



Electrochemical HCL Density Transmitter via USB

UA54-HCL-20

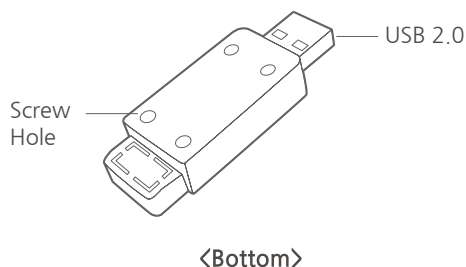
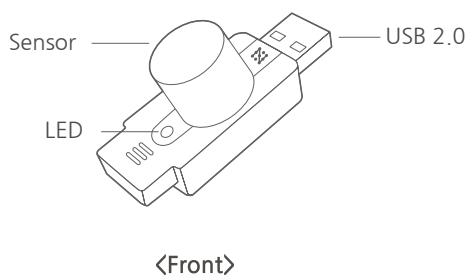
- Real-time HCL density, Temp/RH transmitter
- Electrochemical HCL gas sensor embedded
- Individual Certificate included
- Operating On Windows / Linux / MacOS
- AT Command Support
- PC Recording Software (Tapaculo Lite)
- Android Recording App. (Tapaculo Mobile)



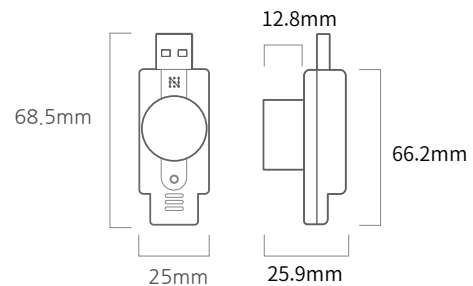
The UA54-HCL-20 device has an electrochemical Hydrogen Chloride(HCL) sensor inside. It transmits measured HCL density and temperature information in real-time via the USB connector.

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). 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!

- 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
- master@dekist.com



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UA54-HCL-20 Specifications

| | | | |
|---------------------------------------|--|---------------------|---------------|
| Sensor Channel Info. | <ul style="list-style-type: none"> • CH1: HCL (Hydrogen Chloride) • CH2: Temperature • CH3: Humidity | | |
| Gas Sensor Type | Electrochemical Cell | | |
| Gas Sensor Filter | Metal Sintering filter | | |
| Body Material | PC(Polycarbonate) | | |
| Measurement Range | <ul style="list-style-type: none"> • HCL: 0 ~ 20 ppm • Temperature: -20 ~ 50°C (-4 ~ 122°F) • Humidity: 5~95% | | |
| Measurement Unit (Selection using SW) | <ul style="list-style-type: none"> • HCL: ppm • Temperature: °C(Default), °F • Humidity: % | | |
| Measurement Cycle | 1 sec | | |
| Sensor Resolution | <ul style="list-style-type: none"> • HCL: < 0.2ppm • Temperature: 0.01°C • Humidity: 0.01% | | |
| Sensor Accuracy (Repeatability) | <ul style="list-style-type: none"> • HCL: < 2% of measured value • Temperature: ±0.2°C • Humidity: ±2.0% | | |
| Baseline Drift | Zero ± 0.5 ppm | | |
| Long-term Drift | < 2% signal loss / month | | |
| Gas Response Time | T80 < 40 secs | | |
| Warming up Time | < 3mins after power-on | | |
| Operating Condition | <ul style="list-style-type: none"> • Temperature: -20 ~ 50°C (-4 ~ 122°F) • Humidity: 15 ~ 90% R.H (non condensing) | | |
| Lifetime ¹⁾ | More than 12 months @ discontinuous measurement | | |
| Cross-Sensitivity | Interfering Gas | Concentration [ppm] | Reading [ppm] |
| | C2H4 | 100 | 0 |
| | Cl2 | 20 | <0.5 |
| | CO | 1000 | 0 |
| | Ethanol (C2H5OH) | 30 | <0.3 |
| | H2S | 20 | <40 |
| | HBr | 20 | 10 |
| | NH3 | 80 | 0 |
| | NO | 25 | 0 |
| | NO2 | 20 | -6 |
| | SO2 | 100 | 0 |
| | Methyl Mercaptan (MM, CH3SH) | 10 | ~2.5 |
| | Tert-Butyl Mercaptan (TBM, (CH3)3CSH) | 10 | ~2.5 |
| Power Consumption | 5V (Max. 90mW) | | |
| Calibration Certificate | Individual Certificate. Calibration with 5ppm HCL(Interfering Gas) calibration gas mixture | | |
| Calibration Method | Two point Calibration Mode Manual Zero Calibration Mode | | |

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

| | |
|------------------|--|
| 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"> • BLINK RED & GREEN: Warming-up • RED KEEP ON: USB Connection Failed • BLINK GREEN: Measuring |
| Software Support | <ul style="list-style-type: none"> • Tapaculo Mobile 3CH 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 |

Application

- Semiconductor production lines
- Chemical industry
- Industrial Safety Monitoring
- Centralized Gas Monitoring System

Product Components

| Model | Component |
|-------------|--|
| UA54-HCL-20 | <ul style="list-style-type: none"> • UA54-HCL-20(1EA) • USB Extension Cable 1.5 m(1EA) • Calibration Certificate(1EA) |

Optional Accessories

| Type | Model | Spec. |
|--------------------------------------|------------|--|
| Sensor data transmitter via Ethernet | RN171 WC | <ul style="list-style-type: none"> • 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-D | <ul style="list-style-type: none"> • Supports cloud monitoring • Supports MODBUS TCP/ HTTP data transmission • Power: DC12V, 5W |