ZKTeco

ZKBio CVSecurity

Version 6.4.0_R

All-in-One Biometric Security Advanced Solutions

Access Control	Time & Attendance	Elevator	Visitor	Parking	Guard Patrol	Video Management	Consumption	Facekiosk	Intelligent Scene	Space Management	Entrance Control	Locker Management	Intrusion Alarm	Video Intercom

ZKBio CVSecurity delivers a web-based security platform which integrates biometric authentication and advanced computer vision technology seamlessly. ZKBio CVSecurity enables organizations of all sizes to transform their physical security infrastructure while streamlining daily operations.

Technical Excellence

- A Microservice architecture for robust performance and scalability.
- Enterprise-grade data security (ISO/IEC 27001:2013, 27701:2019)
- Achieved ISO 20000 certification for the international standard for IT Service Management.
- Achieved ISO 9001:2015 for the quality-assured management system.

Key Features

- Web Application
- Space Management **NEW**
- Video Intercom **NEW**
- Flexible Elevator Control
- FaceKiosk Information Screen
- Personal Trajectory
- Video Patrol
- Microsoft Active Directory

- Multi-point Deployment
- Scramble(Dynamic) QR Code Credential
- Global Anti-Passback and Linkage
- Smooth and Advanced Visitor Management
- Time & Attendance
- Intelligent Target Search
- Smart Camera Personnel Control
- Card Printer

- Flexible 3rd-Party System Integration
- Elevator Destination Control System Integration
- Entrance Terminal Management
- Self-Service Visitor Management
- Professional Video Management System
- Smart Camera Perimeter Protection
- Visual Data Panel
- OCR

- High Availability ZKBio HA Integration
- Visible Light Facial Authentication
- LPR Camera for Parking
- WhatsApp, LINE, SMS, Amazon SNS Notification
- Intelligent Video Linkage
- People Counting
- GIS Map
- Consumption Management (Online & Offline)

Features of Main Modules

Module	Features
Access Control	• **Access Level:** Precisely manage the entry and exit of personnel to enhance campus security. • **Access Records:** Detailed logging of each visit's time, location, and visitor information for easy reporting and analysis. • **Video Linkage:** Integrates with video surveillance systems for real-time monitoring and event recording. • **Emergency Evacuation:** Quick evacuation guidance in emergencies to improve rescue efficiency. • **Advanced Features:** Support for global anti-tailgating, interlocking, and linkage to meet complex security management needs.
Time & Attendance	• **Flexible Attendance Rules:** Different scheduling rules can be set for different departments and employee categories. • **Accurate Calculation:** Precisely track regular work hours, overtime, tardiness, and absences to ensure accurate payroll processing. • **Comprehensive Tracking:** Manage make-up cards, leave requests, approval workflows, and monitor sick leaves and personal leaves. • **Regulated Overtime Management:** Systemize overtime and compensatory time arrangements to ensure compliance and minimize disputes. • **Seamless Integration:** Offer extensive APIs for seamless integration with payroll systems. • **Employee Self-Service:** Enable employees to view personal attendance records and apply for leaves independently. • **Insightful Reporting:** Provide detailed attendance reports to help management identify trends and potential issues.
Visitor Management	• **Suitable for All Scenarios:** We offer a variety of visitor check-in and check-out solutions to meet the needs of different occasions. • **Efficient Reception:** Utilizing OCR and ID card readers for swift identity verification and information scanning, with automatic receipt printing post-registration for a seamless process. • **Self-Service Kiosks:** Integrating advanced facial authentication, we enable self-check-in for visitors, instantly issuing receipts, enhancing experience, and reducing front desk workload. • **Online Scheduling and Access:** Our app allows you to invite and pre-register visitors. They gain automatic access during the scheduled time, streamlining the visit process. • **Watchlist Management:** Our system intelligently identifies and flags visitors of various categories, alerting staff with VIP notifications for enhanced etiquette. • **Comprehensive Notification Service:** The system provides timely alerts for all stages, including bookings, approvals, check-ins, check-outs, no-shows, and overtime check-outs, through various channels like Email, WhatsApp, and SMS.
Parking Management	• **Automated Management:** Swift response to vehicle entry and exit with automated barrier systems for improved traffic efficiency. • **Diverse Payment Options:** Supports various payment methods for different user categories, including temporary, regular, special, and monthly renters, catering to diverse management needs. • **Stringent Fee Collection:** Computerized billing and charging record every transaction, preventing revenue leakage and ensuring parking lot profitability. • **Centralized Control:** Real-time transmission of parking equipment status and space usage to the control center via the network, enhancing supervision. • **High Plate Recognition Rate:** High-definition cameras boast a plate authentication rate above 99%, adaptable to complex environments.
Elevator Control	• **Enhanced Security:** Fine-grained access control ensures only authorized users access designated floors, effectively preventing unauthorized entry and enhancing building security. • **Floor Control Capability:** Our elevator access controllers are powerful, capable of managing up to 128 floors, meeting the vertical transportation needs of high-rise buildings. • **Efficient Dispatch System:** Integrates with DCS, it works in tandem with 3rd party elevator systems like Mitsubishi and KONE, enabling intelligent destination dispatch to reduce wait times and improve transportation efficiency. • **Personalized Services:** Custom services cater to passenger habits and needs, offering exclusive elevator services such as VIP direct floors and management-specific elevators for special groups.

Module	Features
Entrance Control	• **Enhanced Security:** Identity verification through facial, fingerprint, palm, card, and other authentication methods ensures that only authorized personnel can access specific areas. • **Crowd Management:** Effectively control and monitor the flow of people to prevent overcrowding, enhancing order and security in the area. • **Data Recording:** The system records detailed information of each passage, including time and identity of personnel, facilitating post-incident audits and data analysis. • **Emergency Response:** In emergency situations, such as fires or security incidents, the access gates can be quickly opened to ensure rapid evacuation of personnel.
Video Intercom	• **Enhanced Security:** Video identity verification ensures that only authorized visitors enter, enhancing the security of residential and workplace environments. • **Two-Way Communication:** Intercom units, indoor monitors, phones, mobile apps, and PC clients can call each other, enabling two-way communication capabilities. • **Simplified Configuration:** The software automatically assigns SIP accounts, quickly synchronizing them with devices and apps, eliminating the hassle of manual configuration. • **Access Control Integration:** In emergency situations, the system automatically dials designated apps to ensure that no critical alerts are missed.
Smart Video Surveillance	• **Expanded Capacity:** Capable of handling up to 1024 video channels, with support for 64-channel prereview and 16-channel simultaneous real-time playback. • **Essential Video Management:** Offers fundamental functionalities including real-time preview, PTZ (Pan-Tilt-Zoom) control, video playback, and video decoding. • **Intelligent Alert Management:** Allows for viewing and addressing intelligent camera alerts such as intrusion and rapid movement directly from the software's alarm center. • **Enhanced Surveillance:** Video patrol features bolster security personnel's situational awareness and patrol effectiveness, with the software maintaining comprehensive patrol records. • **Watermark Protection:** Incorporates a watermark function to safeguard user photos and data, preventing unauthorized copying and reuse.
Guard Patrol	• **Standardized Management:** Streamline patrol processes to ensure tasks are carried out according to established plans and frequencies. • **Real-time Monitoring:** Continuously monitor the status of patrol personnel to promptly detect and respond to any anomalies. • **Flexible Scheduling:** Adjust patrol routes and schedules as needed to accommodate varying security requirements. • **Cost Reduction:** No need to purchase additional patrol equipment; access control devices also serve as patrol points, and patrols can be completed using facial authentication, fingerprint scanning, or card swiping.
Consumption	• **Fast Checkout:** Supports facial authentication or card payments, which is convenient and fast, reducing waiting time in lines. • **Account Management:** Facilitates personal account management, including recharges, balance inquiries, and transaction history reviews. • **Subsidy Distribution:** Simplifies the process of issuing and managing meal subsidies for employees or students. • **Data Tracking:** Provides comprehensive consumption statistics reports, assisting cafeteria managers in analyzing consumption patterns and trends.
Intrusion Alarm	• **Seamless Integration:** Harmoniously integrates with Alarm Control Panels from leading brands like BOSCH and RISCO, enabling comprehensive monitoring and control over various partitions and points within the security system. • **Enhanced Visualization:** Offers an intuitive defense zone display on the map, providing a clear visual overview of security zones for enhanced situational awareness and efficient response to any incidents.

Module	Features
Locker Management	• **Automated Management:** Automatically assigns and releases lockers to designated personnel. • **Real-time Monitoring:** The system can monitor the usage status of lockers in real time to ensure the rational allocation of resources. • **Data Recording:** The system automatically records data on the use of lockers, facilitating management and tracking. • **Advertising Opportunities:** The system interface can display advertisements, providing an additional revenue stream for operators. • **Emergency Access:** In emergency situations, management personnel can quickly access lockers.
NEW Space Management	• **Mobile Access:** Support for access via mobile devices, allowing employees to book meeting rooms from any location using smartphones or tablets. • **Flexibility:** Employees can arrange meetings flexibly according to their own schedules and the availability of meeting rooms. • **Conflict Reduction:** The system can automatically detect and prevent scheduling conflicts, ensuring that only one meeting is arranged for the same time slot. • **Automated Notifications:** After a successful reservation, the system automatically sends notifications to meeting participants, reminding them of the meeting's time and location. • **Energy Saving:** With intelligent control of lighting and air conditioning, relevant equipment is only turned on when in use, contributing to energy conservation and emission reduction. • **Security:** Through access control management, it ensures that only authorized personnel can book or access specific meeting rooms.
NEW Enery Saving	• **Improve Energy Utilization Efficiency:** By intelligent regulation, ensure the maximization of energy use, truly achieving "lights off when people leave," and reducing unnecessary energy waste. • **Enhance Spatial Comfort:** Through precise environmental control, the system can maintain a constant indoor temperature, humidity, and oxygen levels, providing a comfortable and healthy space environment.

Software Specifications

Operating System

Server-Side	Windows7/8/10/11, Windows Server 2008/2012/2016/2019/2022	
Database	PostgreSQL, Oracle11g/12c/18c/ 19c /21c, SQL Server 2008/2012/2014/2016/2017/2019/2022	
Suggested Browser for Client-Side	IE 11 or later, Chrome 33 or later, Safari 6.1.3 or later Edge	
Certifications	ISO/IEC 27001:2013, ISO/IEC 27701:2019, ISO9001, ISO20000.	

Database Platform

Maximum Number of Clients Allowed to Access	Unlimited (depending on the performance of the server & network)
Maximum Supported Admin Users	
Maximum Supported Personnel	300,000
Maximum RFID Cards	300,000
Maximum Passwords	300,000
Maximum Fingerprints	300,000
Maximum Faces	300,000
Maximum Access Controlled Doors	5,000
Maximum Access Control Level	Unlimited (depending on the performance of the server & network)
Maximum Attendance Points	2,000
Maximum Visitors (Monthly)	100,000
Maximum Surveillance Cameras	1024
Maximum Intelligent Video Servers	50
Maximum Controlled Outputs Maximum Inputs	Unlimited (depending on the device's configuration)

3rd-Party Integration

Notification / Messages	Line / WhatsApp / Amazon SNS / SMS
GIS Map	Google Map / Baidu Map / SuperMap
Microsoft Active Directory	No Version restriction
Intrusion Alarm Integration	Bosch/RISCO
API	Restful API Supports: Person Interface of Attendance Area RESTful API Person Interface RESTful API Person Biometric Template Interface RESTful API Card Interface RESTful API Department Interface RESTful API Area Interface RESTful API Reader Interface RESTful API Media Interface RESTful API Door Interface RESTful API Floor Interface RESTful API Access Control Interface RESTful API Access Control Device Interface RESTful API Access Level RESTful API Access Control Transaction Interface RESTful API Attendance Transaction Interface RESTful API Attendance Device Interface RESTful API Elevator Control Level Interface RESTful API Elevator Device Interface RESTful API Elevator Transaction Interface RESTful API Vehicle Management Authorization Interface RESTful API Vehicle Management Transaction Interface RESTful API Visitor Reservation Interface RESTful API Visitor Level Interface RESTful API Visitor Registration Check Out Interface RESTful API Temperature Transactions Interface RESTful API FaceKiosk Device Interface RESTful API FaceKiosk Area Interface RESTful API
Elevator Destination Control System Integration	KONE, MITSUBISHI ELECTRIC

Cybersecurity

Data Protection	256-bit AES encryption

System Requirement

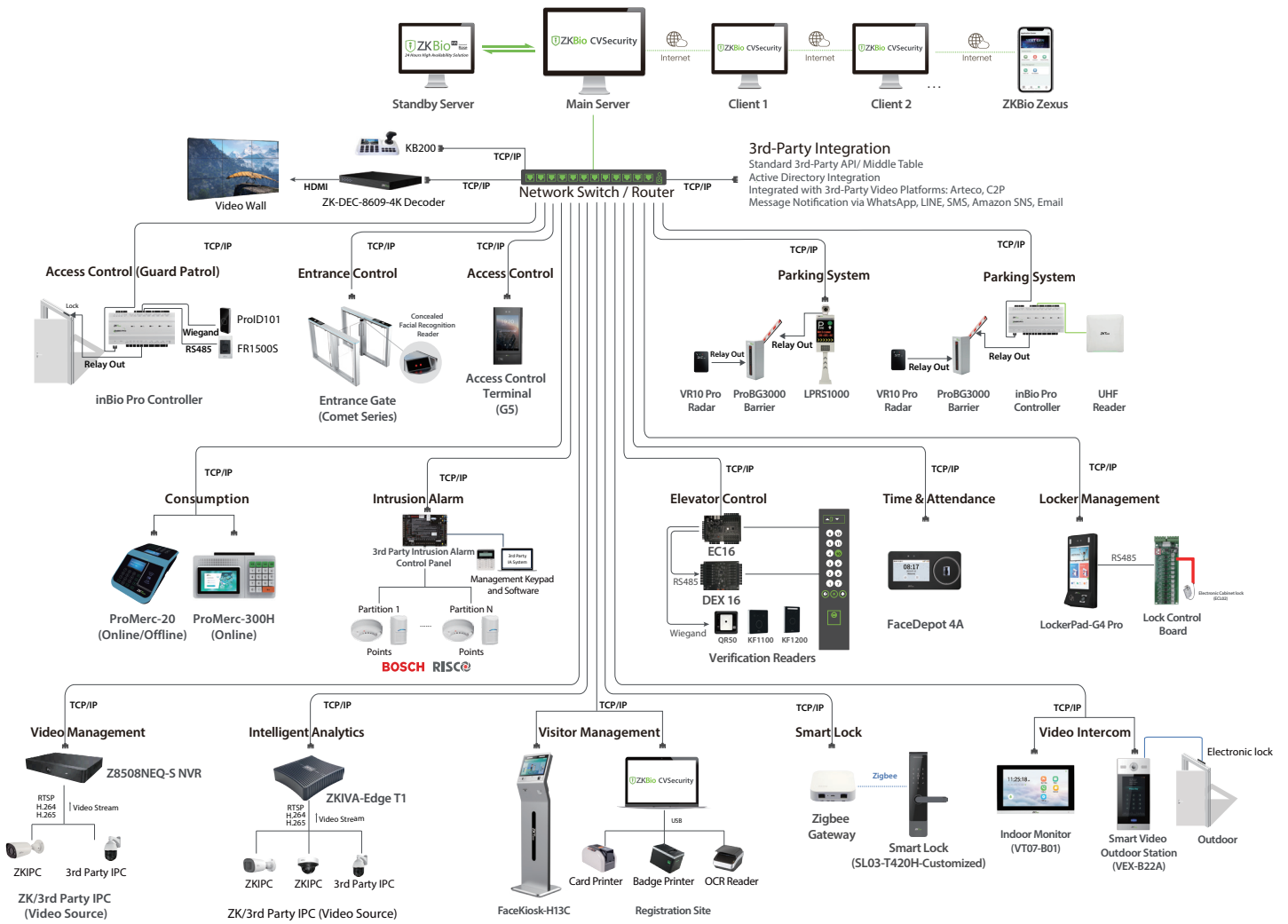|	
Operation System	Microsoft® Windows 7 Microsoft® Windows 8 Microsoft® Windows 10 Microsoft® Windows 11 Microsoft® Windows Server 2008 Microsoft® Windows Server 2012 Microsoft® Windows Server 2016 Microsoft® Windows Server 2019 Microsoft® Windows Server 2022
Browser Version	Google Chrome® 84 and above Firefox® 84 and above Safari® 11 and above Microsoft® Edge 89 and above Internet Explorer® 11 and above
Database	PostgreSQL, Oracle11g/12c/18c/19c/21c, SQL Server
OS for Mobile Client	iOS 10.0 and above Android 7.0 and above

* For high stability and good performance, the following system requirements must be met.

Server Configuration

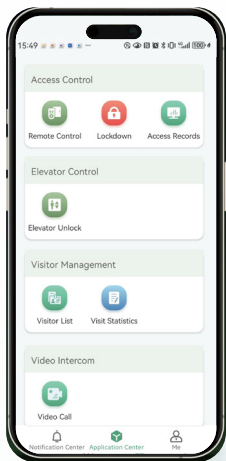| Application Scenario	Device Protocol	Device Quantity	Deployment Method Description	Recommended Server Configuration				
				Server Type	Memory	CPU	Hard Drive Capacity	GPU
Small-scale Project	Push / Pull / Best	Push Device: 50 pcs Pull Device: 20 pcs Video Channel: 64 Cameras	If MSSQL or Oracle database is used, an additional separate database server needs to be deployed.	ZKBio CVSecurity Server	8GB	Core i5 quad-core with a clock speed of 2.8 GHz or higher	100GB	/
				ZKBio CVSecurity Client (Supports simultaneous preview of 64 videos)	16GB	Core i7 quad-core with a clock speed of 3.0 GHz or higher	100GB	NVIDIA GTX750 (Only preview video devices are needed)
				Database Server (Only required when using MSSQL and Oracle)	8GB	Core i5 quad-core with a clock speed of 2.8 GHz or higher	100GB	/
Media-scale project	Push / Pull / Best	Push Device: 50~200 pcs Pull Device: 50 pcs Video Channel:128 Cameras	1. When the number of devices exceeds 100, it is not recommended to use MSSQL 2. If using MS SQL or Oracle databases, an additional separate database server needs to be deployed.	ZKBio CVSecurity Server	16GB	Core i5 hexa-core with a clock speed of 3.0 GHz or higher	200GB (SSD)	/
				ZKBio CVSecurity V6600 Client (Supports simultaneous preview of 64 videos)	16GB	Core i7 quad-core with a clock speed of 3.0 GHz or higher	100GB	NVIDIA GTX750 (Only preview video devices are needed)
				Database Server (only required when using MSSQL and Oracle)	8GB	Core i5 hexa-core with a clock speed of 3.0 GHz or higher	200GB (SSD)	/
Medium to large-scale project	Push / Pull / Best	Push Device: 200~600 pcs PullDevice: 50 pcs Video Channel: 256	1. MSSQL is not recommended. 2. If using an Oracle database, an additional separate database server is required.	ZKBio CVSecurity Server	16GB	Core i7 octa-core with a clock speed of 3.2 GHz or higher	500GB (SSD)	/
				ZKBio CVSecurity Client (Supports simultaneous preview of 64 videos)	16GB	Core i7 quad-core with a clock speed of 3.0 GHz or higher	100GB	NVIDIA GTX750 (Only preview video devices are needed)
				Database Server (Only required when using Oracle)	16GB	Core i5 hexa-core with a clock speed of 3.2 GHz or higher	500GB (SSD)	/

* To ensure optimal system performance, should you plan to connect more than 600 devices, we recommend that you contact our Technical Support Center. Our professional team will provide you with customized server configuration recommendations to ensure smooth and efficient operation of your devices.
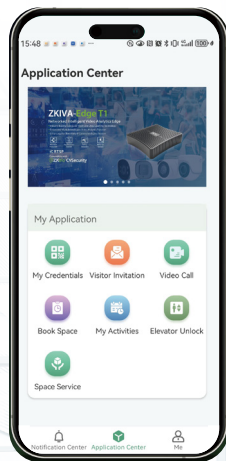
System Topology

Standby Server — ZKBio 24 Hours High Availability Solution
Main Server — ZKBio CVSecurity
Client 1 — ZKBio CVSecurity — Internet
Client 2 — ZKBio CVSecurity — Internet
ZKBio Zexus

KB200 — TCP/IP
HDMI — ZK-DEC-8609-4K Decoder — TCP/IP
Video Wall

Network Switch / Router — TCP/IP

3rd-Party Integration
Standard 3rd-Party API/ Middle Table
Active Directory Integration
Integrated with 3rd-Party Video Platforms: Arteco, C2P
Message Notification via WhatsApp, LINE, SMS, Amazon SNS, Email

Access Control (Guard Patrol) — TCP/IP
Lock
Wiegand — ProID101
RS485 — FR1500S
Relay Out
inBio Pro Controller

Entrance Control — TCP/IP
Concealed Facial Recognition Reader
Entrance Gate (Comet Series)

Access Control — TCP/IP
Access Control Terminal (G5)

Parking System — TCP/IP
VR10 Pro Radar — Relay Out
ProBG3000 Barrier — Relay Out
LPRS1000

Parking System — TCP/IP
VR10 Pro Radar — Relay Out
ProBG3000 Barrier — Relay Out
inBio Pro Controller
UHF Reader

Consumption — TCP/IP
ProMerc-20 (Online/Offline)
ProMerc-300H (Online)

Intrusion Alarm — TCP/IP
3rd Party Intrusion Alarm Control Panel
3rd Party IA System
Management Keypad and Software
Partition 1 — Points
Partition N — Points
BOSCH **RISCO**

Elevator Control — TCP/IP
EC16
RS485
DEX 16
Wiegand
QR50 — KF1100 — KF1200
Verification Readers

Time & Attendance — TCP/IP
FaceDepot 4A

Locker Management — TCP/IP
RS485
LockerPad-G4 Pro
Electronic Cabinet lock (EC102)
Lock Control Board

Video Management — TCP/IP
Z8508NEQ-S NVR
RTSP H.264 H.265 — Video Stream
ZKIPC — 3rd Party IPC
ZK/3rd Party IPC (Video Source)

Intelligent Analytics — TCP/IP
ZKIVA-Edge T1
RTSP H.264 H.265 — Video Stream
ZKIPC — ZKIPC — 3rd Party IPC
ZK/3rd Party IPC (Video Source)

Visitor Management — TCP/IP
ZKBio CVSecurity
USB
Card Printer — Badge Printer — OCR Reader
FaceKiosk-H13C
Registration Site

Smart Lock — TCP/IP
Zigbee
Zigbee Gateway
Smart Lock (SL03-T420H-Customized)

Video Intercom — TCP/IP
Electronic lock
Indoor Monitor (VT07-B01)
Smart Video Outdoor Station (VEX-B22A)
Outdoor

Mobile APP-ZKBio Zexus

Admin Page

Access Control — Remote Control, Lockdown, Access Records
Elevator Control — Elevator Unlock
Visitor Management — Visitor List, Visit Statistics
Video Intercom — Video Call

Keep an eye on everything, guard every moment, 24/7 security defense.

Personnel Page

Application Center
ZKIVA-Edge T1
My Application — My Credentials, Visitor Invitation, Video Call, Book Space, My Activities, Elevator Unlock, Space Service

You can reserve the space and manage visitors on the mobile app.

Video Call

Visitor Invitation

My Activities

Call Elevator

My Credentials

Visitor Approval

Book Space

Space Service

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ANDROID APP ON **Google play**

iOS — Android