Aranet4

The perfect companion for indoor environments allowing you to monitor CO_2 levels, temperature, relative humidity and atmospheric pressure

aranet

v2.8

Aranet4	HOME	PRO
Measures carbon dioxide concentration, temperature, relative humidity, and atmospheric pressure	TDSPC0H3	TDSPC003 (EU) TDSPC0R3 (RU) TDSPC0U3 (US,AS)

Sensor performance				
	CO_2 concentration[1]	Temperature	Relative humidity	Atmospheric pressure[2]
Range	0 - 9999 ppm	0 - 50 °C	0 - 85 %	600 - 1100 hPa
Resolution	1 ppm	0.1 °C (0.1 °F)	1 %	1 hPa
Accuracy[3]	± 30 ppm ± 3 % of reading[4]	±0.3 °C (±0.5 °F)	± 3 %	-2 hPa / +3 hPa
Long term drift	N/A[5]	0.03 °C/year (0.05 °F/year)	0.5 %/year	1 hPa/year
Time constant τ (63 %)[6]	100 seconds	10 minutes	TBD	instantaneous

Radio parameters[7]	
Line of sight range	3 km (1.9 mi)
Supported ISM bands	EU868, RU869 US920, AS923
Transmitter power	14 dBm
Data transmission interval	1, 2, 5 or 10 minutes
Data protection	XXTEA encryption
Compatible base stations	Aranet PRO

General	
Ingress protection rating	IP20
Operating temperature range	0 °C to 50 °C (32 °F to 122 °F)
Operating relative humidity range	0% to 85 %
Dimensions	70 x 70 x 24 mm (2.76 x 2.76 x 0.94 in)
Weight[8]	104 g (3.7 oz)
Font height on the display	10 mm
Enclosure material	Polycarbonate
Included in the box	2 AA alkaline batteries, configuration pin

Bluetooth parameters	
Line of sight range	10 m (33 ft)
Transmitter power	4 dBm or -12 dBm
Data transmission interval	1, 2, 5 or 10 minutes

Power	2 AA batteries	
Type	Alkaline[9]	Lithium[10]
TX interval	Battery lifetime at 20 °C (68 °F)[11]	
1 minute	0.7 years	0.9 years
2 minutes	1.2 years	1.7 years
5 minutes	2.8 years	4.0 years
10 minutes	4.8 years	7.0 years

Compliance	
CE	Conformité Européenne
IC	Innovation, Science and Economic Development Canada
FCC	Federal Communications Commission (USA)

NB! Aranet4 is not impact resistant. Do not leave the device in the direct sunlight.

[1] CO_2 sensor of the device is calibrated at standard atmospheric pressure. CO_2 readings are pressure compensated and comply with the specifications down to 750 hPa. If the device has to be used at high altitude for a prolonged period of time, manual calibration of the unit should be performed for optimal performance. It is not intended to use the device higher than 4000 m (13 000 ft) above the sea level.
[2] The device measures absolute pressure, i.e., pressure readings are not compensated for an elevation above the sea level.
[3] 95 % of the sensors measure within these typical limits in equilibrium state at the time of sale. For evaluation of the total measurement error long-term drift has to be taken into account.
[4] CO_2 measurement accuracy is provided for a range 0 ... 5000 ppm, temperature 15 ... 35 °C (59 ... 95 °F) and relative humidity 0 ... 80 %. Accuracy above 5000 ppm is 10 % of reading, but not guaranteed since it is extrapolated form the calibrated range.
[5] If a drift of the CO_2 measurements occurs, calibration feature of the device should be used. Auto calibration mode is utilizing ABC algorithm whereas Manual calibration mode demands sensor to be exposed to fresh air.
[6] Time constant is determined at 1 m/s airflow.
[7] Available only for the PRO version of the product.
[8] Weight with alkaline Fujitsu Premium LR6G07 AA batteries.
[9] Fujitsu Premium LR6G07 AA batteries used for tests and calculations.
[10] Energizer Ultimate Lithium L91 AA batteries used for tests and calculations.
[11] With the Bluetooth connection disabled. Battery lifetime data has been obtained by mathematical extrapolation and is provided for descriptive purposes only and is not intended to make or imply any guarantee or warranty.