



MAGOS

IO-Device: Sealevel & MASS3 Integration User Guide

User Guide



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1. INTRODUCTION TO THIS GUIDE

This guide is designed to aid users with the integration of MASS (Magos Area Surveillance System) and IO Devices output that will triggered by alerts received from MASS with regard to targets that enter monitored areas.

MASS is a multi-feature command and control software, developed and designed for use with Magos radar sensors as well as a variety of additional sensors and verification equipment (for example: cameras and indicative fences). For in-depth information about the installation and operation of MASS, refer to the Mass User Guide available for download in the download section at <https://partners.magosys.com/portal/downloads/>.

1.1 ABOUT MAGOS SYSTEMS

Magos was established in 2007 to realize its co-founders' vision of bringing advanced radar technology to the security and perimeter protection and detection market. We are Experts in Low cost, Low power consumption, High performance radars that can be easily integrated with existing VMS, PSIM and other control software and automatic PTZ slew-to-cue for an end-to-end cost effective and easily maintained solution of the customer's security requirements.

1.1.1 CONTACTING MAGOS SYSTEMS

Email	info@magosys.com
Mail	Gad Feinstei 13 Office 225, Rehovot Israel 7638517
Web site	www.magosys.com

1.1.2 CONTACTING MAGOS SUPPORT

Support is available to customers who have a trial version of a Magos product or who have purchased a Magos product and have a valid maintenance contract.

To contact Magos support, send an email to support@magosys.com.

1.2 REQUIREMENTS

1.2.1 SOFTWARE & HARDWARE REQUIREMENTS

The integration has been tested on:

- 120POE eI/O PLC-8

MASS requirements:

- The integration is supported in Mass version 3.20.3 and above.

2. MASS INEGRATION SETUP

This section covers all the required configurations and settings on the MASS side.

2.1 GENERATING EVENTS FROM MASS

The MASS will generate target events and send them out to external SW only when a target detected by one of the radars enters an Alarm Zone.

Ensure that Alarm zones are properly defined in the MASS to cover the entire protected area.

For the reader's convenience, this section includes the minimum required steps required for defining an alarm zone using the MASS client software. For full details on alarms zones refer to the MASS User Manual for instructions on how to set-up alarm zones in the MASS.

Define Alarm Zones:



1. Open the main menu by clicking the  icon on the top left of the screen.
2. Make sure that the requested profile is currently active.
3. Move the cursor over the **ALARM ZONES** menu and click the  icon to add a new zone.
In the **Map View** the edit the zone editing options will appear.



Figure 1: Edit Zone side menu


4. Click **Draw a polygon** () to draw a new zone
 - a) Click the map at the location of the polygon that defines the zone of interest. Each click adds a vertex to the polygon.
During this stage the polygon, as defined by the vertexes (mouse clicks) is temporarily filled in semi-transparent blue, solid red lines define the borders of the polygon, and the dashed line represents the next border-line that is to be drawn.



Figure 2: Drawing a new zone

At any stage while drawing, before clicking on the first point and closing the polygon, you can select an option from the auxiliary menu:

- ▶ **Finish** – click for finishing drawing the zone
- ▶ **Cancel** – Discards all vertexes drawn
- ▶ **Delete last point** – Discards the last vertex drawn (can be used repeatedly up to the first vertex)

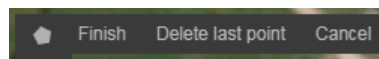


Figure 3: Polygon Drawing Auxiliary menu

- b) When finished, click the first point of the polygon. The mouse cursor's shape changes from cross-hair (+) to a point hand (☞) icon when moved over the first point, to indicate that this operation closes the polygon.

Once the polygon is complete and closed, it will be displayed as the drawn shape, filled with semi-transparent light red and bordered by a solid light red line.

Proceed to the next step in order to edit the zone properties.

5. While in Zone Edit mode, move the mouse over the requested zone (currently filled with semi-transparent blue), and click it to open the **Zone properties** menu on the bottom left side of the screen.

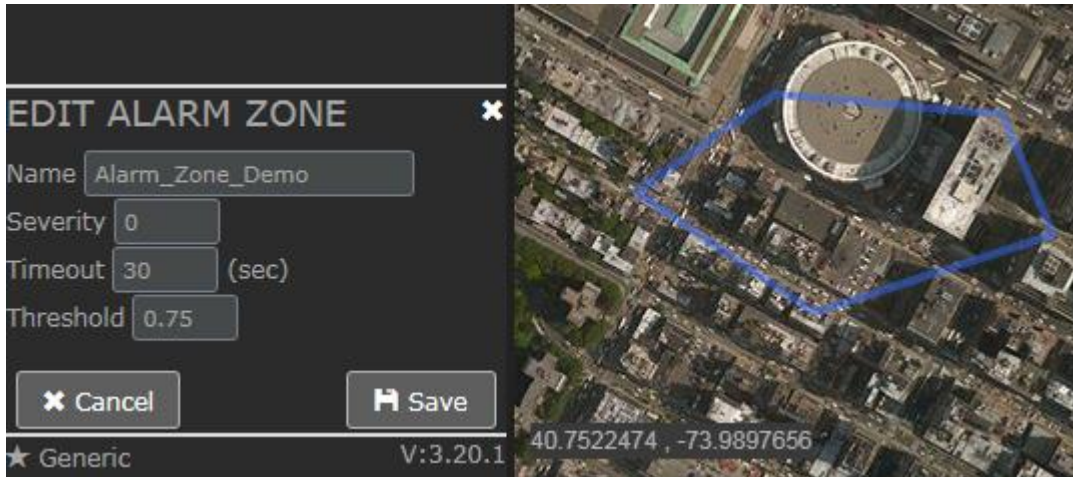


Figure 4: Zone Properties Menu



NOTE

In places where two or more zone polygons overlap each other, right-clicking the opens a pop-menu with the list of overlapping zone names, allowing you to select the zone to be edited.

This menu contains the following options:

- ▶ **Name** – User-defined name for the zone. By default, the system assigns an arbitrary name to each zone.
- ▶ **Severity** – Set Severity for the zone. Severity affects the **Resource Scheduler** decision when several targets need to be tracked with limited amount of camera.
- ▶ **Timeout** – the number of seconds to wait since the last target left the alarm zone and before "re-arming" the alarm trigger. Eg. if set to 5, then if a target appears within the area and then disappears, then next alarm event will be issued only if a new target is reported more than 5 seconds after the first one disappeared.
- ▶ **Threshold** – A numeric value between 0 and 1, Typical value is 0.75. This is the track confidence threshold for declaring an alarm in this zone. A higher value will reduce False and Nuisance alarms. A lower value will increase sensitivity.
- ▶ **Save** – saves all changes made. For a newly defined polygon this operation turns the polygon into an applicable zone, thereby changing its border to dashed orange.
- ▶ **Cancel** – Discards all changes made for the zone. For newly defined polygons this operation deletes the entire polygon, while for existing/pre-defined polygons all changes made since the polygon was last saved are discarded.



NOTE

Zone name must not contain spaces or “-“ (Hyphen-minus).

6. Click **Save** to finish and add the zone.
The newly zone will be added to the **ALARM ZONES** list in the main menu.

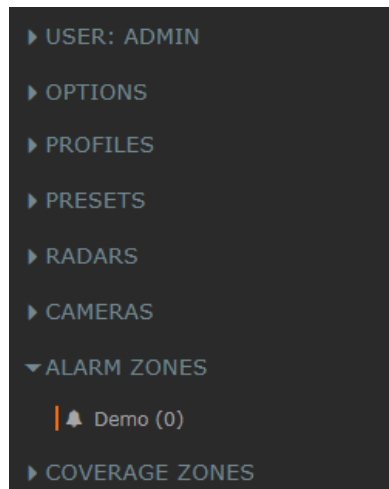




Figure 5: ALARM ZONES list menu

Reviewing Zones:

7. On the top left of the page, click the  button to open the **Settings menu** on the left of the screen.
8. Expand the **ALARM ZONES** menu to open the zones list.
9. **Move the cursor over the desired Zone name and click** the icon to edit the zone or the  to open the Zone Info pane showing all the settings defined for this zone.

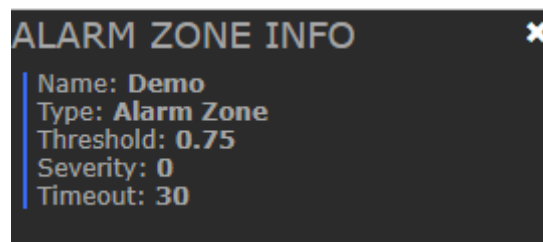




Figure 6: Zone Info Menu

2.2 ENABLING THE INTEGRATION IN MASS CONFIGURATION

In order access the plugins page from MASS, and add a plugin:

1. Open the main menu by clicking the  icon on the top left of the screen
2. Move the cursor over the USER menu, and click on the  button.
3. The Mass System Configuration page will open, click the **Plugins** tab.

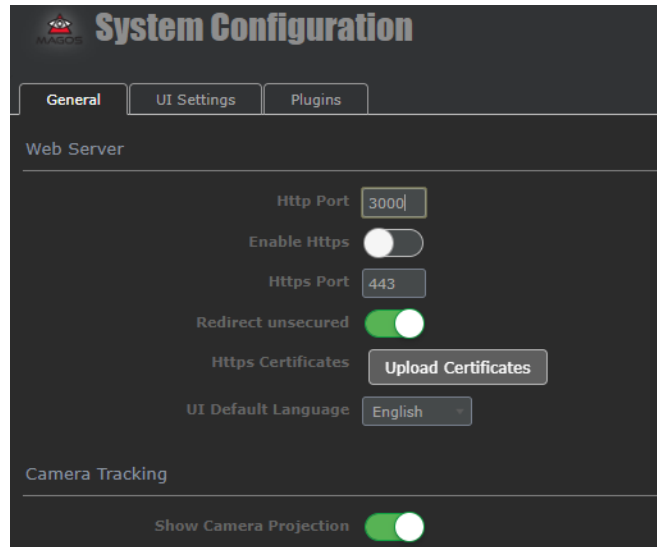
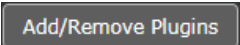


Figure 7: Open Mass system configuration

4. Click  on the bottom right of the screen
5. Select the IO-Device plugin to enable from the list of available plugins in the **Add/Remove Plugins Menu**
6. **Enable** the integration by click the toggle button.
7. Click **Add new IO Device** button
8. Define the following:
 - **Enable** (checkbox) – enable the specific IO Device by click the checkbox.
 - **IP** – set the IP address assigned to the device
 - **Port** – set the port assigned to the device (Default- 502)
 - **Unit ID** – set the unit ID assigned to the device (Default- 1)
 - **Timeout** – connection timeout (Default- 10)

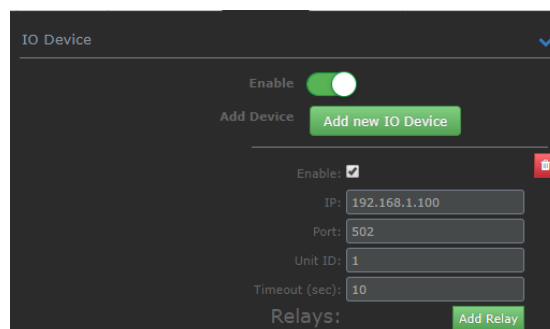
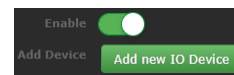


Figure 8: IO – Device plugin

9. To add relay click Add Relay button, new **Relay** setting will be added

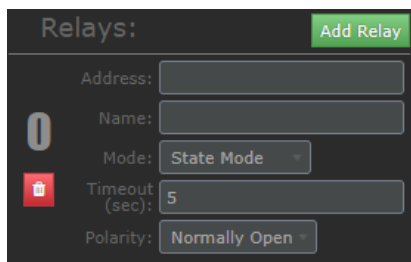


Figure 9: Add Relay

10. Fill in the following parameters:

a) **Address** – enter the relay address number.

Table: default digital output addresses for different devices:

Digital Out	Sealevel 120POE
DO0	0
DO1	1
DO2	2
DO3	3

b) **Name** - use one of the options bellow:

- use the name of the desired alarm zone to be linked to this output.
- use the word **fault** for triggering an event when there is a failure to communicate with device such as sensor and plugins.

c) **Mode** - select State mode or Timeout Mode

d) **Timeout** - set the timeout for the relay to stay open\close. (work only with Timeout Mode.

e) **Polarity** - select Normally Open\Close – The state of the output is normally open (electrically disconnected) or normally close (electrically conducting).

11. Save changes by click **Save** at the bottom of the page.

12. Click “Close” to go back to MASS.