Electrochemical C2H4 Low-Density Transmitter via USB
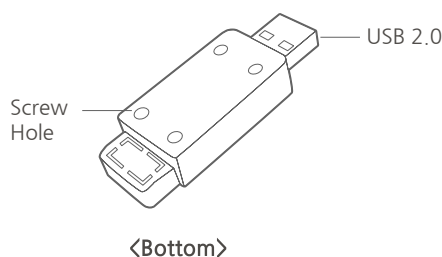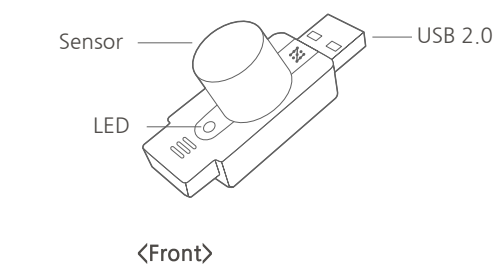
UA54-C2H4-10

- Real-time C2H4 density, Temperature transmitter
- Electrochemical C2H4 gas sensor embedded
- Individual Certificate included
- Operating On Windows / Linux / MacOS
- AT Command Support
- PC Recording Software (Tapaculo Lite)
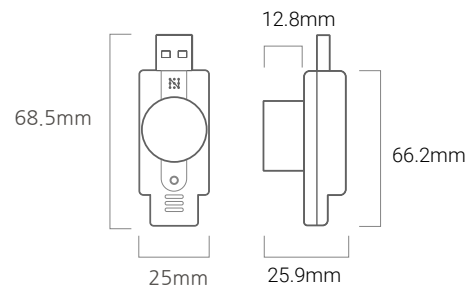- Android Recording App. (Tapaculo Mobile)

The UA54-C2H4-10 device has an electrochemical Ethylene(C2H4) sensor inside. It transmits measured C2H4 density to 10ppm 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). 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

Sensor — USB 2.0
LED

〈Front〉

USB 2.0
Screw Hole

〈Bottom〉

Contact Information

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

Dimensions

12.8mm
68.5mm
66.2mm
25mm   25.9mm

⚠ 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.

UA54-C2H4-10 Specifications

Sensor Channel Info.	• CH1: C2H4 • CH2: Temperature
Gas Sensor Type	Electrochemical Cell
Gas Sensor Filter	Metal Sintering filter
Body Material	PC(Polycarbonate)
Measurement Range	• C2H4: 0 ~ 10 ppm • Temperature: -40 ~ 50°C (-40 ~ 122°F)
Measurement Unit (Selection using SW)	• C2H4: ppm • Temperature: °C(Default), °F
Measurement Cycle	1 sec
Sensor Resolution	• C2H4: 0.1ppm • Temperature: 0.01°C
Sensor Accuracy (Repeatability)	• C2H4: < 2% of measured value • Temperature: ±0.2°C
Baseline Drift	Zero ± 2 ppm
Long-term Drift	< 5% signal loss / 6 months
Gas Response Time	T80 < 60 secs
Warming up Time	< 3mins after power-on
Operating Condition	• Temperature: -40 ~ 50°C (-40 ~ 122°F) • Humidity: 15 ~ 90% R.H (non condensing)
Lifetime[1]	More than 12 months @ discontinuous measurement
Cross-Sensitivity	Interfering Gas: CO, CS2, C2H5OH
Power Consumption	5V (Max. 90mW)
Calibration Certificate	Individual Certificate. Calibration with 5ppm C2H4(Interfering Gas) calibration gas mixtures
Calibration Method	Two point Calibration Mode Manual Zero Calibration Mode
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) Gas sensors have a longer life when measured discontinuously than when measured continuously.

Application

• Fruit storage facilities
• Safety of electrical systems
• Petrochemical industry
• Industrial safety Monitoring

Product Components

Model	Component
UA54-C2H4-10	• UA54-C2H4-10(1EA) • USB Extension Cable 1.5m(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