

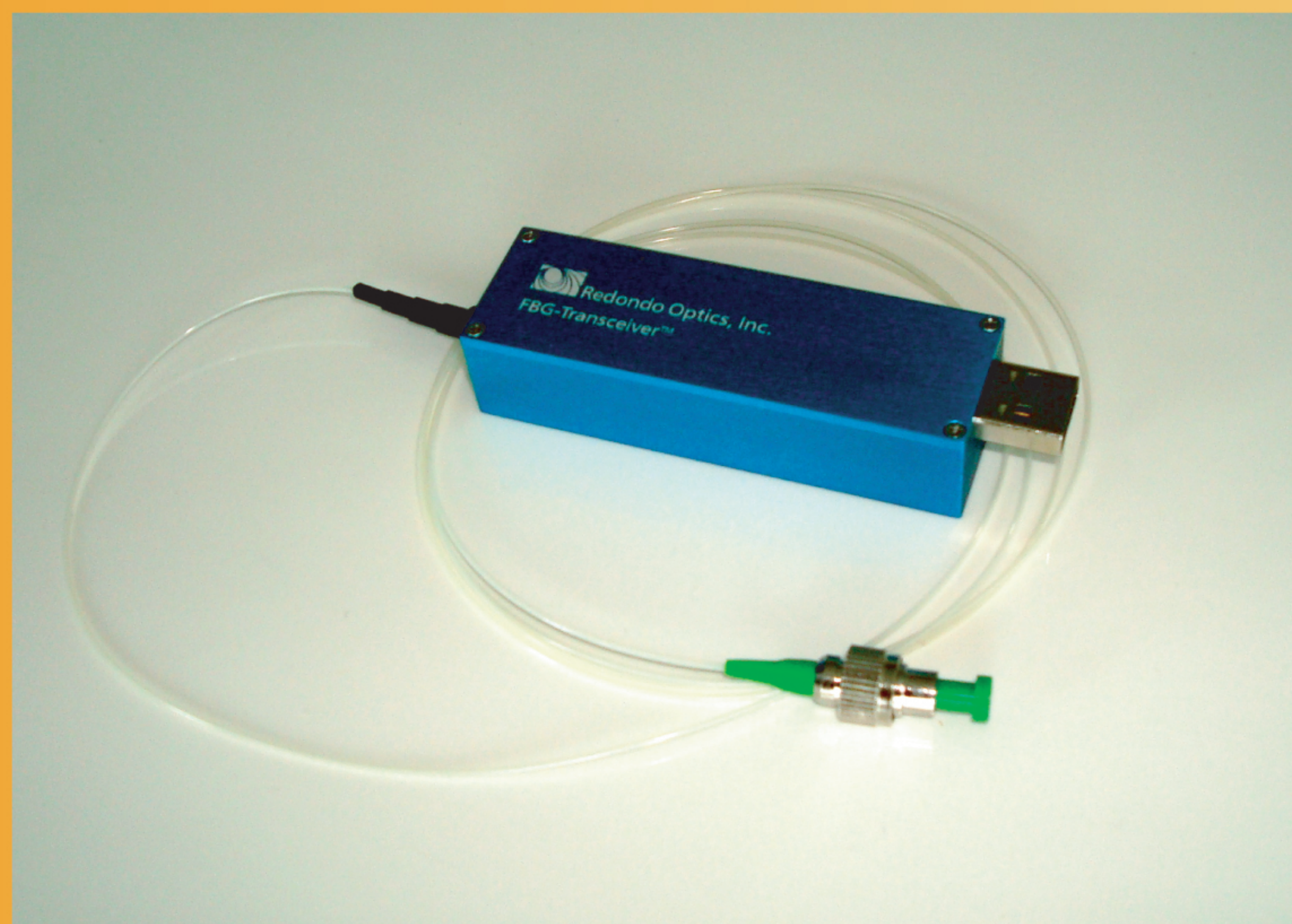


Redondo Optics, Inc.

Product Release

Fiber Bragg Grating Transceivers

FBG-Transceiver™



Redondo Optics' family of FBG-Transceiver™ systems, based on its patented hybrid planar lightwave circuit technology, represents a completely new, highly robust and reliable technology to accurately monitor in real time the passive or dynamic status of single or multiple distributed fiber optic Bragg grating strain or temperature sensors installed in critical infrastructures.

Its miniaturized packaging, low power operation, state-of-the-art data communications architecture and affordable price make it a very attractive solution for a large number of SHM/NDI applications in energy, aerospace, naval and maritime industries, civil structures such as bridges, buildings and dams, the oil and chemical industry, defense and for homeland security.

FBG-Transceiver™ System Series

Performance Specifications*

Model No	Units	FBGT-100	FBGT-500	FBGT-1200
Sensing Channels		1	5	12
Monitoring Mode		Stress-strain, temperature, vibration, and acoustics		
Monitoring Principle		Wavelength division demultiplexing (WDDM)		
Wavelength Range	nm	1520 - 1570		
Bandwidth (FWHM)	nm	60		
Output Power	dBm	Max (-) 0.5 dBm	Max 0 dBm	Max 5 dBm
Wavelength Resolution	Hz	5 pm @ 100 Hz		
Wavelength Accuracy	pm	± 5 pm		
Wavelength Repeatability	Hz	± 5 pm @ 100 Hz		
Strain Range		≤ 10,000 μstrains	≤ 4,000 μstrains	≤ 2500 μstrains
Temperature Range	°C	0 °C to 400 °C		
Sensor Sampling Rate	Hz	2-kHz	20-kHz per channel	10-kHz per channel
Signal Processor		Microcontroller – Sensor calibration and T compensation		
Data Communication		USB or (Optional - Ethernet, Wireless, Bluetooth)		
Optical Connector		FC/APC or Custom		
Package		Hermetically Sealed Single Fiber Package		
Data Display		LabView Graphical Interface		
Power Supply	mA	5V/500 mA	12 V/500 mA	12 V/500 mA
Weight		75 gr	115 gr	115 gr
Dimensions	mm	18.5 mm x 18.5 mm x 50 mm	29 mm x 29 mm x 110 mm	29 mm x 29 mm x 110 mm

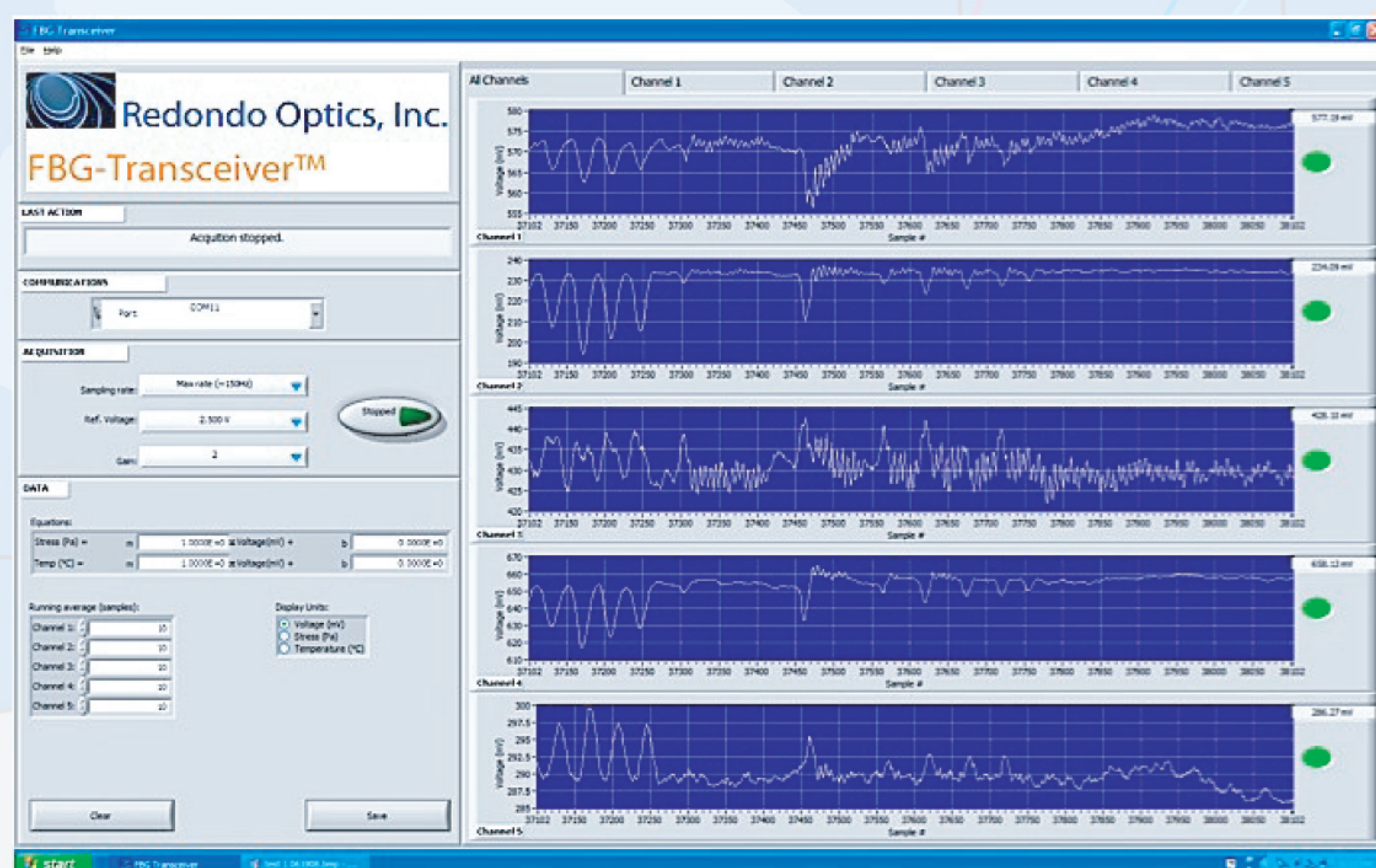
* Engineering prototypes specification subject to change without prior notice.

Applications

- Structural health monitoring
- Nondestructive evaluation
- Smart structures
- Passive and dynamic sensing

Key Features

- No moving parts
- Monolithic integration
- Miniature package
- Autonomous 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.



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