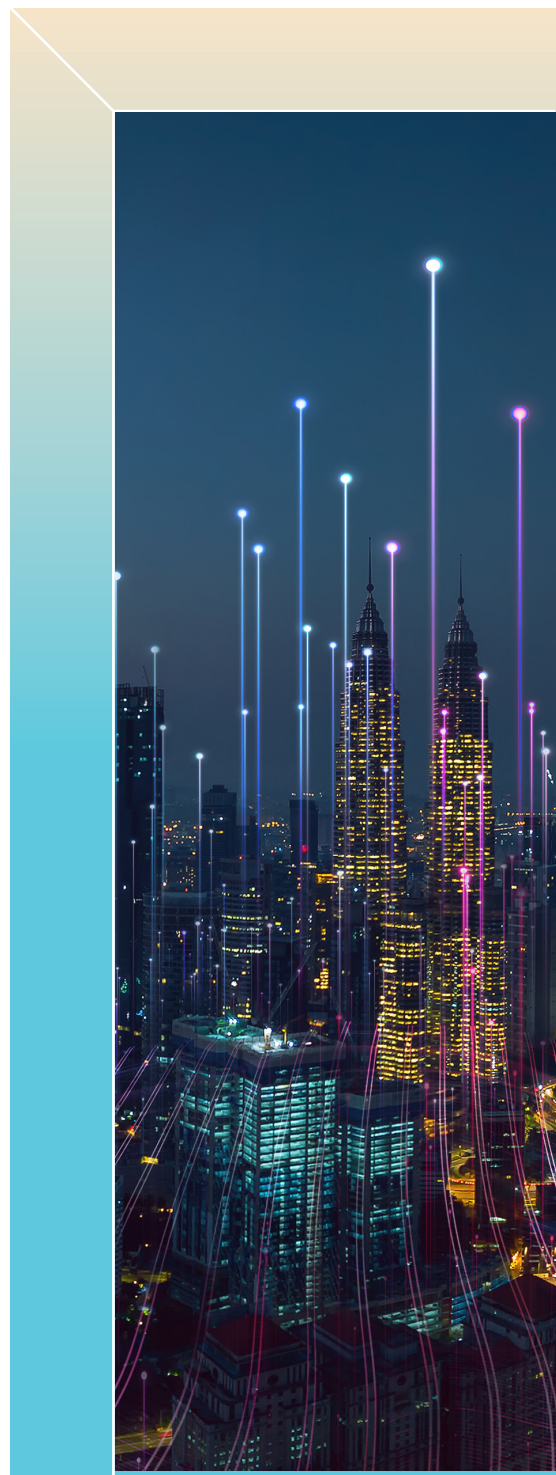




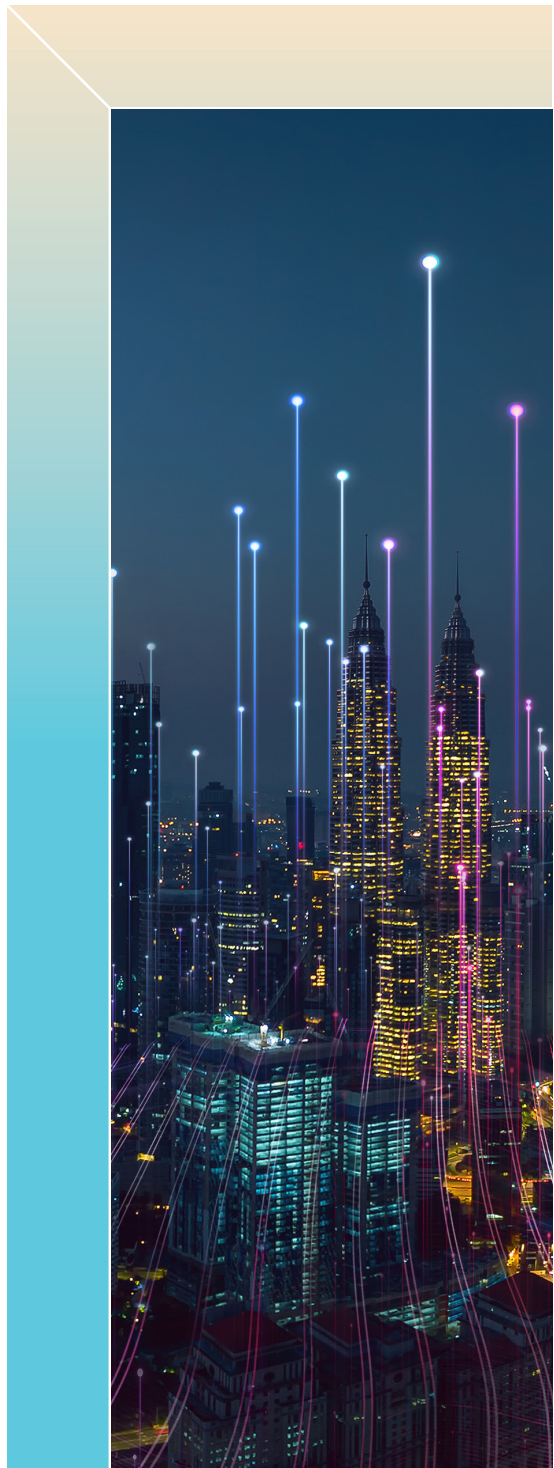
INNODEP

innovative development



The Data City & Sharing

The Data City & Sharing





www.innodep.com

Company Overview

General Status | History and Major Awards
Organization Chart

Solution

| Data Platform |

TMS / Data Hub / Dashboard / Specialized Solution

- Customized Big Data Dashboard
- Floating population analysis solution
- Smart Industrial Complex Expansion
- Prediction Integrated Platform

| Unified Security Platform |

VURIX / Tiered AI / C-Stream / Access Control /
GIS&Web GIS / E Map / e-DaaS



Company Overview

INNODEP
korea No.1 Total Security Platform Leader

Company Name	Innodep	Date Company Establishment / KOSDAQ Listed	January 2008 / June 2021
Sales	59.2 Billion Dollar(2022)	The Number of Employees	235

Key Products

- Smart City Integrated Control Platform(TMS)
- Integrated Security Platform(VURIX VMS)
- Intelligent selective control, high-speed search (VMS, Tiered AI)
- All-in-one Appliance (Virtualized IP-Matrix, 1,000ch NVR, Smart NVR)
- Smart Parking System / Road Crime Prevention System / Access Control System
- Video compression and Big data analysis tool
- E-Map, GIS, Web GIS, RTSP

HQ

9F, 47, Digital-ro 9-gil,
Geumcheon-gu, Seoul,
Republic of Korea

Factory

62, Simin-daero 109beon-gil,
Dongan-gu, Anyang-si,
Gyeonggi-do, Korea 21315

Contact

Tel. 02-2109-6866
Fax. 0505-555-3382

Overseas Partners

Thailand
Malaysia
China
Philippines
Indonesia
Eastern Europe
America
Africa(Rwanda)
Middle East(Dubai)

Technical partnership (Global)

intel.
DELL Technologies
Microsoft
Qualcomm

Global Service

Cloud
AI
Big Data
Security
Smart City



History and Major Awards

2022

- 12. Designation of Quality Assurance Procurement Goods by the Public Procurement Service
- 10. ISC (Innodep Solution Conference) 2022 held
Dell smart city platform construction business agreement
- 04. Tmax Metabus, Tmax AI Smart City Platform Building Business Agreement

2021

- 12. Security Awards Korea 2021 video security integrated solution grand prize
- 06. Listed on KOSDAQ
- 05. Jeju branch opening / Anyang center relocation
- 03. Acquisition of NAVER Cloud support service security certification for the first time
- 02. SKT-ADT Caps-Innodep 3 companies signed 'AI-based intelligent image analysis solution commercialization

2020

- 12. Minister of Trade, Industry and Energy Award
Smart city integrated platform business order and establishment, In operation (Seodaemun-gu and 19 local governments)
- 06. Built business partnership for AI Video Security With Hanwha Techwin
- 08. Built business partnership for 5G Drone Business with ADT Caps

2019

- 12. MOU for Access Control with Suprema
- 11. Win a contract 'Smart City Platform' (Cheonan-Asan Project)
- 08. Win a contract 'Smart City Platform' (Incheon Project)
- 02. Launch Total Surveillance Center Management Service DMS-BI
- 01. Acquired a NEP (New Excellent Product) (NEP-MOTIE-2019-031)

Acquired 'Good Software' Certification (19-0064) / VURIX-DMS

2018

- 12. Won 'Data Management' prize at 2018 Security Awards Korea
- 10. Be nominated for Surveillance device by Public Procurement Service (C-Stream)
- 03. Won IR52 Jang Young-sil Award

2017

- 09. Be nominated for Public Procurement Service (Parking Management System)
- 03. Acquired NEP Certification (NEP-MOTIE-2017-003)
- 02. Established 2nd Factory in Incheon

2016

- 06. Launched a New Product of VURIX (Big-data-based DMS)
- 04. Acquired ISO9001: 2008

2015

- 11. Won MOTIE minister Prize
- 08. Acquired NVR multi-channel decoding technology performance certification (certification number: No. 11-364)
- 05. Acquired a NET (New Excellent Product) (No. 0896)

2014

- 04. National R&D Project (with Ministry of Science and ICT)
- 01. Launched IP-Matrix (All-in-one VMS Appliance based on Virtualization)

2008~9

- 01. Establishment of Innoddep

2011~12

- 2011.02 Acquired 'Good Software' Certification (11-0031) / TYBIS 1.0
- 2012.10 Established IP-CCTV System Development based on KT CLOUD (over 10,000ch of CCTV)

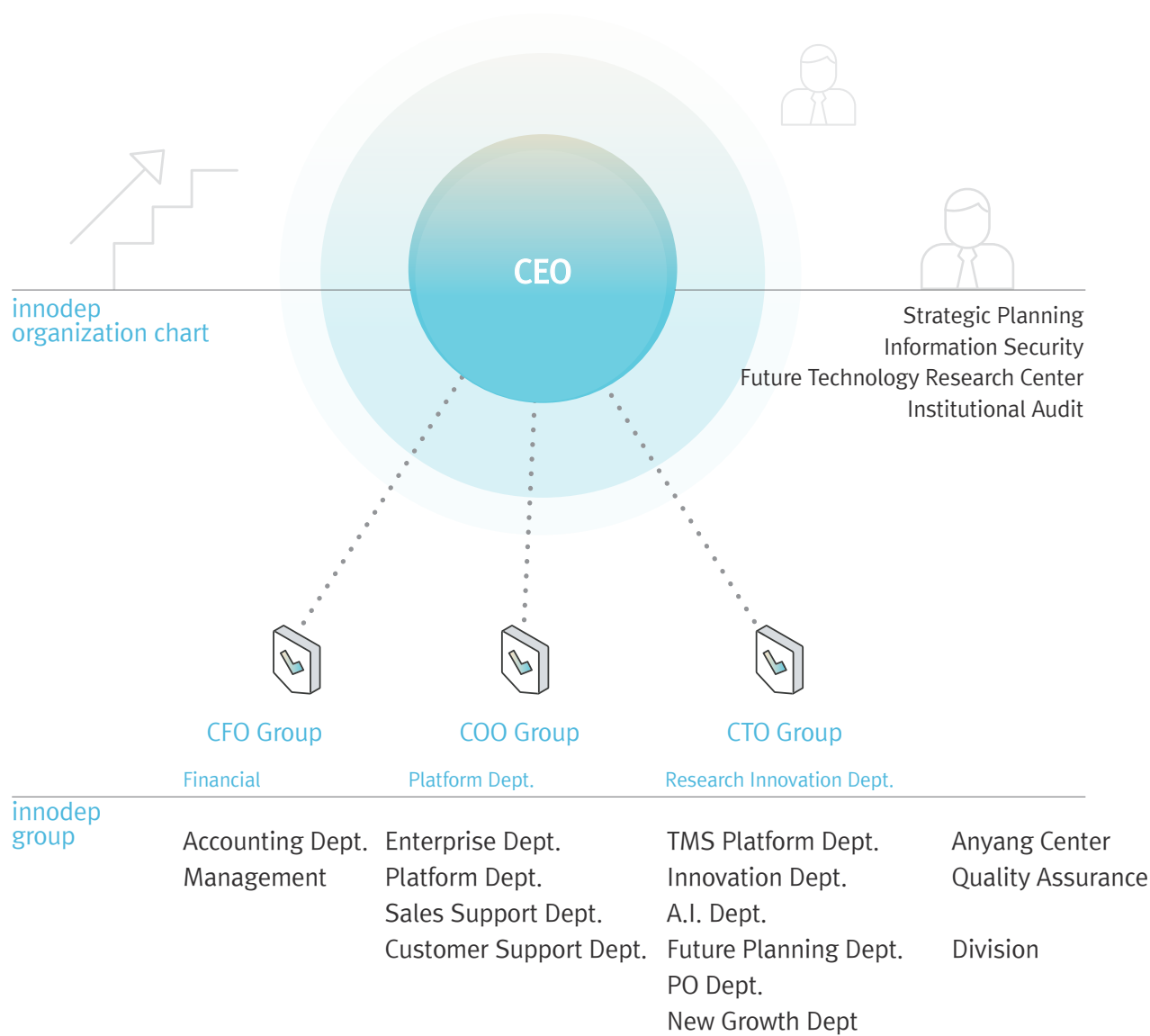
2013

- 12. Acquired an award (Minister of ICT)
Acquired an award (Chief Director of NIA)



Organization Chart

Out of **235** employees, there is **60%** developers and engineers





Competitiveness

Intelligent
Solution

Digital
Security

Smart City

Cloud

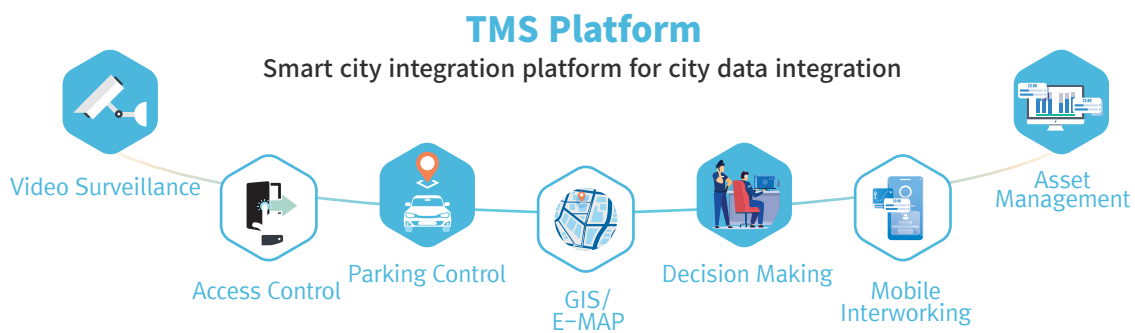
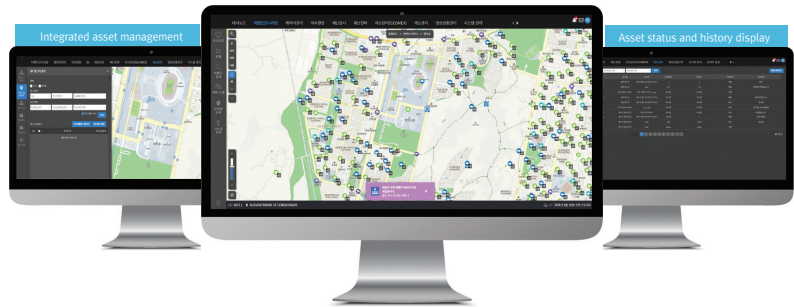
Innodep provides IT, cloud, artificial intelligence-based Smart City and Digital Security platforms and services.

VMS | TMS | Tiered AI | C-Stream | Access control | e-DaaS | Cloud

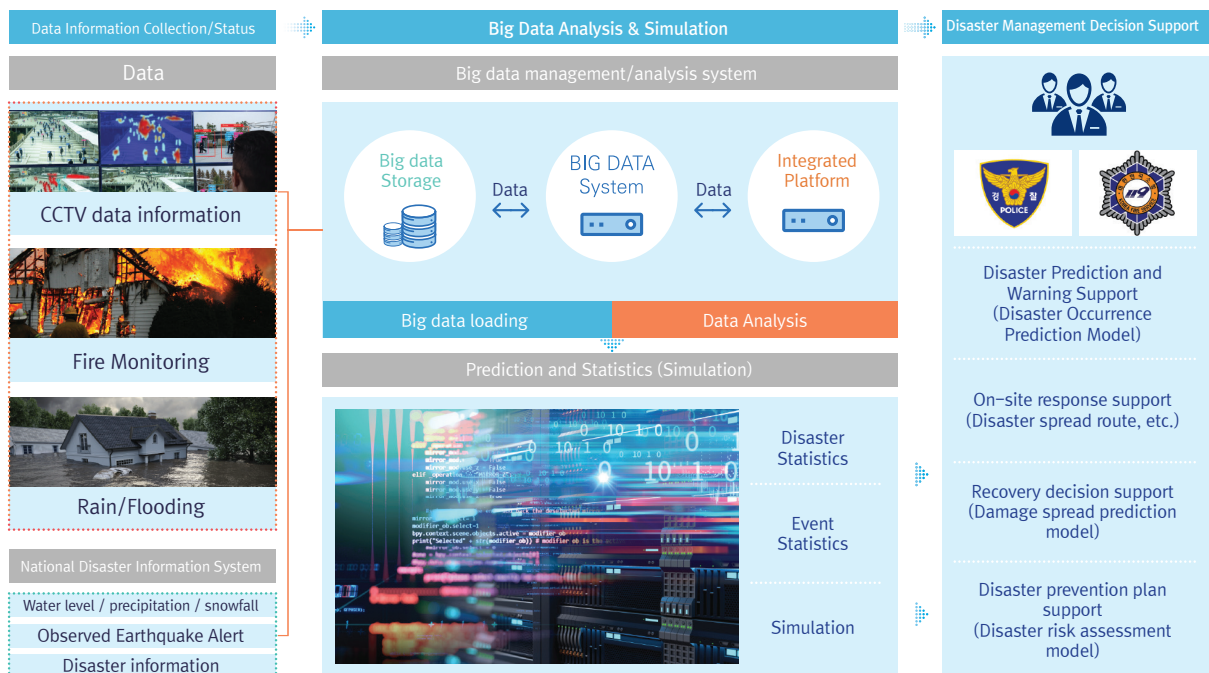
Business Area

TMS (Smart City Integrated Platform)

- Innodep’s TMS is a hybrid form platform of Cloud and On-premise.
- TMS / DMS is a city integrated surveillance system that supports emergency reaction and decision making with various core technologies.



Providing various data report services based on the collected big data and providing services linked to related organizations





BI ((Business Intelligence))

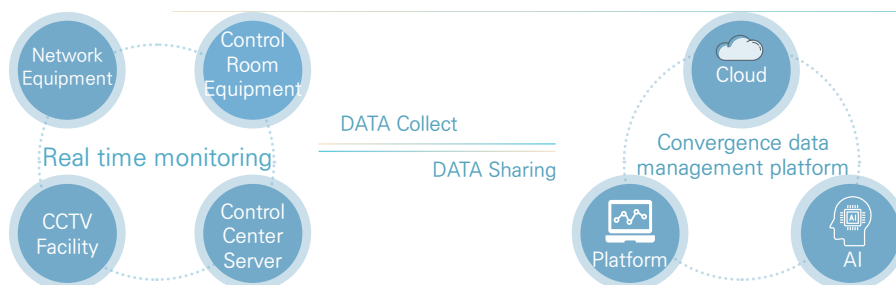
: Inspiring your business with intelligent data analysis

- It is a service that derives information through cloud-based big data analysis and provides critical business insights for decision-making to solve problems at the City Safety Center through BI.



- Find, collect, and refine valuable data for easy recognition
- Analysis and management using the cloud to quickly and accurately find a lot of data
- Examine your data to create meaningful data-to-data correlations
- Create and share visualization reports based on objective data to be intuitive

Cloud-based dashboard service (BI)



- > Statistical data visualization by situation/equipment
- > Provides free UI through customized data selection

- > Establishment of response system in case of failure through real-time monitoring
- > Widget-based dashboard design/modification/enhancement of convenience

Asset status



Display camera status by installation purpose/manufacturer/model name

Integrated control center operation status



Display of operation status by installation type / topography

Video data processing status



Display transmission amount by installation purpose/manufacturer/equipment

Resource usage



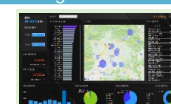
Display server/process resource usage status

Video data operation status



Total storage usage

Transportation big data service



Time Data City & Sharing
Daily average/cumulative/regional external vehicle status display

Business Area

e-DaaS (Smart Mobility Integrated Platform)

· e-DaaS provides end-to-end services such as drone dispatch, flight-related mission instruction, data collection, and data purification and display. All components operate like a single system, and efficient management and operation are possible through data sharing and asset management systems. In addition, the individual system is fully optimized for various mission environments using drones, so users can operate and utilize it easily.

GIS-based event detection

Receive and process various types of heterogeneous drone data

Real-time drone location display and data connection

Effective response possible through data-based event control and linkage

Data Visualization Service

Provides insights needed for decision-making through visualized information

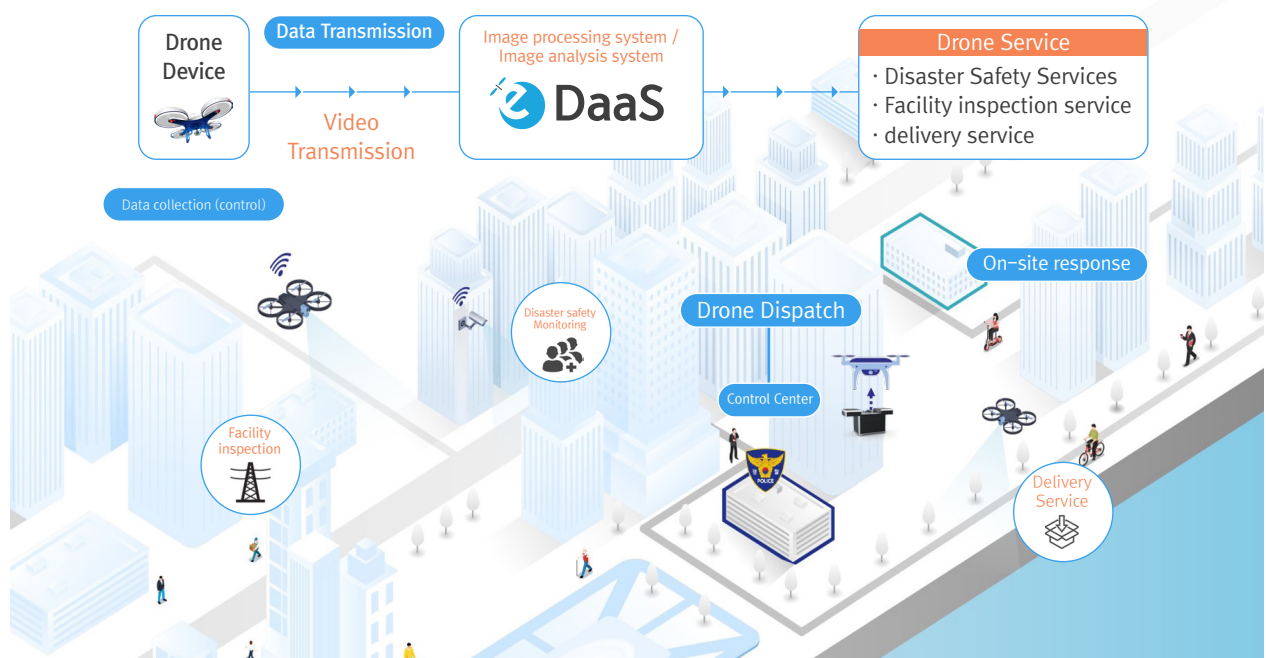
Asset status and history display

Provides overall status and status information on related assets



Drone Operation Scenario

- e-DaaS can perform real-time monitoring and safety inspection from the sky for safety and security in facilities.
- It can also conduct risk detection and lifesaving operations on ships and other unauthorized persons in ports or wharfs.
- Convenience and safety can be strengthened through rapid response and proactive prevention of incidents and accidents.





Business Area

Hybrid Drone



120+ mins flight



Invisible flight operation



MAX Speed
72 km/h



Operating Temperature
-20 ~ 45 °C



Wind resistance
16 m/s



Safety certificate /
Certificate of accreditation

Fire Surveillance/Life Rescue

Content 24/7 operation possible, real-time monitoring of disaster sites

Effects Fire and forest resource management monitoring / search for survivors

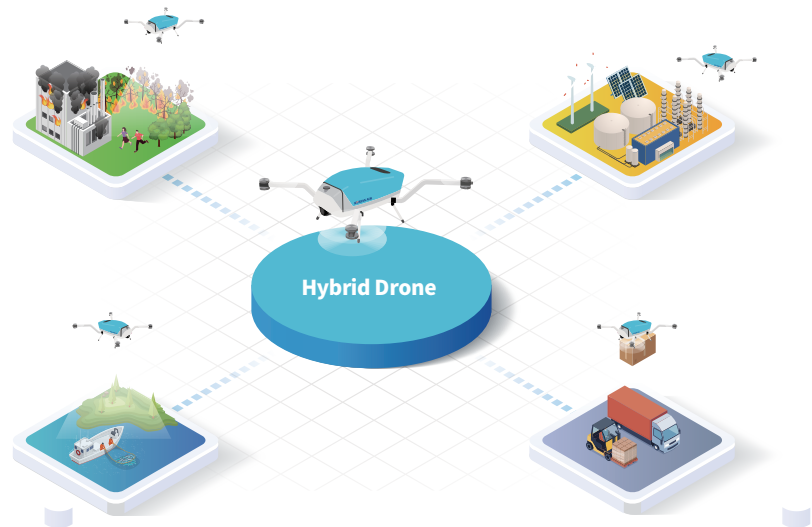
Device Transport equipment and EO/IR camera

Wide area infrastructure safety inspection

Content 24/7 operation possible, real-time monitoring of disaster sites

Effects Fire and forest resource management monitoring / search for survivors

Device EO/IR camera



Maritime Disaster/Safety Management

Content • Safety Obstruction/Illegal Fishing Vessel Guide
• Search for victims of maritime rescue

Effects • Reduced risk of safety accidents, shortened reconnaissance/search time
• Disaster site real-time monitoring

Device Speaker and EO/IR camera

Long-distance logistics delivery

Content Emergency delivery of medicines, etc. to island areas

Effects Shortened period (2 days > 1 hour)

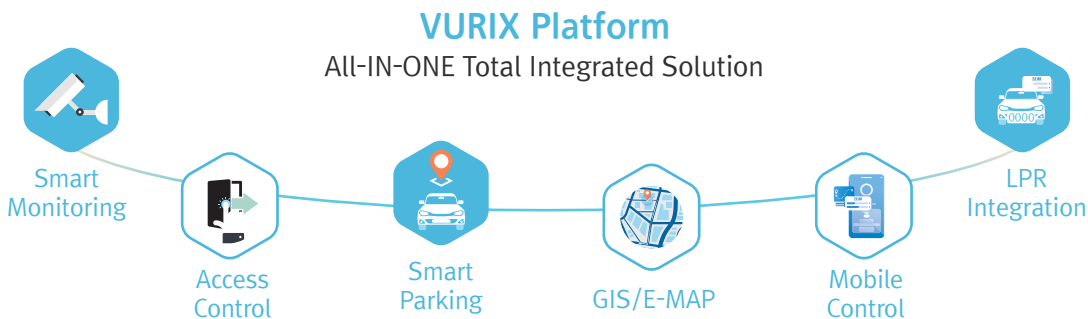
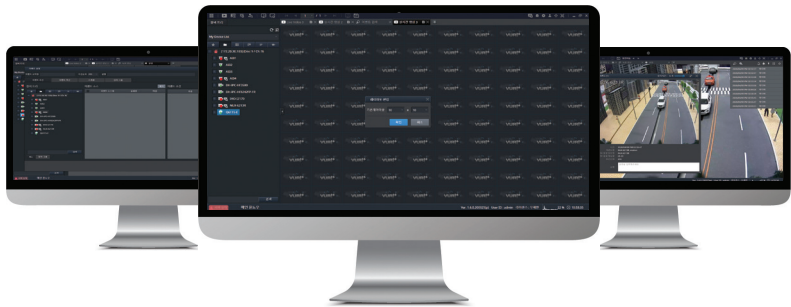
Device Transport equipment and camera



Business Area

VMS (Video Management Solution)

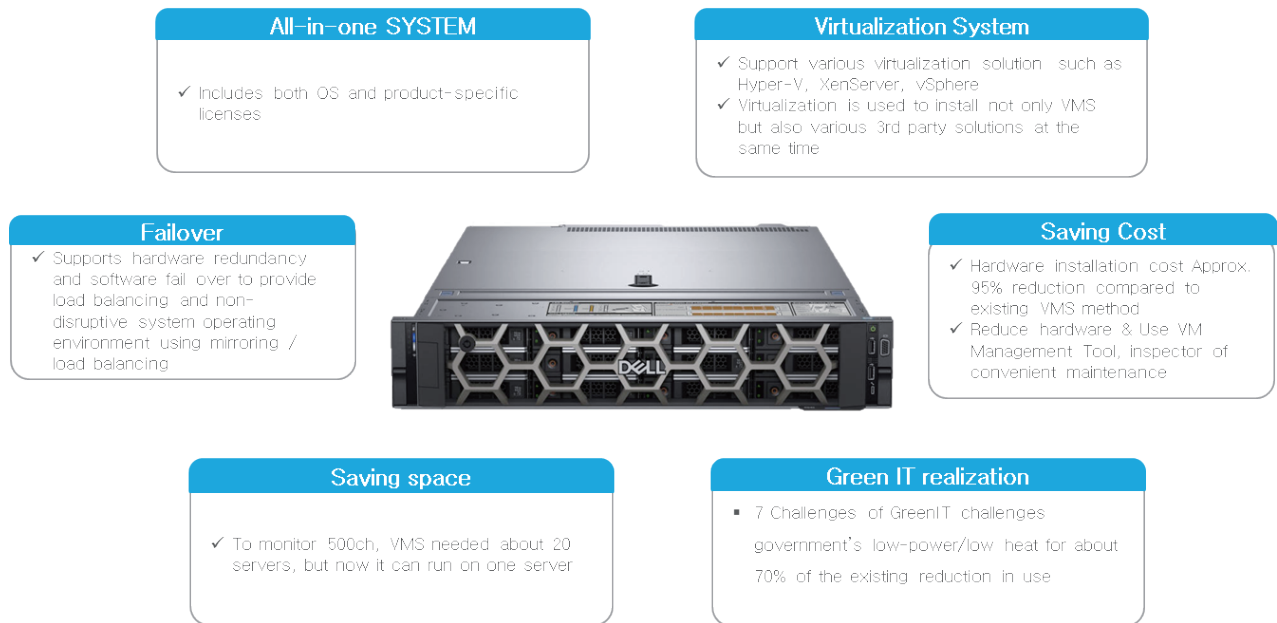
- : Visualize all connected security video with open architecture platform
- VURIX is the solution for any devices from Analog to Network devices or sensors.
- Video Management Software capable of integrating over 10,000 channels.
- Open platform video surveillance tool for extensive scalability and stability.



Smart Monitoring Solution Only meaningful images are screened and displayed on VURIX	Smart Search Solution Interworking with Intelligent smart search VURIX through deep learning based hierarchical analysis	DMS-BI Service Through VURIX DB, provide customized BI service
GIS/E-MAP Solution Interworking with GIS and E-MAP VURIX for MAP-based image control	Video Taken-out Solution Minimize administrator workload with VURIX integration for full automation	Password Management Solution VURIX integration for batch management of P/W, OTP issuance, and P/W change
Illegal Parking Crackdown Solution Integrated with VURIX for Centralized illegal parking solutions	Parking Management Solution Control of parking lot facilities and integrated Image information through VURIX	Problem Vehicle Search Solution Using existing CCTV, the problematic vehicle is detected and displayed through VURIX
Access Control Solution Control of access control facilities and integrated management of video information through VURIX	Road Crime Prevention Solution Simultaneous shooting of two lanes video monitoring, vehicle number recognition through VURIX	Mobile Solution Provide remote video monitoring service through mobile app



IP-Matrix



VURIX IP-Matrix Technical Specifications

S/W		8000(ME)	4000(ME)	2400(ME)	1200(ME)	640(ME)
	Master	VURIX Master Server				
	Recording	VURIX Recording Server				
	Client	VURIX Client System				
	SDK	VURIX SDK 2.x				
	OS	Windows Server or Linux (Kernel 3.x)				
Main Feature	Throughput	8Gbps	4Gbps	2.4Gbps	1.2Gbps	640Mbps
		(Recording + Distribution + LiveView)				
	2MP, 4Mbps, CVBR Camera Ch.	1,000	500	300	150	80
	5MP, 20Mbps, CVBR Camera Ch.	200	100	60	30	16
	1MP, 2Mbps, CVBR Camera Ch.	2,000	1,000	600	300	160
H/W	CPU	XEON Gold series		XEON Silver series		
	Memory	256GB	128GB	64GB	64GB	32GB
	HDD	4TB 7.2K Rpm NL-SAS				
	NIC	10Gbps *4	10Gbps *2	1Gbps *8	1Gbps *4	1Gbps *2
	Height	2U	2U	2U	2U	1U
Options	Virtualization	MS Hyper-V, VMWARE Vsphere, CITRIX XenServer				
	Redundancy	Option				X
	Storage	up to 10TB HDD, Max 180Bay				

* Above Specification is subject to be changed without notification.

Business Area

Tiered AI (Video analyze based on Tiered AI and Situation)

: Layering intelligent video analysis by tiered customer requirement

- Analyzing compressed video stream for primary detection and integrating object coordinates based on Open API to other solution.
- Able to play-back smart surveillance event only in continuously recorded video.
- Maximizing surveillance efficiency and on-sire response through analysis result of event integration and visualization.



Key features

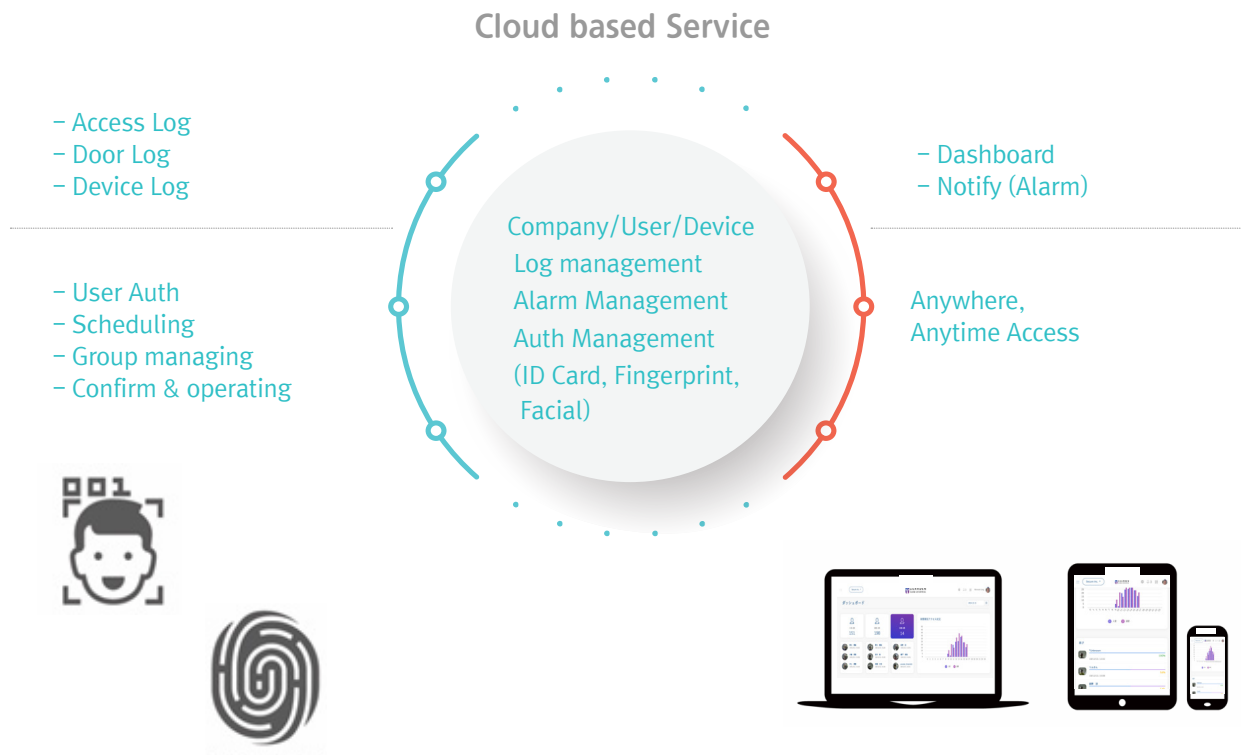
- Searching and Sorting Age, Gender, belonging, etc.
- Searching and Sorting Sedan, Taxi, Truck, Bicycle, Motorcycle
- Classifying each events
- Reducing wrong detection with deep learning based on Tiered AI



ACaaS (Access Control As A Service)

: Cloud access point management with public open stack device

- Untact Service
- Managing and Control Everywhere, Anytime with APP
- Transform visitor and employee management to Service



Support Devices List

• Union Community

U-Bio X Series, AC5000, AC1100, AC 5100, AC 2100

• Suprema

Xpass, XPassS2, SecureIO2, BioStation2, BioStation A2, FaceStation 2, BioStation L2, BioEntry W2, BioEntry P2, BioLite N2, BioEntry R2, XPass D2, FaceLite, XPass 2 Keypad, FaceStation F2

• Hikvision

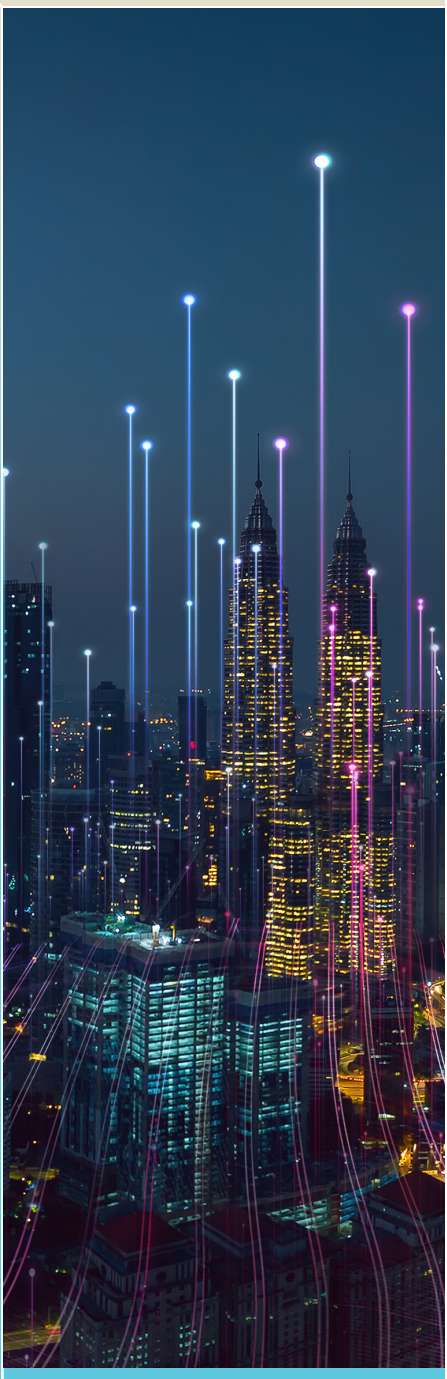
K1T331, DS-K1T671M, DS-K1T671TM-3XF

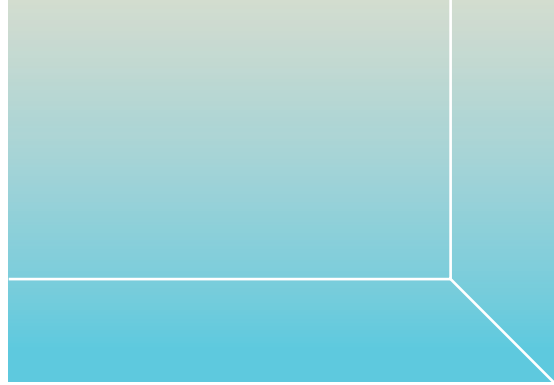




US Battery Factory VMS 1200Ch	Hungary Battery Factory VMS 956Ch	Poland Battery Factory VMS 350Ch
China / Yangcheng SK Innovation BUE VMS 666Ch	China / Tianjin Battery Factory VMS 1200Ch	China / Changzhou SKIET Innovation VMS 369Ch
Malaysia / Kuala Lumpur MITI VMS 300Ch	Malaysia / Johor Bharu Danga Bay Residence VMS 600Ch NVR 64ch *2	Japan AEON Mall NVR 1318Ch
Thailand / Bangkok PTT Enco Building VMS 200Ch Face Recognition, LPR	Thailand / Mukdahan K-City Network VMS 60Ch TMS, Drone	Philippines SEMPHIL VMS 1800Ch
Rwanda / Kigali City Surveillance Center VMS 500Ch		

The Data City & Sharing





[H Q]
9F, 47, Digital-ro 9-gil, Geumcheon-gu,
Seoul, Republic of Korea

[Factory]
62, Simin-daero 109beon-gil, Dongan-gu,
Anyang-si,
Gyeonggi-do, Korea 21315

T. 82-2-2109-6866
E. itn@innodep.com
H. www.innodep.com

[2023.04 | Ver.1]