

## Plug & Play Remote Health Monitoring for Rotating Machines



### Enhance your predictive maintenance program with TACTIX™

#### IMPROVE PLANT RELIABILITY

- Avoid unexpected breakdowns
- Maximize throughput and top-line performance of your facility

#### LOWER MAINTENANCE COSTS

- Decrease frequency of complex and time-consuming repairs
- Reduce the need to keep expensive parts on-hand

#### REALIZE HIGHER PRODUCT QUALITY

- Receive real-time alerts before product runs out of tolerance
- Avoid downstream quality and waste issues

#### ENHANCE SAFETY

- Reduce the need to take measurements at running machines

### SYSTEM OVERVIEW

Easy-to-install sensors measure machine vibration & temperature

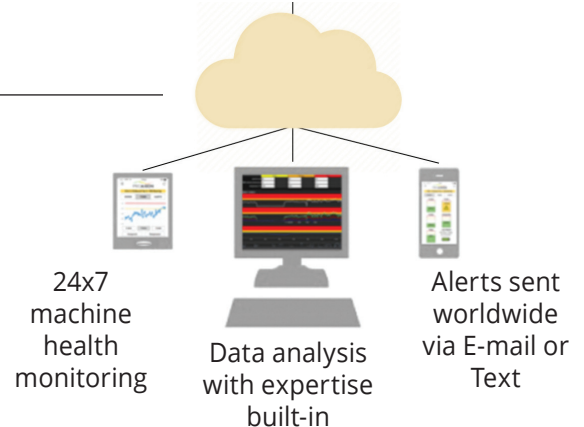


Existing Machines



Plug & Play Industrial Gateway securely connects sensors to Cloud

Integration with other cloud-based software



TACTIX™ SENSOR	
Vibration Measurement	
Type	3-Axis MEMS
Range	+/- 16g
Frequency Response	0 – 1600 Hz (+/- 3dB)
Sensitivity	3.9 mg/LSB
Noise Floor	4.3 mg @ 100 Hz; 18 mg @ 3,200 Hz
Transverse Sensitivity	<10%
Samples per acquisition	800 to 6400*
Spectral Lines	400 to 3200*
Sample Rate	16 to 3200 Hz
Temperature Measurement	
Range	-40°F to +230°F (-40°C to +110°C)
Accuracy	+/- 0.5°F (+/- 0.3°C)
Physical/Mechanical/Environmental	
Overall Dimensions	2" diameter x 3.75" height
Weight	305 grams
Base Materials	316L SS
Enclosure Material	Ryton™ PPS
Mounting Options	¼"-28 UNF Stud or Epoxy
Mounting Surface Temp	-40°F to +230°F (-40°C to +110°C)
Ambient Temp	-40°F to +167°F (-40°C to 75°C)
Ingress Protection	IP68
Impact Resistance	6-foot (2-meter) drop onto concrete
Exposure	Outdoor rated, UV resistant
Wireless Communication	
Radio	Bluetooth Low Energy 2.4 GHz
Range	Up to 150 feet depending on site
Antenna	Internal omni-directional
Power	
Battery Type	Lithium Thionyl Chloride
Expected Battery Life	7+ years at 4 samples/hour

GATEWAY™	
Dimensions	4.5" diameter x 7.5" height
Weight	2 lbs
Operation Temperature	--40°F to +140°F (-40°C to +60°C)
Enclosure	NEMA 4X Indoor/Outdoor
Power Source	120 VAC, 1-Ph, 60 Hz
Power Consumption	<20 watts
Sensor Communication	Bluetooth Low Energy 2.4 GHz
Communication with Cloud	Cellular (data plan included) WiFi (IEEE 802.11) Ethernet (IEEE 802.3)
# of Sensors per Gateway	Up to 50
Data Security	HTTPS/TLS 1.2
Firmware Updates	Over-The-Air (OTA)
System Reliability	Automatic Fault Recovery
Connectivity Uptime	>95%
Offline Data Storage	30+ days
Setup & Configuration	Plug & play automatic

CLOUD SOFTWARE	
User Interface	Web browser with secure login
Security	HTTPS/TLS 1.2
Vibration Analysis	1-axis + 3-axis composite Acceleration 0-pk, RMS Velocity 0-pk, RMS FFT and Waveform plots Broad and narrowband thresholds
Historical Trending	Vibration & temperature Adjustable: 1-hour to 6-month
Data Storage & Download	Unlimited, .xls & .csv formats
Supported Browsers	Chrome Mozilla Firefox Internet Explorer 9.0+
Supported Devices	PC/Desktop Tablet & Phone
User-Configurable Alerts	Warning & Alarm Thresholds
Alert Notifications	SMS Text and E-mail