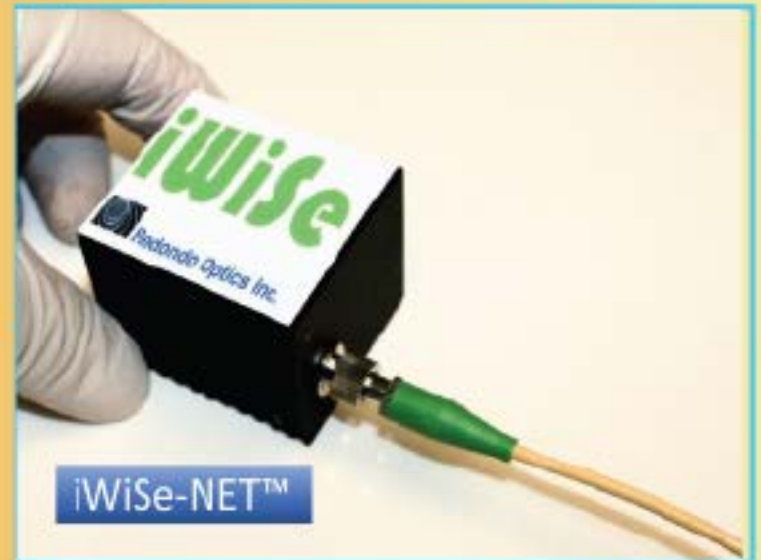




# iWiSe-NET™ - Wireless FBG Sensor Interrogator

## Intelligent Fiber Optic Sensor Networks



Redondo Optics' family of battery powered, wireless Fiber Bragg-Grating sensor network systems—based on its patented photonic integrated circuit (PIC) microchip technology represents a completely new, robust and reliable technology to accurately monitor in real time the passive and dynamic status of single or multiple distributed fiber optic Bragg grating sensors installed in critical infrastructures.

### Unique Features:

- Monolithic Optical Transceiver Demodulator
- No Moving Parts
- Hermetically Sealed
- Wireless Data Communication
- Rechargeable Battery Power
- Quick-Connect Sensor Elements
- Miniature Size and Lightweight
- Ultra-Low Power Operation



# iWiSe-NET™ System Series

Performance Specifications\*

Monitoring Mode	Single point or multipoint distributed over single fiber
Sensing Elements	Strain, temperature, pressure, vibration, acceleration, acoustics
Sensor Range	Strain $\pm$ 5,000-microstrains, T $\leq$ 1000°C; P $\leq$ 200,000 psi
Sensor Accuracy	$\leq$ 0.1-% of reading
Sampling Rate	DC to 20-kHz/FBG sensor channel
Signal Processor	Ultra-low-power Microcontroller
Data Communication	Wireless – Wi-Fi 802.11, ZigBee, USB
Power Consumption	$\leq$ 125-mA @ 3.2-Vdc
Power Supply	Li-Battery 3.7 V/2.4W/hr - Rechargeable
Operating Temperature	-40°F to 185°F
Weight	Node 100-grams
Package Dimensions	Node 40-mm x 40-mm x 50-mm

\* Engineering prototypes specification subject to change without prior notice.

## Applications

- Wireless Sensor Networks
- Structural health monitoring
- Smart structures
- Passive and dynamic sensing

Miniature Multi-Channel  
Fiber Optic SHM Monitor  
System for Applications where  
Weight, Size, and Power are  
Critical for Operation

## Contact Information

For further information on this or other products, please contact our sales department at (310) 406-1295 or e-mail [sales@redondooptics.com](mailto:sales@redondooptics.com).



Redondo Optics Inc.