Fypynode+ airQ

Specsheet draft 1.0



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1.0	Overview	03
2.0	Features	03
3.0	Specifications	03
3.1 3.2 3.3	DA14531 - SmartBond TINY™ Digital Humidity Sensor SHTC3 Battery	03 03 04
4.0	Pynode+ airQ Size	05
4.1	Diagram	05
5.0	Power Consumption	06
6.0	Ordering Information	06
7.0	Revision History	06





1.0 Overview

Bluetooth® Low Energy (BLE) 5.1 Air Quality and Temperature sensor featuring Dialog Semiconductor DA14531 BLE 5.1 and Bosch BME688 Air Quality sensor. The Pynode+ airQ is a Bluetooth BLE enabled sensor that connects seamlessly to your Pycom's WiPy, GPy, LoPy4, FiPy, OEM module or any other device that runs BLE 5.1.

2.0 Features

- BLE: Dialog Semiconductor
 DA14531 SmartBond TINY™
- Sensor: Bosch BME688 Air Quality sensor

3.0 Specifications

- 3.1 DA14531 SmartBond TINY™
 - Low Power Bluetooth 5.1 system-on-chip
 - 16 MHz 32-bit Arm® Cortex-M0+
 - Compatible with Bluetooth v5.1, ETSI EN 300/328 and EN 300 440 Class 2 (Europe), FCC CFR47 Part 15 (US) and ARIB STD-T66 (Japan)
 - Supports up to three BLE connections
 - TX: 3.5 mA, RX: 2.2 mA (system currents with DC-DC, VBAT_HIGH =3 V and 0 dBm)

3.2 Bosch BME688 Air Quality Sensor

- Gas sensor with Artifical Intellgence (AI)
- Integrated with high-linearity/accuracy pressure, humidity and temperature sensors
- Low Power Consumption
- Operation Range:
 Pressure: 300-1100 hPa
 Humidity: 0-100 %
 Temperature -40 +85 C°
- Capable to detect Volatile Organic Compounds (VOCs), volatile sulfur compounds (VSCs) and other gases such as carbon monoxide and hydrogen in the part per billion (ppb) range.

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 3.3 Battery – Panasonic CR2032 Lithium 3V Coin 	
Table 1 – Power consumption by feature Nominal Voltage(V)	
Nominal Capacity(mAh)	225.00
Continuous Standard Drain(mA)	0.2000
Maximum Pulse DischargeCurrent(A)	-
Diameter(mm)	20.0
Thickness(mm)	-
Hight(mm)	3.2
Weight(Approx.)(g)	2.80
Operating Temperature) (C°)	-30 - +85
Туре	CR coin
JIS	CR2032
IEC	CR2032
IEC 60086-4	Certified
UL1642	Certified

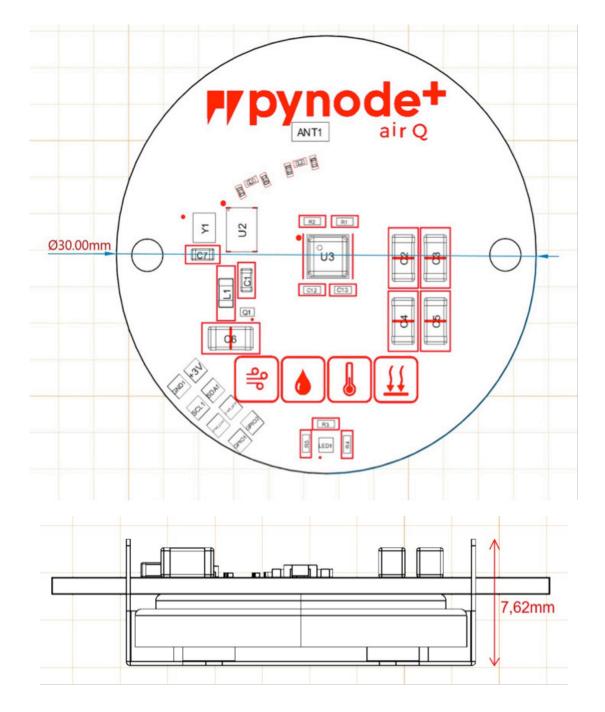
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4.0 Pynode+ airQ Size

Diameter: 30mm Height: 7.62mm Weight: 3g (excl. battery and 6g (incl. battery) Weight in packaging: 21g

4.1 Diagram



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5.0 Power Consumption

- Central role for initial configuration: avg: 446uA and max: 1.67mA
- Peripheral & Advertising mode (Iminute sleep timer): avg: 220uA and max: 17.10mA (Gas sensor enabled)

6.0 Ordering Information

For pre-orders or to discuss supply please contact sales@pycom.io quoting pynode+ airQ

7.0 Revision History

Table 2 – Document revision history

Version

Initial Release

Draft 1.0 first draft release

06SEPT2021