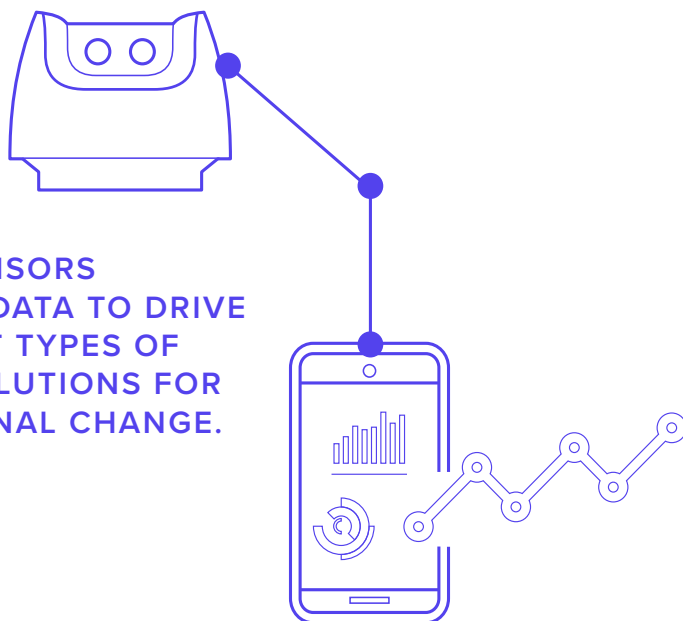# INNERSPACE HARDWARE: SMART INDOOR LOCATION SOLUTIONS

The InnerSpace platform uses three types of IoT sensors to generate indoor location data.

These sensors capture the data our platform needs to provide critical metrics and insights that can be used to inform and validate operational decisions, and drive employee and customer experiences.

These sensors provide data that is used to present:

+ Maps
+ Positioning and Location
+ Number of people
+ Time on Site
+ Queue Times
+ Frequency
+ Asset tracking
+ And more

Benefits of InnerSpace IoT Devices

+ Powered by Power-over-Ethernet (PoE) technology, eliminating the need for electrical contractors and ongoing battery replacement
+ Managed in the cloud, sensors are automatically updated and do not require ongoing maintenance
+ Cellular and/or standalone network connectivity for data backhaul means the platform does not impact existing IT infrastructure
+ GDPR compliant, InnerSpace anonymizes data and does not store personally identifiable information
+ Sensors feed data to InnerSpace analytics and other digital solutions in the cloud so that users can access their data from any connected device
+ Open API to support new solutions

THESE SENSORS CAPTURE DATA TO DRIVE DIFFERENT TYPES OF SMART SOLUTIONS FOR OPERATIONAL CHANGE.

Whitelist:
The following ports and domains must be available for connections on all of our sensors:

+ innerspace.io
+ innrspc.com
+ resin.io
+ balena.io
+ *.balena-cloud.com
+ *.docker.com
+ *.docker.io
+ google.com (for time sync)

Certifications
InnerSpace sensors meet TUV certification for the following Canada, USA, Europe and Australia standards:

+ FCC Part 15, Subpart B, Class A
+ ICE003
+ CISPR 24
+ CISPR 32

Confirm Network Security Requirements:
The following ports must be available for outbound connections:

+ 80 (tcp/http)
+ 443 (tcp/https)
+ 53 (udp/dns)

LOCATION SENSOR

The InnerSpace location sensor has all of the great features of our mapping sensor, without the LiDAR used to automatically generate floor plans. Most commonly used in conjunction with the mapping sensor, the location sensor improves coverage across an indoor space.

Features & Benefits

+ **Real-time tracking:** Monitor location of people and assets in real-time using electromagnetic signals from smartphones, computers, or asset tags.
+ **Improve coverage:** Use in conjunction with the InnerSpace mapping sensor to increase fidelity of location data.
+ **Install anywhere:** Drop mount, and t-bar installation options makes it easy to install in virtually any indoor environment. Sensors are typically spaced 50-70-feet apart.
+ **Low power draw and easy connection:** The InnerSpace Sensor uses existing PoE or PoE + ethernet supplying a minimum of 15W.
+ **Offline capabilities:** Continues to count people even when offline with onboard storage.

ACCESS POINTS

The InnerSpace solutions work with your existing Access Points to provide a seamless and hassle-free setup. The benefits of working this way include greater efficiencies.

Features & Benefits

+ Ingests the RSSI data from existing WiFi infrastructure
+ Processes the data through our patented location calculators
+ Provides the same metrics as the location sensor
+ Leverage your existing infrastructure to provide a greater ROI
+ Mitigate installation costs and avoid visually obtrusive elements in your buildings
+ Get up and running in less than 30 days

OCCUPANCY SENSOR

This occupancy sensor, supports specific use cases where highly accurate people counting is required. This sensors detects bodies within a tightly confined space and is independent of smartphone detection. Ideal for choke points, lineups, and doorways, this sensor is used to count people and measure queue times. This sensors can be used in conjunction with InnerSpace mapping and location sensors.

Features & Benefits

+ **Highly Accurate Headcount:** Ideal for choke points, lineups, and doorways this sensors counts people moving through its field of view.
+ **Real-time measurement:** Provides the number of people passing through a space and measures the time people spend in lines.
+ **Zero configuration:** Plug in and go. Once installed, data is instantly fed to the InnerSpace platform.
+ **Offline capabilities:** Continues to count people even when offline with onboard storage.