

WITHSAFE

Occupational Safety and Health Management Solution for Workers

leading the Internet of Things ecosystem

Next Generation Global SHM* Companies

* Safety & Health Management

Solution Overview



WITHSAFE

It utilizes a variety of sensor functions Real-time status of workers

Predict various casualties that may occur to workers in advance, and the workers themselves and It is a service that transmits event in real time to neighboring colleagues and remote safety management personnel.

- Strengthen integrated monitoring of safety and health based on A-ICBM* technology
- Establishment of emergency medical emergency response system
- Transition to a responsible self-discipline prevention system

* A-ICBM: Artificial Intelligence (A.I.), Internet of Things (IoT), Cloud, Big Data, Mobile

Using Smart Watch and IoT device sensing data

Worker safety and health solutions

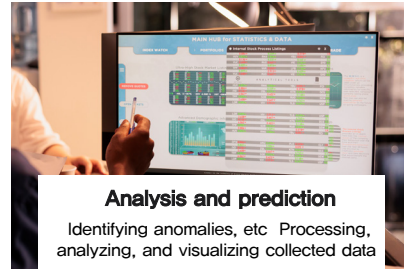


Understanding the Status

It utilizes a variety of sensor functions Real-time status of workers



Location tracking

With RTLS technology
Fast location tracking in case of an emergency

Analysis and prediction

Identifying anomalies, etc Processing, analyzing, and visualizing collected data

Real Time Location System (RTLS): Real-time Positioning Algorithm

Key Features

SOS Calls and Safety Notifications

- SOS Calls And Neighbor Peer
- Notifications Emergency Services Telephone Connection
- A Safety Rule/Disaster/Warning text message
- A Two-way Real-time Voice call
- AI Voice Guidance System

Collect Location Information

- Look Up Location
- When An Event Occurs
- Collecting Outdoor/Indoor location information
- Risk/Safety Zone Notification
- Geofencing Settings

User Information

- Identify the number of elderly and vulnerable to health conditions
- Identify the number of people at Risk/Safe Areas

Custom Health Monitoring

- (Biological) Heart Rate, Blood Oxygen, Skin Temperature, Body Composition, Electrocardiogram
- (Activity) Steps, Distance traveled, Calories, fFlis
- Notification Of Harmful And Chemical Gases to the Human Body

Collect Device Information

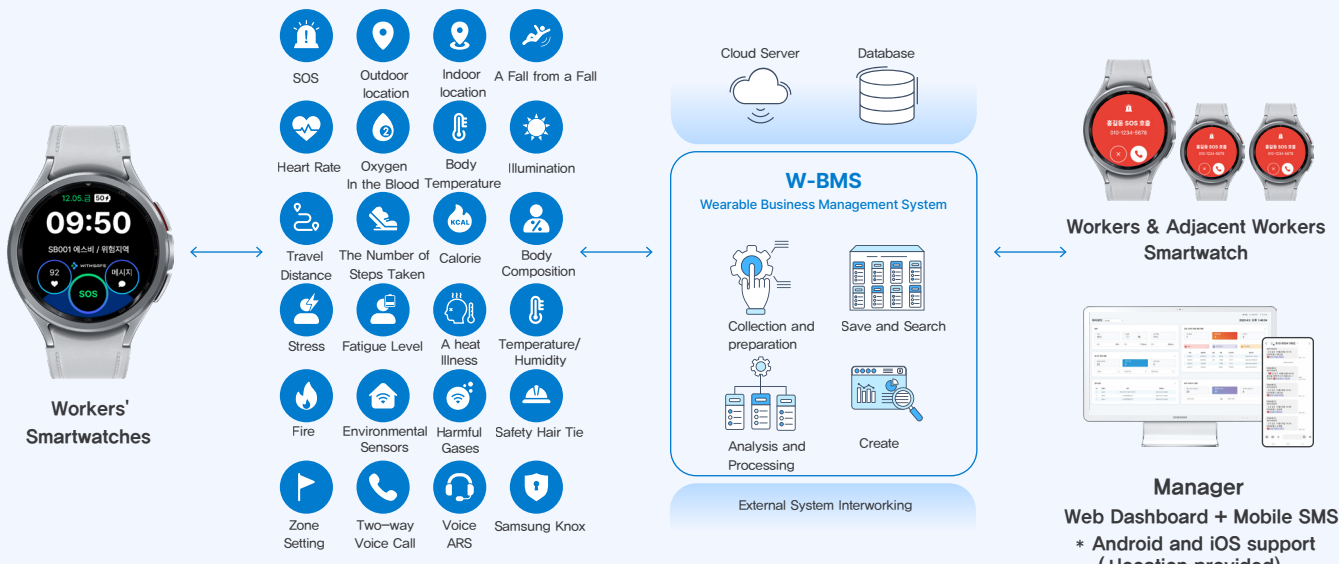
- Smartwatch communication status, battery
- Collect and manage user's wear status
- Interworking and notification of other devices (Safety helmet strap, portable gas sensor)

Security and Automatic Updates

- Built-in privacy password module
- Automatic Google Play Store Update

Solution System Configuration Chart

KT Cloud-based DATA can be used to provide customized services



Single Purchase and Possessable Safety Equipment that can be linked with WITHSAFE

Smart Beacons (Indoor Location) 	Safety helmet smart chin strap sensor 	Smart Environmental Detector (Fixed Environmental Sensor) 	VOC gas detector (Portable Chemical Gas Sensor) 	Smart Gas Detector (Portable Hazardous Gas Sensor) 	Smart safety ring
<ul style="list-style-type: none"> • Network: BLE 5.0 • Waterproof Dustproof: IP 67 • Battery: L1 (AA size) x2EA • Period of Use: 1 year • Operating Temperature: -20° C ~ 60° C • Size: 60 x 70 x 28.5 mm (W x H x D) • Weight: 100g • Authentication: KC (R-C-31S-SCS-0100) 	<ul style="list-style-type: none"> • Network: Bluetooth v5.0 • Sensor Type: Power Outage Sensor • Waterproof Dustproof: IP 65 • Battery: Battery CR2032*1 • Hours of Use: 1 month • Weight: 11g 	<ul style="list-style-type: none"> • Network: Wi-Fi i, Ethernet, Bluetooth v4.0 • Sensors (12 Types): TVOC, CO2, CO, SO2, NO2, Fine Dust, Temperature, Humidity, Ambient Illumination • Power: PoE / DC 5V 2A Adapter • Usage Time: 27,000 hours or more • Operating Temperature: 0° C ~ 80° C • Humidity: 0 ~ 100% RH (Relative Humidity) • Size: 153 x 153 x 60 mm (L x W x H) • Weight: 550g • Authentication: CE, KC, ROHS, FCC, CE-EMC Certified Fine Dust Simple Measurement Instrument Certification Grade 1 	<ul style="list-style-type: none"> • Network: Bluetooth, BLE • Sensor (2 Types): Methanol, TCE • Sensor Type: Electrochemical Formula • Alarm Sound Volume: 85 dB @ 10 cm • Waterproof Dustproof: IP20 • Battery: 3.6V Li-SOCl2 Battery 1EA • Period of Use: 2 years • Operating Temperature: 20° C ~ +50° C • Humidity: 10% to 90% RH (Relative Humidity) • Size: 64 x 62 x 25 mm (H x W x D) • Weight: 100 g • Certification: KCs, KC, ATEX, IECEx Certification 	<ul style="list-style-type: none"> • Network: Bluetooth, BLE • Sensor (5 Types): O2, CO, H2S, CH4, CO2 • Sensor Type: Electrochemical, Optical (NDR) • Alarm Sound Volume: 85 dB @ 10 cm • Waterproof Dustproof: IP67 • Battery: 3.6V Li-SOCl2 Battery 1EA • Period of Use: 4 Months • Operating Temperature: 20° C to +50° C • Humidity: 0 to 90% RH (Relative Humidity) • Size: 128 x 59 x 23 mm (H x W x D) • Weight: 178g • Certification: KCs, KC, ATEX, IECEx Certification 	<ul style="list-style-type: none"> • Network: Bluetooth, BLE • Sensor: Hook Sensing Department + Warning Department • Sensor Type: Contact sensor, Pattern Recognition Sensor, Motion Sensor • Battery: AA Battery, USB C Type • Certification: Safety Certification

* This service is intended to be used as an auxiliary means for industrial safety and health management of workers, and we would like to inform you that the service may be suspended in the communication shade (non-communication) area.

Differentiated Strength

 Marketing	Provide customized services to a wide range of industries <ul style="list-style-type: none"> • Tizen ~ Service Experience With WearOS Technology (Only in Korea) • Currently, About 10 Sites are in Operation Nationwide • From 2015 to Now, More than 30,000 Galaxy Watches have been delivered • National Defense (Air Force, Army, Navy), Local Government/University (Gunpo City Hall, Dankook University, etc.), Public Institutions (Korea Expressway Corporation, Water Resources Corporation, National Park Service, etc.), Private (SK Group, KT, Seoul Milk, HY, etc.) 	Building a collaborative network based on collective intelligence <ul style="list-style-type: none"> • Samsung Electronics has signed a partnership for global Tier 1 solutions (Only in Korea) • Samsung EHS Research Institute, Korea Occupational Safety and Health Agency Collaboration Project • MOU signed for Dankook University's WMD Project Group with AIOT experts • Advanced Healthcare Algorithms with Gachon University's Department of AI and Software
 Security & Certification	Strong Triple Security Policy for Privacy <ul style="list-style-type: none"> • Installation in the KCMVP Watch of the National Intelligence Service • Adopt Interval Encryption For All Networks • DB Encryption with CC Authentication Security Module 	National Authorized Software Quality Certification <ul style="list-style-type: none"> • GS (Good Software) Certified Software Quality Grade 1 "Human Safety and Health Management Support System" • 9 Related Technical Patents Registered
 Technology	Utilizing Samsung Electronics' Digital Healthcare Technology <ul style="list-style-type: none"> • Samsung Health SDK utilizes Samsung's unique sensor data • Remote installation and maintenance with Samsung Knox • Customizable UX/UI as a business partner WithSafe Google Play Store Registration <ul style="list-style-type: none"> • Customized Central Control and Notification Services • Automatically Update Remotely When Upgrading Features • WithSafe is Available for Customers with Watches 	Interworking Customer Requirements With Pre-built Infrastructure <ul style="list-style-type: none"> • Voucher service using payment function • Interworking Pre-Established Environment, Gas, Water Level, Earthquake Sensor, etc • Worker's Smartphone Linked to Smart Safety Equipment • Reflect Zero Generated Data (Location, Biometric, Activity, Etc.) Policies • Battery Life (Up to 40 hours) Adjustable • Watch 1 Year Free A/S • Select Subscription, Establishment Plan pPolicy • Select LTE, BLE, WiFi communication • Provides Feature-Specific Dashboards Reflecting Requirements • Connecting Emergency Services Calls, Providing Neighboring Peer Notifications • AI Voice Guidance System

Applicable Industrial Groups



A Safety Disaster



Living Welfare



Health Care



A Local Government



National Defense



A Public Institution



School



Medical Treatment



Manufacturing



Construction



Distribution



Transportation And Delivery