



INTEGRAXOR

IOT SCADA 物聯網整合型控制器



文耀興業有限公司

陳俊傑

簡報大綱

- 1.描述物聯網IOT
- 2.物聯網商機將來自於應用服務
- 3.何謂**SCADA**圖控系統?
- 3.整合式工業控制器 基本架構
- 2.整合式工業控制器 硬體介面
- 3.整合式工業控制器 基本規格&功能
- 4.整合式工業控制器 通訊協定支援
- 5.選用 整合式工業控制器 優勢
- 6.整合式工業控制器 軟體介面
- 7.實機畫面&功能操作展示
- 8.Q&A時間



服務

Aecl[®]

IntegraXor
Taiwan



WELL[®]

SIEMENS

 **finder**

 **Huba Control**

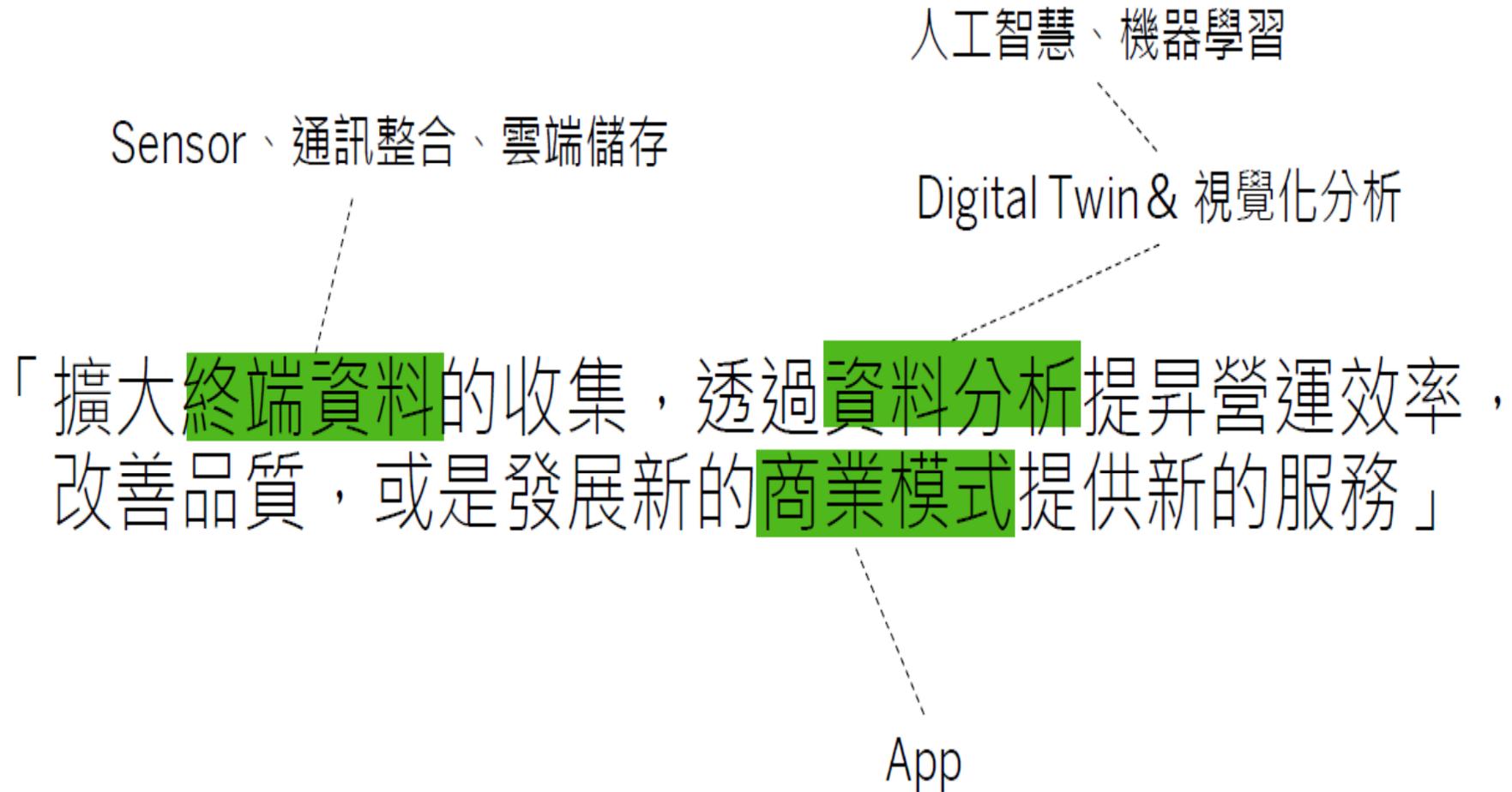
Cermate

DnH


bürkert
Fluid Control Systems

Airproof

如果用一句話描述物聯網IOT...

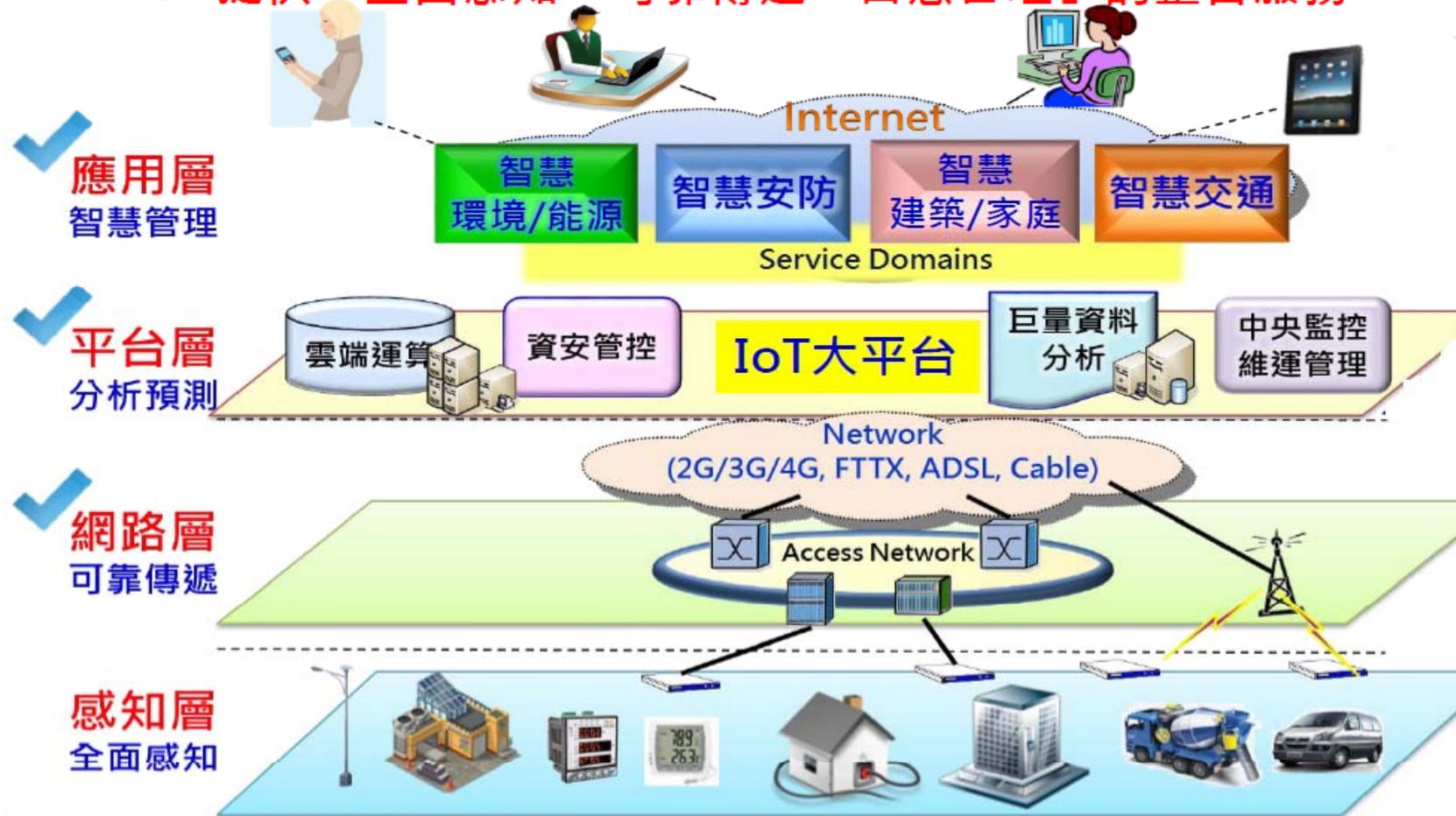


LINE訊息和警報推播功能或其他擴充需求功能...等

IoT 服務架構

IoT 定義：物物相聯的網際網路

- 使物與物或物與人之間產生聯結與互動
- 提供「全面感知、可靠傳遞、智慧管理」的整合服務



資料參考來源：中華電信

物聯網商機將來自於應用服務

- 物聯網發展重點將從硬體聯網轉成服務應用，並藉由智慧裝置、數據分析及推估預測等，將聯網資訊轉化為商業決策之輔助

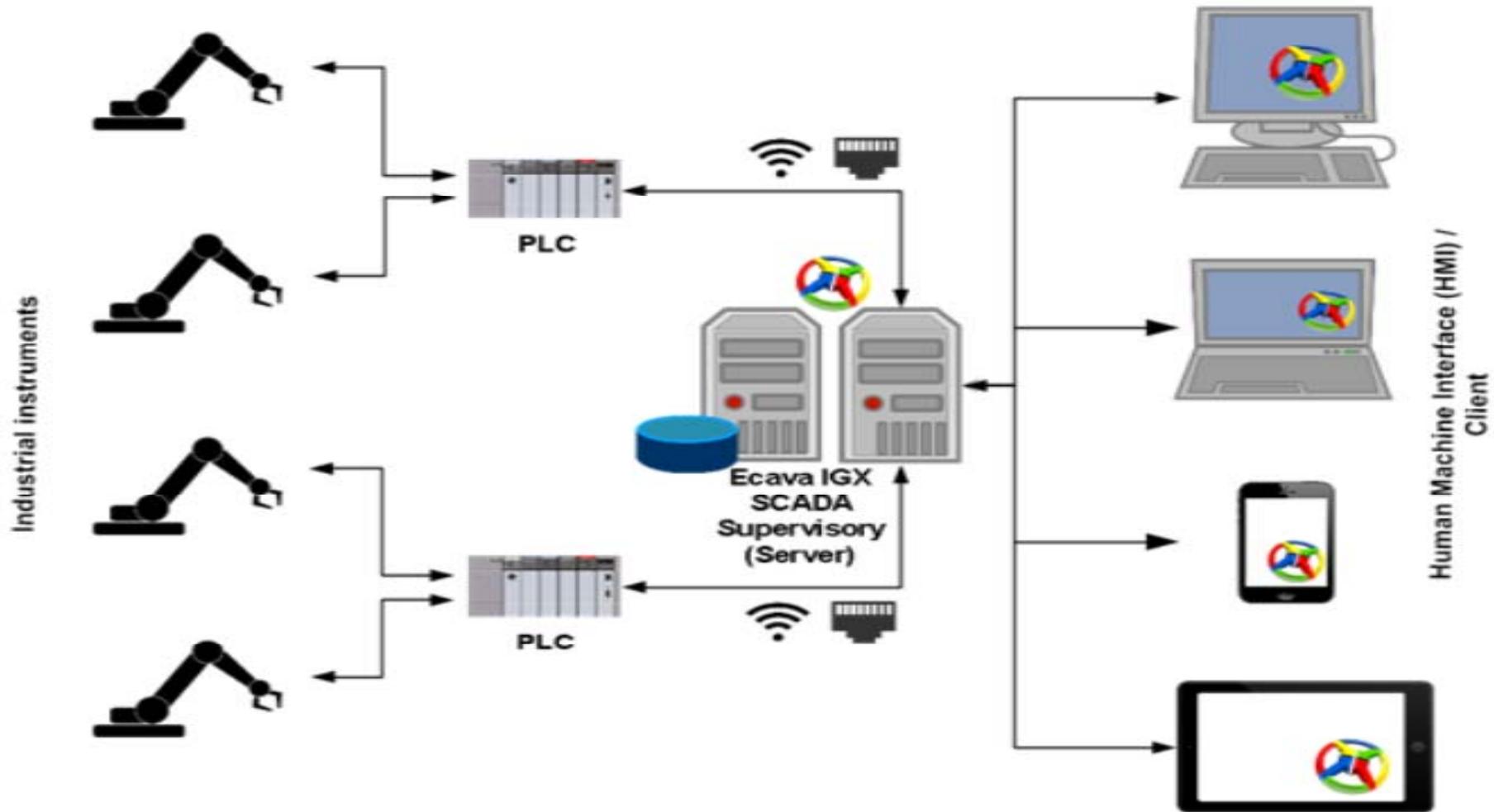


資料參考來源：MIC、IEK

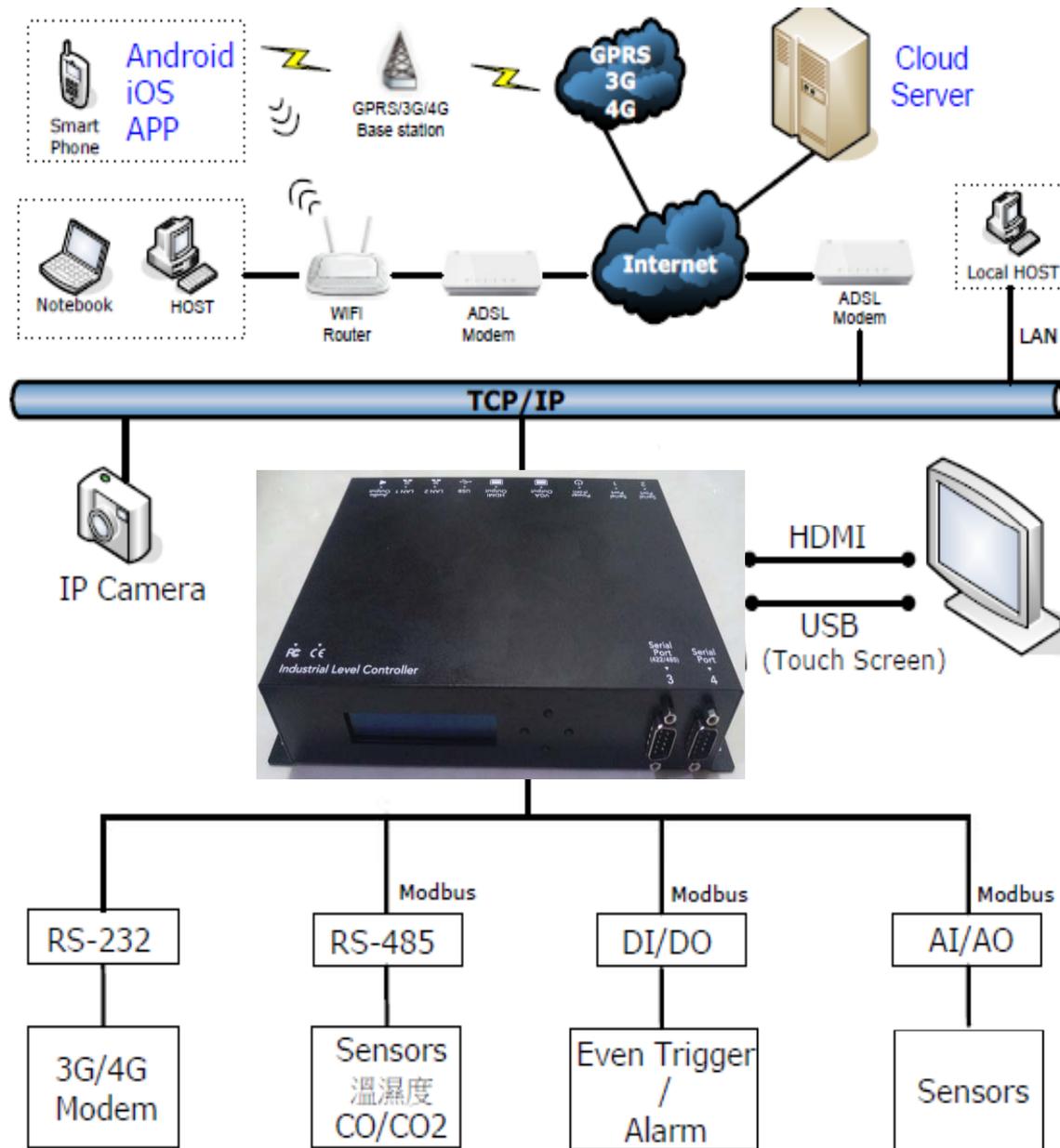
何謂SCADA圖控系統?

- 凡是具有系統監控和資料擷取功能的軟體，都可以稱之為SCADA (Supervisor Control And Data Acquisition) 軟體。
- 它是架構在 PC 之上的生產自動化及控制系統。
- 此類型軟體的應用範圍很廣，舉凡電力系統、水利系統、石油、化工、汽車業都是其應用領域。不同領域應用，所需的功能也不儘相同，但是它們都具有以下的基本特色：
 - 圖形操作介面
 - 系統狀態動態模擬
 - 即時和歷史資料趨勢曲線顯示
 - 警報處理系統
 - 資料擷取與記錄
 - 資料分析
 - 報表輸出

IGX SCADA 基本架構



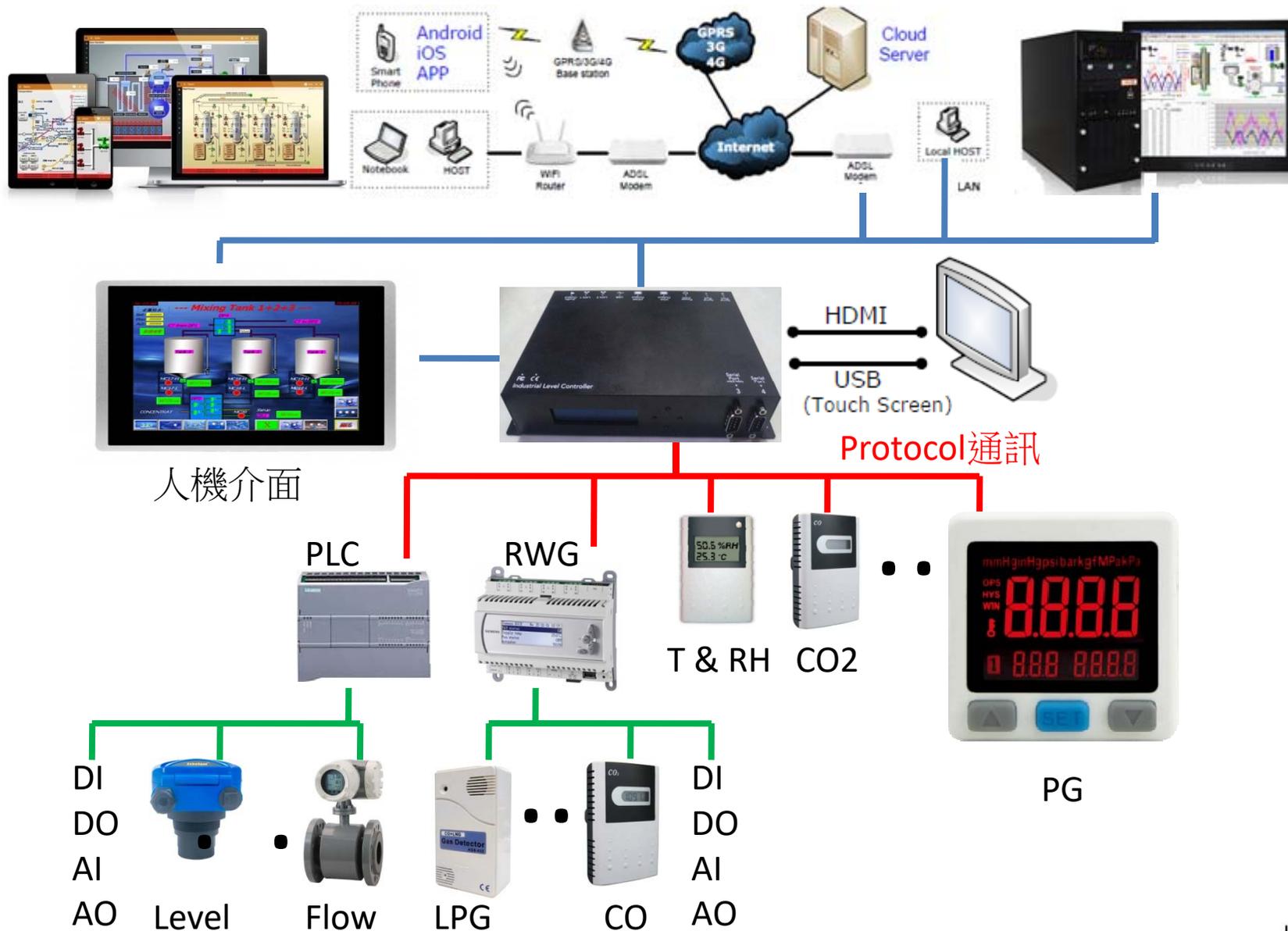
IOT SCADA 物聯網整合型控制器



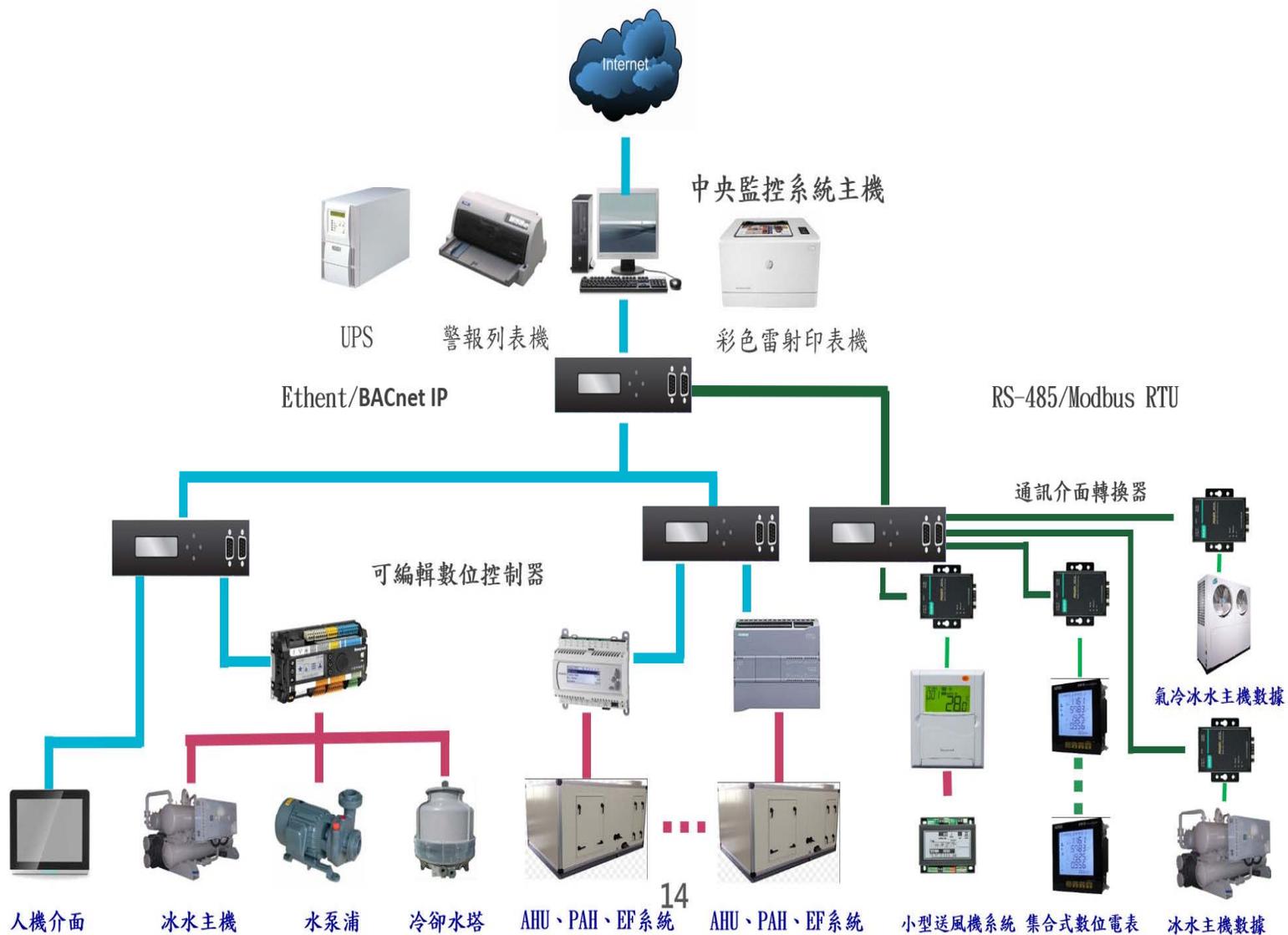
- SCADA 圖控系統
- 支援Web GUI (遠端控制界面)
- IP Camera 即時監看
- 大數據統計分析
- 簡訊/LINE警告系統
- 排程開關控制
- 延伸相關功能
- APP 或 雲端服務
- 支援線上故障排除

- 4GB RAM & 64GB ROM
- 可擴充的flash memory card
- RJ-45port*2 (WAN或LAN (ICMP, TCP/IP, DHCP))
- HDMI 輸出
- VGA 輸出
- USB port *2
- MQTT, Modbus 或 OPC UA 、 BACnet IP 或 Profinet...等

IOT SCADA 物聯網整合型控制器 架構2



HVAC自動控制系統架構說明



SCADA 可視化解決方案

- 總公司位於台灣 但工廠地點位於越南
- (如何有效達到設備監看與管理)



設備狀態與回報故障

- SMT設備上方都有**運轉燈號表示**



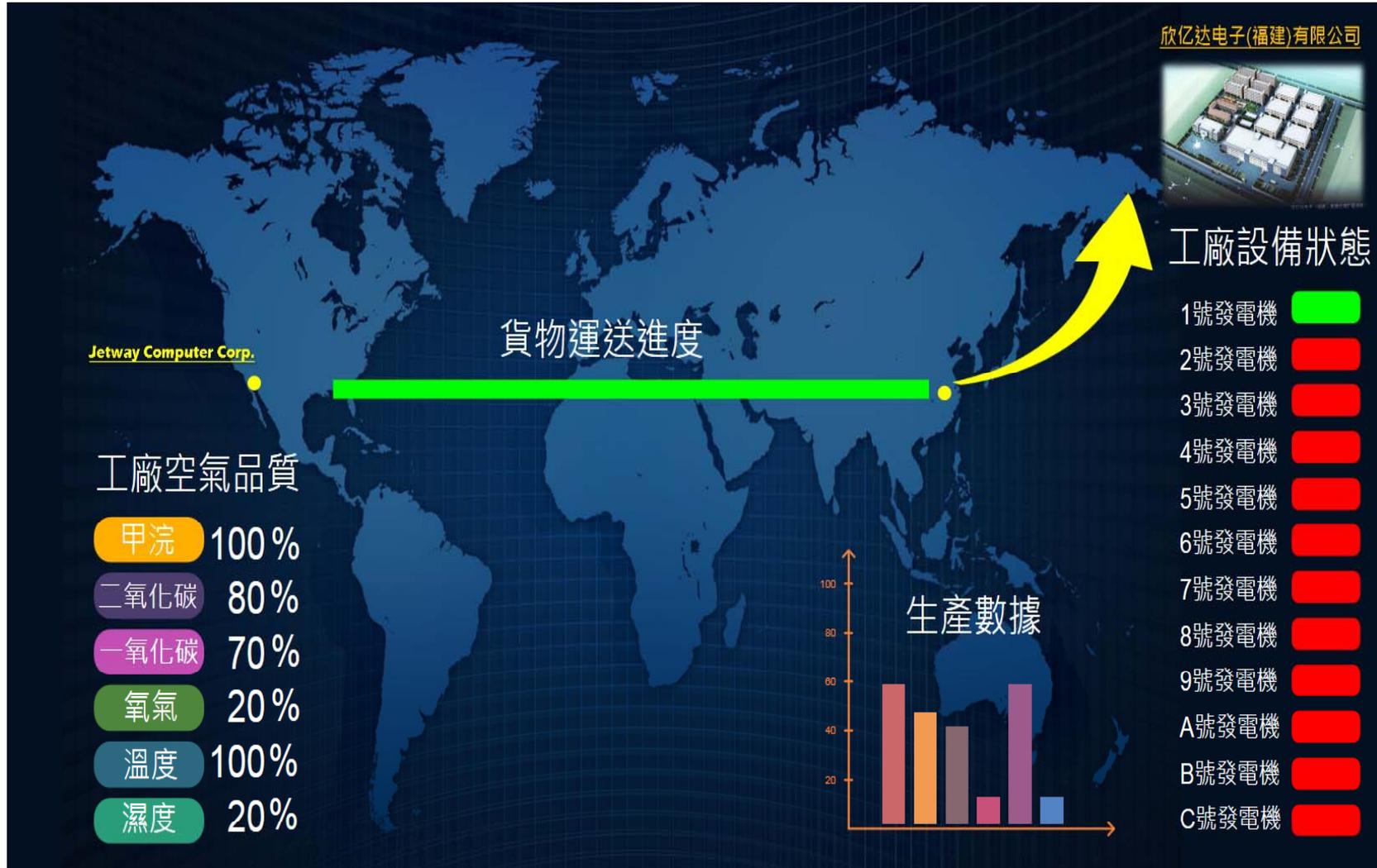
綠燈標示正常運轉
紅燈標示故障

SCADA圖控工廠運用

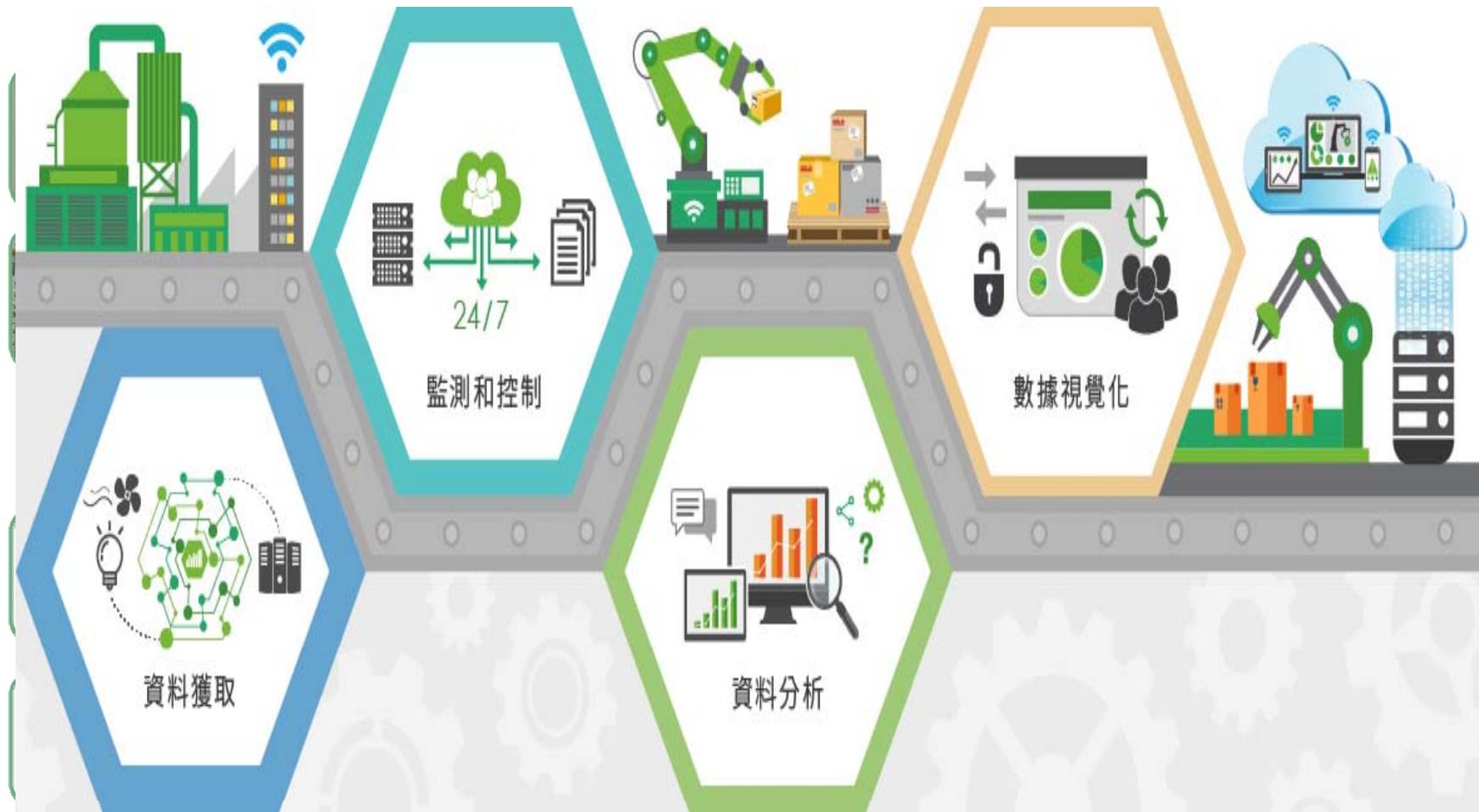
- 基於工廠設備都需要良好的管理方式
- 採用不破壞機台設備也可以得到良好的管理
- 廠內監控設備與人員管控(出勤人數)整合
- 整合廠內各種狀態(如空氣品質監測)



SCADA圖控工廠運用畫面

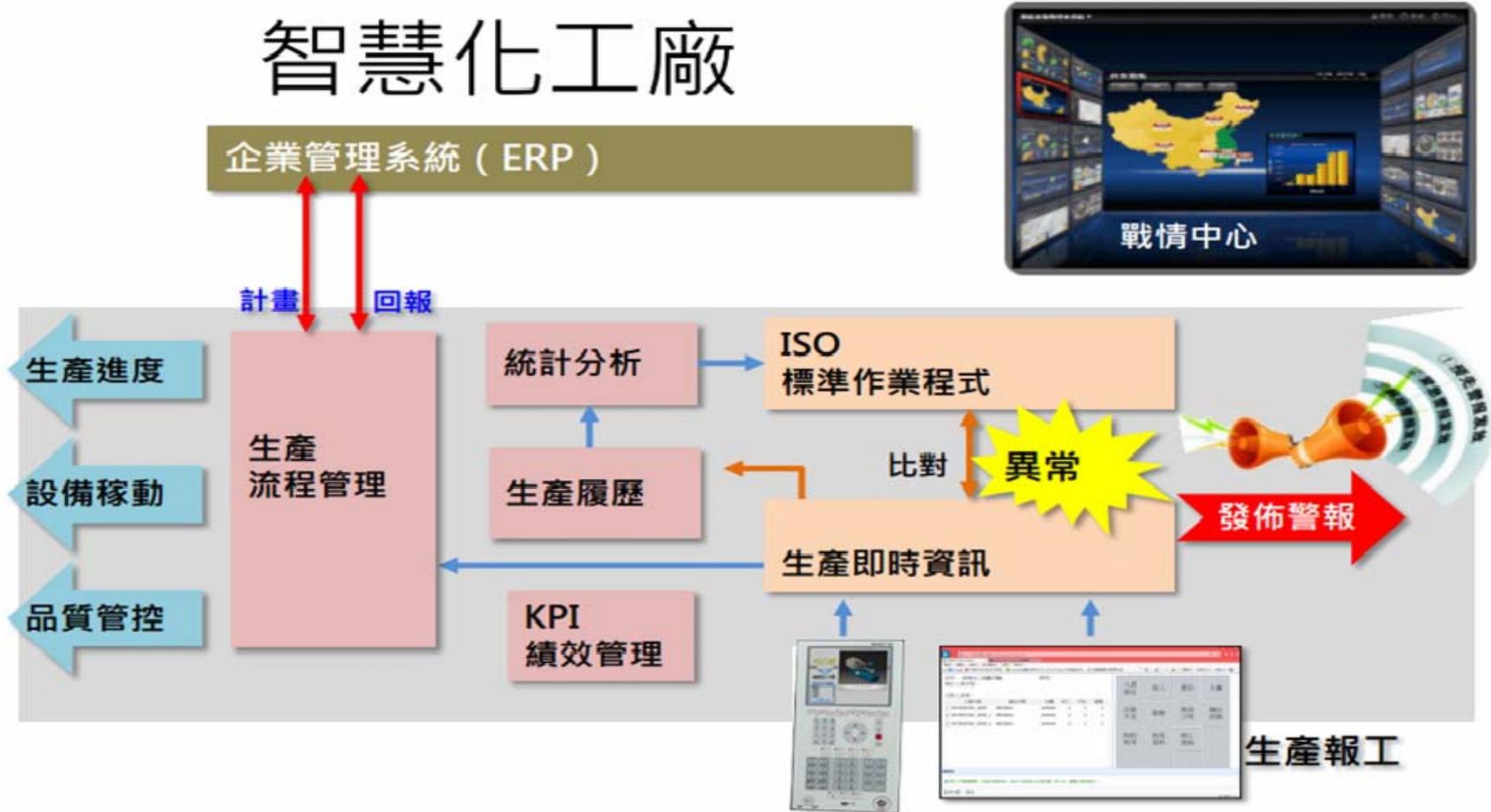


SCADA圖控工廠效益(一)

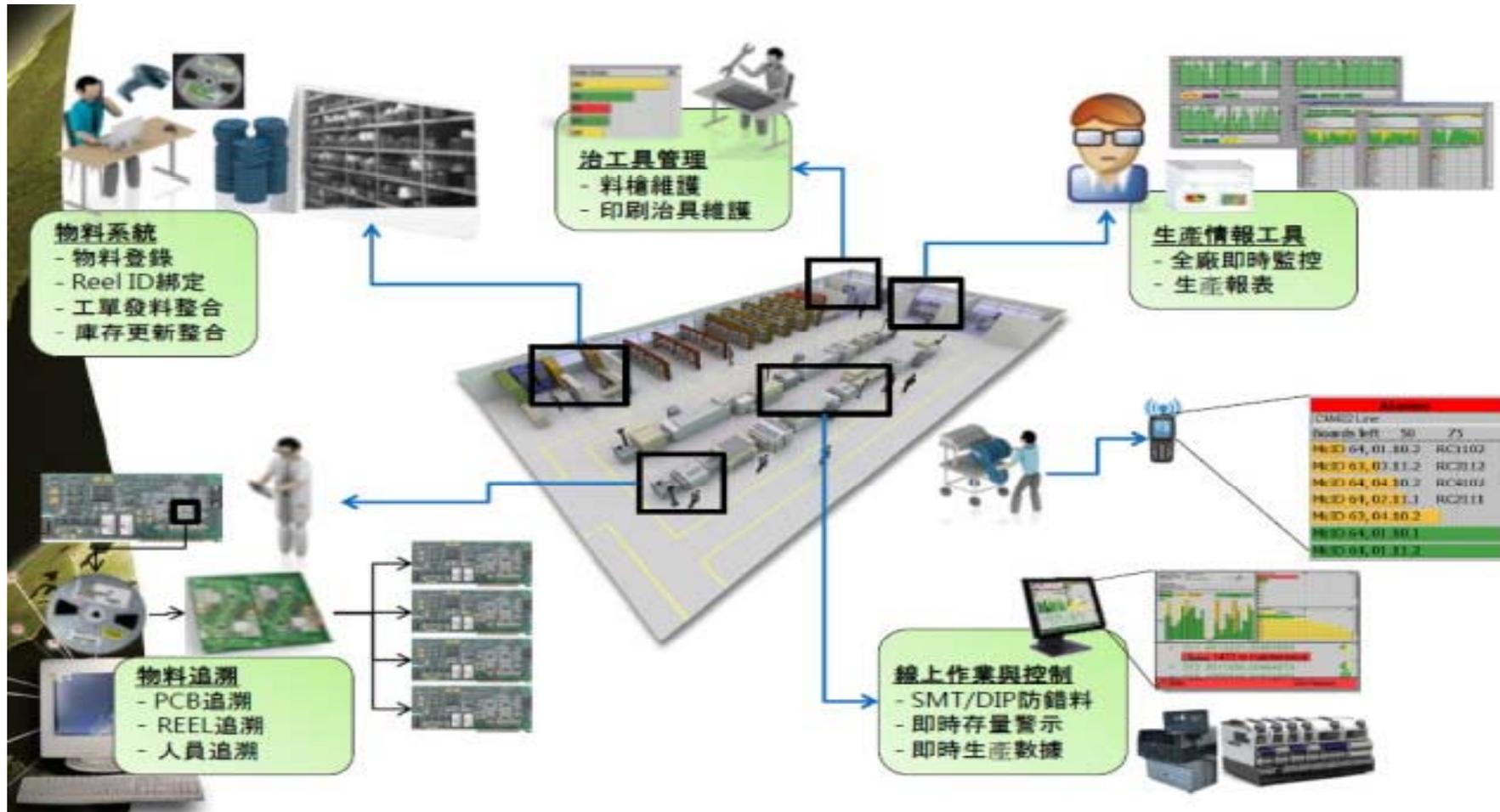


SCADA圖控工廠效益 (二)

智慧化工廠



SCADA圖控工廠效益 (三)

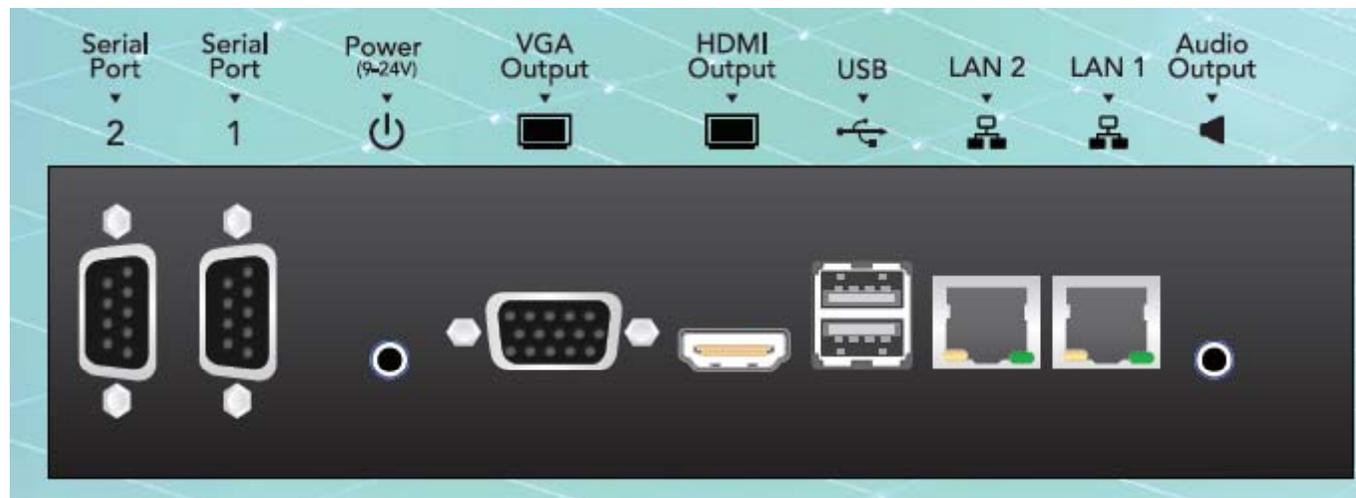


IOT SCADA整合型控制器 硬體介面-1

Front Panel



Rear Panel



IOT SCADA整合型控制器 硬體介面-2

- **Ethernet 1/2**
 - 2 x RJ-45 Connector
 - 1Gbps ICMP, TCP/IP, DHCP
- **Serial Port 1/2/4**
 - 3 x DB-9 female connector
 - For RS-232 only
- **Serial Port 3 (422/485)**
 - 1 x DB-9 female connector
 - For RS-422/RS-485 only
- **USB1~2 (Reserved)**
 - 2 x USB3.0 Type A female connector
 - Reserved (optional function)
- **HDMI output (Reserved)**
 - 1 x HDMI1.4 Type A female connector
 - Reserved (optional function)
- **VGA output (Reserved)**
 - 1 x VGADB-15 female connector
 - Reserved (optional function)
- **Audio output (Reserved)**
 - 1 x 3pins-phoenix terminal block
 - Reserved (optional function)
- **Power Supply**
 - 9-24V DC
- **Power Output**
 - 12VDC
- **Power Consumption**
 - Up to 20W
- **Operating Temperature**
 - 20°C to 75°C (4°F to 167°F)
- **Storage Temperature**
 - 40°C to 85°C (-40°F to 185°F)
- **Enclosure**
 - Metal
- **Fixedness**
 - Mounting ear with screws
- **Humidity**
 - 20 - 80% RH [Not Condensation]
- **Device Dimension**
 - 196x139x44 mm (WxDxH)

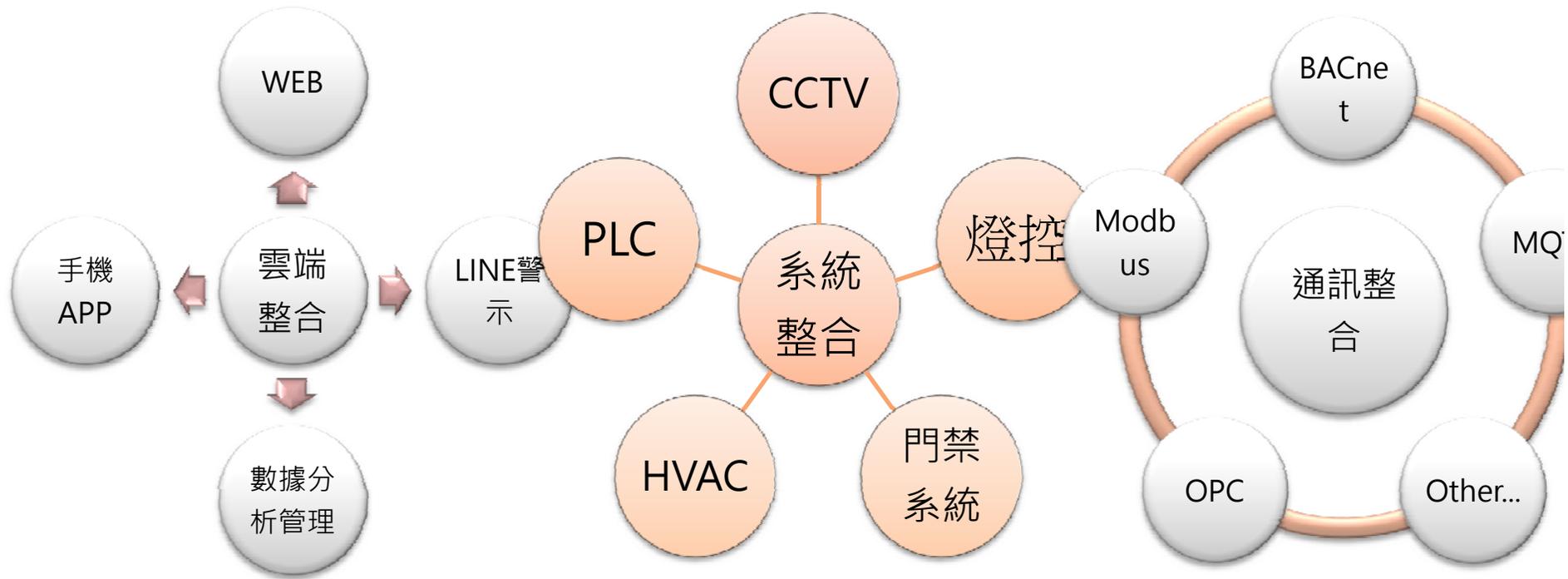
IOT SCADA整合型控制器 基本規格&功能

- 4GB RAM &32GB ROM embedded
- Expandable flash memory card
- APP control supported
- Web GUI supported
- Web SCADA supported
- Cloud management supported
- Online trouble shooting supported
- Simple setup process by Installation Wizard
- Supporting Event/Action & Schedule
- Supporting Auto Discovery for the default devices
- Adding connected devices by easily programmable process
- Generating multi-control commands by easily programmable process

IOT SCADA整合型控制器通訊協定支援 (依客戶需求選配)

SQL Driver	MQTT	BACnet/IP
DNP3 Client	SNMP Agent	SNMP Manager
Ethernet/IP	GE Fanuc SNP	Omron FINS
IEC 60870-5-101	IEC 60870-5-104	Omron Host Link
OPC DA Client	OPC DA Server	Profinet Driver
Allen-Bradley DF1	Mitsubishi Melsec-Q	Modbus Master(RTU&TCPIP)
Modbus Slave(TCPIP)		IP Address Scanner

選用 IOT SCADA 整合型控制器 優勢



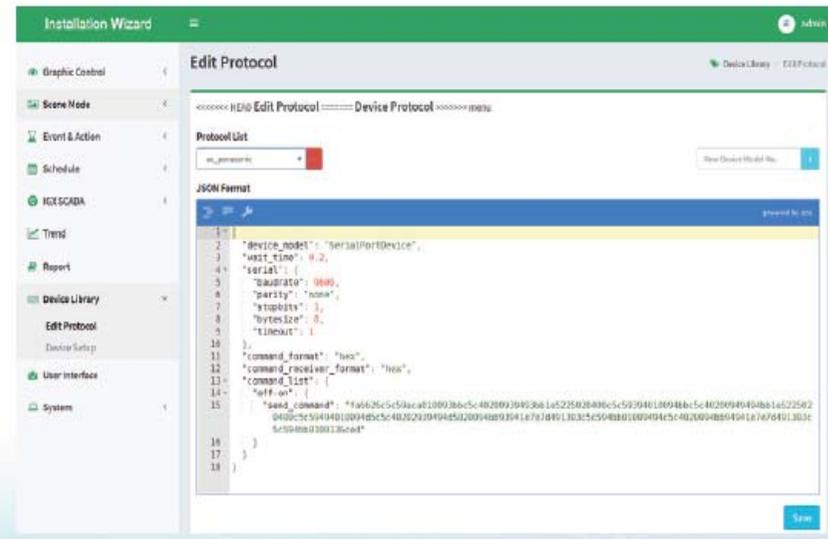
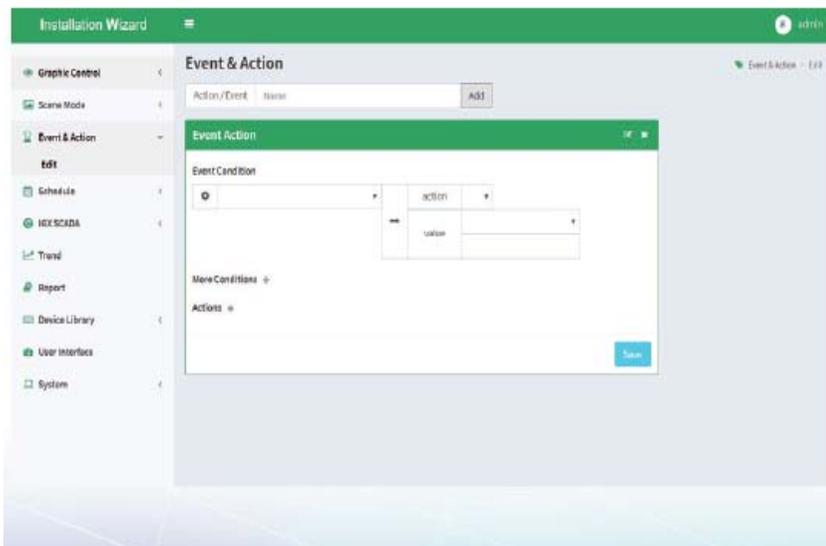
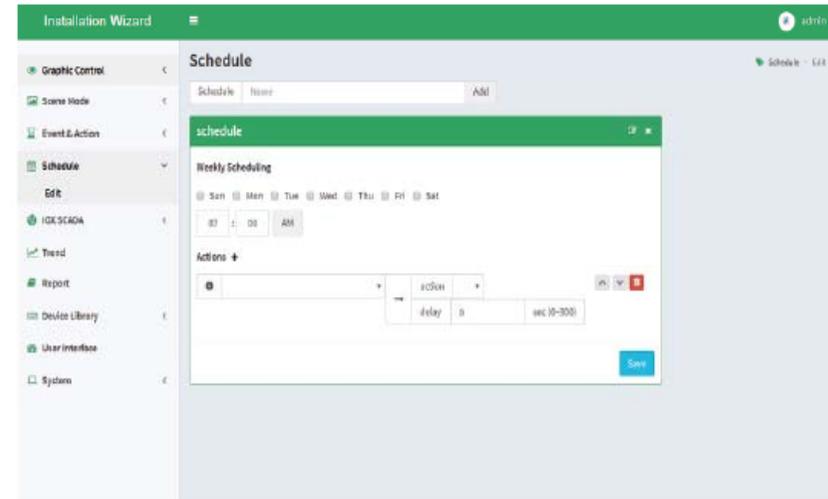
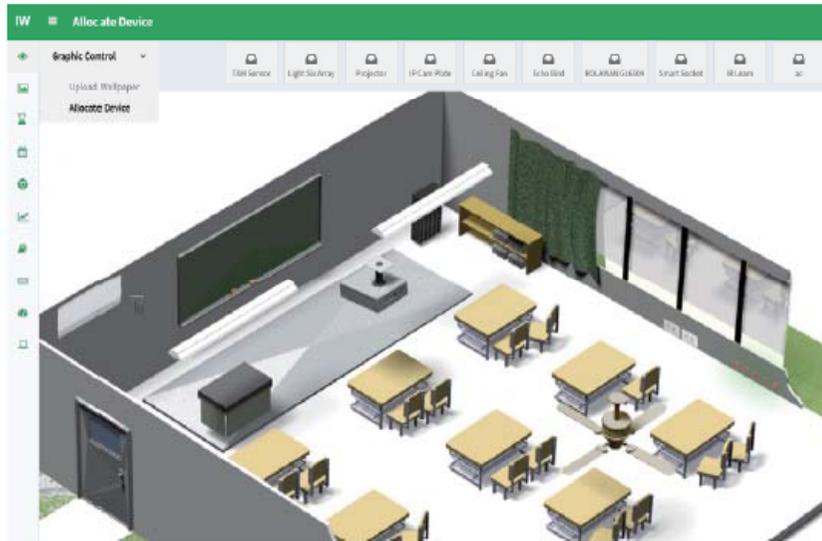
選用 IOT SCADA 整合型控制器 優勢

1. 可簡單或客制化開發的網頁儀表板
可使用 網頁伺服器，在任何平板/智慧手機皆能監視儀表板
2. 遠端維護程式(可節省人力&其他成本、提升維護效率)
3. 遠程數據:讀取和收集機械設備數據(週期資訊、警報、KPI、監看參考點、消耗資訊...)
可支援動態物件即時監看警報匯總、歷史資訊、資料紀錄趨勢圖
4. 即時監看機械設備狀況
5. 收集所有資訊推動增值服務應用(工業雲/私有雲...)
6. 進一步導入AI人工智慧&數據分析

實現之進程



整合式工業控制器 軟體介面



Installation Wizard

Installation Wizard

- Graphic Control
 - Upload Wallpaper
 - Allocate Device
- Testing
- Command Configuration
- Control Interface
- Trend
- Report
- Scene Mode
- Event & Action
- Schedule
- IGX SCADA
- System Configuration

Dashboard

Home > Dashboard

Base Picture

Image upload

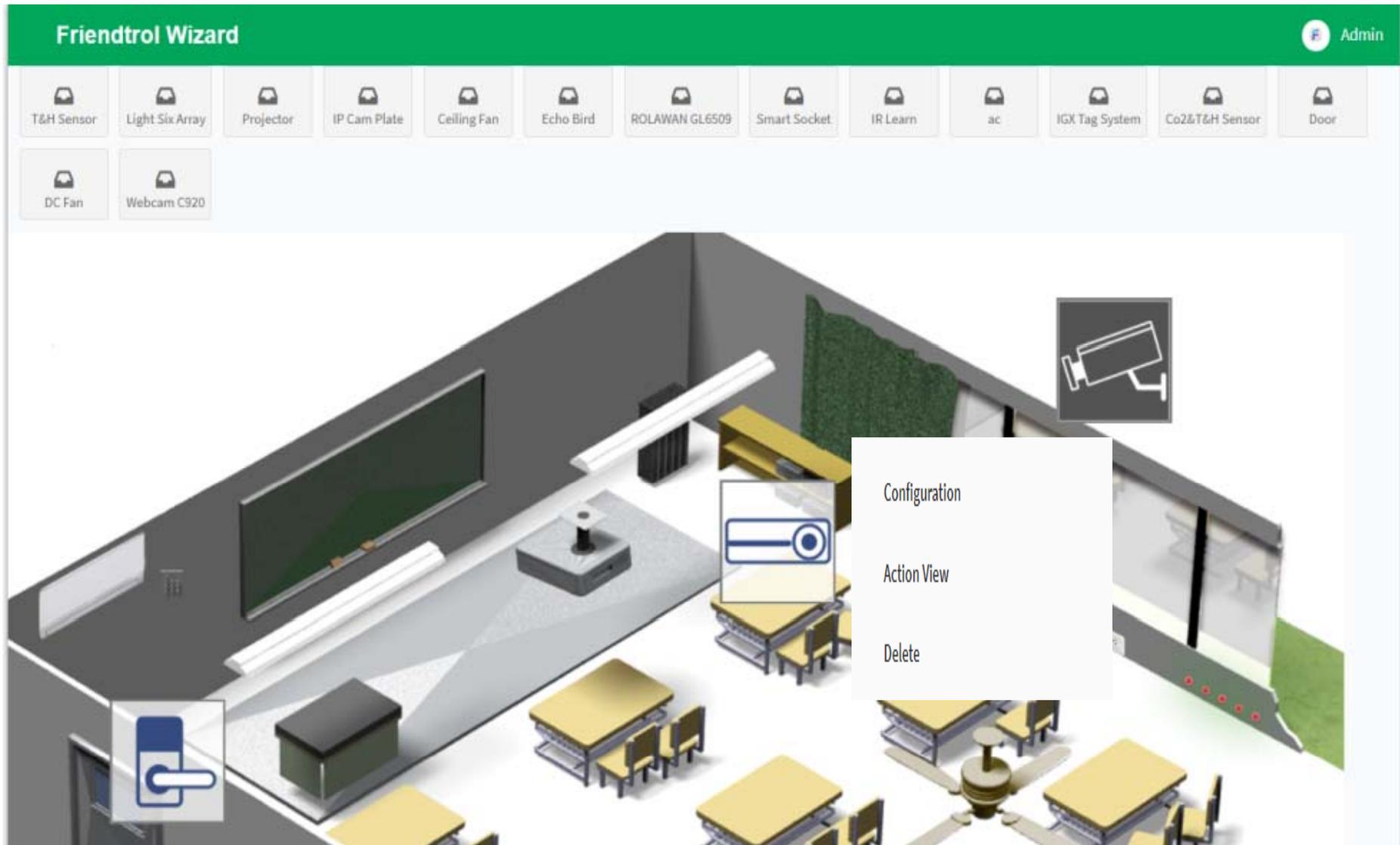
選擇檔案 未選擇任何檔案

(jpg, png, 1920x1920 2MB)



Upload

Allocate Device



Event & Actions

Action Event	Name	Add
--------------	------	-----

Project 1

Event Trigger

		→	action	
			value	

Event Condition +

Event Reaction +

Event Advance

Time Loop	20	sec (1~3600)	<input type="checkbox"/> continue
-----------	----	--------------	-----------------------------------

Save

Schedule

Action Schedule	Name	Add
-----------------	------	-----

schedule

Schedule Day

Sun Mon Tue Wed Thu Fri Sat

07 : 00 AM

Schedule Reaction +

		→	action				
			delay	0	sec (0~300)		

Save

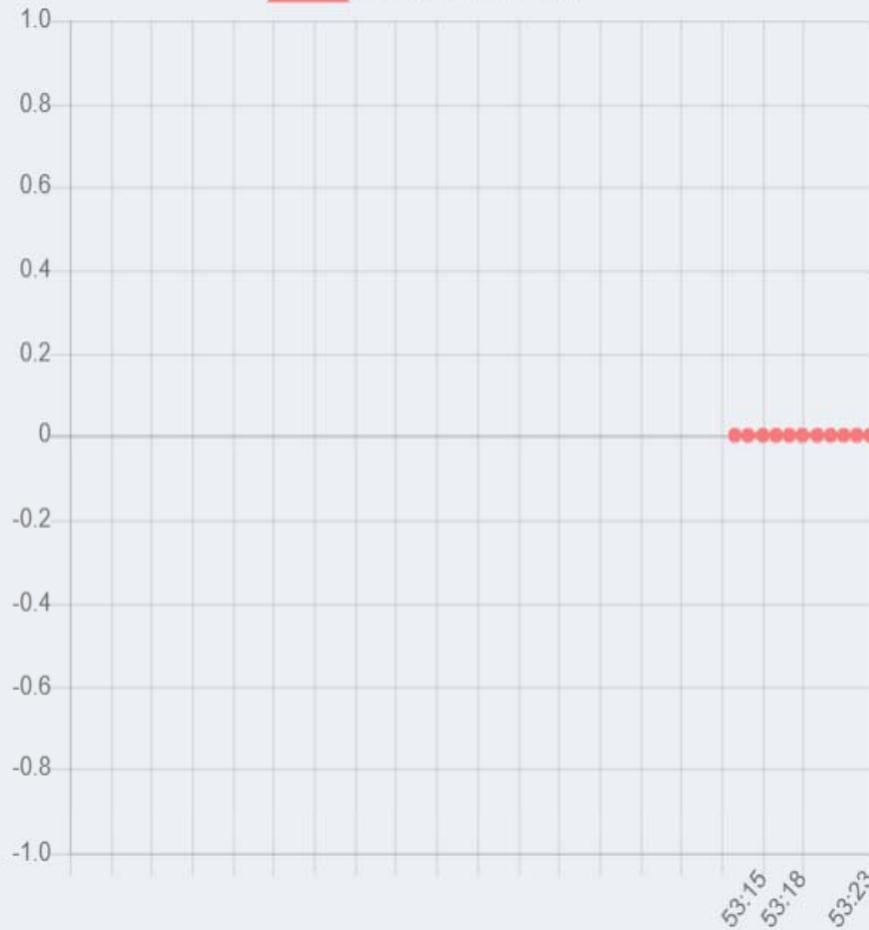
Trend

Dashboard

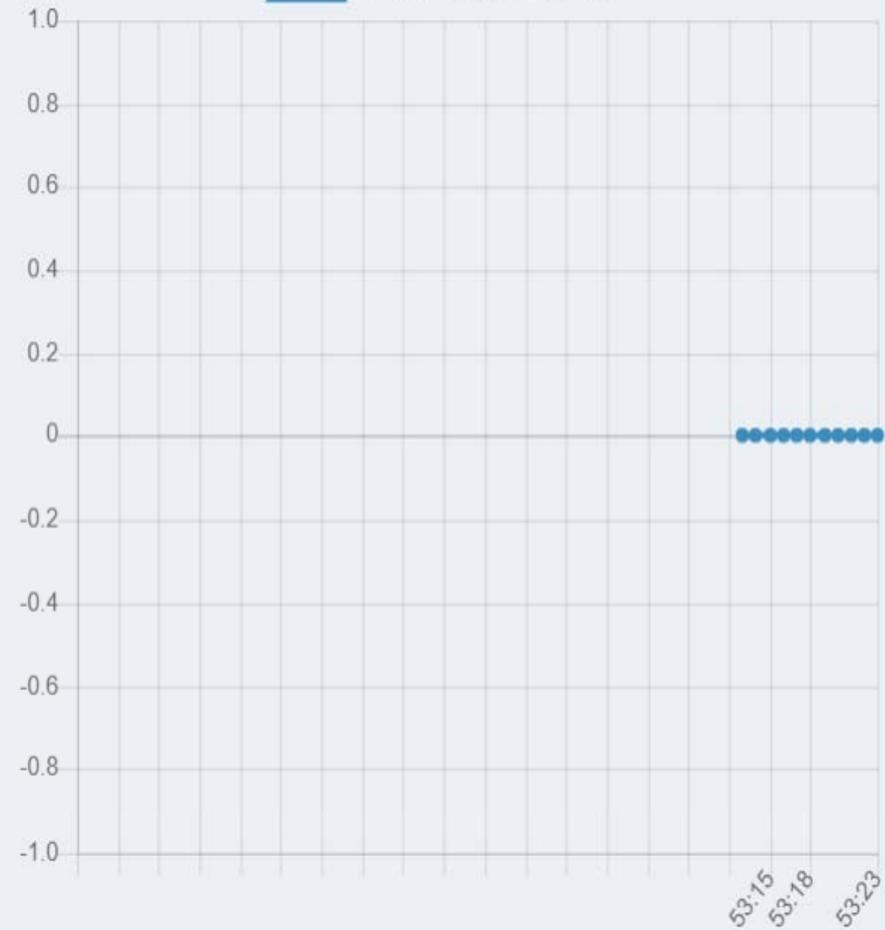
[Home](#) > [Dashboard](#)



Project P1:power status



Project P1:av mute status



Report

device	action	data_type	data_value	created_at
DC Fan 4	is on	int	0	2019-01-02 15:57:42
DC Fan 4	is on	int	0	2019-01-02 15:57:42
DC Fan 4	is on	int	0	2019-01-02 15:57:41
DC Fan 4	is on	int	0	2019-01-02 15:57:41
DC Fan 4	is on	int	0	2019-01-02 15:57:40
DC Fan 4	is on	int	0	2019-01-02 15:57:40
DC Fan 4	is on	int	0	2019-01-02 15:57:38
DC Fan 4	is on	int	0	2019-01-02 15:57:38
DC Fan 4	is on	int	0	2019-01-02 15:57:37
DC Fan 4	is on	int	0	2019-01-02 15:57:37

« < 1 2 3 4 5 ... > »

Edit Protocol

Device Model No.

 +

JSON Format

```
1 {
2   "device_model": "SerialPortDevice",
3   "wait_time": 0.2,
4   "serial": {
5     "baudrate": 9600,
6     "parity": "none",
7     "stopbits": 1,
8     "bytesize": 8,
9     "timeout": 1
10  },
11  "command_format": "hex",
12  "command_receiver_format": "hex",
13  "command_list": {
14    "off-on": {
15      "send_command": "fa6626c5c59aca010093bbc5c40200939493bb1e5225020400c5c59394010094bbc5c40200949494bb1e522502
0400c5c59494010094d5c5c40202939494d5020094bb93941e7e7d491303c5c594bb01009494c5c4020094bb94941e7e7d491303c
5c594bb0100136ced"
16    }
17  }
18 }
```

Save

Device Setup - 1

Device



<p>T&H Sensor</p> A blue icon of a thermometer with a scale on the right side.	<p>Light Six Array</p> A blue icon of a light bulb.	<p>Projector</p> A blue icon of a projector.	<p>IP Cam Plate</p> A black icon of a camera mounted on a plate.
<p>Ceiling Fan</p> A white icon of a ceiling fan with four blades on a black background.	<p>Echo Bird</p> A brown icon of a bird-shaped speaker with the word "ECHO" on its side.	<p>ROLAWAN GL6509</p> The LoRa logo, featuring the word "LoRa" in black with blue signal waves above it.	<p>Smart Socket</p> A white icon of a light bulb on a black background.
<p>IR Learn</p> A grey icon of a remote control.	<p>ac</p> A black icon of a laptop with signal waves below it.	<p>IGX Tag System</p> A colorful icon of a tag system with red, blue, and green elements.	<p>Co2&T&H Sensor</p> A blue icon of a thermometer with "CO2" written above it.

Device Setup - 2

Device Name

Ceiling Fan

Device Model No.

mrken_6he84

Device I/O type

- DI DO Serial Port Modbus MQTT Network

Device Timer

Icon



Device Active

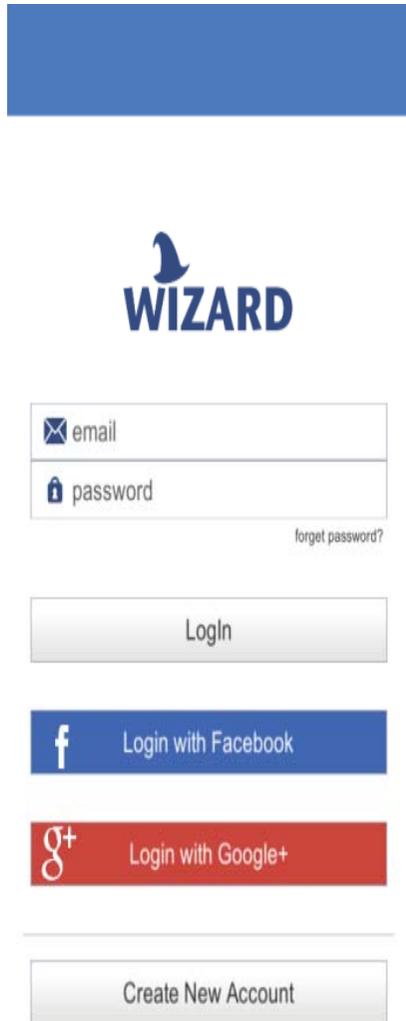
- Online Offline

Device Action +

Action ▾	high	high_speed ▾	Param 1 ▾	Action API Param 1	-
Action ▾	medium	medium_speed ▾	Param 1 ▾	Action API Param 1	-
Action ▾	off	off ▾	Param 1 ▾	Action API Param 1	-
Action ▾	low	low_speed ▾	Param 1 ▾	Action API Param 1	-

APP展示畫面

Login & Register



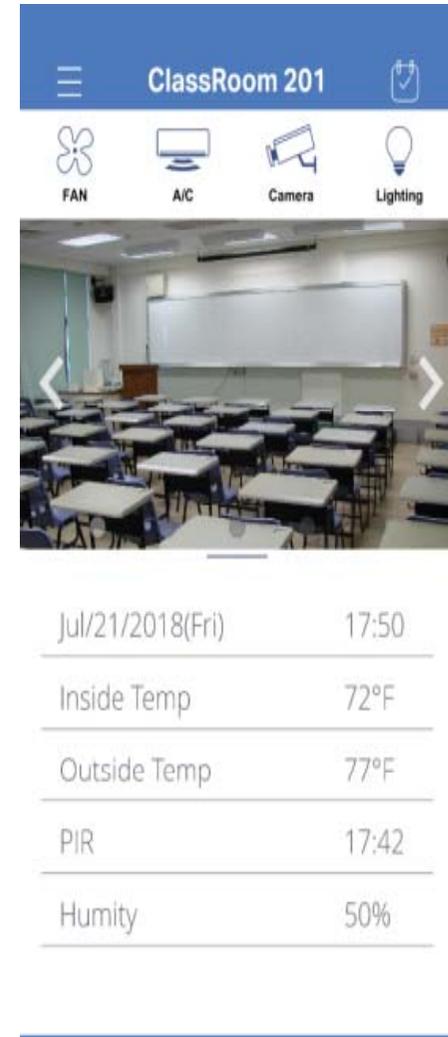
The screen features a blue header bar. Below it is the 'WIZARD' logo, which includes a blue wizard hat icon. There are two input fields: 'email' with an envelope icon and 'password' with a lock icon. A 'forget password?' link is positioned below the password field. Below the input fields is a 'Login' button. Further down are two social login buttons: 'Login with Facebook' with the Facebook 'f' logo and 'Login with Google+' with the Google+ 'g+' logo. At the bottom is a 'Create New Account' button.

Adding Controller



The screen has a blue header bar with a hamburger menu icon and the text 'Add Controller'. The form contains several input fields: 'Name' (a single text box), 'IP address' (four separate boxes for each octet), 'Port' (a single text box), 'Controller Account' (a single text box), and 'Controller Password' (a single text box). Below these fields is a large grey rectangular area. At the bottom center is a 'Confirm' button.

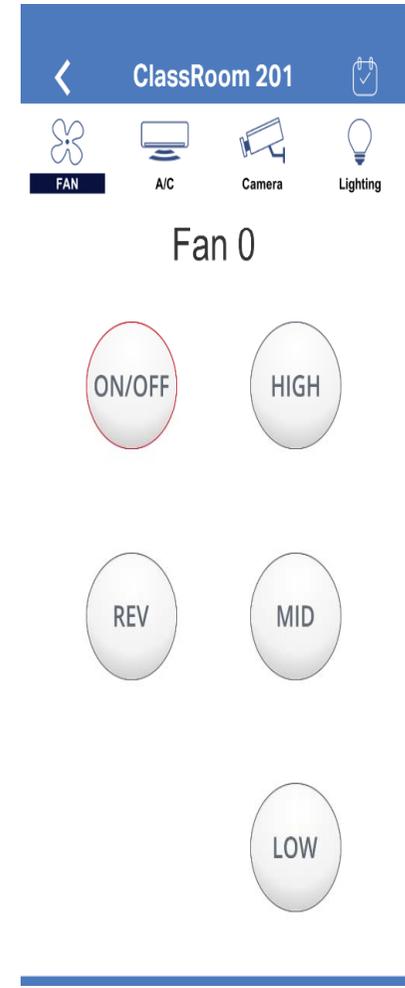
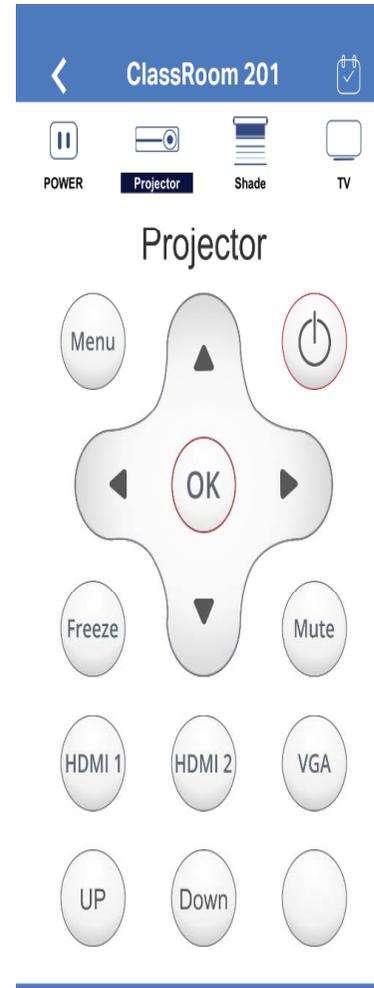
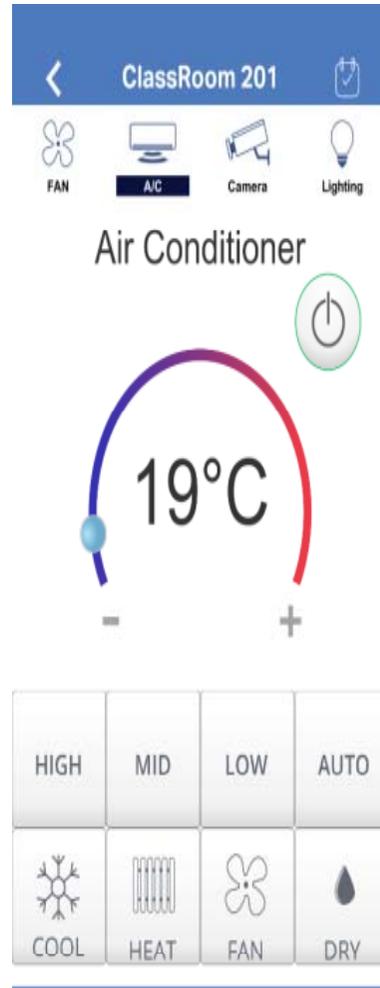
Main Page



The screen features a blue header bar with a hamburger menu icon, the text 'ClassRoom 201', and a checkmark icon. Below the header are four icons representing different controls: 'FAN' (a fan icon), 'A/C' (an air conditioner icon), 'Camera' (a camera icon), and 'Lighting' (a lightbulb icon). Below the icons is a photograph of a classroom with desks and a whiteboard, with left and right navigation arrows. At the bottom is a table displaying sensor data.

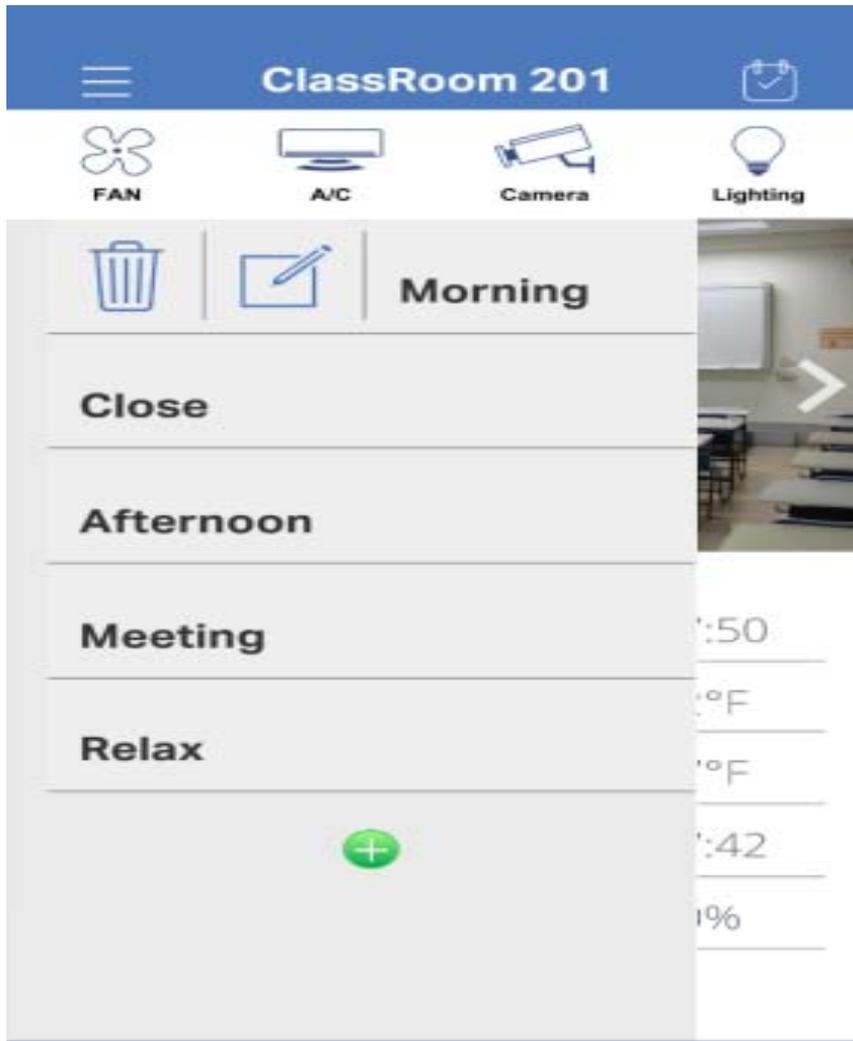
Jul/21/2018(Fri)	17:50
Inside Temp	72°F
Outside Temp	77°F
PIR	17:42
Humidity	50%

APP展示畫面 Device Control



APP展示畫面

Scene Mode



Q&A時間

感謝聆聽



文耀興業有限公司

各式儀器買賣&自動化系統整合

陳俊傑

Jacky Chen



營業項目

- ◎各式儀器買賣&維修保養
- ◎各式自動化系統設計規劃&整合
- ◎各式管閥配件買賣
- ◎水電配管工程
- ◎各式變頻器買賣&維修保養
- ◎各式設備買賣&維修保養

手機:0976-482457

電話:02-22048697

FAX:02-81927098 或 02-22048692

E-mail:wenyao1015@gmail.com

網址:https://modbus.tw/

地址:242新北市新莊區建安街69號3樓

統一編號: 66916813

營業項目

- ◎各式儀器買賣&維修保養
溫度、濕度、壓力、差壓、流量、風量、液位、氣體偵測、差壓開關、水流開關、水質儀器、PH、導電度、濁度、餘氯、溶氧、COD、SS、氨氮、PM2.5、照度計、無紙紀錄器、人機介面、CCTV監視系統、漏水檢知器(線)、集合式電表、各式轉換器&顯示器...等相關儀器
- ◎各式自動化系統設計規劃&整合
PLC、DDC、空調、電力、燈控、門禁、水質、水處理...等相關系統整合
- ◎網頁圖控軟體SCADA、IOT物聯網應用
- ◎各式軟硬體設備&系統開發
- ◎各式管閥配件買賣
手動閥、電動閥、氣動閥、PVC、PP、PVDF、SUS...等相關管閥配件
- ◎水電配管工程
- ◎各式變頻器買賣&維修保養
- ◎各式設備買賣&維修保養



INTEGRAXOR