

KONA Smart Room Sensor

LoRaWAN® connected Home and Office Environment Monitoring

KONA Smart Room Sensor integrates a lot of useful functionality into a very small form factor. KONA Smart Room Sensor is ideal for holistically monitoring the home and office environment, whether it is measuring and reporting temperature, humidity, light, movement, motion, shock, or detecting leaks, open / closed doors and windows or other custom features. It also supports battery status for easy maintenance.

The sensor is optimized for long battery life and excellent RF performance. It is fully configurable over-the-air by the user for custom applications, behaviours, thresholds, trigger events and reports, enabling it to support many different Smart Home IoT applications with the same device. KONA Smart Room Sensor can be cost effectively and quickly modified for other applications and deployments, or custom packaged if required.

Applications

- » Movement Detection (Doors, Drawers)
- » G-Force Measurement (Settable Trigger)
- » Motion Detection (PIR) - Optional
- » On / Off External Contact - Optional
- » On / Off Internal Magnetic Switch
- » Pulse Reading (Water, Gas, other metering)
- » Light Detection
- » Temperature Measurement
- » Humidity Measurement
- » Moisture / Leak Detection - Optional



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Technical and Functional System Specifications

General System Parameters

Operational Temperature	0°C to 60°C (10°C to 40°C optimal battery life)
Ingress Protection	IP30
Size	42 x 42 x 14 mm
Weight	20 g
Battery (up to 10 year life)	CR2450 (replaceable)

LoRa Parameters

RF Power	14 dBm
RF Sensitivity	up to -137dBm (SF12, 125kHz)
ISM Band	NA915, EU868, AU915, KR920
	AS923, IN865, RU864
Antenna	Internal
LoRa Device Class	Class A

Regulatory Compliance

Safety	IEC 60950-1 (CE)	
Regulatory	ETSI EN 300 220	
	ETSI EN 301-489-1/-3	
	FCC 15.247	FCC 15.209
	RSS-247	RSS-GEN

Optimized Battery Life (Years) - CR2450

Operational Temperature	20°C
Tx Power	14 dBm
Rx Cycle/Hour	1

Transmission	SF 10 125 kHz	SF 7 125 kHz	SF 8 500 kHz
4 packets / hour	+1.7	5.8	7.4
3 packets / hour	+2	6.8	8
2 packets / hour	2.8	7.4	8.6
1 packets / hour	4.4	8.6	9.5
1 packets / day	9.8	10.3	10.3

Estimated Battery Life (Transmissions) - CR2450

Temperature	Tx Power (dBm)	Tx Current (dBm)	Duty Cycle (%)	Expected Transmission
20°C	6	16.2	18.6	38.000
20°C	6	16.2	9.3	59.000
20°C	10	23.7	10	52.000
20°C	10	23.7	5	94.000
20°C	16	46.5	5.3	29.000
20°C	16	46.5	2.7	35.000
10°C	16	46.5	2.7	14.000



TEKTELIC Communications is a premier supplier of best-in-class LoRaWAN® IoT Gateways, Sensors, and custom applications. These elements combined provide a powerful end-to-end solution that can be easily, quickly, and cost effectively deployed to address the most demanding IoT challenges.

For more information please visit www.tektelic.com