

SMOKE DETECTION

A Better Way to Design Smoke Detectors. A Better Way to Save Lives.

Smoke detectors save lives. Three of every five fire-related deaths in the U.S. occurred in properties without smoke detectors. Smoke detectors save lives, but only when they are used properly. In properties with smoke detectors, nearly one in four deaths (23%) occurred where smoke detectors were not working, or were disabled due to frequent false alarms.



Better Performance. Better Safety. Better Smoke Detectors.

3 out of 5

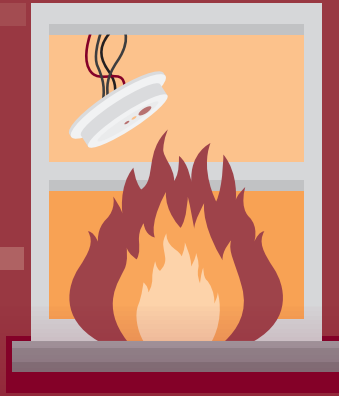
deaths resulted from fires in properties without working smoke alarms

23%

of deaths are caused by fires where smoke alarms were present, but were often intentionally disabled due to frequent false alarms

83%

less time available to escape a fire than in the 1970s due to the presence of more synthetic materials in living and work spaces

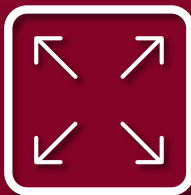


The Challenges for Manufacturers



High Occurrence of Nuisance Alarms, Which Results in:

- 🔥 Turning off the detector
- 🔥 Not changing batteries
- 🔥 Covering the detector with plastic



Large Size

- 🔥 Cannot be integrated into fixtures to meet architectural or aesthetic designs
- 🔥 High power consumption
- 🔥 Less suitable to meet demand for wireless detectors



Regulatory Compliance

- 🔥 New products must pass UL 217 and EN 54/EN 14604 tests to reduce false alarms and detect fires caused by synthetic materials

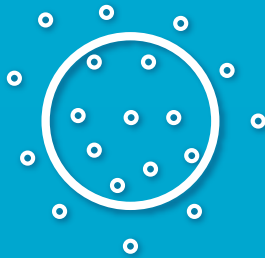
The Solution from ADI



Space-saving integrated module—photodiode, AFE, and LEDs



Reduces power dissipation

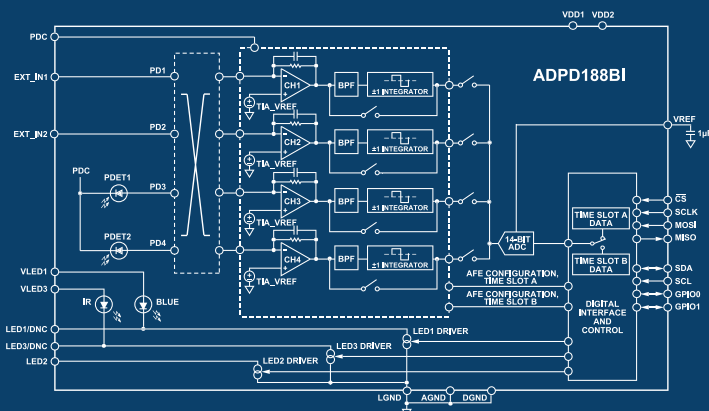


Particle size estimation using two LEDs reduces false alarms



Enables UL 217-compliant detectors

Better Performance. Greater Design Flexibility. Faster Time to Market.



ADPD188BI

Uses two colors to separate particle sizes, increasing the ability to detect and classify smoke types and reject nuisance sources. It is engineered to meet the latest regulatory requirements such as UL 217 and EN 54/EN 14604.

Learn more at analog.com/smokedetection

EngineerZone® Online Support Community

Engage with the Analog Devices technology experts in our online support community. Ask your tough design questions, browse FAQs, or join a conversation.

Visit ez.analog.com



Circuits from the Lab Reference Designs

Circuits from the Lab® reference designs are built and tested by ADI engineers with comprehensive documentation and factory-tested evaluation hardware.

Visit analog.com/cftl

**Circuits
from the Lab®**
Reference Designs

Analog Devices, Inc. Worldwide Headquarters

Analog Devices, Inc.
One Technology Way
P.O. Box 9106
Norwood, MA 02062-9106
U.S.A.
Tel: 781.329.4700
(800.262.5643, U.S.A. only)
Fax: 781.461.3113

Analog Devices, Inc. Europe Headquarters

Analog Devices GmbH
Ott-Aicher-Str. 60-64
80807 München
Germany
Tel: 49.89.76903.0
Fax: 49.89.76903.157

Analog Devices, Inc. Japan Headquarters

Analog Devices, KK
New Pier Takeshiba
South Tower Building
1-16-1 Kaigan, Minato-ku,
Tokyo, 105-6891
Japan
Tel: 813.5402.8200
Fax: 813.5402.1064

Analog Devices, Inc. Asia Pacific Headquarters

Analog Devices
5F, Sandhill Plaza
2290 Zuchongzhi Road
Zhangjiang Hi-Tech Park
Pudong New District
Shanghai, China 201203
Tel: 86.21.2320.8000
Fax: 86.21.2320.8222

©2018 Analog Devices, Inc. All rights reserved. Trademarks and registered trademarks are the property of their respective owners. Ahead of What's Possible is a trademark of Analog Devices. BR20183-15-6/18

analog.com



AHEAD OF WHAT'S POSSIBLE™