Innovative Wireless Sensing™
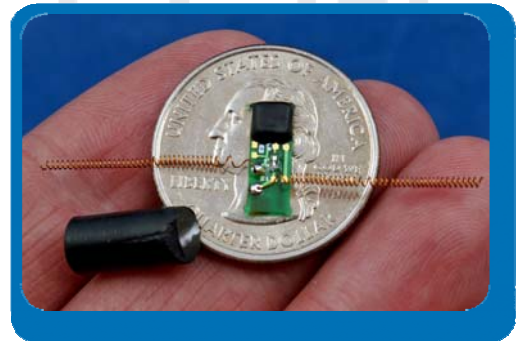
PHASE IV
ENGINEERING INC.

SensTAG™ UHF-EPC RFID Sensors

Passive (battery-free)   Battery-Assisted (long-range)   Data-Loggers   Metal-Mount

⊞ UNIQUE BREAK-THROUGH FEATURES

- **Long read range -** 5+ meters with battery, 2+ meters, passive.
- **Use Existing UHF EPC Readers** to read temperature.
- **Temperature Sensors** available off the shelf and custom.
- **Multi-Sensor**—Temperature, pressure, humidity, strain…
- **No Battery -> no maintenance, miniature, high-temperature**.
- **Ultra High and Low Temperature Range** with tethered sensors.
- **Metal-Mount** tags with optimized metal-mount antennas.
- **Miniature & Mobile**—read sensors as they pass by a reader.
- **Embedded** sensors—read through walls, boxes, wood…
- **Configurable Data Logging** with PC interface.
- **Customized** sensor tags —our specialty.*
- **Easy to Install**—no wires to connect.
- **Totally Sealed**—submersible, rugged.
- **Low Cost Data Logging** (with battery).

Custom Packaged Battery-Free
Ultra-Miniature Temperature Sensors

Experts in RFID Sensing
that We Invented.

Credit Card Passive RFID Sensor

Metal Mounted SensTAGs were embedded in the rubber
pads of tank tracks for temperature testing.

*We specialize in providing innovative sensing systems for hard-to-solve sensing problems. In addition, we offer a range of semi-custom products and complete turnkey manufacturing of custom sensing solutions for volume commitments.

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Contact Phase IV Engineering to explore how our innovative wireless sensing technology can work for your organization.

Data Logger with internal and external tethered sensor.

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*Sens*TAG™ UHF RFID Specifications (Passive, BAP, Data Logger)

Physical

Size	Standard size - credit card. Down to 10mm x 4 mm. *
	*We specialize in custom packaging.

Reader & RF Specifications

Operating frequency	868-950 MHz Ultra High Frequency (UHF). EPC.
Read/Write Range	5+ meters using high-power reader.
	2+ meters (battery-free) with credit card sized tag.
ID	Unique identifier EPC code for each device.
Reader Commands Required	Standard Read/Write for many applications.
	Some applications may require custom commands.

Sensor Performance*
(Internal)

Temperature Range	-40 °C to +125°C (-40 °F to +230 °F).*
	*Range may be extended with tethered sensors.
Temperature Accuracy	±0.5 °C.
Sampling Intervals (data logger)	Programmable from 1 second, to 1 day.
Alerts (data logger)	4 adjustable temperature threshold settings.*
Calibration	Calibration factors stored onboard.

Additional Sensor Options

	Two external sensor inputs also available.*

Memory (Data Logging Mode)

Mode	Time-based and limit-based data logging modes.*
Capacity	800+ time-stamped temperatures.
	Stores over 1,000 sensing violation events based on 4 user-selectable limits.*

Electrical Specifications

Power source	RFID reader (passive) or battery (BAP).
	RF energy harvesting for external sensor power.
Battery Life	1 to 20 years, depending on the application.

Certification/Regulatory

ISO Standards	Fully compliant with ISO 18000-6C .
EPC	EPC Class 1 and Class 3, Gen2 (with custom commands).

***UHF *Sens*TAGs are highly configurable. A microprocessor-based "Smart" *Sens*TAG is also available that offers options beyond these specifications. We specialize in custom RFID Sensors. Call us with your unique sensing challenges.**

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