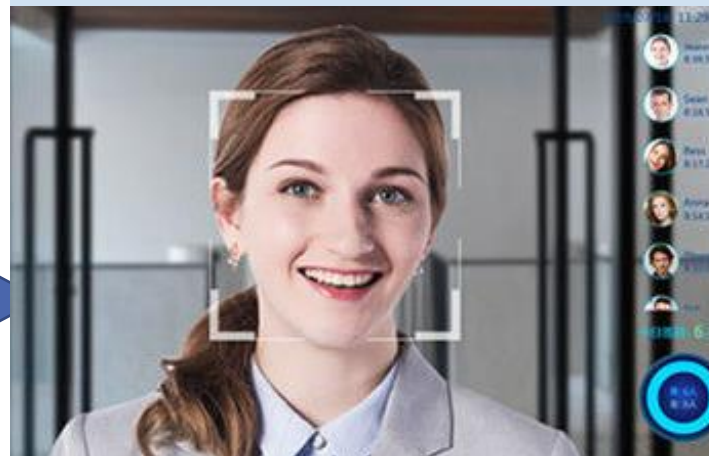
## Speed

Ayonix Access authenticates multiple people simultaneously



## Performance

It allows customers to be matched in a Built-in IP camera. Performance is 2 times higher than others



99% ACCURACY



## Cost

Low cost  
NO server  
NO complexity  
NO waiting time



# What we offer

**Option 1** Ayonix AICAM  
Ayonix Face recognition camera



Ayonix-branded FR camera

**Option 2** Ayonix AIBOX  
Ayonix FR-box for existing cameras



Axis camera



Face recognition box

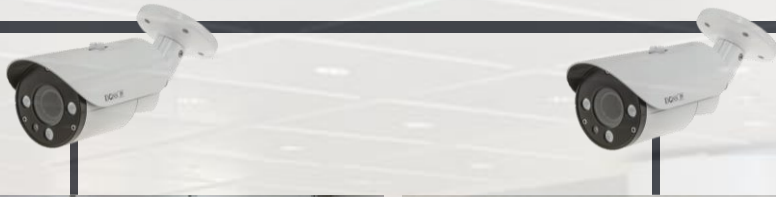
**Option 3** Android tablet  
Android-based Access control



Android matches faces and open door

Comparison	AICAM	AIBOX	Android tablet
<b>USB camera support</b>	No	Yes	No
<b>Budget solution</b>	No	No	Yes
<b>Easy use</b>	Yes	Yes	Yes
<b>Lead time</b>	3 weeks	1 week	1 week

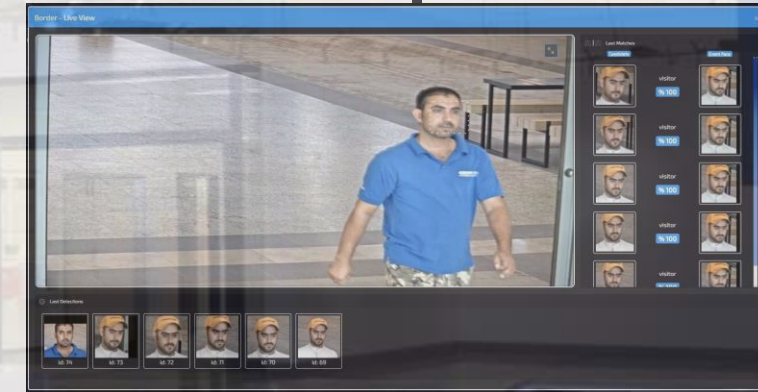
# System Architecture



FR Cloud server



Built-in FR camera matches people and sends information to FR cloud server

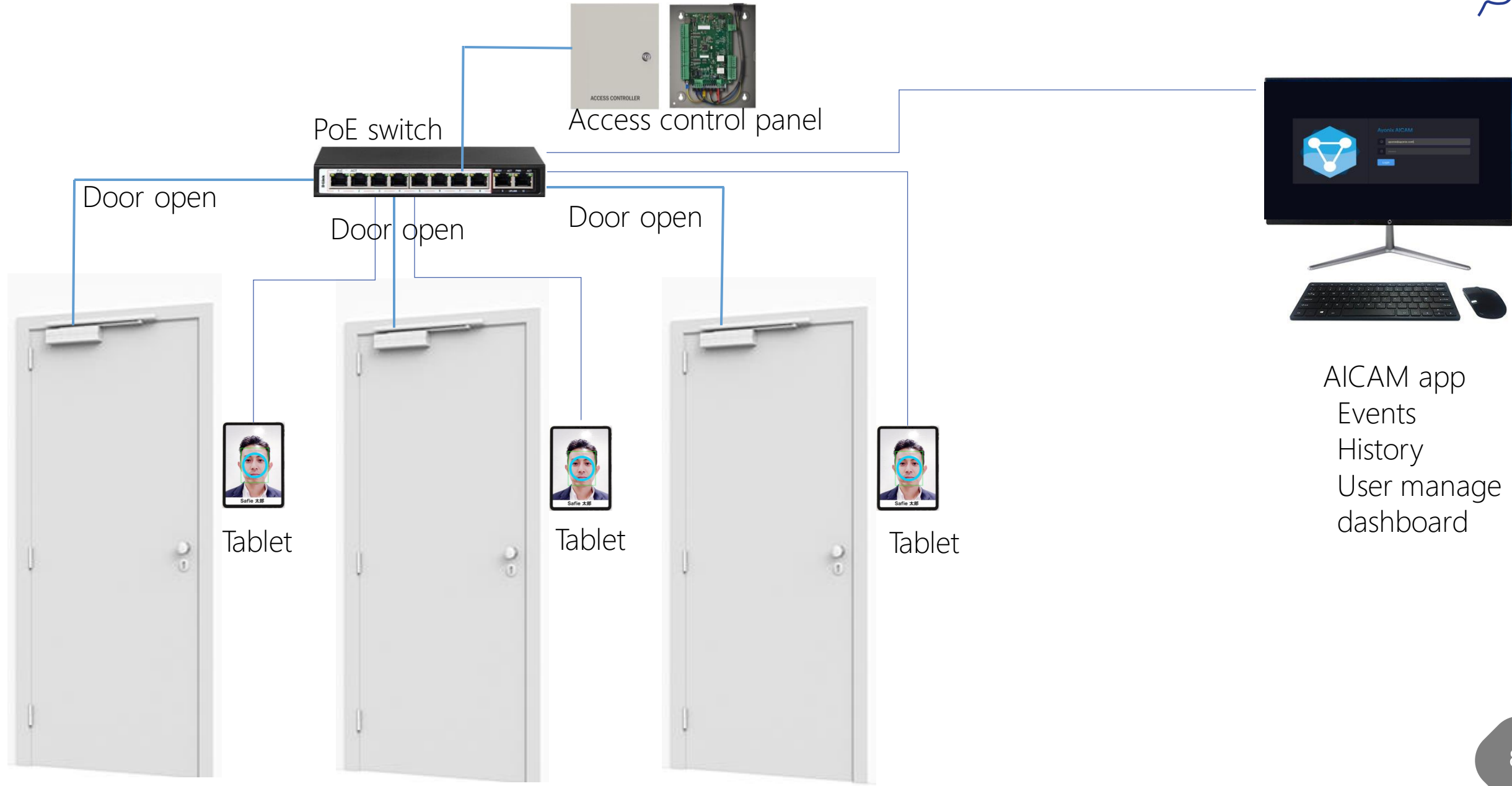


Cloud servers makes management of accessing people

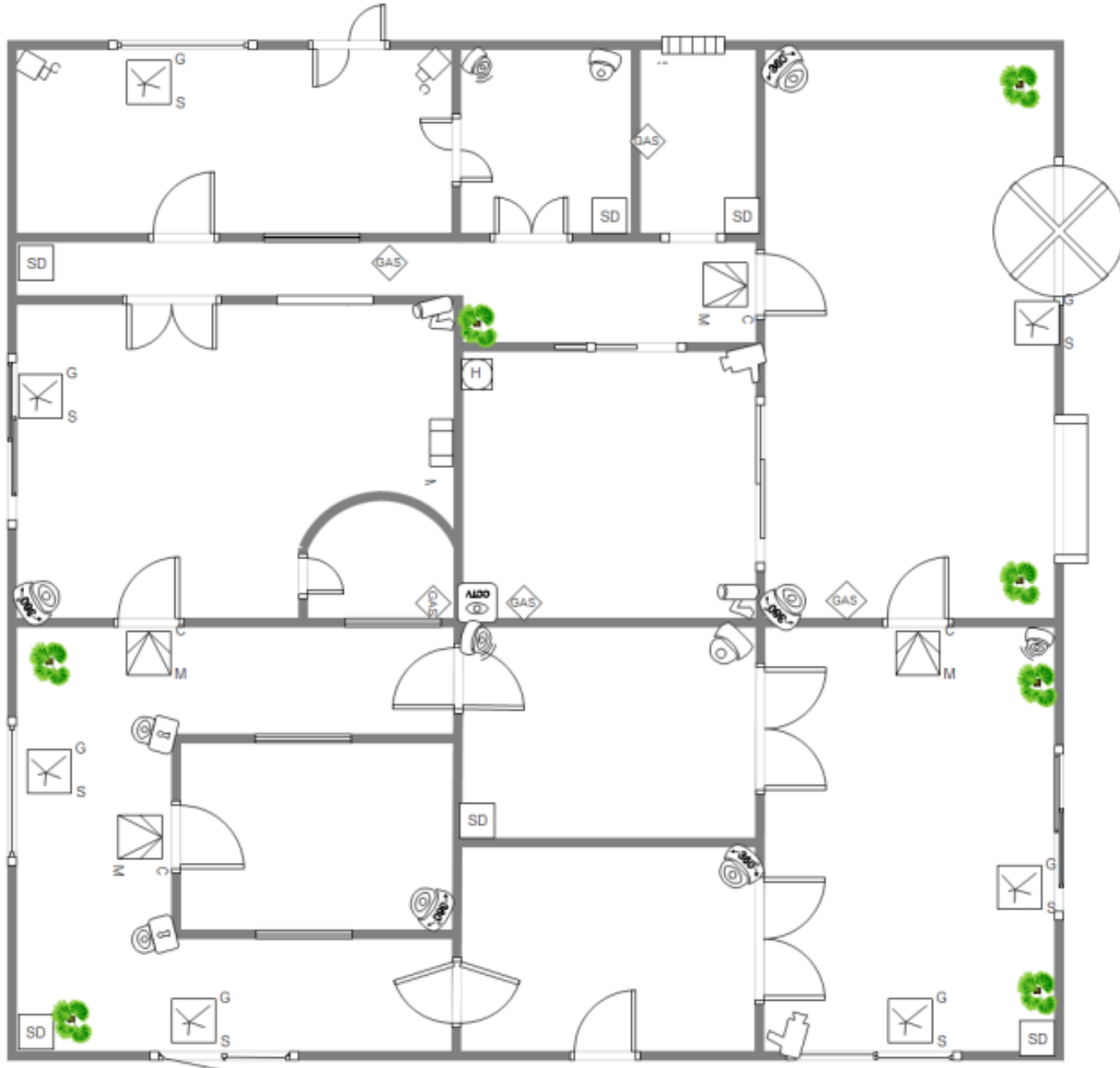




# System diagram



# System diagram



Combination of AICAM, Android tablet can make the facility fully guarded



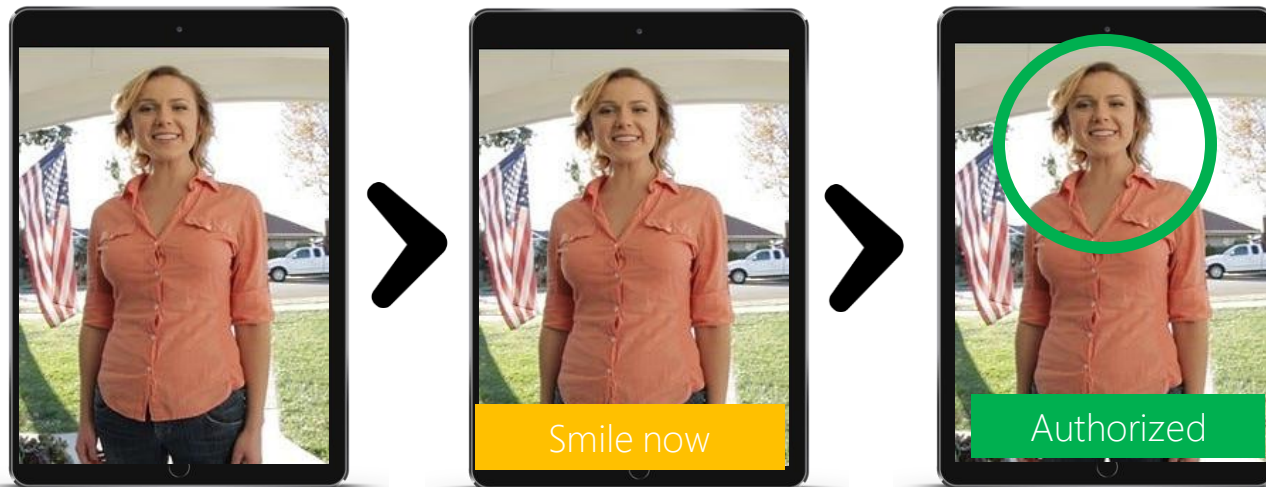
**HOME:**  
Backyard  
Front garden  
Surroundings of the house



Door entrances or  
Office turnstiles

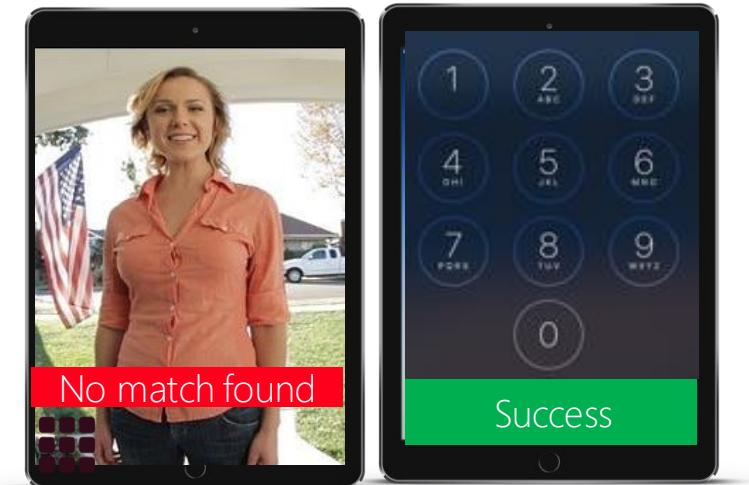
**OFFICE:**  
Corridors  
Elevators  
Lobby, meeting rooms  
Waiting rooms

# How does it recognize



For pre-enrolled person:

Person approaches → Smiles → Authorized



Passcode screen

For an unknown person:

Person approaches → Smiles → Not authorized  
(Person can put passcode as an option)

# Enrollment gallery

Enrollment is done instantly in the AICAM Cloud application.  
You can remove or add a person to Database at any time

ome / Enrollments

Enrollments

4 person

Filter: search

ID ↑

4

3

2

5

Batch Enrolling Report (optik gözlük 1, 98 person)

Detected Person98

Detected Faces108

Total Images98

Start Time2020-07-01 06:02:10

Finish Time2020-07-01 06:02:57














Duration47 seconds

Abort

Confirm

Ready for Enrolling

100%

Check	From	Name	Birth Date	Mugshots	Faces / Images	Status
<input checked="" type="checkbox"/>		1dade1___BkGPnSIHVWJ___	07/01/2020	 	2/1	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>		1dade1___BjVZOAWH-Bb___	07/01/2020		1/1	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>		1dade1___BoWDv1FI572___	07/01/2020	 	2/1	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>		1dade1___BmIOAy_n8pL___	07/01/2020	  	3/1	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>		1dade1___BmdDW46ng61___	07/01/2020		1/1	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>		1dade1___Bz6RH0cCo4h___	07/01/2020	 	2/1	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>		51stdown_BRtsuzWDEI3_1	07/01/2020	 	2/1	<input checked="" type="checkbox"/>

12

10









# Match events

Matches from all available cameras are grouped and listed in Match event list in the application

Home / Detection History

### Detection History

Filter:  Detailed detections per page:

ID	Event Time	Camera	Location	Camera Face	Score	Matched Face	Name	Watchlist	Detection Count	Detection Duration
1	2020-06-19 07:20:50	Dell XPS	Tokyo		82%		John Cena	Default Watchlist	2	3 minutes
2	2020-06-19 06:59:22	Dell XPS	Tokyo		73%		Alessandro Nivola	Default Watchlist	5	3 minutes
3	2020-06-19 07:02:17	Dell XPS	Tokyo		73%		Amy Adam	Default Watchlist	5	3 minutes

All matches are displayed with scores and images for visual comparison

# Camera management in google map

## Choose Camera Location



Zoom: 14

Center: [ 139.3519187441068, 35.43696268197175 ]

Rotation: 0

My geolocation:

Confirm

Each camera can be accessed in google map.

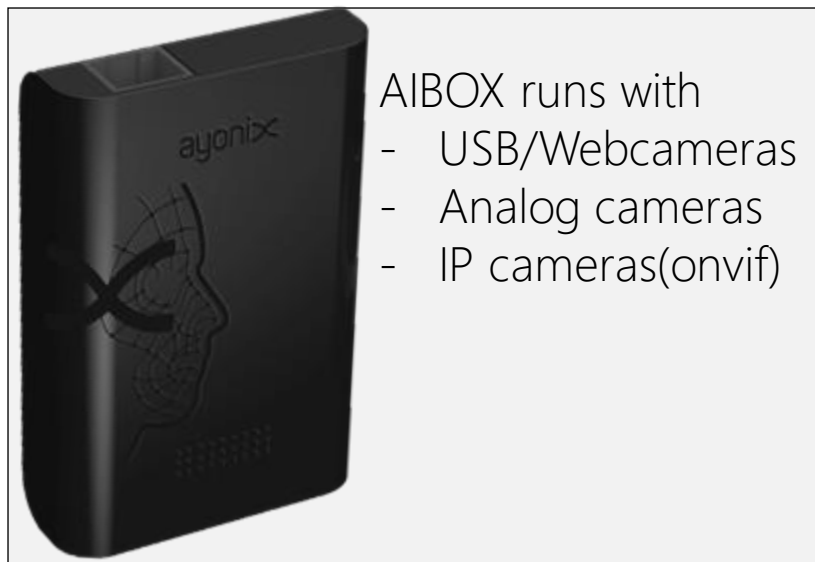
You can do

- Change camera
- change location
- live-view camera
- get statistics and many more.....

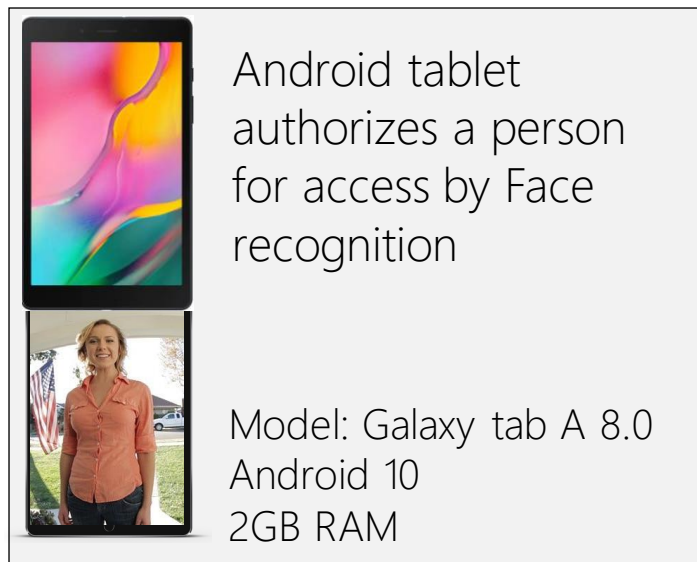
# AICAM models



# AIBOX models



# Android 10



### Built-in Face engine

99% accuracy  
1Kb face template  
Recognition at 50ms  
48 pixels minimum face  
20 faces real-time

### Face recognition features

- ✓ Gender/Age/Smile estimation
- ✓ Full-HD face tracker
- ✓ Auto face optimizer
- ✓ Full-3D face model
- ✓ Adjustable match distance
- ✓ Camera-based threshold
- ✓ Adaptive smile detector
- ✓ Built-in 3D Face matching

Ayonix engine has been selected as the fastest Face recognition engine in the world in NIST-FRVT 2014 and NIST 2018 tests

# Door access controller

Both Onvif and OSDP door open formats are supported



Onvif Profile C is for Physical door control protocol



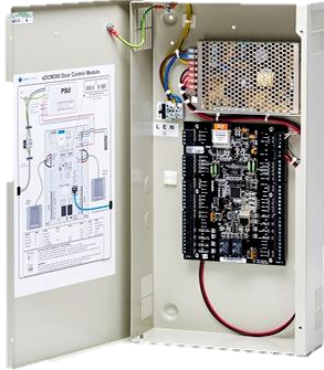
OSDP is the most common protocol for access ctrl





# Access control device

Below access control devices are supported:



CEM eDCM 330  
(2-door ctrl with PoE)



CEM DCM 400  
(4-door ctrl with PoE)




Axis A1001  
(4-door ctrl with PoE)


# Many more features...


Edge-based Access control


Centralized management

Cloud management


 Live camera view


 Door open control


 Log management


 Event management


 User management

 Event face search


 Tracing on map

 Match search

 Group face match

 Smart face enroll

 Category setting

 Mask identification

THANK YOU



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