

# AIOT

# SENSE CONNECT

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# Who is ChinoINT?

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### **Partners & Customers in Next Gen Smart Solution**



### **ChinoINT SaaS**

**ChinoINT** creates the next generation SaaS and IOT platforms.

The SaaS is a complete platform including data broker, ETL tool, Database, dashboard, management tools, mobile portal and notification tools, etc. This fulfills all your IOT needs and generates extra values to our clients.



### **ChinoINT Big Data Analytic**

**ChinoINT** is the Data Expert.

Not only expert in wireless sensor design, but also in data consolidation, storage, manipulation, analytic and data visualization.

Our experts help you to drill into the hidden meaning of data, and generate insight from the data.



## **Confined Space Management**





### **Confined Space Monitoring System**

### Features:

• Count the number of <u>authorized</u> people getting into and out of the confined space

- Count the number of <u>unauthorized</u> people getting into and out of the confined space
- Safety Helmet enforcement
- Real time alert for unauthorized people
- Identify foul behavior, such as getting into the area through undefined path
- Prolonged stay alert in confined space

### Benefits:

- Reduced site monitoring staff at each site
- Real Time alert system for Safety monitoring
- Remote monitoring at Control Room
- Dashboard for Management Review
- Attendance Record for different contractors
- Analytic data for work site safety and usage
- Easy to install sticky tag



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### Health Monitoring for personnel (LoRaWan based personnel health track)

Especially in confined spaces, a lot of places in the construction sites are with no GSM reception. Thus, LoRaWan would be the best choice for consturction sites.





### **LoRaWan Manhole Monitoring**

ChinoINT provides both indoor / outdoor edge computing LoRaWan gateway to simplify and ease the installation

Immersible water level monitoring

Simple & effective cover monitoring



Air Quality monitoring

ChinoINT specializes in wireless customization to overcome signal transmission issue due to manhole structure



### **Centralized Management Platform**

The Software Platform consists of Data Broker, ETL tool, Database, Dashboard and notification modules For esay deployment, both Cloud Saas and on-premise version is available.





### Dashboard

Clean and clear dashboarding is one of the key element in an IoT system. The Smart Toilet platform provides easy to use dashboard, with multi-layer user account settings. GUI Maintenance Portal is provided with the platform. Both desktop and mobile version (Android and IOS) are available.





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### Notification

Notification is one of the crucial feature for Smart Toilet, in order to achieve on-demand cleaning and best resource utilization.

Notification can be done through app, notification bar alert, SMS and through e-mail.

App message notification can be configured as group alert, and individual alert.



App message

notification

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Testing "Toilet 5-1 梘液檢測" 沒有梘液 1200 "Toilet 5-1 梘液檢測" 沒有梘液 1200

February 26



### **Smart Worksite Control Center**





# Solutions & References



### **Smart Solutions Done Smartly**

Region	Name	End user	Year of Completion
Hong Kong	SSSS - Confined Space management	CLP - Black Point Power Plant	2020
Hong Kong	SSSS - Confined Space management	CLP - Castle Peak Power Plant	2019
Hong Kong	SSSS - Confined Space management	CLP - Black Point Power Plant	2021
Hong Kong	SSSS - Confined Space management	CLP - Castle Peak Power Plant	2021
Hong Kong	SSSS - Confined Space management	CLP - Black Point Power Plant	2022
Hong Kong	SSSS - Confined Space management	CLP - Castle Peak Power Plant	2022
Hong Kong	SSSS - Turbine Work Safety Video Analytic	CLP - Black Point Power Plant	2021
Hong Kong	SSSS - Personnel management for containers during COVID	CLP - Castle Peak Power Plant	2021
Hong Kong	SSSS - 5G enabled Smart Construction Site Monitoring	Nga Ying Decoration Ltd	2023
Hong Kong	SSSS - 5G enabled Smart Construction Site Monitoring	Por Mee Factory Building	2023
Hong Kong	SSSS - UWB-enabled Collision Avoidance System for Vehicle	SUEZ - IWTS	2021
Hong Kong	Smart Metering - LoRaWan (POC)	SUEZ - IWTS	2021
Hong Kong	Smart Toilet - LoRaWan	Hong Kong International Airport	2022
Hong Kong	Smart Toilet - LoRaWan (POC)	Poly University	2021
Hong Kong	Smart Facility Management - LoRaWan @ M+	ASD	2021
Hong Kong	Smart Facility Management - LoRaWan	Kadoorie Estates Limited	2020-2023
Hong Kong	IOT Hub	Kai Tak Sports Park	2023
Macau	Smart Elderly Center - Zigbee	Vila Medalena Macau	2019
Hong Kong	Smart Metering	Poly U	2020
Hong Kong	Smart Toilet	Poly U	2022
Hong Kong	Smart Facility Management - Water leakage Detection	Queensway Government Office	2022
Hong Kong	Smart Visitor Management - People Counting	Hong Kong U	2020
Hong Kong	Smart Faciliy Management Notification Platform	Queensway Government Office	2023
Hong Kong	Smart Chiller Plant Monitoring	EMSD	2022
Hong Kong	Smart Chiller Plant Monitoring	EMSD	2023
Hong Kong	Smart Chiller Plant Monitoring	Poly U	2023

### **Video Analytic of SSSS - CLP**





### **SSSS - Confined Space Management @ Power Plant & University**







### **Safety Helmet Recognition**

Able to catch workers without safety helmet onsite, safety issues have no way to hide







### **Safety Belt Recognition**

Able to catch workers without safety belt onsite, no alert for those with safety belt



### **Simple and Neat installation**







### SSSS - Collision Avoiding System @ Transfer Station

**ChinoINT** also masters on latest technology such as UWB o design real time monitoring system to raise safety to the next level

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### **Rich functionality**

- Human face recognition
- human body recognition
- license plate recognition
- smoke and flame recognition
- helmet recognition
- phone calling recognition
- · cigarette smoking
- gathering of people recognition
- work clothes recognition
- leaving work and sleeping recognition

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AP109P型边缘计算盒子

- zone intrusion warning
- human fall recognition
- running recognition
- clothes color
- Fire escape blockage identification
- etc



2023-07-11 12:02:45

Not wearing a helmet

Imet CAM1



Platform alert: AI detects "not wearing a helmet" under CAM1

- Real time streaming
- APP Notification
- Evidence with photo









### **PolyU Smart Toilet**





System Component:

- IOT Edge Computing Gateway
- Odor gas sensors
- People Counting solution
- RFID auto attendance system





**Smart Elderly Center - Macau** 





Nurse Call

Whenever in need, the patients, nurses and doctor are able to get immediate help by using the Nurse Call system, together with the Indoor Location system. No false alarm!!



Fall Prevention

Some patients and elderly are not quite mobile. The Fall Prevention system protects them by alerting related personnel to offer assistance when they need to move around.



### Remote Home Care

Home pension is getting traction. The Remote Home Care system allows family and nurses to learn the status and needs from the home pensions.





### Smart Chiller Plant and Switch Room Monitoring - EMSD & Poly U



Project Background

To maintain the environment safety and real time monitoring

**Project Description** 

LoRaWan air quality sensors including Chlorine sensors are deployed. LoRaWan sensors such as people counter, water leakage, piep monitoring are being installed.

ChinoINT successfully deployed a LoRaWan infrastructure and achieved the above goals.



### **Smart Facility Management - Kadoorie Management**











**Project Background** 

A Hong Kong Real Estates Company would like to deploy a IoT system to collect the building alarms from remote sites (services apartment)

**Project Description** 

LoRa sensors/LoRa Nodes for dry contact are deployed at their main building and remote site buildings to collect the alarm for water leakage, temperature & RH, water level, CT. pipe pressure, etc and transfer the alarms to main office via Internet.

ChinoINT successfully deployed a LoRaWan infrastructure and achieved the above goals.



### **Automated Air/Con Automation @ M+**

ChinoINT masters on wireless technology. Temperature and humidity feeds to the IoT gateway. Feedback to BMS and control HVAC locally







### **Smart Metering @ Transfer Station**

ChinoINT has show-cased our strengths in IOT technologies We have enabled smart metering solution in Transfer Station in Hong Kong Not only providing IOT metering with fully integrated dashboard with dashboard for real time and historical data, and also enabling real time analytic and alerts with extra values





# Thank You

sales@chinoint.com