

CL-201-WF
CL-202-WF
CL-203-WF
CL-204-WF
CL-205-WF
CL-206-WF
CL-207-WF
CL-208-WF

Remote CO/CO2/NH3/H2S/HCHO/TVOC/Temperature/
Humidity/Dew Point Data Logger Module

Features

- Able to record CO, CO2, HCHO, H2S, NH3, TVOC, Temperature, Humidity and Dew Point Measurements
- Non-dispersive Infrared (NDIR) CO2 Senso
- Up to 450,000 records with date and time stamps
- Simple and Powerful Software Utility, iOS APP and Android App Included
- Supports the DCON and Modbus RTU/TCP Protocols
- Supports the MQTT Protocol for Ethernet Interface
- Includes RS-485/Ethernet/Wi-Fi Communication Interfaces
- Relay Output for Alarm or IAQ Device Control
- Compatible with IEEE802.11b/g/n standards
- Includes redundant power inputs: PoE (IEEE 802.3af, Class 1) and DC input
- Support Infrastructure and Limit-AP Modes for Wireless Networks
- Ceiling Mounting or Wall Mounting

Introduction

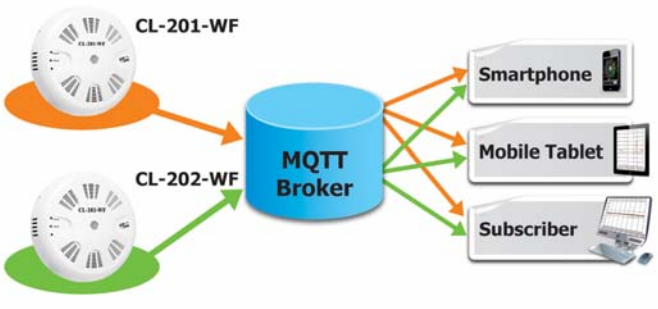
The CL-200-WF is an IAQ (Indoor Air Quality) monitoring module that includes Wi-Fi, Ethernet and RS-485 interfaces, It provides a WLAN connection which complies with the IEEE802.11b/g/n standards. With the popularity of 802.11 network infrastructure, the modules provide an easy method of incorporating wireless connectivity into monitoring and control systems. The CL-200-WF series of Data Logger devices can be used to record CO, CO2, HCHO, H2S, NH3, TVOC, Temperature, Humidity and Dew Point information, including date and time stamps, and are able to store up to 450,000 downloadable records.

Real-time data can be accessed from the CL-200-WF Data Logger from anywhere and at any time using the free Windows software, the iOS App or the Android App, as long as they are connected to the same local network as the Data Logger.

Support is provided for popular industrial protocols such as DCON, Modbus RTU, and Modbus TCP. For Ethernet interface, it also supports the emerging machine-to-machine (M2M)//)IoT (Internet of Things) connectivity protocol – MQTT. The CL-200-WF Data Logger can be connected via widely used communication interfaces including RS-485, Ethernet, PoE and Wi-Fi, meaning that the device can be easily integrated into existing HMI or SCADA systems, and is easily maintained in a distributed control system.

Supports the MQTT Protocol for IoT Applications Features (Ethernet Interface Only)

The MQTT protocol is designed for the efficient exchange of real-time data between a sensor and a mobile device. It operates via TCP/IP and is in widest use today in "machine-to-machine" (M2M) and "Internet of Things" applications.



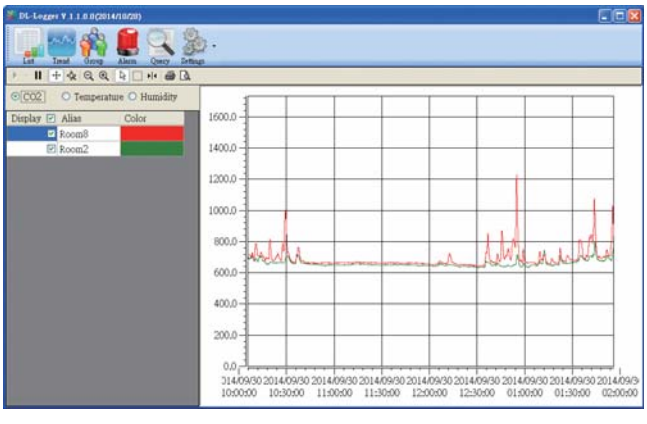
Simple and Powerful Utility

The DL300 Utility can be used to configure the modules, monitor real-time data, group CL-200-WF modules so that the status of distribution groups can be viewed and managed. The utility also allows the log data to be downloaded and exported to a .CSV file that can then be imported into any industry-standard software or spread sheet for analysis.

Get Real-time Data Anywhere and Anytime

Real-time data from the CL-200-WF data logger can be accessed from anywhere and at any time using the DL300 Utility, the iOS or Android App, or via a regular web browser, as long as they are connected to the same local network as the data logger.

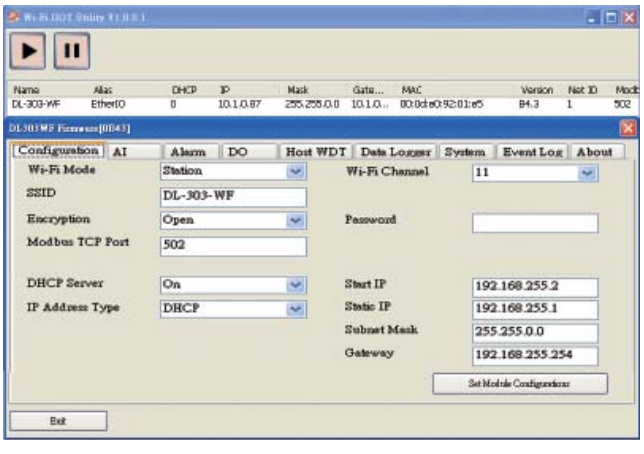




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Real-time data from the CL-200-WF series can be accessed from anywhere and at any time using the WF-IIOT-Utility and iOS App.

▲ iOS APP QR CODE ▲ Android APP QR CODE



System Specifications

Model	CL-201-WF	CL-202-WF	CL-203-WF	CL-204-WF	CL-205-WF	CL-206-WF	CL-207-WF	CL-208-WF
System								
CO Alarm	Yes	-	Yes	-				
CO2 Alarm	-	Yes	Yes	-				
HCHO Alarm	-			Yes	-		Yes	-
TVOC Alarm	-			Yes	-			Yes
NH3 Alarm	-				Yes	-		
H2S Alarm	-					Yes	-	
RH/Temperature Alarm	Yes							
Real Time Clock	Yes							
Data Logger	Yes, up to 450,000 records							
Relay Output	Form A×1, SPST 30 VDC @ 16 A or 250 VAC @ 16 A							
Communication								
RS-485 Port	Baud Rate = 1200 ~ 115200 bps							
Ethernet Port	10/100 Base-TX, 8-Pin RJ-45 x1 (Auto-negotiating, Auto-MDI/MDIX, LED indicators)							
Security	IP filter (whitelist) and Password (web)							
Protocol	Modbus/RTU(RS-485), Modbus TCP(Ethernet, Wi-Fi) and MQTT(Ethernet)							
Dual Watchdog	Yes, Module (2.3 seconds), Communication (Programmable)							
Wi-Fi Interface								
Antenna	Antenna = 1 dBi (PCB Antenna)							
Output Power	18 dBm @ 1 DSSS, 14.5 dBm @ 54 OFDM							
Receive Sensitivity	-95.7 dBm @ 1 DSSS, -74.0 dBm @ 54 OFDM							
Standard Supported	IEEE 802.11 b/g/n							
Wireless Mode	Infrastructure & Limited AP							
Encryption	WEP, WPA and WPA2							
Transmission Range	50 meters (LOS)							
Electrical								
Powered from Terminal Block	+12 to +48 VDC							
Power Consumption (Non-PoE)	1.6 W (Max.)	1.6 W (Max.)	1.7 W (Max.)	1.9 W (Max.)	1.7 W (Max.)	1.7 W (Max.)	2.0 W (Max.)	1.9 W (Max.)
Power Consumption (PoE)	1.7 W (Max.)	1.7 W (Max.)	1.8 W (Max.)	2.0 W (Max.)	1.8 W (Max.)	1.8 W (Max.)	2.1 W (Max.)	2.0 W (Max.)
Mechanical								
Installation	Ceiling Mounting/Wall Mounting							
Protection Class	IP20							
Dimensions (D x H)	Ø 150 mm x 53 mm							
Environment								
Operating Temperature	0 to +50°C							
Storage Temperature	-30 to +75°C							
Humidity	10 to 90% RH, Non-condensing							

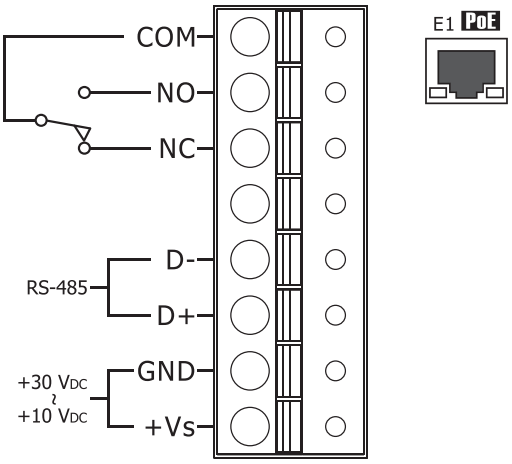
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I/O Specifications

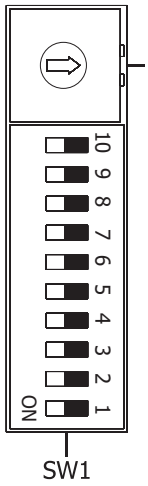
Model	CL-201-WF	CL-202-WF	CL-203-WF	CL-204-WF	CL-205-WF	CL-206-WF	CL-207-WF	CL-208-WF
CO Measurement								
Range	0 to 1000 ppm (Electrochemical)	-	0 to 1000 ppm (Electrochemical)	-				
Resolution	1 ppm	-	1 ppm	-				
Accuracy	±5% of measured value	-	±5% of measured value	-				
Response Time	30 seconds	-	30 seconds	-				
Warm-up Time	300 seconds	-	300 seconds	-				
CO2 Measurement								
Range	-	0 to 9999 ppm (NDIR)		-				
Resolution	-	1 ppm		-				
Accuracy	-	±40 ppm ±3% of measured value		-				
Response Time	-	120 seconds		-				
Warm-up Time	-	5 minutes		-				
HCHO Measurement								
Range	-			0 to 2000 ppb (Electrochemical)	-		0 to 2000 ppb (Electrochemical)	-
Resolution	-			1 ppb	-		1 ppb	-
Accuracy	-			-	-		-	-
Response Time	-			≤60 seconds	-		≤60 seconds	-
Warm-up Time	-			180 seconds	-		180 seconds	-
TVOC Measurement								
Range	-			0 to 60000 ppb (MEMS Metal Oxide)	-			0 to 60000 ppb (MEMS Metal Oxide)
Resolution	-			1 ppb	-			1 ppb
Accuracy	-			±15%	-			±15%
Response Time	-			60 seconds	-			60 seconds
Warm-up Time	-			180 seconds	-			180 seconds
NH3 Measurement								
Range	-				0 to 100 ppm (Electrochemical	-		
Resolution	-				1 ppm	-		
Accuracy	-				±5% of measured value	-		
Response Time	-				< 120 Sec	-		
Warm-up Time	-				180 Sec	-		
H2S Measurement								
Range	-					0 to 100 ppm (Electrochemical)	-	
Resolution	-					1 ppm	-	
Accuracy	-					±5% of measured value	-	
Response Time	-					< 120 Sec	-	
Warm-up Time	-					180 Sec	-	
Temperature Measurement								
Range	-10 to +50°C							
Resolution	0.1°C							
Accuracy	±0.6°C							
Relative Humidity Measurement								
Range	0 to 100% RH, Non-condensing							
Resolution	0.1% RH, Non-condensing							
Accuracy	±5% RH, Non-condensing							
Dew Point								
Range	Calculated using temperature and relative humidity							
Resolution	0.1°C							

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Pin Assignments & WireConnections

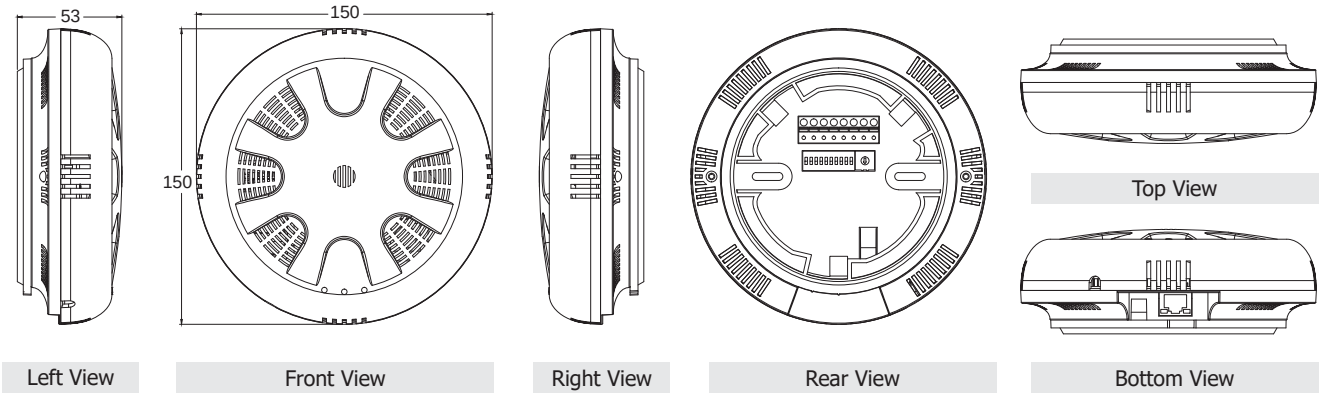


DIP Switch Settings



SW1-	ON	OFF
1	DCON	Modbus
2	SW Config	HW Config
3	High Node	Low Node
4	INIT	RUN
5~10	Reserved	

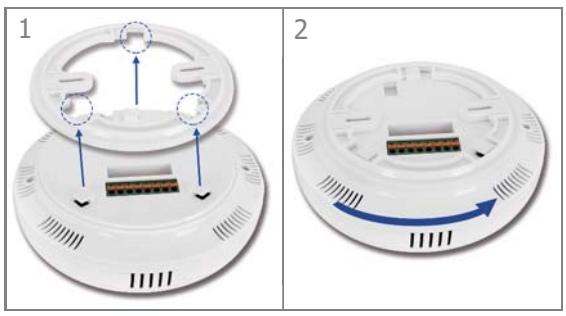
Dimensions (Units: mm)



Left View | Front View | Right View | Rear View | Top View | Bottom View

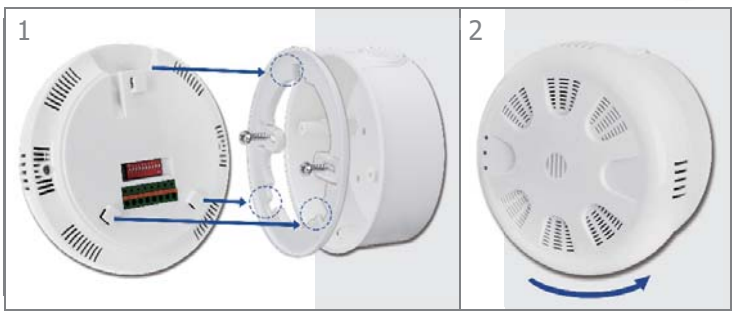
Installation

Ceiling Mounting



Wall Mounting (+ External Wall Box EWB-C150)





CL-2xx-E + RJ45 Cable:

CL-2xx-E (Ethernet Type) are with optional angle-bent RJ45 cable to smoothly install the Ethernet plug in the hole of the ceiling-mounted.



CA-RJ45-04
(30 cm)



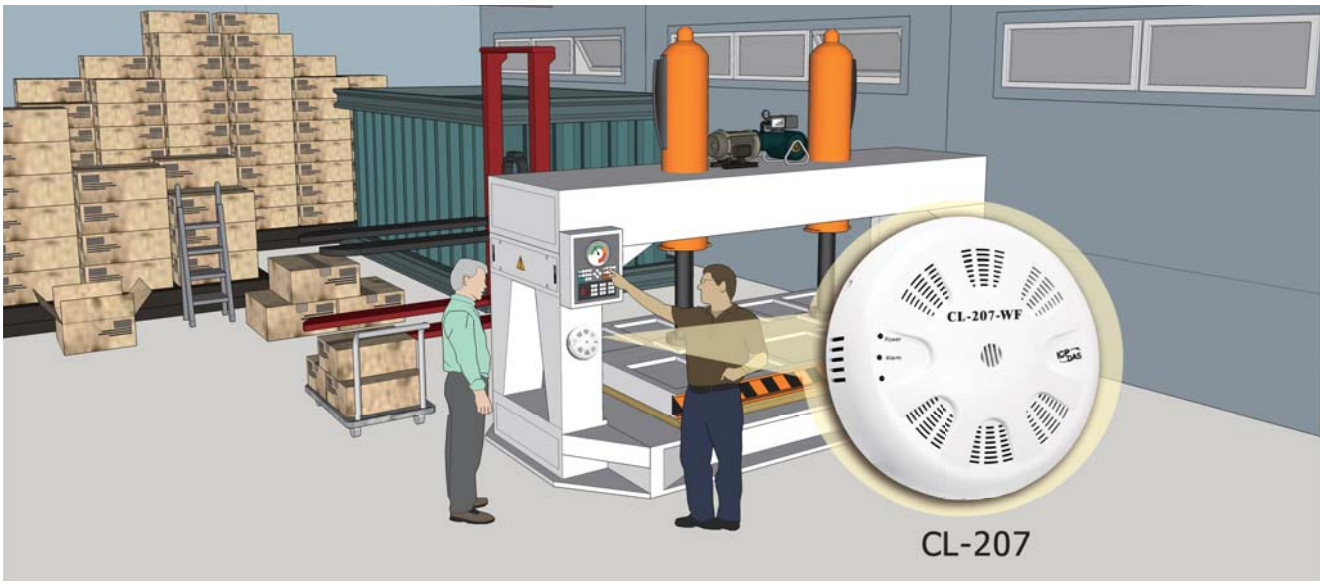
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Applications

- Transportation of Food or Pharmaceuticals
- Food and Beverage Industry (HACCP)
- Blood Stations and Pharmacies
- Building and Energy Management
- Warehouse Management
- Museums, Archives and Galleries

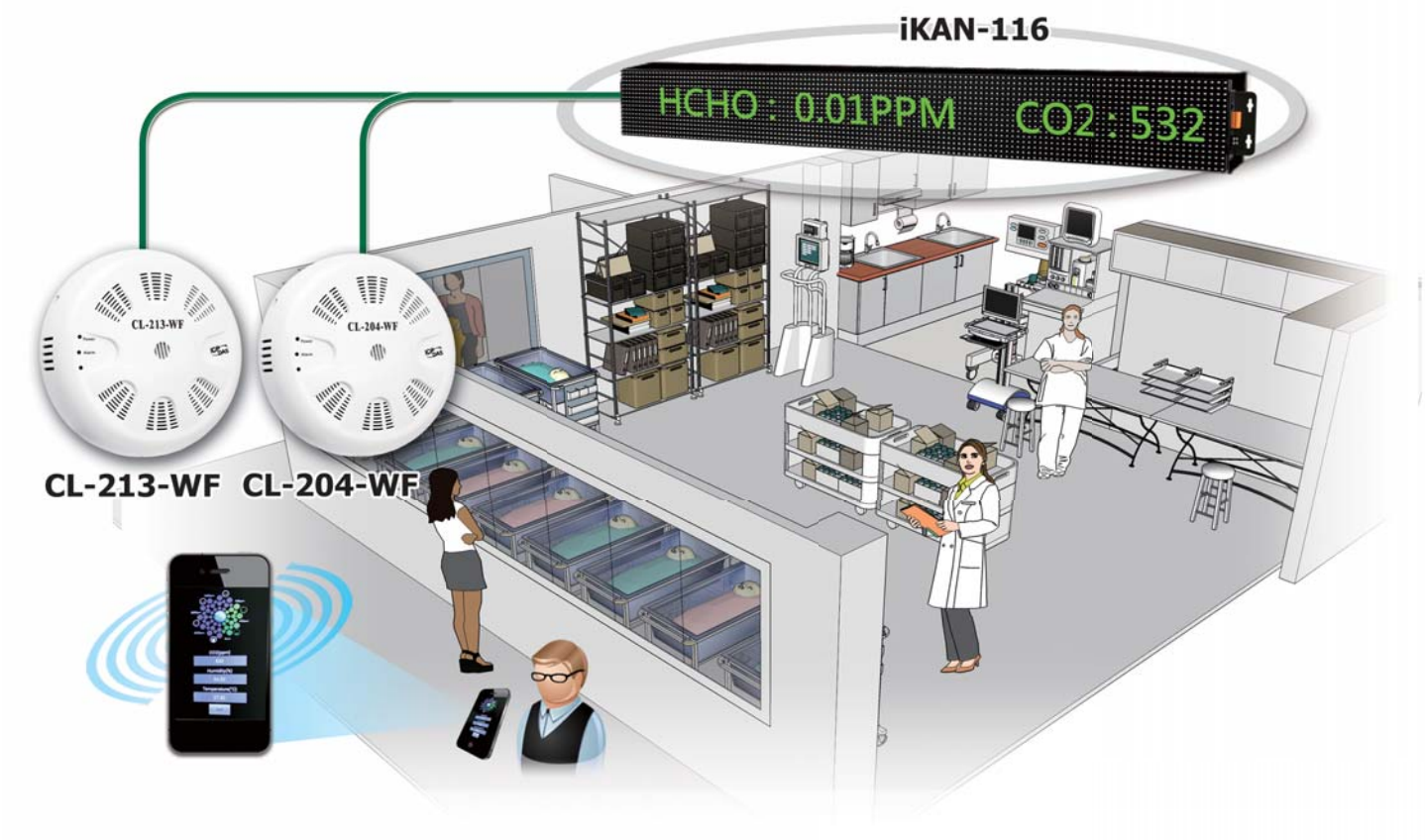
HCHO (Formaldehyde) / VOC Detector Automatic Solution

The **HCHO/VOC** detector provides an instantaneously warning of toxic formaldehyde, which can be found in a plywood factory, furniture factory and new interior remodelling house commonly.



Preschool Air Quality Monitoring

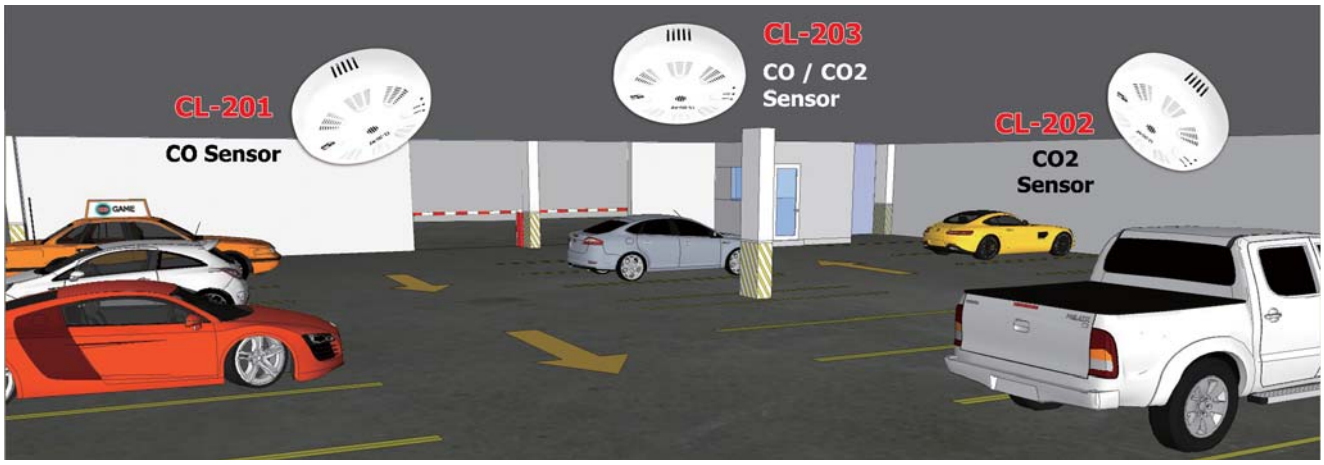
Indoor air quality is a key matter for children in preschool. ICP DAS provide a solution toward this environment include CL-213-E, CL-204-E modules to monitor the fumes and Particle Matters such as PM1, PM2.5, PM10, CO, CO2, HCHO, TVOC, and etc. Combine with ICP DAS iKAN series LED monitors, teachers in the preschool can easily check the real-time Air Quality Index. Furthermore, diversity of SCADA software is also compatible with these monitoring modules and can upload received data into remote database. Teachers can use their mobile App to remotely check the AQI or other fumes data to make sure that the Air Quality is always in the safety range.



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Indoor or Underground Parking Lot Automatic Monitoring Solution

The air quality automation system for indoor or underground parking lot can use the CL-200-WF series modules to monitor the health and safety information, such as CO, CO2, temperature, humidity and dew point, and more...



Ordering Information

CL-201-WF CR	Remote CO/Temperature/Humidity/Dew Point Data Logger with Ethernet/RS-485/Wi-Fi Interfaces and PoE (RoHS)
CL-202-WF CR	Remote CO2/Temperature/Humidity/Dew Point Data Logger with Ethernet/RS-485/Wi-Fi Interfaces and PoE (RoHS)
CL-203-WF CR	Remote CO/CO2/Temperature/Humidity/Dew Point Data Logger with Ethernet/RS-485/Wi-Fi Interfaces and PoE (RoHS)
CL-204-WF CR	Remote HCHO/TVOC/Temperature/Humidity/Dew Point Data Logger with Ethernet/RS-485/Wi-Fi Interfaces and PoE (RoHS)
CL-205-WF CR	Remote NH3/Temperature/Humidity/Dew Point Data Logger with Ethernet/RS-485/Wi-Fi Interfaces and PoE (RoHS)
CL-206-WF CR	Remote H2S/Temperature/Humidity/Dew Point Data Logger with Ethernet/RS-485/Wi-Fi Interfaces and PoE (RoHS)
CL-207-WF CR	Remote HCHO/Temperature/Humidity/Dew Point Data Logger with Ethernet/RS-485/Wi-Fi Interfaces and PoE (RoHS)
CL-208-WF CR	Remote TVOC/Temperature/Humidity/Dew Point Data Logger with Ethernet/RS-485/Wi-Fi Interfaces and PoE (RoHS)

Accessories

EWB-C150 	External Wall Box for CL-200 series
CA-RJ45-04 	RJ45 Cable, Male-Female, 30cm (90º)

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