i-ALERT® Monitoring Solution

Sensor | App | Ai Platform

Bluetooth® SMART

Features & Benefits

ASSET INTELLIGENCE

Monitor the equipment health of any rotating machine such as pumps, motors, fans, and more.

EASY TO USE

Put machine monitoring in the hands of the everyday user.

STAY SAFE

A Bluetooth® Smart wireless connection allows monitoring from a safe distance.

EARLY DETECTION

Unplanned machine failures can cost 10 times more than planned maintenance.

SAVE TIME

Quickly scan multiple machines at once and cover more equipment with less resources, freeing time for analysis and troubleshooting.

SOLVE PROBLEMS

Advanced vibration diagnostic tools are available to anyone who can use a smart phone or tablet.

Product & Services

Sensor

Monitor tri-axial vibration temperature, and run hours.

App

Monitor your machine right from your phone with the free mobile app.

Ai Platform

Monitor all your i-ALERT sensors from a simple web interface.

i-ALERT Sensor

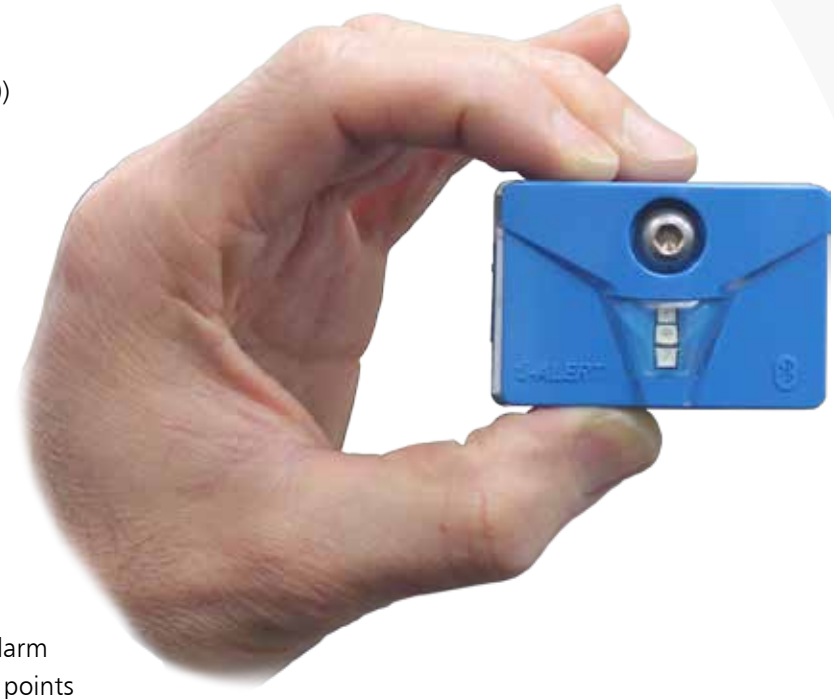
Sensor Installation & Start up

DESIGN
- Dustproof / Water Proof (IP68)
- Intrinsically Safe (C1D1, Zone 0)

MEASUREMENTS
- Temperature
- 3 Axis Vibration
- Operating Hours Tracker
- FFT and TWF

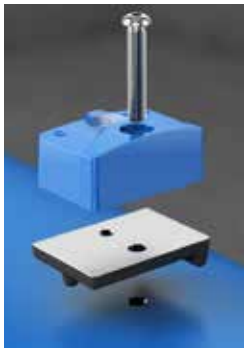
LED INDICATION
- Green: Normal
- Blue: Connecting
- Red: Alarm

DATA STORAGE
- Store readings every hour
- Checks alarms every 5 min
- Takes FFT and trend point on alarm
- Stores 170 days of hourly data points



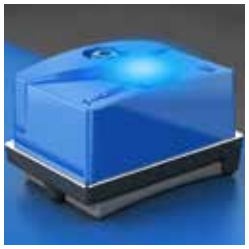
Sensor Installation & Start up

1 Install Sensor & Remove Sticker



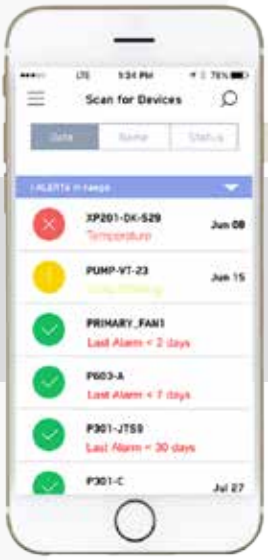
2 Download & Open App

3 Select Sensor & Edit Sensor Details



DONE

i-ALERT APP



Scan for Devices

View the status of all the i-ALERT devices in range without having to directly connect

Dashboard

Simple, intuitive dashboard to track vibration, temperature, run-time & battery life

Trending

Trend vibration, temperature, & kurtosis to monitor any changes in the equipment operation

Advanced Tools

Download or request a Fast Fourier Transform (FFT) & Time Wave Form to perform vibration analysis

Datasheets for Machines

Load performance and technical reference documents for all your machines

Report Generator

Generate a machine health report and send the report via email

Faster Data Collection

Manage the Routes

Create, Edit, and Execute all of your routes

Customize the Routes

Customize your route by choosing a route name, schedule, route type, emails to report list, and devices you want to add

Execute the Route

The app will automatically collect the data on your route and will prompt the user if more data is needed

Auto Generated Reports

Once a route is completed the app will automatically generate a report and send it to a group email list

Case Study

Cut Data Collection Time in Half
Reports are Generated Automatically

A petrochemical additive manufacturer working in conjunction with their PdM service provider cut their route-based data collection time by more than 50% just by using the i-ALERT2 route feature. The exception report created instantaneously upon route completion further saves time. It allows the service provider's highly trained vibration analysts to focus on troubleshooting and complex problem resolution, thereby maximizing the value of their contract with the customer.

"Of the 33 i-ALERT2 devices installed, 13 can be read by standing in just one spot"

Portable Data Collector

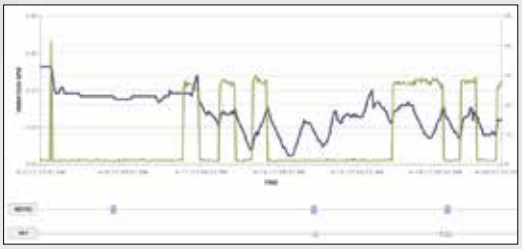
i-ALERT2 monitoring

Status	Alarm	Equip. Name	Equip. Type		Radial	Horiz	Axial	Temp
	Vib Warning,Last Alarm < 2 days	PD-110-078A	Pump	Value: Alarm:	0.07 0.20	0.07 0.20	0.12 0.15	73 129
	Last Alarm < 2 days	PD-110-076	Pump	Value: Alarm:	0.00 0.20	0.00 0.20	0.00 0.15	60 129
	Normal	PD-441	Pump	Value: Alarm:	0.00 0.20	0.00 0.20	0.00 0.15	64 131
	Normal	PD-440	Pump	Value: Alarm:	0.00 0.20	0.00 0.20	0.00 0.15	71 131
	Normal	PD-439	Pump	Value: Alarm:	0.00 0.20	0.00 0.20	0.00 0.15	73 131
	Normal	PD-438	Pump	Value: Alarm:	0.00 0.20	0.00 0.20	0.00 0.15	73 129
	Normal	PD-110-086B	Pump	Value: Alarm:	0.00 0.20	0.00 0.20	0.00 0.15	62 131
	Normal	PD-110-086A	Pump	Value: Alarm:	0.00 0.20	0.00 0.20	0.00 0.15	64 129
	Normal	PD-110-078B	Pump	Value: Alarm:	0.00 0.20	0.00 0.20	0.01 0.15	62 129
	Normal	PD-110-058B	Pump	Value: Alarm:	0.01 0.20	0.02 0.20	0.00 0.15	60 131
	Normal	PD-110-058A	Pump	Value: Alarm:	0.01 0.20	0.05 0.20	0.02 0.15	96 129
	Normal	PD-110-019B	Pump	Value: Alarm:	0.01 0.20	0.06 0.20	0.03 0.15	91 129
	Normal	PD-110-019A	Pump	Value: Alarm:	0.01 0.20	0.04 0.20	0.03 0.15	86 129

i-ALERT Ai (iALERT.ai)

i-ALERT Ai Online Platform

Monitor and manage all of your i-ALERT enabled machines and sensors in one place. This subscription service requires no software to download or dedicated hardware to run.

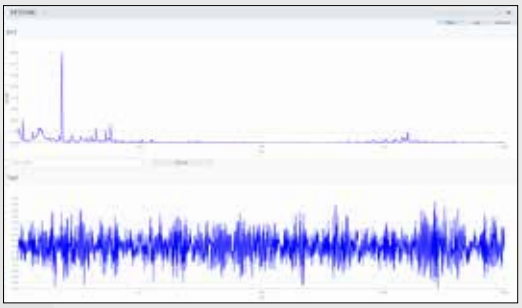


Get a Complete History of Your Machine

Stop wasting time piecing together the machine history from different data sources. View trend data, machine notes, technical data and vibration spectrum data all visualized in a simple timeline.

Track Your Plant Performance

Track the overall performance of all your machines in your plant. Set up different sites, zones or areas to compare how one area is performing to the other.



Analyze and Diagnose Machine Faults

View vibration spectrum data in all three axis. Use the built in analysis tools to view and analyze FFT (Fast Fourier Transform) and TWF (Time Waveform) data sets to diagnose machine faults.

Manage Data Collection Activities

Create, View, Assign and Edit data collection activities from the Routes Control Center. Measure on-time performance, see what routes are due, by when and by who.

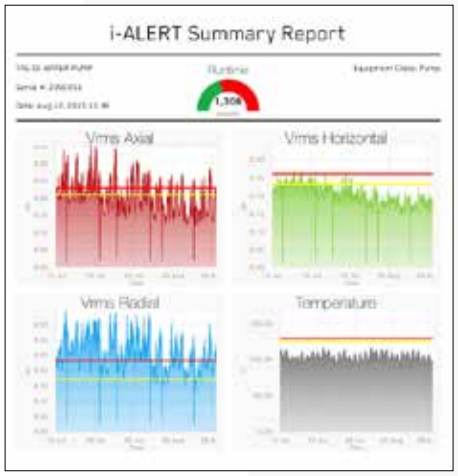
Stay Safe

A critical cooling tower at a New Jersey hospital failed unexpectedly and an emergency repair was required. Prior to the failure, only annual vibration checks were allowed since the cooling tower cell had to be shutdown and restarted for the accelerometers to be installed and then removed after data collection.

Because of the lengthy monitoring interval, the impending failure was not caught early enough. The gearbox and motor were fitted with i-ALERT2 devices during the repair. Because the i-ALERT2 monitor is Bluetooth Smart enabled it can communicate to a mobile device wirelessly from a safe distance of 30-100 ft (10-30 m) while the equipment is still running.

Vibration and temperature data collection can now be performed without shutting down and entering the cooling tower cells.

Early Detection



A North America-based chemical company was experiencing frequent failures on a chemical pump. The failures could not be explained as the normal 30-day vibration predictive maintenance interval did not show any abnormal operating conditions.

The customer elected to install an i-ALERT2 device to monitor the pump. Within 187 hours (about a week) of operation two abnormal spikes in vibration in all three axis was recorded by the i-ALERT2 device. From the time stamp of the alarm condition, the root cause of the problem was traced back to low tank level feeding the pump, causing cavitation. Because the low level alarm for the tank was set too low the operator was never alerted that there was a problem.

The i-ALERT2 device was able to provide both early detection of a possible failure event and provide enough information to enable a corrective action.

Wide Range of Rotating Equipment

i-ALERT2 monitors rotating equipment in any industrial plant and anywhere in the world.

- pumps
- fans
- motors
- compressors
- gear boxes
- and more

Hazardous Ratings

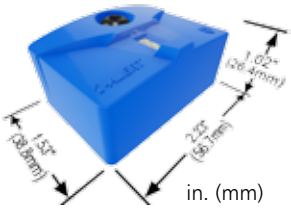
i-ALERT2 monitors is certified for use in rugged and industrial environment.

- IP68 water and dust protected
- Class I, II, III, Division 1 Groups C,D,E,F,G
- ATEX Zone 0 AEx ia IIB Ga (Groups C & D)
- RoHS, WEEE, REACH, CE, FCC

Technical Specifications

Dimensions

- 2.23in L x 1.53in W x 1.02in H
- 57mm L x 39mm W x 26mm H



in. (mm)

Measurements

- Temperature
- 3 Axis Vibration (RMS Velocity)
- Kurtosis
- Machine run-time counter
- Fast Fourier Transform (FFT)
- Time Waveform (TWF)

Vibration

- 3-axis accelerometer ±16g
- Frequency range:

axial	10-1,000Hz
horizontal	10-1,000Hz
radial	10-600Hz

- FFT resolution: 1Hz/bin
- The i-ALERT is expected to have an error less than 10% for RMS and FFT measurements under typical measurement conditions.

Memory

- X,Y,Z velocity rms, kurtosis, temperature
- Hourly measurements for 170 days
- Weekly Summary (min,max,avg) for 5 years

Environment

- Ambient temperature:
  -40°C to +84°C (-40°F to +183°F) T3
  -40°C to +60°C (-40°F to +140°F) T4
- IP68 water and dust protected
- Intrinsically Safe
- Class I, II, III, Division 1 Groups C,D,E,F,G
- ATEX Zone 0 AEx ia IIB Ga (Groups C & D)
- RoHS, WEEE, REACH, CE, FCC

Battery & Power

- 3.6 V Lithium battery
- Life expectancy : 3 years (use dependent)

Materials

- Shell Material: Nylon 12
- Mounting Stud: 316ss

Software

Go to **i-Alert.ai**, iTunes App Store, or Google Play to download app

Display

- Green LED for unit ON
- Red LED for unit in ALARM
- Blue LED for Bluetooth radio transmitting

Wireless Synching

- 2400-2483.5 MHz Bluetooth 4.0 Low Energy
- Max range: 30m (100 feet)
- Recommended:
  - Apple iPad (Air, Mini, Pro)
  - Apple iPhone (5s & up)
  - Samsung (Galaxy Tab A Tablet)
  - Samsung (Galaxy S6 & up)
  - Google/LG (Nexus 7,9 Tablet)
  - Google/LG (Nexus 5x, 6, 6p Phone)
  - Motorola (Droid Turbo, MOTO G, MOTO X Phone)

iOS Download on the App Store

GET IT ON Google Play

Visit our website at
i-Alert.ai

Components

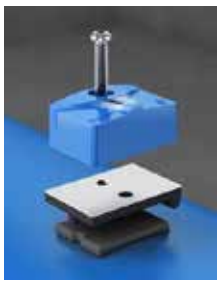
i-ALERT2

C10823A

Aluminum Mounting Adapter

C10824A

Stainless Steel Mounting Adapter



C10987A

Magnetic Mounting Adapter

K05163A

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