



## NDIR Optical High-Density Carbon dioxide Transmitter via

# UA52-CO2

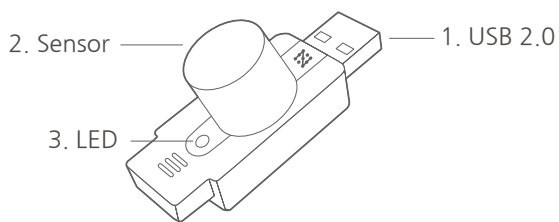
- Real-time CO2, Temperature transmitter
- Long Lifetime using NDIR
- Individual Certificated included
- Recording/Monitoring Software on Win/Mac/Linux
- Android Recording App.



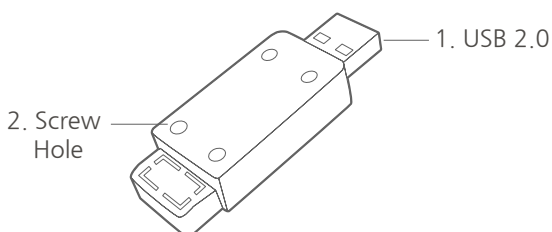
The UA52-CO2 device has an NDIR optical Carbon dioxide(CO2) sensor inside. It transmits measured Carbon dioxide and temperature information in real-time via the USB connector.

The UA Series is automatically recognized as a serial port on the operating system and accessed using the AT command. Multiple USB connections of the UA device could compose the multi-channel sensor. The sensor data is not stored in the UA, but recording in PC and Android device. 128CH real time monitoring software on pc, Tapaculo Lite is downloadable on our website([www.radionode365.com](http://www.radionode365.com)). And android real time recording application is also available from google play store. The optional RN17X model helps UA series for you to setup remote web monitoring system.

### Hardware

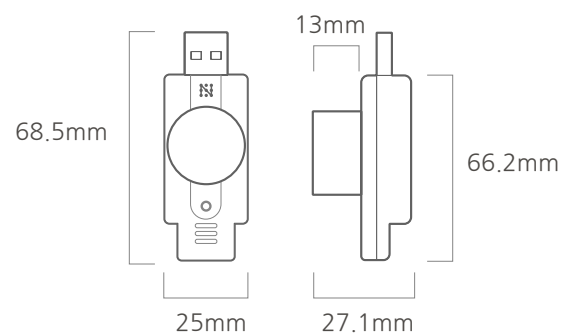


<Front>



<Bottom>

### Dimensions



### ⚠ CAUTION!

- Use in a non-condensing environment. Otherwise, distorted measurements are read.

### Contact Information

- [www.radionode365.com](http://www.radionode365.com)
- [master@dekist.com](mailto:master@dekist.com)



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### UA52-CO2 Specifications

Sensor Channel Info.	<ul style="list-style-type: none"> <li>• CH1: CO2</li> <li>• CH2: Temperature</li> </ul>
Gas Sensor Type	NDIR Optical sensor
Gas Sensor Filter	Metal Sintering filter
Body Material	ABS
Measurement Range	<ul style="list-style-type: none"> <li>• CO2 : 0 ~ 20%, 0 ~ 200000 ppm</li> <li>• Temperature : 0 ~ 50°C</li> </ul>
Measurement Unit (Selection using SW)	<ul style="list-style-type: none"> <li>• CO2: %(Default), ppm</li> <li>• Temperature: °C(Default), °F</li> </ul>
Measurement Cycle	1 sec
Sensor Resolution	<ul style="list-style-type: none"> <li>• CO2: 0.01% (100ppm)</li> <li>• Temperature: 0.25°C</li> </ul>
Sensor Accuracy (Repeatability)	<ul style="list-style-type: none"> <li>• CO2: 5% of measured value</li> <li>• Temperature: ±0.25°C</li> </ul>
Gas Response Time	T90 < 30 secs
Warming-up Time	1.2 secs after power-on
Operating Condition	<ul style="list-style-type: none"> <li>• Temperature: 0 ~ 50°C</li> <li>• Humidity: 0 ~ 95%RH (non-condensing)</li> <li>• atm: 950 ~ 1000 mBar</li> </ul>
Lifetime	< 8 Years
Power Consumption	5V (Max. 80mW)
Calibration Certificate	Individual Certificate. Calibration with 5% CO2 calibration gas mixtures
Calibration Method	One point calibration
USB Port	USB 2.0 Type A Plug
Output Signal	USB digital, CDC Device (AT Command)
Software Support	<ul style="list-style-type: none"> <li>• Tapaculo Lite 128CH recording software on PC Download: <a href="http://www.radionode365.com">www.radionode365.com</a></li> <li>• Tapaculo Mobile 2CH recording software on Android devices Download: Google play store</li> <li>• Calibration Software Calibrator that compensates measuring error. Download: <a href="http://www.radionode365.com">www.radionode365.com</a></li> </ul>

### Application

- CO2 Incubator
- Food storage sites(refrigerators, freezers)
- Bio-labs
- Building energy usage monitoring
- Medicine and medical goods storage sites
- Semiconductor production lines

### Product Components

Model	Component
UA52-CO2	<ul style="list-style-type: none"> <li>• UA52-CO2(1EA)</li> <li>• USB Extension Cable 1.5 m(1EA)</li> <li>• Individual Calibration Certificate(1EA)</li> </ul>

### Accessories

Type	Model Number	vSpec.
Converter (USB → LAN)	RN171	<ul style="list-style-type: none"> <li>• Supports cloud monitoring</li> <li>• Supports MODBUS TCP/HTTP data transmission</li> <li>• Power: PoE 48V, IEEE802.3af/at, DC6V, 1.9W</li> </ul>
Converter (USB → WIFI)	RN172	<ul style="list-style-type: none"> <li>• Supports cloud monitoring</li> <li>• Supports MODBUS TCP/HTTP data transmission</li> <li>• Power: DC6V, 2.4W</li> </ul>