

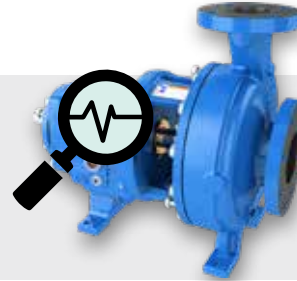
# i-ALERT<sup>®</sup> Monitoring Solution

## Zero Unplanned Downtime

Sensor | App | Gateway | Diagnostics | Ai Platform



# i-ALERT Solution



## SENSORS

Monitor tri-axial vibration, temperature, run-time hours and pressure

## MOBILE APP

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

## GATEWAY

Add remote monitoring capabilities by leveraging remote data collection

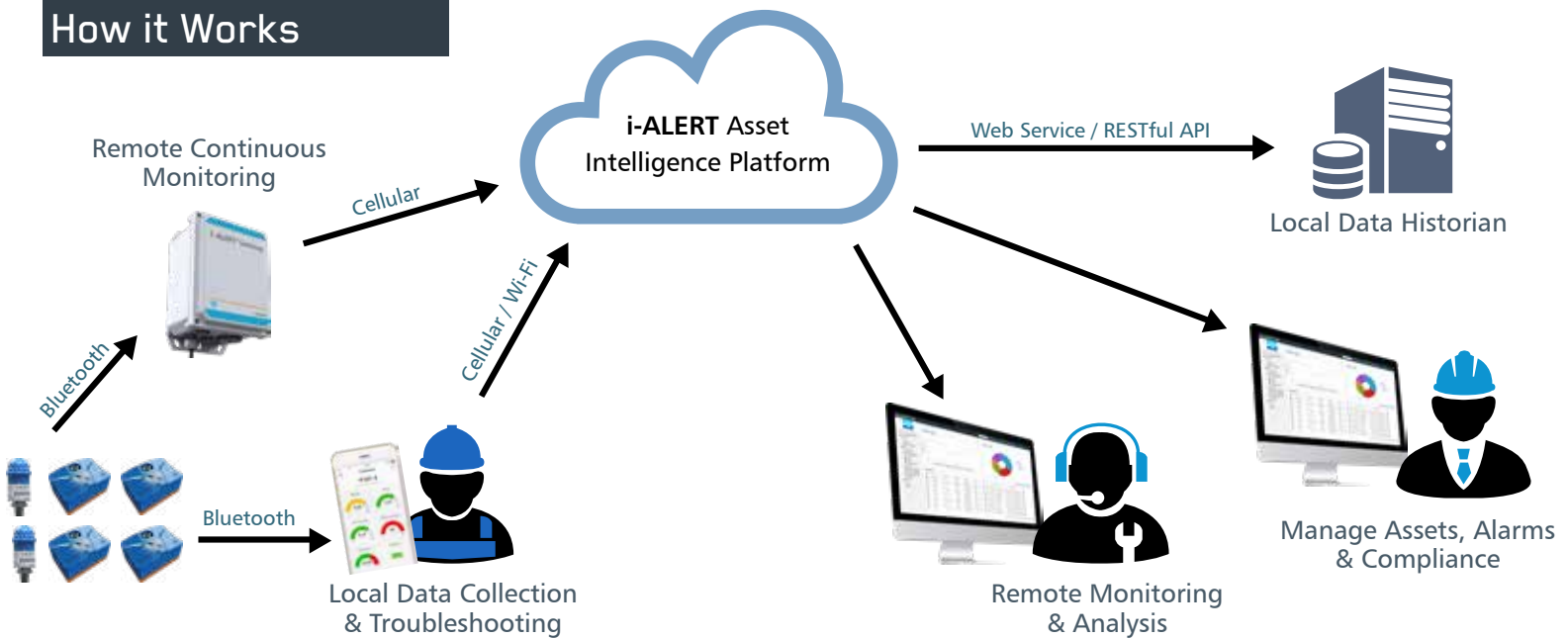
## DIAGNOSTICS

Built in intelligence automatically detects and diagnoses machine issues

## Ai PLATFORM

Monitor all of your i-ALERT sensors and machines from a simple web app

## How it Works



# i-ALERT Benefits



## Easy to Setup

Begin monitoring your equipment in minutes. No power or wires to install. Sensor installation supports threaded connection, epoxy or magnetic mounting. Download the free i-ALERT mobile app and follow the on screen instructions to get started.



## Smart

Once the i-ALERT is activated it immediately begins monitoring your equipment. Built in edge computing processes vibration spectrum data to enable in-depth analysis of the equipment health. Get automated vibration analysis and diagnostics through the i-ALERT Ai Platform.



## Plug & Play

For 24/7 remote monitoring the i-ALERT Gateway provides a secure connection between the i-ALERT sensors and i-ALERT Ai portal. Apply power and let the gateway automatically connect to the cellular network and configure all the i-ALERT sensors in range.



## Accurate

The i-ALERT sensor was designed to accurately measure vibration in all three axis and can be compared to the some of the most advanced vibration analysis tools in the market. Vibration diagnostics are available to anyone who can use a smart phone or tablet.

# Applications



## Eliminate Unplanned Downtime

Pulp & Paper mill in USA, "We added i-ALERTs to the our roll bearings on the #15 paper machine. We were able to find two bad bearings within 1 month that we are usually not able to detect. We repaired the bearings on a scheduled outage instead of unplanned. We saved thousands of dollars in maintenance and production costs."



## Eliminate Bad Actors

Chemical plant in Thailand, install i-ALERTs to monitor 8 pumps with chronic failures. After a few months of operation one of the pumps experience 16 alarm events over 9 days. The root cause was traced back to a failure in the suction control valve. The payback of the i-ALERT solution was 700%.



## Improve Productivity

Copper mine in Chile, Leveraging i-ALERT and the Ai Platform, the maintenance department is saving 16 hours per week to monitor 10 pumps. The ease of use of the i-ALERT enabled the local operators to collect machine health data directly from their mobile phones and maintenance could view the data remotely from the Ai platform.

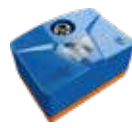


## Improve Safety

Oil refinery in UK, "Half of our plant is hydrofluoric acid. You have to wear big rubber chemical suits to go in. We've got lots of pumps in there and they all need vibration monitoring. I could connect to the i-ALERT standing 25 meters away on the outside - in the safe zone. For me, that was a real win-win."



# Getting Started



i-ALERT 2



Mobile APP



Automated Diagnostics



Gateway



Data Integration

## Troubleshooting

- On-Demand Vibration & Temperature
- Around the Clock Trends
- Retrieve Vibration Spectrum on Demand or in Alarm



## Route Based Monitoring

- Manage Team Data Collection Activities
- View Consolidated Data from All Assets
- Automated Reports & Notifications



## Remote Monitoring

- 24/7 Continuous Monitoring
- Plug and Play Configuration (Auto-detect)
- Typical Range of 30-100m (100-300ft)



## Full Integration

- Data Integration
- RESTful API (Real-Time data feed)
- Data Historian System Integration (OMF)



# Hardware

## i-ALERT 2 Vibration & Temperature Sensor



### Machine Health Monitoring

Monitor and log the vibration and temperature of any rotating machine. Capture transient events with a 1 to 5 minute alarm check and trend overall health with 1 to 60 minute trend interval. For advance analysis request or download vibration spectrum on demand.

### Technical Specifications

Vibration: 3-Axis, 5 to 1100Hz (X,Y) 5 to 700Hz (Z)

Temperature: -40°C to +84°C (-40°F to +183°F) T3

-40°C to +60°C (-40°F to +140°F) T4

Data Storage: 170 Days (based on hourly data)

Analysis: Machine Run-Time, Kurtosis, Vibration Spectrum

Wireless: Bluetooth V4, Range 30-100m (100-300ft)

Power: Lithium Battery, 3 Year Average Life (use dependent)

Environment: IP68 / NEMA4x, Intrinsically Safe

## i-ALERT Pressure & Temperature Sensor



### Process Monitoring

Directly measure and monitor the pressure and temperature of any process fluid. Build long term trends and capture transient events with the built in data logger.

### Technical Specifications

Pressure: -14.7 to 10,000 psi

Temperature: -20°C to 85°C (-4°F to 185°F)

Wireless: Bluetooth V4, Range 30-100m (100-300ft)

Data Storage: 300 Days (based on hourly data)

Power: 2 Year Replaceable Lithium Battery (use dependent)

Enclosure: IP68 / NEMA4x

Wetted Material: 17-4 Stainless Steel

## i-ALERT Gateway



### Secure Connection

The i-ALERT Gateway provides a secure connection between the i-ALERT sensors and the i-ALERT Ai portal. Apply power and let the gateway automatically connect to the cellular network and configure all the i-ALERT sensors in range. The gateway enables connection to the Ai portal for autonomous sensor data upload and changing of i-ALERT sensor settings remotely by authorized users.

### Technical Specifications

Cellular WAN: LTE, 3G

Bluetooth: Bluetooth 4.0 (Max 12.5 dBm)

Wireless Range: 30-100m (100-300ft)

Power: 120-240VAC or 6-90 VDC

Temperature: -30°C to 60°C (-22°F to 140°F)

Enclosure: IP68 / NEMA4x, Class 1 Division 2 ATEX Zone 2

# Software



## Local Monitoring & Troubleshooting

- Monitor your machines right from your phone or tablet with the i-ALERT mobile app.
- Simple, intuitive dashboard tracks vibration, temperature, run-time & battery life.
- Trend parameters such as vibration, temperature, kurtosis, run-time to monitor any changes in machine health or operation.
- Advanced analysis tools enable vibration spectrum to be downloaded from a prior alarm event or request a new one.
- Generate and send machine health reports directly from your mobile device.



## Remote Monitoring & Collaboration

- Monitor and manage all of your i-ALERT enabled machines and sensors in one place with the i-ALERT web app.
- No software to download dedicated hardware to purchase.
- Collaborate remotely with team members and subject matter experts.
- View a complete history of the machine in one view.
- Analyze and automatically diagnose machine faults.
- Manage and schedule data collection activities.
- Automatically received notifications of critical machine events.



## Actionable Information & Automated Diagnostics

- Based on vibration spectrum analysis and developed over 30 years the i-ALERT automated diagnostics software will detect a machine fault event, determine the fault severity, provide the fault type and recommendations to remedy the fault.
- Automated vibration diagnostics works with pumps, fans, centrifugal blowers, agitators, mixers, electric motors and gearboxes.
- Additional machine types in progress. Contact the i-ALERT team for additional information.

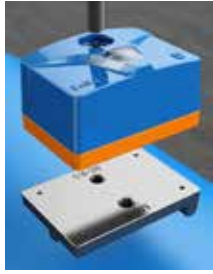
# Part Numbers

i-ALERT2 v3



RC10218AF

Aluminum  
Mounting Adapter



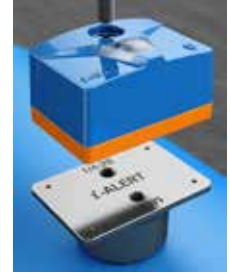
C10743A

Stainless Steel  
Mounting Adapter



C10986A

Magnetic  
Mounting Adapter



K09925A

Pressure &  
Temperature Sensor  
-14.7 to 100 psi



K10504A01

Pressure &  
Temperature Sensor  
-14.7 to 250<sup>1</sup> psi



K10504A02

Gateway  
120-240VAC



K13653A-US / K13653A-GBL

1. For pressure ratings above 250psi call factory

**Pricing:** <https://www.i-alert.com/pricing>  
**Where to buy:** <https://www.i-alert.com/pricing/locator>

**Contact Us:**  
support@i-alert.ai  
1.315.568.7290



ITT Brands