



## Electrochemical NO2 Density Transmitter via USB

# UA53-NO2

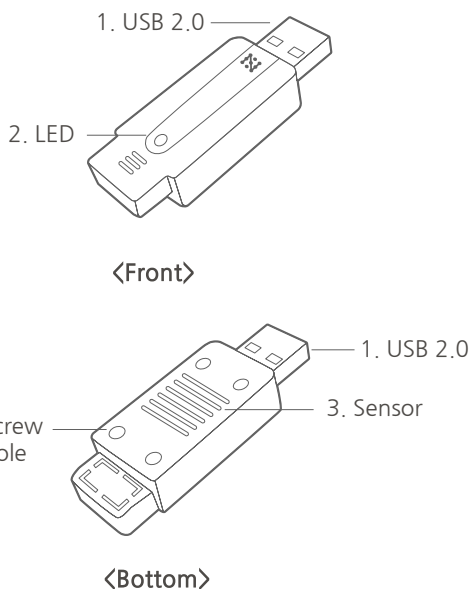
- Real-time NO2 density transmitter
- Cost-effective gas sensor
- Long Lifetime
- Calibration Certificate Included
- Recording/Monitoring Software on Win/Mac/Linux
- Android Recording App.



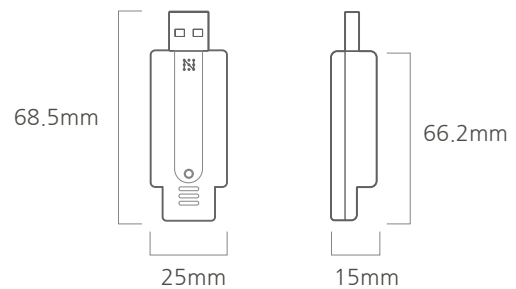
The UA53-NO2 device is a cost-effective Nitrogen dioxide(NO2) transmitter. It has an electrochemical NO2 sensor inside and transmits the measured NO2 density and temperature information in real-time via the USB connector.

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



### Dimensions



### ⚠ CAUTION!

UA53-NO2 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](http://www.radionode365.com)
- [master@dekist.com](mailto:master@dekist.com)



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### UA53-NO2 Specifications

Sensor Channel Info.	<ul style="list-style-type: none"> <li>• CH1: NO2</li> <li>• CH2: Temperature</li> </ul>
Gas Sensor Type	Electrochemical Film
Body Material	PC(Polycarbonate)
Measurement Range	<ul style="list-style-type: none"> <li>• NO2: 0 ~5 ppm</li> <li>• Temperature: -20 ~ 40°C (-4 ~ 104°F)</li> </ul>
Measurement Unit (Selection using SW)	<ul style="list-style-type: none"> <li>• NO2: ppm</li> <li>• Temperature: °C(Default), °F</li> </ul>
Measurement Cycle	1 sec
Sensor Resolution	<ul style="list-style-type: none"> <li>• NO2 : 0.02ppm</li> <li>• Temperature: 0.01°C</li> </ul>
Sensor Accuracy (Repeatability)	<ul style="list-style-type: none"> <li>• NO2: &lt; ±5% of measured value</li> <li>• Temperature: ±0.2°C</li> </ul>
Long-term Drift	< 5% signal loss / 1 year
Gas Response Time	T90 < 15 secs
Warming up Time	< 1 min after power-on
Operating Condition <sup>1)</sup>	<ul style="list-style-type: none"> <li>• Temperature: - 20 ~ 40°C (-4 ~ 104°F)</li> <li>• Humidity: 15 ~ 95% RH(non condensing)</li> </ul>
Lifetime <sup>2)</sup>	5 Years @ (23 ± 3°C, 40 ± 10% RH recommended)
Cross-Sensitivity	Interfering Gas: NO, H2S, SO2
Power Consumption	5V (Max. 91mW)
Calibration Certificate	Individual Certificate. Calibration with 10.4ppm NO2 calibration gas mixtures
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 <ul style="list-style-type: none"> <li>• BLINK RED &amp; GREEN: Warming-up</li> <li>• RED KEEP ON: USB Connection Failed</li> <li>• BLINK GREEN: Measuring</li> </ul>
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>

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.

### Application

- AIR Quality Monitoring
- Environment monitoring
- Industrial safety

### Product Components

Model	Component
UA53-NO2-5	<ul style="list-style-type: none"> <li>• UA53-NO2-5(1EA)</li> <li>• USB Extension Cable(1EA)</li> <li>• Calibration Certificate(1EA)</li> </ul>

### Accessories

Type	Model Number	Spec.
Converter (USB → LAN)	RN171 WC	<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 WC	<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>