

Sense^{IoT} Range – Intelligent, Powerful IoT Devices



Product Name	Sense ^{IoT} Fit 400	Sense ^{IoT} Asset	Sense ^{IoT} Asset	Sense ^{IoT} Asset XL	Sense ^{IoT} Condition (with Alert Button)	Sense ^{IoT} Condition (with Laser Range Finder)	Sense ^{IoT} Shield	Sense ^{IoT} Lite
Typical Applications	Efficient operation, equipment monitoring in-house or in transit, data centers and metal IT assets – both in terms of tracking and temperature monitoring, embedding the tag into metal components, monitoring mechanical plants	Hospitals, manufacturing facilities, warehouse management, cold chain condition monitoring, container management, facilities management, ports construction & mining, asset management	Hospitals, manufacturing facilities, warehouse management, container management, facilities management, ports construction and mining, asset management, yard management	Container management, facilities management, ports construction & mining, field operations, asset management, worker accountability, fleet monitoring, yard management	Facilities management, production line, material flow, consumable replenishment, room utilisation, state change notification, space/asset utilisation, worker accountability	Facilities management, production line material flow, consumable replenishment, room utilisation, space/asset utilisation, bin/tank fill level monitoring, car park utilisation monitoring	Contact tracing, personnel tracking and social distancing applications across large sites, facilities and sports arena/stadia	Asset tracking, personnel tracking, real time location
Radio Protocol	EPC Class 1 Gen2v2	Bluetooth 4.2 (2.45GHz) +8dBm to -15dBm NFC (Beacon configured via NFC)	Bluetooth 5.0 (QUUPPA proprietary channels or BLE advertising channels), +6dBm to -24dBm	LoRaWAN NFC (beacon configured via NFC)	LoRaWAN NFC (beacon configured via NFC)	LoRaWAN NFC (beacon configured via NFC)	Bluetooth 5.0 (Quuppa proprietary channels and BLE advertising channels), +6dBm to -24dBm NFC (buzzer volume level configured via NFC)	Bluetooth 5.0 (Quuppa proprietary channels and BLE advertising channels), +6dBm to -24dBm
Frequency Range	866-868 (EU) 902-928 (US)	2.4GHz	2.4GHz	868MHz (EU) 915MHz (US)	868MHz (EU) 915MHz (US)	868MHz (EU) 915MHz (US)	2.4GHz	2.4GHz
Battery Type	N/A	Sealed Prismatic battery, non-replaceable	Sealed prismatic battery, non-replaceable	Sealed Prismatic battery, non-replaceable	Sealed prismatic battery, non-replaceable	Sealed prismatic battery, non-replaceable	Replaceable CR2032	Replaceable CR2032
Battery Capacity	N/A	1.2Ah	1.2Ah	3.2Ah	3.2Ah	3.2Ah	225mAh	225mAh
Battery Life	N/A	Up to 5 years, 5% motion, 10 second beacon rate Tx power set to +8dBm	Up to 5 years, Device moving 10 hours/day (1Hz beacon rate) Device stationary 14 hours/day (0.1Hz beacon rate). TX power set to 0dBm	Up to 3 years, DBR set to 24h, 1 movement per day, DOP = 3 (GPS accuracy 7meters)	Up to 5 years, DBR set to 24h, set to 25,000 activations	UP to 5 years, 96 measurements per day, DBR set to 24h in alert 50% of the time	Up to 6 months under following conditions - (device moving 10 hours/day (3Hz beacon rate). Device stationary 14 hours/day (0.1 Hz beacon rate). Tx power set to 0dBm, enters alert mode 20 times per day with buzzer & LED activation for 20 seconds at each alert (blink slow)	1 year under following conditions - (device moving 10 hours/day (1Hz beacon rate), device stationary 14 hours/day (0.1Hz beacon rate), Tx power set to 0dBm
Read Range	Fixed reader: Up to 3.5m Handheld reader: Up to 2 m (6.6 ft)	200 m+ depending on reading device	Up to 200m+ depending On Quuppa locator type used	Range 3–4 km urban — can be up to 15 km line of sight	Range 3–4 km urban — can be up to 15 km line of sight	Range 3–4 km urban — can be up to 15 km line of sight	Up to 200m+ depending on Quuppa locator type	Up to 200m+ depending on Quuppa locator type
Default Beacon Rate	N/A	Configurable from 1–10 seconds	Configurable	Configurable from 1–254 hours	Configurable from 1–254 hours	Configurable from 1–254 hours	Configurable	Configurable
Alarm Beacon Rate	N/A	Configurable from 0–10 seconds (where 0 is off)	N/A	Configurable from 0–254 minutes (where 0 is off)	Configurable from 0–254 minutes (where 0 is off)	N/A	N/A	N/A
Sensor Period	N/A	N/A	N/A	N/A	N/A	Configurable from 0–254 minutes (where 0 is off)	N/A	N/A
Sensors	Temperature	Accelerometer, temperature	Accelerometer (movement), button, LED	GPS (Location) accelerometer temperature	Push button (alert) optional: accelerometer temperature	Laser range finder optional: accelerometer temperature	Button, accelerometer	Button, accelerometer
LED Indicator	No	Yes (Bi color LED)	Yes (Bi color LED)	Yes (Bi color LED)	Yes (Bi color LED)	Yes (Bi color LED)	Yes (Bi color LED)	Yes (Bi color LED)
Temperature Sensor Range	-40°C to +85°C	-20°C to +60°C with an accuracy of +/-2°C	N/A	-20°C to +60°C with an accuracy of +/-2°C	N/A	N/A	N/A	N/A

Note: All above Values are for comparison only, Please refer to product datasheets for full specifications.

Continues overleaf

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Configurable	N/A	Tx power, tag type (GATT Profile), accelerometer threshold, default beacon rate, alarm beacon rate, high temp threshold, low temp threshold, sleep/awake status	Tx power, accelerometer threshold (rate & sensitivity), default beacon rate (transmit rate), Rx rate, buzzer volume	Data rate, accelerometer threshold, default beacon rate, alarm beacon rate, high temperature threshold, low temperature threshold, gnss max lock time, gnss min lock time, dop threshold, tag status (asleep/awake)	Data rate, alarm beacon rate, default beacon rate, sleep/awake status	Data rate, default beacon rate, sensor period, range type, max range, range threshold, range offset, enter alarm state (above/below), sleep/awake status	Tx power, accelerometer threshold (rate & sensitivity), default beacon rate (transmit rate), Rx rate, buzzer volume	Tx power, accelerometer threshold (rate & sensitivity), default beacon rate (transmit rate), Rx rate
Supported Profiles	N/A	BLE (Generic, iBeacon, Eddystone UUID)	Quuppa	N/A	N/A	N/A	Quuppa	Quuppa
Construction	Painted black, optimized for metal	Overmolded durable, shock resistant TPE (thermoplastic elastomer)	Overmolded durable, shock resistant TPE (thermoplastic elastomer)	Overmolded durable, shock resistant TPE (thermoplastic elastomer)	2-part durable PC/ABS case	2-part durable PC/ABS case	2-part durable PC/ABS case. Available in belt clip, lanyard or wrist strap options	2-part durable PC/ABS case. Available in Wrist strap, Belt Clip, Lanyard, adhesive or rivet attachment options
Size (mm)	13.1 x 8.05 x 3.1 including IC bump Tolerance +/-0.5	95.1 x 34.2 x 21	95.1 x 34.2 x 21	113.4 x 58.3 x 24.3	80.3 x 60.3 x 21.3	102.5 x 60.3 x 20.1	Lanyard or belt clip - 50.1 x 44.5 x 13 Wrist strap - 44.5 (bezel size), strap length 115 + 75 to buckle	Wrist 35 dia x 116, rivet 35 dia x 68.4, without Mechanical Flange 44.4 x 20 x 14.2, cable Tie 74.4 x 24 x 14.2, lanyard 35 dia x 14.2
Weight (g)	1.4	59	59	134	77	80		
Attachment	Film adhesive (included) for placement only in applications exceeding +85°C2	Mechanical (std), cable tie attachment accessory (optional), magnet attachment (optional), without mechanical flange (optional)	Mechanical (std), cable tie attachment accessory (opt.), magnet attachment (opt.), without mechanical flange (optional)	Mechanical (std), cable tie attachment accessory (optional), magnet attachment (optional), without mechanical flange (optional)	Mechanical (std), without mechanical flange (optional)	Mechanical (std), without mechanical flange (optional)	Belt clip, lanyard or wrist strap options	Rivet, cable tie, lanyard, wrist strap, without mechanical flange
Operating Temperature	-40°C to +85°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C
Temperature Alarm	Up to +125°C	N/A	N/A	Yes	N/A	N/A	N/A	N/A
Max Temperature Exposure¹	220°C short term 168 hrs 150°C long term 700 hrs	+60°C	+60°C	+60°C	+60°C	+60°C	+60°C	+60°C
IP Rating	IP68	IP68	IP68	IP68	IP68	IP68	IP68	IP68
Shock and Vibration	MIL-STD-810-G	MIL-STD-810-G	MIL-STD-810-G	MIL-STD-810-G	MIL-STD-810-G	MIL-STD-810-G	N/A	N/A
IC Type (chip)	Magnus S3: M3D / M3E	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Warranty	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year
Certifications	CE , ROHS, ATEX Certified (Optional) CID1/D2 Certified (optional)	CC, FCC, ROHS, WEEE, NFC, BLE	CC, FCC, ROHS, WEEE, Quuppa	CC, FCC, ROHS, WEEE	CC, FCC, ROHS, WEEE	CC, FCC, ROHS, WEEE	CC, FCC, ROHS, WEEE, Quuppa	CC, FCC, ROHS, WEEE, Quuppa

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