VerticalMan™

"Man Down" detection system

The solution for lone workers safety

ALDEA
The Smart Solutions Company

VerticalMan™

VerticalMan is a professional application designed to protect the safety of lone workers.

The system automatically detects dangerous conditions "Man Down" or "Motion-less Man" and allows the manual activation of "SOS" alarm to warn a remote rescuer through an SMS, a phone call, an email, web service or a VoIP call.

Man Down
The vertical posture of the operator is constantly controlled; If it is maintained an inclination over a configured angle, the visual and acoustic local alarm is activated.

Motionless Man
VerticalMan checks the prolonged immobility of the operator and eventually activates the local alarm.

SOS alarm
VerticalMan allows the operator to activate the SOS alarm through the apposite button on the screen or through the physical button on Atex Ecom devices.
It is also possible to connect via Bluetooth a physical external button in order to activate the SOS alarm; in this mode, it can also be activated silently and can be used like a Panic Button in case of aggressions.

System alarms

These are alarms automatically activated by the App to guarantee the proper system operation.

- **Low battery level** - VerticalMan can be configured in order to warn locally and remotely if the device battery level goes under a set charge level.

- **Wrong configuration** - In case of an incoherent App configuration, it is locally warned the type of error, ex. Configured SMS notification without at least a phone number recipient

- **No connectivity** - Is checked the presence of connectivities required for notice channels chosen.
If, for example, it is configured the SMS notification, it is controlled the availability of the GSM connectivity and eventually it is activated only the local alarm.

From local alarm to remote notification

If the local alarm persists, are activated remote notifications to rescuers through the chosen communication channels: SMS, phone call, email, web service or VoIP call.
SMS, email and Web notifications can contain the device position through GPS (also with Google Maps link) and eventually the coordinates inside a building through the mapping of Beacon devices.
The GSM phone call notification starts with speakerphone activated and they can be recorded locally on audio files.
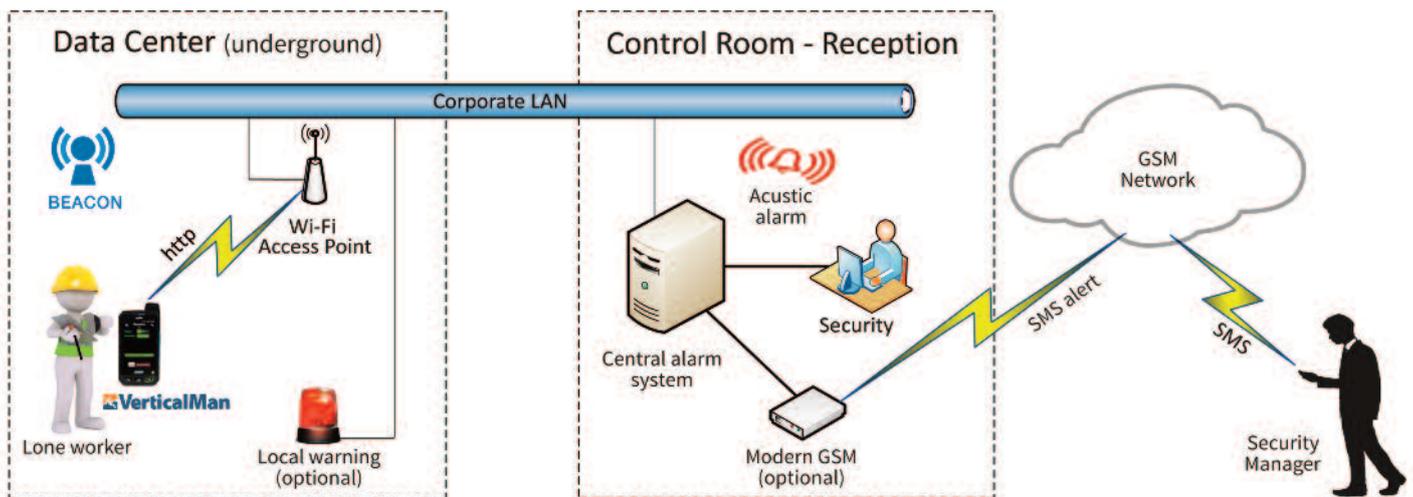
Notify the alarm on Wi-Fi network

One of the features of VerticalMan more appreciated by the market is the possibility of notifying the alarm through Wi-Fi connectivity, in order to make the infrastructure independent from the GSM operator. That allows to:

- Use VerticalMan also in places where there is not GSM signal (indoor areas of buildings, underground locals, etc.);
- Not be linked to the availability of third parts service (GSM operator) in case of emergencies;
- Do not need a GSM SIM that must be managed in order to be maintained active;
- Monitor the good network devices operation that contributes to make the whole system extremely safe;
- Integrate the "Man Down" into the centralized corporate alarms management system.

IPS indoor positioning

The positioning only through GPS is not enough if the operator works also inside buildings where the satellites signal cannot reach the device with VerticalMan. To overcome this limit, VerticalMan allows you to get the position inside a building using a Beacon network.
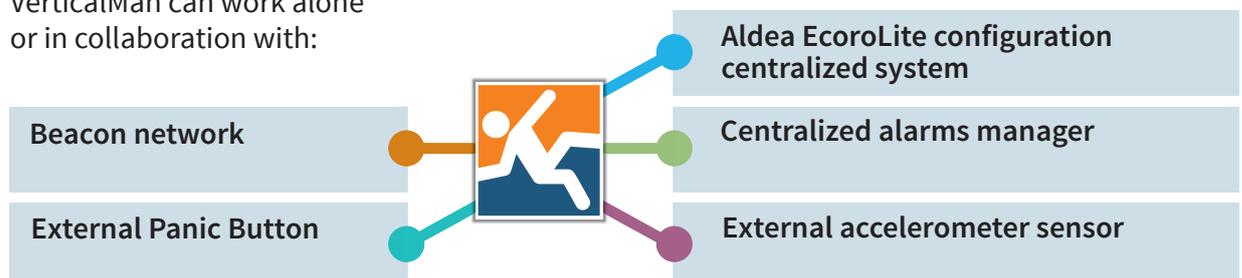
VerticalMan indoor

The technology

The App works on Android platform and it is installable on common commercial smartphones or on "ragged" devices - very resistant to dust, water, impacts and weather - good for operating in extreme and dangerous environments.

VerticalMan can work alone or in collaboration with:

- Beacon network
- External Panic Button
- Aldea EcoroLite configuration centralized system
- Centralized alarms manager
- External accelerometer sensor

VerticalMan features

"Man Down" alarm
"Motionless Man" alarm
Low battery level alarm
SOS alarm
Panic alarm (Panic Button)
Wrong configuration alarm
No connectivity alarm
Alarm noticed through GSM phone call (up to 5 phone numbers)
Alarm noticed through SMS (up to 5 phone numbers)
Alarm noticed through Web service
Alarm noticed through Email
Alarm noticed through VoIP call (SIP; Skype; What's App)
Sending GPS coordinates with Google Maps link
Sending indoor position with Beacon network (IPS)
High configurability
User interface language: English and Italian

Security

VerticalMan has been designed to avoid involuntary activations or exits from the app. All functions work with sliding, so hardly inadvertent.
The app configuration access can be limited with a password. In order to keep the system safe you can be notified locally and remotely if the battery charge level goes under a certain value.
VerticalMan allows to be warned locally if you are entering in an area without connectivity area (GSM or WiFi) necessary for the chosen remote notifications.
The App locally adverts you in case the configuration is not valid, to guarantee, in emergency situations, that remote notification are sent correctly.

Configuration

VerticalMan is extremely configurable so it can be used in the major part of cases depending on the customer requirements.
In the installations where there are more VerticalMan devices with WiFi connectivity, it is possible to use the centralized configuration that allows to publish on the central system a configuration that is automatically downloaded by VerticalMan.
Aldea provides, free of charge, the web application EcoroLite for the centralized configuration management.

Advantages and benefits

- It does not need specific hardware but common smartphones.
- Works correctly on Atex certified devices
- Deeply configurable.
- Localization in outdoor environments with GPS and in indoor environments with Beacon.
- Does not mandatorily need GSM connectivity but can work also with LAN WiFi network only.
- Simple and intuitive user interface.
- Easy configuration directly on the device or centrally with web application.

concept: covergrafica.com