# [AN018]



# Configuring a Device for InformaCast M2M

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### M2M PLUGIN OVERVIEW

Machine-to-Machine (M2M) technology allows communication between devices via the network. With M2M, an AND device triggered by an event like a contact closure input will transmit a message over the network to InformaCast, which will translate the message and trigger messages to other devices. The M2M plugin uses this technology to send Informacast broadcasts as triggered by an AND contact closure input, as well as trigger an AND contact closure output when it receives a broadcast.

Once you have configured your contact closures, you can add them to InformaCast as input and output ports:

- Input ports allow you to trigger InformaCast broadcasts from contact closure activation.
- Output ports allow you to activate a contact closure, as triggered by a broadcast (accomplished by adding the output port(s) as a recipient to InformaCast's messages).

The M2M plugin requires these prerequisites:

- Successful InformaCast installation.
- Fully configured contact closures.
- A valid M2M plugin license, included with your InformaCast license.

This document covers procedures for working with the M2M plugin including:

- Configure Contact Closure Device
- Configure Contact Closure Input Port
- Configure Contact Closure Output Port
- Contact Closure Schedules
- Trigger an InformaCast Broadcast from a Contact Closure Input
- Trigger a Contact Closure Output with an InformaCast Broadcast





# **CONFIGURE CONTACT CLOSURE DEVICE**

Before you can use the M2M Plugin, you must add and configure the AND device with contact closures.

 From the InforaCast web interface, select Plugins → M2M → Contact Closures to access the Maintain Contact Closures page.

	Plugins   M2M						
G	Schedules Contact Closures	Maintain C	Contact Closures				
	License	15 V	ADD				
		Name	Description	Address	Input Ports	Output Ports	Action
		IPSWD	IPSWD outputs	10.10.6.38	1	<u>3</u>	DELETE
		sean's 1.1 speaker	testing 1.1 board	10.10.6.175	1	<u>0</u>	DELETE
		M2M DW test	configuring DW for Jerry	10.10.7.169	<u>4</u>	2	DELETE
		testing output as in	output trap we want to trigger on	10.10.6.65	2	<u>0</u>	DELETE
		Gary Desk I/O	Gary Desk I/O	10.10.7.93	<u>1</u>	2	DELETE O

2) Click the Add button to access the Add Contact Closure page:

	Plugins   M2M		
G	Schedules Contact Closures	Add Contact Closure	
	License	Name: *	
		Description: *	
		IP Address: *	
		SNMP Community Name: *	
		* required	
		Save Cancel	

• <u>Name</u>

Enter a unique name for the AND device associated with the contact closure(s). (Contact closures cannot share names.)

• <u>Description</u>

Enter a description of the AND device associated with the contact closure(s).

IP Address

Enter the IP address of the AND device associated with the contact closure(s). Use DHCP address reservation to guarantee the IP address of the device remains consistent over time.





### <u>SNMP Community Name</u>

Enter the SNMP community name that is configured for this device. For AND devices, this value should match the *SNMP Write Community* string in the device's configuration file (see **Configure Contact Closures via the Configuration File**).

3) Click the *Save* button. The Maintain Contact Closures page will appear, reminding you to configure your newly added device's I/O port(s).

### EDIT OR DELETE A CONTACT CLOSURE

Click the Contact Closures link to access the Maintain Contact Closures page.

Maintain Contact Closures							
<b>♦♦♦ ♦</b>   15 ▼	ADD 🔿						
Name	Description	Address	Input Ports	Output Ports	Action		
IPSWD	IPSWD outputs	10.10.6.38	1	<u>3</u>	DELETE		
sean's 1.1 speaker	testing 1.1 board	10.10.6.175	<u>1</u>	<u>0</u>	DELETE 🚫		
M2M DW test	configuring DW for Jerry	10.10.7.169	4	2	DELETE		
testing output as in	output trap we want to trigger on	10.10.6.65	2	<u>0</u>	DELETE		
Gary Desk I/O	Gary Desk I/O	10.10.7.93	1	2	DELETE 🚫		

- To delete, click the *Delete* button for the contact closure you want to delete, and click the *OK* button on the dialog box that appears to confirm.
- To edit, click the *Name* link for the contact closure to bring up the *Edit Contact Closure* page. Make your desired changes, and click the *Save* button.

<b>•</b>	Plugins   M2M				
C -	Schedules Contact Closures	Edit Contact	Closure		
	License	Name:	Gary Desk I/O	*	
		Description:	Gary Desk I/O	*	t
		IP Address:	10.10.7.93	*	
		SNMP Community Name:	public	*	
		* required Save Cancel			





### CONFIGURE CONTACT CLOSURES VIA THE CONFIGURATION FILE

#### For the MAC-specific file option:

Edit the AND device's specific configuration file, *InformaCastSpeaker2046f9010203.cfg*, where 2046f9010203 is the MAC address of the device to configure.

#### For the global configuration file option:

Edit the global configuration file, e.g., *InformaCastSpeaker.cfg*.

#### Config File Settings:

- For output contact control, in the *SNMP* tag, set the *write\_community* parameter. This value should match the contact closure *SNMP Community Name* configured in the M2M plugin for this device.
- For input contact triggers, in the *SNMP* tag, add a trap manager pointing to the InformaCast server (10.10.3.4 in this example) using the contact closure password configured in M2M. Also, the respective input trap must be turned on in the *GPIO* tag.
- Reset the AND device to begin using the new settings.





### **CONFIGURE CONTACT CLOSURE INPUT PORT**

After you add a contact closure device, you can add its input port(s). Configuring a contact closure's input ports allows you to trigger an InformaCast broadcast when that contact closure has been activated or deactivated, depending on your configuration.

1) Turn on the SNMP trap for the respective input contact in the configuration file:

```
<GPIO snmp_trap_for_input_gpio0="1"
snmp_trap_for_input_gpio1="1" />
```

2) Add an SNMP Trap Manager pointing to the InformaCast server (10.10.3.4 in this example):



 From the InformaCast web interface, select Plugins → M2M → Contact Closures to access the Maintain Contact Closures page.

Plugins   M2M						
Schedules Contact Closures	Maintain C	ontact Closures				
License	🗣 🏟 🏟 📔 15 🔻	(ADD 🔿				
	Name	Description	Address	Input Ports	Output Ports	Action
	IPSWD	IPSWD outputs	10.10.6.38	1	<u>3</u>	DELETE 🚫
	sean's 1.1 speaker	testing 1.1 board	10.10.6.175	1	<u>0</u>	DELETE
	M2M DW test	configuring DW for Jerry	10.10.7.169	<u>4</u>	2	DELETE 🚫
	testing output as in	output trap we want to trigger on	10.10.6.65	2	<u>0</u>	DELETE
	<u>Gary Desk I/O</u>	Gary Desk I/O	10.10.7.93	<u>1</u>	2	DELETE O
	Results 1 - 5 of 5.					



# **Configuring a Device for InformaCast M2M**



4) Click the Input Port number of the device to which you want to add an input port to bring up the *Maintain Contact Closure Input Ports* page.

	Plugins   M2M				
6	Schedules Contact Closures License	Maintain Contact Closure	Contact :: Gary Desk I	Closure Input Ports	
		Name	Status	Message	Action
		Gary Input	ACTIVE	Example Humoctopus Alert	DELETE
		Results 1 - 1 of 1.			

5) Click the *Add* button to bring up the *Add Contact Closure Input Port* page.

Plugins   M2M Schedules Contact Closures License	Add Contact Cl Contact Closure: Gary Des	osure Input Port
	Monitoring Status:	ACTIVE *
	Time Schedule:	Always On v
	Manufacturer MIB (HELP (2)	
	Port Identifier (OID):	*
	Port Switch On/Off (OID value):	*
	InformaCast Message:	Example Hammer   (All Recipients)  All Speakers conact closure flasher flash
	InformaCast Recipient(s):	Gary Output ON Gary Output OFF sean speaker Test SIP Recipient Group just gen 3 outdoor sign
	* required	
	Save Cancel	
	Save Cancel	





Name

Enter a unique name for your contact closure port (contact closure ports cannot share names).

- Monitoring Status Select Active to enable monitoring of the device's input port. Select Disabled to disable monitoring.
- Time Schedule ٠

Select the schedule you wish to use for monitoring purposes from the drop-down menu. Select Always On to set the input port for continuous monitoring.

Port Identifier (OID)

Set the OID of the input contact to monitor:

1.3.6.1.4.1.39866.3.1.4.10.1.3.1First input: Second input: 1.3.6.1.4.1.39866.3.1.4.10.1.3.2

Port Switch On/Off (OID Value)

Set this field to "1" to trigger the InformaCast broadcast upon input activation. Set this field to "0" to trigger the InformaCast broadcast upon input deactivation.

InformaCast Message •

> Using the drop-down menu, select the message to broadcast upon the triggered contact closure. Note: The contact closure's input ports only support Text, Text and Pre-recorded Audio, and Prerecorded Audio messages.

- InformaCast Recipients Select the recipient group(s) to receive the broadcast. Note: You can hold the *Ctrl* key and click to select multiple recipients.
- 5) Click Save.

# EDIT OR DELETE A CONTACT CLOSURE INPUT PORT

- 1) Click the *Contact Closures* link to access the *Maintain Contact Closures* page.
- 2) Click the link in the *Input Ports* column for the contact closure to edit or delete, which brings up the Maintain Contact Closure Input Ports page.





	Plugins   M2M				
6	Schedules Contact Closures License	Maintain Contact Closur	Contac	t Closure Input Ports	
		Name	Status	Message	Action
		Gary Input	ACTIVE	Example Humoctopus Alert	DELETE 🚫
		Results 1 - 1 of 1.			

- To delete, click on the corresponding *Delete* button. Click the *OK* button to confirm the delete.
- To edit, click the name of the input port to edit, make changes on the Edit Contact Closure Input *Port* page, and press the *Save* button.

Plugins   M2M Schedules Contact Closures License	Edit Contact Cle Contact Closure: Gary Des Name: Monitoring Status: Time Schedule:	osure Input Port k I/O Gary Input * ACTIVE • *
	Manufacturer MIB RELP ? Port Identifier (OID): Port Switch On/Off (OID value):	1.3.6.1.4.1.39866.3.1.4.10.1.3.1 0 *
	InformaCast Message:	Example Humoctopus Alert  *
	InformaCast Recipient(s):	(All Recipients) All Speakers conact closure flasher flash Gary Output ON Gary Output OFF sean speaker Test SIP Recipient Group just gen 3 outdoor sign
	* required Save Cancel	





# **CONFIGURE CONTACT CLOSURE OUTPUT PORT**

You can add an output port as a recipient to an InformaCast broadcast, thus activating or deactivating a contact closure upon receipt of a specific broadcast. Make sure to create two actions for an output port: one to turn on the device connected to the output port, and one to turn it off (e.g., Strobe Light On and Strobe Light Off).

Firmware 1.6 and above supports a GPIO output pulse option, which activates the respective GPIO output for the specified number of milliseconds, then de-activates the output automatically. If using the pulsed output, only one action is necessary.

1) Set the SNMP Write Community string in the configuration file to match the selected *SNMP Community Name* used in the M2M contact closure:

```
<SNMP
write_community="myM2Mpassword" >
...
</SNMP>
```

2) To enable the pulse option, set up the pulse width in milliseconds in your configuration file:

```
<GPIO
gpio0_when_input_gpio0="1"
removal_time_ms_input_gpio0="1000"
pulse_ms_output_gpio0="1000"
/>
```

 From the InformaCast web interface, select Plugins → M2M → Contact Closures to access the Maintain Contact Closures page.

	Plugins   M2M							
C	Schedules Contact Closures	Maintain C	Contact Closures					
· · ·	License	♦ ♦ ♦ 15 ▼						
		Name	Description	Address	Input Ports	Output Ports	Action	
		IPSWD	IPSWD outputs	10.10.6.38	1	3	DELETE	
		sean's 1.1 speaker	testing 1.1 board	10.10.6.175	1	<u>0</u>	DELETE	
		M2M DW test	configuring DW for Jerry	10.10.7.169	4	2	DELETE	
		testing output as in	output trap we want to trigger on	10.10.6.65	2	<u>0</u>	DELETE	
		Gary Desk I/O	Gary Desk I/O	10.10.7.93	1	2	DELETE	
		Results 1 - 5 of 5.						



# **Configuring a Device for InformaCast M2M**



4) Click the Output Port number of the device to which you want to add an output port to bring up the *Maintain Contact Closure Output Ports* page.

	Plugins   M2M					
<b>G</b>	Schedules Contact Closures	Maintain Contact Closu	re Output Ports			
	License	Contact Closure: Gary Desk I/O				
		Each output port listed below will appear as an In The recipient will appear as follows: [M2M Output	formaCast recipient. Please name th t Port: Contact Closure Name: Outpu	he output ports accordingly. ut Port Name].		
		₩ ♦ ♦   15 ▼   🜆 🔿				
		Name	Status	Action		
		Gary Output Off	ACTIVE			
		Gary Output On	ACTIVE	DELETE		
		Results 1 - 2 of 2.				
		Results 1 - 2 of 2.	ACTIVE	Otter		

5) Click the Add button to bring up the Add Contact Closure Output Port page.

Plugins   M2M Schedules Contact Closures License	Add Contact Clo Contact Closure: Gary Des	osure Output Port k I/o
	Name:	*
	Time Schedule:	AUTIVE V
	Manufacturer MIB (HELP ?)	
	Port Identifier (OID):	*
	Field Type:	Integer  *
	Port Switch On/Off (OID value):	*
	* required	
	Save Cancel	

#### • <u>Name</u>

Enter a unique name for your contact closure port (contact closure ports cannot share names).

### Monitoring Status

Select Active to enable monitoring of the device's output port. Select Disabled to disable it.

• <u>Time Schedule</u>

Select the schedule you wish to use for monitoring purposes from the drop-down menu. Select *Always On* to set the output port for continuous monitoring.





<u>Port Identifier (OID)</u>
 Set the OID of the output contact to control:
 First output: 1.3.6.1.4.1.39866.3.1.4.11.1.21.1

If using the pulsed output option, also set the OID of the output contact to control as follows: First output: **1.3.6.1.4.1.39866.3.1.4.11.1.22.1** 

- <u>Field Type</u> Set this field to "Integer".
- <u>Port Switch On/Off (OID Value)</u> Set this field to "1" to activate the contact closure "0" to deactivate the contact closure
- 6) Click Save.

Once you save your settings, you can add the output contact to a recipient group to activate or deactivate the contact closure with an *InformaCast Message*.

Each output port will appear as an InformaCast recipient, listed as follows:

M2M Output Port: <Contact Closure Name>: <Output Port Name>

<Contact Closure Name>Name entered on the Add/Edit Contact Closure page<Output Port Name>Name entered on the Add/Edit Contact Closure Output Port page.

### EDIT OR DELETE A CONTACT CLOSURE OUTPUT PORT

- 1) Click the Contact Closures link to access the Maintain Contact Closures page.
- 2) Click the link in the *Output Ports* column for the contact closure to edit or delete, which brings up the *Maintain Contact Closure Output Ports* page.

	Plugins   M2M					
	Schedules Contact Closures License	Maintain Contact Closure Output Ports				
		Contact Closure: Gary Desk I/O				
		Each output port listed below will appear as an InformaCast recipient. Please name the output ports accordingly. The recipient will appear as follows: [M2M Output Port: Contact Closure Name: Output Port Name].				
		🏟 🗇 🏟 🛛 15 🔻 🛛 🗚				
		Name	Status	Action		
		Gary Output Off	ACTIVE	DELETE		
		Gary Output On	ACTIVE	DELETE		



# **Configuring a Device for InformaCast M2M**



- To delete, click on the corresponding *Delete* button. Click the *OK* button on the confirmation window that appears to confirm the delete.
- To edit, click the name of the output port to edit, make changes on the *Edit Contact Closure Output Port* page, and press the *Save* button.

C:	Plugins   M2M		
	Schedules Contact Closures	Edit Contact Cl	osure Output Port
	License	Contact Closure: Gary Des	ik I/O
		Name:	Gary Output Off *
		Monitoring Status:	ACTIVE •
		Time Schedule:	Always Available 🔻
		Manufacturer MIB (HELP 2)	
		Port Identifier (OID):	1.3.6.1.4.1.39866.3.1.4.11.1.21.1
		Field Type:	Integer  *
		Port Switch On/Off (OID value):	0 *
		* required	
		Save Cancel	





# **CONTACT CLOSURE SCHEDULES**

You can use the M2M Plugin to monitor contact closures based on a set schedule.

1) Select **Plugins**  $\rightarrow$  **M2M**  $\rightarrow$  **Schedules** to access the *Maintain Sche*dules page.

	Plugins   M2M					
C.	Schedules Contact Closures License	es Maintain Schedules Schedules are an optional feature for added control of monitoring contact closure ports.				
		Name	Description	Times	Days	Action
		test schedule	test schedule desc	01:00 AM to 11:00 PM	Sun Mon Tue Wed Thu Fri Sat	DELETE

2) Click the *Add* button to bring up the *Add Schedule* page:

	Plugins   M2M			
G	Schedules Contact Closures	Add Schedule		
	License	Name: *		
		Mescription:		
		Time Of Day:         01 ▼         00 ▼         AM ▼         To:         01 ▼         AM ▼         *		
		Days Of Week:		
		* required		
		Save Cancel		

• <u>Name</u>

Enter the name of your new schedule (e.g. Weekday Monitoring).

• <u>Description</u>

Enter a description of your new schedule.

• <u>Time of Day</u>

Use these fields and dropdown menus to enter the start and end time for monitoring a contact closure. The time of day can extend into the following day.

• Day(s) of Week Checkboxes

Enter the days of the week to which this schedule pertains. The starting time is tied to the selected day of the week; the ending time may extend into the next day.

3) Click the *Save* button.





### EDIT OR DELETE A CONTACT CLOSURE SCHEDULE

To modify or delete a schedule:

1) Click the Schedules link to access the Maintain Schedules page.

	Plugins   M2M					
	Schedules Contact Closures License	Maintain Schedules Schedules are an optional feature for added control of monitoring contact closure ports.				
		Name	Description	Times	Days	Action
		test schedule	test schedule desc	01:00 AM to 11:00 PM	Sun Mon Tue Wed Thu Fri Sat	DELETE
		Results 1 - 1 of	1.			

2) To delete, click on the corresponding *Delete* button, and then click *OK* on the pop-up window to confirm the delete.

**Note:** You cannot delete any schedules associated with an input port or an output port. You must first remove the schedule from the port and then delete the schedule.

3) To edit, select the *Name* link of the schedule, make needed changes on the Edit Schedule page, and press the *Save* button.

C-	Plugins   M2M			
	Schedules Contact Closures	Edit Schedule		
	License	Name:	test schedule *	
		Description:	test schedule desc *	
		Time Of Day:	01 • : 00 • AM • To: 11 • : 00 • PM • *	
		Days Of Week:	Sun Mon Tue Wed Thu Fri Sat	
		* required		
		Save Cancel		





### TRIGGER AN INFORMACAST BROADCAST FROM A CONTACT CLOSURE

By configuring a contact closure's input port(s), you can trigger an InformaCast broadcast upon activation or deactivation of that contact closure, depending on your configuration. Whenever the contact closure is triggered, the message that you selected from the *InformaCast Message* drop-down menu will broadcast to the recipients you selected in the *InformaCast Recipients* field.

Create schedules to limit when messages broadcast. A broadcast can include text, text and pre-recorded audio, or pre-recorded audio message types only. Make sure to select *Active* from the *Monitoring Status* drop-down menu to enable the InformaCast broadcast.

- 1) Set up the *InformaCast Message* (audio and/or text) that you want broadcast when pressing the button.
- 2) Set up the *InformaCast Recipient* group of speakers, phones, and/or displays that should broadcast the message.
- 3) Add the contact closure device to InformaCast (see Configure Contact Closure Device).
- 4) Add the contact closure's input port to InformaCast. Link the contact closure input port to the *InformaCast Message* (the audio and/or text event), and set up the AND device to report the button press to InformaCast via SNMP (see **Configure Contact Closure Input Port**).

The contact closure's input should now trigger the *InformaCast Message* when pressed.





# TRIGGER A CONTACT CLOSURE OUTPUT WITH AN INFORMACAST BROADCAST

Configuring a contact closure's output port allows you to add that output port as a recipient to an InformaCast broadcast, thus activating/deactivating a contact closure upon receipt of a specific broadcast. You will need to create two actions for an output port: one to turn on the device connected to the output port, and one to turn it off (e.g., Strobe Light On and Strobe Light Off). Also, make sure you have configured the output port as *Active* in the *Monitoring Status* drop-down menu.

- 1) Add the contact closure device to InformaCast (see **Configure Contact Closure Device**).
- 2) Add the contact closure's output port to InformaCast, and configure the AND device's *SNMP Write Community* string (see **Configure Contact Closure Output Port**).
- In the InformaCast web interface, select Recipients → Edit Recipient Groups to access the Edit Recipient Groups page, where you can edit an existing recipient group or create a new recipient group.
- 4) Determine how you will select your recipients:
  - If you choose to select recipients individually, your output port(s) will appear as *M2M Output Port* with your contact closure and port's name following a colon in the *Select Individual Recipients* pop-up window.
  - If you choose to select existing recipient groups, make sure to select a recipient group that already includes your output port(s).

If you choose to make rules, you can select the following on the Add/Edit Recipient Group page:
 First drop-down menu InformaCast Device Type
 Second drop-down Does
 Third drop-down Equal
 Fourth drop-down M2M

- Click the *View* button to verify the list of matching recipients includes your contact closure.
- 5) Click the *Update* button to save your changes.
- 6) Go to **Messages**  $\rightarrow$  **Send or Edit Messages** to access the *Send or Edit Messages* page.
- 7) Click the Send button for the message that you want to broadcast to bring up the Send Message page.
- 8) Select the recipient group(s) that contain your contact closure output port(s), and click the *Send* button.

