zilog®

Embedded in Life

An ◻ IXYS Company

ZMOTION® Intrusion Detection Solution with Lens and Pyroelectric Sensor Selection Options

Zilog's ZMOTION Intrusion Detection Solution provides a dramatic improvement in both sensitivity and stability over traditional security-related motion detection designs. Like our other ZMOTION products, the Intrusion Detection Solution is an integrated and flexible solution for Passive Infrared (PIR)-based motion detection applications and includes a high-performance microcontroller with integrated motion-detection algorithms, plus it includes a selection of lenses and PIR sensors to fit a wide range of intrusion detection and security applications. With integrated functions such as White Light Detection and Pet Immunity, the ZMOTION Intrusion Detection Solution is the ideal solution for security applications in which highly stable intrusion detection capability is vital.

ZMOTION®

The ZMOTION Intrusion Detection Solution, based on Zilog's Z8FS021 MCU, combines the programmability and rich peripheral set of our Z8 Encore! XP family of In-Circuit Programmable Flash MCUs with built-in motion detection software algorithms to provide the functions necessary for PIR motion detection applications. These algorithms comprise the PIR Engine and run in the background while control and status of the Engine is accessed through a software Application Programmer Interface (API). These APIs allow designers to create their own application-specific software while taking advantage of Zilog's ZMOTION Motion Detection Technology. Additional API settings are provided to match PIR Engine operation to each lens and pyroelectric sensor combination.

Reference Designs, Application Notes and Source Code

ZMOTION Intrusion Motion Detector Reference Design (RD0001, RD0001-SC01) | **BUY THIS REFERENCE DESIGN**

High Brightness LED Reference Design (AN0309, AN0309-SC01)

Resources & Documentation

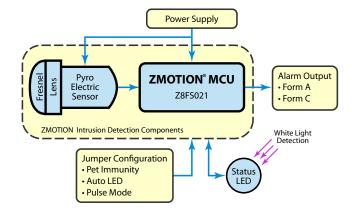|	
Order Samples	Product Brief (PB0230)
Product Information	Product Specification (PS0288)
Development Kit	User Manual (UM0233)
ZDS II Development Tools	Technical Support
Schematic Diagrams	Source Code

ZMOTION Intrusion Detection Block Diagram

Product Features and Benefits

- Accurate frequency discrimination and programmable pet immunity

- White light detection using status LED reduces system cost (eliminates CDS photocell)

- Wall, corner wall and long range mounting options with Fresnel and Nicera lenses

- Rectangular floor pattern options

- Lens selection options target security and intrusion detection applications for wide area, long corridors and warehouse settings

- Optimize the performance of your product by choosing a lens that closely matches your application

- Includes preprogrammed ZMOTION detection algorithms

- API settings are provided to match the ZMOTION Engine operation to each of the lens and PIR sensor combinations provided

Part Numbers

Z8FS021AHH20EG	ZMOTION Intrusion 20-Pin MCU
ZMOTIONS200ZCOG	ZMOTION Intrusion Detection Development Kit
ZLR12GI12V3	Wall-Mount Corridor Long Range Array Lens
ZVB12GIV1	Vertical Barrier Array (5.6°) Lens
ZWA12GI12V4	Corner Wall-Mount Array (88°) Lens
ZCM077GIV2	Low-Level Ceiling-Mount Array (360°) Lens
ZCM077GIV3	Mid-Level Ceiling-Mount Array (360°) Lens
ZCM077GIV5	High-Level Ceiling-Mount Array (360°) Lens

Other ZMOTION Development Options

ZMOTION Detection Module. A complete board-level module that provides a fully-functioning, small-form-factor motion detection solution that can be integrated into your product.

ZMOTION Detection and Control. Zilog also offers a ZMOTION solution for non-security-related applications with a selection of lenses and pyroelectric sensors, plus API settings for optimal lens performance.

A selection of matched lens and pyroelectric sensors available to meet a variety of applications. Optimized configuration parameters for the ZMOTION MCU are provided for each lens/sensor combination ensuring the best possible performance while significantly reducing development risk and minimizing time to market.

Adjustable PIR Sensitivity. The sensitivity of the PIR Engine can be adjusted to target slow, fast, and subtle motion while maintaining stability to avoid false detections.

Wall, corner wall and long range mounting options. Optimize the performance of your product by choosing a lens that closely matches your application. Use your own or select from our family of lenses spanning 90-degree wall mount, 30-meter long range, and 7-meter height range.

Includes preprogrammed ZMOTION detection algorithms. Zilog's ZMOTION MCU combines the programmability and rich peripheral set of the Flash-based Z8F042A Encore! XP® MCU with built-in software-based motion detection algorithms. These motion detection algorithms comprise the PIR engine and run in the background of the MCU while control and status of the engine is accessed through a software API.

API settings. Provided to match the ZMOTION Engine operation to each of the lens and PIR sensor combinations.

Complete ZDS II development system available. The ZMOTION Intrusion Detection Development Kit includes a base board in which the ZMOTION Intrusion Detection MCU is plugged, a prototyping area with potentiometers, LEDs, a CDS photocell that enables you to add your own custom application hardware, and a serial interface to the ZDS II USB SmartCable to allow development and debugging of custom application software.

Insert local contact information here

(Copy your info into Paint, then in Acrobat choose Tools > Comment & Markup > Stamps > Paste Clipboard Image As Stamp Tool to insert into saved pdf file)

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[ZiLOG](#):
  [ZMOT1AHH0F0AG](#)