

## SOLUTION OVERVIEW

# Aruba and HID

## Reducing Unplanned Downtime for Industrial and Mechanical Equipment

### WIRELESS SENSORS AND PREDICTIVE CLOUD ANALYTICS DRIVE COST-EFFECTIVE MAINTENANCE SOLUTIONS

Manufacturing companies and organizations in general strive to maintain production lines at optimal operating levels to deliver on their business objectives. Non-manufacturing businesses also strive to maintain their operations where dependencies upon mechanical systems can be critically important.

The types of equipment within these environments includes heating, cooling and ventilation systems, conveyors, pumps, packaging machines, refrigeration, and other applications where motors are in use. Unplanned downtime is the bane of these organizations because it can result in severely negative outcomes.

Depending on the business, unplanned downtime consequences can include missed business opportunities, materials spoiling, work in process becoming scrap, and orders becoming backlogged or cancelled. The destructive results of unplanned downtime can continue to mount with soaring costs due to idled workers, repair, clean-up, and possible penalties for missed commitments to suppliers or customers. Worse yet, unplanned downtime can also jeopardize health, safety, and the environment – potentially leading to additional costs and risks due to remediation, fines, or permanent damage to the brand.

Traditional approaches to manage these risks start with regular inspections and service schedules used for preventive maintenance strategies. This strategy doesn't consider the actual state of the equipment. Depending on how they are managed, preventative maintenance strategies can also drive wasted investment when equipment doesn't need service or parts. In response, condition monitoring has been introduced which enables plant managers to analyze

### WHY ARUBA AND HID

- HID Condition Monitoring solution leverages the customers' existing Aruba Wi-Fi network, allowing for lower costs and higher ROI from the existing Aruba asset vs. adding redundant overlay networks.
- Enables cost effective and data-driven condition monitoring strategies to predict and respond before failure occurs.
- The solution provides real-time data to operators and plant managers from multiple data sources to warn of emerging problems or enable fine-tuning of existing maintenance and service procedures.
- Both HID CM (Condition Monitoring) and RTLS (real-time location services for asset or people tracking) can concurrently share the existing Aruba Wi-Fi network.
- HID BLE BEEKS™ beacons can easily be retrofitted on almost any type of equipment to receive immediate wireless monitoring.

the performance and operation of motors in their fleet in real-time. Real-time condition monitoring enables plant managers and operators the opportunity to predict and respond prior to a failure. Condition monitoring advances preventive maintenance strategies by leveraging data about equipment as it operates.

Unfortunately, condition monitoring has earned the reputation of being cost prohibitive and applicable to only the most expensive motors and only when available from specific motor manufacturers or service providers. This approach leaves most motors at risk of failure with possible consequences for the entire operation.



### HID SOLUTION

HID Global has answered the challenge to the growing need for cost-effective real-time condition and industrial monitoring solutions. With wireless sensors and cloud analytics, HID provides increased visibility into equipment performance using multiple data sources to monitor and react quickly to critical events.



Figure 1: HID BLE BEEKs Beacons

The HID approach to condition monitoring integrates BLE (Bluetooth Low Energy) BEEKs CM Sensor Beacons (Figure 1) with HID Bluzone™ cloud analytics to offer a low-cost condition monitoring solution for the masses. The solution enables plant managers to monitor the status, health and performance of multiple assets and can

continuously collect data on any rotating or reciprocating machinery using vibration and temperature data in real-time.

Initially, HID’s cloud-based artificial intelligence (AI) learns the baseline vibration behavior pre-deployment for each asset on which a sensor beacon is installed. Once the training period is complete, the data collected is used to generate a model of the machine’s normal activity. Any defined deviation from the training period, such as a significant change in vibration behavior or temperature, generates an alert through HID Bluzone Advanced Condition Monitoring SaaS to indicate a change in the asset’s health state (Figure 2).

In addition to identifying emerging problems, the data allows management to refine or establish proactive maintenance, inspection, and operation strategies to enable better planning and execution decisions.

The BEEKs industrial sensor beacons capture accurate, high resolution, 3-axis vibration and temperature data using wireless sensors that efficiently collect and transmit insights on equipment status. BEEKs sensor beacons can easily be retrofitted on almost any type of equipment to receive immediate wireless monitoring.

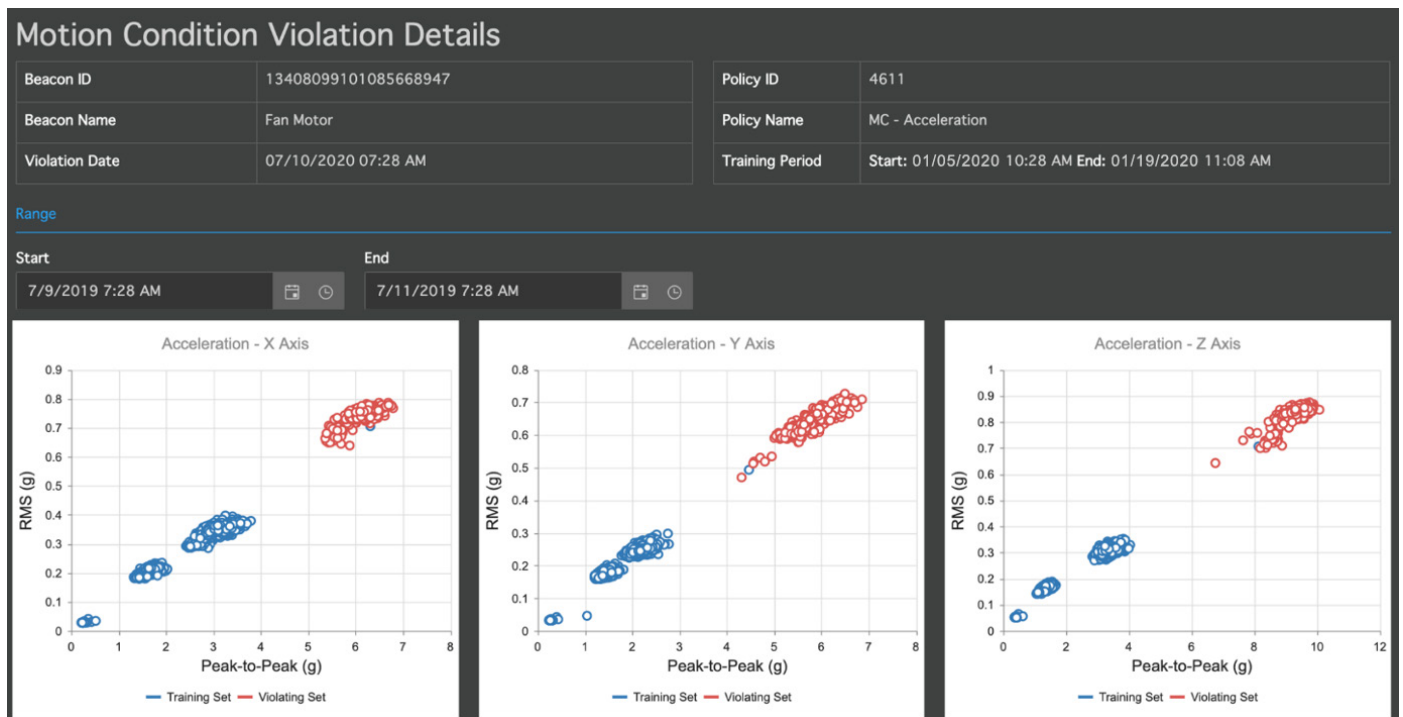


Figure 2: Bluzone Advanced Condition Monitoring SaaS



### ARUBA & HID – BETTER TOGETHER

Aruba and HID have partnered to integrate Aruba 802.11ax (Wi-Fi 6 and 6E) and 802.11ac (Wi-Fi 5) wireless access points with HID's Condition and Industrial Monitoring solution. The integration and interoperability of Aruba with HID Condition Monitoring solutions helps to reduce cost and complexity by leveraging the existing Aruba wireless infrastructure which supports HID BLE communications directly (Figure 3).

A cost effective and secure way to deploy HID Condition Monitoring is by leveraging the existing Aruba Wi-Fi network infrastructure. This has the benefit of amortizing one capital investment across multiple services.

The same Aruba Wi-Fi network used for HID Condition Monitoring solutions is extensible to HID's location-based solutions for asset and people tracking, providing even greater solution and ROI capability.

Leveraging the Aruba Wi-Fi network for HID solutions eliminates incremental installation and maintenance costs of overlay networks supporting dedicated sensor beacons and gateways. Cybersecurity posture is improved for the customer deployment as Aruba enables security policies and network visibility to extend edge to cloud security across the factory or venue.

Aruba Wi-Fi access points support a broad range of IoT services through integrated Wi-Fi 6, Bluetooth Low Energy, 802.15.4 radios and other IoT device interfaces, making Aruba AP's an ideal platform for IoT based use cases.

- Increase the ROI of your network infrastructure investment by enabling condition monitoring and location services use cases.
- Lower implementation and maintenance costs by leveraging the existing Aruba Wi-Fi infrastructure.
- Certified interoperability means worry free deployment and support.

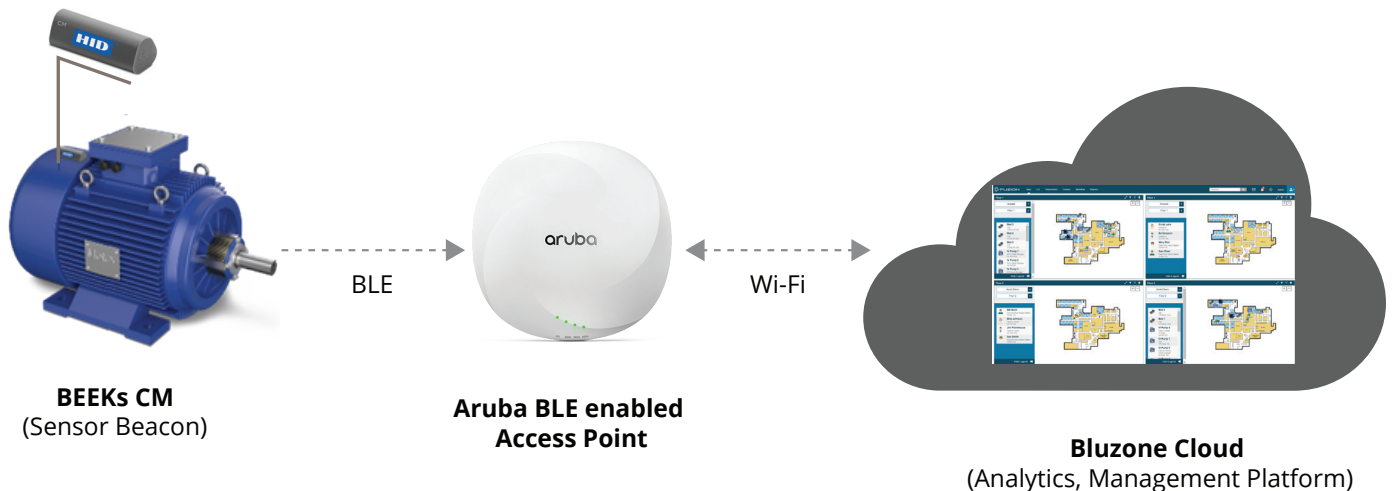


Figure 3: The Aruba and HID Joint Solution



### CERTIFIED INTEROPERABILITY

We've taken the guesswork out of deploying joint solutions by certifying the interoperability of HID's Condition and Industrial Monitoring platform with Aruba's wireless infrastructure.

This allows joint deployments to be setup faster and simplifies maintenance of the completed solution.

### SUMMARY

HID's solution when integrated with Aruba Wi-Fi 5 and Wi-Fi 6 and 6E access point delivers valuable predictive maintenance and industrial status solutions, in real-time.

Highly scalable and easy to deploy in a new or retrofitted plant, these solutions offer cost effective solutions for rotational machinery predictive maintenance.

To learn more about Aruba solutions, please visit <https://www.arubanetworks.com/solutions/>

For more information on HID's solutions, please visit <https://www.hidglobal.com/solutions/identification-technologies/condition-monitoring>

## DEPEND ON HID



HID Global is an American manufacturer of secure identity products. The company is an independent brand of ASSA ABLOY, a Swedish door and access control conglomerate.

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