

Alarm System

Overview

About this document

Scope and purpose

Infineon’s Alarm System is a sensor fusion-based glass-break detector that delivers unmatched performance and exceptional protection against false alarms.

This product overview describes the features and installation considerations for the Alarm System.



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Processing blocks

1 Processing blocks

Infineon’s Alarm System is a sensor fusion-based glass-break detector that delivers unparalleled performance and exceptional protection against false alarms.

Infineon’s sensor fusion software synchronizes the event data from both sensors and makes the final decision after comparing the logical levels of both outputs.

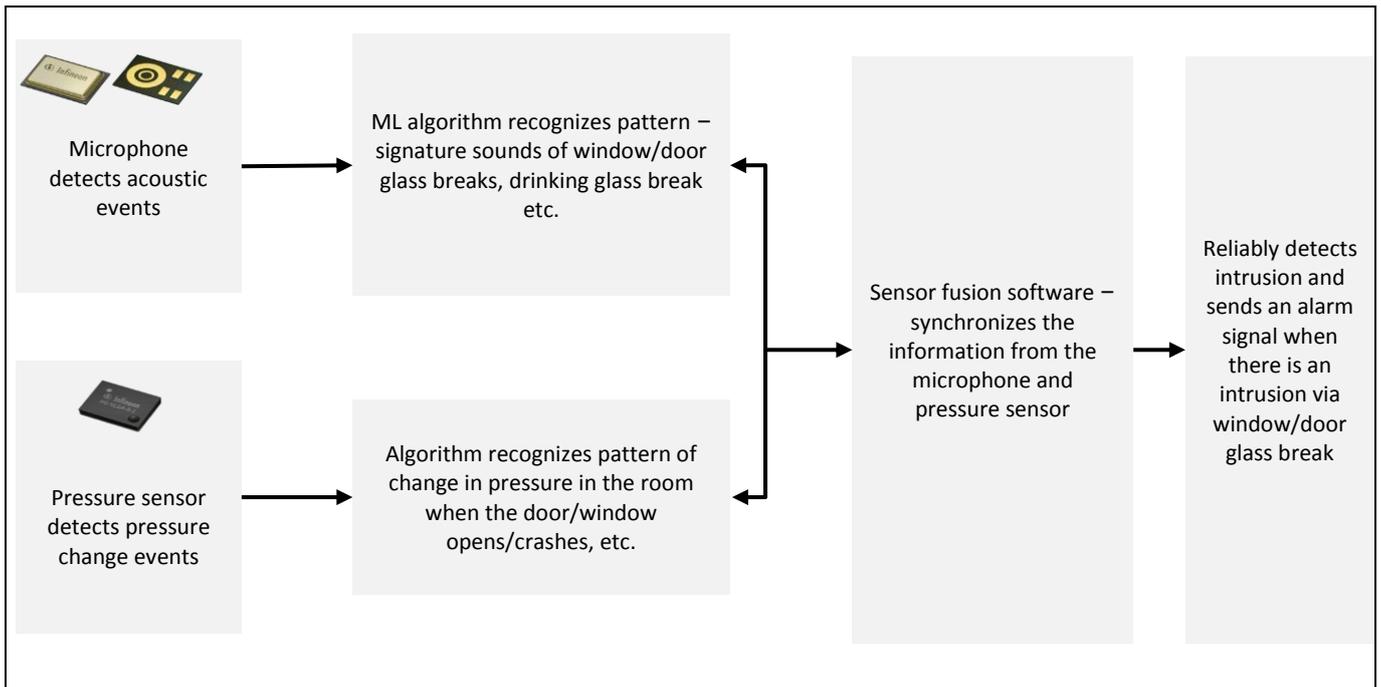


Figure 1 Building blocks of Alarm System

Features

2 Features

- Sensor fusion-based glass-break detector
 - Infineon’s Alarm System employs cutting-edge sensor fusion algorithm to optimize the performance and reduce false alarms
 - Feature extraction using machine learning ensures that the microphone does not listen to any conversations
- Easy installation and set-up
 - Plug-and-play configuration allows easy set-up
- Suitable for all types of glasses
 - Fusion of audio event and pressure change event ensures reliable intrusion detection for all types of glass
- Exceptional protection against false alarms
 - Reduced false alarms, when compared to traditional acoustic-only glass-break detectors
- Pet friendly
 - Integration of pressure sensor event for final alarm decision ensures alarm’s reliability against dog barks

Specification

3 Specification

Technology	Time-synchronized sensor fusion
Sensing elements	
Microphone	Infineon's high-performance digital XENSIV™ MEMS microphone
Pressure sensor	Infineon's digital barometric air-pressure sensor
Coverage	
Room size (m ²)	Maximum : 64
Window size (m ²)	Minimum: 0.4 x 0.4 Maximum: 3 x 3
Environmental	
Operating temperature (°C)	-10°C to 40°C

Installation considerations

4 Installation considerations

4.1 Range of coverage

- Infineon’s Alarm System can reliably protect a room of up to **64 m²**
- The Alarm System can cover the room 4 m in each direction

Note: Keep a minimum distance of 1 m from air ducts, exhausts or other cooling/ventilation systems.

4.2 Location range

For optimal use, place Infineon’s Alarm System as shown here:

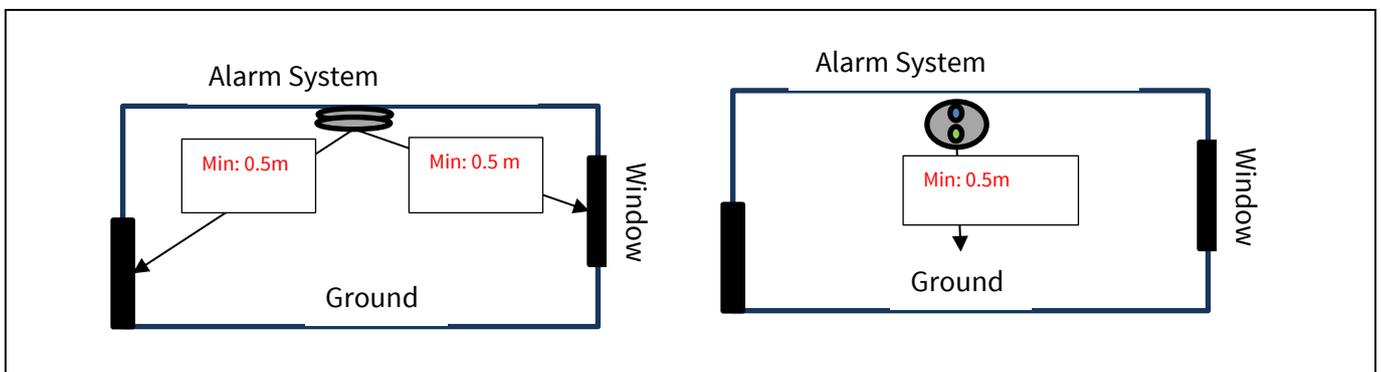


Figure 2 Location range

4.3 Mounting

Infineon’s Alarm System can be mounted anywhere in the room except directly on the glass pane.

To avoid unwanted alarms, make sure the minimum distance between the window/door glass and Infineon’s Alarm System is 0.5 m and the maximum distance from the window or door glass is 8 m.

4.4 Limitations (summary)

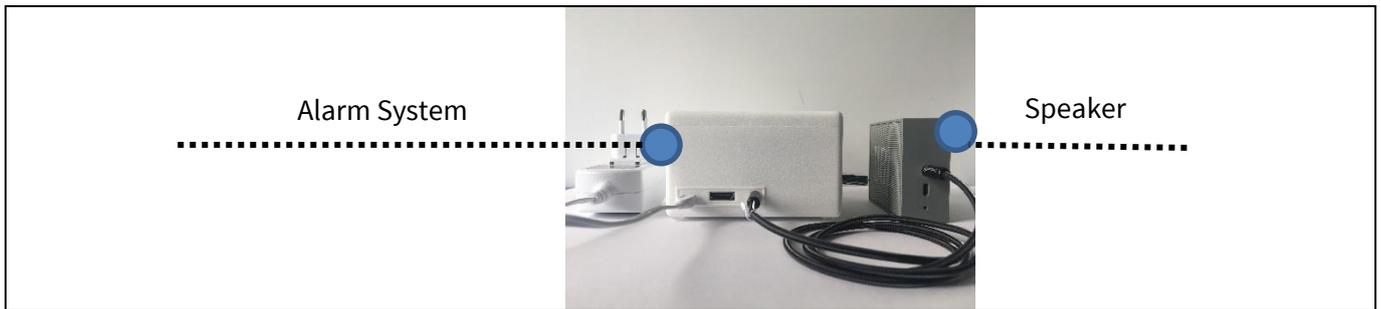
- For optimal performance, close all windows and doors in the room before activating the alarm system.
- Always place the detector in clear line of sight of the window/door.
- Curtains or other material between the alarm system and window/door can reduce the performance.

Attention: *Alarm System can offer specified performance only within the mentioned specification and installation guidelines.*

Parts list

5 Parts list

Part name	Quantity	Remark
Alarm System in housing	1	Delivered with an audio cable and a power cable
Speaker	1	
Infineon USB stick	1	Used for upgrading software and copying log files



Note: Indispensible part NOT INCLUDED in the package – Risco RG65 Vitron Glass Break Simulator. It is only used for testing the audio events.

Document references

6 Document references

Note that the system comes pre-configured and that the software is pre-installed in the Raspberry Pi.

Document name	Remark
Installation guide	Refer to the Infineon Toolbox manuals for information on downloading software updates and documentation updates
User guide and API documentation	
Product overview	
Release notes	

Revision history

Document version	Date of release	Description of changes
V1.0	July 2018	First release

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Edition 2018-07

Published by

Infineon Technologies AG

81726 Munich, Germany

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Email: erratum@infineon.com

Document reference

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