	TITLE:	**Configuring the Inovonics Area Control Gateway (ACG)**
AN-170	**PRODUCTS**:	Security Management System (SMS) 6.1.3 or later eMAX-EP Area Controllers firmware 1.21.1 or later Inovonics ACG, firmware 1.2.66 or later Digital Inovonics Sensors
November 23, 2016	**SUMMARY**	Details on configuring the Inovonics EN6080 Area Control Gateway (ACG) to an eMAX-EP Area Controller

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Introduction

This document will provide the guidelines to set up the Inovonics EN6080 Area Control Gateway (ACG) to an eMAX-EP Area Controller in the Security Management System (SMS).

Note: Please thoroughly review this document before proceeding with any installation.

Inovonics provides a wireless environment for connecting remote sensors to a system. A variety of different Inovonics sensors are available including magnetic, motion, smoke, glass break, pendant and a variety of universal input modules.

The Inovonics EN6080 Area Control Gateway (ACG) device is an IP-based device that bridges the Inovonics hardware to any eMAX-EP Area Controller that supports network panels. This allows for the eMAX Intrusion Processor System (IPS) integration to arm and disarm the Inovonics wireless sensors. The ACG is limited to digital sensors such as signal repeaters, input monitoring transmitters, as well as fixed and mobile pendants.

Note: Analog sensors such as humidity and temperature are not supported with the ACG device integration. To use the analog sensors, you must use the SMS MultiPort Inovonics Integrator. For more information, see the AN-081 Configuring the Inovonics Panel Integrator.

This document applies to version **6.1.3.16193** of the SMS software and requires the following components:

- **Inovonics EN6080 Area Control Gateway, Firmware 1.2.66 or later. Contact Inovonics for updated ACG firmware.**
- **Inovonics digital sensors**
- **Web Browser: Internet Explorer version 10 or later; FireFox version 24 or later**
- **eMAX-EP Area Controller, Firmware version 1.21.1 or later**

ACG Additions package:

- **Desktop.exe 11/9/2016 version 6.1.2.16314 or later**
- **MultiPort.dll 11/16/2016 version 6.1.2.16321 or later**
- **Scpd_Net.dll 7/12/2016 version 4.6.1.180 or later**
- **Update Database Maxxess.sql 11/22/2016**

Bridging the Inovonics hardware to an eMAX-EP Area Controller is done in two major steps. The Inovonics EN6080 ACG must be configured with its supporting hardware. Then the ACG is configured as a network panel communicating with an eMAX-EP Area Controller.

Configuring the Inovonics Area Control Gateway (ACG) Device and Sensors
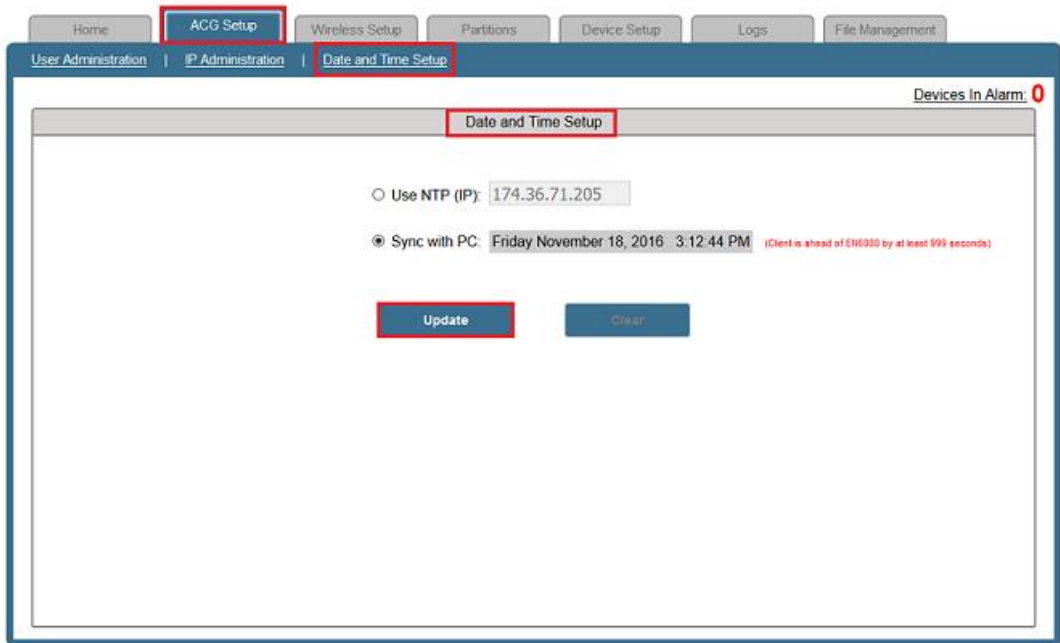
ACG Setup – IP Administration

1. A new, out of the box Inovonics ACG device is configured with a static IP address of 192.168.60.80.
2. *In order to access the web server to modify the IP address of the ACG device, set the host PC's IP address to something in the 60 subnet.* **For example: 192.168.60.81**
3. After getting the host PC on the same subnet as the Inovonics ACG device, open a supported web browser. Type in the ACG static IP address 192.168.60.80 to open the device's configuration web pages.
4. Enter the default login credentials **(capital letter sensitive)** for the ACG device:
     Username: Admin
     Password: Admin

5. At the Home screen for the ACG device, click on the "ACG Setup" tab, and then click on the "IP Administration" link which will bring up the IP Setup window where the user can enter the desired IP Address.
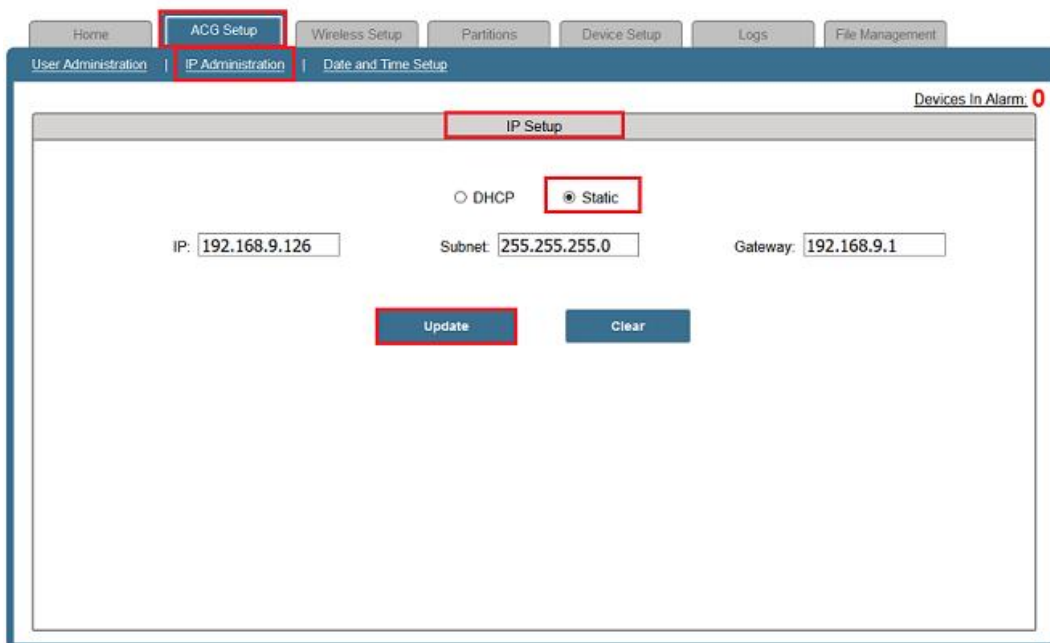
6. Click on the Update button to save the IP Address configuration changes and reboot the ACG device.
7. The host PC being used to connect to the web server for the ACG device will now need its IP Address reverted to its original state.

ACG Setup – Date and Time Setup

8. On the "ACG Setup" tab, click on the "Date and Time Setup" link which will bring up the Date and Time Setup window where the user can sync the ACG device time with an NTP server or Sync its time with the host PC.
9. Click on the Update button to save any changes.

Device Setup – Automatic Administration (Registering Inovonics Sensors to the ACG)

All associated digital Inovonics sensors must be registered to the ACG unit through the "Device Setup" window. The sensors can be registered either manually using the Manual Administration page or through Automatic Administration.
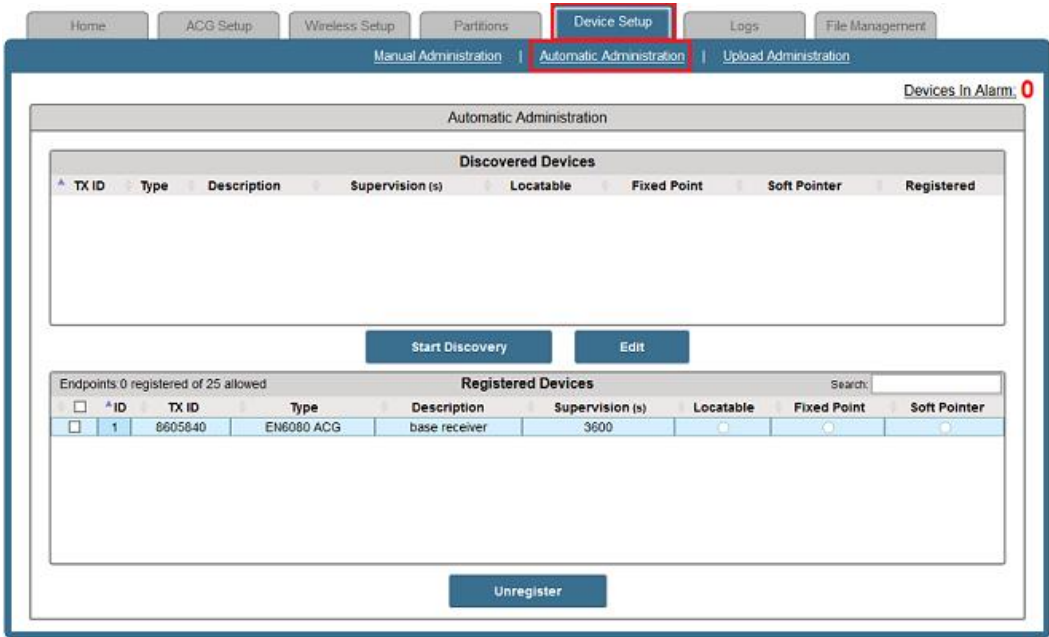
Automatic registration is the easiest method for registering the digital Inovonics sensors, and will be the chosen method used in this document.

10. Click on the "Device Setup" tab, and then click on the "Automatic Administration" link
11. Click on the "Start Discovery" button where it will put the ACG device page into waiting mode. The message "Reset any devices to be discovered" will be displayed on the page.
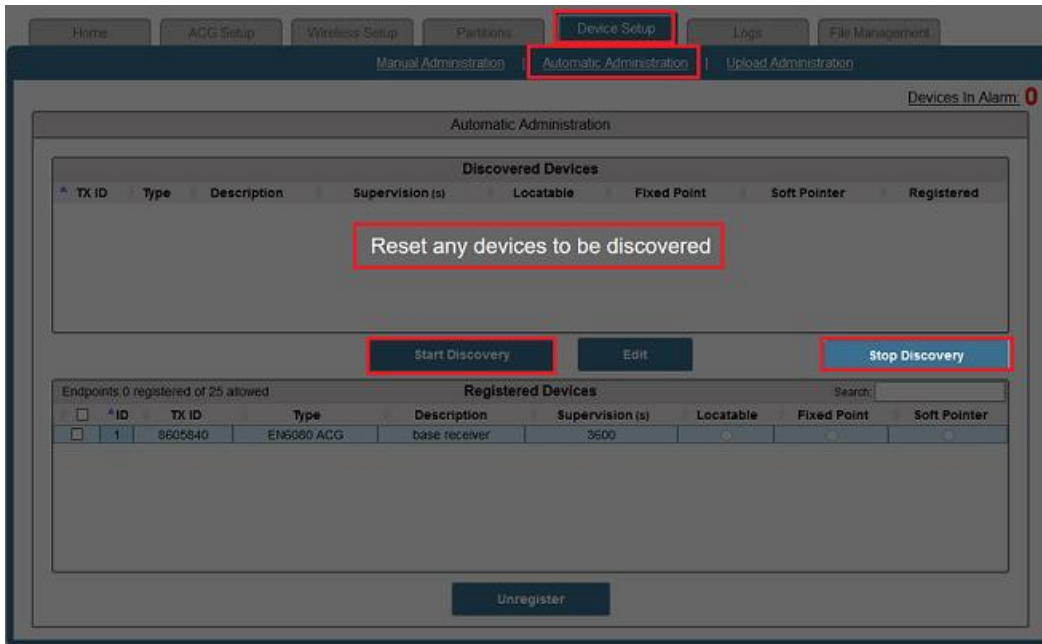
12. Press the RESET button on all digital Inovonics sensors to be registered with the ACG. **Note: More than one sensor can be registered during the discovery process.**
13. When all the digital Inovonics sensors to be discovered are on the list, click on the "Stop Discovery" button.
14. One at a time, highlight a non-registered sensor in the list to be edited. The selected sensor in the list will change from BLUE to GREEN.
15. Click on the "Edit" button and enter a Description of the sensor as well as enter a Supervision timeout. **Note: The Manufacturer recommends setting the Supervision timeout value to 540.**

16. Each Inovonics sensor must be set to one of three operation modes available: Fixed Point, Locatable Point, or Soft Pointer.

    Note: At this time, all sensors must be configured as Fixed Points only. Sensors configured as Locatable Points or Soft Pointers are not supported and may result in undesired transaction event messages and/or communication issues.

    Note: Sensors can be unregistered then re-registered with the ACG if their configuration needs to be change.

Fixed Points: The device will be stationary. Use this option for input monitoring transmitters, fixed duress transmitters, and repeater devices.

Locatable Points: Use this option for mobile duress pendants that will be moving around the monitored area.

Soft Pointers: This configuration is used for the mobile duress pendant being used for the RF mapping. Only ONE pendant should be registered as a Soft Pointer.

17. Click on the Register button to add the sensors to the ACG device.
18. The sensors will be added to the ACG Registered Devices list.

Note: Make a reference note of the ID number for all registered sensors as the ID number is used when manually adding the ACG sensors to the SMS database.

Note: The EndPoints status message on the Inovonics ACG Registered Devices list will show the total number of registered sensors out of the total number of allowed sensors per ACG device. The total number of sensors allowed per ACG device is limited by the Inovonics license. To increase the number of registered sensors per ACG device, please contact Inovonics for an upgraded license.

Configuring the ACG Panel and Sensors in the SMS

Install the ACG Additions Package on the SMS System

If not already done, extract the ACG Additions package onto the AXxess folder in the Server's shared folder. The default location is "C:\AXxess".

Note: Prior to configuring the ACG panel and its sensors in the SMS database, the SMS workstation must be updated with the ACG package. Contact Maxxess Technical Support for the ACG package for SMS systems running 6.1.3.16193.

Note: All SMS applications must be closed and the MultiPort must be stopped at the workstation to allow file components to be updated.

19. Login to Windows with an account that has Administration rights to the SMS database and workstation.
20. If not already done, make sure a backup file exists or has been created for the SMS database before proceeding with the next step to add the ACG integration package.
21. Open the SMS Resource Manager application. Drag and drop the Update Database Maxxess.sql onto the SQLs file group.
22. Open the SMS Desktop. Go to Configuration ➜ Database Operations ➜ Database Manager…
23. In the Database Manager window, locate the SQL file called Update Database Maxxess and click on the Execute button.
    Note: If errors occur during the SQL execution, STOP and DO NOT PROCEED. Contact Maxxess Technical Support for further assistance.

    Note: This action needs to be perform only once on the SMS database from any SMS workstation.
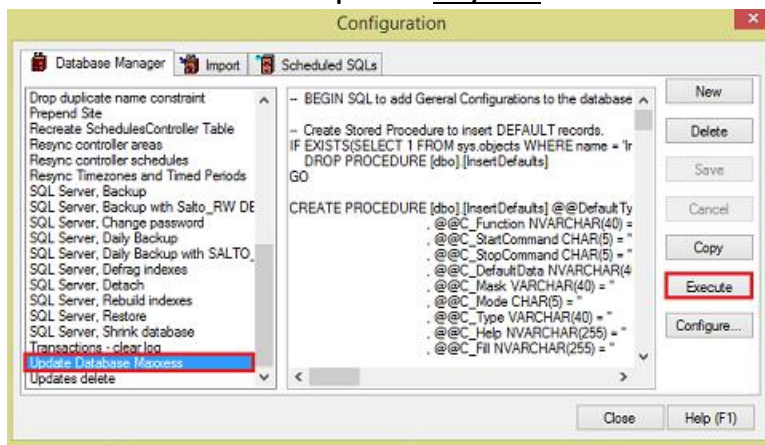
24. Open the SMS Service Manager application. Stop the MultiPort service.
25. Close any related SMS applications including the Desktop.
26. Rename the Desktop.exe file to Desktop_org.exe in the folder …\Maxxess\Axxess Workstation\Bin.
27. Rename the MultiPort.dll file to MultiPort_org.dll in the folder …\Maxxess\Axxess Workstation\Bin.
28. Rename the Scpd_Net.dll file to Scpd_Net_org.dll in the folder …\Maxxess\Axxess Workstation\Bin.
29. Drag and drop the 3 updated ACG file components into the BIN folder (Desktop.exe, MultiPort.dll, and Scpd_Net.dll).
   **Note: This action needs to be perform to all SMS workstations.**
    Note: If you repair an SMS workstation after installing the ACG Additions package, you will need to re-install the updated file components onto the SMS workstation.

Update the EP firmware in the eMAX-EP Area Controller

As part of the requirement to use the Maxxess Inovonics ACG integration, the firmware in the eMAX-EP Area Controller must be updated to version 1.21.2 or later.

30. Make sure to add the eMAX-EP Area Controller to the SMS database.
31. Open the SMS Service Manager application.
32. Use the Execute Command window to send the Status of Area Controller command to verify the current firmware version in the eMAX-EP Area Controller.

33. If the EP firmware is older than version 1.21.2, then use the Execute Command window to send the Download firmware (EP) command to update the firmware in the eMAX-EP Area Controller.
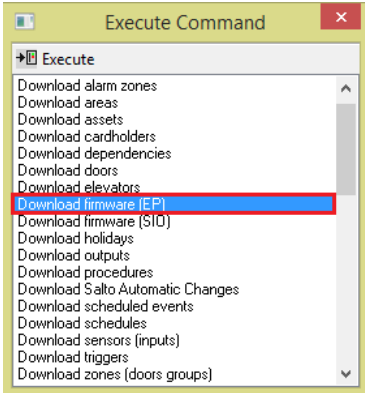
Add the Inovonics ACG Device as a Network Panel to the SMS

The Inovonics ACG device is bridged to the eMAX-EP Area Controller as a network panel in the SMS database.

34. If not already done, Open the SMS Desktop application.
35. Go to Configuration ➔ Devices ➔ Panels…
36. On the Panels tab, click on the New button to add the Inovonics ACG.
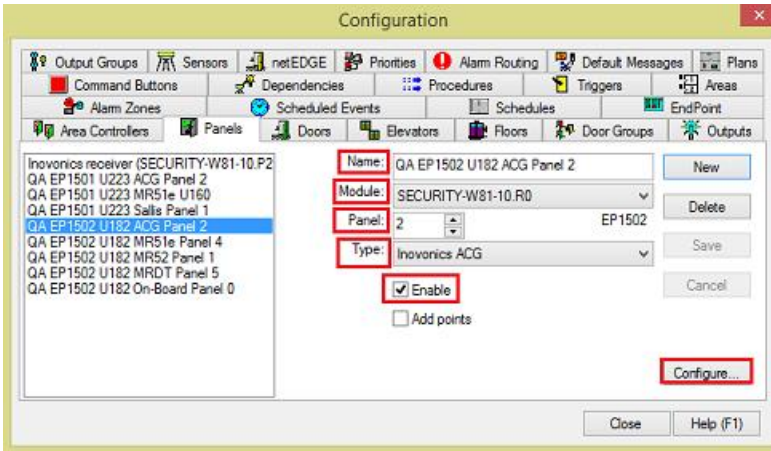
37. Enter a new Name for the Inovonics ACG.
38. Select the eMAX-EP Area Controller in the Module field.
39. Set the desired Panel Address for the Inovonics ACG.
    Note: It is recommended to reserved panel Address zero (0) for the internal or on-board panel for the eMAX-EP Area Controller.
    Note: Only one (1) Inovonics ACG device is supported per eMAX-EP Area Controller.

40. Set the Panel Type to: **Inovonics ACG**
41. Check **(✓)** the Enable box.

42. Uncheck the Add Points box.
   Note: Do not use the Add Points box unless it is desired to add the total 2048 maximum number of Inovonics sensors for the ACG device to the SMS database.

43. Click on the Configure button to open the Configuration Properties for the Inovonics ACG.
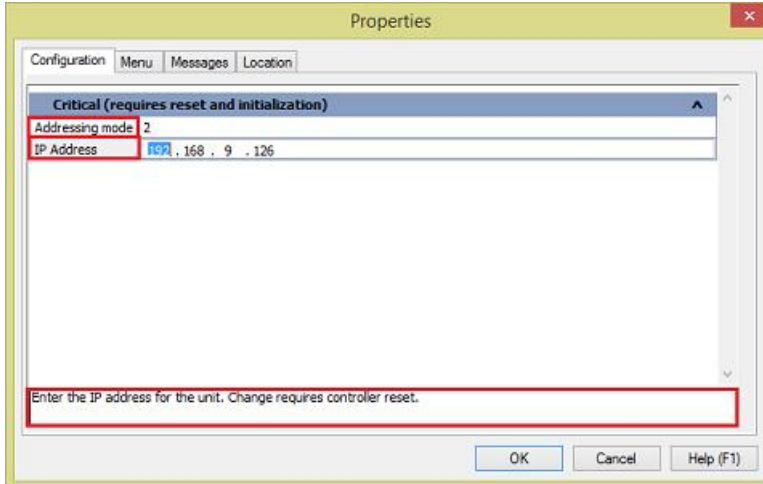
44. Set the Addressing Mode for the Inovonics ACG device to 2. **Note: 2 = Static. Static Addressing mode is the only valid setting for the Inovonics ACG.**
45. Enter the IP Address for the Inovonics ACG. **Note: Any changes to the IP Address setting will require the eMAX-EP Area Controller to be reset and initialize.**
46. Click on the OK button to close the Configuration Properties for the Inovonics ACG.
47. Click on the Save button to save changes for the Inovonics ACG.

Add the Inovonics ACG Sensors to the SMS

All Inovonics ACG sensors must be manually entered and configured in the SMS database. Use the Inovonics ACG Registered Devices page as a reference list for all ACG sensors or manually trigger the Alarm states for each ACG sensors that will need to be added to the SMS.

Sample Figure 1. Manual Trigger of ACG Sensor Reported to the SMS Service Manager Application
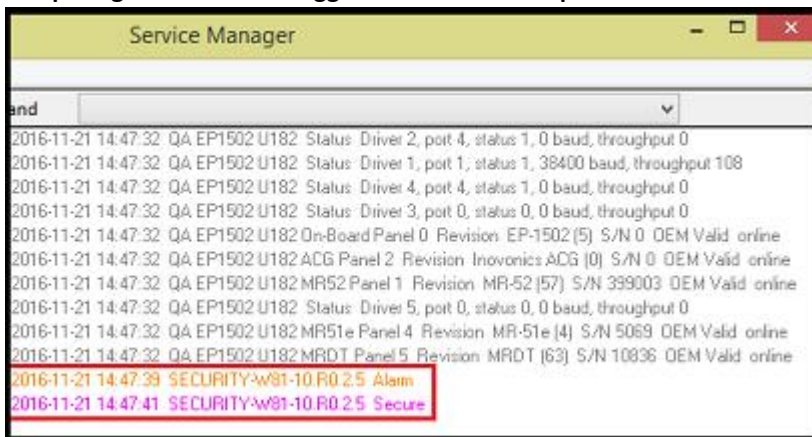
Sample Figure 2. The Inovonics ACG Registered Devices page for all associated ACG sensors

	ID	TX ID	Type	Description	Supervision (s)	Locatable	Fixed Point	Soft Pointer
☐	1	8605840	EN6080 ACG	base receiver	3600	○	○	○
☐	2	3509253	EN1235D Pendant	Blk 2Button 3509253	540	○	◉	○
☐	3	6174777	EN1235D Pendant	Blk 2Button 6174777	540	○	◉	○
☐	4	8246425	EN1247 Glassbreak	White GlassBreak 8246425	540	○	◉	○
☐	5	8628890	EN1223D Pendant	Blk 2Button Pendant 8628890	540	○	◉	○
☐	6	8818094	EN1223S Pendant	White 1Button Pendant 8818094	540	○	◉	○
☐	7	8819982	EN1210W Door/Window	White Transmitter 8819982	540	○	◉	○

Endpoints:6 registered of 25 allowed — Registered Devices — Search:

48. Go to Configuration ➔ Devices ➔ Sensors…
49. Enter a new Name for the Inovonics ACG Sensor
50. Select the Inovonics ACG panel in the Panel field.
51. For the new Sensor, enter the Point number. **Note: The Point number should match the ACG sensor ID number in the ACG Registered Device page.**

52. Check **(✔)** the Enable box.
53. Optionally, add the ACG Sensor to an Alarm Zone.
54. Click on the Configure button to modify additional sensor properties.
55. Click on the Save button.
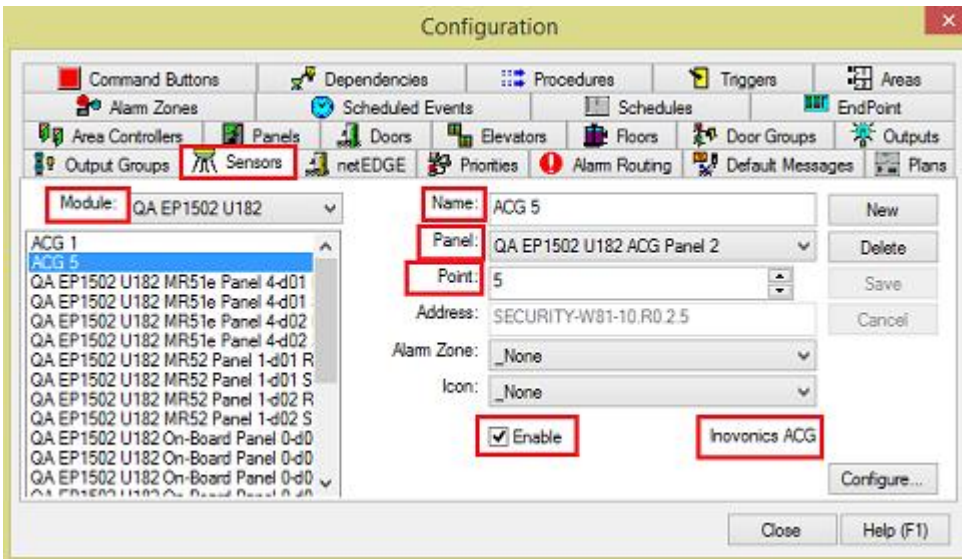
56. Test the Inovonics ACG sensor. This test will confirm the name of the ACG sensor in the SMS system.
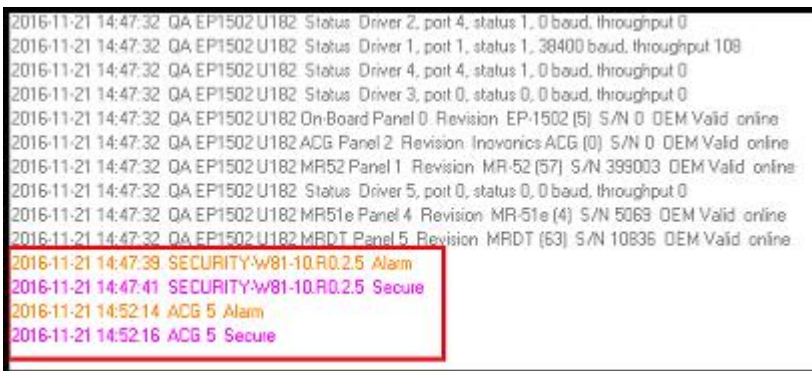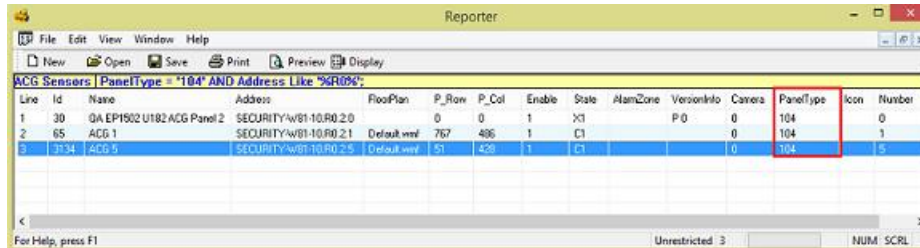
Create an SMS Report for the Inovonics ACG Sensors

For reporting purposes, create and run a report on the ACG sensors for the Inovonics ACG panel.

57. Open the Reporter. Create a new report for the Inovonics ACG sensors.

Sample Report Query: **Select * From Sensors Where [PanelType] = '104'**

**Sample Figure 3. SMS Report for the Inovonics ACG sensors on the Inovonics ACG Panel**

Disable or Enable the Inovonics ACG Sensor

There are multiple ways to Enable/Arm or Disable/Disarm the Inovonics ACG Sensors in the SMS system. It can be done through Commands from Plan buttons, Dependencies or via an IPS Group/Alarm Zone.

58. To manually arm or disarm the ACG sensor, add the Inovonics ACG sensor to a Plan location.
59. Go to Configuration ➔ Devices ➔ Sensors…
60. Select the eMAX-EP Area Controller from the Module field.
61. From the Sensor window, highlight or click on the ACG Sensor to be modified.
62. Click on the Configure button to open the Configuration Properties for the ACG sensor.
63. Click on the Location tab.
64. Add the ACG sensor to the desired Plan. Then click on the OK button.
65. Click on the Save button to save any changes.
66. If not already done, make sure the Desktop Plan window can be navigated to the Plan with the Inovonics ACG sensor. **Note: See the SMS Desktop on-line help on Plans or Desktop Properties for more information.**

67. From the Plan window, locate the icon for Inovonics ACG sensor.
68. Use the right-click menu on the Sensor Icon button to access the Enable or Disable Commands.
69. The Disable command will disarm the ACG sensor.
70. The Enable command will arm the ACG sensor.

**Sample Figure 4. Disable and Enable the Inovonics ACG sensor**
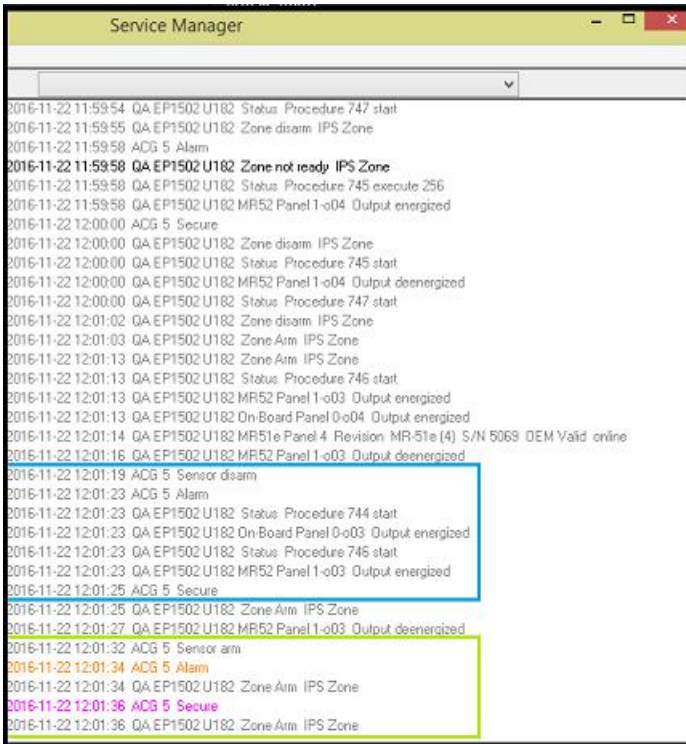
Configure Dependencies for the Inovonics ACG Sensors

Dependencies may be used to trigger other activities such as turning on a relay or other Access Control hardware or triggering a camera view based on the ACG Sensor event messages.

71. Go to Configuration ➔ Devices ➔ Dependencies…
72. Use the Module box to select the eMAX-EP Area Controller.
73. Enter a new Name for the Dependency.
74. Use the Message field to select an event associated with the ACG sensor.
75. Use the Input field to select the ACG sensor that will trigger the dependency event.
76. Use the Command field to select the desired command operation.
    Note: The following dependency command list are not currently supported - 1056 Disable REX, 1057 Enable REX, 1058 Disable Door Sensor, and 1059 Enable Door Sensor. Contact the factory for function availability.

77. Use the Data field to select the output (i.e. door, alarm zone, email, etc.) to be acted on.
78. Use the Schedule field to select the Schedule when this dependency will be active.
79. Check **(✓)** the Enable box. **Note: The Enable checkbox does not apply to dependencies that are converted to Triggers and Procedures as they cannot be disabled.**
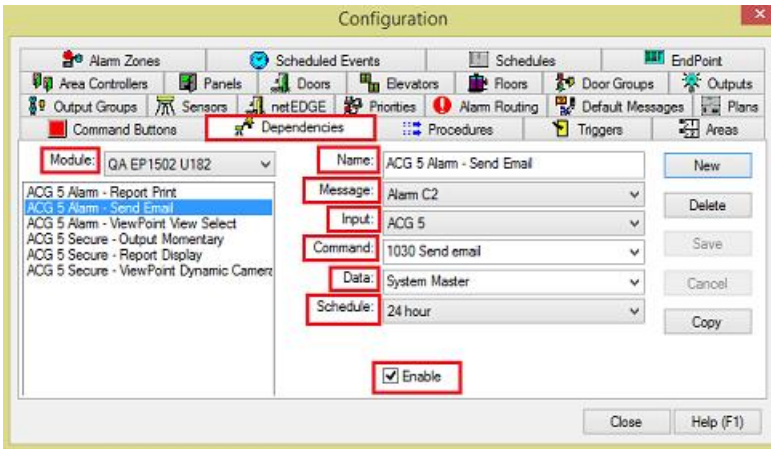
Adding the Inovonics ACG Sensor(s) to an IPS Group/Alarm Zone

The Inovonics ACG sensors can be arm or disarm via the eMAX Intrusion Process Support (IPS) integration.

Note: For more detailed information on the IPS Group/Alarm Zone set up, see Application Note AN-160 for complete installation and configuration.

80. To associate an Inovonics ACG sensor to an IPS Group, the IPS Group must first be configured as an Alarm Zone in the SMS database.
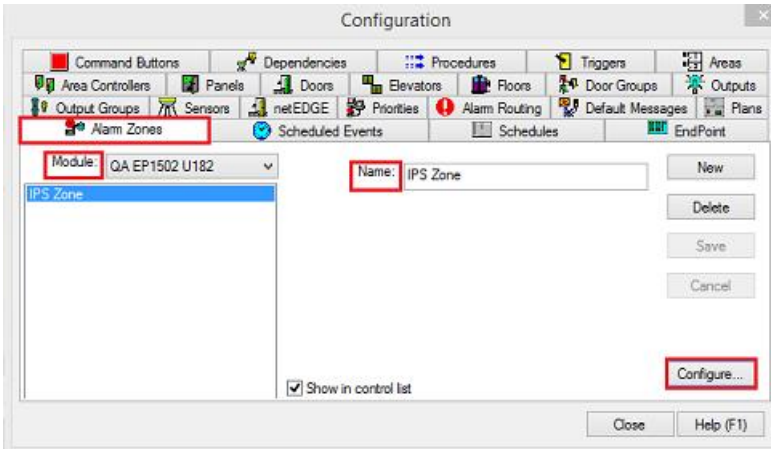
81. Go to Configuration ➔ Devices ➔ Sensors…
82. Select the eMAX-EP Area Controller from the Module field.
83. From the Sensor window, highlight or click on the ACG Sensor to be modified.
84. In the Alarm Zone field, set to the desired IPS Group/Alarm Zone.

85. Click on the Save button.
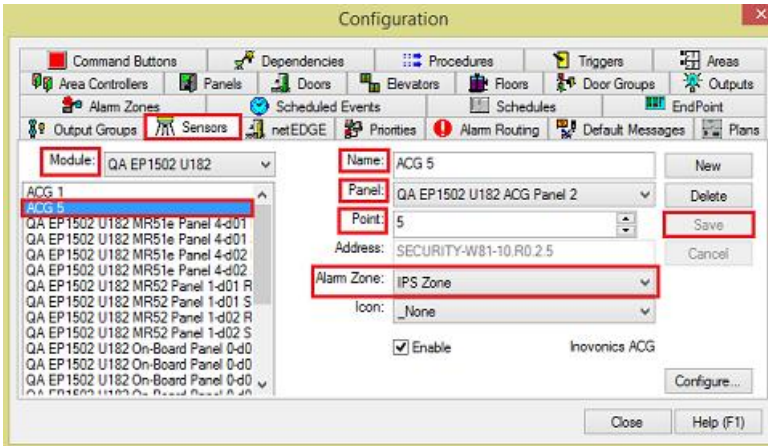
86. Test the Arm or Disarm function for the IPS Group/Alarm Zone to either disarm or arm the ACG sensor.
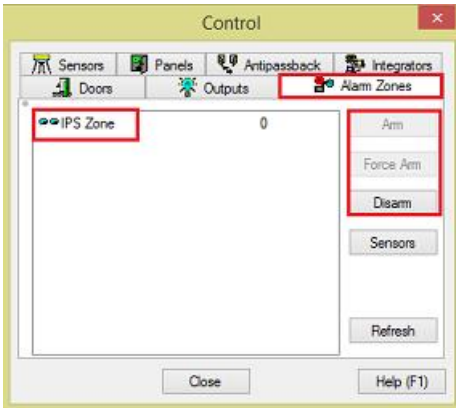
Additional Inovonics ACG Integration Notes

- The Inovonics EN6080 Area Control Gateway (ACG) must be running with firmware 1.2.66 or later. If the device is running older firmware, please contact Inovonics for an updated ACG firmware. Failure to update the device firmware will result in undesired sensor events and/or communication issues.
- To access the Configuration Web Page for the ACG device, you must use the following Web Browsers: Internet Explorer version 10 or later; FireFox version 24 or later.
- Only digital Inovonics sensors can be used with the Inovonics ACG device. Analog Inovonics sensors such as Humidity and Temperature sensors are not supported with the ACG Device.
- If analog Inovonics sensors are required, you must use the SMS MultiPort Inovonics Integrator. For more information refer to the Application Note AN-81. Contact Maxxess Technical Support for the MultiPort Inovonics Integrator package.
- The number of supported sensors per Inovonics ACG device is limited by license from Inovonics. A new Inovonics ACG device has a default license for up to 150 sensors. Please contact Inovonics for an updated license to support the desired number of sensors per ACG device.
- The Inovonics ACG integration requires the SMS version 6.1.3.16193. Contact Maxxess Technical Support for the ACG Additions package.
- At this time, all ACG sensors must be configured as Fixed Points in the ACG device to work with the Maxxess ACG integration.
- Inovonics sensors configured as Locatable Points or Soft Pointers are not supported for use in the SMS database. Failure to re-configure the ACG sensors to Fixed Points will result in undesired transaction event messages.
- The ACG device is only supported with the eMAX-EP Area Controller running with firmware version 1.21.2 or later.
- Only one (1) Inovonics ACG device is supported per eMAX-EP Area Controller.
- When configuring the Inovonics ACG device in the SMS database, Static addressing mode is the only valid setting for the ACG.
- Do not use the Add Points box when adding the Inovonics ACG Panel to the SMS database unless it is desired to have 2048 ACG sensors. The eMAX-EP Area Controller and Inovonics ACG device integration will support a maximum total of 2048 sensors. However, the SMS software will only support up to 1500 ACG sensors to allow for other non-ACG sensors per eMAX-EP Area Controller.
- All ACG Sensors will now have a unique Number in the SMS Sensors table starting from 1 through 1599. The Sensor point number will match the device's ID number in the ACG Registered Devices list.
- Debounce, Invert and Supervision (2 Resistors) modes are not supported with the ACG sensors in the SMS system.
- All non-ACG sensors will now have a unique Number in the SMS Sensors starting from 1600 and up.
- All non-ACG sensors that do not currently exist in the SMS database will now report with the name of the Area Controller. The panel and point address for the non-ACG sensor must be known before it can be entered and configured as a new sensor in the SMS database. Optionally, use the Add Points button for the non-ACG panel to add the non-ACG sensors to the SMS database.
- The following dependency command list are not currently supported - 1056 Disable REX, 1057 Enable REX, 1058 Disable Door Sensor, and 1059 Enable Door Sensor. Contact the Maxxess Technical Support for function availability.

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