

# Visible Light Facial Recognition & SDK



## Highlights

ZKTeco provides SDK software development tool kit and adjustment tools, which supports various programming languages and editing functions, for engineers' convenience to flexibly and efficiently develop their own applications. For example, shops' user system may apply ZKTeco Visible Light Recognition, staffs are thus notified upon VIPs' visit

Visible Light Recognition SDK is widely applicable to different industries and businesses, complete SDK editing functions support and satisfy professional needs!





## Application for Visible Light Facial Recognition

Visible Light Facial Recognition System is able to automatically recognize and track faces in videos. After installation, System is enabled to actively collect face images and perform matching and identification upon any human activity in its 3-meter distance. Upon successful verification, staffs are free to have entrance and exit without any queuing and waiting needed.

The Visible Light Facial Recognition System is widely suitable for various applications including offices, warehouses, clinics, manufacturing plants, catering premises and constructions sites etc. For staffs that have been tired of long queue, it no longer requires waiting long time and walking in front of conventional passive recognition systems for fingerprint or facial verification. Instead, with the great convenience and efficiency brought by the Visible Light Facial Recognition System, staffs only need to walk straight through and the System actively match faces and data.



Office buildings



Ware House



Clinic



Factories



Restaurants



Construction

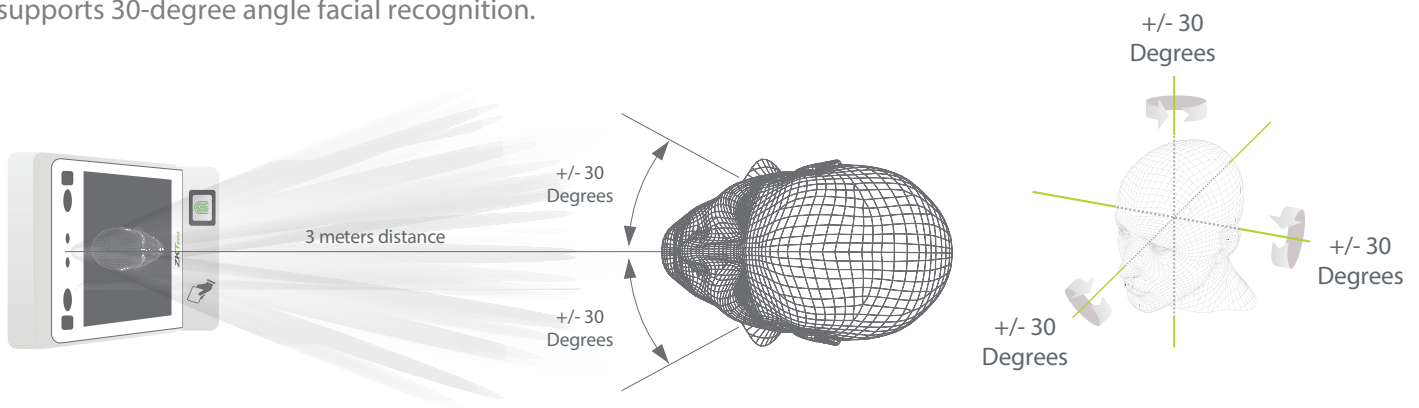
## Proactive Facial Recognition

Visible Light Recognition is a proactive facial recognition device, users no longer need to stand steadily in front of camera. When users pass through the specific area, they are possibly recognized automatically.



## Recognition distance up to 3m long and extra wide angle recognition

The recognition distance has been greatly extended up to 3 meters long, which significantly improves maximum traffic rate. While most of algorithms only support 15-degree angle facial recognition, ZKTeco supports 30-degree angle facial recognition.



## User-friendly mobile App selfie registration and alert pop-up

User-friendly mobile photo-capture face registration function, supports iOS/ Andriod versions. Management staffs only need to use mobile phones or tablet devices to capture self image and upload to ZKBioFace for registration. After registration the faces can be conveniently set as blacklisted or whitelisted.



## Software Development Kit

Develop with flexibility and efficiency



### Application for ZKTeco Visible Light Facial Recognition & SDK

ZKTeco SDK is a development tool kit with rich functions, it enables flexible and efficient application development with complete categories of functions, letting developers quickly and easily integrate clients' applications. It maximizes efficacy of solutions' functions and adds values to them.

ZKTeco is designed according to functional modules, which lets developers use the tools to utilize the advantages of visible light recognition techniques, for example: sales departments may integrate it with security system, automatic notifications to sales representatives or security staffs can be made upon arrivals of VIPs or unwelcomed persons to specific zones.





## Product Introduction

### Face Depot Series

#### FaceDepot-7A

##### Outdoor Facial Recognition Station with Robust and Compact Design

- Enhanced Visible Light Facial Recognition with Deep Learning built-in
- 7-inch LCD display with impact-resistant glass cover
- Splash-proof design
- Wide range of lighting acceptance
- ID / MF module optional
- Maximum 10,000 face templates capacity
- High performance processor boosted by ZKTeco
- Ultrasonic distance detected sensor, 50cm ~ 150cm adjustable



Proactive Facial Recognition



New Height of Anti-Spoofing



Speedy Recognition



Wide Pose Angle Acceptance



Touchless for Better Hygiene



#### FaceDepot-7B

##### Indoor Facial Recognition Station with Slim and Exquisite design and 7-inch Display

- Enhanced Visible Light Facial Recognition with Deep Learning built-in
- Maximum 10,000 face templates capacity
- 7-inch touch LCD
- Fingerprint and ID / MF module optional
- Dual-camera for real-time face detection
- Recognition distance: 0.3 - 3 m
- High performance processor boosted by ZKTeco
- Compatible with external RS232, RS485 and Wiegand reader
- TCP / IP, Wi-Fi and USB communication
- Compatible with ZKTeco and 3rd party barrier
- IP65 ingress protection rating



Proactive Facial Recognition



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## Product Introduction

### Speed Face Series

#### SpeedFace -H5

##### 3-in-1 Starter Facial Recognition Terminal with 5-inch Touch Display

- Enhanced Visible Light Facial Recognition with Deep Learning built-in
- 3-in-1 verification with Fingerprint, RFID and Facial Recognition
- 5-inch touch LCD
- Dual-camera for real-time face detection
- 6,000 face template capacity
- Recognition distance: 0.3 - 3 m
- Compatible with external RS232, RS485 and Wiegand reader
- TCP / IP, Wi-Fi communication



Proactive Facial Recognition



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#### SpeedFace -V5

##### Starter Facial Recognition Terminal with 5-inch Touch Display

- Enhanced Visible Light Facial Recognition with Deep Learning built-in
- Multiple verification with Fingerprint, RFID and Facial Recognition
- 5-inch touch LCD
- Dual-camera for real-time face detection
- 6,000 face templates capacity
- Recognition distance: 0.3 - 3 m
- Compatible with external RS232, RS485 and Wiegand reader
- TCP / IP, Wi-Fi communication



Proactive Facial Recognition



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## Product Introduction

### Face Kiosk Series

#### Multipurpose Facial Recognition Smart Device with Android System



**FaceKiosk-H21**



**FaceKiosk-H32**



**FaceKiosk-V32**



**FaceKiosk-V43**

- Multi-language(English, Thai, Spanish, Arabic, Turkish, Russian, Korean, Indonesian, Portuguese, Cantonese)
- Fast verification recognition distance of 1-5 meters, simultaneous dynamic recognition of 3-5 people
- Support as many as 10,000 facial templates and 100,000 attendance records
- Dynamic advertisement display
- Interactive operation experiences
- Support TCP/IP, WIFI, USB Host, Blue-tooth
- Enhanced security level anti-spoofing liveness detection
- Unique registration, one facial template per user
- Strong flexibility and adaptability in application



Proactive Facial  
Recognition



New Height of  
Anti-Spoofing



Speedy  
Recognition



Wide Pose Angle  
Acceptance



Touchless for  
Better Hygiene



## Product Comparison

	ZKTeco	Brand H	Brand D
SDK	Push SDK ✓	Net SDK	Net SDK
Protocol	HTTP/ HTTPS Protocol ✓	dll document and soku	dll document and soku
Cross-platform	Supports ✓	Does not support (different platforms require different SDK documents)	Does not support (different platforms require different SDK documents)
Cross-gateway	Supports ✓	Requires mapping	Requires mapping
Cross-external website	Supports ✓	Does not support	Does not support

ZKTeco PUSH Protocol compared with other SDKs:

**· Hardware:**

Simple setting without port mapping setting required, only low network knowledge required which enables quick setting for unskilled persons.

**· Software:**

Utilizes HTTP/HTTPS protocols and supports cross-gateway and cross-external website functions, which enables quick development of cross-platform B/S structure software based on the Internet.

**· Server Requirements:**

Using HTTP/HTTPS protocols, with no load balancing applied, a single unit of server is able to connect up to a thousand of ZKTeco devices, while NetSDK is only able to connect one to two hundreds of devices, thus 3rd party software based on ZKTeco SDK development and application is very suitable for middle to large scale project biddings.

**· Safety Level:**

Using PushSDK internal encryption and HTTPS encryption and encryption techniques with global standards, it prevents leaks of data during transmission, while NetSDK encryption technique is yet to meet global standards which tolerates potential security risks.





# SDK: Merge with VIP & Membership System

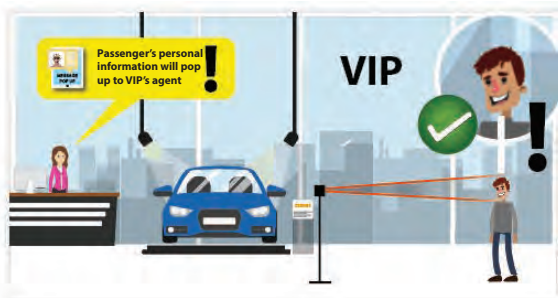
## VIP + Membership

### Flexible and Instant Customer Reception Notification



Before	After
1) Walk to reception to register	1) Registered 3M distance from shop's entrance
2) Manual search of members' information	2) Instant pop-up information, no searching required
3) Calling for responsible staffs for VIP service by receptionists	3) Responsible staffs for VIP service are instantly notified via SMS

Enrolment can be with customers' selfie photos. Once customers visit, responsible staffs receive SMS text notification automatically delivered by computer system that VIPs has arrived destined areas. Staffs can also review VIPs information (including names, interests and occupations etc.) with mobile phones to provide better and more flexible service.



Visible light recognition technique enables automatic notifications to sales representatives can be made upon arrivals of VIPs.



Visible light recognition techniques can also be used to detect unwelcomed customers and notify security staffs.

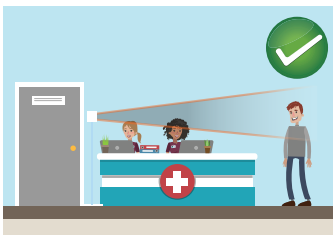
# SDK: Merge with Clinic & Medical Center System

## Clinics + Visible Light Recognition

### Automatic Patient Identity Recognition, Double Verification of Identity



Before	After
1) Walk to reception to manually register	1) Registered 3M distance from entrance
2) Manual search of patients' information on computer	2) Instant pop-up information, no searching required
3) Patients must present personal identity proof to register	3) Verified with no more proof required
4) Illegal impersonation is easy	4) Illegal impersonation is prevented

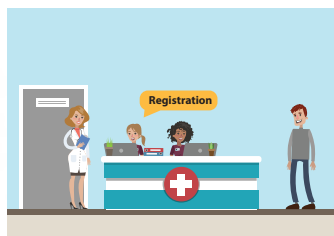


Patients enter the clinic and recognised by the ZKTeco visible light facial recognition system.

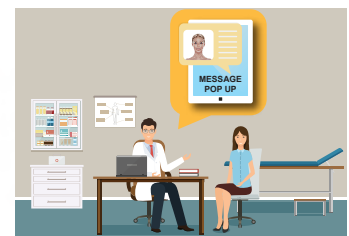
After photo registration, patients' identities can be recognized in entry. Staffs can also perform double verification on tablets or computers by photo review of patients.



Instant pop patient's personal information without searching.



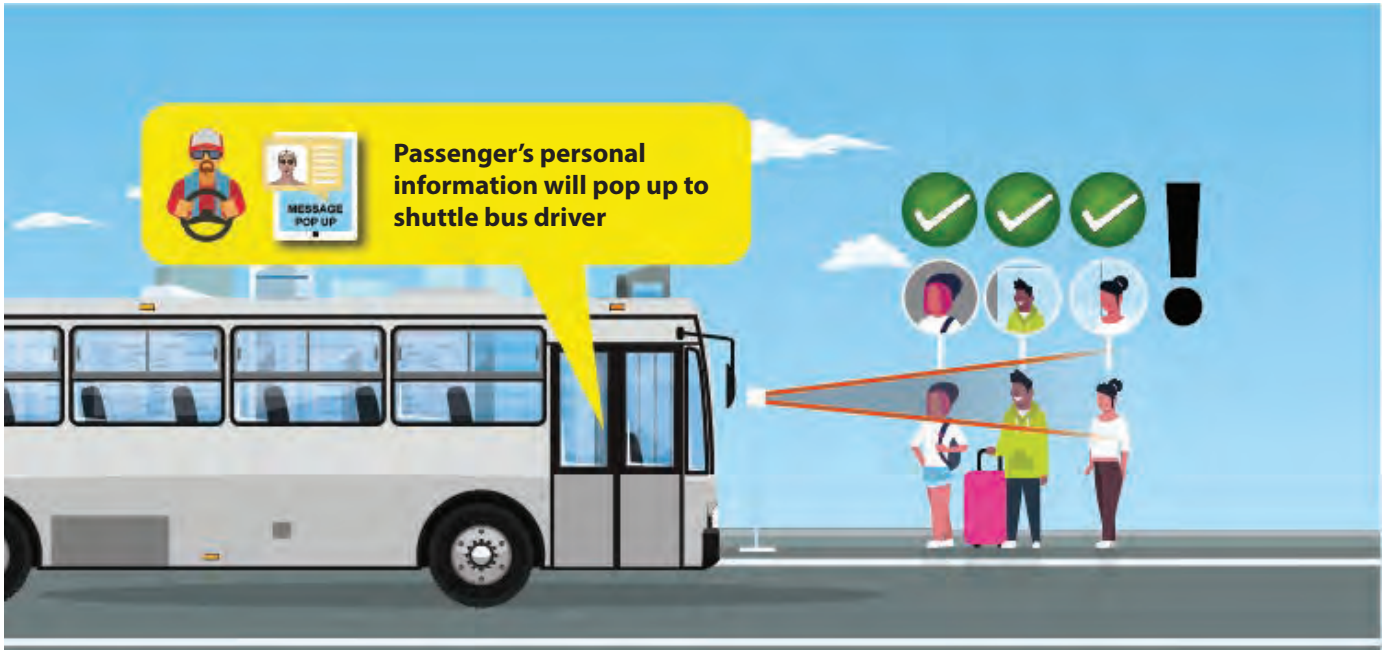
Registration success, and contact the doctor instantly.



Patient's information will pop up to doctor.

# SDK: Merge with Shuttle Bus System

Shuttle Bus x Visible Light Recognition  
 No More Tickets for Shuttle Bus Required  
 On-board Verification



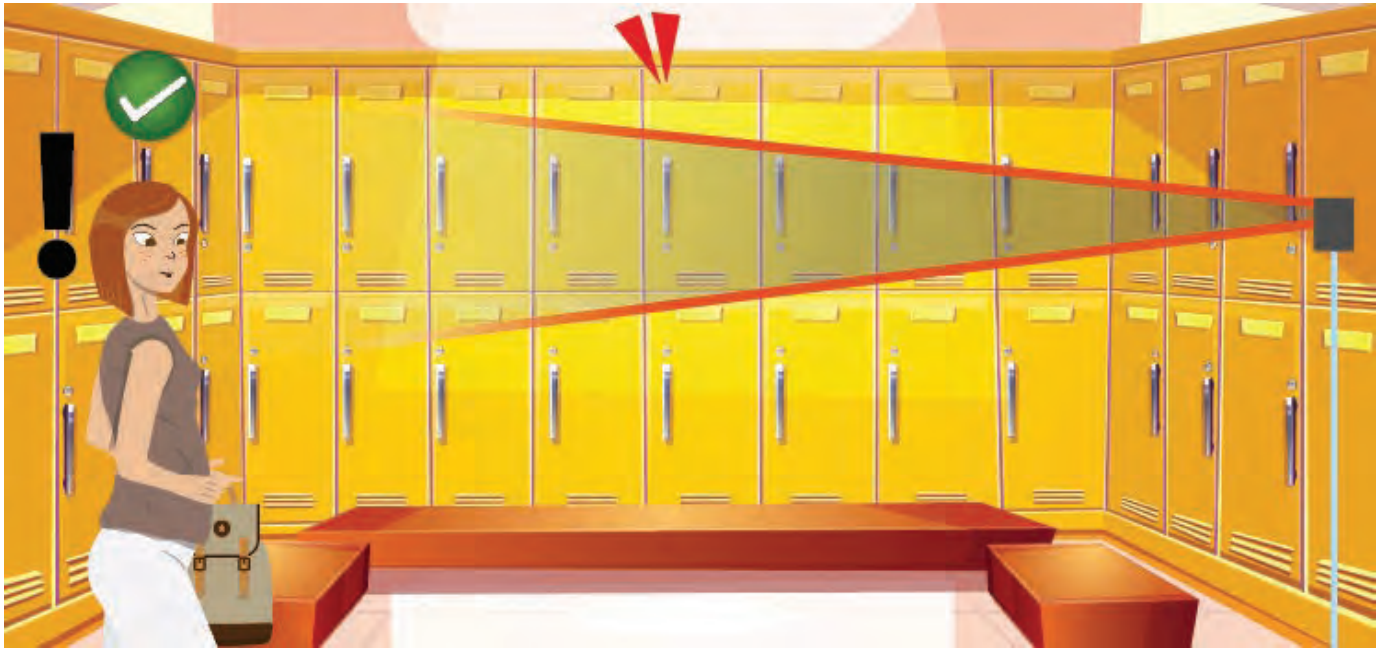
Before	After
1) Passengers must buy tickets first	1) Verified upon boarding
2) Passengers must present tickets	2) Pop-up information of tickets upon passengers' boarding
3) Drivers must check passengers' tickets	3) Passengers' identity verification has been performed
4) Illegal impersonation is easy	4) Illegal impersonation is prevented

In the past, Passengers must buy tickets in order to take shuttle bus. Now, with ZKTeco Visible Light Recognition, passengers' identities are already verified when boarding. If a person is not permitted to board, the driver will be instantly notified by automatic SMS notification by computer system in order to prevent non-permitted boarding.



# SDK: Merge with Smart Locker System

Smart Locker x Visible Light Recognition  
Instant verification and smart lock unlocking function



Before	After
1) Users need to scan QR code to pick up deliveries	1) Users may instantly pick up deliveries once they reach the lockers
2) Illegal Impersonation is easy	2) Illegal Impersonation is prevented



Unlocked !!!

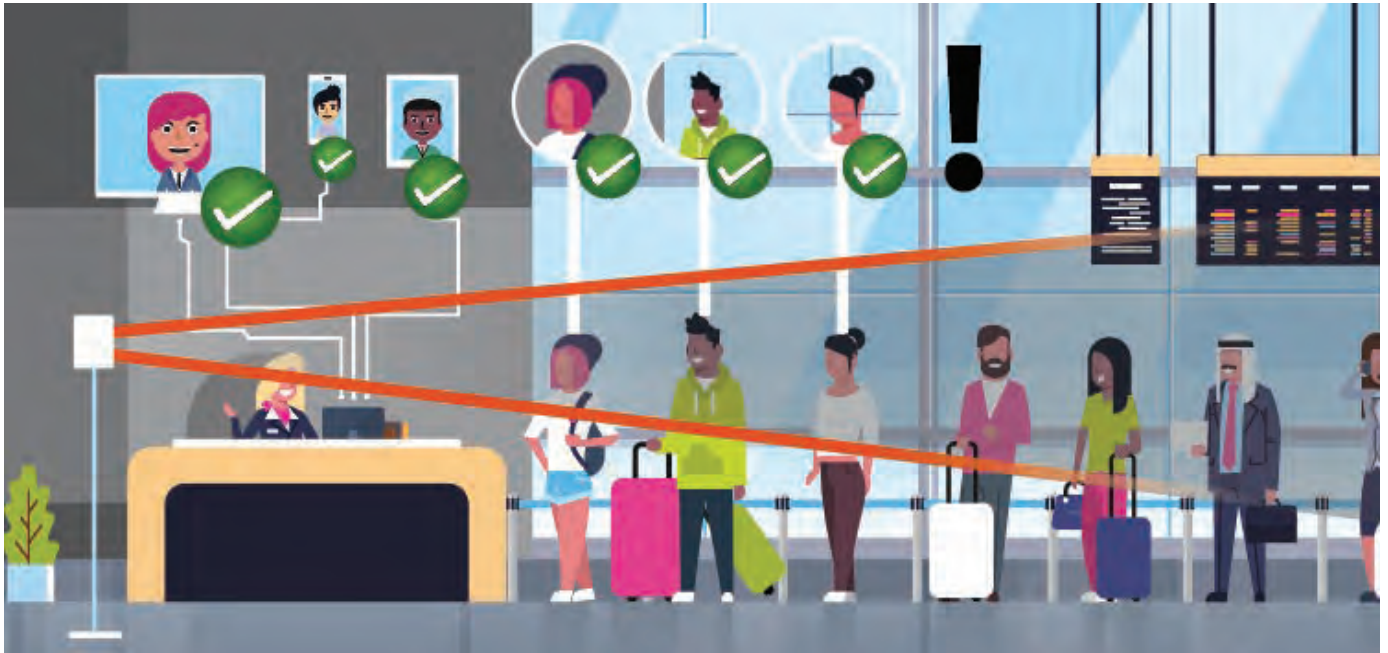


With ZKTeco Visible Light Recognition, delivery and pick-up progress can be further simplified. Customers only need to walk towards smart lockers, and Visible Light Recognition instantly can identity persons with requiring QR code scanning.



# SDK: Merge with Airport Check-In System

## Flight Check-in x Visible Light Recognition Instant Verification and Check-in



Before	After
1) Reception staffs are required to perform check-in	1) Check-in are already performed upon passengers' entry to designated areas
2) Passengers must present tickets	2) Passengers no longer need to present tickets, Visible Light Recognition are able to automatically verify passengers' identities and pop up their personal information
3) Illegal Impersonation is easy	3) Illegal Impersonation is prevented



Conventional flight check-in requires presentation of tickets for identity verification. Now with ZKTeco Visible Light Recognition, passengers' identities are automatically verified for boarding. Visible Light Recognition can also be integrated with character recognition system to automatically convert passports and identity information to system.



# SDK: Merge with Theme Park Fast-Pass System

## Theme Park Fast Pass x Visible Light Recognition Instant Verification and Fast-Pass



Before	After
1) Customers must line up and scan QR code to enter Fast Pass channel	1) Direct entry after Visible Light Recognition
2) Ticket officers must check Fast Pass tickets in entrance	2) Automatic registration and verification by ZKTeco Visible Light Recognition without manual checking required
3) Illegal impersonation is easy	3) Illegal impersonation is prevented

The purpose of Fast Pass is to perform quick access, however visitors must present Fast Pass QR code for identity verification. Now with ZKTeco Visible Light recognition, visitors are able to quickly and direct enter upon



Visitor walks towards the entry of the fast pass.

Authorised and passengers will allowed to enter the identity verification.

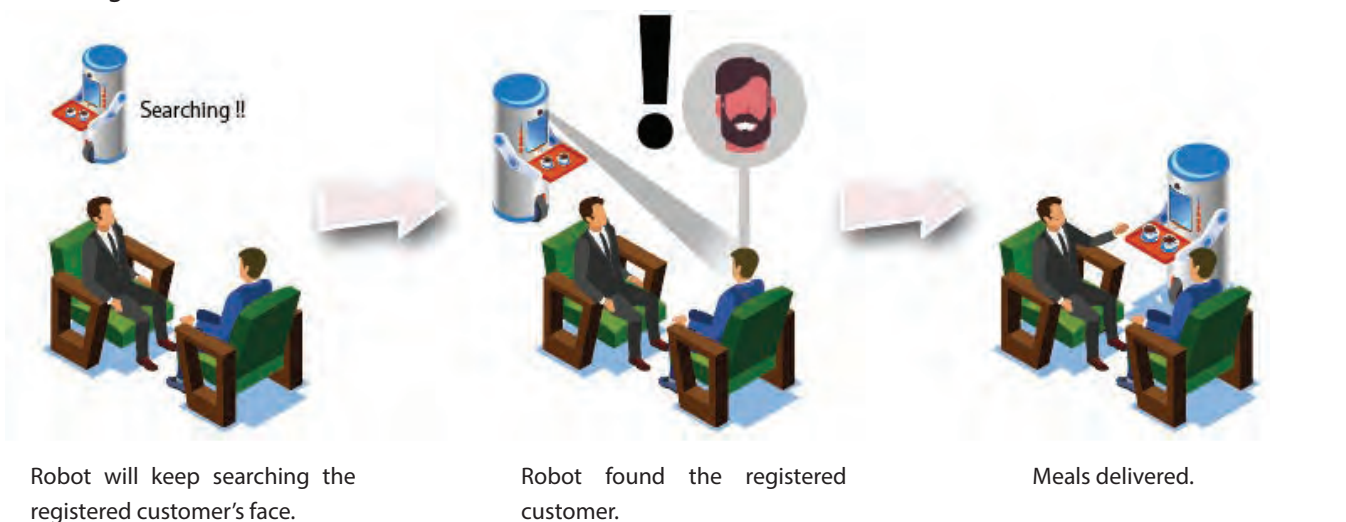
# SDK: Merge with Food Court Delivery Robot System

Food Court Delivery Robot x Visible Light Recognition  
Automatic Customer Search and Food Delivery To Save Manpower



Before	After
1) Manual services are required	1) Robots can identify customers automatically
2) It is required to enter customers' seat number	2) Robots are able to track customers' locations
3) Wrong delivery is easy when customers change their seats	3) Customers are free to sit anywhere and get their meals

With the integration, more manpower for ordering and serving customers can now be saved. Robots are able to register customers' faces, and customers are free to sit anywhere with robots' automatic location tracking and searching to deliver meals.



Robot will keep searching the registered customer's face.

Robot found the registered customer.

Meals delivered.

# The Leader Of Security And Time Management Solution



Fingerprint Recognition



Face Recognition



Palm Recognition



Finger Vein Recognition



Iris Recognition



Card Recognition