



Kounosoft Co., Ltd.
<http://kounosoft.com>



KOUNOSoft

Allsense Guard

IoT & AI-based
Integrated Safety Solution

Safety Challenges in Research & Laboratory Environments



Experimental Environment Management

- Environmental changes (temperature, humidity, air quality) impact experiment results
- Continuous monitoring across laboratories is difficult
- Immediate detection of environmental changes near equipment is limited

Safety Management

- Presence of hazardous equipment and material storage areas
- Difficult safety management during nighttime and unmanned hours
- CCTV-based systems focus mainly on post-incident review



Access Control in Research Areas

- Restricted areas such as equipment rooms and chemical storage
- Difficulty managing unauthorized access
- Risk of accidents and disputes due to insufficient access control

Core Solution

An integrated safety management system combining multi-sensor monitoring and AI-based risk detection
" Allsense Guard "

Real-time
environmental
sensing

Continuous monitoring
of laboratory data

Administrator
visibility on
environmental
changes

Virtual fencing for
hazardous equipment
and lab zones

Real-time detection
of unauthorized access

Alerts
and notifications
on hazardous area
intrusion

Risk management starts with Allsense Guard



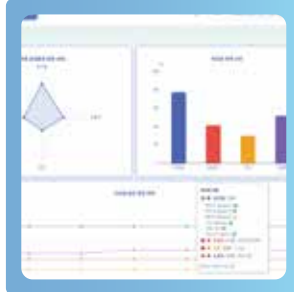
- 24/7 monitoring enables rapid response
- Stable research environment
- Enhanced laboratory safety management
- Improved research data reliability

Use Cases

1 Experimental Environment Management



Sensor monitoring



Detect temperature/humidity/air changes

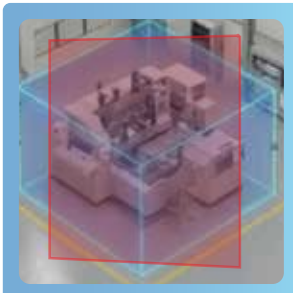


Alert & notify



Maintain stable environment

2 출입 제한 구역



Virtual fence



Unauthorized access detection



Alert & notify



Prevent incidents and disputes

3 시약 및 위험 물질 보관실



Hazard zone & gas monitoring



Detect gas/leak or intrusion



Alert & notify



Prevent safety accidents

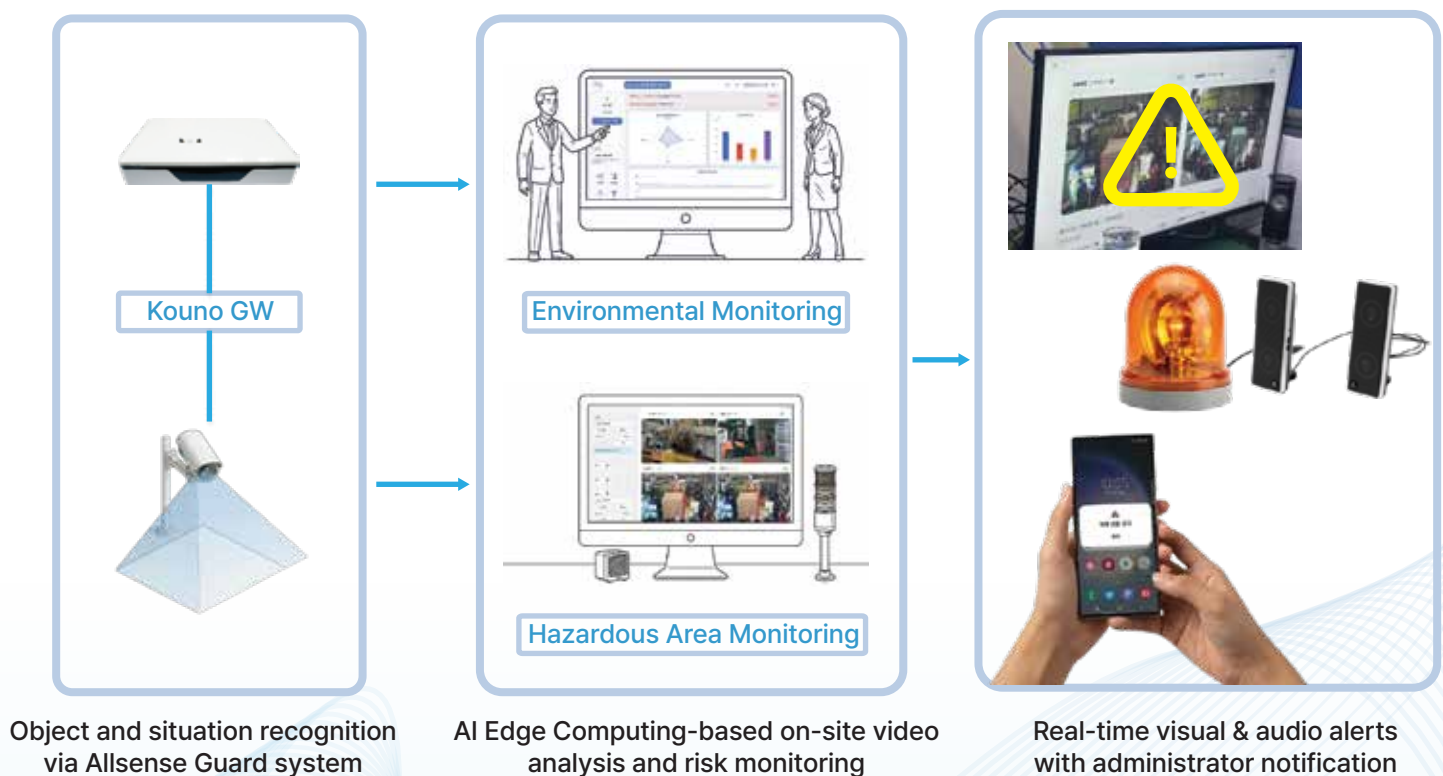
Overview

Why Allsense Guard?



Allsense Guard is

- Allsense Guard is an IoT-based integrated safety solution combining multi-environment sensors and AI video analytics.
- Simultaneously monitors environmental conditions and detects access to hazardous zones, improving safety management efficiency in industrial sites.



“ Integrated Safety System = Multi-sensor Monitoring + AI Virtual Fencing ”

Allsense Guard Features

20+ sensors for environment detection



Temperature



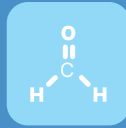
Humidity



CO₂



Air Quality/
Fine Dust



Formaldehyde



Ozone



Flame
Detection



Door opening
Detection



Light/Illumination
Detection



Motion
Detection



Acoustic
Detection



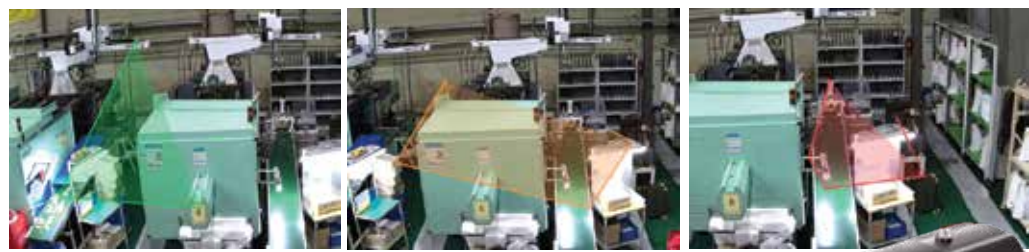
Sound
Detection

8 types of harmful gases detected by MOS sensor

- ① Carbon monoxide
- ② Nitrogen dioxide
- ③ Ethanol
- ④ Hydrogen
- ⑤ Ammonia
- ⑥ Methane
- ⑦ Propane
- ⑧ Iso-butane

- Periodic data transmission to server
- Server-based monitoring & management
- Alerts when thresholds are exceeded

3-level virtual fence (**Safe/Warning/Danger**) with alarms and voice alerts



- Flexible camera addition/removal
- Risk detection logs
- Video recording upon risk detection
- Real-time alarm on restricted zone entry



AI monitoring /
Multi-sensing
detection

Risk occurrence

Immediate
detection

Alert
& voice alarm

Accident
prevention



IoT & AI based Integrated Safety Solution

Allsense Guard