

SAFESTAR

Integrated communication
system for safety supervision

DANIELI AUTOMATION



SAFESTAR

Applications

- > Industrial and productivity area
- > Communication networks
- > Safety improvements
- > Access management & controls geolocalization

SAFESTAR is an innovative and integrated geo-localization and communication system, permitting the identification and position determination of all operators inside a defined production area, covered by Wi-Fi / Bluetooth / ZigBee networks and monitored by a CCTV system. The operators are provided with a special helmet each (including headset and microphone), as well as a WiFi-COM device, (approx. the size of a typical smartphone), together with a ZigBee belt tag for position determination via radio. By this means, through management of real-time information such as position, Direction, Man-Down alerts and presence of dangerous gases, SAFESTAR system significantly contributes to improve safety supervision of all operators working inside the production areas.

Principle of operation

The main features of the SAFESTAR system are hands-free radio communication using wi- units (i.e. smartphones) and radio localization to increase safety conditions.

Each operator, provided with a Wi-Fi, Bluetooth radio unit and ZigBee device, can talk using a point-to-point link or in conference-call with the shift supervisor and/or co-workers.

In case of danger (i.e. gas detection) or a man-down situation (detected by an integrated accelerometer), an alarm will be immediately sent to the main control pulpit to be managed by an emergency team. The system is designed to integrate or replace existing analogue communication devices, with Ip-based digital technology.

Features

- > SAFESTAR is a software platform, capable of integrating any type of mobile or fixed terminal, regardless of the network;
- > It can be installed on any type of computer or it can run as a virtual platform;
- > Thanks to its capability for full integration into existing communication systems, considerable savings in terms of investment costs are achievable;
- > All technical events can be sent directly to maintenance staff, reducing response time considerably and benefiting production.

Area access control

To increase safety parameters, it's possible to monitor and manage personal access to specific working areas, generating an alarm if unauthorized persons try to enter restricted and/or dangerous work areas.

Operator's localization

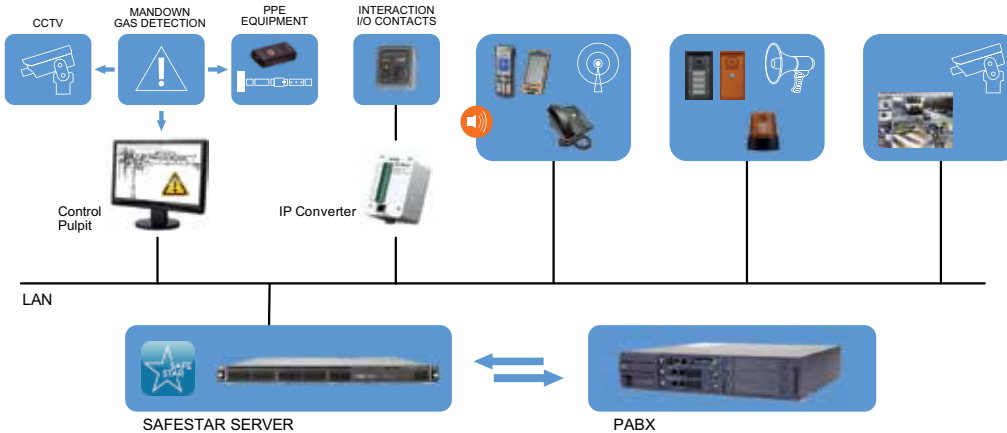
User geo-localization is achieved by means of a dedicated ZigBee belt device. This allows not only continuous position monitoring of all equipped operators (to a position accuracy of around 4 metres) but also the directions in which they are moving, enabling safety management of all operators working in the same area.

Furthermore, recognition of user's exact position inside dangerous areas is of vital importance to achieve high safety standards in industrial environments. For example, before lifting and handling heavy loads, an EOT crane operator can verify if the SAFESTAR system is generating a "free-area" signal, indication that all operators are standing in safe areas, outside the crane's area of activity.

Full CCTV area coverage

If necessary, CCTV cameras, normally used to monitor the whole industrial area, can be zoomed in real-time to focus on a specific area in which an emergency situation may have just occurred. The camera is moved in the correct direction by the local control system activated by the emergency alarm signal.





SAFESTAR system overview

Customizable alerts system

Custom specific and additional alarms can be easily added to the standard software base configuration, customizing safestar’s alert system to the specific needs of each application. The degree of safety can be adapted to suit a customer’s individual requirements.

Operator health monitoring

All users wear dedicated man-down sensor/transmitters which immediately detect any fall and automatically send a personalized alarm to the main control pulpit. Moreover, if necessary a worker can send an SOS request signal, by simply pressing a dedicated button which calls for immediate help. The user’s identification and his position are immediately relayed to the main control pulpit, providing fast and vital information to the emergency team.

Integrated gas detection

Essential when operating in hostile environments and with the aim to increase safety standards, a dedicated sensor can be incorporated to detect the presence of toxic and dangerous gases, promptly alerting both the affected worker as well as the main control pulpit.

Voice & Data communication

Integrated communication system for voice and data transmission, either inter-operator and/or between operator and the main control pulpit, bring together different technologies (such as GSM, Dect, Wi-Fi, ZigBee), in a single and integrated software platform, providing the simplest approach to communication network management.



DANIELI HEADQUARTERS**DANIELI**

Via Nazionale, 41
33042 Buttrio (UD) Italy
Phone +39 0432 195 8111
www.danieli.com
info@danieli.com

DANIELI AUTOMATION

Via Bonaldo Stringher, 4
33042 Buttrio (UD) Italy
Phone +39 0432 518 111
www.dca.it
info@dca.it

WORLDWIDE DANIELI COMPANIES**AUSTRIA**

Max Planck Strasse, 5
A - 9100 Völkermarkt
Tel (43) 4232.51440.6101
info@austria.danieli.com

UNITED KINGDOM

4 Ignite, Magna Way
Rotherham S60 1FD
Tel (44) 1709.724300
info@uk.danieli.com

SPAIN

Poligono Sondikalde
Calle Portu Bidea, 2
48150 Sondika - Vizcaya
Tel (34) 94.4872800
info@spain.danieli.com

INDIA

Technopolis Building
Plot 4, Block - BP, 5th Floor
Wing - B, Sector - V, Salt Lake
700 091 Kolkata - West Bengal
Tel (91) 33.39847777
info@india.danieli.com

GERMANY

Brunshofstrasse, 12
D-45470 Mülheim - Ruhr
Tel (49) 208.3780000
info@germany.danieli.com

THE NETHERLANDS

Rooswijkweg 291, 1951
ME Velsen-Noord
T +31 (0)251 500 500
F +31 (0)251 500 501
info@danieli-corus.com

TURKEY

1. OSB Istiklal Mahallesi
1. Cadde No. 15
Beykoy - Duzce
Tel (90) 380.5537110
info@turkey.danieli.com

INDIA

7000 Central Expressway,
Sri City
517588 Andhra Pradesh
Tel (91) 8576.304000
info@india.danieli.com

GERMANY

Scherl 12
D-58540 Meinerzhagen
Tel (49) 2354.70820
info@germany.danieli.com

SWEDEN

Nya Ågatan, 23
SE-77782 Smedjebacken
Tel (46) 240.668500
info@sweden.danieli.com

RUSSIA

Avtozavodskoe shosse 48
Nizhny Novgorod Region
606000 Dzerzhinsk
Tel (7) 8313.310310
info@russia.danieli.com

THAILAND

Land Plot N. K11
The Eastern Seaboard Ind. Estate
Tambol Pluakdaeng, Amphur
Pluakdaeng, 21140 Rayong
Tel (66) 38.929000
info@thailand.danieli.com

FRANCE

Les Mercuriales
F-93176 Bagnolet Cedex
Tel (33) 1.49722269
info@france.danieli.com

SWEDEN

Box 994
SE-85125 Sundsvall
Tel (46) 60.139400
info@sweden.danieli.com

CHINA

No. 19, Xing Gang Road, CEDZ
Changshu, Jiangsu 215513
Tel (86) 512 52267088
infodcs@china.danieli.com

USA

600 Cranberry Woods Drive
Suite 200
Cranberry Township, PA 16066
Tel (1) 724.7785400
info@usa.danieli.com

WORLDWIDE OFFICES AND SERVICE CENTERS**SWITZERLAND**

Olsbergerstrasse 2
4310 Rheinfelden
Tel (41) 61.8368310
info@switzerland.danieli.com

TURKEY

Adalet Mah. Manas Bulvari No. 47,
Folkart Towers, A Block, Ofis 3208,
35580 Bayrakli, Izmir
Tel (90) 232.4355577
info@turkey.danieli.com

INDIA

D-402 Lotus Corporate Park,
Ram Mandir Road,
Off Western Express Highway
Goregaon (E), Mumbai 400 063
Tel (91) 22.39917100
info@india.danieli.com

KOREA

Room 201, Daecheon Building
157-4 Samsung-dong
Gangnam-gu 135-090, Seoul
Tel (82) 2.5626622
info@korea.danieli.com

CANADA

P.O. Box 24062
Sault St. Marie
Ontario P6C 6G7
Phone (1) 705.9468779
info@canada.danieli.com

RUSSIA

Leningradskiy Prospekt 31A
Building 1, 24th Floor
125284 Moscow
Tel (7) 495.9819073
info@russia.danieli.com

EGYPT

76 Al-Moltaka Al-Arabi Dist.
11799 Sheraton Zone
Heliopolis, Cairo
Tel (20) 2.22699491
info@egypt.danieli.com

INDIA

Furnace Building
1, Taratala Road
Kolkata - 700024
Tel (91) 33.33013510
info@india.danieli.com

JAPAN

42F, Yokohama Landmark Tower
2-2-1, Minatomirai, Nishi-ku,
Yokohama-City
220-8142 Japan
Tel (81) 45.651.7077
info@japan.danieli.com

RUSSIA

Lenin str. 130, Office 109
Chelyabinsk Region
445038 Magnitogorsk
P.O. Box 322 Abu Dhabi
Tel (7) 3519.244043
info@russia.danieli.com

UAE

Najda Street, Old Nissan
Masaood Building, Flat 1003
P.O. Box 322 Abu Dhabi
Phone (971) 2.6812268
info@uae.danieli.com

THAILAND

Muang Thai-Phatra Office
16th Floor, Tower II
252-91 Rachadaphisek Road
Huaykwang - Bangkok 10310
Tel (66) 2.6933520
info@thailand.danieli.com

TAIWAN

26F-1, No. 31
Hai-Bian Road
Kaohsiung City, Taiwan 802
Tel (886) 7.3358655
info@taiwan.danieli.com

UKRAINE

Glinky Street 2, Office 301
49000 Dnipropetrovsk
Tel (380) 56.7904301
info@ukraine.danieli.com

KSA

Silver Tower 6th floor
P.O. Box 4867
Al-Khobar 31952
Tel (966) 3.8993145
info@ksa.danieli.com

VIETNAM

Lot A4b Industrial Park
Tan Thuan EPZ (E-Office Park)
Tan Thuan Dong Ward, District 9
Ho Chi Minh City
Tel (84) 8.35287400
info@vietnam.danieli.com

USA

114 Chesser Crane Road
Chelsea, AL 35043
Phone (1) 205.6787451
info@usa.danieli.com

MEXICO

Edificio Sierra Madre
Ave. Vasconcelos Oriente 310
Colonia del Valle
66250 Garza Garcia, N.L.
Tel (52) 81.83781055
info@mexico.danieli.com

BRAZIL

Rua George Rexroth, 609
Diadema
CEP 09951-270 São Paulo
Tel (55) 11.35085900
info@brazil.danieli.com