



INNOBIZ
기술혁신명품소기업



Sunghwaft co.,Ltd

GAS DETECTION & Leak Total SYSTEM.

GAS DETECTOR
FLAMMABLE GAS DETECTOR
TOXIC GAS DETECTOR
GAS SHUT – OFF VALVE
LEAK DETECTION
GAS MONITORING SYSTEM.

sunghwa^{FT}
(주)성화에프티

Sunghwa FT



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- Certification , **KOLAS**

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01 About Sunghwa ft

- Introduction
- History
- Organization
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SUNGHWAFT

GAS DETECTOR
FLAMMABLE GAS DETECTOR
TOXIC GAS DETECTOR
GAS SHUT – OFF VALVE
LEAK DETECTION
GAS MONITORING SYSTEM

sunghwa^{FT}
(주)성화에프티

Gas Monitoring System and Gas Detector based on IT

CEO
Eric, Jeong

We have over 20 years of original technology and have developed our own brand and manufactured products to meet global standards and technologies.

We developed the first automatic sampling type sensor and monitoring system. It is competitive enough abroad.

We have developed a highly reliable gas system with a lot of know-how. It has sensor-based technology, not mere assembly of manufacturing systems.

COMPANY HISTORY

2015

Development of gas monitoring system



2017

Move and Expansion



2019

Inno- Biz Acquisition

Venture biz recognition of KOTEC

R&D department Certified

Patents for hydrogen sensors based on friction electricity



2021

KOLAS Accreditation as CABs

:

2014

Foundation of Sniffer



2016

Detector Business expansion
Online shopping mall start



2018

Removable Environment device development

Leak Detection system development

ISO 9001

Gas monitor electronic display system development

Passing calibration training

Change of CEO and Company's name



2020

Certification of a leading company in Busan

Certification of the specialized company for materials & components

ORGANIZATION



01

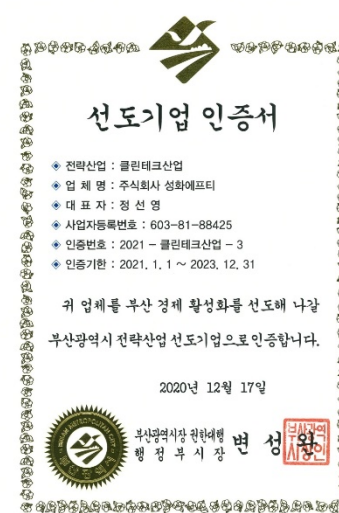
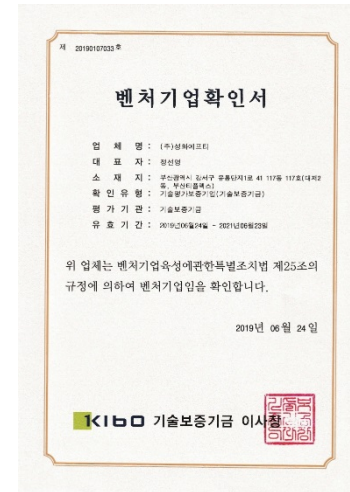
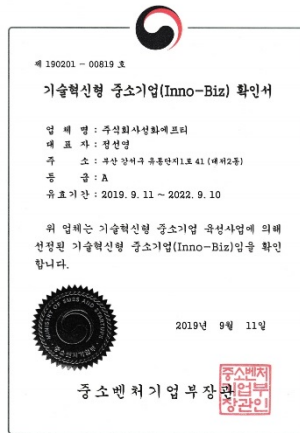
02

03

04

Management	Sales & Design team	Production technique / R&D	QC
General Affairs Management Purchasing Management	Design Domestic sales Overseas sales	Construction Management Product process Final production Product development A/S	Quality Guarantee Class approval ISO9001

CERTIFICATION & PETENT



KOLAS ACCREDITATION



Korea Laboratory Accreditation Scheme

KOLAS 공인교정기관 인정서

[주]성화에프티

인 정 번 호 : KC21-386
법 인 등 록 번 호 : 180111-0928094
사 업 장 소 재 지 : 부산광역시 강서구 금호순서길89번길 32
최 초 인 정 일 자 : 2021년 3월 24일
인 정 유효 기 간 : 2021년 3월 24일 ~ 2025년 3월 23일
인 정 분 야 및 범 위 : 별첨
발 행 일 : 2021년 3월 24일

상기 기관을 국가표준기본법 제 14 조 및 KS Q ISO/IEC 17025:2017 에
의거하여 KOLAS 공인교정기관으로 인정합니다.
또한 ISO-ILAC-IAF 공동성명에 언급된 바와 같이 인정된 분야 및 범위에
대한 기술적 능력과 교정기관의 품질경영시스템이 적절함을 인정합니다.



한국인정기구장
(Korea Laboratory Accreditation Scheme)

한국인정기구(KOLAS)는 국제시험기관인정협력체(ILAC)의 상호인정협정(MRA) 서명기구입니다.

Korea Laboratory Accreditation Scheme

CERTIFICATE OF ACCREDITATION

SUNGHWA FT Co., Ltd.

Accreditation No. : KC21-386
Corporation Registration No. : 180111-0928094
Address of Laboratory : 32, Geumhosunseo-gil 89beon-gil Gangseo-gu Busan,,
Republic of Korea
Date of Initial Accreditation : Mar. 24, 2021.
Validity of Accreditation : Mar. 24, 2021 ~ Mar. 23, 2025
Scope of Accreditation : Attached Annex
Date of issue : Mar. 24, 2021.

This Calibration laboratory is accredited in accordance with the recognized
International Standard ISO/IEC 17025 : 2017. This accreditation
demonstrates technical competence for a defined scope and the operation
of a laboratory quality management system (refer to Joint ISO-ILAC-IAF
Communiqué).



Sanghoon Lee
Head
Korea Laboratory Accreditation Scheme

Korea Laboratory Accreditation Scheme(KOLAS) is a signatory to the ILAC Mutual Recognition Arrangement



02 Business Field

- Main Field
- Main products
- Customer satisfaction



MAIN BUSINESS FIELD



MAIN PRODUCTS

NO	P R O D U C T S
1	Single Gas detector AC TYPE, DC TYPE (LNG, LPG)
2	Single Gas detector detecting LNG, LPG for Chemical Industry
3	Single Gas detector detecting LNG, LPG, Flammable gases, Toxic gases for Chemical Industry
4	GAS DETECTOR RS-485,4-20mA(Transmitter)Type (HC GAS, TOXIC GAS)
5	Computer Monitoring System (HC GAS, TOXIC GAS)
6	Gas pressure notification monitoring system
7	Gas Monitor Single, Multi type (HC GAS, TOXIC GAS)
8	CALIBRATION GAS (Can gas & Kit for Calibration)
9	Portable single gas detector, Portable multi gas detector
10	Auto Gas valve shut-off device (15A-250A)
11	Auto pump gas detector (HC / TOXIC GAS)



Customer satisfaction

Service of technology
to meet domestic chemical market

< Quick Customer Service >

(Related Law)
ARECS(화평법)
CCA(화관법)



SHT-900CW
Center Receiver Monitor
(중앙 감시반)



SHT-700MW
Master Receiver Monitor
(현장 중계 기반)

- ▶ Quick customer service support for rapidly changing domestic chemical safety
- ▶ Provide description of the products (Worldwide network)
- ▶ Exchange All parts of Gas Detectors
- ▶ Quick and Accurate Calibration service before requesting for a claim



03 Products

- Gas detector
- Leak sensor
- Odor monitoring System





Gas Detector



SHT-4700

- Certified for internal pressure explosion proof (KOSHA)
- **International certification(IECEX, ATEX)**
- Application of the optimal program to measure flammable gases ranging from low to high concentration
- Applied detection method proven for stable use and service life
- Approval on model by the Korea Fire Institute
- Detects low and high density flammable gas in real time through installation at industrial and explosion hazard area, Provides standard output of 4~20mA. DC and uses the device by connecting to various control units



SPECIFICATION

Model	SHT-4700 : KOSHA / SHT-4700D : IECEX, ATEX
Measuring Gas	LNG, LPG
Measuring Range	0~100 %LEL
Measuring Method	Diffusion type, Catalytic combustion cell type
Measuring Signal	4~20mA.DC
Response Time	Less than 20sec
Accuracy	< ±3% /Full scale
Operating Power	24V.DC
Approval	Ex d II B T4 (KOSHA)
Dimension	95(W) x 100(H) x 76(D) (mm)
Weight	0.58kgs

QM-4700D(F)

- Certified for internal pressure explosion proof (KOSHA)
- Designed with constant voltage circuit for safe operation of overcurrent shutoff circuit detection sensor
- Minimizes effects of temperature/humidity and electric noises
- Connect analogue standard output(4~20mA) signals to DCS & PLC monitoring systems
- Detects flammable gas in real time through installation at industrial and explosion hazard area, Provides standard output of 4~20mA. DC and uses the device by connecting to various control units
- International certification(IECEx, ATEX) – in this year



SPECIFICATION

Model No	QM-4700D(F)
Measuring Gas	LNG, H ₂ , C ₂ H ₂ , C ₂ H ₄ , (Flammable Gas) i-C ₄ H ₁₀ , HC, etc (Ignition gas)
Measuring Range	0~100 %LEL, 0~100 %VOL, 0~999 PPM
Measuring Method	Diffusion type, Catalytic combustion cell type, Semiconductor type
Measuring Signal	4~20mA.DC
Response Time	Less than 20sec
Accuracy	< ±3% / Full scale
Operating Power	24V.DC
Approval	Ex d II C T6 (KOSHA)
Dimension	126(W) x 193.5(H) x 76(D) (mm)
Weight	1.17kgs

QM-4700D(T)

- Certified for internal pressure explosion proof (KOSHA)
- Designed with constant voltage circuit for safe operation of overcurrent shutoff circuit detection sensor
- Minimizes effects of temperature/humidity and electric noises
- Connects to an analog standard output (4~20mA) signal to DCS&PLC monitoring system
- Detects flammable gas in real time through installation at industrial and explosion hazard area, Provides standard output of 4~20mA. DC and uses the device by connecting to various control units
- International certification(IECEX, ATEX) – in this year



SPECIFICATION

Model No	QM-4700D(T), QM-4700D(O ₂)
Measuring Gas	Toxic Gas, Oxygen(O ₂), CO, Cl ₂ , NH ₃ , SO ₂ , H ₂ S, NO, NO ₂ , HF, NO _x , SO _x , etc VOC, Benzene, Toluene, Xylene, etc.
Measuring Range	0~PPM – (Depends on gases), 0~25 %Vol – O ₂ , Adjustable range
Measuring Method	Diffusion type, Electro-chemical cell type(Sensor), Semiconductor type
Measuring Signal	4~20mA.DC
Response Time	Less than 20sec
Accuracy	< ±2% / Full scale
Operating Power	24V.DC
Approval	Ex d II C T6 (KOSHA)
Dimension	126(W) x 193.5(H) x 76(D) (mm)
Weight	1.15kgs

QM-9000(F)

- Internal Pressure Explosion Proof Structure (IP66)
- Controls zeroing, density and temperature correction function by magnetic key or computer monitoring system without opening the cover
- 2-Way transmission feature at Computer system and Controller
- Indicates self-illuminating FND (LED) for continuous indication of atmospheric gas concentration even in dark environment
- When additional detection unit is expanded, automatically expands and reduces by accessing to the closest communication line, and connecting to the related computer monitoring system



SPECIFICATION

Model No	QM-9000D(F)
Measuring Gas	CH ₄ , H ₂ , C ₂ H ₂ , C ₂ H ₄ ... Etc (Flammable gas)
Measuring Range	0~100 %LEL
Measuring Method	Diffusion type, Catalytic combustion cell type, Semiconductor type
Measuring Signal	4~20mA.DC , RS-485, Relay contact (H.HH)
Response Time	Less than 20sec
Accuracy	±3% 이내/Full scale
Operating Power	21~31V.DC
Approval	Ex d II C T6 (IP66) (KOSHA)
Dimension	126(W) x 193.5(H) x 76(D) (mm)
Weight	1.65kgs
Remarks	Explosion Proof Alert Light (option)

QM-9000(T)

- Internal Pressure Explosion Proof Structure (IP66)
- Controls zeroing, density and temperature correction function by magnetic key or computer monitoring system without opening the cover
- 2-Way transmission feature at Computer system and Controller
- When additional detection unit is expanded, automatically expands and reduces by accessing to the closest communication line, and connecting to the related computer monitoring system
- Indicates self-illuminating FND (LED) for continuous indication of atmospheric gas concentration even in dark environment
- International certification(IECEEx, ATEX) – in this year



SPECIFICATION

Model No	QM-9000D(T), QM-9000D(O ₂)
Measuring Gas	Toxic Gas, Oxygen(O ₂), CO, Cl ₂ , NH ₃ , SO ₂ , H ₂ S, NO, NO ₂ , HF, NO _x , SO _x etc VOC, Benzene, Toluene, Xylene, etc.
Measuring Range	0~PPM – (Depends on gases), 0~25 %Vol – O ₂
Measuring Method	Diffusion type, Electro-chemical cell type, Semiconductor type
Measuring Signal	4~20mA.DC(Transmitter), Relay contact(H.HH) or 24V.DC(H.HH), RS-485 Modbus
Response Time	Less than 20sec
Accuracy	Less than ±2% / Full scale
Operating Power	21~31V.DC
Approval	Ex d II C T6 (IP66) (KOSHA)
Dimension	126(W) x 193.5(H) x 76(D)
Weight	1.67kgs
Remarks	Explosion Proof Alert Light (option)



Leak Detector



CABLE TYPE

- Build a sensor with special coating for each material's purpose
- Detect Conductive/Volatile Liquid and Chemical solution
- Installable at the economical cost



TT-1000

SPECIFICATION	
Usage	Water (Computer, operating room etc)
Cable diameter	0.24 in. (6.0 mm) nominal
Continuity & Signal Wiring	2 x 26 AWG with insulation of fluoropolymer
Wear Resistance	> 65 cycles per UL 719
Maximum working Temperature	174°F (75°C)
Length	1.5m, 3m, 4.5m, 7.5m, 10m, 15m (Can be custom ordered)



TT-3000

SPECIFICATION	
Usage	Acid, Alkali, Ethylene (Indoor, outdoor)
Cable diameter	0.24 in (6.0 mm) nominal
Continuity & Signal Wiring	2 x 26 AWG with insulation of fluoropolymer
Wear Resistance	(> 65 cycles per UL 719
Maximum working Temperature	194°F (90°C)
Length	1.5m, 3m, 4.5m, 7.5m, 10m, 15m (Can be custom ordered)



TT-5000

SPECIFICATION	
Usage	Petroleum (Indoor, outdoor)
Cable diameter	0.28 in. (7 mm) nominal
Pressure	Loads greater than 20 lb (9 kg) per linear inch at 20°C (68°F) may immediately trigger an alarm.
Maximum working Temperature	-20°C to 60°C (-4°F to 140°F)
Length	1.5m, 3m, 4.5m, 7.5m, 10m, 15m (Can be custom ordered)



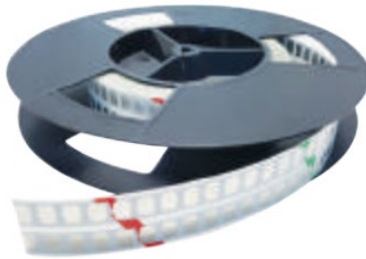
TT-5001

SPECIFICATION	
Usage	Toluene, Acetone, MEK, NMP etc. (Indoor, outdoor)
Cable diameter	0.27 in. (6.9 mm) nominal
Pressure	Loads greater than 20 lb (9 kg) per linear inch at 20°C (68°F) may immediately trigger an alarm.
Maximum working Temperature	-20°C to 60°C (-4°F to 140°F)
Length	1.5m, 3m, 4.5m, 7.5m, 10m, 15m (Can be custom ordered)

Film SENSOR



SFT-LF(26/44)



SFT-LFF(26/44)

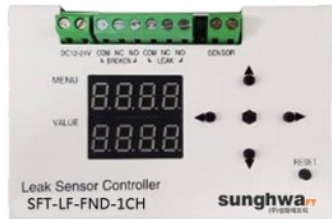
- Prevention and prevention of damage caused by leak detection in Chemical industries
- LEAK SENSOR can detect water and chemicals separately,
- Can be used in various industries as it has chemical resistance /heat resistance/strong durability
- Safe durability by using PET material and metal plate
- Sensor installation direction changeable with no connector / Easy work

SPECIFICATION	
Model	SFT-LFF(26/44)
Target Liquid	Acid, Alkali – Unable to detect water
Material	PET Insulation Film, anode/cathode plate
Size/ Maximum Length	26 / 44mm(W) * 0.6mm(H) /Max. 20m
Installation Method	Use fixed bracket (AMS-SP-CV)
Voltage etc	24V(DC) / $\leq 50\mu A$ / $< 0.005W$
Temperature	-20°C ~ 80°C
Lead time	< 3 sec

SPECIFICATION	
Model	SFT-LF(26/44)
Target Liquid	Acid, Alkali, Waste, Water, Etc.
Material	PET Insulation Film, anode/cathode plate
Size/ Maximum Length	26 / 44mm(W) * 0.6mm(H) /Max. 20m
Installation Method	Use fixed bracket (AMS-SP-CV)
Voltage etc	24V(DC) / $\leq 50\mu A$ / $< 0.0012W$
Temperature	-20°C ~ 80°C
Lead time	< 3 sec (Without delay)

Film SENSOR

- Able to control sensor sensitivity, and set sensitivity according to external conditions
- Prevents false alarm and leakage false alarm by bolt tools
- Able to manage leak log When monitoring (Option) is selected, and transmit SMS text message for any leak
- Able to customize sensitivity level



SFT-LF-FND-1CH

SPECIFICATION	
Type	Detection for Acid, Alkali
Size	110*75*20
Rated Voltage /Electric Current	12~24±1V (DC) / 40mA ~ 300mA
Power Consumption	7.2W
Temp & Humidity for Use	-25°C ~ 85°C, 5 ~ 80%RH



SFT-OD-LCD-10CH



SFT-LF-LCD-5CH

SPECIFICATION	
Type	Detection for Acid, Alkali
Size	160*115*30
Rated Voltage /Electric Current	12~24±1V (DC) / 70mA ~ 1000mA
Power Consumption	24W
Temp & Humidity for Use	-25°C ~ 85°C, 5 ~ 80%RH

SPECIFICATION	
Type	Detection for Acid, Alkali
Size	160*115*30
Rated Voltage /Electric Current	12~24±1V (DC) / 70mA ~ 1000mA
Power Consumption	MAX. 62W
Temp & Humidity for Use	-10°C ~ 40°C, 5 ~ 60%RH

POINT SENSOR

- It is the world's first special point sensor that distinguishes water from liquid chemical substance, and only detects chemical substance.
- Strong against external shock and noise, and optimized for outdoor installation
- Solves the problems of conventional point sensors simultaneously (frequent malfunctions, weak durability, sounding alarms in water, etc.)
- Reacts to acid, alkali



Separate Point Sensor



Separate Controller

SPECIFICATION	
Model	FT-PC-01
External Material	SUS304, Polyacetal etc.
Cable	Lead Cable 2M (24AWG x 2C, BLACK, WHITE)
Size	(W x H) 74 x 29

SPECIFICATION	
Model	SFT-PD-01-1CH
Rated Voltage	DC 24V
Communication	Modbus (RS-485)
Output	Contact Output(NC, COM, NO)
External Material	Aluminum etc
Size	(W x H x D) 106 x 59 x 25



All-In-One Point Sensor

SPECIFICATION	
Model	AG-CI011
Rated Voltage	DC 24V
Power Consumption	80mA(MAX)
Output	DC24V
Operating Temperature	-20°C ~ 60°C
Output	SUS304, PP etc
External Material	Ø74 x 30 (± 0.5)
Cable	2M cable provided (26AWG x 4C)

POINT SENSOR

- Explosion proof N-132/2-10 24 V DC
- Compact structure, shape, width 17.6mm
- Detachable screw terminal
- Indicates a cable break or short circuit through a relay contact
- Application program up to SIL 2 per IEC 61508



Organic solvent point sensor



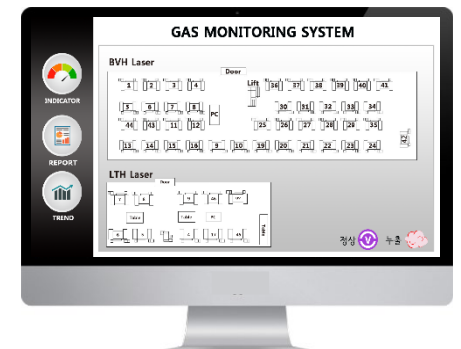
Barrier

SPECIFICATION	
Model	KAS-40
Operating Voltage	5~15 V.DC
External Material	PCV
Size	0.5m, 2 x 0.14 mm ² , FEP
Operating Temperature	-25°C ~70°C

SPECIFICATION	
Model	N-132/2-10 24 V DC, ATEX (Barrier)
Input Current	Typ. 55 mA
Operating Voltage	18... 31.2 V DC
ATEX Certificate	Ex II (1) G [Ex ia] Ex IIC
IECEx Certificate	Ex nAc nCc [ia] IIC T4
Size	114,5 x 108 x 17,6 mm
Temperature	-20 °C +70 °C
보호도(iec60529)	IP 30, IP20

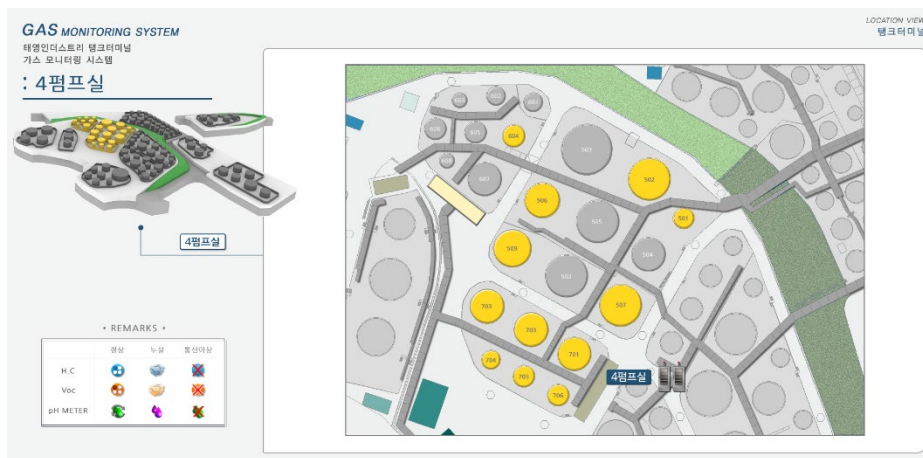


Monitoring System

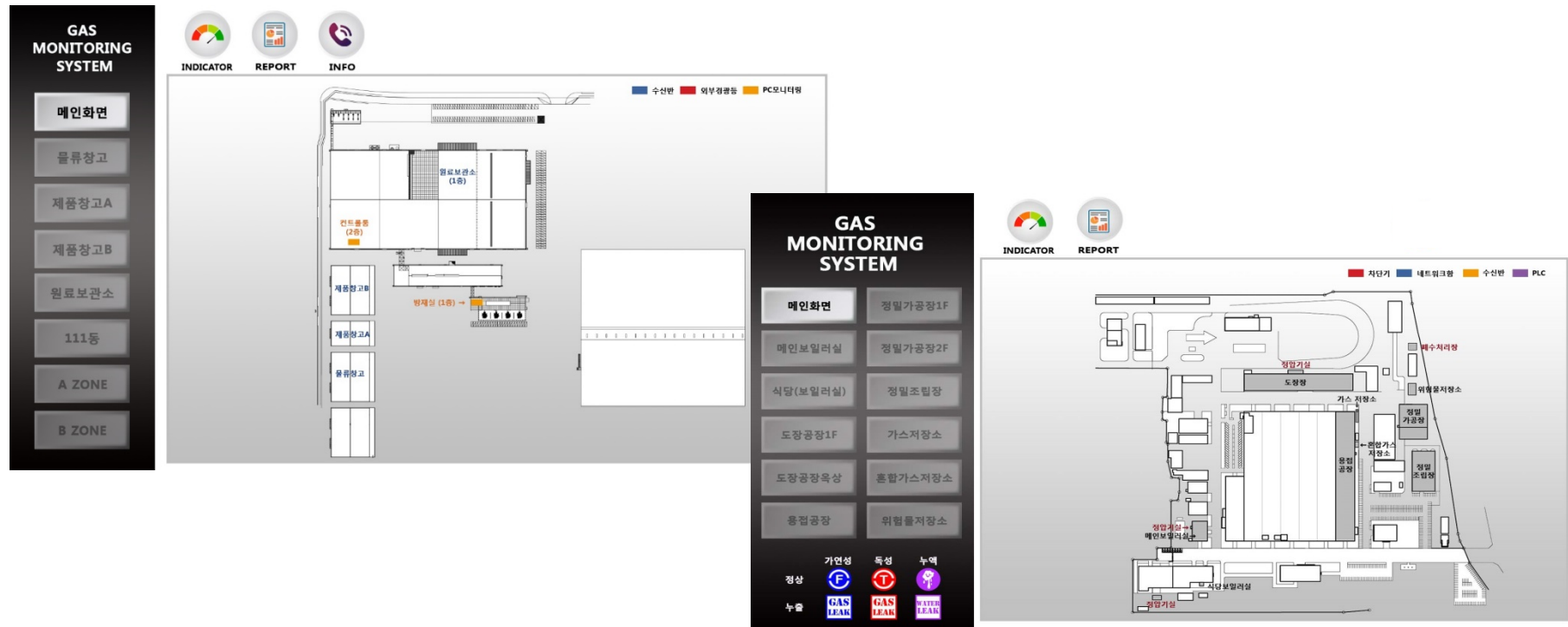


Monitoring System

- When diverse flammable and toxic gases are used in various industrial fields, unexpected gases can occur, and Monitoring system is intended to prepare for emergency situations.
- The monitoring system is used as part of the site's comprehensive monitoring and safety system, It will give you time to create rescue and protection activities.
- The signal transmission system between the measuring instruments installed in the gas alarm is fully interfaced, allowing all gas detectors, gas shut-off, and abnormal pressure to be monitored and controlled from a distance.
- In addition, RS-485 Modbus signal is transmitted (bidirectional transmission/reception) from the gas network built-in alarm that measures the concentration in the air in real time and performs integrated monitoring and control functions.



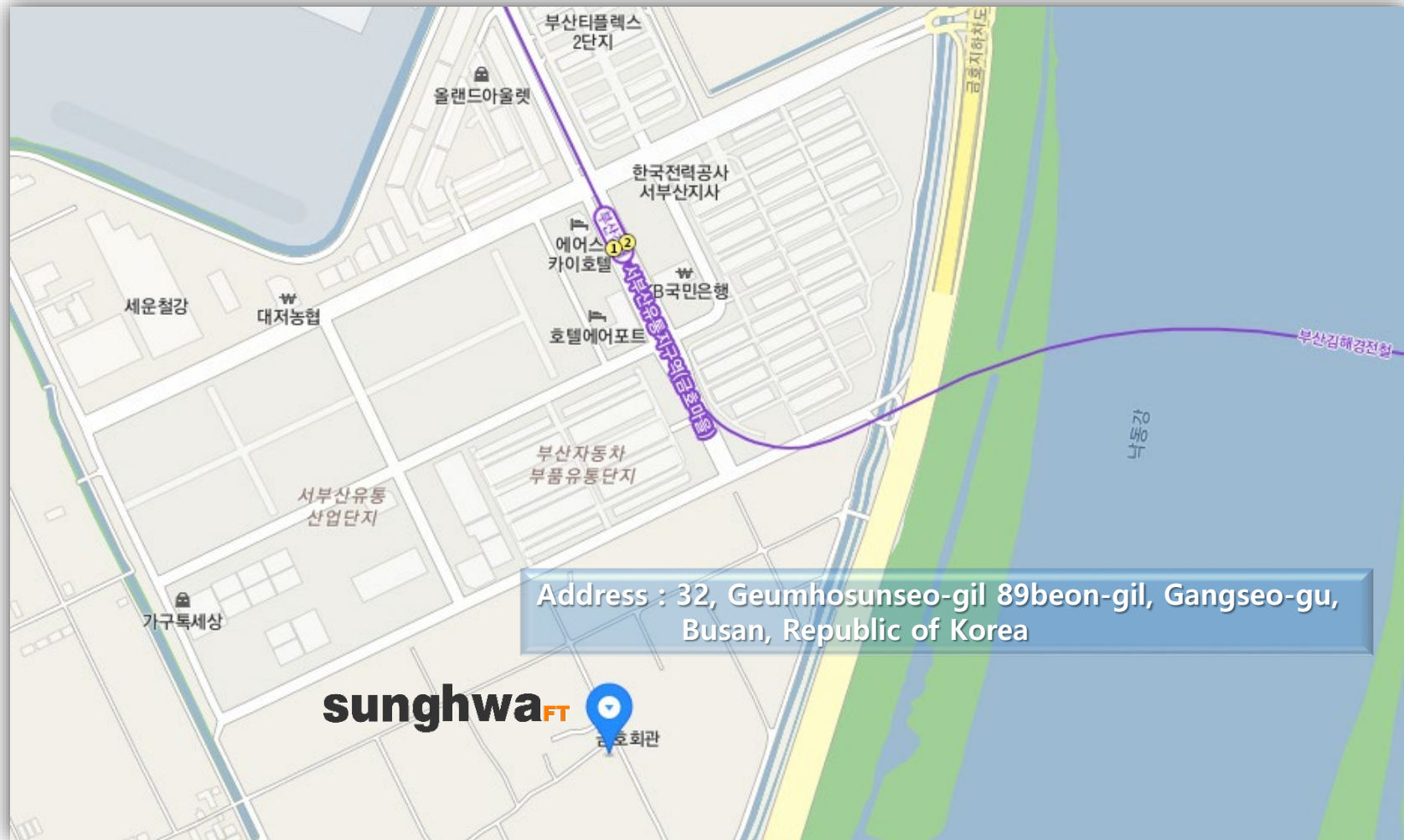
Monitoring System



Our monitoring system applied easy-to-use and easy-to-see UI is a state-of-the-art program that quickly and accurately expresses the status of gas alarms, gas shut-offs, and gas abnormal pressures.

- Communication status check and Icon Animation function for gas alarm, gas shut-off, gas abnormal pressure status
- It has Report, Trend function and analyze & store data logs to support planned monitoring.
- Easy to expand line by Ethernet method (more than 256 communication ports can be expanded)
- Additional expansion and deletion are convenient using the database editor, and can be easily changed without adding additional software
- Performs SET UP function to make it easy to modify the location of icons and set passwords
- Additional expansion is convenience by applying a dual control system (Monitor the server and the client separately)

SERVICE NETWORKS



T. 1600-7962

T. 051-973-7982 / 986-7982~4

E-mail : gas@sunghwaft.co.kr

Blog : Blog.naver.com/sunghwaft

F. 051-980-7815

Homepage. www.sunghwaft.com

Shopping mall : www.snif.co.kr



Gas/Leak/Odor/Air Quality Total Monitoring System

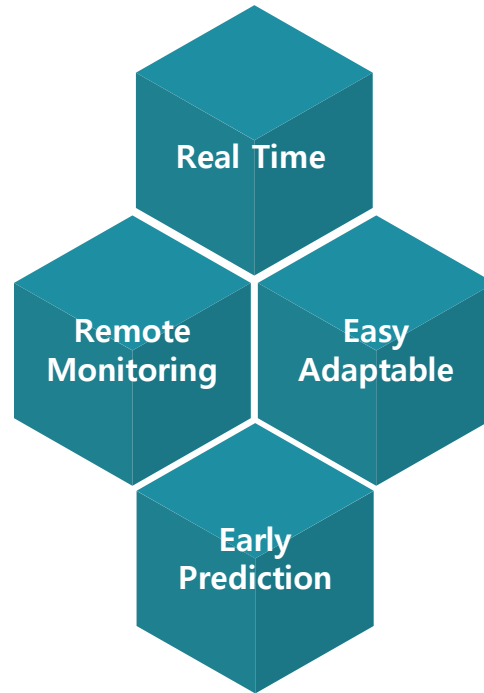
Total Solution Monitoring System



sunghwa^{FT}
(주)성화에프티

1. Air Quality / Odor Monitoring System

Air Quality / Odor Monitoring System



Real-Time Monitoring

- ❖ Real-Time Information Gatherin

Remote Monitoring

- ❖ LTE (No limitation distance)

Easy Adaptable

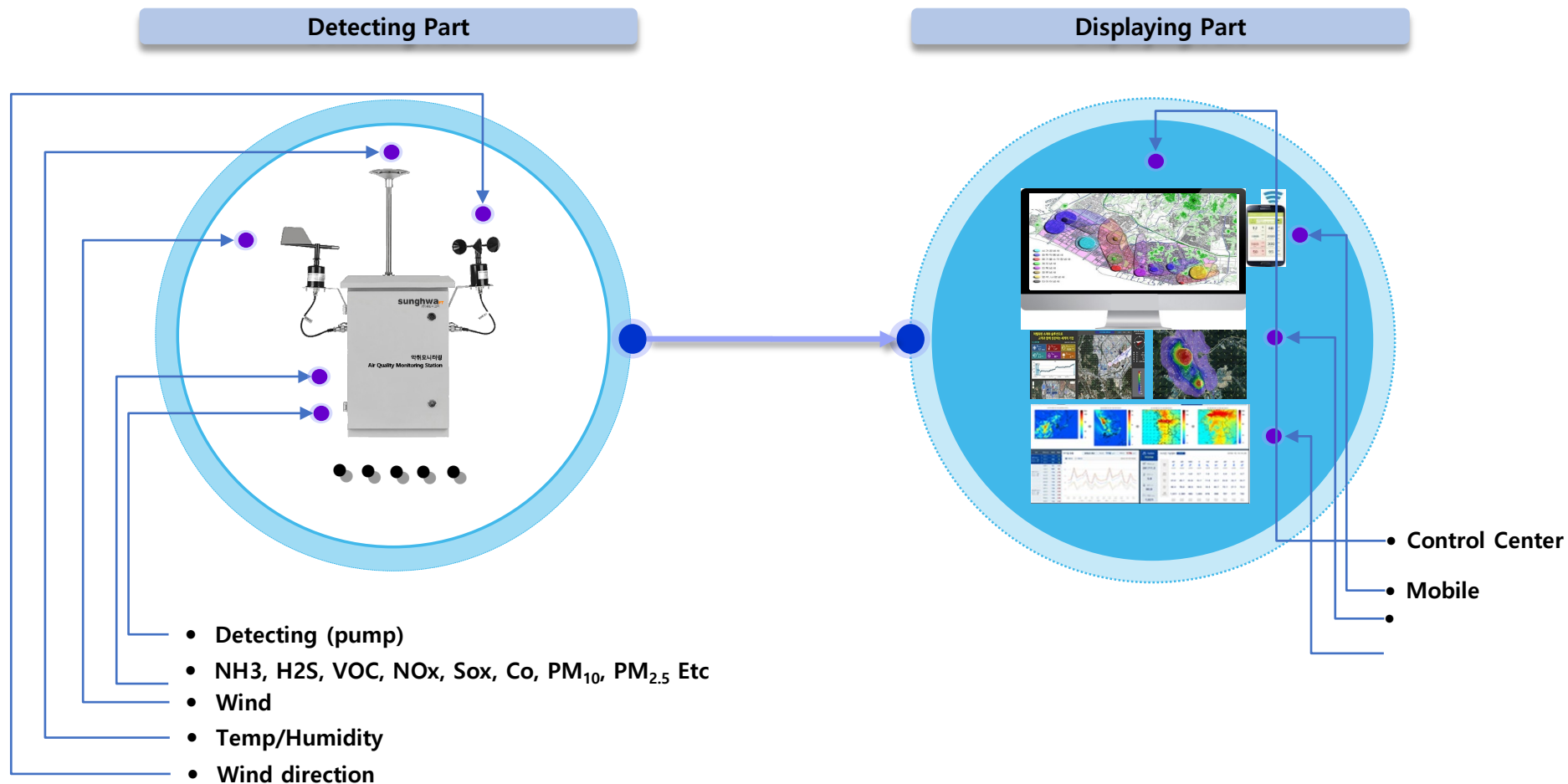
- ❖ Reasonable cost

Total Monitoring Solution

- ❖ Big data
- ❖ AI

2. Air Quality / Odor Monitoring System

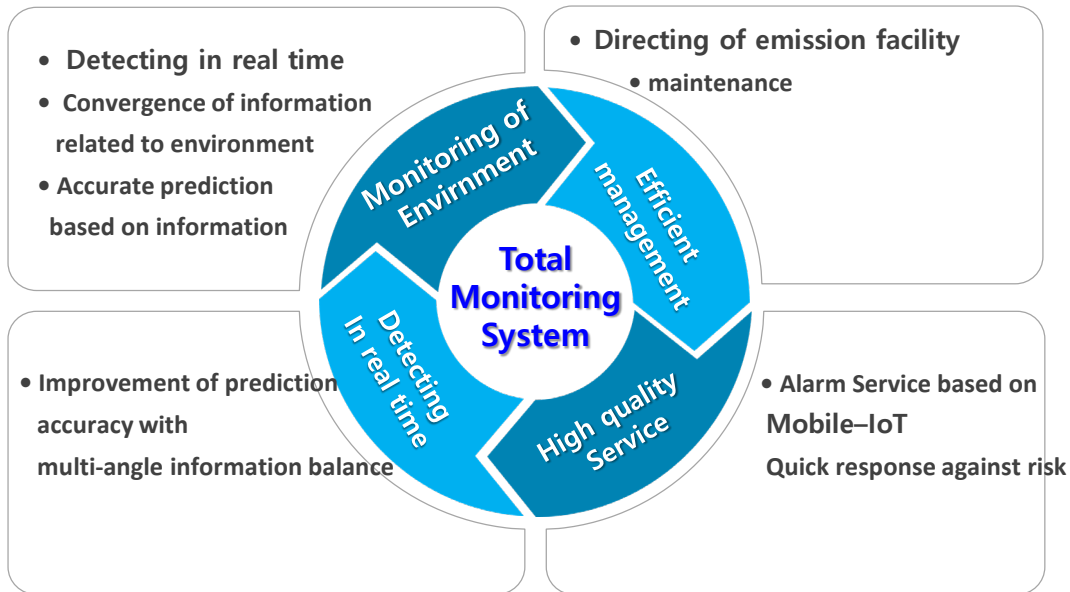
Item in detail



Gas/Leak/Odor/Air Quality Total Monitoring System Concept

G/L/O/A Monitoring System

- Detecting in **real Time**
- Big data by linking Public institutions



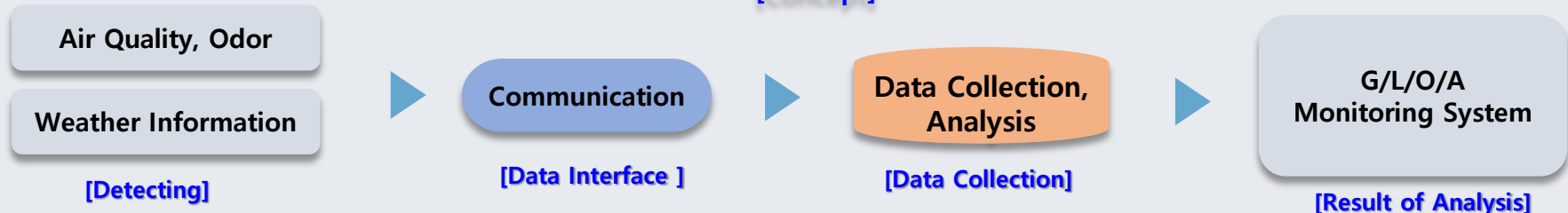
Gas monitoring



Odor, Air Quality Monitoring



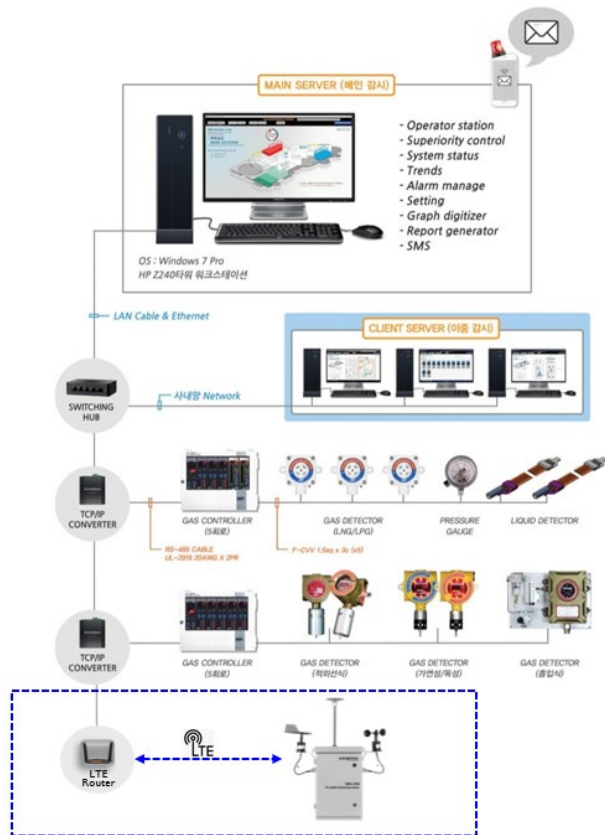
[Concept]



7. Gas/Leak Monitoring System Network

Gas/Leak Monitoring System Network

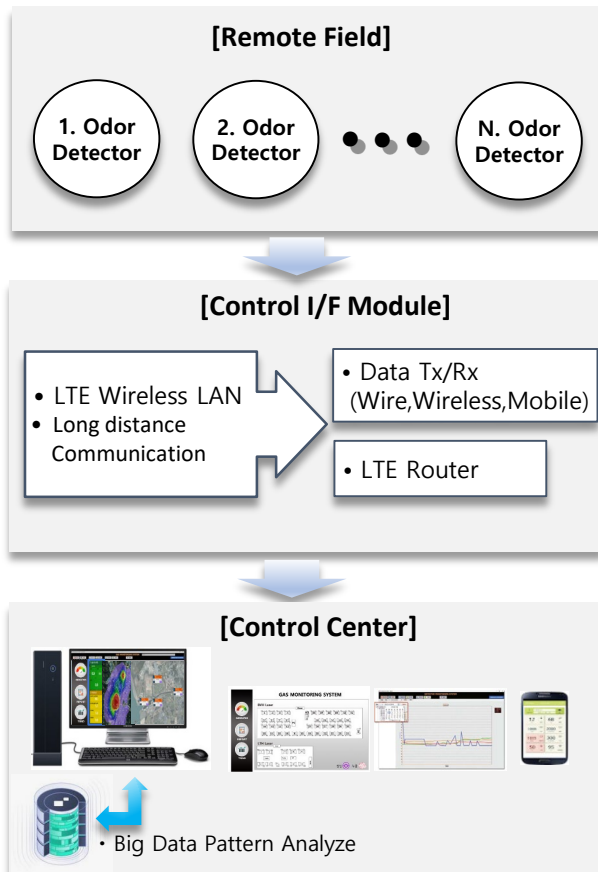
- Real-Time Automation Monitoring System
- Long distance monitoring with wireless communication



7. Gas/Leak Monitoring System Network

Odor/Air Quality Monitoring System Configuration

O/A Monitoring System Diagram



O/A Monitoring System Configuration



[Air Quality Monitoring]

3. Portable Air Quality Detector

Portable Air Quality Detector

(FT-3100)



[FT-3100]

Technical Function

- ❖ Portable detector
- ❖ Quickly, easy detector where odor complaints spot
- ❖ No additional power

Where

- ❖ wastewater treatment plant
- Water purification plant
- Forest Service
- Chimney
- Chemical Corporation

SPECIFICATION	
Item	FT-3100
Detecting	Air(Odor)
Communication	4G IoT solution
Probe	SUS 304 1/4"
Capacity	10L (Adjustable another size)
Weight	7Kg
Power	Battery
Charger	input : 220V/60Hz AC, output : 12V/1A DC
Dimension	500x 400x 200 x (Wx Hx D)