Summit

Multi-sensing Platform

A single Summit device can simultaneously measure strain, temperature, 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 vast amounts of data. Summit allows engineers across industries to gather the data they want, not just the data they can get.

Features

- Simultaneously monitor strain, temperature, deflection, 3D shape and more.

- Field upgradeable so the platform can scale as needed.

- Starting at 26m of sensing length and upgradeable to 52m .

- Acquisition rates of up to 30 Hz standard and up to 60 Hz after an upgrade. Acquisition rates are independent of the sensing length.

- Spatially continuous data along the entire length of the fiber with resolution down to 6.3mm.

- Starting at 1,024 simultaneously monitored sensors per channel or 2,048 per channel after an upgrade .

- Measure ±30,000 µε and −270 to 900 °C.

- Repeatability of ±1.6 µε and ±0.19 °C .

- 0-1km user defined lead length.

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Benefits

- *High Performance:* 2.6 times more total sensing length than comparable alternatives.

- *More Data*: Fully distributed sensing provides enough data for confident testing and model validation.

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

- *Adjustability:* The lead length is fully adjustable so users can place the sensor exactly where it needs to be.

- *Reduces Risk*: Having access to better 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.

Application examples

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

- *Automotive*: Monitor strain on automobile frames to improve safety, validate designs, or provide handling feedback.

- *Medical:* Monitor the shape of surgical tools in real time.

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. Additionally, Sensuron's simple upgrade model allows customers to purchase additional capabilities at a fraction of the cost of a new system. Please contact us for more information.

	Summit	Summit Ultra[1]	Summit Elite[1]
Interrogator accuracy	1.0 µε / .12 °C		
Strain repeatability	±0.5 µε after time filtering, ±1.6 µε continuous output		
Temperature repeatability[2]	±0.06 °C after time filtering, ±0.19 °C continuous output		
Features	**Summit**	**Summit Ultra[1]**	**Summit Elite[1]**
Channels	4	4	4
Total sensors	4096	4096	8192
Total sensing length	26 m	26 m	52 m
Sensing length per channel	6.5m	6.5m	13m
Gage spacing	25.4 mm to 6.3 mm		
Gage length	25.4 mm to 6.3 mm		
Performance	**Summit**	**Summit Ultra[1]**	**Summit Elite[1]**
Data rate[3]	Up to 30 Hz	Up to 60 Hz	Up to 60 Hz
Spatial resolution	6.3 mm	6.3 mm	6.3 mm
Interrogator strain measurement range[4]	±30,000 µε		
Interrogator temperature measurement range	-270-1200 °C		
Sensor temperature range[5]	-200-400 °C		
Mechanical and Environmental			
Lead length[6]	User defined between 0-100m		
Dimensions	330 x 305 x 115 mm (LWH)		
Weight	13 lbs		

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

[2]This figure was calculated via a conversion from strain repeatability.

[3]Summit data rates are independent of sensor length. The maximum data rate for each upgrade option 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 lengths longer than 100m.

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.

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