



WUT series wireless ultrasonic thickness sensors are designed for corrosion, erosion, bolt preload & tension monitoring. Thanks to the best battery efficiency in the industry, the sensors can be used for both dynamic or long-term monitoring. The sensor battery can last 10-year or more at 30s interval. The instant real-time response is crucial for critical infrastructures such as pipelines, refineries or wind turbines. The sensors have resolution of 0.001mm with +/-0.1mm repeatability. The wireless ultrasonic sensors have large measurement range from 3mm up to 1,000mm. The sensors can connect to PT1000 temperature sensor for environment compensation.

WUT series sensors should be used with [Broadsens edge-computing gateways](#).



WUT204-S wireless ultrasonic sensor



BUP4S single-element ultrasonic probe

Parameters	WUT204	
Number of channels	4	
Measurement interval	Default every 10s (optional 0.1s, 0.5s, 1s, 3s, 10s, 30s, 1m)	
Resolution	0.001 mm	
Repeatability	+/- 0.01mm in room temperature	
Connector to probes	750mm cable with SMA female connector	
Ultrasonic probes	BUP4S (single element), 550mm long, SMA male connector	BUP4D (dual element), 550mm long, SMA male connectors
Measurement range	50 mm up to 1,000 mm	3 mm to 60 mm
Temperature sensor type	PT 1000 platinum temperature sensor	
Temperature accuracy	+/- 1 °C	
Battery life	10 years or more at 30s interval; 7 years at 10s interval	
Power consumption	2.3 uA idle, 41 uA average at 10s interval, 20 uA average at 30s interval	
Power supply	ER14335 battery pack, 3,300mA capacity, user replaceable	
Wireless protocol	2.4GHz ultra-low power proprietary	
FCC ID/IC ID	X8WBC833M / 4100A-BC833M	
Transmission distance	Up to 300m (900 ft) line of sight, open space	
Size	WUT204-S (Screw mount enclosure): Diameter: 41mm, Height: 56mm	
Material & Weight	Stainless steel & industrial plastic, 295 g with extension cables	
Mounting method	Screw mount: 1"1/4 TP1 11.5 NPT	
Environment	Working temperature: -40 - 85 °C; storage temperature: -20 - 50 °C; IP67 waterproof	

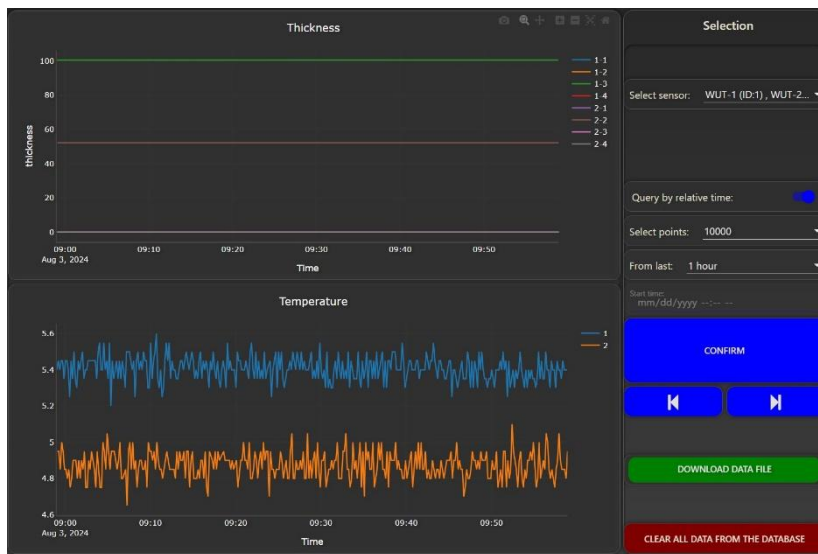
## Key Features

WUT series wireless ultrasonic thickness sensors have high performance with the best battery efficiency in the industry. The sensors are ideal for online corrosion monitoring, bolt preload & tension measurements and long-term monitoring. Key features of the sensors include:

- **The only solution of instant response with 10-year or more battery life in the industry, ideal for critical infrastructures**
- Large measurement ranges from 3mm up to 1,000mm
- High resolution of 0.001mm with +/- 0.01mm repeatability at room temperature
- Replaceable ultrasonic probes
- Designed for harsh environments with IP67 waterproof rating
- Data logger ability that allows to download data when communication to the gateway is impossible
- Parallel monitoring with multiple WUT sensors connecting to the same gateway
- Easy installation and usage
- Cost effective

## Monitoring Software

Software at wireless gateway is based on open-source software node-RED. No software installation is required. It can be accessed with all major web browsers.



## Software advantages

- True real-time thickness monitoring
- Intuitive data visualization charts
- Numeric data display
- Data logger ability
- Time-series database
- Easy to add or delete sensors
- Data streaming ability to clouds
- OTA firmware upgrade
- Easy data exports
- Secure data transmission

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**Website:** [www.broadsens.com](http://www.broadsens.com)

**Sales:** [sales@broadsens.com](mailto:sales@broadsens.com)

**Support:** [support@broadsens.com](mailto:support@broadsens.com)

**USA Headquarter**

• 100 S Murphy Ave Ste 200, Sunnyvale, CA, 94086

**Distributors**

[Contact Broadsens](#)