

EFFICIENT CLOUD MANAGEMENT AND MONITORING OF BLE BEACONS

- **Bluzone™ Fleet Management** – Monitor beacon status and update configuration remotely
- **Bluzone™ Workplace Optimization** – Optimize building utilization, emergency mustering etc.
- **Bluzone™ Item Management** – Find assets quickly in buildings or across a campus using Real Time Location Services (RTLS)
- **Bluzone™ Condition Monitoring** – Check performance status of motorized equipment remotely and alert on failures

TECHNOLOGY HIGHLIGHTS:

- Remote management of BEEKs™ BLE beacons and BluFi™ Gateways
- Query telemetry data of endpoints
- Push configuration and firmware updates to endpoints
- Grouping and reporting functions
- Location and heat map info using standard geo-coordinates
- AI algorithms for condition monitoring and RTLS
- Interact via web console or REST API

Bluzone™ is a cloud based Software as a Service (SaaS) to centrally manage BEEKs™ BLE beacons via BluFi™ BLE to WiFi gateways. Bluzone's basic subscription functionality is hardware fleet management with optional add-ons for Workplace Optimization, Item Management (RTLS) or wireless Condition Monitoring of equipment.

The Bluzone web-based console provides a powerful user interface (UI) to query and configure every aspect of a fleet of BEEKs beacons and BluFis, including remote firmware updates. At a glance, the Bluzone dashboard shows hardware deployed, in range and in or out of compliance according to the configured policies. Over a dozen different policy types can be configured for all or a group of beacons to alert on situations. For example: Presence, battery, temperature, motion, location, geo-fence, proximity, light, enter/exit, tampering etc. Policy violations can be logged and/or sent via alert per e-mail.

Bluzone's location engine positions BEEKs beacons efficiently through geo-coordinates on mapping engines from Google, Bing or Baidu. Floor plans of buildings are easily imported as JPG or PNG graphics. Automatically generated heat maps or historical paths help to optimize building utilization or work processes. Condition Monitoring artificial intelligence (AI) functions help detect and potentially even predict failures of equipment where BEEKs with condition sensors are mounted.

Standard Bluzone console functions and additional features are available using publicly documented RESTful APIs allowing HID partners or end-users to build their own dedicated consoles for specific use cases or vertical markets or link to their ERP systems. An interface to Siemens MindSphere is also available.

APPLICATION AREAS:
Condition Monitoring

- Wireless status info on motorized equipment (on/off)
- Fault detection based on vibration or temperature trends
- Reporting of equipment duty cycles
- Cold chain applications

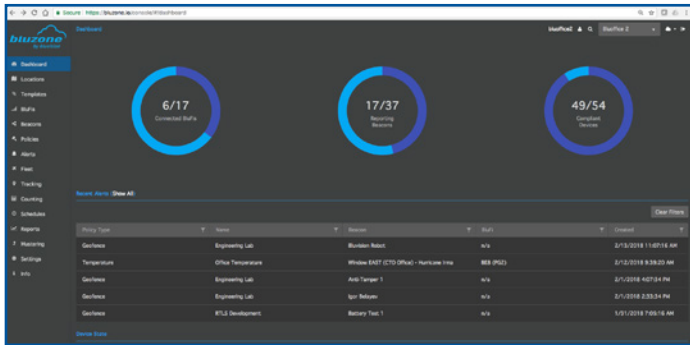
Real-time locations for assets

- Indoor position tracking of assets (Tools, portable equipment, vehicles)
- Position based alerting, heat maps, etc
- Workplace optimization
- Emergency mustering

Retail advertisement

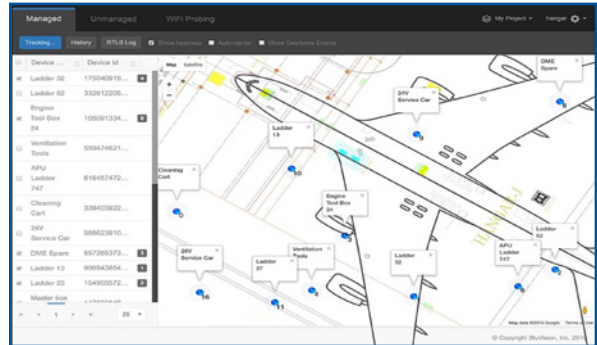
- BEEKs beacons may be used in iBeacon and/or Eddystone mode for advertising messages or location based services
- Central provisioning or monitoring via BluFi and Bluzone possible
- Optional counting phones in vicinity

Bluzone™ SaaS Fleet Management



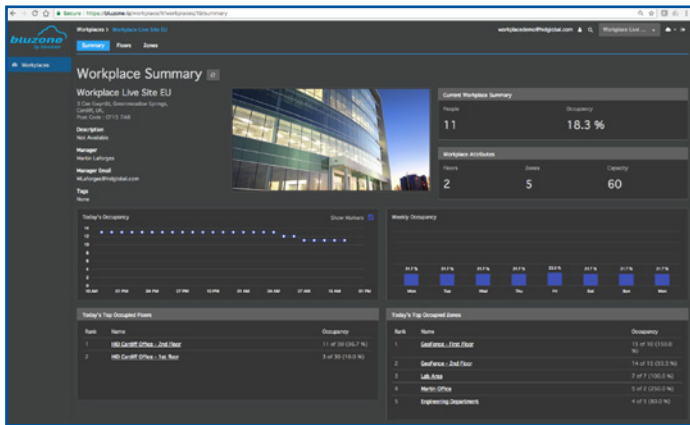
This is a basic subscription to manage installed BEEKs and BluFi hardware. Receive battery status query and push policy or firmware updates. Licenses are per managed item (BEEK or BluFi). Ideal use cases for fleet management without add-on modules are e.g. Retail iBeacon / Eddystone or wayfinding applications.

Bluzone™ SaaS Item Management RTLS | WIP Manufacturing RTLS



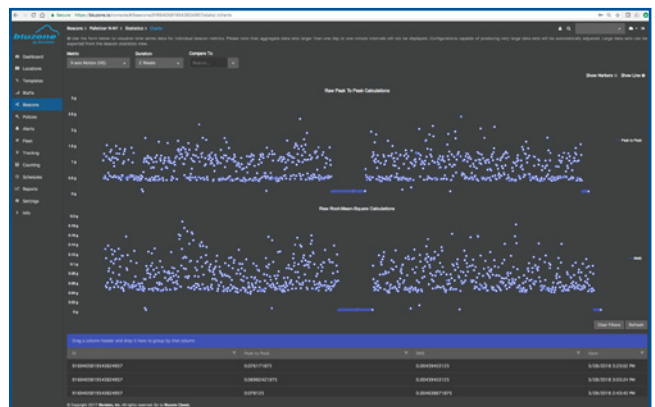
Add-on package that is designed to support asset location tracking in office environments (e.g. hospitals, parking lots) or work in progress (WIP) production environments. Licensed per beacon. While RTLS can quickly help locate an asset that is needed - like a tool, a diagnostic device or other mobile equipment, historical heat maps and location paths help optimize future workflows, prevent accidents and help enforce safety zones.

Bluzone™ SaaS Workplace Optimization



Add-on package which is targeted for workplace environments. It includes pre-configured dashboards and reports for building utilization, asset location (people) and heat mapping. Licensed per beacon. The data can further be used to infer other location specification decisions to improve employee collaboration, easy navigation with wayfinding, headcount during evacuation, and to reinforce secure zones and employee safety.

Bluzone™ SaaS Condition Monitoring Basic | Advanced



Add-on package provides status information about equipment that has a BEEKs Industrial or Condition Monitoring beacon with sensors mounted. Licensed per beacon. Basic condition monitoring will alert on start or stop of (vibrating) equipment, temperature being outside a given range, light levels etc. BEEKs Beacons can easily be retrofitted on almost any type of equipment to receive immediate wireless detection of failure. Advanced condition monitoring aims to predict equipment failure by the utilization of specialized BEEKs beacons and AI algorithms evaluating sensor trends over time.

