



The SmartCone Safety Solution

Intelligent perimeter monitoring, hazardous levels detection, and intrusion detection to improve physical safety in work zones, at permanent or temporary job sites ranging from small confined spaces to large construction sites.

IoT Technology for “Smart” Safety

The SmartCone Safety™ Solution deploys IoT (Internet of Things) technology to create a “smart” safety zone that helps avert public and workplace injuries and fatalities. The SmartCone solution provides connectivity, on-site sensor fusion, and alarms.

The high-tech detection and early warning system is safer, less expensive, and more productive than a human or physical barrier, and provides vital feedback to workers and bystanders in the area.

Portable

SmartCones can be static or mobile. A cone can be installed in a permanent location, and covered in different “skins” for the cone to blend in. A SmartCone can also be completely mobile — employees simply drop cones where they are needed and walk away.

How it works

The SmartCone Solution is made up of one or many SmartCones. Each SmartCone contains a high powered computing platform running SmartCone IoT FusionCore software and

sensors. Customers can quickly change the sensor modules to modify or expand the SmartCone’s capabilities: SmartCones can be setup to detect motion, radiation, electrical activity, hazardous gases — a huge range of options is available.

IoT technology

SmartCones can work together to create an intelligent mesh network. Each SmartCone is independent and connected. If one fails, the others can take over.

Fog computing capabilities allow the cones to develop a set of metadata that can be uploaded over the internet. This dramatically reduces your bandwidth and storage requirements and makes data and video viewing and archiving affordable and easily searchable.



The SmartCone Safety Solution can be deployed to reduce risk in hazardous areas such as:

- Confined spaces
- Moving or dangerous machinery parts and vehicles
- Electrical hazards (voltage sensors)
- High radiation (ionizing and non-ionizing) environments
- High chemical-use environments
- Spills
- Open pits
- Roadworks



Detection

Motion/physical detection

- Passive Infrared
- LiDAR - trip wire/distance measuring
- Seismic
- Motion, including speed and direction
- Windspeed

Hazardous conditions detection

- Multigas detectors, toxic and/or slightly toxic

- Air quality: ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrous oxide
- Gas leakage: LPG, Butane, methane, alcohol, hydrogen, and smoke
- Certain dust, smoke, mist, fume, condensates, and fog
- Any other workplace respiratory, radiation, and flammable hazards that have sensors available
- Temperature + variances in
- Oxygen levels + variances in
- Noise levels

The SmartCone IoT FusionCore uses a novel cognitive behavior fusion engine to process sensor data coming in through the individual cones. A series of complex algorithms collect, manipulate, and populate a "prior knowledge repository" with real-time findings from the sensor network.



Warning and notification

Alert methods

- Text, telephone, and/or email notification
- Flashing LED lights, of any color (usually red and green)
- Digital signs
- Custom audio messages uploaded on the fly
- Pre-recorded sounds from speakers, such as a warning message, alarm bells or sirens
- Vibrating wrist devices
- Potential for wireless emergency alert
- Potential broadcast through emergency broadcast system

IoT FusionCore Alarms

- Customizable alarms and alarm zones
- Audio, visual, tactile alarms or combination of each
- Option to create an alarm zone amongst several or many SmartCones
- Location-independent: sensors can be placed in one area and alarms placed in another, as long as both are connected to the internet

The SmartCone IoT FusionCore combines data from multiple sensors and generates an alarm based on user configurable thresholds. Multi-dimensional alarming ensures SmartCones use every possible method to alert the public and/or employees.

About SmartCone Technologies

At SmartCone Technologies, our mission is simple: we want to save lives and secure your assets. Since 2011, we've been researching and developing IoT (Internet of Things) technologies to make safety more intelligent, cost-effective, adaptable, and mobile, all at the highest standards of security and privacy.

SmartCone solutions have been used for securing dangerous work sites, controlling bicycle lane traffic, managing vehicle fleets, monitoring traffic incident scenes, mobile and fixed advertising, crowd control, and site security surveillance. Our clients include utility companies, departments of transportation, construction companies, engineering firms, automobile dealerships and various policing agencies among others.

A few of our customers

Enterprise Rent-A-Car

Exelon Corporation

City of Ottawa

Department of Transportation
North Dakota

SBA RCA Participant

Department of Transportation
Florida

Village of Lyons Police
Department



Intelligent surveillance

An intelligent video management system fuses the HD video feed with sensor data. HD video data is captured and stored for fast, intuitive searching later.

Safety personnel can receive an alert by email, text, and/or telephone when a threshold has been reached on the SmartCones, such as motion detected around a secured area. They can then immediately logon to view activity around the area.

- Professional grade cameras record activity around the cone 24/7
- HD Live video streaming
- Lower bandwidth and storage requirements for transmitting and archiving data
- Fully searchable video archives for research, investigation, or litigation needs
- Search capabilities based on motion events, time, or sensor alarms

To learn more about how you can deploy IoT technology to improve safety, contact us at

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