RADIONODE®

The most innovated data logger

Electrochemical O3 Density Transmitter via USB

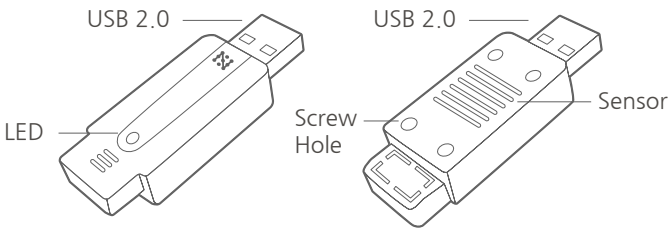
UA53-03-10

- Real-time Ozone Density Data
- Cost-effective gas sensor
- Long lifetime
- Calibration certificate included
- Operating On Windows/ Linux / Mac
- Simple AT command Support
- PC Recording Software (Tapaculo Lite)
- Android Recording App. (Tapaculo Mobile)

The UA53 device transmits measured gas density information in real-time via the USB connector. Available to detect Ozone(O3) and simply calibration on PC. In most operating systems, the UA Series is recognized as a serial COM port and controlled via the AT command.

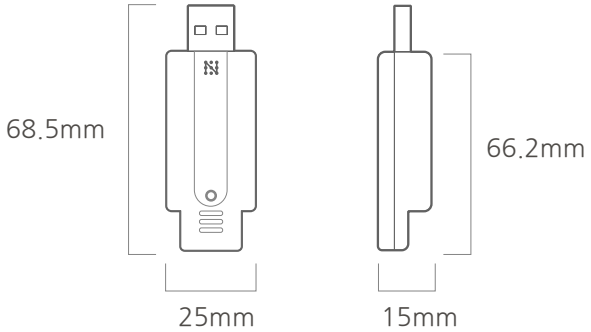
Monitoring software is available for Windows (Tapaculo Lite) and Android (Tapaculo Mobile), which can be downloaded from the homepage and play store respectively. To use the cloud-based Radionode365 web service, you need to add a Wireless Node Ethernet Transmitter (RN171) or Wi-Fi Transmitter (RN172).

Hardware



〈Front〉 〈Bottom〉

Dimensions



⚠ CAUTION!

UA53-O3 doesn't guarantee performance in the following environments.

- Condensation and Water
- Salt Water Contamination
- High-Temperature Operation (>70°C) for more than 1 month
- Low Humidity Operation (<15% RH) for more than 3 months
- < 10% humidity may permanently damage the sensor.
- Highly contaminated air over a prolonged period
- Highly levels of particles or soot (unless proper filtering is provided)

Contact Information

- www.radionode365.com
- master@dekist.com

RADIONODE®

The most innovated data logger

Electrochemical O3 Density Transmitter via USB

UA53-O3 Specifications

Sensor Channel Info.	• CH1: O3 • CH2: Temperature • CH3: Humidity
Gas Sensor Type	Electrochemical Film
Gas Sensor Filter	None
Body Material	PC(Polycarbonate)
Measurement Range	• O3: 0 ~10ppm • Temperature: -30 ~ 50°C • Humidity: 5~95%
Measurement Unit (Selection using SW)	• O3: ppm • Temperature: °C(Default), °F • Humidity: %
Measurement Cycle	1 sec
Sensor Resolution	• O3 : 0.02ppm • Temperature: 0.01°C • Humidity: 0.01%
Sensor Accuracy (Repeatability)	• O3: < FS ±2% • Temperature: ±0.2°C • Humidity: ±2.0%
Gas Response Time	T90 < 180 secs
Warming up Time	< 1 min after power-on
Operating Condition[1]	• Temperature: - 30 ~ 50°C • Humidity: 15 ~ 95% RH(non condensing)
Lifetime[2]	10 Years @ (23 ± 3°C, 40 ± 10% RH recommended)
Power Consumption	5V (Max. 110mW)
Calibration Certificate	Bulk Calibration Certificate.
Calibration Method	Two-point Calibration
USB Port	USB 2.0 Type A Plug
Output Signal	USB digital, CDC Device (AT Command)
LED	Device Status Indicator • BLINK RED & GREEN: Warming-up • RED KEEP ON: USB Connection Failed • BLINK GREEN: Measuring
Software Support	• Tapaculo Mobile 2CH recording software on Android devices Download: Google play store • Tapaculo Lite 128CH recording software on PC Download: www.radionode365.com • Calibration Software Calibrator that compensates measuring error. Download: www.radionode365.com

1) Avoid prolonged exposure to temperatures outside the recommended operating - as this may cause irreversible damage and loss of sensitivity.

2) Gas sensors have a longer life when measured discontinuously than when measured continuously.

Cross-Sensitivity

The following table lists the relative response of common potential interfering gases

Gas/Vapor	Concentration (ppm)	Typical Response PPM H2S
Nitrogen Dioxide (NO2)	5	4.2
Sulfur Dioxide (SO2)	10	0.05
Ethylene (C2H4)	50	0.02
Chlorine (Cl2)	10	4.0
Nitric Oxide (NO)	10	0.2

Application

- Industrial safety
- Industrial hygiene
- Virus disinfection
- Sterilization of commercial and residential buildings.
- Air quality monitoring
- Building environment monitoring

Product Components

Model	Component
UA53-O3-10	• UA53-O3-20(1EA) • USB Extension Cable(1EA) • Calibration Certificate(1EA)

Optional Accessories

Type	Model Number	Spec.
Sensor data transmitter via Ethernet	RN171 WC	• Supports cloud monitoring • Supports MODBUS TCP/ HTTP data transmission • Power: PoE 48V, IEEE802.3af/at, DC6V, 1.9W
Sensor data transmitter via WiFi	RN172 WC	• Supports cloud monitoring • Supports MODBUS TCP/ HTTP data transmission • Power: DC6V, 2.4W