

Edge™ Sensor

IP Rated platform with on-board and external sensor interface connectivity solution

WSE-2462



Connectivity

- Cellular Cat M1/NB-IoT
- LoRa

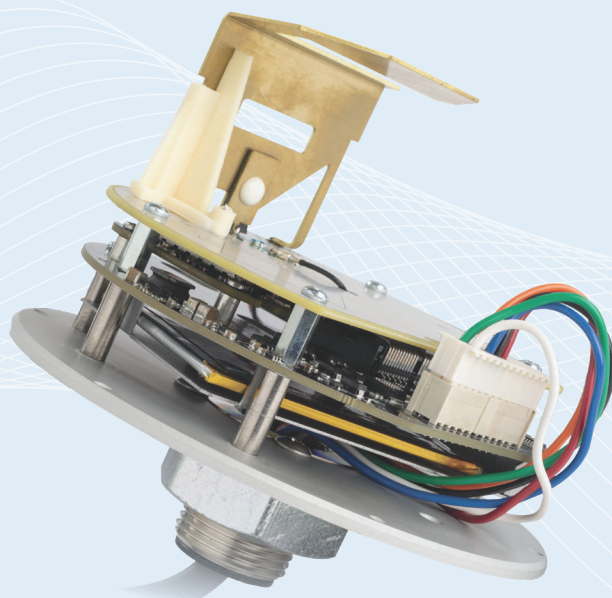
Features

- Integrated sensor and antenna platform for high performance
- Ability to connect and report multiple external sensors
- Ruggedized platform IP67 rated
- Ability to connect to power and battery backup on board along with external sensor powering capability
- Pick and choose on-board and external sensors
- Ability to read from multiple on-board sensors designed
- Customizable application and firmware

On Board Sensors

- Relative Humidity and Temperature
- 6-axis Inertial Measurement Unit
- Gas, Air Quality, Pressure, Temperature and Humidity





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The PCTEL® Edge™ Sensor is a highly customizable solution that combines two of our top platforms in a single rugged housing. It offers multiple radio connectivity from LoRa and cellular and a variety of on-board and external sensors. The Edge™ sensor can send data to the business viewing application of the customer's choice. Integrating PCTEL's core antenna platform in the Edge™ Sensor allows our customers to reduce the number of units deployed in the field, whether for a new greenfield deployment or transforming existing wired sensors to low cost easy to maintain wireless technology.

The Edge™ Sensor includes an On/Off switch which enables better management of the unit on-site and makes it easy to restart mechanically. It also features several interfaces that provide connectivity to external sensors to meet customer requirements. The interfaces are 4-20mA, 0-10V Ratiometric input, Dry contact, SPI, I2C, and serial RS-485/232.

A Lithium-Ion 1sXp battery pack is included. External power may be supplied by a 8 to 32 VDC power source or solar panel.

Equipment for use in locations where children are not likely to be present.

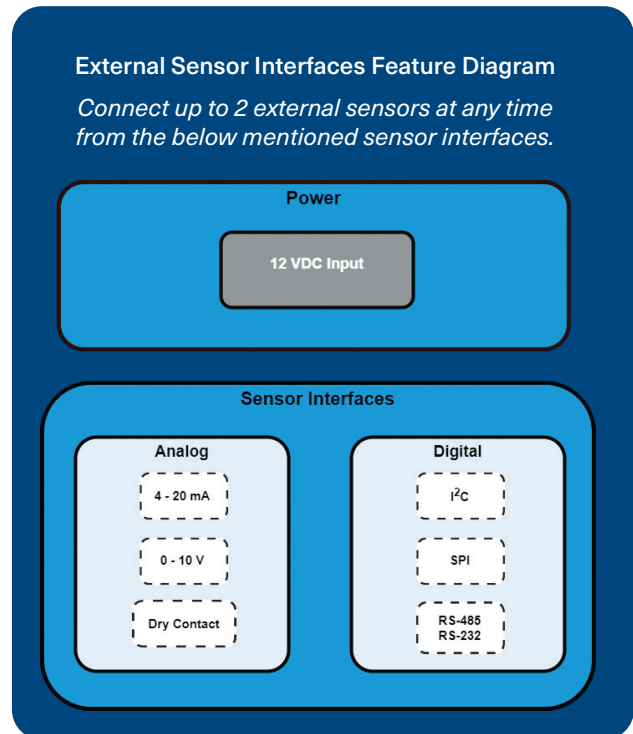
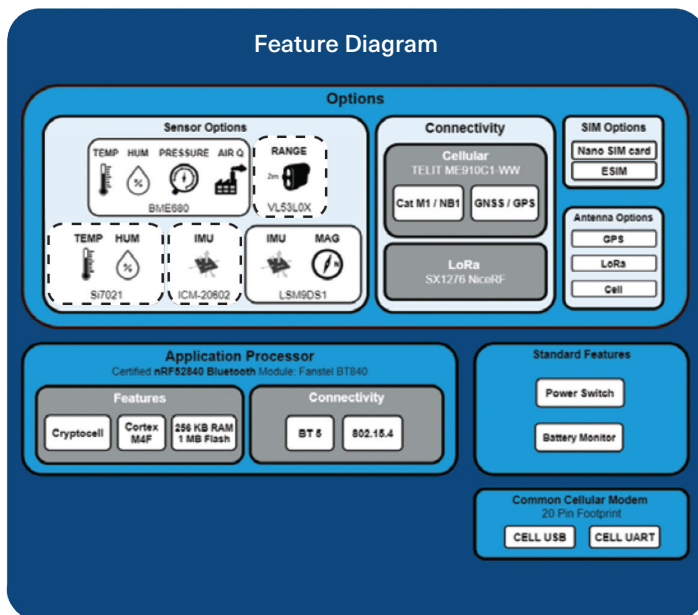


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Features and Benefits

Feature	Benefit
ARM Mbed Enabled	Faster time to market leveraging ARM Mbed OS to accelerate application software development
Internal Radio Antenna	PCTEL optimized antenna for all radios
Rechargeable Battery Pack	Easily recharge using external power supply
Mounting Options	Stud
Nano-Sim Card Holder	Easy installation of preferred cellular provider SIM card
High Performance Analog to Digital Converter	Excellent external sensor data readings with 24-bit resolution and sampling rates up to 4 kSPS
Battery Voltage Monitoring	Able to maximize battery health as needed



--- dashed lines indicates capable of supporting



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General Specifications

Parameter	Specification
Operating Temperature	-20°C to +60°C
Charging Temperature	0°C to +45°C
Storage Temperature	-20°C to +45°C (1-month) -20°C to +35°C (6-months)
Battery Pack	Li-Ion, 3.7 V @ nnnn 5 AH
Dimensions	136.5 mm (5.38") dia. x 90 mm (3.54") height

Internal Sensor Specifications

Device	Specification
Relative Humidity / Temperature	±3% RH (max) 0-80% RH / ±0.4°C (max) -10°C to +85°C
6-Axis IMU Motion Tracking Device	3-axis Accelerometer: ±2/±4/±8/±16 g linear 3-axis Gyroscope: ±250/±500/±1000/±2000 dps
Environmental Gas / Air Quality Gas (VOC)	20% tolerance; 5% accuracy
Pressure	300 to 1100 hPa (±0.6 hPa)
Humidity	10% to 90% RH (±3%) at 0°C to +65°C
Temperature	-40°C to +85°C (±1°C), 25°C (±0.5°C)
Air Quality Score	0 to 500 (±15%)

External Sensor Interfaces

Type	Specification
Analog	4-20 mA [2-pos.] Dry Contact [2-pos.] 0-10 V Ratiometric Input [2-pos.]
Digital	I2C [2-pos.] SPI [4-pos.] RS-485/RS-232 [2 or 4-pos. shared]
Power	12 VDC Input - Nominal [2-pos.]
Signal Returns	4-positions



CONTACT US

**For more information about
this product contact us at
> pctel.com/contact**

Solving Complex Wireless Challenges

PCTEL is a leading global provider of wireless technology solutions, including purpose-built Industrial IoT devices, antenna systems, and test and measurement products. Trusted by our customers for over 29+ years, we solve complex wireless challenges to help organizations stay connected, transform, and grow.



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