SAFMET

SAFFR SAFETY HELMET

ABOUT SAFMET

SAFMETs are developed to enable companies to track the worker's location and know if the helmet is worn by the person during work in a hazardous and life-threatening setting of an industrial or a construction site. Some of the key feature characteristics of this type of helmets are their durability, ruggedness, and their long-range sensing capabilities. Each helmet has an active RFID module that provides long-range wireless connectivity. The design of SAFMET ensures minimum exposure to radiation.

FEATURES

The system mainly contains 2 parts: Helmets and readers.

SAFMET

- Operates in the 2.4 GHz universal open band.
- SOS button and accident detection.
- Comes in three variations:
  1.: Primus - Real-time chip-strap & helmet on-off detection
  2. Professional - All in Primus with additional Real-time location tracking
  3. Executive - All in professional with additional air conditioning system, harmful gas monitoring
- Can be integrated with add-ons for
  - Falling object detection and alarm
  - Fall and Accident Detection.

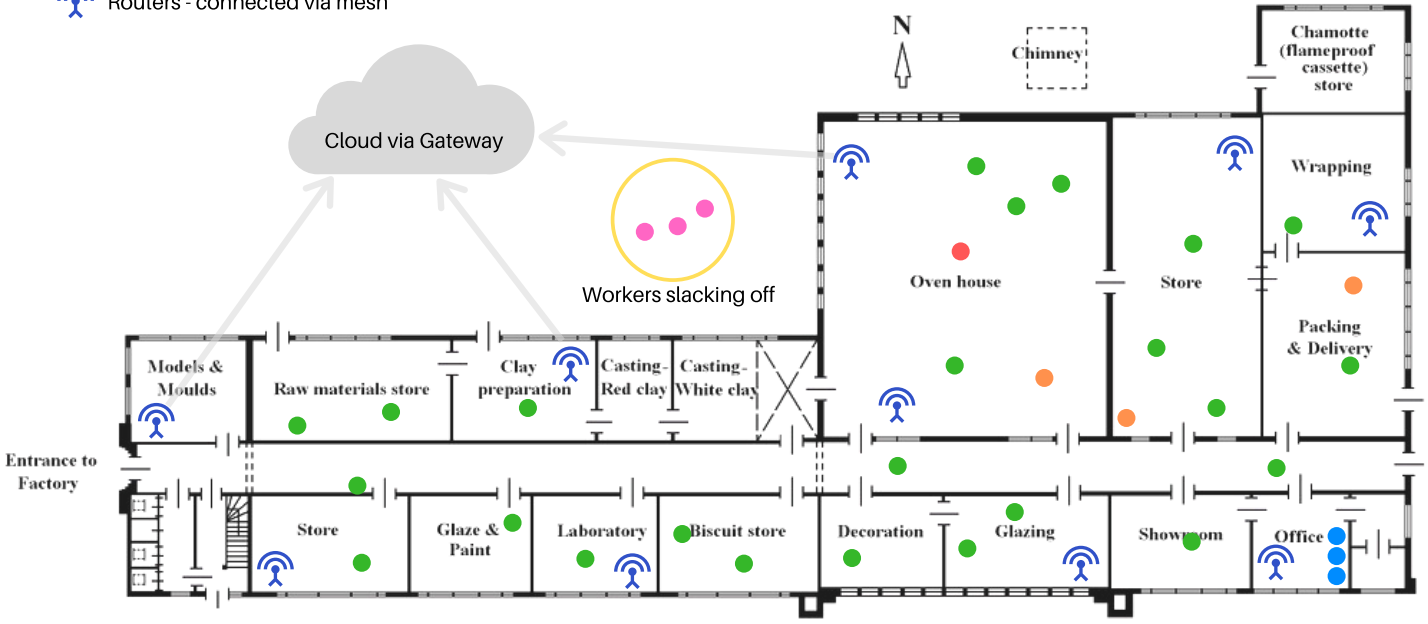
READER

- Integrated WiFi/Ethernet/MODBUS/USB interface
- IP65 casing to prevent any damage due to dust and rain
- Power supply 100-240VAC
- Has Line Of Sight range of 200m

Reader Long Range

Legend

- Helmet on, everything is ok
- Alert, problem detected. Possible accident
- Helmet off
- Helmet at charging station
- Routers - connected via mesh



EXAMPLE APPLICATION: WORKER SAFETY

SAFMET is developed to enable companies to track a worker and monitor if a worker is wearing a helmet in an industrial/construction setting. The helmets broadcast special packets whenever a put-on or put-off event is detected. The structure of the helmet is designed in such a fashion that the chances of faking the helmet put-on event are minimum.

In the picture, we showcase a sample use case of worker's safety application.
Green circles are employees who have worn the helmet.
Red circles are employees who have not worn the helmet.

OPERATION FLOW

1. Each employee of the factory is provided with a helmet upon entry.
2. At the factory entrance, the employee scans his/her fingerprint and takes the SAFMET. This is done to confirm the identity of the person taking the helmet.
3. As soon as the employee puts on the helmet, a message is sent to the central server.
4. Multiple long-range readers are put at different locations in the factory area.
5. In case of an emergency, all the workers are supposed to assemble at the emergency points.
6. The readers count the number of people in the factory. This information is sent to the local server where the data is stored in a database.
7. The server then locates all the people missing from the assembly area in real-time and lists out their location. This information can be used to evacuate the employees from that area.