CUBOX
Integrated Biometric Solution
About CUBOX

CUBOX BUSINESS OVERVIEW
CUBOX OVERVIEW
CUBOX HISTORY
CUBOX Business Overview

**Airport**
- ABC e-Gate
- Self Check In KIOSK
- Pre Security Check Gate
- Self Bag Drop
- Boarding Gate
- API

**Platform Service**
- ONE ID Service
  (Biometrics Identification for Airport)
- Biometrics Identification Platform
  (Banking, Commerce etc.)

**Biometrics**
- Facial Algorithm
- Fingerprint Algorithm
- Facial Recognition Solution
- AFIS
- Mobile Biometrics Identification
- AI Facial Recognition

**Public Area**
- Facial Gate
- Facial Access Control Terminal
- MBDAS (Enrolment)
- ACU / RFID Reader
WE ARE

Company Name: CUBOX Co., Ltd
CEO: Un Sung, Nam
Founded: 2010.05.31
Capital: 1,088,500,000 KRW (USD 1 Million)
Employees: 76

Business:
- AI Biometrics Recognition
- HW & SW Development
- Airport / Immigration Solution
- Biometrics Access Control (HW & SW)

Website: www.cubox.aero
Address: Daeryung Post Tower 5Cha 17F, Digital-ro 9-gil 68, Geumcheon-gu Seoul, Korea
TEL: 82-2-6277-7800

VISION

AI-Vision Recognition Platform
AI-Facial Recognition Platform

Biometrics Solution with AI
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
</table>
| 2019 | Implemented NIRS Access Control System  
Enhanced performance of AI facial recognition engine (Deep Learning technology)  
Development of ONE ID solution for overseas market and establishment of its mass production system |
| 2018 | Enhanced performance of AI facial recognition engine and developed its services  
**Constructed Automated Immigration Checkpoint at Incheon International Airport Terminal 1 (4th generation)** |
| 2017 | Acquired patent for transfer method of minutia data and authentication method and system using minutia data (No. 10–180880)  
Acquired patent for minutiae data creation system and method using dual camera (No. 10–1786810)  
**Constructed Access Control System for government complex (Gwacheon)**  
Certified as Venture Enterprise  
**Won contract for Automated Immigration Checkpoint at Incheon International Airport Terminal 2**  
ISO 9001 : 2015 Certificate |
| 2016 | **Installation of Facial Recognition Access Control System at government complex (Seoul, Gwacheon, Daejeon, Sejong)**  
Facial Recognition/Authentication Technology acquisition  
Development of Biometrics Authentication “MBDAS” |
| 2015 | International standardization of Automated Immigration Control System (based on FRONTEX, ICAO)  
Acquired patent for User Search System/Method through Multi-biometric Recognition (No. 10-0875923)  
Acquired patent for bio-registration and authentication device (No. 10-1226151)  
Acquired patent for eye position detection method and device (No. 10-0590572)  
Development of fingerprint recognition and verification system using smartphone camera |
| 2013 | Establishment of affiliated research institute (CUBOX Research Institute)  
**Mongolian Immigration Control System modernization project (KOICA, Sysone)** |
| 2012 | Integration and maintenance of Immigration Information System and consignment of G4F System (Ministry of Justice, Sysone) |
| 2010 | Established CUBOX Co., Ltd |
Smart Integrated Security System oversees and controls access in an adequate manner, by monitoring the path of a vehicle since its entrance.

Application of Smart Integrated Security System
CUBOX Integrated Security System

System Diagram of Smart Integrated Security System

Physical Security
- Office
- Computer
- Speed Gate
- E/V
- Staircase

Control Room
- Integrated Server
- Management Control
- Monitoring Control
- Multiple Displays & Control Panels

Visual Monitoring
- DVR
- MATRIX
- Monitoring #1
- Monitoring #2
- Monitoring #3

Security Management Solution
- Visitor control
- Various types of visitor report
- Access authority configuration
- Add/delete visitor
- Remote control for entrance gate
- Live monitoring with matrix display panel
- Monitoring based on network
- Auto Motion saved in real time
- High resolution recording
Facial Recognition – Visual Concept

"CUBOX biometric terminals provide fast and accurate access to secured areas and guarantee security and convenience through simple access control"
Facial Recognition Management Scenario

01 Facial data registration
- Collect facial data
- Register RF card
- Pre-filtering
- Personal Info.
- Photo
- Review on data consistency
- Upload to facial data server
- Facial DB generated

02 Facial recognition process
- Facial data acquired from gate is confirmed after being compared 1:n (20,000) in real time to the preregistered facial data in facial data server. The gate opens selectively for those who match.

1. Facial Recognition (Long-distance)
2. Walk through RF gate
3. Identification (Server-link/confirm terminal)
4. Alarm/Notify
5. Gate opens
6. Finish and save record

Registered facial DB shall be acquired accordingly to image size regulation. Faulty or unsized images are verified through the feasibility study.

"Facial Recognition Access Control is complied with the security guideline of client."
### Integrated Monitoring

**Visitor status check/Recognition accuracy rate**

**Statistics display**

#### Monitoring Measures

1. Status Monitoring by security officer
2. Integrated Control Center
3. On-site Monitoring

#### Key Point
- Real time monitoring on access control while system is operated with regular access performance
- High level of convenience through various features utilizing the operating computer.

#### Access Authorization Control
- User face information maintenance (Register, suspend, discard etc.)
- Grant security access (Access restriction settings)

#### Access Record Control
- Verify registered entries to system

#### Visitor/Device Status Monitoring
- Custom layout eligible for user control
- Access control device and visitor information are visual
- Record verification through logs, Stronger security surveillance through printable report
CUBOX Solution

- Biometric Recognition Solution
- Airport Solution
- Security Solution
CUBOX Biometric Recognition Solution

CUBOX Potential

Massive DATA

Domain Knowledge & Experience

- Design/manufacture devices
- Design camera
- Data preprocessing and reinforcement
- S/W development

CUBOX’s unique Domain Knowledge coming from its management experience at top-security national facilities.

Incheon Airport · Ministry of Justice:
50M Biometric Live Data

Government Agencies:
200K Biometric Live Data

Legal acquisition and analysis of data through 7 years of business experience
Stability, Improvement and Enhancement

The leading enterprise for AI facial recognition engine
Biometric Recognition

**Facial Recognition Algorithm**
- Deep learning based facial recognition engine
- Accurate landmark extraction algorithm
- Fast facial recognition and image scan, support ultrahigh speed face matching
- High speed and accurate detection even for non-frontal face
- Outstanding recognition rate resistant to low light intensity and other environmental factors
- Solid recognition with infrared lens
- 3D minutiae matching
- Support multiple platform environment (embedded device, mobile, computer, etc.)
- A variety of commercialized purposes and optimization opportunities well-suited for biometrics

**Fingerprint Recognition Algorithm**
- Outstanding recognition rate through fingerprint minutiae extraction algorithm and matching algorithm
- Multispectral images are recognized by derma line pattern, through capillary bed method.
- Powerful preprocessing algorithm complements accuracy for low quality fingerprint.
- Supports various image extensions and parameter changes at multi platform environment (wsq, raw, bmp, tiff, jpeg, etc.)
- Supports international standard ISO-19794-2,4

**Applied at**
- Incheon Airport
- Ministry of the Interior and Safety
- Ministry of Justice
Biometric Recognition

Automated Fingerprint Identification System
Converts resident registration issue application and 10 fingerprints of each domestic - foreign criminal into digital image which comprises relate database. Is a system aiming to support forensics(ex. unidentified, identity theft, accidental death, fingerprint identification at crime scene, further crimes tracking, etc.) based on this database.

Mobile Biometric Identification
(Non-contact fingerprint recognition solution)
- Applicable to all mobile devices supporting closeup photography (Regardless of fingerprint recognition sensors)
- No distortion caused by environmental changes such as temperature, humidity, and skin condition
- Clear fingerprint image acquired from three-dimensional perspective
- Over 40 minutiae extractable
- Capable of utilizing copious fingerprint data by entire acquisition

Facial Recognition Solution

Iris Recognition Camera Module
CUBOX Solution

Biometrics Solution

The strength of CUBOX facial recognition algorithm has been proven by its multiple experiences of establishment at airport immigration and government complex.

- **Govt. Complex**: 250 K cases of DB processed per year
- **Incheon Airport**: 110 K cases of DB processed in total

Features

- Approved by int’l airports and govt. office bldgs.(KISA Certification)
- **ISO19794-5** Detect multiple faces simultaneously with standard face image
- Distinguishes sex of object in the image
- Liveness detection: verifies real face / video / photograph
- Position facial traits and extracts minutiae data (considering all image pixels of face)
- Recorded in database after analysis and groupage by generalized traits
- Independent of illuminance, backlight, posture, accessory and angle
- Enhanced face recognition performance (multiple sensors combined)
Biometrics Solution

<table>
<thead>
<tr>
<th>Category</th>
<th>Result</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy (EER)</td>
<td>99.00%</td>
<td>LFW</td>
</tr>
<tr>
<td>Accuracy (EER)</td>
<td>99.10%</td>
<td>MUCT</td>
</tr>
<tr>
<td>Extraction speed</td>
<td>0.11 face / sec</td>
<td></td>
</tr>
<tr>
<td>Contrast speed</td>
<td>100,000 / sec</td>
<td></td>
</tr>
</tbody>
</table>

*Simulation results from March 2019*
Airport Solution
Currently expanding the product line-up to provide ONE ID solution

Self Check-in Kiosk  Pre-Security / Boarding Gate  ABC e-Gate system
Self Check-in Kiosk

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Material</td>
<td>Powder Coated Steel</td>
</tr>
<tr>
<td>Body Size (W X H X D)</td>
<td>560 X 1800 X 460</td>
</tr>
<tr>
<td>Display (main)</td>
<td>17-inch LCD 1024 X 768</td>
</tr>
<tr>
<td>Display (sub)</td>
<td>22-inch LCD 1280 X 1080</td>
</tr>
<tr>
<td>Touch Screen</td>
<td>Capacitive Type 17-inch Tempered Glass</td>
</tr>
<tr>
<td>Camera</td>
<td>2M FHD Camera</td>
</tr>
<tr>
<td>Speaker</td>
<td>Stereo Speaker 3W</td>
</tr>
<tr>
<td>Passport Reader</td>
<td>ICAO9303 Standard Passport, Visa, Traveler card Recognition Available</td>
</tr>
<tr>
<td>Boarding Pass Reader</td>
<td>Paper, Mobile Barcode Recognition</td>
</tr>
<tr>
<td></td>
<td>1D, 2D Barcode Recognition</td>
</tr>
<tr>
<td></td>
<td>70mm X 50mm</td>
</tr>
<tr>
<td>Fingerprint Reader</td>
<td>Multi Spectrum Type</td>
</tr>
<tr>
<td>Navigation Keypad</td>
<td>6 Key Device</td>
</tr>
<tr>
<td></td>
<td>3.5mm Audio Jack</td>
</tr>
<tr>
<td>Boarding Pass Printer</td>
<td>1D and 2D IATA Barcode Printing</td>
</tr>
<tr>
<td>Baggage Tag Printer</td>
<td>Native AEA 2012 Support</td>
</tr>
<tr>
<td></td>
<td>High Speed up to 200mm</td>
</tr>
<tr>
<td></td>
<td>Automatic Ticket Length Detection</td>
</tr>
<tr>
<td>Power</td>
<td>110 – 240 VAC, 50/ 60Hz</td>
</tr>
<tr>
<td>UPS (Option)</td>
<td>Emergency drive in case of power failure</td>
</tr>
</tbody>
</table>
Pre-Security / Boarding Gate

<table>
<thead>
<tr>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Material</td>
</tr>
<tr>
<td>Body Size</td>
</tr>
<tr>
<td>Drive Module</td>
</tr>
<tr>
<td>Door Material</td>
</tr>
<tr>
<td>Operation Mode</td>
</tr>
<tr>
<td>Sensor</td>
</tr>
<tr>
<td>Speaker</td>
</tr>
<tr>
<td>Face Recognition Module</td>
</tr>
<tr>
<td>RF Card Reader</td>
</tr>
<tr>
<td>Power</td>
</tr>
<tr>
<td>UPS (Option)</td>
</tr>
</tbody>
</table>

- 3 related patents acquisition
  - 10-2019-0067147 Gate control method and system through facial recognition
  - 10-2019-0067151 Facial recognition method, terminal and system using multiple cameras
  - 30-2019-0022260 Immigration gate
ABC e-Gate

**Specification**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body Material</strong></td>
<td>Steel powder coating</td>
</tr>
<tr>
<td><strong>Body Size</strong></td>
<td>4000 x 206 x 1230 (excluding door glass height)</td>
</tr>
<tr>
<td><strong>Drive module</strong></td>
<td>BLDC motor</td>
</tr>
<tr>
<td><strong>Door Material</strong></td>
<td>12mm tempered glass</td>
</tr>
<tr>
<td><strong>Operation Mode</strong></td>
<td>Normal Close, Emergency-Fail safe (entrance) / Fail Lock (exit)</td>
</tr>
<tr>
<td><strong>Sensor</strong></td>
<td>Transmissive Sensors x 40, CUBOX Detection Algorithm</td>
</tr>
<tr>
<td><strong>Speaker</strong></td>
<td>Stereo Speaker 3W</td>
</tr>
<tr>
<td><strong>Face Recognition Module</strong></td>
<td>10-inch LCD Monitor, 7Color LED Indicator, Depth Camera x 1, 2M FHD Camera</td>
</tr>
<tr>
<td><strong>Fingerprint Scanner</strong></td>
<td>Multi Spectrum type</td>
</tr>
<tr>
<td><strong>Passport Reader</strong></td>
<td>Compliance with ICAO9303 standard Passport, Visa, Traveler card recognition available</td>
</tr>
<tr>
<td><strong>Gate Control Board</strong></td>
<td>CUBOX GCU RS-485/ RS-232/ TCP/IP</td>
</tr>
<tr>
<td><strong>Thermal transfer printer</strong></td>
<td>Thermal method/ 8dot/mm, 203dpi, 1dot=0.125mm 150mm/sec/ 56mm</td>
</tr>
<tr>
<td><strong>2 Persons Detection Device</strong></td>
<td>2 persons detection by stereo type</td>
</tr>
<tr>
<td><strong>CCTV</strong></td>
<td>FHD Dome Camera</td>
</tr>
<tr>
<td><strong>Screening PC</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>110 – 240 VAC, 50/ 60Hz</td>
</tr>
<tr>
<td><strong>UPS (Option)</strong></td>
<td>Emergency drive in case of power failure</td>
</tr>
</tbody>
</table>
**CUBOX One ID AMS (Airport Management System)**

### Convenient and Secure Entry
- Only authorized persons may access due to double security structure.
- Web Admin structure facilitates easy installation and management.
- Immediately accessible to the domain(device) at which management is necessary.

### Intuitive Comprehension of Device · Passenger Status
- Bottleneck or accident can be comprehended instantly.
- Error of device can be detected and handled immediately.
- Status change in the field can be comprehended instantly.

### Status Check and Handling of Individual Customers
- Current location of customer can be comprehended.
- Problem with the customer can be comprehended and can be immediately solved by staff through instant instruction.
- Actual situation of the customer is recorded, which makes it possible to cope with its features.

### Statistics Service Depending on Duration and Situation
- Dashboard where entire situation can be comprehended at once is provided.
- Statistics on each section can be viewed.
- Data per duration facilitates analysis for airport usage pattern and user information.
On entering a gate, the facial recognition module in front simultaneously performs facial recognition.

Direction of entry and user movement are the same.

No additional action is required for facial recognition.

### Specification

<table>
<thead>
<tr>
<th>Material</th>
<th>Powder coated SPCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>1400 X 206 X 1440 (Except door glass)</td>
</tr>
<tr>
<td>Motor</td>
<td>BLDC motor</td>
</tr>
<tr>
<td>Door</td>
<td>12mm tempered glass (Max 1800)</td>
</tr>
<tr>
<td>Operation Mode</td>
<td>Normal Open/ Close Emergency–Fail safe</td>
</tr>
<tr>
<td>Sensor</td>
<td>Transmission 16units Sensor</td>
</tr>
<tr>
<td>Speaker</td>
<td>2CH Stereo</td>
</tr>
<tr>
<td>Facial Recognition</td>
<td>10inch LCD Monitor (16:9)</td>
</tr>
<tr>
<td>Recognition Terminal</td>
<td>7Color LED Light</td>
</tr>
<tr>
<td></td>
<td>2D FHD Camera</td>
</tr>
<tr>
<td></td>
<td>Depth Camera</td>
</tr>
<tr>
<td></td>
<td>IR Camera</td>
</tr>
<tr>
<td>Power</td>
<td>110 - 240 VAC, 50/ 60Hz</td>
</tr>
<tr>
<td>UPS (Option)</td>
<td>Emergency Operation for Power Failure</td>
</tr>
</tbody>
</table>

- 3 Related patents acquisition
  - 10-2019-0067147 Gate control method and system through facial recognition
  - 10-2019-0067151 Facial recognition method, terminal and system using multiple cameras
  - 30-2019-0022260 Immigration gate
ACCESS CONTROL

Overall Coverage for Physical Security Reinforcement

BIOFORCE is a security system that ensures safe and convenient access control through a wide range of biometrics (fingerprint, iris, and face).

Facial Recognition Kiosk

Facial Recognition Access Control system

Facial Recognition Products

MBACS
(Access Control Management Solution)

Access Control Software

MBACS software is capable of smart and safe access control through logging the visitors and recognizing their information rapidly.

Monitoring

MBACS software provides monitoring function for currently active access control.

Facial Recognition SW Solution

MBDAS
(Complex Biometric Registration System)

Is a system for registering MBACS users, which can be implemented for convenient biometric registration.
Walk-Through Face Recognition Device

- **3D Depth Camera**
  - Fake Face Check
  - User Recognition in Sequence
    - Processing the facial recognition sequentially for each user in queue according to the measured distance through the 3D Depth camera

- **Face Recognition Camera**
  - Upper and Lower Face Recognition Cameras
    - Dual camera equipped on top and bottom of device collects the sufficient facial data in vertical range.
    - The position of cameras are designed for the maximum viewing angle as below and 10-inch LCD is applied for harmony in overall design.

- **IR Camera**
  - Fake Face Check
  - Backlight and Illuminance control

- **10-inch Wide LCD**
  - High Readability
    - Upper-side attached terminal on gate gives high readability for display on LCD even user is apart from the gate over 2 meters. (Result, notice, etc.)

- Related Patent acquisition
  - 10-2019-0067151 Facial recognition method, terminal and system using multiple cameras
Walk-Through Face Recognition Device

**Specification**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
<tr>
<td>CPU</td>
<td>Intel Pentium N4200</td>
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<tr>
<td>RAM</td>
<td>4GB</td>
</tr>
<tr>
<td>eMMC</td>
<td>32GB</td>
</tr>
<tr>
<td>VPU</td>
<td>Intel Movidius</td>
</tr>
<tr>
<td>Visual Camera</td>
<td>2M Pixel FHD (1280 * 1080)</td>
</tr>
<tr>
<td>IR Camera</td>
<td>2M Pixel FHD (1280 * 1080)</td>
</tr>
<tr>
<td>Depth Camera</td>
<td>IR Stereo Depth Camera</td>
</tr>
<tr>
<td>LCD</td>
<td>10/ 1280 * 800</td>
</tr>
<tr>
<td>Speaker</td>
<td>Mono</td>
</tr>
<tr>
<td>Interface</td>
<td>Ethernet/ RS-485</td>
</tr>
<tr>
<td>Wiegand</td>
<td>2 channel input</td>
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<tr>
<td>TT input</td>
<td>2 channel input</td>
</tr>
<tr>
<td>Relay</td>
<td>3 channel</td>
</tr>
<tr>
<td>Size</td>
<td>180 * 380 * 60</td>
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<tr>
<td>Power</td>
<td>DC12V/ 6A</td>
</tr>
<tr>
<td>OS</td>
<td>Ubuntu</td>
</tr>
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</table>
# Walk-Through Device for Office

## Specifications

<table>
<thead>
<tr>
<th>Device</th>
<th>Interface</th>
<th>H/W</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Carder</td>
<td>UART</td>
<td>USB-A port: 1 EA</td>
</tr>
<tr>
<td>2MP Camera</td>
<td>USB</td>
<td>USB-Micro5 port: OTG, Debug</td>
</tr>
<tr>
<td>5MP Camera(IR)</td>
<td>MIPI (Optional)</td>
<td></td>
</tr>
<tr>
<td>TCP/IP(1 port)</td>
<td>1000Mbps</td>
<td></td>
</tr>
<tr>
<td>RS-485(2 port)</td>
<td>1 ch Host</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 ch Slave</td>
<td></td>
</tr>
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<td>Wiegand(2 port)</td>
<td>1 ch In</td>
<td></td>
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<tr>
<td></td>
<td>1 ch Out</td>
<td></td>
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<td>TTL Input(2 port)</td>
<td>2 ch input</td>
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<tr>
<td>Relay(2 port)</td>
<td>2 Relay</td>
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<tr>
<td>microSD</td>
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</tr>
<tr>
<td>Bluetooth</td>
<td>File Transfer</td>
<td></td>
</tr>
<tr>
<td>Wifi</td>
<td>IEEE 802.11 b/g (OPTION)</td>
<td></td>
</tr>
</tbody>
</table>

## Features

- 5-inch Color LCD Touch Screen
- Available for a variety of cards
- Bluetooth
- High Storage Capacity
- Facial Recognition
- LED Equipped - Face detection available in low light environment

**CPU**: Up to 1.4Ghz Octa core

**Memory**: 1GB Ram + 8GB Flash

**Sound**: Embedded Speaker, Embedded Mic

**sensor**: Temperature sensor, Proximity sensor

**Operation Temp.**: -20 to 50 °C

**Power**: 12VDC or 24VDC
Project Implementation and Establishment

100% M/S in Korean Market

- Incheon Airport T1, T2
  132 units of e-Gate
- Incheon Airport
  Smart ISP
- Incheon Harbor 1
  3 units of e-Gate
- Incheon Harbor 2
  4 units of e-Gate
- Gimpo Airport
  6 units of e-Gate
- Jeju Airport
  4 units of e-Gate
- National Information Resources Service (NIRS)
- Yangyang Airport
  e-Gate to be installed
- Cheongju Airport
  4 units of e-Gate
- 2019 ASEAN
  - Republic of Korea Commemorative Summit
- Busan Harbor
  5 units of e-Gate
- Gimhae Airport
  13 units of e-Gate

Multimodal Recognition Access Control System
for Government Office Buildings
Project Implementation and Establishment

- **2012**: Multimodal Recognition e-Gate Installation (Incheon, Jeju, Gimhae Airport and Incheon Harbor)
- **2013**: Multimodal Recognition e-Gate installation (Gimpo, Gimhae Airport)
- **2014**: Multimodal Recognition e-Gate Order-based Production and Installation Project (Incheon Airport)
- **2015**: Multimodal Recognition e-Gate Installation (Cheongju Airport)
- **2016**: Multimodal Recognition Access Control System Established for Government Office Buildings
- **2017**: Incheon T1, T2 e-Gate Production and Installation Project
- **2018**: Incheon Airport T1 e-Gate Production and Installation Project (4.8 million USD)
- **2019**: NIRS and several other projects
- **Mongolia Immigration Management System Modernizing Project (Chinggis Khaan Airport)**

**Airport & Access Control**
Project Implementation and Establishment

Acquiring Record of Export based on Domestic Market Competitiveness

e-Gate Installation in Chinggis Khaan Airport, Mongolia in 2014

- Chinggis Khaan Airport
- e-Gate Opening Ceremony
- 4 e-Gates Installation

Immigration Control System Development in Mongolia, Vietnam, Laos and Philippines

- Mongolia Immigration Control System
- Established AFIS system in Vietnam People’s Public Security AFIS, along with other overseas establishments in Laos and Philippines.
CUBOX at FTE 2019 in Singapore
CUBOX at ASEAN – Republic of Korea Commemorative Summit
Corporate Organization

Organization Chart

- Board of Directors
- CEO
- Vice president

Business Strategy
- Business Planning Team
- Strategy Planning Team

Biometrics Platform
- Business Development Team
- Consulting Team
- Operational Business Team

Biometric Service
- Service Team
- Sales & Marketing Team
- Operational Business Team

Laboratory
- AI Team
- Platform Team
- Product Team
Certificates & Patent Licenses

- Small and Medium Business Certificate (Medium)
- Venture Business Certificate
- Enterprise Institute
- INNO-Biz Certificate
- ISO 9001 : 2015 Certificate
- Minutia Data Acquisition System and Method Using Dual Camera
- User Identification Method and System Using Minutia Data Transfer Method and Minutia Data
- Bio-registration and Verification Device
- Eye Position Detection Method and Device
Certificates & Patent Licenses

- Software Business Confirmation
- FaceGate Server Ver. 2.3
- GCU Gate Firmware Ver. 1.7
- Bio-Middleware Ver. 3.5
- FaceGate Client Ver. 2.3
- FaceMonitoring Ver. 2.3
- CUBOX CUBL Framework
- MBDAS IF Ver. 1.7
- MBDAS SW Ver. 1.7
Certificates & Patent Licenses

- Fingerprint Recognition Algorithm 1.4
- Facial Recognition Algorithm 1.4.2
- FACE KIOSK KC Certification
- MBDAS-I KC Certification
- Information and Communication Works Business Registration
- Direct Production Confirmation
- Direct Production Confirmation (SW)
Partners and Customers


SAMSUNG  LG  KEPCO  IIAC

Incheon International Airport  INCHEON AIRPORT

Ministry of the Interior and Safety  GIMHAE AIRPORT

National Library of Korea  Ministry of Justice

Johnson Controls  GUNNEBO

Ministry of Justice  Korea Immigration Service  National Police Agency

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Compliance with IATA Standard

One ID

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