





#### **TECHNOLOGY HIGHLIGHTS:**

- Bluetooth Smart 4.1 compliant beacons
- iBeacon (Apple), Eddystone (Google) and sBeacon (Bluvision) supported simultaneously
- Highly accurate environmental sensors
- Up to 5 years battery life time
- Location precision down to 6 ft (2 m)
- Central management possible
- Fast and easy roll-out, equipment agnostic

# BLE BEACONS FOR CONDITION MONITORING, ASSET LOCATION OR OTHER APPLICATIONS

- Flexible Simultaneously supports iBeacon, Eddystone and sBeacon protocol for optimal application compatibility.
- Multi-Purpose Used as promotional / way-finding beacons or industrial sensor network.
- Rapid Implementation Gather real-time data on item location and equipment condition with minimal infrastructure.

BEEKs™ Bluetooth Low-Energy (BLE) beacons are among the most advanced beacons in the industry. Being fully Apple iBeacon and Google Eddystone compatible, BEEKs beacons may be used for any standard beacon application that provides location based promotional or way-finding services to smartphone users.

When combined with HID Global's endto-end IoT ecosystem, that includes BIuFi™ BLE to WiFi gateways and the Bluzone™ cloud services, BEEKs can be centrally managed through the cloud to transfer new messages, firmware updates and battery status checks remotely. Their unique design allows BEEKs to broadcast reliably even in densely populated WiFi environments.

BEEKs are not limited to standard beacon applications. HID Condition Monitoring Services, enabled by Bluvision, include a range of sensor beacons for capturing motion, temperature, light, vibration or magnetic field. This sensor data is sent via BluFi gateways to the Bluzone Cloud to perform operational analysis for motorized equipment

performance, capacity load, door open status etc. Alerts according to policy are received via e-mail or web service.

Equipment agnostic, 3-axis vibration and temperature monitoring provides anomaly detection that indicates when a piece of rotating machinery has deviated from its normal operating state, which can be used in the inspections workflow to improve maintenance practices.

HID Global Location Services, enabled by Bluvision, is an efficient real-time asset location (RTLS) platform leveraging BEEKs beacons to effectively pin down the locations of assets inside a warehouse, campus or manufacturing hall.

BEEKs beacons are available in multiple form factors and sensor configurations like in form of badges for Workplace Optimization or with anti-tamper sensors to raise an alarm upon removal. Their extensible architecture allows organizations to scale deployments of standard beacon applications and extend to centralized management, real-time condition monitoring or location services in a later phase.



### **APPLICATION AREAS:**

Condition Monitoring (requires Bluzone™ cloud)

- 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 location for assets (requires Bluzone™ cloud)

- Indoor position tracking of assets (Tools, portable equipment, vehicles)
- Position based alerting, heat-maps etc.

### **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 optionally possible

### **SPECIFICATIONS**

|  | BEEKs   |  |  |  |
|--|---|--|--|--|
|  | Industrial  | СМ   | Cooler   | Mini   |
|  | One of  |  |  |  |
| Base Model Number                        | BVBI45W (White)<br>BVBI45G (Grey)   | BVCM4SG  | BVBL45C  | BVBM33B<br>BVBM33BT (Tamper-proof)   |
| ELECTRONIC                               |   |  |  |  |
| Bluetooth communication                  | Bluetooth Low Energy 4.1, 2.4 GHz ISM   |  |  |  |
| BLE Protocols                            | Eddystone, iBeacon, sBeacon   |  |  |  |
| Sensitivity                              | -97dBm  |  |  |  |
| Transmission power                       | -40dBm to +5dBm (-3 m to -150 m line of sight range)  |  |  |  |
| Processor type                           | ARM Cortex M3 and M0  |  |  |  |
| Data rates                               | 1Mbit/s / 2Mbit/s   |  |  |  |
| Memory                                   | 55KB Flash  |  |  |  |
| Sensors                                  | Motion, Light, Vibration (3-axis, up to 800 hz), Temperature -13° to +149° F (-25° to +65° C)                                 | Motion, Light, Vibration (3-axis, up to<br>800 hz (8.000 hz option coming soon)),<br>Temperature -13° to +149° F<br>(-25° to +65° C) | Motion, Light, Vibration (3-axis, up to<br>800 hz), Magnetometer, Temperature<br>-13° to +149° F (-25° to +65° C)  | Motion, Vibration<br>(3-axis, up to 800 hz),<br>Magnetometer (tamper function),<br>Temperature -13° to +149° F<br>(-25° to +65° C) |
| PHYSICAL                                 |   |  |  |  |
| Length × Width                           | 2.36 in × 0.83 x 0.98 in (60 × 21 x 25 mm)  |  |  | 1.3 in x 0.3 in (34.2 x 8.35 mm)   |
| Mounting Method                          | 3M VHB adhesive sticker   |  |  |  |
| Housing Material                         | Polycarbonate and ABS   |  |  |  |
| Color                                    | White or Grey   |  |  | Black  |
| Weight                                   | 1 oz (28 g) 0.24  |  |  | 0.24 oz (7 g)  |
| BATTERY                                  |   |  |  |  |
| Туре                                     | 3.6V / 2600mAh - Primary Lithium  |  |  | CR-2032 - 3V   |
| Lifetime (depending on utilization)      | up to 5 years   |  |  | up to 2 years  |
| CHEMICAL AND MECHANICAL RESISTANCE Water | IP67.68° F (20° C), 3.3 ft (1 m) x1 h   |  |  |  |
| Withstands Exposure To                   | Water and UV resistant  |  |  |  |
| THERMAL                                  | Tracer and O'T resistant  |  |  |  |
| Storage                                  | -22° to +170° F (-30° to +77° C)  |  |  |  |
| Operating Temperature                    | -22° to +170° F (-30° to +77° C)  |  |  |  |
| OTHER                                    |   |  |  |  |
| Speciality                               | General purpose industrial beacon<br>for asset real-time location and<br>basic condition monitoring.                          | Condition Monitoring beacon with<br>Al firmware. Required for Advanced<br>Condition Monitoring SaaS.                                 | Temperature logger beacon w/<br>logger firmware to be queried<br>by Bluzone or phone SDK. Incl.<br>magnetometer to detect door<br>openings. Not suitable for Condition<br>Monitoring SaaS. | Small beacon with or without<br>removal alert. For asset real-time<br>location and basic condition<br>monitoring.                  |
| Standards                                | FCC / CE / JRF / IC; BLE  |  |  | FCC / CE; BLE  |
| Options                                  | 512 KB Flash memory (for more advanced internal recording and machine learning with accurate per minute timestamp recordings) |  |  | e timestamp recordings)  |
| Box Size                                 | 10 pcs.   |  |  |  |
| Warranty                                 | 2 years   |  |  |  |





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