Summit

Multi-sensing

Summit can simultaneously measure strain, temperature, deflection, and more—making vast amounts of data available in real time. In today's world, success is increasingly predicated on the ability of an organization to obtain and interpret large quantities of data. Summit allows engineers across industries to gather the data they want, not just the data they can get.

Features

- Four simultaneously monitored fibers with over 2,000 equally spaced sensors per fiber

- Aggregate sensing length of 52 m

- Software selectable spatial resolution down to 1.6 mm

- Real time, high resolution distributed strain and temperature measurements

- Up to 60 Hz acquisition rate

· Structural deflection & 3D shape sensing capability

- Immune to EMI/RFI and radiation for reliable operation in demanding environments

- Low latency networking capability

- Adjustable sensor standoff length

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Benefits

- *Easy to Use/Cost Effective:* Vastly reduced installation complexity and effort compared to traditional strain gauges and thermocouples.

- *Highly Accurate*: Fully distributed sensing provides comprehensive data for confident testing and model validation.

- *Multi-Sensing*: Simultaneously measure strain, temperature, deflection, 3D shape, liquid level, and more.

- *Versatile:* The standoff length is fully customizable so users can place the sensor exactly where it needs to be.

- *Reduces Risk*: Having access to distributed data empowers engineers to detect design flaws earlier in product development, preventing costly failures after a product is launched.

- *Improves Efficiency*: Replacing multiple technologies in a single platform, Summit allows organizations to consolidate their testing and monitoring equipment.

- *Lifecycle Monitoring:* Monitor a product during design, development, production and operation with the same platform.

Application examples

- *Aerospace:* Monitoring changes in wing load distribution, shape, liquid level and more in real time.

- *Automotive*: Studying automobile frame deformation to improve safety and performance.

- *Medical*: Determining the shape of medical instruments used in non-invasive and minimally invasive surgical procedures.

Customer Success

Sensuron can develop the customizations necessary to embed the Summit platform into your system and will work with your team to ensure that your application can benefit from this technology.

Summit[1]	
Interrogator accuracy	1.0 µε / .12 °C
Strain repeatability	±1.5 µε
Temperature repeatability	±0.2 °C
Features	
Simultaneously monitored fibers	4
Total sensors	8192
Total sensing length	52 m
Sensing length per fiber	Up to 13 m
Gauge spacing[2]	1.6 mm to 25.4 mm
Gauge length[2]	1.6 mm to 25.4 mm
Performance	
Acquisition rate[3]	Up to 60 Hz
Spatial resolution[2]	1.6 mm
Interrogator strain measurement range[4]	35,000 µε
Sensor temperature range[5]	-200 to +200 °C
Mechanical and Environmental	
Standoff length[6]	User defined between 0 to 50 m
Dimensions[7]	305 x 115 x 330 mm (WxHxL)
Weight[7]	6.6 Kg
Power Consumption	65W

[1]Each unit comes standard with strain and temperature sensing capabilities. Upgrades are available for deflection and 3D shape sensing. Contact Sensuron for more details.

[2]Operating at 1.6mm spatial resolution requires custom option (6.3 mm is stock). Contact Sensuron for additional information.

[3]Summit acquisition rates are independent of sensor length. The maximum acquisition rate of 60 Hz yields a strain range of ±800 µε.

[4]The strain range is software adjustable within the listed range.

[5]This figure is for the standard fiber and coating supplied by Sensuron. Contact us for other fiber options for temperatures up to 900 °C.

[6]Contact Sensuron for standoff lengths longer than 50 m.

[7]The system can be repackaged per customer requirements.

Please contact Sensuron at 512-827-2040 or info@sensuron.com to discuss your specific application needs.

The individual specifications listed on the data sheet above are specific to each individual attribute. Overall Product performance may vary based upon each specific use case and may vary depending upon combinations of Products, use with other hardware or software or conditions of use.