

Introduction

This Quick Start Guide acquaints users with Zilog's ZMOTION Intrusion Detection Development Kit and provides instructions for setting up and using the kit to demonstrate its basic operation. The following topics are covered:

- [Getting Started](#): the quickest way to get the board up and running; see page 3
- [Installing the Lens](#) – see page 4

Kit Contents

- ZMOTION Intrusion Detection Development Board
- USB Smart Cable Debugger
- 1.2" Focal Flat Lens Holder
- Selection of Three Lenses
- Mini-USB serial cable
- Wall mount power supply
- CD with Sample applications and product documentation
- CD with ZDSII
- Various mounting hardware

Figures 1 through 2 show images of the components of the kit plus the sensors and lenses it contains. The [Getting Started](#) section follows on page 3.

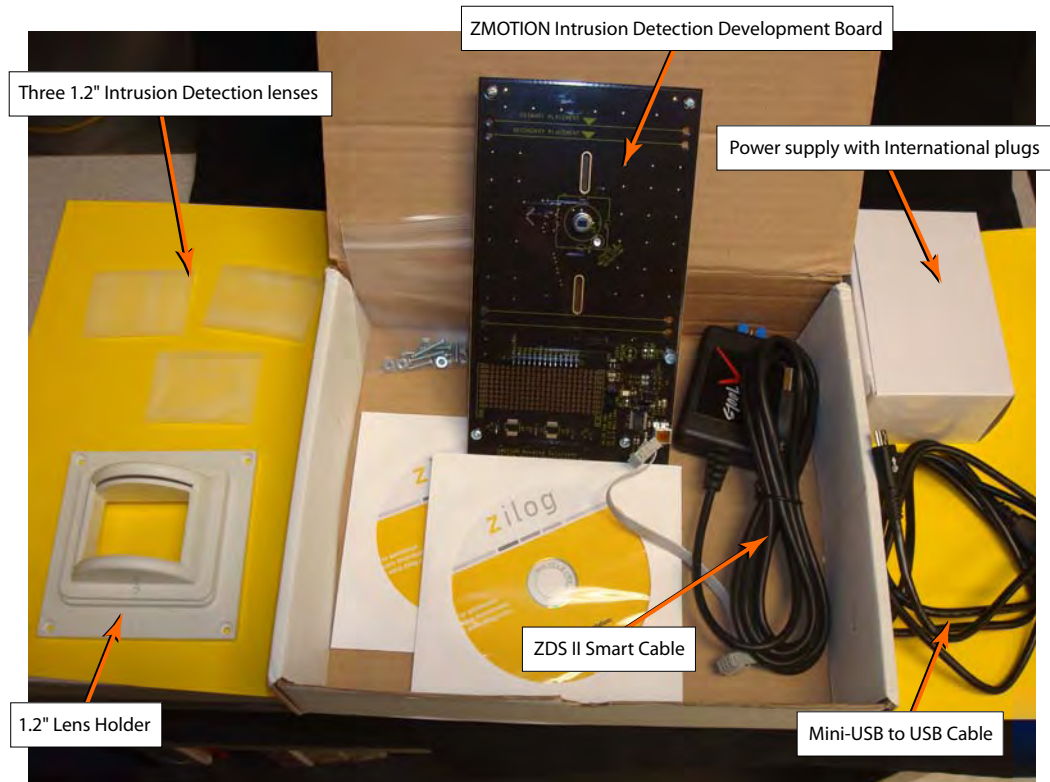


Figure 1. ZMOTION Intrusion Detection Development Kit Components

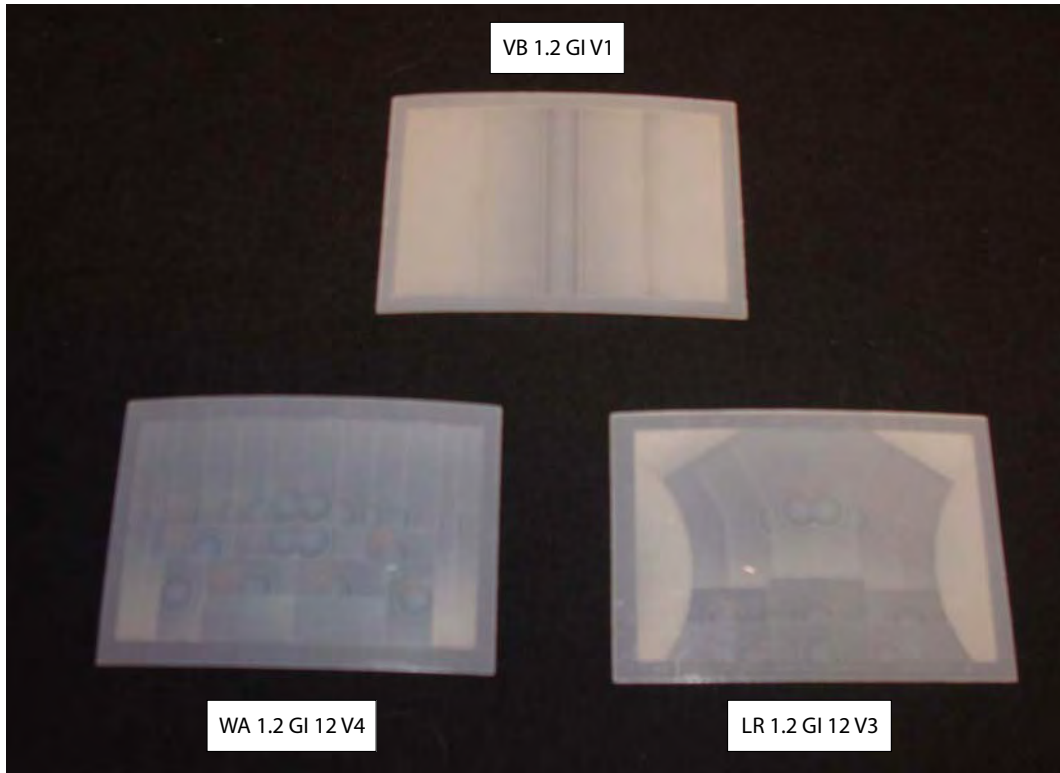


Figure 2. The Three Lenses contained in this Development Kit

Getting Started

The ZMOTION Intrusion Detection Development Kit contains several lens options. To provide a quick method of getting the kit up and running, the ZMOTION MCU is initially programmed with a `ZMOTION_Intrusion_Demo` project using the RE200B-P pyroelectric sensor and the WA 1.2 GI 12 V4 lens. By installing the lens and then applying power, the basic operation of the kit can be observed.

To get started with the kit, observe the following brief procedure.

1. Install the WA 1.2 GI 12 V4 lens as described [on page 4](#).

-
2. Insert the power supply output connector into the Mini-USB Plug P1 on the ZMOTION Development Board and insert the other end into the wall outlet. Move SW1 on the board up to the ON position.

► **Note:** Please use the power supply provided with the kit.

3. The Blue power LED will illuminate and the Red LED will initially illuminate and remain on until the pyroelectric sensor stabilizes – a period of approximately 5 to 30 seconds. After the PIR sensor has stabilized, the Red LED turns OFF, to turn ON only when motion is detected.
4. To test this procedure, wave your hand over the lens and notice the LED turning ON for approximately 1 second.

For more information about the operation of the kit, including how to download and debug your own ZMOTION project, please refer to the ZMOTION Intrusion Detection Kit User Manual (UM0233), included on the Application and Documentation CD and available from [the Zilog website](#).

Installing the Lens

► **Note:** When mounting the ZMOTION Development Board vertically, special consideration should be taken regarding the height, angle and level plane of the board. Be sure to follow the lens manufacturer's recommended height and mounting angle requirements to ensure optimal performance.

Flat Lens Holder

The flat lens holder, shown in Figure 3, is a two-piece assembly that provides a 1.2" focal length mounting. Figure 4 shows the detail of the WA 1.2 GI 12 V4 lens, with its correct orientation.



Figure 3. Flat 1.2" Lens Cap (Top) and Lens Base (Bottom)

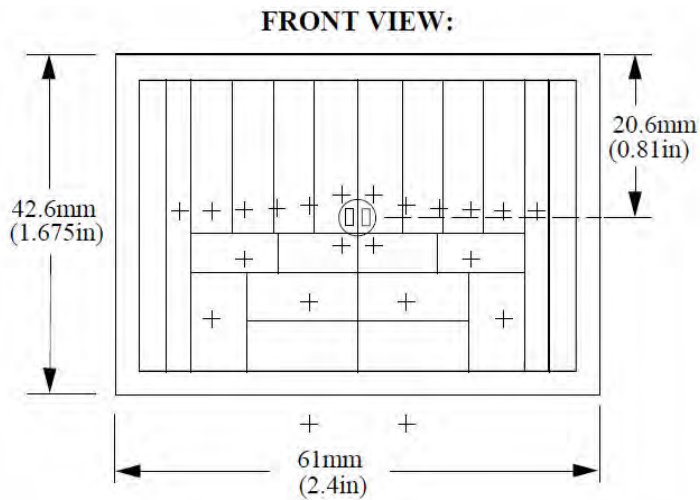


Figure 4. Flat Lens: WA 1.2 GI 12 V4

To assemble this flat lens and holder, observe the following brief procedure.

1. Place the lens into the inside of the cap, ensuring that the grooves of the lens are facing inward.
2. Place the cap over the base, ensuring that the top of the lens is toward the arrow on the base. Use the provided $\frac{3}{4}$ " machine screws (2) with a nut to secure the cap in place, as shown in Figure 5.



Figure 5. Assembled Flat 1.2" Lens Holder and Flat Lens

3. Place the lens and lens holder assembly onto the ZMOTION Development Board with the arrow on the lens holder pointing up, as shown in Figure 5; use the *Primary Placement* position labeled on the circuit board for the WA 1.2 GI 12 V4 lens. The four screw holes in the circuit board should line up with the four upper mounting holes in the lens holder.
4. Fasten each of the four (4) provided $\frac{3}{8}$ " machine screws with a nut to secure the lens holder in place. Figure 6 shows an example of the top of the lens holder installed on the ZMOTION Development Board.



Figure 6. Top of Lens Holder on the ZMOTION Development Board

Installing ZDSII and the USB Smart Cable

For more details about installing ZDSII and the USB Smart Cable, installing the FTDI driver for the serial cable, downloading and running the sample project, and making changes to the sample project, please refer to the ZMOTION Intrusion Detection User Manual (UM0233), located on the Sample Applications and Documentation CD included with this kit, and also available on zilog.com.

References

Refer to the documentation in Table 1 for additional information about Zilog's ZMOTION products.

Table 1. ZMOTION Documentation

Document Number	Description
PB0225	ZMOTION Detection and Control Product Brief
PS0228	Z8 Encore! XP F082A Series Product Specification
PS0284	ZMOTION Detection Module Product Specification
PS0285	ZMOTION Detection and Control Product Specification
PS0286	ZMOTION Lens and Pyroelectric Sensor Product Specification
PS0288	ZMOTION Intrusion Detection Product Specification
PB0223	ZMOTION Detection Module Product Brief
PB0230	ZMOTION Intrusion Detection Product Brief
UM0233	ZMOTION Intrusion Detection User Manual
WP0017	A New PIR Motion Detection Architecture White Paper
WP0018	ZMOTION Detection Lens and Pyro Sensor Configuration Guide



Warning: DO NOT USE IN LIFE SUPPORT SYSTEMS.

LIFE SUPPORT POLICY

ZILOG'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE PRESIDENT AND GENERAL COUNSEL OF ZILOG CORPORATION.

As used herein

Life support devices or systems are devices which (a) are intended for surgical implant into the body, or (b) support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in a significant injury to the user. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system or to affect its safety or effectiveness.

Document Disclaimer

©2011 Zilog, Inc. All rights reserved. Information in this publication concerning the devices, applications, or technology described is intended to suggest possible uses and may be superseded. ZILOG, INC. DOES NOT ASSUME LIABILITY FOR OR PROVIDE A REPRESENTATION OF ACCURACY OF THE INFORMATION, DEVICES, OR TECHNOLOGY DESCRIBED IN THIS DOCUMENT. ZILOG ALSO DOES NOT ASSUME LIABILITY FOR INTELLECTUAL PROPERTY INFRINGEMENT RELATED IN ANY MANNER TO USE OF INFORMATION, DEVICES, OR TECHNOLOGY DESCRIBED HEREIN OR OTHERWISE. The information contained within this document has been verified according to the general principles of electrical and mechanical engineering.

ZMOTION is a registered trademark of Zilog, Inc. All other product or service names are the property of their respective owners.