

Sentinel CO2

Wi-Fi® CO2, T, RH Sensor

802.11, 2.4GHz Radio

Battery-Powered

NDIR CO2 sensor

Internal T & RH sensor (SHT21)



Applications

The Sentinel CO2 is ideal for applications where continuous monitoring is required:

- Indoor air quality
- HVAC management
- Environmental surveillance
- Shipping containers
- Greenhouses
- Incubators

Features

The complete solution includes the sensor, wireless transceiver, database and a web-based portal.

- WiFi Module
- Web-based Data Visualizationⁱ
- Up to 1 Year Life using a single Lithium C batteryⁱⁱ
- Alarming/Alerting Systemⁱⁱⁱ
- Uses the Wi-Fi Infrastructure
- Audit Trail of the Sensor Data

Benefits

No wireless receiver is necessary as it uses the existing Wi-Fi infrastructure – therefore the overall cost is significantly lower; full sensor audit trail; data can be viewed remotely from any computer using a web browser; sensor units are battery operated therefore portable; sensor units can last up to one year using a single Lithium C battery.

Technical Specifications

Sensor Unit

Data Storage	At least 10 days of sensor data at sampling rate of once per minute
Data Visualization & Reporting	Desktop Software, Web Hosted or Enterprise Portal
Alerting System	Email or cell phone alerts when sensor crosses set threshold values (depending on Software version)
Power supply	Using a single C cell 3.6V Lithium battery - Expected life of up to 1 year with measurements every minute
Operating conditions	Operating temp. range: -10°C to +60°C Operating humidity range 0% RH to 90% RH non-condensing
Physical dimensions	TBD
Regulatory	FCC
Typical power emission	33mW

Wi-Fi

Radio Protocol	IEEE 802.11 b/g compatible (g-only not supported)
Supported rates	1, 2, 5.5 and 11 Mbps only
Security	WPA2-PSK (AES) WPA1-PSK (TKIP) WPA1+2 PSK (AES+TKIP) 802.1x EAP-FAST WEP (40bit, 104bit)

Networking

Addressing	IP v4 static or DHCP address
Protocol used to communicate with server	SNMP/UDP, UDP
Ports	161-163 on both server and sensor

Sensors

CO2 Sensor	<p>Sensing Method: non-dispersive infrared (NDIR) absorption</p> <p>Sampling Method: diffusion</p> <p>Response Time: 30 sec to 2 min (user configurable)</p> <p>Measurement period: user configurable</p> <p>Measurement range: 0 to 2000ppm</p> <p>Accuracy: $\pm 50\text{ppm} \pm 3\%$ of measured value</p> <p>Non Linearity: $<1\%$ of FS</p>
Internal Relative Humidity	<p>Range: 0-100% RH</p> <p>Resolution: 0.04% RH typical</p> <p>Accuracy: $\pm 3.0\%$ RH max</p>
Internal Ambient Temperature	<p>Range: <i>same as unit operating range</i></p> <p>Resolution: 0.01°C typical</p> <p>Accuracy: $\pm 0.4^\circ\text{C}$ max (between 5°C and 60°C)</p>

About Aginova

Aginova Inc. is a wireless sensor network solution provider. The Company will provide the packaged wireless sensor hardware with the data acquisition and management software using leading-edge Internet and Web technologies.

Find more information on our website www.aginova.com.

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ⁱ Available separately: Desktop Software, Web Hosted Portal or Enterprise Portal

ⁱⁱ Battery Life varies depending on network conditions and sensor settings

ⁱⁱⁱ Available only with Web Hosted, Enterprise and Desktop Software Gold Edition