

# Sensorium™ SafeZone

## — Safety Sensor Module

*A worksite safety sensing module built on the BLE Smart Sensor Node Platform: detects proximity, restricted-zone entry, and danger-zone activity and raises alerts through the gateway and dashboard. An alerting sensor — not a certified safety-rated machine-stop system.*

sensorium-safety-zone · Sensorium™ · Revision Draft (Preliminary) · 2026-07-07 · Status: Preliminary

**PRELIMINARY.** This overview describes intended functionality. Values marked [TBD] are pending engineering confirmation and must not be treated as final specifications. This is a **safety-critical** device: no safety performance level, functional-safety rating, or certification is claimed here until verified — see the datasheet for confirmed detail.

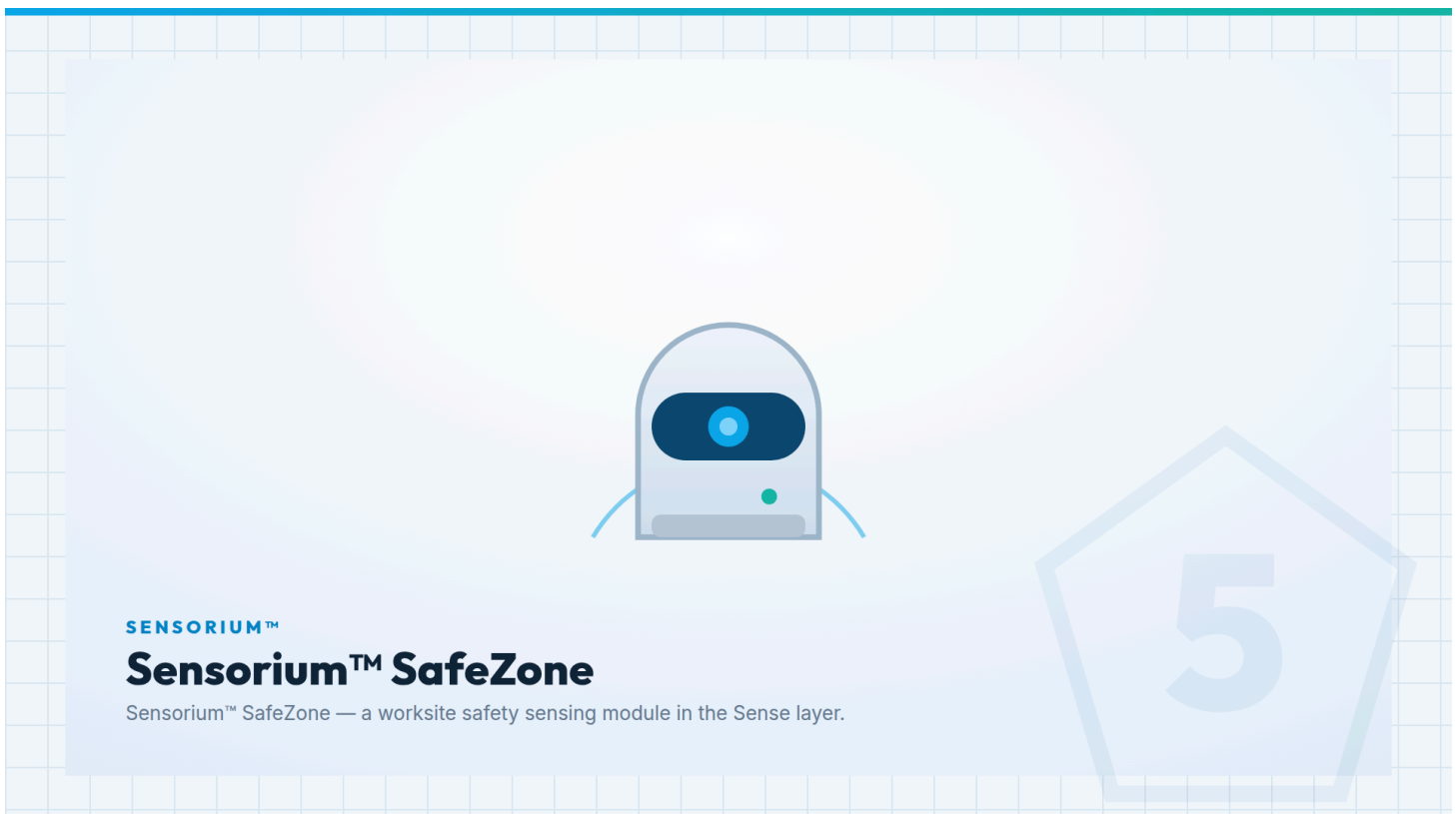


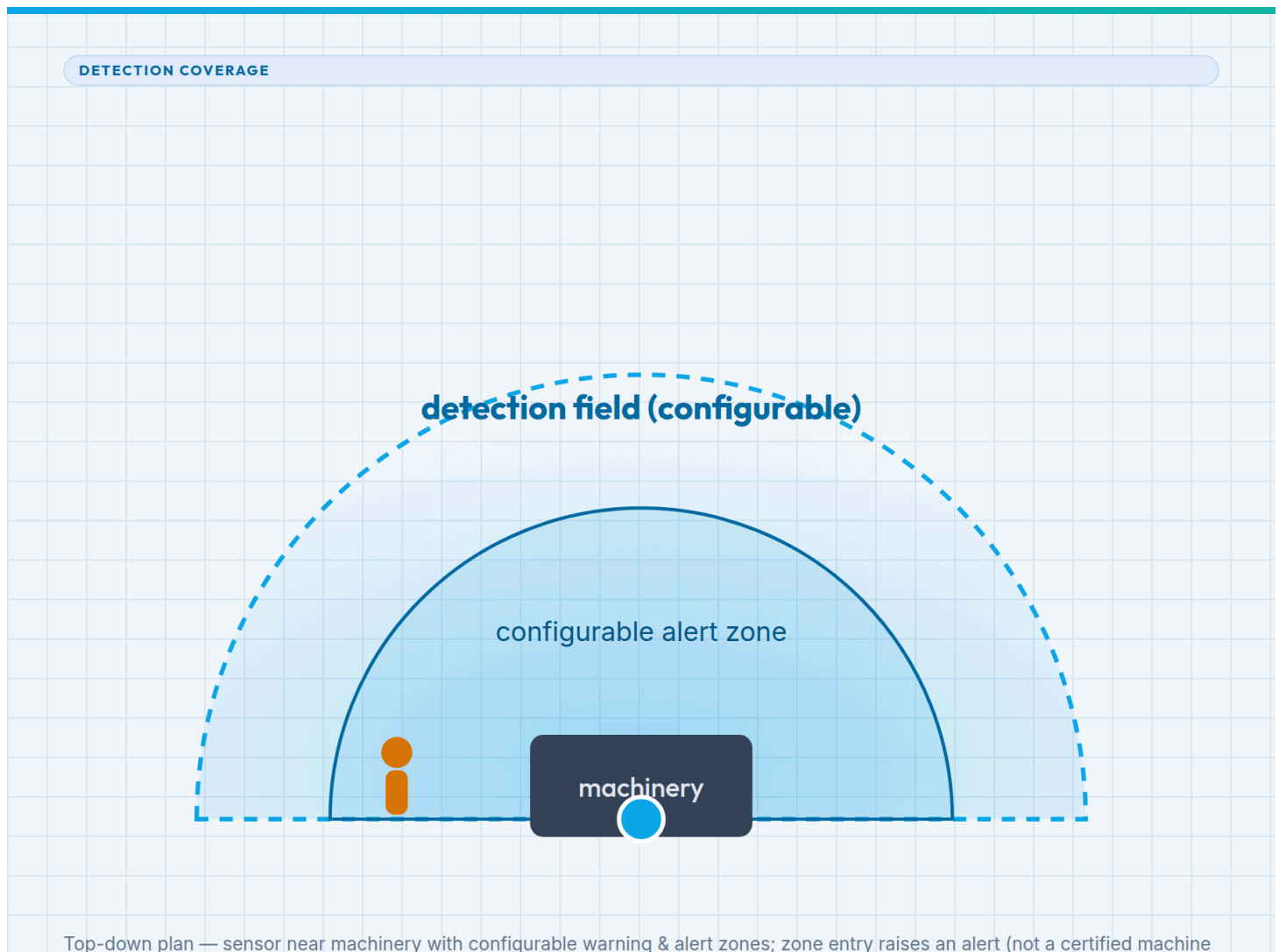
Figure FIG-001 — Sensorium™ SafeZone, the worksite safety sensing module of the Sensorium™ Sense layer.

# What it is

The **Sensorium™ SafeZone** is a *Sense* module of the 5Tech Sensorium™ family — a worksite and industrial **safety sensing module** built on the **BLE Smart Sensor Node Platform**. It detects **proximity, restricted-zone entry**, and **danger-zone activity** near machines, mobile equipment, or hazardous areas, and raises **alerts** through the **Sensorium™ Gateway**, the 5Tech dashboard, and the alerting workflow. It is intended for environments where people work near moving or energised equipment and where a hazard needs to be flagged for a person to act on.

It is an **alerting sensor** — **NOT a certified safety-rated machine-stop system**. It does not perform any automated machine stop, and no functional-safety rating or safety performance level is claimed.

Configured zone geometry and alerting behaviour are illustrated in FIG-002.



*Figure FIG-002 — Configurable warning and restricted/danger zones around a hazardous area; entry into a restricted zone raises an alert through the gateway and dashboard.*

## Where it fits

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SafeZone is a **Sense**-layer module in the 5Tech *Sense* → *Connect* → *Decide* chain. Its detections travel up through the **Sensorium™ Gateway** (Connect) to the **5Tech Platform** (Decide), where the dashboard, pipeline, and automation logic turn them into monitored insight, alerts, and reports for an operator to act on — a person is always in the loop.

- **Sense** — the **SafeZone** safety sensing module, alongside the **SmartBolt** module, both built on the **BLE Smart Sensor Node Platform**; the **ESP32 Edge IoT Bridge** (Phase-1 MVP) validates the sensor-to-cloud pipeline.
- **Connect** — the **Sensorium™ Gateway** aggregates and forwards detections over MQTT.
- **Decide** — the **5Tech Platform** (dashboard · pipeline · automation logic) raises alerts and reports; it does not command any machine stop.
- **Solution** — a core component of **Worksite Safety Automation** and **Construction Site Monitoring** (SafeZone + Gateway + Dashboard).

## Highlights

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- **Proximity and zone-presence sensing** near machines, mobile equipment, and hazardous areas.
- **Configurable restricted / danger zones** matched to the guarded area.
- Raises **alerts** through the Sensorium™ Gateway, the 5Tech dashboard, and the alerting workflow — an **alerting sensor, NOT a certified safety-rated machine-stop system**.
- No automated machine stop, functional-safety rating, or safety performance level is claimed.
- A **safety sensing module** built on the **BLE Smart Sensor Node Platform** in the Sensorium™ family.
- Sensing element and detailed environmental, electrical, and safety specifications: **[TBD]** — see the datasheet.

# Documentation for this product

| DOCUMENT           | WHERE                                                                  | STATUS |
|--------------------|------------------------------------------------------------------------|--------|
| Datasheet          | <a href="#">../../datasheets/sensorium-safety-zone-datasheet/</a>      | [TBD]  |
| Manual             | <a href="#">../../manuals/sensorium-safety-zone-manual/</a>            | [TBD]  |
| Installation guide | <a href="#">../../installation/sensorium-safety-zone-installation/</a> | [TBD]  |

## Ordering

Order codes are being finalised — full detail is in the datasheet. The prefix is indicative only:

[SEN-SZ-\[TBD\]](#). Exact suffixes and variants are [\[TBD\]](#).

## Figures

| ID      | TITLE                            | STATUS  | FUTURE FILENAME                                        | PURPOSE                                                                   |
|---------|----------------------------------|---------|--------------------------------------------------------|---------------------------------------------------------------------------|
| FIG-001 | Industrial Hero Render           | Missing | <a href="#">renders/hero_sensorium_safety_zone.png</a> | Product overview cover / hero                                             |
| FIG-002 | Detection Coverage & Alert Zones | Missing | <a href="#">diagrams/detection_coverage_360.png</a>    | 360° coverage and configurable exclusion zones around hazardous machinery |

*Specifications are preliminary and subject to change. See [revision.md](#) for change control, [references.md](#) for sources, and [figures.json](#) / [image\\_prompts.md](#) for the figure index.*