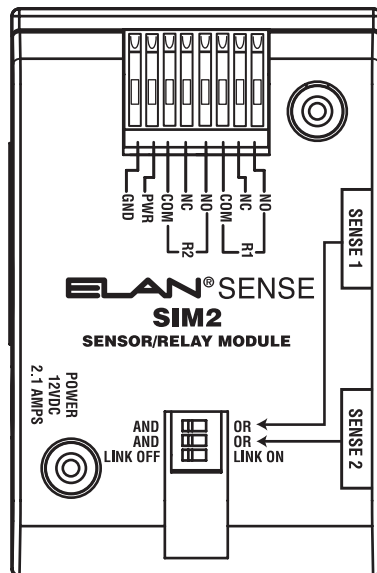


# SIM2

## SENSOR INTEGRATION MODULE



**ELAN**®

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Introduction

The SIM2 Sensor Integration Module is designed to provide dry contact closure or 12 VDC output in response to input status from ELAN®SENSE Automation Sensors in home automation applications. Capable of being used as a stand-alone device, the SIM2 integrates four sensor inputs with two relay outputs and provides simple setup and operation with no programming required. Relays respond to sensor triggers differently based on conditional logic DIP switch settings.

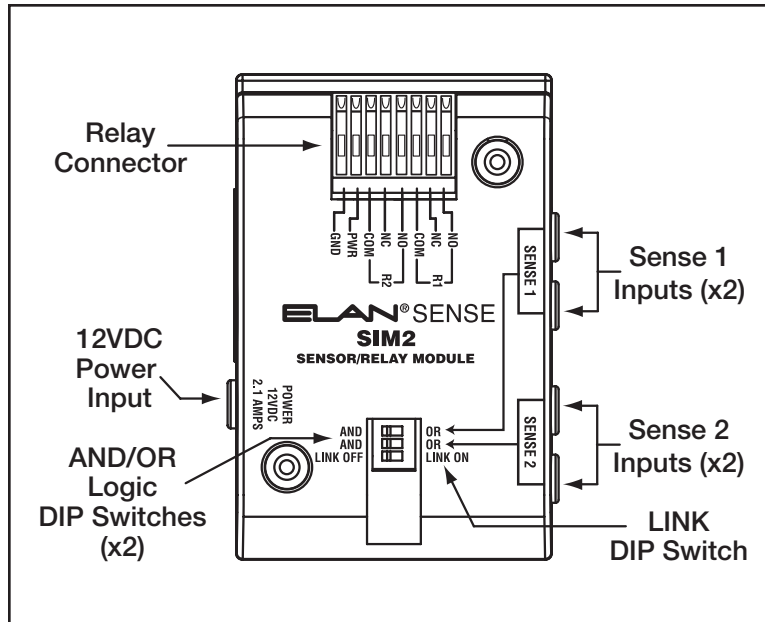
Features

- Stand-Alone Interface for ELANSENSE Automation Sensors
- Any ELANSENSE Sensor Can Trigger Either Of Two On-board Relays
- All Four Sense Inputs Can Be Linked To One Relay
- Conditional Logic AND/OR Settings
- Simple Setup & Operation-No Software Required

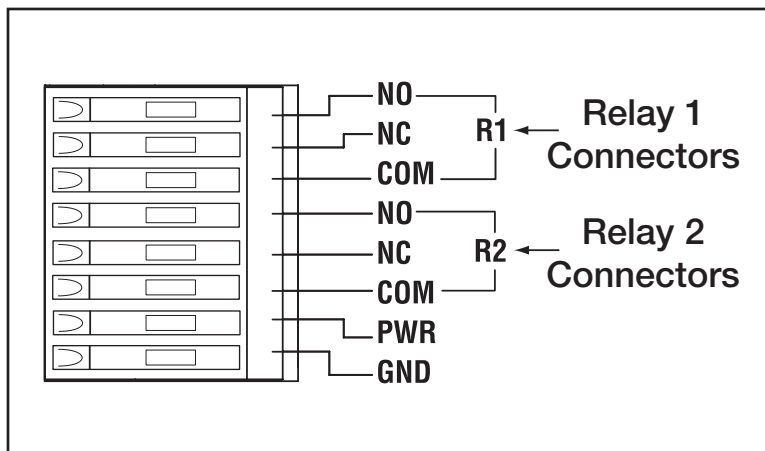
Specifications

Sense Inputs (x4)	3.5mm Stereo Mini Plug
Relay Outputs (x2)	8 pin WECO Connection NO, NC, COM, GND,12VDC Accepts 24 AWG (Cat-5) Wire
Rated Load	.5A @ 120VAC or 1A @ 24VDC
Power Output	12VDC @ 650ma
Power Requirements	12VDC 2.1 Amps PWR3 Power Supply Included
Mounting	Adhesive Strip and Mounting Screws Included

## Connectors & Switches



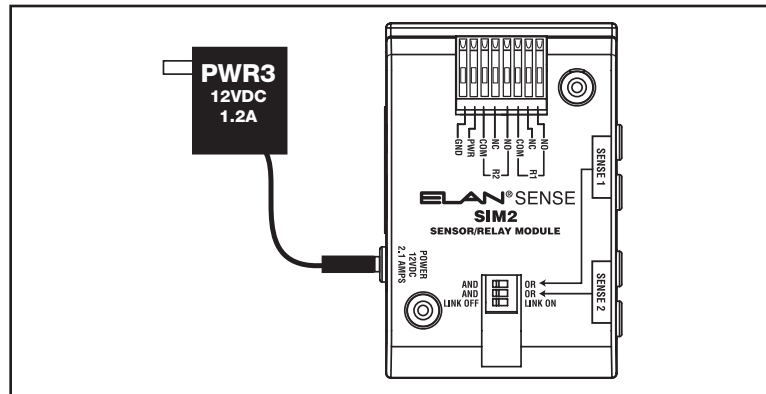
## Relay Connector



## Connections

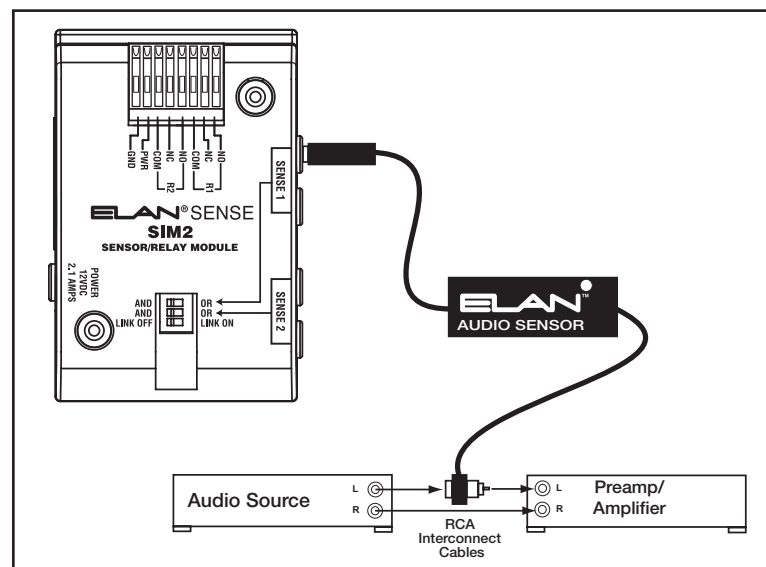
### Power: 12VDC, 2.1A

Connect the included PWR3 power supply.



### SENSE1/SENSE2 Ports

Connect an ELAN® SENSE Sensor to the **SENSE1** and/or **SENSE2** ports located on the side of the SIM2. The type of sensor used will depend on the application. Consult the **ELAN SENSE Installation Manual** for details about specific sensor applications.

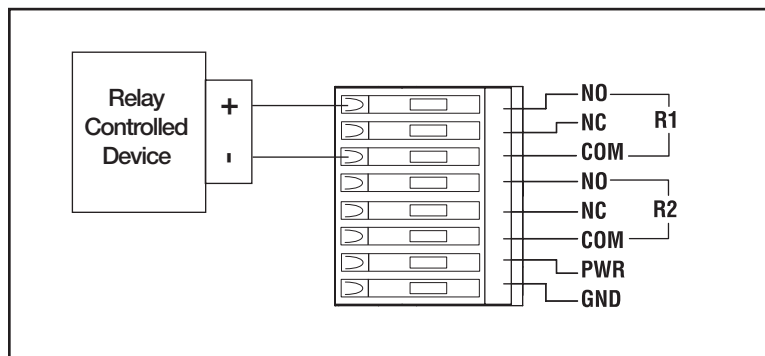


## Relay - R1 & R2

There are four basic connection types when configuring the SIM2. Each of these basic connections can be customized for specific applications to provide hundreds of possible uses.

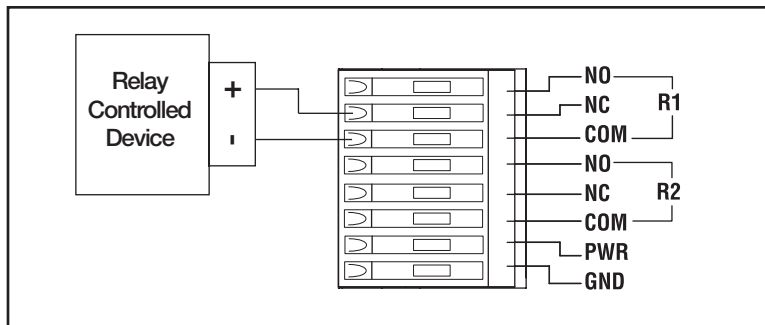
### Contact Closure - N.O. (Normally Open)

Use this method to wire devices that require a simple closed-contact to activate them.



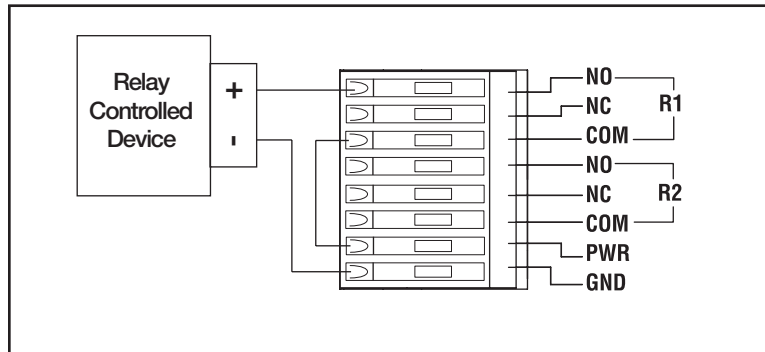
### Contact Closure - N.C. (Normally Closed)

Use this method to wire devices that require an interruption of power to activate them.

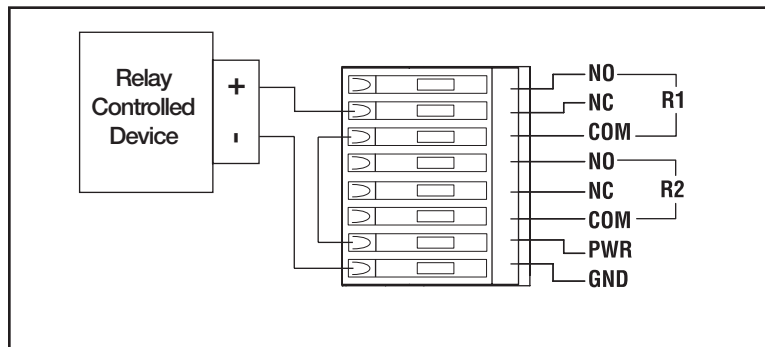


**+12 Volt Trigger - N.O. (Normally Open)**

Use this method to wire devices that require a powered +12VDC trigger.

**+12 Volt Trigger - N.C. (Normally Closed)**

Use this method to wire devices that require a 12VDC triggered interruption of power to activate them.





## DIP Switch Settings

There are two DIP switches on the SIM2 that provide AND/OR logic functionality for each pair of Sense Inputs, and one DIP switch that links the two Relay Outputs.

### AND/OR Logic DIP Switches

Each Sense Input (SENSE1 and SENSE2) has two ports. If a single sensor is connected to a Sense Input, select OR for that input. If a sensor is connected to both ports of a Sense Input, use the AND/OR DIP switch to determine the functionality as follows:

- **AND** - Relay will trip only if both of the connected sensors are active.
- **OR** - Relay will trip if either of the connected sensors is active.

### LINK OFF/LINK ON Switch

The LINK OFF/LINK ON DIP switch links the two Relay Outputs (R1 & R2). If the switch is set to LINK OFF, the sensors connected to SENSE1 control Relay 1 and the sensors connected to SENSE2 control Relay 2. If the switch is set to LINK ON, either Sense Input will trigger both R1 and R2. The AND/OR DIP switches determine whether one or both individual inputs of SENSE1 or SENSE2 activate the relay(s).

### Examples:

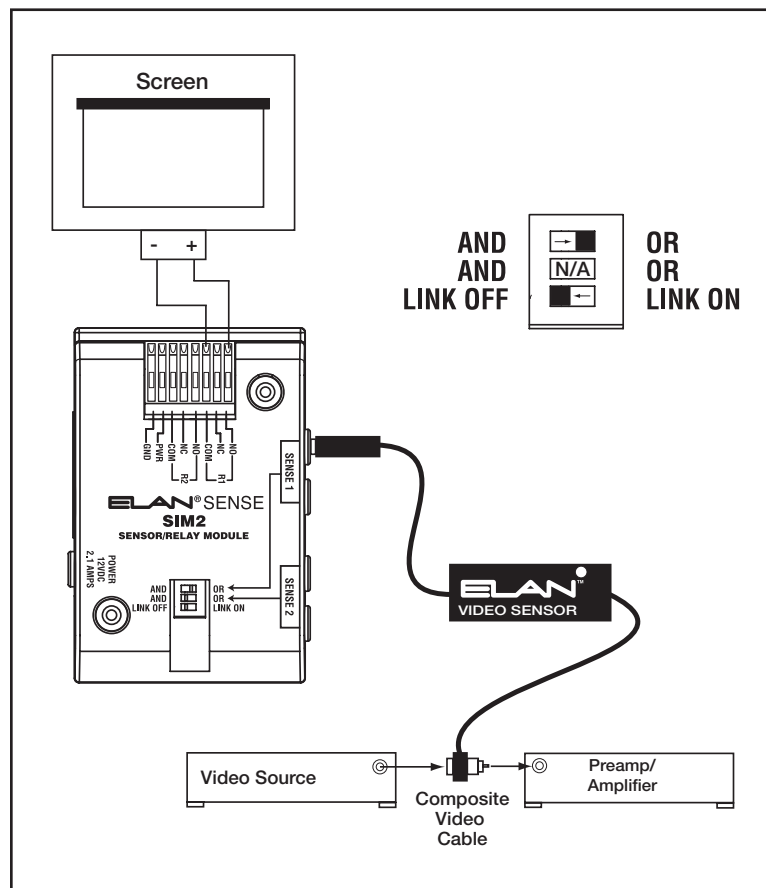
- **SENSE1/R1/LINK OFF**  
AND - R1 active if BOTH connected sensors are active  
OR - R1 active if EITHER connected sensor is active
- **SENSE2/R2/LINK OFF**  
AND - R2 active if BOTH connected sensors are active  
OR - R2 active if EITHER connected sensor is active
- **SENSE1/LINK ON**  
AND - R1 & R2 active if BOTH connected sensors are active  
OR - R1 & R2 active if EITHER connected sensor is active
- **SENSE2/LINK ON**  
AND - R1 & R2 active if BOTH connected sensors are active  
OR - R1 & R2 active if EITHER connected sensor is active

## Applications

This section provides a few basic examples that illustrate the types of things that the SIM2 is capable of. Many more applications are possible.

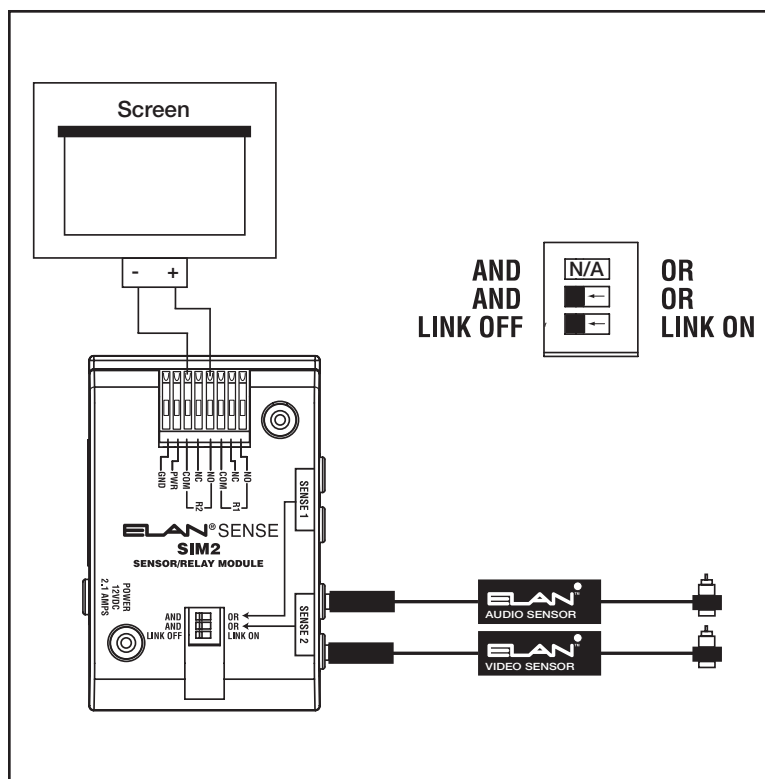
### Basic Home Theater Automation

This application utilizes an ELAN<sup>®</sup> SENSE Video Sensor to automatically lower a projection screen in a Home Theater when video is detected. Set the SENSE1 DIP switch to OR and the LINK DIP switch to OFF.



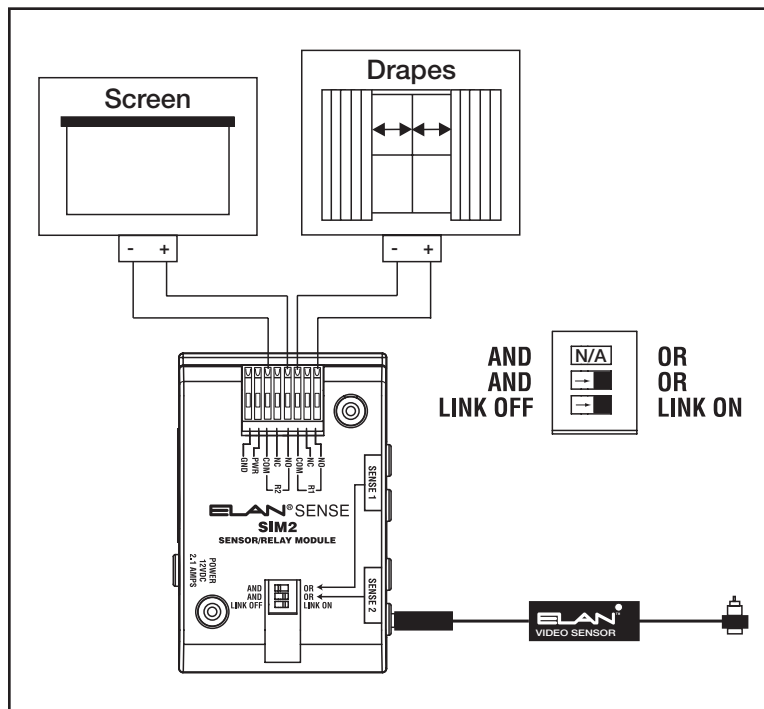
## Multiple ELANSENSE Sensors

This application utilizes an ELANSENSE Video Sensor and an Audio Sensor to automatically lower a projection screen in a Home Theater. This application adds some sophistication in that both audio and video must be detected in order for the screen to drop. Set the SENSE2 DIP switch to AND and the LINK DIP switch to OFF.



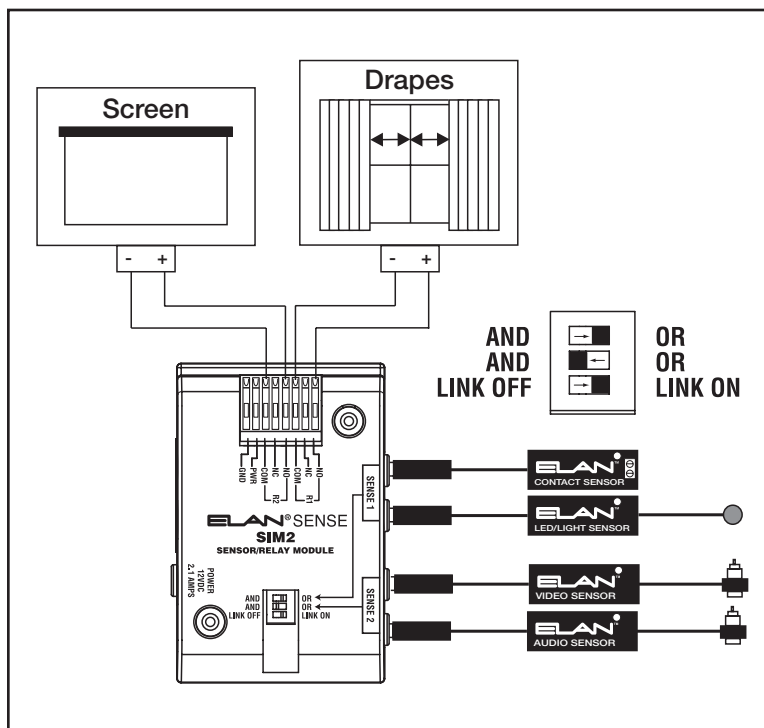
## Multiple Relay Controlled Devices

This application utilizes an ELANSENSE Video Sensor to automatically lower a projection screen and close drapes in a Home Theater. This application utilizes the LINK feature of the SIM2 to activate both on-board relays. Set the SENSE2 DIP switch to OR and the LINK DIP switch to ON.



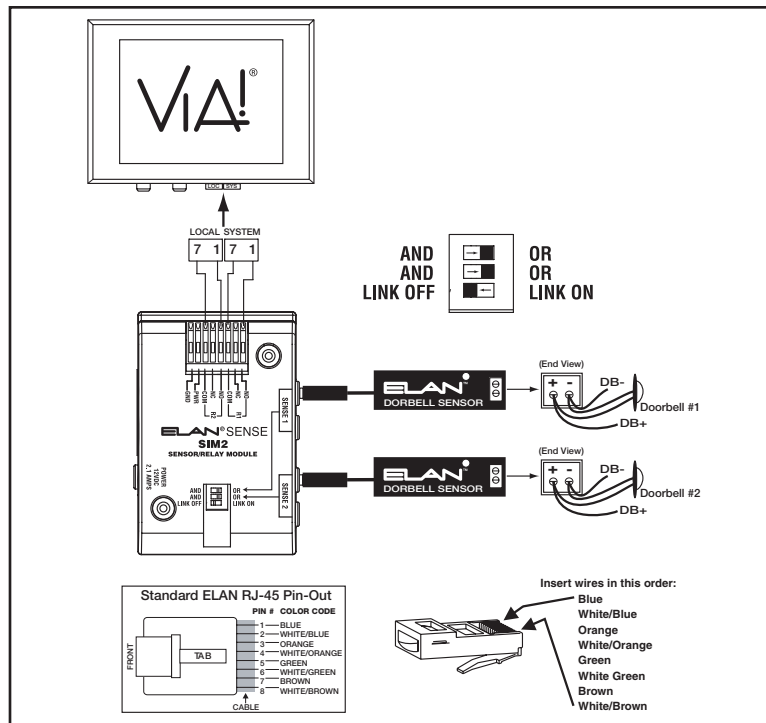
## Multiple Sensors/Multiple Relay Controlled Devices

In this application, either the SENSE1 or SENSE2 input will trigger both R1 and R2 outputs. For the SENSE1 port, if either the Contact Sensor or the Light/LED Sensor is activated, both R1 and R2 will become active; the Screen will lower and the Drapes will close. For SENSE2, both the Audio Sensor and Video Sensor must be activated for R1 and R2 to become active. This application utilizes the LINK feature of the SIM2 to activate both on-board relays. Set the SENSE1 DIP switch to OR, the SENSE2 DIP switch to AND, and the LINK DIP switch to ON.



## VIA! Local/System Port Applications

VIA! Color LCD Touch Panels (with the exception of the VIA!40) have the ability to perform IR or RS-232 functions when Pins 1 & 7 of the SYSTEM and/or LOCAL ports are shorted. This application allows for specific codes to be sent to devices when sensors connected to the SIM2 are activated. In the drawing below, two Doorbell Sensors are connected to the SIM2. When the sensor connected to Sense1 is activated (the front doorbell button is pressed), the R1 output of the SIM2 creates a closed contact that triggers the VIA!s SYSTEM port, causing it to perform whatever sequence steps are programmed on the VIA!TOOLS "Trigger" page. The sensor connected to Sense2 causes the same effect for the VIA!s LOCAL port. This functionality allows the installer to easily have a VIA! Touch Panel display different cameras when different doorbell buttons are pressed. Creative installers may devise useful IR or RS-232 sequences to perform a myriad of different functions using this same method.





## Limited Warranty

ELAN HOME SYSTEMS L.L.C. ("ELAN") warrants the SIM2 Sensor Integration Module to be free from defects in materials and workmanship for the period of two years (2 years) from date of purchase. If within the applicable warranty period above purchaser discovers that such item was not as warranted above and promptly notifies ELAN in writing, ELAN shall repair or replace the item at the company's option. This warranty shall not apply (a) to equipment not manufactured by ELAN, (b) to equipment which shall have been installed by other than an ELAN authorized installer, (c) to installed equipment which is not installed to ELAN's specifications, (d) to equipment which shall have been repaired or altered by others than ELAN, (e) to equipment which shall have been subjected to negligence, accident, or damage by circumstances beyond ELAN's control, including, but not limited to, lightning, flood, electrical surge, tornado, earthquake, or other catastrophic events beyond ELAN's control, or to improper operation, maintenance or storage, or to other than normal use of service. With respect to equipment sold by, but not manufactured by ELAN, the warranty obligations of ELAN shall in all respects conform to the warranty actually extended to ELAN by its supplier. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation or other expenses which may be incurred in connection with repair or replacement.

Except as may be expressly provided and authorized in writing by ELAN, ELAN shall not be subject to any other obligations or liabilities whatsoever with respect to equipment manufactured by ELAN or services rendered by ELAN.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES EXCEPT WARRANTIES OF TITLE, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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