

Construction Site Worker
Safety Control Solution

BOM Safety

A solution that monitors and protects workers in real-time in hazardous environments through AI video analysis technology.

Ai-based video analysis
takes responsibility for construction site safety.



365 days, 24 hours a day, always safely

Video analysis Ai monitors construction sites in real-time and helps maintain a safe working environment.



Dangerous situations, quickly without missing them

Quickly detects workers' dangerous situations and provides various real-time notifications for immediate response.



All sites at a glance

Supports an integrated management dashboard that allows easy management of sites in various regions at a glance.

Responds **quickly and accurately** even in dynamic sites.

Through Ai-based video analysis, instantly detects various hazards in complex sites and promptly alerts.



Fire
Fire detection that doesn't miss even small flames



Smoke
Rapid detection of smoke even in the early stages of spread



Hard hat not worn
Simultaneous identification of multiple workers not wearing hard hats



Safety equipment not worn
Detection of not wearing essential equipment such as vests and safety shoes



Falling down
Immediate recognition of falling down in crowded environments



Heavy equipment approach
Rapid warning when safety distance is violated

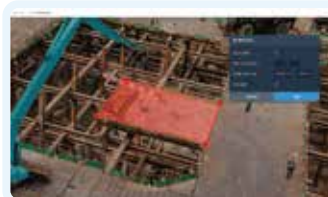


Intrusion
Detection of intrusion into dangerous, no-entry zones



Loitering
Automatic detection of suspicious repetitive movement

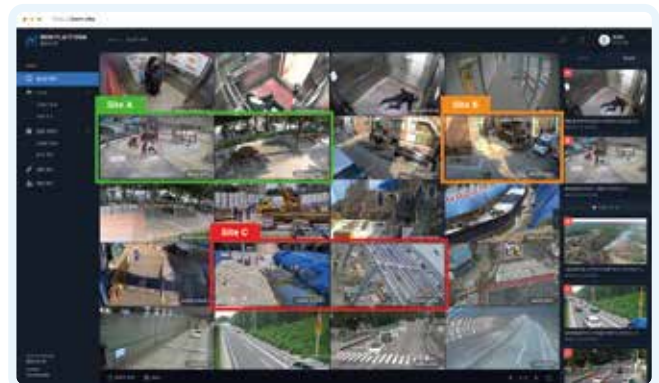
Provides only the functions that perfectly **fit** users, **simply**.



Simple function setup
Anyone can easily configure the environment with simple area designation and function setup.



Excellent performance
Maintains high detection accuracy in various environments with sophisticated video analysis technology.



Integrated control dashboard
Integrates regional data to manage all sites on one screen.

Technology with added trust, now **protecting you with proven performance**.

Fire performance certification



Acquired performance certification for detecting smoke and flames in various environments such as day/night and various weather conditions

*Certification criteria: Detection accuracy of 90% or higher

Falling performance certification



Acquired performance certification for detecting falling in various spaces such as indoor/outdoor and elevators

*Certification criteria: Detection accuracy of 90% or higher

Fight detection performance certification

Acquired performance certification for detecting fighting occurrence in various spaces such as indoor/outdoor and schools

*Certification criteria: Detection accuracy of 90% or higher

Intrusion performance certification



Acquired performance certification for detecting intrusion behavior in day/night and various weather environments

*Certification criteria: Detection accuracy of 90% or higher

Loitering performance certification



Acquired performance certification for detecting loitering behavior in day/night and various weather environments

*Certification criteria: Detection accuracy of 90% or higher

People counting performance certification



Acquired performance certification for counting the number of people based on queues, movement flows, etc.

*Certification criteria: Counting accuracy of 90% or higher

Edge-based Advanced
Traffic Management Solution

BOM Traffic

An intelligent traffic control solution that links with signal systems through AI-based vehicle flow analysis and traffic violation detection.

Protects traffic flow analysis and safety through Ai video analysis.



Traffic volume measurement

Vehicle traffic volume measurement

- Hourly traffic volume
- Recognition rate of 95% or higher



Violation enforcement

Motorcycle helmet not worn detection

- 3-stage advancement function
- Saves surrounding photos, enlarged photos, etc.
- License plate recognition · Recognition rate of 90% or higher



Violation enforcement

Motorcycle over-passenger (3 or more people) detection

- 3-stage advancement function
- Saves surrounding photos, enlarged photos, etc.
- License plate recognition · Recognition rate of 90% or higher



Violation enforcement

Speed violation detection

- Saves surrounding photos, enlarged photos, etc.
- License plate recognition · Recognition rate of 90% or higher



Violation enforcement

Designated lane violation detection

- Saves surrounding photos, enlarged photos, etc.
- License plate recognition · Recognition rate of 90% or higher



Violation enforcement

Traffic signal violation detection

- 3-stage advancement function
- Saves photos before passing, passing, and after
- Simultaneously saves traffic light photos
- License plate recognition · Recognition rate of 90% or higher



Violation enforcement

Seatbelt not worn detection

- 3-stage additional function
- Applies to both driver and front passenger
- Saves surrounding photos, enlarged photos, etc.
- License plate recognition · Recognition rate of 90% or higher

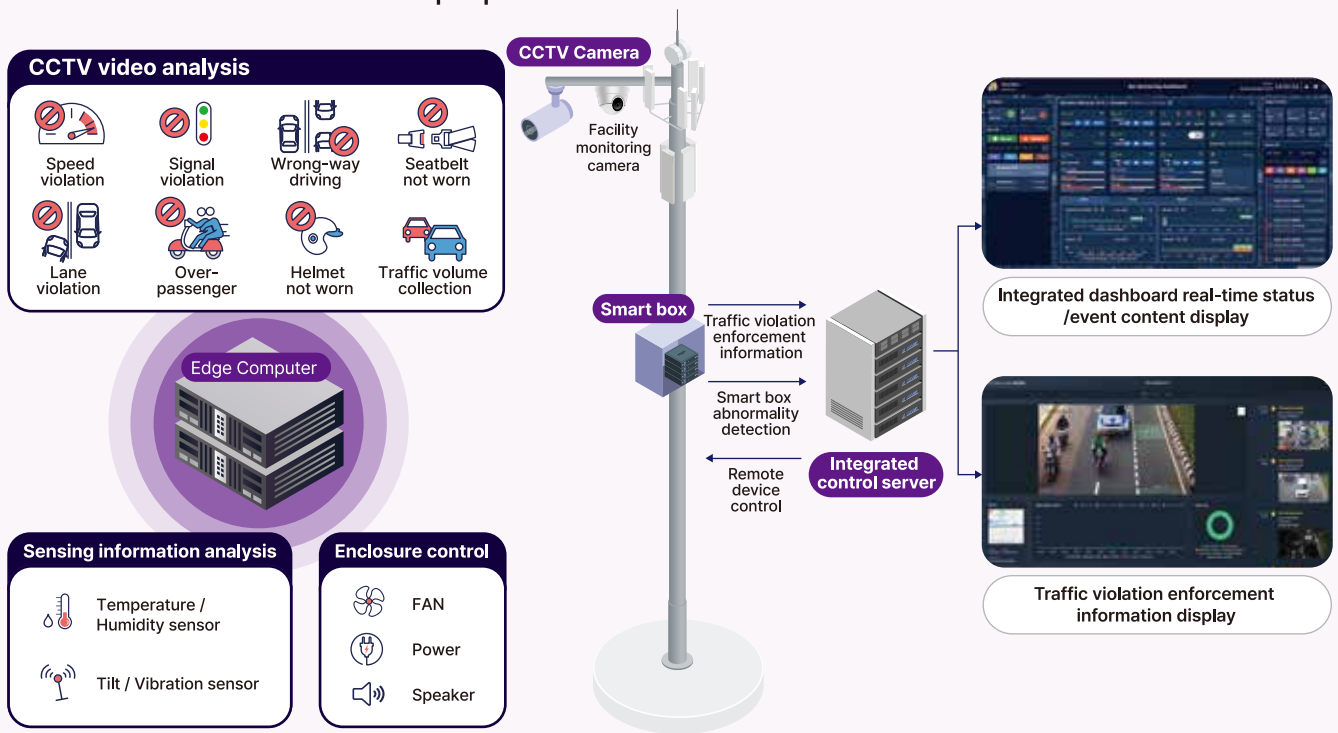


Violation enforcement

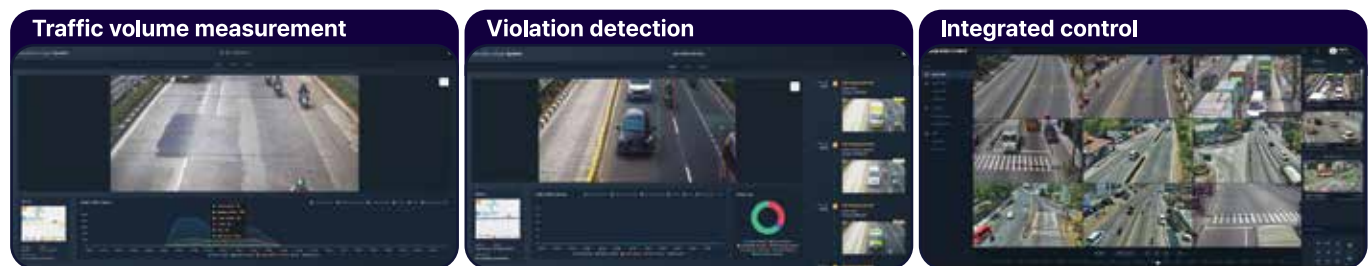
Mobile phone use while driving

- 3-stage additional function
- Saves surrounding photos, enlarged photos, etc.
- Simultaneously saves traffic light photos
- License plate recognition · Recognition rate of 90% or higher

Makes system operation and management smart with advanced lot equipment.



Intelligent traffic control system recognizes sites in real-time and improves traffic flow.



Smart traffic control is possible with Bom Traffic.



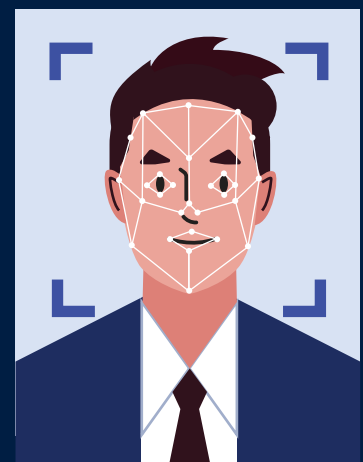
Biometric recognition Ai solution
that guarantees high safety and security

BOM Entrance

An intelligent Ai video analysis solution that detects the identity of visitors through facial recognition at access control facilities.

Realizes smart security through Ai-based real-time visitor recognition, registration, and movement tracking.

Visitor information verification based on face and ID recognition, personal information de-identification



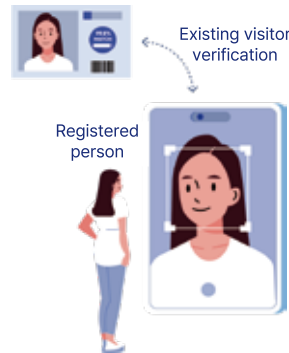
- Visitor registration through matching between face images captured by camera and ID images, access management based on facial recognition
- Real-time automatic registration, personal information authenticity verification, access control

Access management through face recognition

Registration - Using face and ID



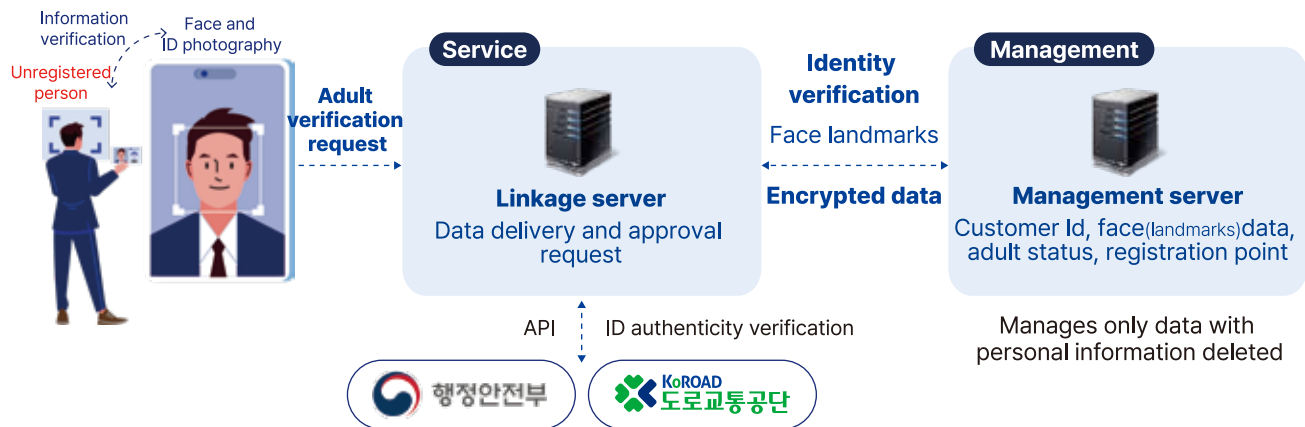
Management - Visitor verification, multiple location linkage



Control - Simultaneous entry of 2 or more people



Adult verification and personal information protection



Differentiated device for access management, **BOM FD & FDS**

BOM FD & FDS

Npu-based Edge Device for face recognition
A device for small-scale units such as unmanned stores, access control, and offices. Fds is equipped with a scanner for ID validity inspection.

- Supports wall installation and stand installation (optional)
- ID recognition scanner installation (optional)

Supported channels

1ch

Npu computation

6Tops

Touch display

10.1 Inch



▲ BOM FD



BOM FDS ▶

Elevator passenger safety and
dangerous situation recognition system

BOM Elevator

An intelligent Ai solution that recognizes abnormal behaviors (assault, falling, etc.) and dangerous situations (fire/smoke, boarding with pets, etc.) occurring inside elevators.

Recognizes dangerous situations inside elevators in real-time and immediately notifies relevant organizations to **implement smart safety response.**



Falling down

Real-time detection and automatic notification of passenger falling situations



Assault

Real-time detection and automatic notification of assault situations inside elevators



Smoke

Rapid recognition and notification of fire risks through Ai-based smoke detection



Pets

Recognition and notification of pets boarding together with passengers

Systematizes response to abnormal situations inside elevators with intelligent advanced lot equipment.

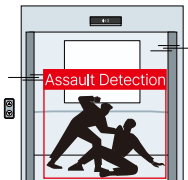


Constant monitoring service for illegally operating elevators using acceleration sensors and motion detection



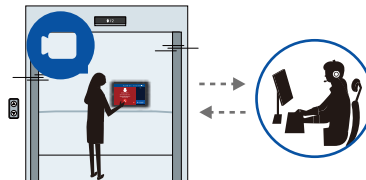
- Function to monitor the operating status of elevators subject to operation suspension using acceleration sensors and motion detection functions
- Function to immediately provide video and voice guidance to passengers that it is an illegally operating elevator

Emergency situation detection service through intelligent video analysis and voice recognition



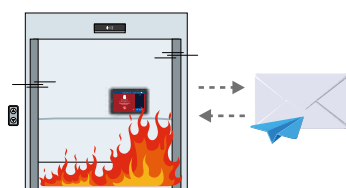
- Function to automatically detect abnormal symptoms such as emergency patients and immediately transmit video to the control system
- Control center voice warning message and emergency rescue request function

Smart emergency call service through video connection with control center



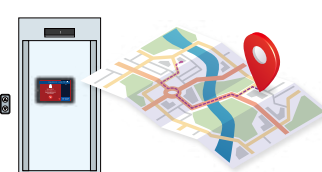
- Situation sharing with control center through smart emergency call function (video call)
- Possible to confirm dispatch location through video call with maintenance company personnel's smartphone

Situation dissemination message service for emergency situation guidance and rapid response



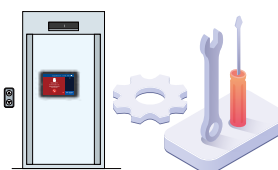
- Message transmission to situation dissemination system when emergency situation occurs
- Can receive messages sent from control center or situation dissemination app

Elevator location information management service for rapid dispatch when situations occur



- Transmits corresponding elevator location to control center and situation dissemination app when situations occur
- Real-time confirmation of dispatcher's progress and location possible

Maintenance service for safe operation of lot safety devices



- Remote management and monitoring for maintenance of lot safety devices
- Setting management that can be used by maintenance companies
- Establishing grounds for mandatory installation of lot safety devices (safety law related)

Technology with added trust, now protecting you with proven performance.

Fire performance certification



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Acquired performance certification for detecting fighting occurrence in various spaces such as indoor/outdoor and schools

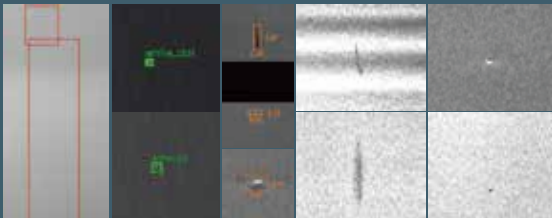
*Certification criteria: Detection accuracy of 90% or higher

Ai-based system for
product appearance defect inspection

BOM Inspection

An intelligent vision inspection function that detects product appearance defects with video-based AI in product manufacturing facilities.

Realizes automation and precise management of manufacturing quality by recognizing, classifying, and detecting defects with various Ai models.



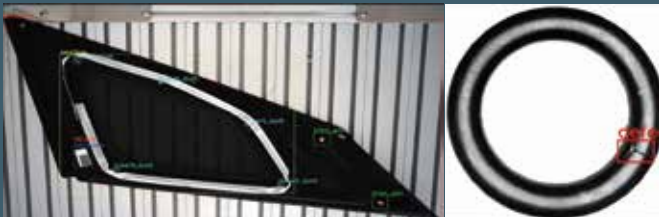
Steel Manufacturing Industry

Comprehensive inspection of surface defects and dimensional measurements can be performed across all major processes commonly used in the steel industry such as roll-to-roll processing, slitting, and shearing as well as for a wide range of steel grades.



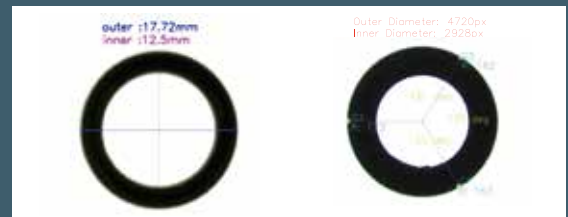
Electronics Manufacturing Industry

Comprehensive defect inspections including visual and assembly checks can be conducted across a wide range of electronic manufacturing processes, such as PBA hand soldering, SMT, connector and wiring assembly, and PCB production, serving various sectors within the electronics industry.



Automotive Parts Industry

Comprehensive inspections for a wide range of defect types including cosmetic, coating, assembly, molding, and dimensional defects can be conducted on various components manufactured in the automotive parts industry.



Measurement

High-precision dimensional inspections with tolerances as tight as 0.05mm can be performed on a wide range of injection-molded and formed products, including plastic and metal components, as well as various pipe types such as square, round, oval, and custom-shaped steel tubes.

Automates manufacturing quality monitoring and model learning with cloud-based Ai platform.



Integrated dashboard(RPMS)

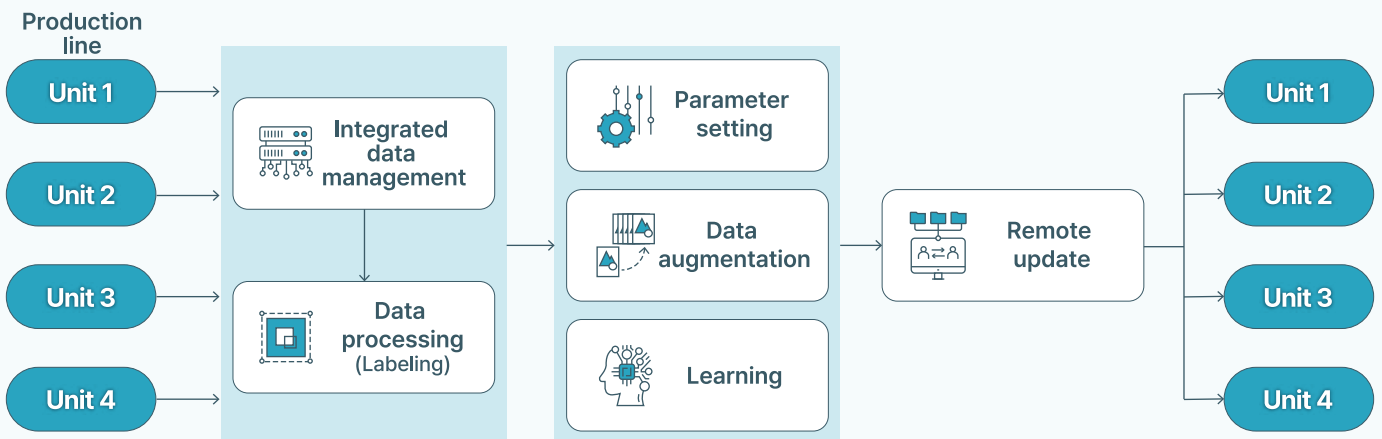


Integrated monitoring

 Integrated control Real-time monitoring of inspection status of production factories and production lines possible	 Integrated dashboard Real-time integrated monitoring of daily/monthly production status by line	 Integrated data management Integrated management of inspection result images and Ai model training image data	 PLC linkage Rapid cause identification of continuity defects through equipment data acquisition
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Ai model learning and update process

Through Self Ai model learning function, users can easily update Ai inspection models for new products and specification change products without separate requests.





Small data learning

- Learning is possible using small amounts of data of about 100~200 images, enabling **rapid application to new products and specification change products**



Data augmentation function

- Performance improvement and data imbalance problem compensation** through data reinforcement during small data learning through automatic data augmentation function



Parameter tuning function

- Automatic calculation function of essential parameters during Ai learning and **free Ai model learning** through manual adjustment of about 20 parameters



Automatic labeling function

- Reduction of time required for labeling** through Ai-based automatic labeling function during training data labeling process