

H4 Beacon & H4 Pro Beacon

Product Brief



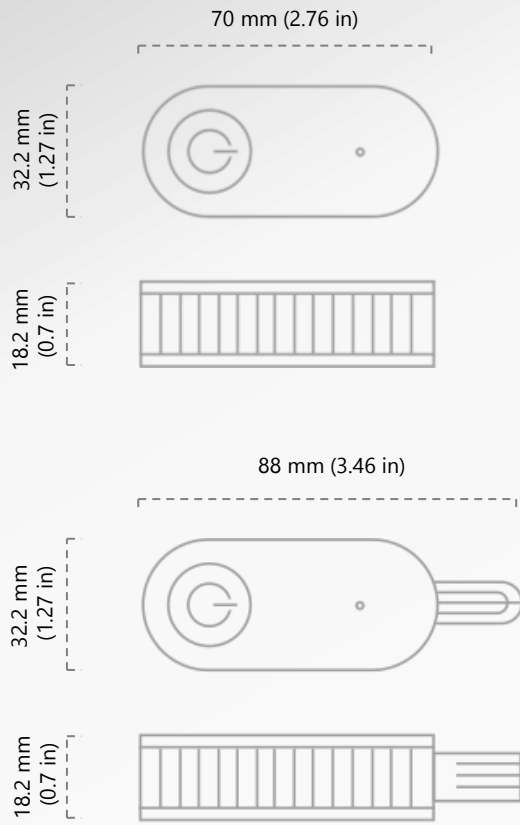
With integrated high-precision and wide-range temperature and humidity sensor, H4 series Beacon is available for environmental monitoring and analysis. It is the best choice for the application of smart building.

Make environmental monitoring more intelligent and efficient

- Integrated with high-precision and wide-range temperature and humidity sensor
- 7x24 real-time monitoring and recording the change of temperature and humidity
- Intelligent threshold alarm trigger reminds the temperature or humidity is higher or lower than the preset safe value
- Up to 4000 T&H data logs can be stored and help historical review and environmental analysis
- Smartphone app (iOS & Android, and provide SDK) can help you easily view the real-time and historical T&H data

All-round service and customization to save your time and costs to market quickly

- Certified for USA (FCC), Europe (CE) including REACH and RoHS environmental regulation
- All other worldwide certifications can be customized
- Hardware can be added 3-axis accelerometer sensor and NFC for customization
- The T&H Sensor interface by I²C can be customized to other sensor
- Branding, Logo, Label, Packaging, Manufacture parameters, even hardware and firmware are all customizable



General Features

Main Chip	Nordic nRF52832
Bluetooth	Bluetooth 4.2
Range	Up to 120 meters (in the open area and no obstacles)
Dimension	70mm x 32.2mm x 18.2mm (H4) 88mm x 32.2mm x 18.2mm (H4 Pro)
Weight	32.2g (H4, with battery) 35.1g (H4 Pro, with battery)
Material	ABS+PC & PMMA
Waterproof	IPX4
Color	White and Black
Installation	Laid, Sticker
Button	Mechanical button
LED	1 Green Led and 1 Red LED
Sensor	SENSIRION SHT3x Temperature and humidity sensor 3-axis accelerometer sensor ((need to be customized)
Operating temperature	-20°C / + 60°C
Storage temperature	-20°C / + 70°C (without battery) -20°C / + 40°C (with battery)
Humidity	0% ~ 95% (non-condensing)

Power

Power supply	Replaceable 2 x 1.5V 1200mAh lithium and iron disulfide battery
Average current	41.6uA (Default settings*)
Lifetime	2.5 years (Default settings*)

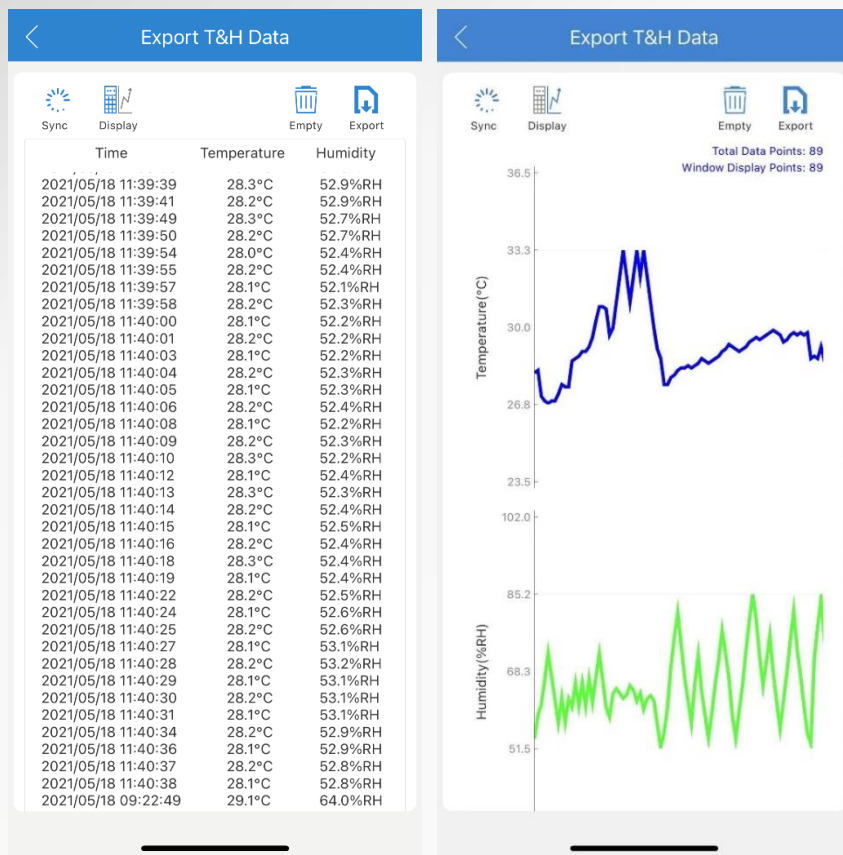
Default settings - 1 active slot, 1000ms ADV interval, 0 dBm Tx power and 1 second sensor data sampling rate

Functions

Advertising format	Apple iBeacon Google Eddystone (UID, URL, TLM) MOKO BeaconX Pro sensor data
Multi-advertising	Support up to 6 active slots (Beacon can broadcasts different advertising packets separately)
Configuration	Advertising format and data/ Beacon name Tx Power/ Advertising interval Connection password/ Trigger options/ Sensor parameters
Sensor sampling	Broadcast or notify the temperature and humidity sensor data in real time
Threshold trigger	When the temperature of humidity is higher of lower than the preset safe value, the advertising status and data will change
Sensor data storage	Store the T&H data according to the storage rules (time interval, fluctuation range of temperature or humidity)
Firmware update	Nordic DFU OTA/ J-link
Configuration APP	iOS and Android are available Scanning the advertising data and connecting to configure all parameters Sensor data curve/ Export storage sensor data Open APP SDK for customer to develop

Service and Customization

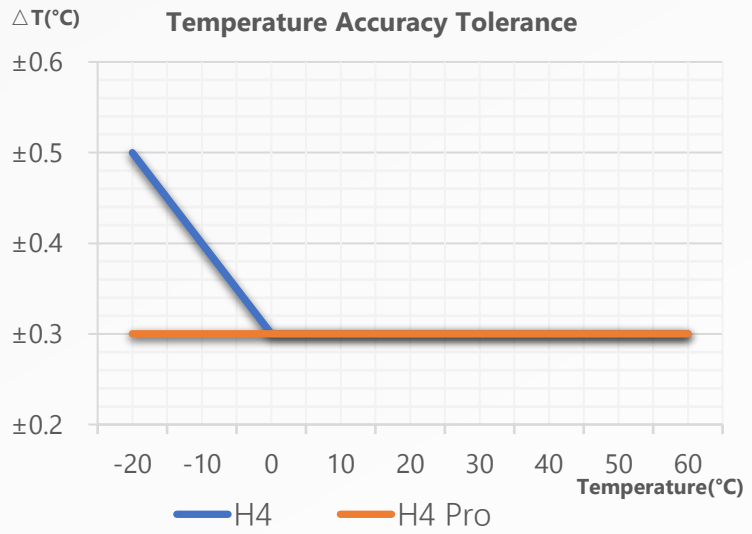
Certification	USA (FCC), Europe (CE-RED, CE-LVD, CE-EMC, REACH, RoHS) Other certifications can be customized
Manufacture customization	MP Pre-configuration parameters Packaging/ Laser logo/ Label/ Sensor/ NFC
Development	Custom firmware development Customer firmware programing Custom hardware design and layout



Temperature & Humidity sensor data displayed on the BeaconX Pro APP

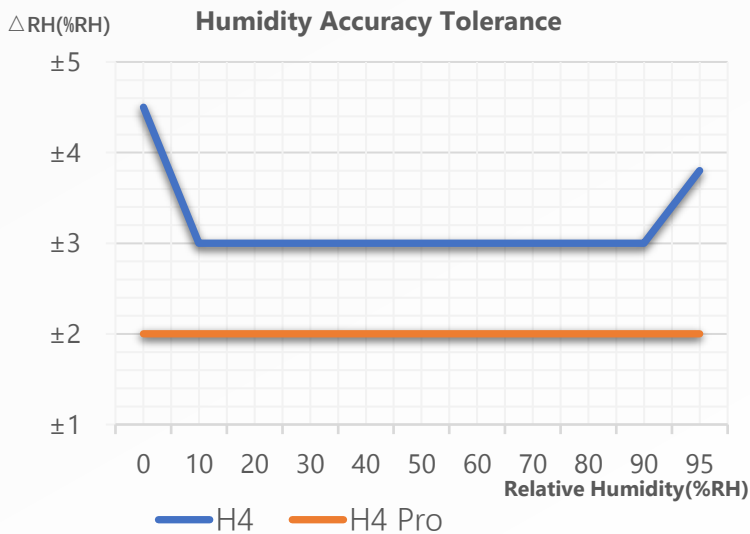
Temperature Performance

H4	
Sensor model	SHT30
Accuracy tolerance (typical)	±0.3°C (Condition: 0°C - + 60°C) ±0.5°C - ±0.3°C (Condition: -20°C - 0°C)
Resolution	0.1°C
H4 Pro	
Sensor model	SHT31
Accuracy tolerance (typical)	±0.3°C (Condition: -20°C - + 60°C)
Resolution	0.1°C



Humidity Performance

H4	
Sensor model	SHT30
Accuracy tolerance (typical)	±3% RH (Condition: 10% RH - 90% RH) ±4.5% RH - ±3% RH (Condition: 0% RH - 10% RH) ±3% RH - ±3.8% RH (Condition: 90% RH - 95% RH)
Resolution	0.1% RH
H4 Pro	
Sensor model	SHT31
Accuracy tolerance (typical)	±2% RH (Condition: 0% RH - 95% RH)
Resolution	0.1% RH



Note: The sensor shows best performance when operated within recommended normal temperature and humidity range of 5°C – 60 °C and 20 %RH – 80 %RH, respectively. Long-term exposure to conditions outside normal range, especially at high humidity, may temporarily offset the RH signal (e.g. +3%RH after 60h kept at >80%RH). After returning into the normal temperature and humidity range the sensor will slowly come back to calibration state by itself. Prolonged exposure to extreme conditions may accelerate ageing.

Contact Us

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