

CL-210-E/CL-211-E
CL-212-E/CL-213-E

Remote PM2.5/CO/CO2/Temperature/Humidity/
Dew Point Data Logger Module

Features

- Able to record PM2.5, CO, CO2, Temperature, Humidity and Dew Point Measurements
- Non-dispersive Infrared (NDIR) CO2 Sensor
- Up to 450,000 records with date and time stamps
- Supports the DCON, Modbus RTU/TCP, and MQTT Protocols
- Includes RS-485/Ethernet Communication Interfaces
- Relay Output for Alarm or IAQ Device Control

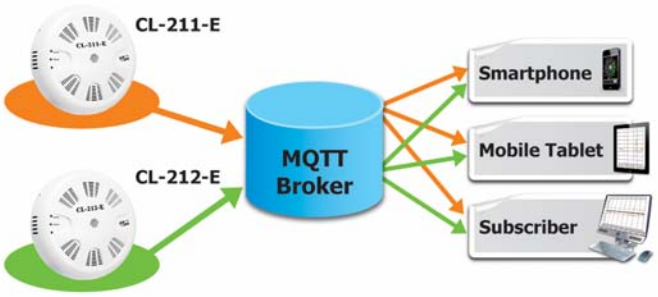
Introduction

The CL-200 series of data logger devices can be used to record PM2.5, CO, CO2, temperature, humidity and dew point information, including the 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 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 common industrial protocols such as DCON, Modbus RTU, and Modbus TCP, as well as the emerging machine-to-machine (M2M)/)IoT (Internet of Things) connectivity protocol – MQTT. The CL-200 data logger can be connected via widely used communication interfaces including RS-485, Ethernet and PoE, meaning that the device can be easily integrated into existing HMI or SCADA systems, ensuring trouble-free maintenance in distributed control systems.

Supports the MQTT Protocol for IoT Applications



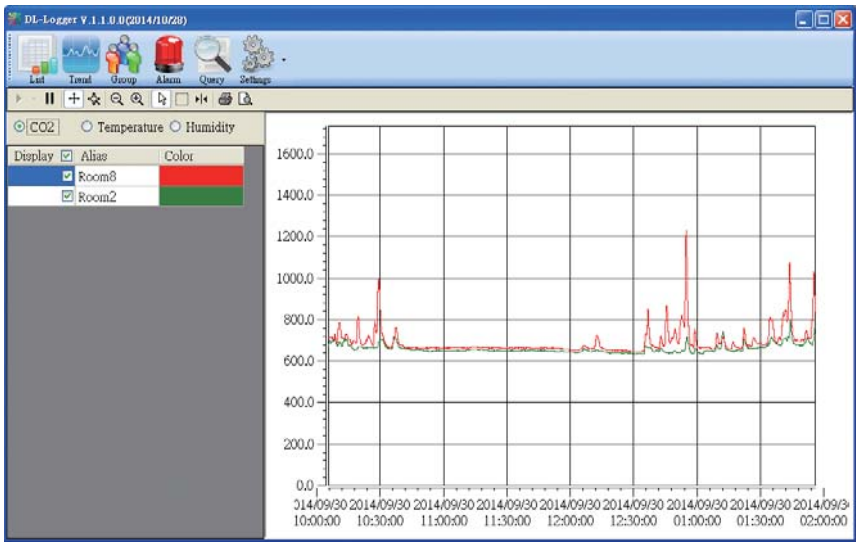
Multi-platform Remote Access Software

Real-time data from the CL-200 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.



Simple and Powerful DL-300 Utility

The DL-300 Utility is a powerful tool that is designed for configuring the modules, monitoring real-time data, grouping DL-300 and CL-200 modules to view and manage the status of distribution groups, downloading log data, which can be exported to a CSV file that can then be imported into any industry-standard software or spreadsheet for analysis.



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System Specifications

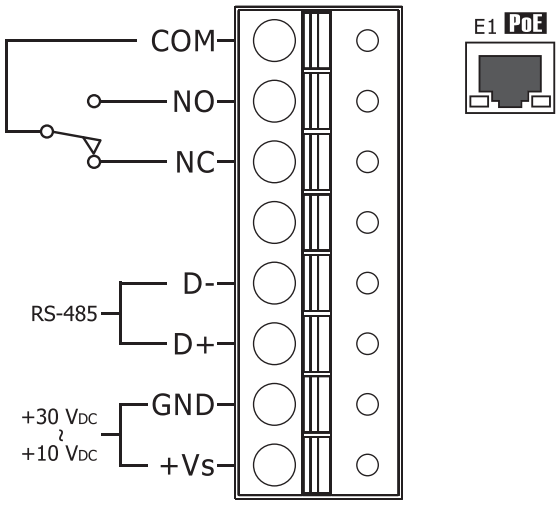
Model		CL-210-E	CL-211-E	CL-212-E	CL-213-E
System					
PM2.5 Alarm		Yes			
CO Alarm		-	Yes	-	Yes
CO2 Alarm		-	-	Yes	Yes
RH/Temperature Alarm		Yes			
Real Time Clock		Yes			
Data Logger		Yes, up to 450,000 records			
Relay Output		Form A×1, SPST 30 VDC @ 16 A or 250 VAC @ 16 A			
Interface		RS-485/Ethernet			
Electrical					
Powered from Terminal Block		+12 to +48 VDC			
Power Consumption	Non-PoE	2.5 W (Max.)	2.66 W (Max.)	2.9 W (Max.)	3.24 W (Max.)
	PoE	2.65 W (Max.)	2.73 W (Max.)	3.22 W (Max.)	3.41 W (Max.)
Mechanical					
Installation		Ceiling Mounting/Wall Mounting			
Protection Class		IP20			
Dimensions (D x H)		Ø 150 mm x 53 mm			

I/O Specifications

Model	CL-210-E	CL-211-E	CL-212-E	CL-213-E
Environment				
Operating Temperature	0 to +50°C			
Storage Temperature	-30 to +75°C			
Humidity	10 to 90% RH, Non-condensing			
PM2.5 Measurement				
Range	0 ~ 400 µg/m3			
Resolution	1µg/m3			
Response Time	<= 1 min.			
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	-	60 seconds	-	60 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	
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 & Wire Connections

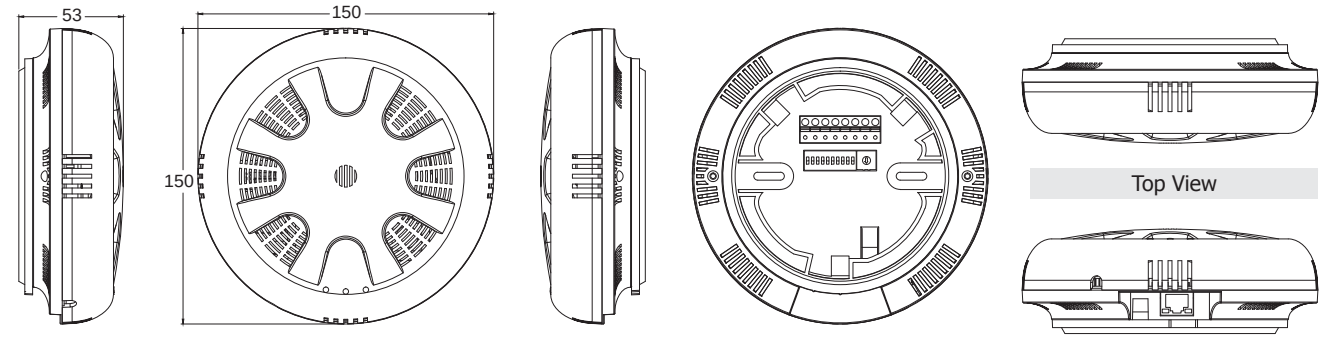


DIP Switch Settings



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

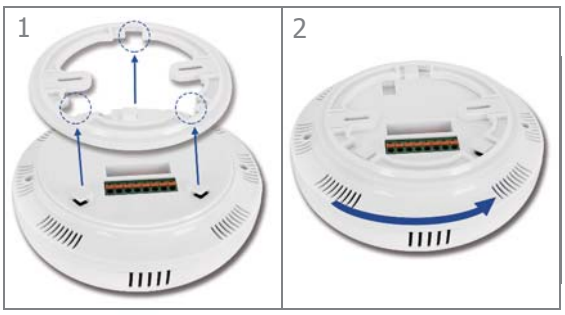
Dimensions (Units: mm)



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

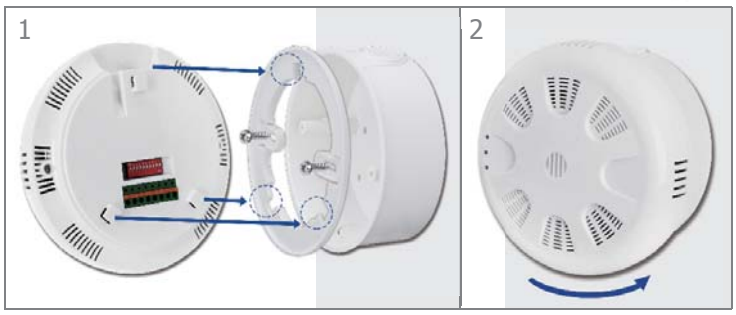
Installation

Ceiling Mounting



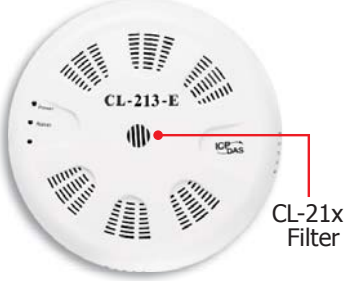
Wall Mounting (+ External Wall Box EWB-C150)





Replaceable Filter Patch:

CL-21x Series offers a replaceable filter patch on the back of the hood filter. This mechanism makes users to replace only the filter patch rather than uninstall all devices.

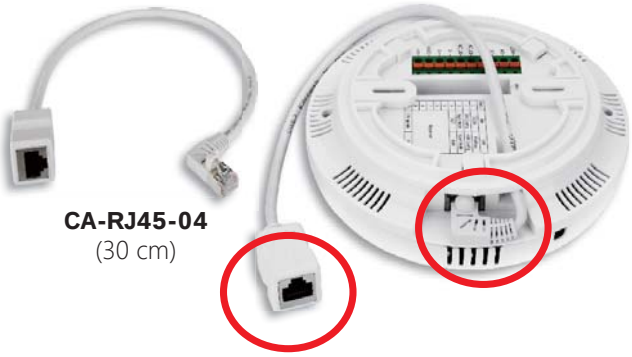




Filter Patch
FLT-C001

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)

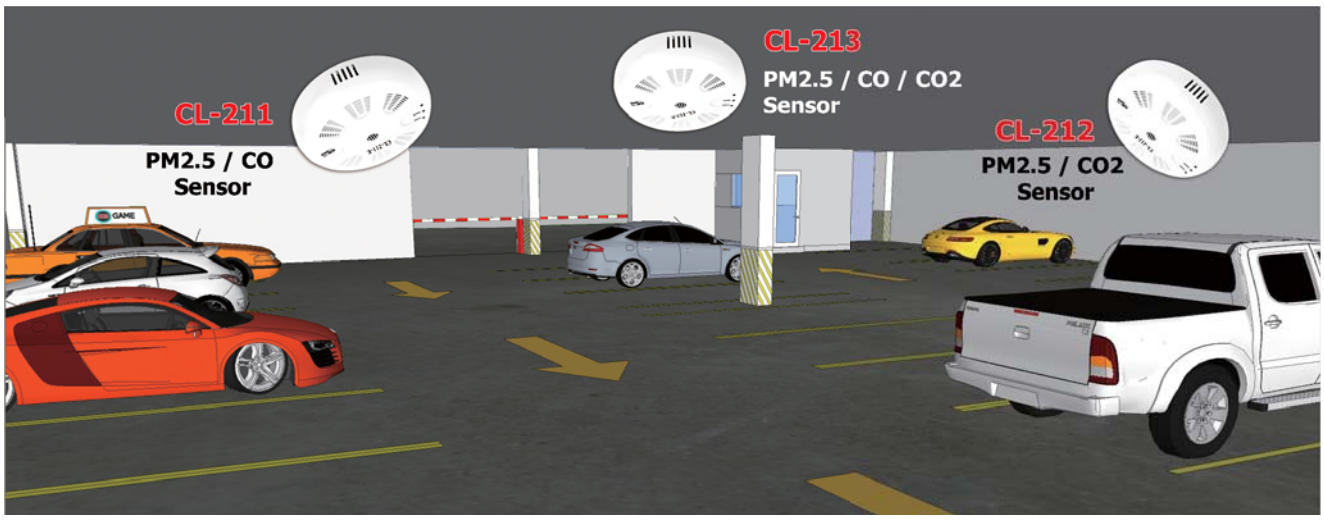
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Applications

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

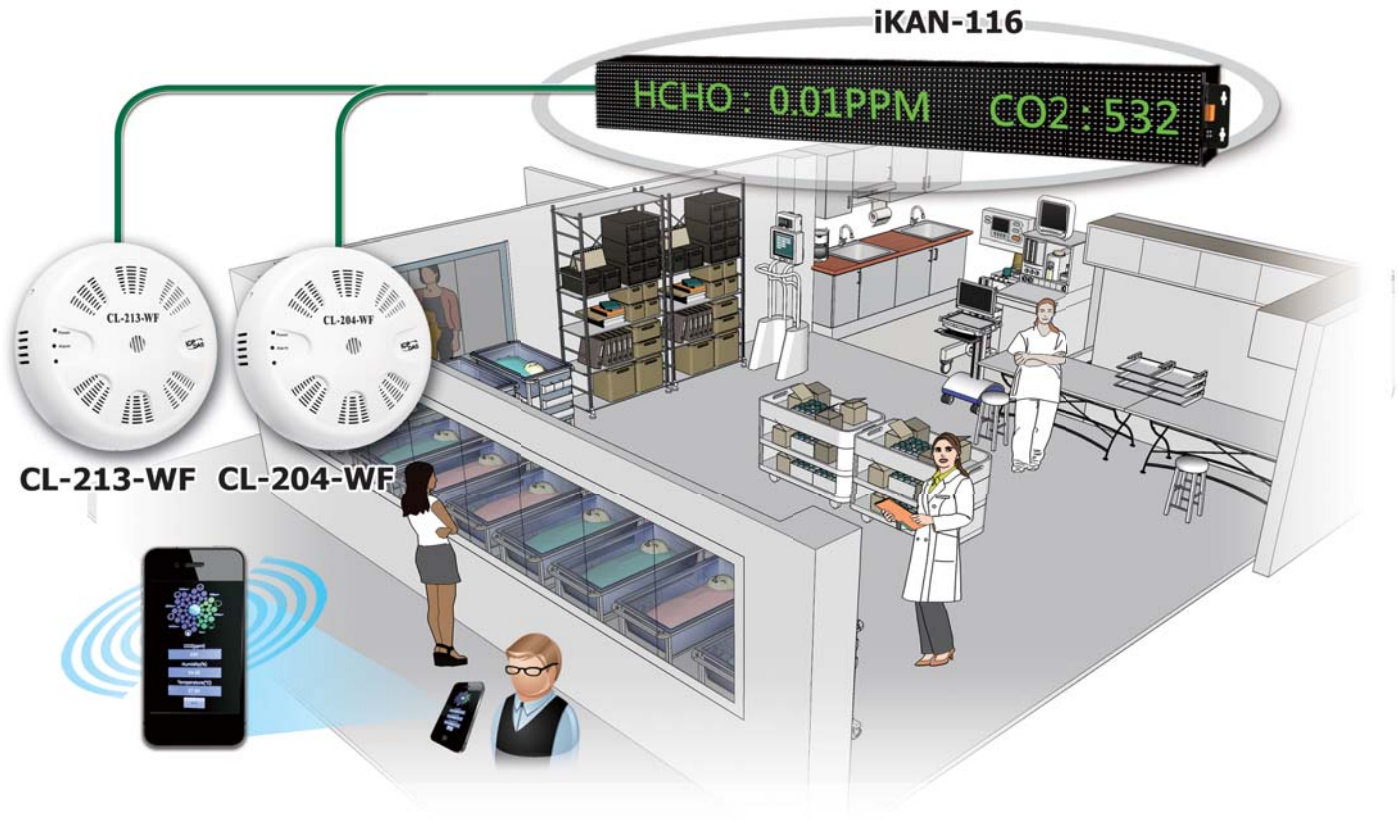
Indoor or Underground Parking Lot Automatic Monitoring Solution

The air quality automation system for indoor or underground parking lot can use the CL-200 series modules to monitor the health and safity information, such as PM2.5, CO, CO2, temperature, humiditym, dew point, and more...



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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Ordering Information

CL-210-E CR	Remote PM2.5/Temperature/Humidity/Dew Point Data Logger Module (RoHS)
CL-211-E CR	Remote PM2.5/CO/Temperature/Humidity/Dew Point Data Logger Module (RoHS)
CL-212-E CR	Remote PM2.5/CO2/Temperature/Humidity/Dew Point Data Logger Module (RoHS)
CL-213-E CR	Remote PM2.5/CO/CO2/Temperature/Humidity/Dew Point Data Logger Module (RoHS)

Accessories

EWB-C150 	External Wall Box for the CL-200 series
CA-RJ45-04 	RJ45 Cable, Male-Female, 30cm (90º)
FLT-C001 	Replaceable Filter Patch

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