



## Electrochemical EO Density Transmitter via USB

# UA54-EO

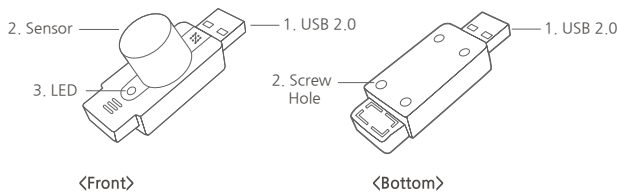
- Real-time C2H4O density, Temperature transmitter
- Electrochemical C2H4O gas sensor embedded
- Individual Certificate included
- Recording/Monitoring Software on Win/Mac/Linux
- Android Recording App.



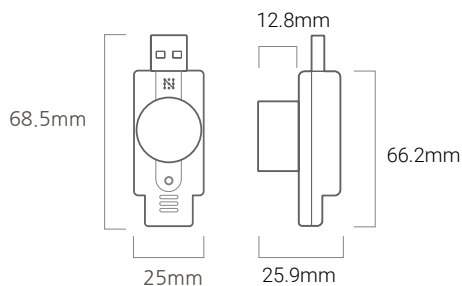
The UA54-EO device has an electrochemical Ethylene Oxide(C2H4O) sensor inside. It transmits measured EO density and temperature information in real-time via the USB connector.

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!

- Volatile organic compounds (VOCs) should be avoided in applications where electrochemical sensors are used because they either dissolve in the electrolyte or adsorb onto the sensor's housing.
- Long term exposures and high concentrations may affect the performance characteristics
- Sudden changes in humidity cause short-term transient signals
- Avoid contact with conductors.
- Static electricity can cause distorted values.

### Contact Information

- [www.radionode365.com](http://www.radionode365.com)
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### UA54-EO Specifications

Sensor Channel Info.	<ul style="list-style-type: none"> <li>• CH1: C2H4O (Ethylene Oxide)</li> <li>• CH2: Temperature</li> </ul>
Gas Sensor Type	Electrochemical Cell
Gas Sensor Filter	Metal Sintering filter
Body Material	ABS
Measurement Range	<ul style="list-style-type: none"> <li>• C2H4O: 0 ~ 10 ppm</li> <li>• Temperature: -40 ~ 50°C (-40 ~ 122°F)</li> </ul>
Measurement Unit (Selection using SW)	<ul style="list-style-type: none"> <li>• C2H4O: ppm</li> <li>• Temperature: °C(Default), °F</li> </ul>
Measurement Cycle	1 sec
Sensor Resolution	<ul style="list-style-type: none"> <li>• C2H4O: 0.05ppm</li> <li>• Temperature: 0.01°C</li> </ul>
Sensor Accuracy (Repeatability)	<ul style="list-style-type: none"> <li>• C2H4O: &lt; 2% of measured value</li> <li>• Temperature: ±0.2°C</li> </ul>
Baseline Drift	Zero ± 1 ppm
Long-term Drift	< 2% signal loss / month
Gas Response Time	T90 < 100 secs
Warming up Time	< 3mins after power-on
Operating Condition	<ul style="list-style-type: none"> <li>• Temperature: -40 ~ 50°C (-40 ~ 122°F)</li> <li>• Humidity: 15 ~ 90% R.H(non condensing)</li> </ul>
Lifetime <sup>1)</sup>	More than 12 months @ discontinuous measurement
Cross-Sensitivity	Interfering Gas: CO, H2S, HCOOH, C2H5OH
Power Consumption	5V (Max. 90mW)
Calibration Certificate	Individual Certificate Calibration with 50ppm CO(Interfering Gas) 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</li> <li>128CH recording software on PC</li> <li>Download: <a href="http://www.radionode365.com">www.radionode365.com</a></li> <li>• Tapaculo Mobile</li> <li>2CH recording software on Android devices</li> <li>Download: Google play store</li> <li>• Calibration Software</li> <li>Calibrator that compensates measuring error.</li> <li>Download: <a href="http://www.radionode365.com">www.radionode365.com</a></li> </ul>

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

### Application

- Disinfection and Sterilization
- Medical
- Industrial Safety Monitoring
- Bio-labs.

### Product Components

Model	Component
UA54-EO	<ul style="list-style-type: none"> <li>• UA54-EO(1EA)</li> <li>• USB Extension Cable 1.5 m(1EA)</li> <li>• Calibration Certificate(1EA)</li> </ul>

### Accessories

Type	Model Number	Spec.
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>