# **REAL TIME LOCATING SYSTEM**



|  | LOCATION READER                                    |  | LOCATION TAG  |  |
|--|--|--|---|--|
| Size   | 410 x 200 x 130 (mm)                               | Size   | 53 x 52 x 20 (mm)   |  |
| Weight   | 1.5kg (include siren)                              | Weight   | 50g (include case, battery)   |  |
| Power  | 12V, 2.5A (PoE supported)                          | Power  | 850mAh (Lithium)  |  |
| Emergency<br>Battery   | Continuous operation for 1 hour after power cut    | Running Time   | Over 10 months  |  |
|  |  | Low Power  | Sleep when idle time  |  |
| Frequency  | 2.4GHz   | Frequency  | 2.4GHz  |  |
| Wireless<br>Communication  | Over 150m (line-of-sight)                          | Wireless<br>Communication  | Over 150m (line-of-sight)   |  |
| RF   | IEEE802.15.4 standard, RFID supported              | RF   | IEEE802.15.4 standard, RFID supported                                   |  |
| Certification  | IP65   | Certification  | IP65  |  |
| Operational<br>Condition   | Temperature -20 ~ 70 $^{\circ}$ C Humidity 0 ~ 90% | Operational<br>Condition   | Temperature -20 $\sim$ 60 $^{\circ}\mathrm{C}$<br>Humidity 0 $\sim$ 90% |  |
| Others   | 125kHz LF (Low Frequency)<br>transmitter included  | Others   | 125kHz LF (Low Frequency) receiver included 13.56MHz RFID included      |  |
| <ul> <li>Alarm button for fire, gas leak and injured worker</li> <li>Operation using battery in case of power outage</li> <li>Connector to external devices (emergency lighting and siren)</li> <li>Selective operation of external devices (emergency lighting can be operated alone)</li> <li>Diverse sensors can be integrated and the environment can be analyzed</li> <li>Self-test, automatic system recovery</li> </ul> |  | <ul> <li>Designed as small and wearable device Can be attached to helmet, nametag or wrist, so can be used conveniently during work</li> <li>Location of an injured worker can be tracked, and the injured worker can be monitored whether transferred safely</li> <li>In case of emergency, the location and the evacuation status of a worker can be monitored, and rapid response and rescue is possible</li> </ul> |   |  |

| OIL/GAS PLATFORM IN          |      |  | 12           |
|------------------------------|------|--|--------------|
| <b>11,000</b> + tags for wor | kers |  | The state of |
|                              |      | TO NAME OF   |              |
| <b>400</b> + readers         |      | A PART OF THE PART |              |
| Simultaneous tracking        |      |  |              |

Tiny OS

by **UC Berkeley** 

# **66** WE KNOW WHAT YOU WANT **99**

We have a variety of advanced solutions for low-power communication, wireline and wireless network system, CCTV control systems, and gate automation systems that apply to ports, shipyards, and offshore plants.

**Development of Smart Disaster Detection and Response SW for Safety of Marine Plant Workers** 



## **OH-KYUNG COMTECH CO., LTD.**

**CONTACT** mianta@iokcom.com **OFFICE** +82 - 2 - 864 - 5480 MOBILE +82-10-6574-8477 whichon.iokcom.com



# **WORKER SAFETY**

# **MANAGEMENT SYSTEM**

Real Time Locating System (RTLS) using wireless communication between a tag and a reader. A small low-power tag is attached to a person or an object of interest. A reader is installed in the area of interest, and works as a reference of location.

# **Safety System Integration Technology**

Low-power wearable tag operates over 10 months.

Automatic detection, diagnosis and recovery for many system problems.

Battery backup power enables uninterrupted operation even in the case of power outage.



# **EASY EXTENSION**

Easily extensible with diverse environment sensors, emergency lighting / siren, CCTV, and applicable to diverse area



# **RELIABLE OPERATION**

With redundant storage, system dualization, and battery backup power, data integrity and availability is provided even in case of power outage or failure of one disk or one server



# **ALARM FOR WORKER**

By pressing a button of a tag, a worker can trigger an alarm in case of injury or accident. Control center can expand alarm to the area



# **ALARM FOR SPECIFIC AREA**

By pressing a button of a reader, an alarm can be trigger in case of fire or gas leak Emergency lighting and siren of the reader notify the alarm



# **ALARM FOR EVERY AREA**

When the hazard enforces evacuation in the entire workplace, control center triggers an alarm in every reader

System dualization provides real-time backup and reliability.



## **ACCURATE LOCALIZATION**

Filtering and compensating algorithms enable accurate real time localization of hundreds of tags at the same time even in crowded indoor environment



## **STABLE COMMUNICATION**

Optimization over IEEE802.15.4 standard protocol enables stable communication despite noise, interference, and possible data corruption



## **DIAGNOSIS AND RECOVERY**

For many system problems, the system detects, diagnoses, and recovers automatically



## **ACCESS CONTROL**

Depending on completion of safety education and work permit, access to a workplace or a specific restricted area can be controlled



## **COLLISION AVOIDANCE**

To avoid collision of a heavy equipment with a worker during operation, an alarm is triggered if a worker is nearby a heavy equipment

# **BATTERY LIFETIME OF TAG**

# 10 MONTHS

State-of-the-art low-power technology provides 10-month lifetime, and makes the system applicable to diverse industries.

# **SIMULTANEOUS OPERATION**

# 11,000 TAGS

Verified stable and efficient operation in harsh industrial environment with 11,000 tags and 400 readers.

