BIOMETRIC

AUTHORIZATION PRODUCT AND SOLUTION

COMPANY PROFILE

ZKTeco, founded in March 1998, is a world-leading enterprise specialized in Hybrid-Biometric Verification technology. ZKTeco currently owns the largest quantity of patents and intellectual property rights in the field, and applies biometric verification technology to smart office, smart financing, smart traffic, and smart security, with a service network covering the entire world. ZKTeco has established an innovation center for hybrid biometric verification technology and Internet of Things in Silicon Valley in the USA, and a research institute for cloud platform, cloud computing, and big data in Europe.

ZKTeco also owns a manufacturing center in Dongguan, plus three enterprises and a laboratory specializing in biometric verification algorithms and business operations in the USA. ZKTeco Core Algorithm Laboratory, Smart Verification Laboratory, Northern China Technical Service Center, Global Technical Service Center , and Russia , Japan , South Korea Sales Center have been established in Dalian China.

ZKTeco also owns branch offices in every province in China, and over 20 countries including Spain, Mexico, Dubai, Argentina, Columbia, Peru, Chile, Thailand, Philippines, Vietnam, Indonesia, India, Iran, Saudi Arabia, Egypt, South Africa, Turkey, Russia and Malaysia etc. with over 80% foreign employees, with a scale of over 3,000 employees and 1,000 research staff.

BIOMETRICS MARKET PREVIEW

Today, the biometric markets are finally ready. Areas including consuming market, government programs and industry applications need accurate improvement and cost-cutting solutions. In these applications accuracy and security are extremely important. Thus, biometric technology has been selected for its user-friendliness and its ability to block illegal attempts to the system.

Marketing Benefits:

For users, biometrics offers:

- Biometric individual character is natural way to be high security against/identity theft/ password forgotten
- Interest and acceptance of biometrics and mobile payment is very high, high safety for payment authorization
- Costs coming down and accuracy improving stuff

For businesses and government, biometrics offers:

- Fraud protection
- Non-repudiation
- Reduction in the cost and hassle of forgotten passwords
- Hybrid biometrics technology combination for full verification accuracy
- Cloud Computing, and remote verification system for increasing importance of user convenience

CONTENTS

Biometric Authorization Product And Solution

Overview

Biometrics authorization solution department is the sub-division of ZKTeco Co. Ltd. which specializes in biometrics and RFID technology promotion and application. The division is based on the biometric technology of independent intellectual property rights, and provides more than 20 application fields including finance, education, transportation, communication, medical treatment, public security, customs, military, etc., and offers biometric products and technology, document related products and system solutions based on mobile and cloud identity authentication solutions and services.

Over the years, this division is committed to the development and innovation of biometric technology, with intellectual property rights of the fingerprint, facial, vein, palm vein, iris and other core biometrics combination system.

It sets up the industry's most complete biometric technology laboratory in US, and the national ID research institutes to study the development and application of biometric technology in a leading position.

Biometrics Solutions and Services

- Offering various biometrics verification technologies and products
- Offering mobile Internet identity verification solutions and integrated services
- Offering ODM/OEM services of biometric verification products
- Offering biometric verification and RFID applied industry solutions
- Offering biometric cloud ports and remote matching solutions

USB Fingerprint Readers

Selling Points

- Slim design
- Live fingerprint detection capability
- Eco-friendly and power saving
- Sunlight operability
- Embedded SOC and flash storage
- Easy-to-use SDK options

SLK20R

SLK20R is a leading fingerprint scanner designed by ZKTeco USA laboratory which adopts the advanced optical design. It has a superior ability to do live fingerprint detection and capture high-quality fingerprint images by 2 Megapixel image. It can be the most comfortable and affordable desktop enrollment and identification device.

Features

- Stable operation under strong light
- Support live fingerprint detection function
- Large fingerprint capture area and high image performance
- Quick recognition of dry, wet and rough fingerprints
- High Speed USB 2.0
- Low Power Idle Mode
- Available SDK for development

FPV10R

FPV10R is a fingerprint and finger vein combined scanner. In mathematics, it has index level accuracy improvement. With a single scanning, it does two verification of both fingerprint and the finger vein. It has the capability to scan both surface signature of the skin (fingerprints) and the inner side (finger vein), and offers reliable solution to block fake attempts to the system.

Features

- One time to take two biology signature
- High accuracy of the verification
- Quick recognition of dry, wet and rough fingerprints and finger vein
- High Speed USB 2.0
- Available SDK for development

ZK4500

ZK4500 is a stable and excellent fingerprint scanner. The device can capture fingerprint image and upload to the PC by USB interface. It supports Windows 2000/XP/2003/Vista/7(32/64bit) and Linux OS. We provide developer with SDK. The developer can integrate the hardware into their own system. This product is widely used in social insurance, public security, time attendance, fingerprint encryption, embedded system and other fields of application.

Features

- High-performance, maintenance-free optical fingerprint sensor
- Readily accessible for any finger
- High quality industrial-class ABS plastic material with scratchproof texture surface treatment
- Removable weighted stand
- High speed USB interface
- LED indicates the status of the device
- Driver CD included
- Available SDK for secondary development

ZK7500

ZK7500 is a high performance fingerprint scanner for precise authentication for PC or network security. It can recognize dry, wet or rough fingerprint very quickly and upload the fingerprint template via USB interface to PC directly. It can be used in many fields, such as time attendance, E-commerce, banking and financial system security, healthy and medical information system and other security fields for user authentication.

Features

- High performance fingerprint scanner for precise authentication for PC or network security
- Excellent adaptation for dry and wet fingerprint
- USB interface facilitates communication
- Outstanding authentication performance combined with ZKFinger SDK
- Support Windows 2000/XP/2003 Vista/7/8(32/64bit)

ZK8500

ZK8500 is a multi-function equipment which integrates fingerprint collector and read card together. The device can capture fingerprint image by its fingerprint sensor, read EM card number, and also read-write Mifare card. ZK8500 connects to the PC by USB interface. ZK8500 supports Windows 2000/XP/2003Nista/7 (32/64bit) and Linux OS. We provide developer with both fingerprint and RFID SDK. The developer can integrate the ZK8500 hardware with their own fingerprint and RFID system. This product is widely used in social insurance, public security, time attendance, fingerprint encryption, embedded system and other fields of application.

Features

- Excellent optical fingerprint sensor
- Read EM ID card
- Read-write Mifare card
- High speed USB interface
- LED indicates the status of the device
- Available SDK for secondary development

ZK9500

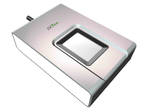
ZK9500 is a leading fingerprint scanner designed by ZKTeco USA laboratory which adopts the advanced optical design. It has a superior ability to do live fingerprint detection and capture high-quality fingerprint images by 2 Megapixel image. It can be the most comfortable and affordable desktop enrollment and identification device.

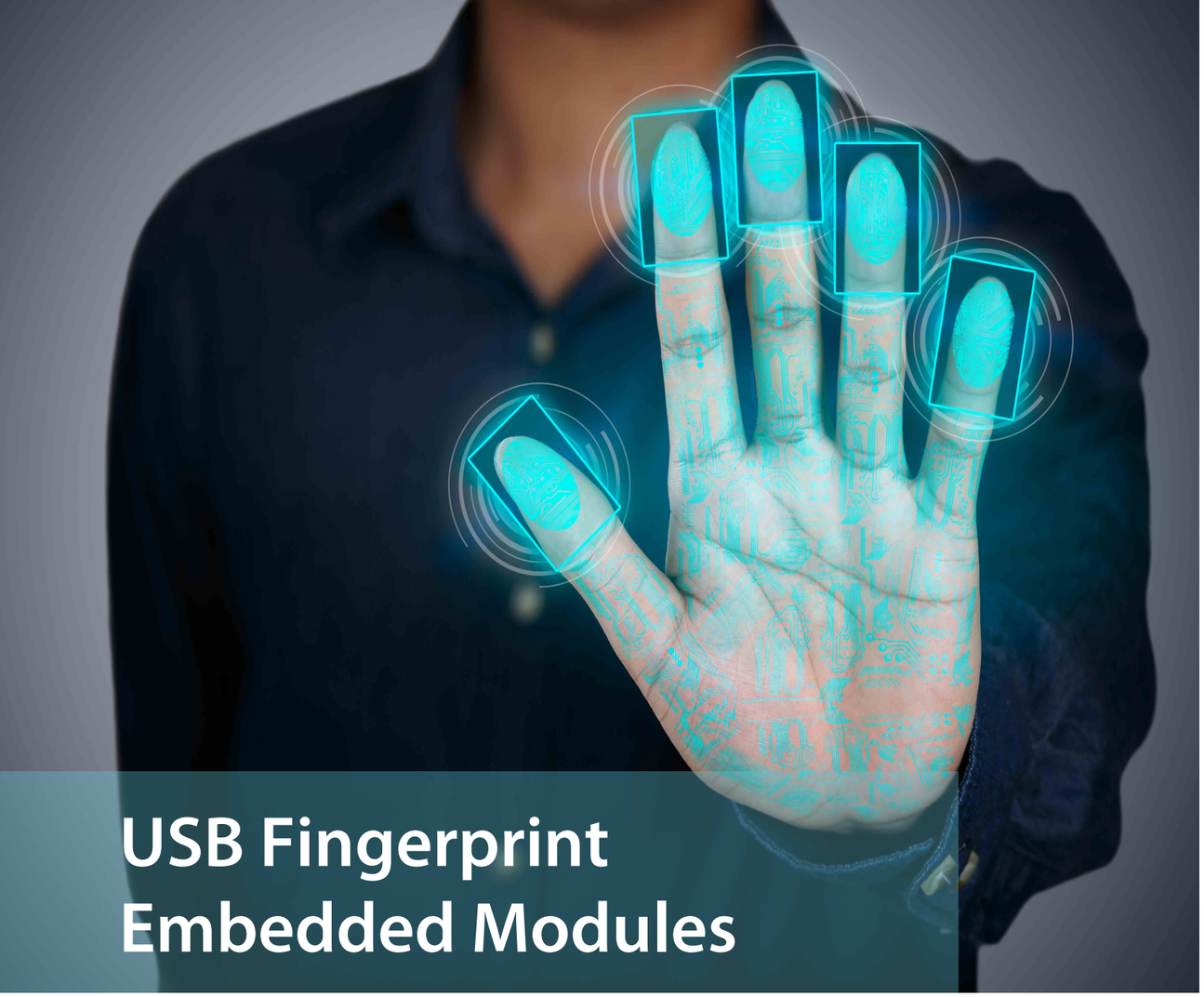
Features

- Stable operation under strong light
- Support live fingerprint detection function
- Large fingerprint capture area and high image performance
- Quick recognition of dry, wet and rough fingerprints
- High Speed USB 2.0
- Low Power Idle Mode
- Available SDK for development

ZKTeco Fingerprint Scanner Hardware Selection Guide

Model Name	SLK20R	ZK4500
		
Features		
Material	Optical	Optical
CPU	280MHz DSP	120MHz DSP
Flash	32 MB	16 KB
SoC	RTOS[image out only]	RTOS
Image Quality	2 million pixels CMOS	0.3 million pixels CMOS
Encrypted Fingerprint Data	YES	NA
Sunlight Operation	Yes, Dark field and Automatic Gain / Exposure	White filed, General Sunlight
Water Splash	YES	YES
Dry, Wet, or Rough Fingerprints	Work well	General Level
Power Consumption	5V:200mA Scanning; 5V:60mA idle (waiting for finger)	5V:200mA Scanning 5V:90mA idle (waiting for finger)
Live Fingerprint Detection	YES	NO
LED	White	Green
Product Certifications	FCC, CE, RoHS, PIV	FCC, CE, RoHS
Specifications		
Power Voltage	5V (USB)	5V (USB)
Power Current	200mA	200mA
Communication	USB 2.0 / USB1.1	USB 2.0 / USB1.1 / USB1.0
Interface Socket	USB Type A	USB Type A
Image Resolution	500~1000 dpi	500 dpi
Effective Collecting Area	15.24 * 20.32 mm (FAP20)	13.24 * 15.7 mm
Collecting Area	16.5 * 23 mm	15.4*18 mm
Image Size	300 * 400 pixel (FAP20)	280*360 pixel
Dimension	49 * 44 * 20.1mm (L*W*H)	65.5 * 48 * 79.8mm (L*W*H)
Image Format	RAW, BMP, JPG	BMP
Template	ZKFinger V10.0 ; ISO19794-2 ; ANSI-378	ZKFinger V10.0
Template Size	1- 4KB (ZKFinger V10.0) 1568 B (ISO 19794-2)	<2KB, (ZKFinger V10.0) 1568 B (ISO 19794-2)
Gray Level	256	256
Weight	0.12kg	0.25kg
Operating Environment	-20 ℃ ~ +50 ℃; 90% r.h.	-20 ℃ ~ +50 ℃; 90% r.h.
ISO/ANSI Support	ISO-19794-2/4 ANSI-378	NA

Model Name	ZK7500	ZK8500	ZK9500
			
Features			
Material	Optical	Optical	optical
CPU	120MHz DSP	120MHz DSP	280MHz DSP
Flash	16 KB	16 KB	32 MB
SoC	RTOS	RTOS	RTOS [image out only]
Image Quality	0.3 million pixels CMOS	0.3 million pixels CMOS	2 million pixels CMOS
Encrypted Fingerprint Data	NA	NA	YES
Sunlight Operation	White filed, General Sunlight	White filed, General Sunlight	must, dark field and automatic gain/exposure
Water Splash	YES	YES	no damage and normal operation is ensured
Dry, Wet, or Rough Fingerprints	General Level	General Level	Work well
Power Consumption	5V:270mA Scanning 5V:90mA idle (waiting for finger)	5V:300mA Scanning 5V:100mA idle (waiting for finger)	5V:200mA scanning 5V:60mA idle(waiting for finger)
Live Fingerprint Detection	NO	NO	YES
LED	Green	Green	White
Product Certifications	FCC, CE, RoHS	FCC, CE, RoHS	FCC, CE, RoHS
Specifications			
Power Voltage	5V (USB)	5V (USB)	5V
Power Current	270mA	300mA	200mA
Communication	USB 2.0 / USB1.1 / USB1.0	USB 2.0 / USB1.1 / USB1.0	USB 2.0 / USB1.1
Interface Socket	USB Type A	USB Type A	USB Type A
Image Resolution	500 dpi	500 dpi	500~1000 dpi
Effective Collecting Area	13.24 * 15.7 mm	13.24 * 15.7 mm	15.24 * 20.32 mm (FAP20)
Collecting Area	15.4*18 mm	15.4*18 mm	16.5 * 23 mm
Image Size	280*360 pixel	280*360 pixel	300 * 400 pixel(FAP20)
Dimension	79 * 49 * 32mm (L*W*H)	124.5 * 102 * 34mm (L*W*H)	75 * 51 * 19.5mm(L*W*H)
Image Format	BMP	BMP	RAW,BMP,JPG
Template	ZKFinger V10.0	ZKFinger V10.0	ZKFinger V10.0
Template Size	<2KB, (ZKFinger V10.0) 1568 B (ISO 19794-2)	<2KB, (ZKFinger V10.0) 1568 B (ISO 19794-2)	1-4 KB (ZKFinger V10.0)
Gray Level	256	256	256
Weight	0.18kg	0.27kg	/
Operating Environment	-20 ℃ ~ +50 ℃; 90% r.h	-20 ℃ ~ +50 ℃; 90% r.h	-20 ℃ ~ +50 ℃; 90% r.h
ISO/ANSI Support	NA	NA	ISO-19794-2/4 ANSI-378



USB Fingerprint Embedded Modules

SLK20M

SLK20M as the smallest embedded optical module in the world combines 2 megapixel image sensor with an ARM9 processor for powerful performance. With ultimate design, it can be flexibly integrated with various system applications without requiring any additional accessories.

Features

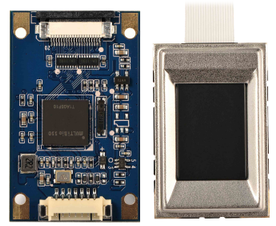
- Easy integration with smallest size without any extra accessories
- Stable operation under strong light source
- Durable glass touch surface
- Quick recognition of dry, wet and rough fingerprints

Bio30M

Bio30M is an advanced embedded electro-silicon fingerprint module developed by ZKTeco specialized for the system integration device. It adapts ZKTeco ZKFinger V10.0 fingerprint algorithm, and integrates high-performance ARM core processor and internationally top semi-conductor fingerprint sensor. It is compactly designed with small size, easy development, fast collection, high anti-spoof ability, and multiple interfaces etc., which make it easy to be embedded into various terminal devices.

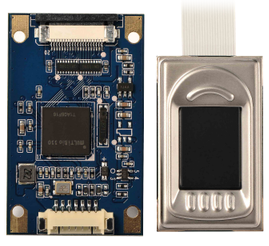
Features

- Fingerprint enrollment, image capture, templates extraction, fingerprint matching (including 1: 1 and 1: N), template deletion and other functions
- The algorithm supports automatic correction recognition, supports 360 ° rotation collection match
- Light and small, can be flexibly embedded into a variety of products
- Can provide an open application program interface (SDK)



Bio31M

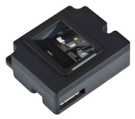
Bio31M is an advanced embedded electro-silicon fingerprint module developed by ZKTeco specialized for the system integration device. It adapts ZKTeco ZKFinger V10.0 fingerprint algorithm as core, and adapts high-performance ARM core processor and internationally top semi-conductor fingerprint sensor. It is an off-line fingerprint module with ultra-high performance.

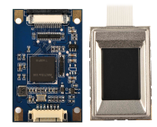
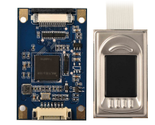


Features

- Fingerprint enrollment, image capture, templates extraction, fingerprint matching (including 1: 1 and 1: N), template deletion and other functions
- The algorithm supports automatic correction recognition, support 360 ° rotation collection match
- Light and small, can be flexibly embedded into a variety of products
- Provides an open application program interface (SDK)

ZKTeco Fingerprint Module Hardware Selection Guide

Model Name	SLK20M
	
Features	
Material	Optical
CPU	280MHz DSP
Flash	32 MB
SoC	RTOS
Image Quality	2 Million pixels CMOS
Encrypted Fingerprint Data	YES
Sunlight Operation	Yes, Dark Field and Automatic Gain / Exposure
Water Splash	YES
Dry, Wet, or Rough Fingerprints	Work well
Power Consumption	5V:200mA Scanning; 5V:60mA idle (waiting for finger)
Live Fingerprint Detection	YES
LED	White
Product Certifications	FCC, CE, RoHS, PIV
Specifications	
Power Voltage	5V (USB) / 3.3V(TTL-RS232)
Power Current	200mA
Communication	UART (115200bps / TTL3.3V) / USB 2.0
Interface Socket	Molex 51021- 0700 (7 pin; 1.25 mm)
Image Resolution	500~1000 dpi
Effective Collecting Area	15.24 * 20.32 mm (FAP20)
Collecting Area	16.5 * 23 mm
Image Size	300 * 400 pixel (FAP20)
Module Size	36.2 * 44.2 * 15.85mm (L*W*H)
Image Format	RAW, BMP, JPG
Template	ZKFinger V10.0 ; ISO19794-2 ; ANSI-378
Template Size	1- 4KB (ZKFinger V10.0) 1568 B (ISO 19794-2)
Gray Level	256
Weight	0.032kg
Operating Environment	-20 °C ~ +50 °C; 90% r.h.
ISO/ANSI Support	ISO-19794-2/4 ANSI-378

Model Name	Bio30M	Bio31M
		
Features		
Material	Electro-silicon	
CPU	280MHz DSP	
Flash	32 MB	
SoC	RTOS	
Encrypted Fingerprint Data	YES	
Water Splash	No	
Dry, Wet, or Rough Fingerprints	Work well	
Power Consumption	5V:200mA Scanning; 5V:100mA idle (waiting for finger)	
Live Fingerprint Detection	No	
LED	None	
Product Certifications	FCC, CE, RoHS	
Specifications		
Power Voltage	5V (USB) / 3.3V(TTL-RS232)	
Power Current	200mA	
Communication	UART (115200bps / TTL3.3V) / USB 2.0	
Interface Socket	Molex 51021- 0700 (7 pin; 1.25 mm)	
Image Resolution	508dpi	
Effective Collecting Area	12.8*18.0mm	10.4*14.0mm
Image Size	256*360pixel	208*288pixel
Module Size (L*W*H)	Motherboard: 42.0*26.0*5.08mm Sensor: 35.0*23.0*3.66mm	Motherboard: 42.0*26.0*5.08mm Sensor: 34.06*20.4*2.47mm
Image Format	RAW, BMP, JPG	
Template	ZKFinger V10.0 ; ISO19794-2 ; ANSI-378	
Template Size	1- 4KB (ZKFinger V10.0) 1568 B (ISO 19794-2)	
Gray Level	256	
Operating Environment	-20 °C ~ +50 °C; 90% r.h.	
ISO/ANSI Support	ISO-19794-2/4 ANSI-378	

High Accuracy Scanners

FPV10R

FPV10R is a fingerprint and finger vein combined scanner. In mathematics, it has index level accuracy improvement. With a single scanning, it does two verification of both fingerprint and the finger vein. It has the capability to scan both surface signature of the skin (fingerprints) and the inner side (finger vein), and offers reliable solution to block fake attempts to the system.

Features

- One time verification to take two biology signatures
- High accuracy of the verification
- Quick recognition of dry, wet and rough fingerprints and finger vein
- High Speed USB 2.0
- Available SDK for development

FPV10M

FPV10M is an optical technology based on hybrid biometrics verification finger vein module developed by ZKTeco. The device integrates fingerprint and finger vein collection functions, and supports live detection and verification functions, with high adaptability and security.

Features

- Hybrid biometrics functions supports fingerprint and finger vein recognition
- Live detection function
- Built-in ZKTeco fingerprint and finger vein recognition algorithm with excellent FAR / FRR performance
- Provides complete SDK for Windows, Linux and Android operating systems
- Supports USB 2.0 communication

Specifications

Model Name	FPV10R	FPV10M
Material	Optical	Optical
Effective Collecting Area	13.24*15.7mm	13.24*15.7mm
Image Size	256*360pixel / 240*320pixel	256*360pixel / 240*320pixel
Image Resolution	500dpi / 300dpi	500dpi / 300dpi
Gray Level	256	256
Interface Socket	USB Type A	USB Type A
Communication	USB 2.0 / USB1.1	USB 2.0 / USB1.1
Operating System	Windows/Linux/Android	Windows/Linux/Android
Power Voltage	4.8V~5.5V (USB)	4.8V~5.5V (USB)
Operating Environment	-20 ℃ ~ +50 ℃; 90% r.h.	-20 ℃ ~ +50 ℃; 90% r.h.
Module Size (L*W*H)	79*50 *58.5mm	79*50*58.5mm
Dimension (L*W*H)	114.6*65.8*63.4mm	/

Touchless Biometric Scanners

PV10M

PV10M Palm Verification Module is a device developed by ZKTeco which integrates palm print and fingerprint verification functions for system integration devices. It has high environment adaptability, fast and accurate verification speed and enhances safety and durability. It is compactly designed and easily to be integrated into terminal devices.

Features

- Equipped with overcurrent protection circuit, ESD protection circuit, to prevent static damage to the product
- Built-in ZKTeco palm recognition algorithm, with excellent FAR / FRR performance
- Features such as palm enrollment and match, image capture, templates extraction, templates deletion
- Compactly designed and to be easily to be integrated into terminal devices
- Provides complete SDK for Android, Windows and Linux platforms
- Powerful API features, supports online / offline applications
- Flexible communication, supports USB / UART interface

Specifications

Board Size	26*42mm	Interface Socket	USB2.0
Camera	1280*720 pixel	Power Voltage	5V
Collection Distance	80mm--160mm	Power Current	0.5A
Image Resolution	500dpi,750dpi,1000dpi(option)	Air Pressure	86 kPa~106 kPa
Verification Speed	1:1<1s,1:N<2s	Working Humidity	20%~90% R.H
Match Mode	1:1 or 1:N	Storage Humidity	17%~96%

FA10R

FA10R is an advanced near-infrared face recognition scanner. It is equipped with a 280MHz processor, and integrates optical face recognition sensor with self fill-light function. It has high accuracy and speed of verification, and adjustable camera angle. It is easy to operate with plug-and-use operation.

Features

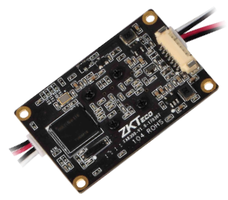
- Near-infrared face recognition function
- Simple operation, adjustable shooting angle
- Using ZKFace VX9.0, with excellent FAR / FRR performance
- Available for face enrollment, face matching, image capture, templates extraction, templates generation storage on host computer
- Provides a complete SDK for Android, Windows and Linux platforms

Specifications

CPU	280MHz	Illumination	940nm LED
RAM	16MB	Algorithm	ZKFace VX9.0
FLASH	32MB	Verification Speed	<1s
Camera	Dual Camera	Power Current	DC 0.5A
Match Mode	1:1 or 1:N	Power Voltage	DC 5V
Image Resolution	1280*720 pixel	Operating Environment	Temperature: 0~50 °C Humidity: 93%RH
View Angle	80°	Interface Socket	USB /UART
Verification Range	80cm--160cm	/	/

FA10M

FA10M is a high-performance face recognition module fill light functions. Using 280MHz processor and combined with optical face recognition sensor, with face input, PC comparison, template management and other functions, it is very easy to embed integrated intelligent biometric modules. It also supports standard USB and UART communication, so that other devices can easily access and achieve face recognition.



Features

- Compactly designed for easy integration into terminal devices
- Simple interface, easy access to Android and PC and other equipment
- Using ZKFace VX9.0, with excellent FAR / FRR performance
- Available to perform face enrollment, face matching, image capture, templates extraction, templates generation storage on host computer
- Provides complete SDK for Android, Windows and Linux platforms
- Powerful API features that supports online applications

Specifications

CPU	280MHz	Illumination	940nm LED
RAM	16MB	Algorithm	ZKFace VX9.0
FLASH	32MB	Verification Speed	<1s
Camera	Dual Camera	Power Current	DC 0.5A
Match Mode	1:1 or 1:N	Power Voltage	DC 5V
Image Resolution	1280*720 pixel	Operating Environment	Temperature: 0~50°C Humidity: 93%RH
View Angle	80°	Interface Socket	USB /UART
Verification Range	30cm--80cm	/	/

ZKTeco Fingerprint Scanner and Module SDK Selection Guide

ZKTeco offers a variety of fingerprint scanner and module SDK to suit the different business needs requirements. We believe a clear function comparison guide would be a good helper of all of our customers. Here is the SDK selection guide to help you sort out the similarities and differences among all ZKTeco Fingerprint developing SDK .

SDK Name	X86/64 PC Hosting		
	ZKFingerSDK 5.3 Lite	ZKFingerSDK 5.3 Standard	
		Generate ZKTeco V10.0 Templates	Generate ISO19794-2/ ANSI-378 Template
Functionality	Initial/Open/Close device	Initial/Open/Close device	
	Set/Get parameter parameter:SN. ,DPI, image size.	Set/Get parameter parameter:SN. ,DPI, image size	
	Get Image	Get Image	
	Generate ZKTeco V10.0 Templates		
	Initial/Free algorithm	Initial/Free algorithm	
	Add/Delete template in hosting memory	Add/Delete template in hosting memory	
	Finger template identification in hosting memory	Finger template identification in hosting memory	
	Finger template verification in hosting memory	Finger template verification in hosting memory	
	Finger template merging	Finger template merging	
		BMP/JPG image extract to template	
	Data format transfer[Base64]	Data format transfer[Base64]	
	Storage image in hosting, need to design	Storage image in hosting, need to design	
	storage templates in hosting, need to design	storage templates in hosting, need to design	
Compatible Devices, Hosting Hardware and Operation System	Hosting Hardware: Intel X86/64 Based PC: Operation System: Windows XP SP3/Vista/7/8/8.1/10, Windows Server 2008/2012 (32/64 bits) Devices Compatible: ZK4500/ZK7500/ZK8500/SLK20R	Hosting Hardware: Intel X86/64 Based PC: Operation System: Windows XP SP3/Vista/7/8/8.1/10, Windows Server 2008/2012 (32/64 bits) Devices Compatible: ZK4500/ZK7500/ZK8500/SLK20R	
	Hosting Hardware: Intel X86/64 Based PC: Operation System: Linux Kernel 2.6~4.10 Ubuntu and Linux/GNU system; Device Compatible: SLK20R	Hosting Hardware: Intel X86/64 Based PC; Operation System: Linux Kernel 2.6~4.10 Ubuntu and Linux/GNU system; Device Compatible: SLK20R	
Browser Support	None	None	
SDK Demo Language	ActiveX/C/C#/Java	ActiveX/C/C#/Java	
Charge	No	Yes	

ZKTeco offers a variety of fingerprint scanner and module SDK to suit the different business needs requirements. We believe a clear function comparison guide would be a good helper of all of our customers. Here is the SDK selection guide to help you sort out the similarities and differences among all ZKTeco Fingerprint developing SDK .

SDK Name	ARM V7/V8 Android Hosting	Embedded Module	ZKBioOnline SDK	
	ZKFingerSDK 5.3 Android	ZKFinger Module SDK	ZKBioOnline SDK Browser Client	ZKBioOnline SDK Server
Functionality	Initial/Open/Close device	Initial/Open/Close device		
		Set/Get parameter parameter: firmware version,time,template capacity,algorithm version		
	Get Image	Get Image	http/https get:image	
	Generate ZKTeco V10.0 Templates	Generate ZKTeco V10.0 Templates	http/https get:template	
		Generate ISO19794-2/ ANSI-378 Template		
	Initial/Free algorithm	Initial/Free algorithm		
	Add/Delete template in hosting memory			
	Finger template identification in hosting memory	Finger template identification in embedded memory		
	Finger template verification in hosting memory	Finger template verification in embedded memory		ZKMatch: 1:1 verification
	Finger template merging			
		Enroll by image identify by image image only support: 8Bit RAW(120KB)		
	Storage image in hosting, need to design			
	Storage templates in hosting, need to design	Storage templates in embedded flash		
Compatible Devices, Hosting Hardware and Operation System	Hosting Hardware: ARM V7/V8: Operation System: Android 4.0~6.0 Devices Compatible: SLK20M	Hosting Hardware: TTL RS232/USB Hosting Device ARM V7/V8,MCU,X86/ X64-CPU,etc. Hosting Operation System:Linux Kernel 2.6~3.0,RTOS,Windows, etc. Devices Compatible: SLK20M	Hosting Hardware: Intel X86/64 Based PC: Operation System: Windows XP SP3/ Vista/7/8/8.1/10, Windows Server 2008/2012 (32/64 bits) Devices Compatible: ZK4500/ZK7500/ ZK8500/SLK20R	Hosting Hardware: Intel X86/X64 Based PC: Operation System: Windows XP SP3/ Visata7/8/8.1/10, Windows Server 2008/2012 (32/64 bits) Linux Kernel 2.6~4.10
Browser Support	None	None	Internet Explorer 11+/;Firefox 27+/; Chrome 33+	
SDK Demo Language	Java	C/TTL Command	http/https get-post	
Charge	No	No	Yes	

Hybrid
Biometrics Tablets

HB510

HB510 is a newly launched Android 5.1.1 system based on the 5-inch handheld multi-functional biometric intelligent verification terminal. The product has the functions of fingerprint recognition and face recognition. It can be used in various industries according to different needs, such as verification mode, fingerprint recognition, face recognition and fingerprint + face blending recognition.

Features

- Android system, quad-core processor, high-capacity storage space
- Diversified wireless communication function
- 5 inch 720P HD screen Corning Gorilla Glass touch screen
- Hybrid biometrics authentication method

HB700

HB700 is positioned for a feature-rich, scalable information collection verification one machine. HB700 integrates face and fingerprint collection and verification in one, and operates with ZKFingerV10.0 fingerprint matching algorithm and face recognition algorithm, and is available for hybrid biometric identification, accurate verification of the user's identity information. The device has hardware interface and rich features to meet the different needs of different customers.

- Wall use (office entrance, examination room, rental, elevator)
- Hand-held (customs airport, bank hall VIP, staff entry)
- Desktop use (Internet cafes, hotel front desk, the company front desk, logistics delivery point)

Features

- Integrates face and fingerprint data collection & matching functions in one
- Durable fill lights and built-in LED light with adjustable light intensity for different light sources to ensure the evenly-distributed lights on faces
- Smart Verification. Activating verification progress with card swiping or fingerprint scanning, and collecting fingerprints or face images. The device is equipped with voice notification function to guide users with the fingerprint verification to ensure accuracy of verification
- Integrated design
- Multiple communication interfaces. Can achieve WIFI, TCP / IP, USB communications
- Shooting distance of 30cm-70cm range
- Can store up to 1,000 fingerprints and 1,000 face templates, matching logs more than 10,000 (including on-site documents, fingerprints, face data)
- There are access switch signal output
- Offline operation available, matching record can be automatically uploaded when networked, record includes card information, fingerprint information, face capture information, verification time and matching results.
- When exception of verification is detected, the front end or background prompts the alert
- Provide fingerprint and face to face service interface, which can be easily integrated into the third-party business systems, the formation of the industry with biometric technology professional application system

HB800

HB800 is ZKTeco's new multi-functional biometric verification terminal based on Android system. The product integrates fingerprint collection comparison and portraits verification functions, and applies open Android operating system, 10-inch high-definition touch screen, which provides a variety of SDK development package for users to develop applications, flexible and diversified installations (desktop use, security gate use etc.), to meet the needs of different industry users of the verification.

Features

- A variety of applications: corporate visitor machines, bank hall desktop terminals, access control gates, information collection verification terminal host
- Fully automated operation, can be used alone or with network communication, to provide secondary development interface
- 10-inch high-definition color capacitive screen, high touch sensitivity and refined display
- Super bright light, fast and accurate matching
- Supports speaker voice

Smart Bio-Terminal Comparison Guide

Model Name	HB510	HB700	HB800
CPU	Quad core 64 bit Cortex A53 1.3GHZ	Intel® Atom™ Processor Z3735F	QuadCore-A64
RAM	2GB	2GB	2GB
ROM	16GB	64G	1G
Display	5 inch IPS HD screen Corning gorilla touch screen	8 inch, IPS screen	10 inch HD color capacitive touch screen
Image Resolution	720*1280 pixel	1280*800 pixel	/
Camera	Rear 8 million pixels, comes with flash, auto focus	iR1000	FAM400
Operating System	Android 5.1.1	WIN10	Android6.0.1
Development Tools	ZKFinger SDK for Android	ZKFinger SDK for Windows	ZKFinger SDK for Android
Operating Frequency	13.56MHz± 7kHz(fc)	13.56MHz± 7kHz(fc)	13.56MHz± 7kHz(fc)
Communication	Wi-Fi, 4G, Bluetooth 4.0	Wi-Fi, RJ45	Wi-Fi, Bluetooth4.0 /2.1+EDR support data encryption
Interface Socket	USB2.0	USB2.0; RJ45; HDMI	USB2.0
Module Name	Bio30M	SLK20M	SLK20M
LED Indicator	Yes	Yes	Yes
Loudspeaker	Yes	Yes	Yes
Power Consumption	5V 2A	5V 2A	DC 12V
Battery	4500mAh Li-polymer	10000mAh Li-polymer	/
Operating Environment	0~+50; 90% r.h.	0~+50; 90% r.h.	0~+50; 90% r.h.
Dimension(L*W*H)	170*85*23mm(±2mm)	80*150*25mm	335*225*175mm

Biometric Large-capacity Fingerprint Matching Server

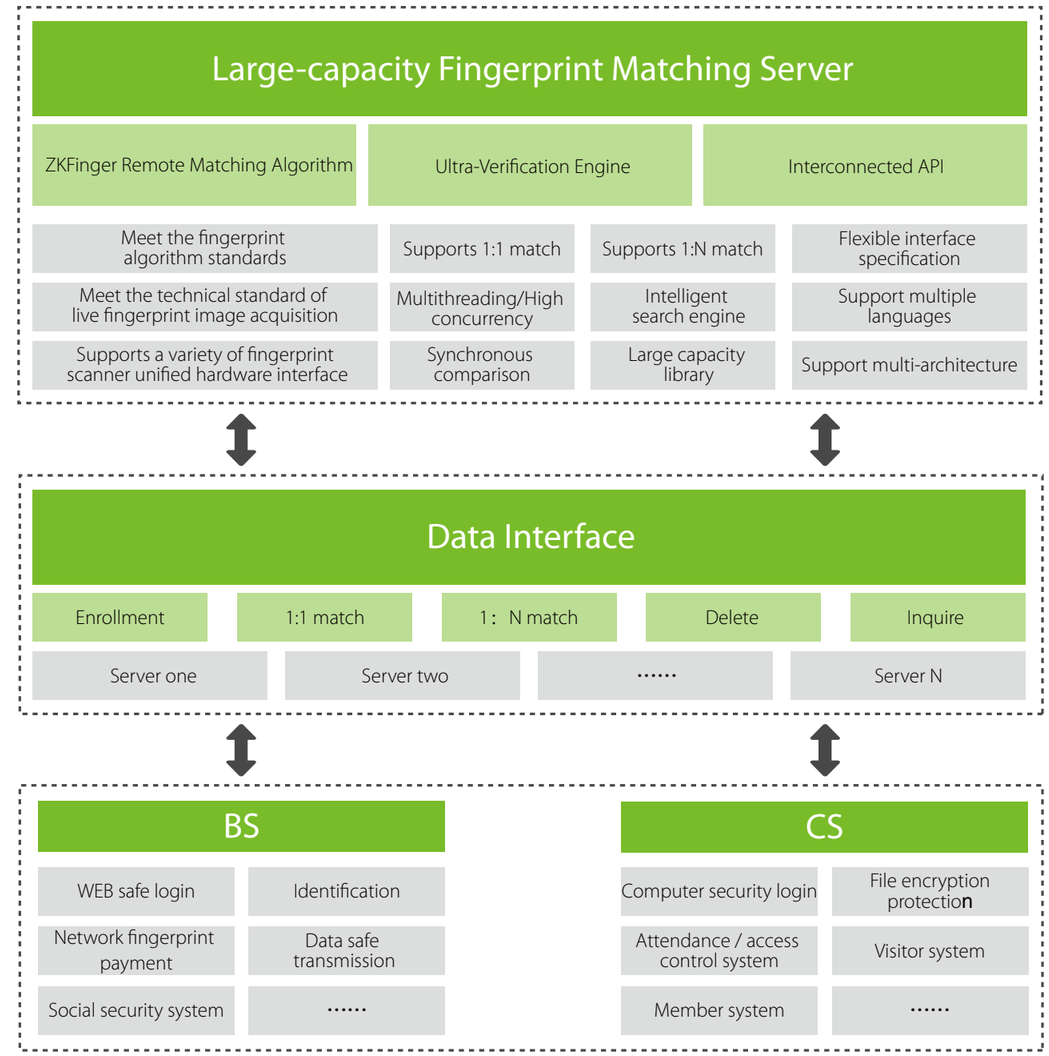
System Introduction

Biometric large-capacity fingerprint matching server is a fully-featured fingerprint matching service system. Based on the industry-leading ZKFinger fingerprint recognition algorithm, it has a very good recognition performance, which provides users with storage of 50,000, 100,000, 200,000 and 500,000 of the amount of data, the server can concurrent processing requests. It also supports PC-side fingerprint authentication background matching, mobile-side fingerprint authentication background (remote) matching, offline product BS background matching.

Features

- Achieves registration, matching, enquiries and deleting etc. without needing to change API
- Allows users to expand storage capacity on the same or other server
- Can save up to millions of users for the amount of data, the server can concurrent processing requests
- Fast fingerprint matching speed, superior verification ability
- Supports local and cloud deployments

Architecture



Application Fields

Hybrid Biometric Entrance Gate Control Management System Solution

Demand Analysis

With the development of biometrics and the wider range of applications, hybrid biometric devices have been used in a variety of industries and in different scenarios. Especially in the exit and entrance control of the channel management system, the application of biometric technology is gradually replacing the traditional credit card verification.
In 2016, China International Social Public Security Expo was held in Beijing, CPSE manufacturers have demonstrated biometric identification equipment. Especially in the use of channel gates management system, making it a hot spot.

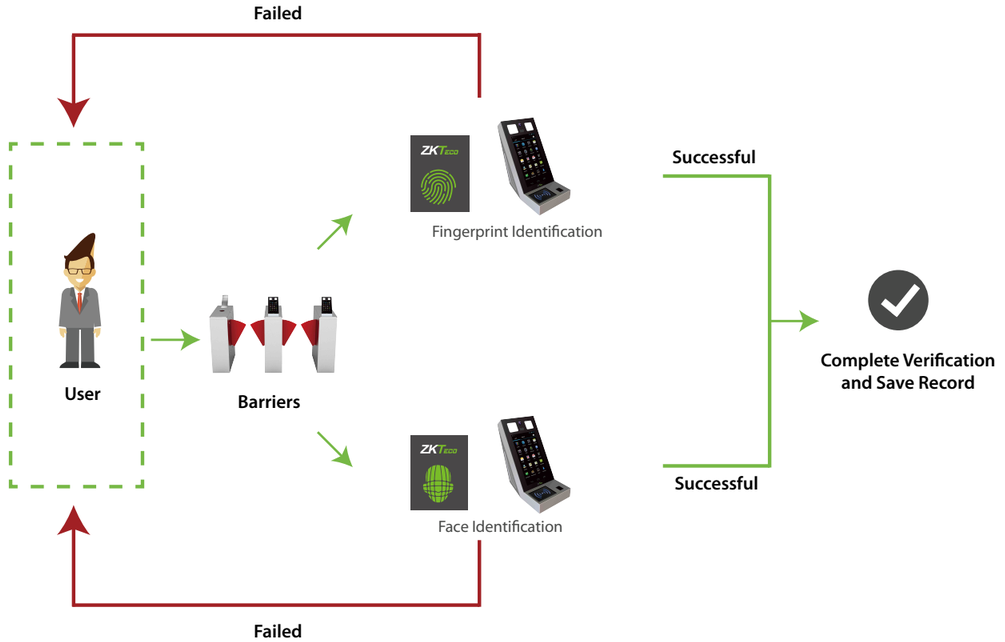
Description

ZKTeco HB800 is the latest multi-functional hybrid biometric verification terminal based on Android system, it integrates fingerprint recognition match, face recognition and credit card and other verification functions in one. The product is integrated in the use of the barrier, staffs' fingerprints and faces will be recorded and matched with the previously stored fingerprint and face information when passing the gates. Access are granted after successful verification, and are not granted with failed verification.

Features

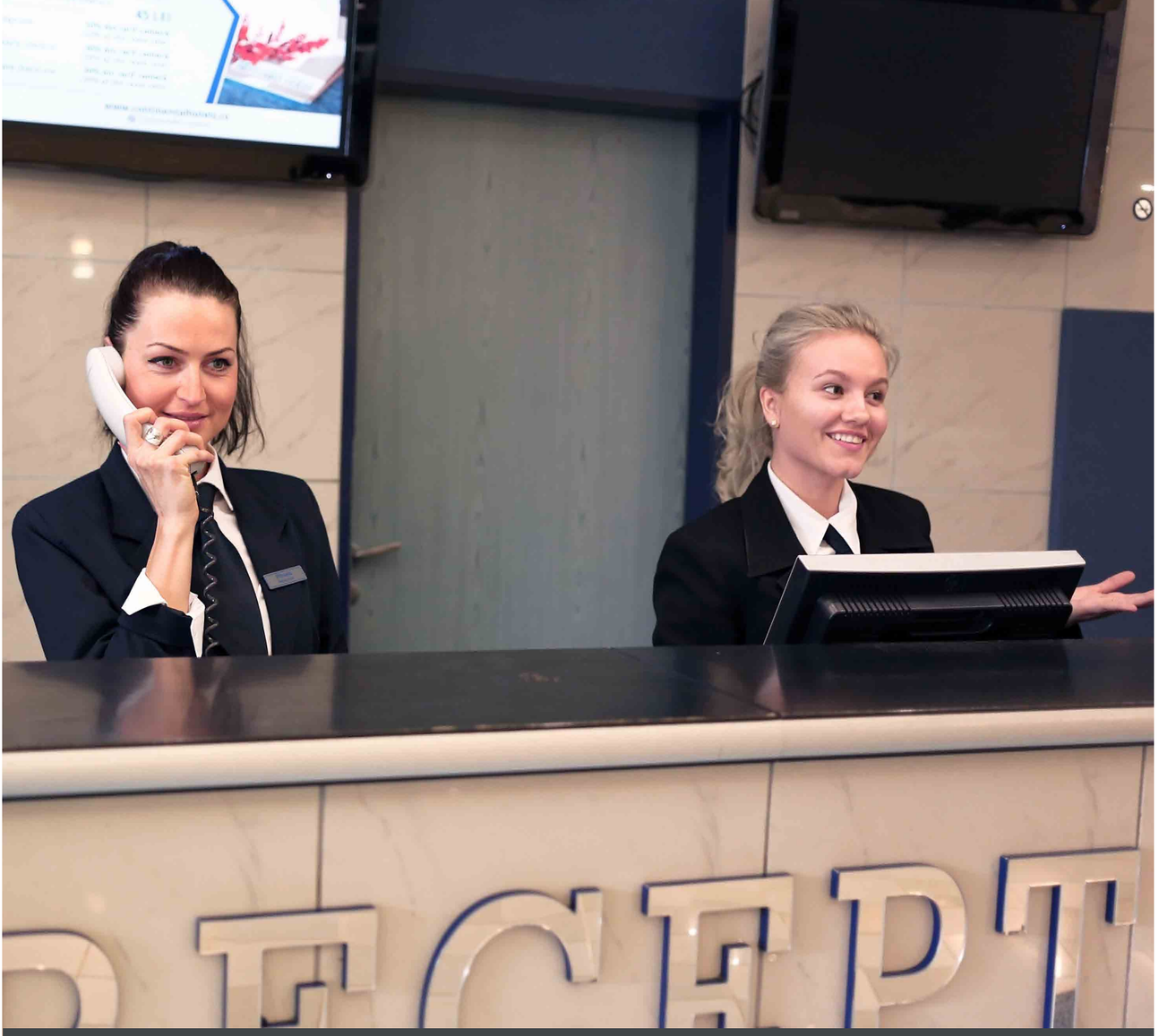
- A variety of biological information collection, hybrid biometric verification
- Biometrics Verification Intelligent Control Gate Switch
- Trailing and tracking prevention functions
- Personnel basic information registration and management
- A variety of SDK development package for users to develop their own applications

Architecture



Application Fields

Government | Education | Visitors | Insurance | Financial | Enterprise



Visitor Management System Solution

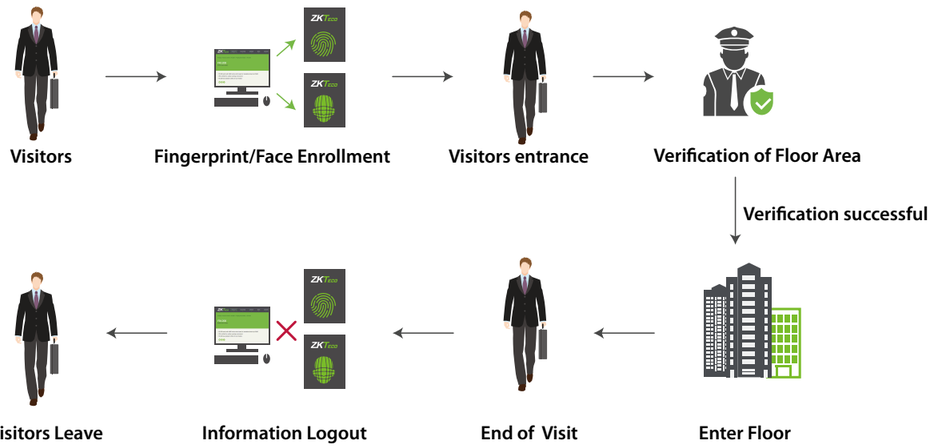
Demand Analysis

Most units or institutions need to register the visitors, the current registration management is still in the more primitive "asked, seeing, noting," manual registration, and there is a variety of security risks of it, which hinders to adapt to the new situation of the security management needs, thus we have specifically launched smart visitor management system solutions.

Disadvantages

- Suspicious and miscellaneous personnel are easy to hide in the management area, which creates difficulties for security staffs to prevent safety risks
- When the visitor traffic is large, the manual registration method is inefficient and the accuracy is low
- It is difficult to obtain the visitors' real-time situation after entering, if suspicious behaviors occur, it is difficult to identify the identities through the monitoring system, there are security risks

Architecture



Advantages

- Verifying the identity of the authenticity can effectively prevent suspicious people and mixed personnel's hiding in the enterprise
- Customer registration is simple and fast, which greatly improves the registration efficiency
- Information management, easy to query and manage statistics, and has seamless integration with the monitoring system to enhance business security

VARIOUS BIOMETRICS SOLUTIONS FOR BANKING AND FINANCE SYSTEM

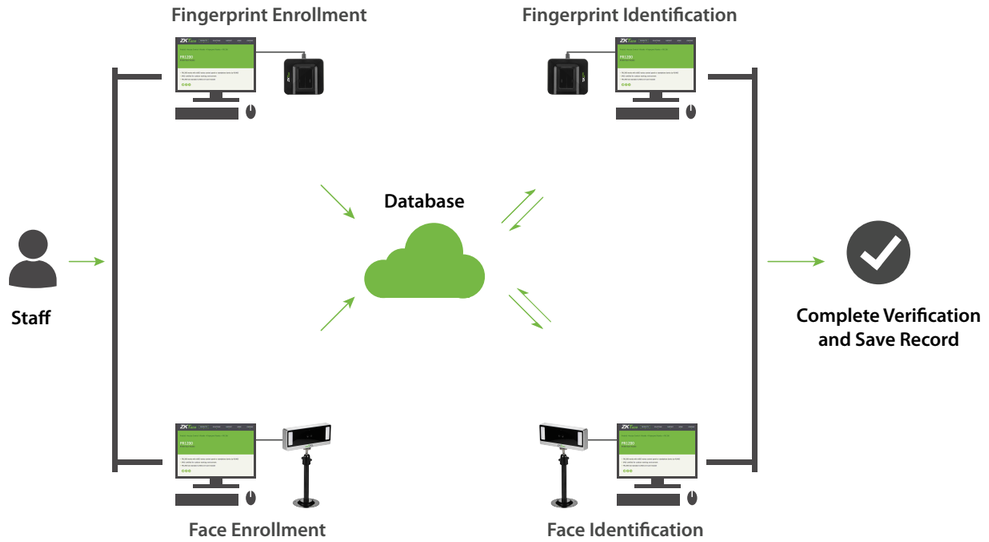
Demand Analysis

Bank escort as an important part of bank security, has gained bigger concern by banks. Conventional escort process is mainly performed manually or by IC card. The two escort methods has been increasingly showing their drawbacks. Manual handover method mainly relies on artificial face recognition (internal staff are familiar with each other), IC card relies on password authentication, these methods rely on strict management to implement, if there are management loopholes, such as personnel conversion or password leakage and other issues, it is likely to cause huge losses on bank funds.

Features

- Automatic data upload and download to save manpower
- Data can be encrypted and compressed
- User-friendliness and reliability

Architecture



Postscript

Fingerprint Scanner

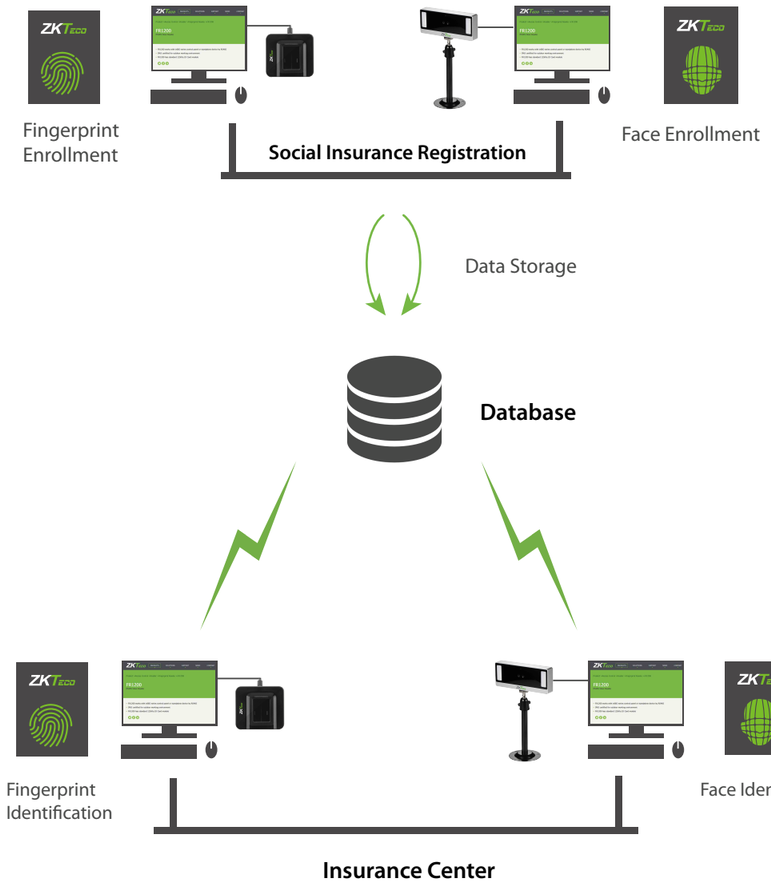
Face Scanner

Social Insurance Management System Solution

Demand Analysis

According to survey, social insurance institutions are unable to confirm if the retired workers are still alive or died in the course of the retirement of civil servants and the basic old-age insurance for employees, for various reasons (such as retiring workers not living locally). The large number of pensions, has caused heavy losses to the social insurance institutions and countries. In order to reduce the loss of state property and social insurance institutions, our company has carried out a large number of research and analysis, and applied the use of independent intellectual property rights of the world's leading fingerprint identification algorithm to identify the basis for fingerprint information and to identify the identity of people. Its unique continuous scanning automatic identification method is suitable for the practical application of social insurance institutions.

Architecture



Postscript

Fingerprint Scanner

Face Scanner

Education Industry Management System Solution

Demand Analysis

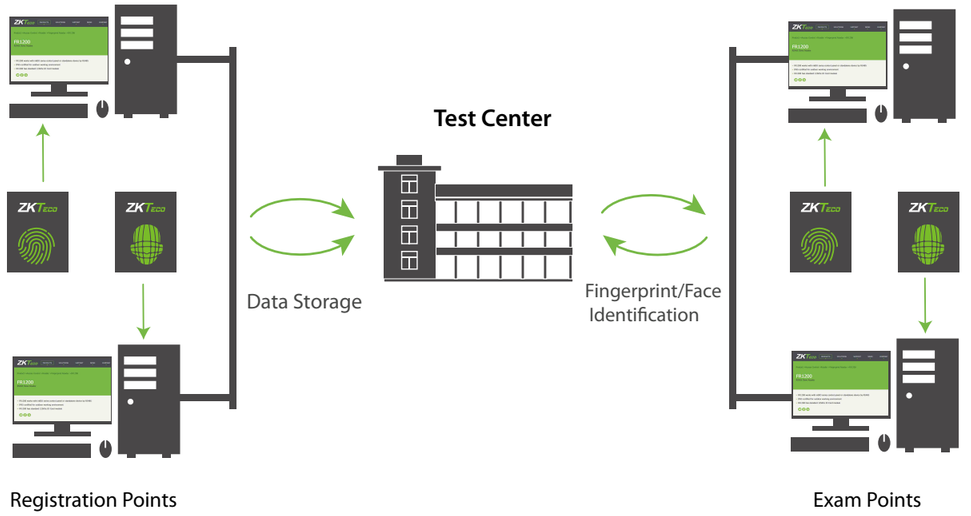
Surrogate examination taking has been very popular in various examinations, and has affected the fairness and effectiveness of the results of examinations. Diminishing the phenomenon has been one of the difficult tasks for examination institutions. To fundamentally eliminate the possibility of the surrogate examination taking in the education, enhance the operation efficiency of the examination management institutions, lower the workload, and ensure the public interests of candidates, biometrics information features have been used for the verification of candidates.

Operating Procedures

1. Before the exam, students attend to the examination location and register their candidate information,candidates' fingerprints and face information aree collected
2. The candidates information are uploaded to the Education Department database, candidate examination permissions are thus issued

3. Candidates with their permissions are verified at examination locations
4. Candidates' fingerprints, face and finger vein and other identity information are verified by attendance devices to enter the examination
5. Identity verification failed, unable to enter the examination room

Architecture



Application Place

- Adult examinations, self-study examinations
- Examinations for overseas study
- Vocational education examinations
- Qualification examinations and title examinations, etc.

Biometric Medicine Distribution Management System Solution

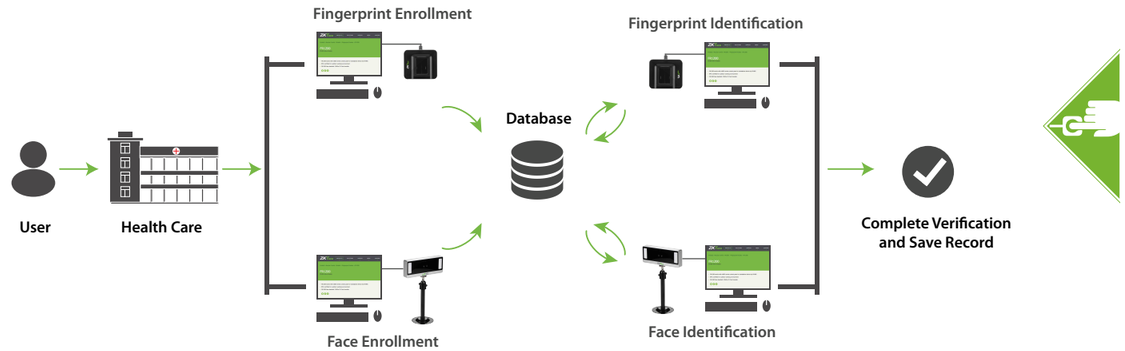
Demand Analysis

With the continuous development of the medical industry, continuous improvement of information technology platform and the gradual enhancement of service awareness, in order to better provide citizens a good medical environment, fair enjoyment of public social resources and prevent medical insurance fraud and other issues, in the medical security system, there has been necessities for a unified identity management system. A unified identity management system can achieve real-name medical treatment and real name consultation, and reduce health insurance fraud, free vaccine waste and the realization of one-person appointment registration, the use of fingerprints, face and finger vein and other unique and non-replicable biological information, as a means of security verification.

Program Description

ZKTeco provides solutions for real-name certification management in the healthcare industry. ZKTeco provides biometric products and software to the medical institutions, medical institutions can access the software or their own database, or SDK for the second development is available, the user first register business fingerprints, and have their information collected and stored in their own Database, thus users are not required to have further registration and can review information with fingerprint verification and business operation.

Architecture



Postscript

Fingerprint Scanner

Face Scanner

System Advantages

- To avoid the patient impersonation and cheating behaviors
- To avoid drug loss
- To avoid impersonation to use other social security card for consultations
- Easy appointment, registration, medical treatment, payment and settlement of medicines

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