

# Dual Channel PIR Signal Processor

Production Data - Dec 16, 2016

E931.62



## Features

- Direct connection to PIR sensor elements
- Temperature measurement
- Differential PIR inputs
- Digital Signal Processing (DSP)
- Single wire serial interface (DOCI™)
- Operating voltage down to 2.7V
- Low current consumption
- High dynamic range
- High supply rejection

## Applications

- Integration with PIR sensor elements (hybrid modules)
- Gas sensors
- High end PIR systems

## General Description

The E931.62 integrated circuit is designed for interfacing Passive Infra Red (PIR) sensors with micro-controllers or processors. A single wire **Data Out, Clock In (DOCI™)** interface is provided for interfacing with a micro-controller. Multiple devices can easily be operated at the same time.

Up to two PIR sensors elements connect directly to the PIR inputs. The PIR signal is converted to a 14 bit digital value.

The E931.62 contains an on chip temperature measurement circuit with a resolution of better than 0.1K. The PIR sensor voltages and the temperature value are supplied to an external microcontroller through the DOCI™ interface.

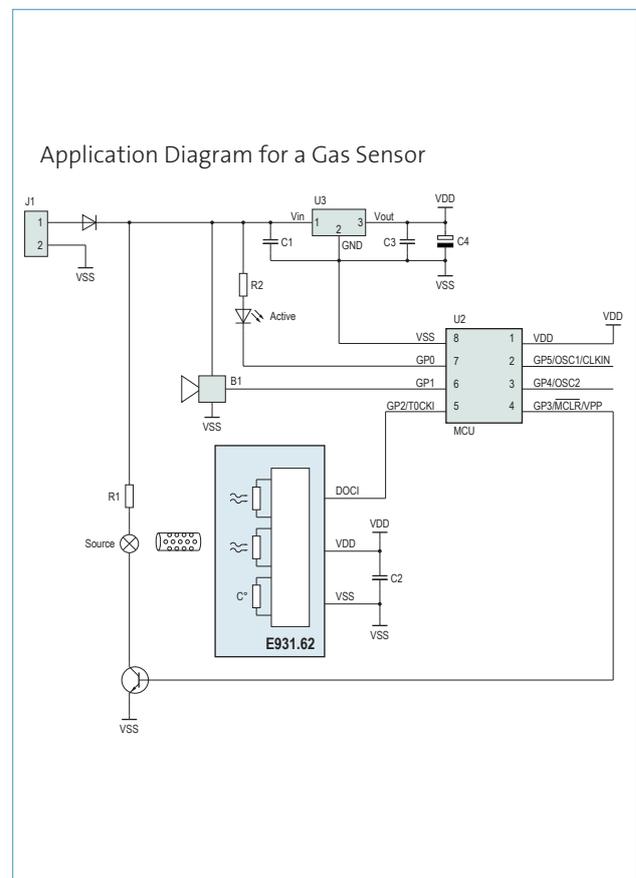
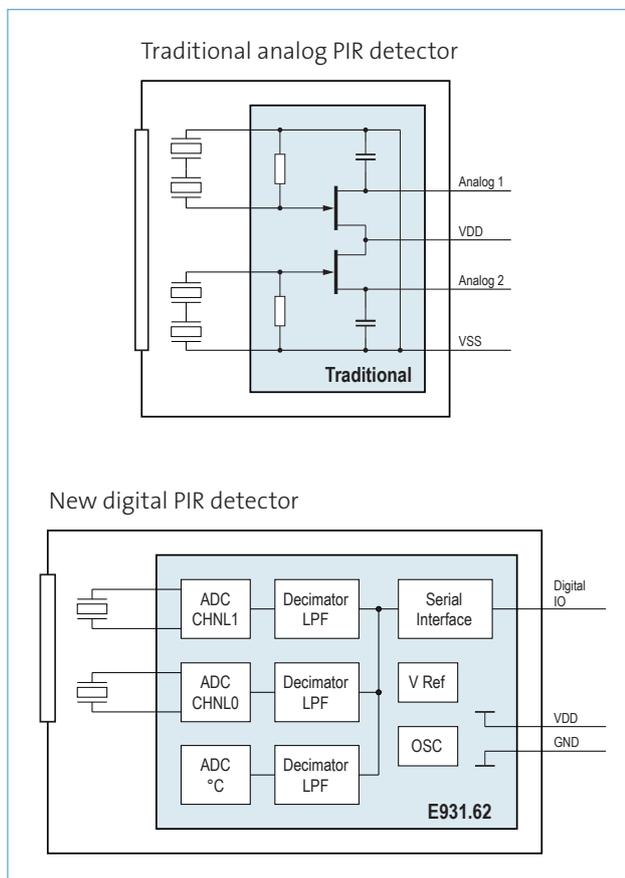
## Ordering Information

Ordering-No.:	Temp <sub>ST</sub> Range	Package
E93162A22W	-45°C to +125°C	Wafer B - Entegris Box

## Digital Sensor Assembly with E931.62

The E931.62 PIR Signal processor replaces the JFETs and optional discrete components.

The pin count of the detector is reduced to 3 pins.



# Elmos Support

## Headquarters

Elmos Semiconductor AG  
Heinrich-Hertz-Str. 1  
44227 Dortmund (Germany)  
Phone: +49 (0) 231 / 75 49-100  
Fax: +49 (0) 231 / 75 49-149  
sales-germany@elmos.com  
www.elmos.com

## Sales and Application Support Office North America

Elmos NA. Inc.  
32255 Northwestern Highway, Suite 220  
Farmington Hills, MI 48334 (United States)  
Phone: +1 (0) 248 / 8 65 32 00  
Fax: +1 (0) 248 / 8 65 32 03  
sales-usa@elmosna.com

## Sales and Application Support Office China

Elmos Semiconductor Technology (Shanghai) Co., Ltd.  
Unit 16B, 16F Zhao Feng World Trade Building,  
No. 369 Jiang Su Road,  
Chang Ning District,  
Shanghai, PR China, 200050  
Phone: +86 (0) 21 / 6210 0908  
Fax: +86 (0) 21 / 6219 7502  
sales-china@elmos.com

## 中国地区销售与应用支持

艾尔默斯半导体技术(上海)有限公司  
中国 上海市 长宁区 江苏路369号  
兆丰世贸大厦16楼 16B单元, 200050  
电话: +86 (0) 21 / 6210 0908  
传真: +86 (0) 21 / 6219 7502  
sales-china@elmos.com

## Sales and Application Support Office Korea

Elmos Korea  
B-1006, U-Space 2, 670 Daewangpangyo-ro,  
Sampyoung-dong, Bundang-gu, Seongnam-si,  
Gyeonggi-do, 13494 Korea  
Phone: +82 (0)31 / 7 14 11 31  
Fax: +82 (0)31 / 6 28 10 90  
sales-korea@elmos.com

## Sales and Application Support Office Japan

Elmos Japan K.K.  
BR Shibaura N Bldg. 7F  
3-20-9 Shibaura, Minato-ku,  
Tokyo 108-0023 Japan  
Phone: +81 3 / 3451-7101  
Fax: +81 3 / 3451-7104  
sales-japan@elmos.com

## Sales and Application Support Office Singapore

Elmos Semiconductor Singapore Pte Ltd.  
3A International Business Park  
#09-13 ICON@IBP  
609935 Singapore  
Phone: +65 (0) 6908 1261  
Fax: +65 (0) 6570 5906  
sales-singapore@elmos.com

**Note:** Elmos Semiconductor AG (below Elmos) reserves the right to make changes to the product contained in this publication without notice. Elmos assumes no responsibility for the use of any circuits described herein, conveys no licence under any patent or other right, and makes no representation that the circuits are free of patent infringement. While the information in this publication has been checked, no responsibility, however, is assumed for inaccuracies. Elmos does not recommend the use of any of its products in life support applications where the failure or malfunction of the product can reasonably be expected to cause failure of a life-support system or to significantly affect its safety or effectiveness. Products are not authorized for use in such applications.

Copyright © 2016 Elmos. Reproduction, in part or whole, without the prior written consent of Elmos, is prohibited.