



# Southwest Microwave Intrepid Perimeter Monitoring Integration White Paper

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## 1 Introduction

This document indicates the features/abilities of the Southwest Microwave Intrepid Perimeter Monitoring hardware when integrated with CathexisVision. Functionally this integration will entail the triggering of standard CathexisVision Events, based on information received from the device. For instructions on setting up the integration, please consult the SWM Intrepid Perimeter Integration Guide, and the CathexisVision Setup Manual.

### a. Integration Purpose

CathexisVision will receive information from the integrated device which monitors the site perimeter for incidents of tamper. This information may be used to trigger CathexisVision Events.

Note: For information regarding the regular operation of a Southwest Micro Intrepid device, please consult the relevant documentation.

### b. Requirements

#### General Requirements

- CathexisVision 2016 Service Pack 3 and later.
  - Tested using a RS232 connection to the Micropoint II module.
    - A RS232 connection can be made using a serial port, ESP1204, or ESP3102.
  - The following modules are supported, but were not tested:
    - Relay Output Module II-16.
    - Relay Output Module II-8.
    - Alarm Input Module II.
    - MicroTrack II.
    - ModelWave 330.
  - From within the GUI, the user has the following Context Menu Commands:
    - Enable (enables the object).
    - Disable (disables the object).
    - Pulse Disable (disables and re-enables object after the configured period).
    - Set Group (adds the object to an existing cable cell group object).
    - Remove from Group (remove the object from the cable cell group).
    - Add Cells (add CableCell objects to the CableCellGroup).
    - Remove Cells (remove cablecells from this cablecell group).
    - Set Tag (sets the name of the device. All objects associated with this device will be tagged as such).

**Note:** for more product specific Context Menu Commands , see tables below.
- CathexisVision 2019 Service Pack 3 and later.
  - Tested using an Ethernet connection to the Remote Polling Module II (RPM II) and the following attached modules were tested:
    - Alarm Input Module II (AIM II)  
Firmware: 64A46269-A01 REV H 2011-02-15 13:10:23
    - MicroPoint II – Processor Module II (PM II)  
Firmware: 64A46370-A01 REV E 2011-06-23 12:43:26
    - MicroTrack II – MicroTrack Processor II (MTP II)  
Firmware: 64A46237-A01 REV A 2010-10-07 16:06:13
    - MicroWave 330

- Firmware: 64A46490-A01 REV 0 2012-12-11 11:42:52
- Relay Output Module II (ROM II)  
Firmware: 64A46239-A03 REV G 2011-02-15 13:20:18
- Remote Polling Module II (RPM II)  
Firmware: 64A46776-A01 REV C 2016-10-20 10:53:06

**Note:** There are no Context Menu Commands for the Remote Polling module however for specific connected devices see the tables below for applicable Context Menu Commands

**Notes:** The individual Southwest Microwave Intrepid device addresses are set on the physical hardware by adjusting 8 DIP switches. The address range is 0-255. Each device should have a unique address.

### CathexisVision License Requirements

License Name	License Description
<b>CSMI-1000</b>	Southwest Microwave Intrepid Module license
<b>CSMI-1001</b>	Each added module requires a CSMI- 1001 Southwest Microwave Intrepid Module license.
<b>CSMI-2000</b>	Southwest Microwave Intrepid device license.

## 2 Features and Abilities

### a. Integration Components

All CathexisVision integrations have two component levels: **Device** and **Object**.

**Device** The device is CathexisVision software's interface, which handles all the interaction between CathexisVision and the integrated hardware. When an integration is added to the CathexisVision system, a device is added.

The messages received from the device are called Device Events.

**Objects** Objects are the individual pieces of hardware that comprise the integration. There may be multiple "object types" under the objects group. For example, the main controller and door nodes, of an access control system, are both objects. They are different types of object.

**Note:** The Set Tag command will not be available when connecting to the Remote Polling Module II via ethernet.

Please note that the columns below are sorted according to the physical hardware and its associated object types.

- *Alarm Input Module II-8*

AlarmInput	
Name	Name of the Alarm Input.
Device Address	Serial port of the AlarmInputModule
Device Tag	The tag set for the alarm input module.
Supervised Alarm State	The alarm states will reflect: <ul style="list-style-type: none"> <li>• Unknown</li> <li>• Unlicensed</li> <li>• Alarm</li> <li>• Normal</li> </ul>
Alarm state	The alarm states will reflect: <ul style="list-style-type: none"> <li>• Unknown</li> <li>• Unlicensed</li> <li>• Alarm</li> <li>• Normal</li> </ul>
There are no context menu commands for this object.	

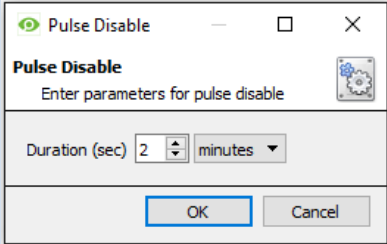
AlarmInputModule	
Name	Name of the AlarmInputModule.
Device Address	Serial port of the AlarmInputModule

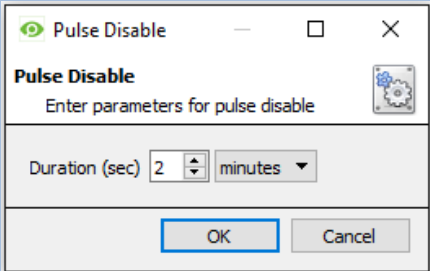
<b>Device Tag</b>	Tag set for the AlarmInputModule. Right-click to set.
<b>State</b>	Indicates the state of the AlarmInputModule. State options are: <ul style="list-style-type: none"> <li>• Unknown</li> <li>• Alarm</li> <li>• Normal</li> </ul>
<b>Tamper</b>	A  indicates that the device is currently not in a tamper state; a  indicates that it is.
<b>MAC Address</b>	MAC address of the AlarmInputModule.
<b>Version</b>	This field shows the hardware/firmware version.
<b>Licensed</b>	A  indicates that the module is unlicensed; a  indicates that it is.
<b>Context Menu Commands</b>	
<b>Set Tag</b>	Sets the name of the device. All objects associated with this device will be tagged as such.







- *MicroPoint II*

<b>AuxiliaryInput</b>	
<b>Name</b>	The name of the auxiliary input.
<b>Device Address</b>	Address of the physical hardware.
<b>Device Tag</b>	The tag set for physical hardware.
<b>Auxiliary Input State</b>	Indicates state of the input. State options are: <ul style="list-style-type: none"> <li>• Unknown (if there is no connection)</li> <li>• Unlicensed</li> <li>• Alarm</li> <li>• Normal</li> </ul>
<b>There are no context menu commands for this object.</b>	

<b>CableCell</b>	
<b>Name</b>	Name of the cable cell.
<b>Device Address</b>	Address of the physical hardware.
<b>Device Tag</b>	Displays the tag set for the physical hardware.
<b>Cable</b>	Indicates which cable the cell belongs to.
<b>Cell</b>	The cell number, out of 216.
<b>State</b>	Indicates the state of the cell. State options are: <ul style="list-style-type: none"> <li>• Unknown (if there is no connection)</li> <li>• Unlicensed</li> <li>• Alarm</li> <li>• Normal</li> </ul>

	<ul style="list-style-type: none"> <li>• Disabled</li> </ul>
<b>Group ID</b>	Displays the ID of the CableCellGroup the cell is associated with.
<b>Group name</b>	Displays the name of the CableCellGroup the cell is associated with.
<b>Context Menu Commands</b>	
<b>Enable</b>	Enables the object.
<b>Disable</b>	Disables the object.
<b>Pulse Disable</b>	Disables and re-enables object after the configured period. 
<b>SetGroup</b>	Adds the object to an existing cable cell group object.
<b>Remove from group</b>	Remove the object from the cable cell group.





<b>CableCellGroup</b>	
<b>Note:</b> First create a cable cell group object, in the Object Configuration tab.	
<b>Name</b>	Name of the cable cell group object.
<b>State</b>	Indicates the state of the group object. State options are: <ul style="list-style-type: none"> <li>• Unknown (if no communication)</li> <li>• Alarm</li> <li>• Normal</li> <li>• Disabled</li> <li>• Partially Disabled <ul style="list-style-type: none"> <li>○ This means that some, but not all of the cells in the group are disabled</li> </ul> </li> </ul>
<b>Context Menu Commands</b>	
<b>Add Cells</b>	Add CableCell objects to the CableCellGroup.
<b>Disable</b>	Disables all CableCell objects in the group.
<b>Enable</b>	Enables all CableCell objects in the group.
<b>Pulse Disable</b>	Disables and re-enables all cable cells in the group after the configured period. 
<b>Remove Cells</b>	Remove cablecells from this cablecell group.

MicroPoint	
<b>Name</b>	Name of the MicroPoint object.
<b>Device Address</b>	Address of the MicroPoint device.
<b>Device Tag</b>	Tag for the device. Right-click to set.
<b>MAC Address</b>	MAC address of the MicroPoint device.
<b>State</b>	Indicates the current state of the device. State options are: <ul style="list-style-type: none"> <li>• Unknown (indicates no communication between device and software)</li> <li>• Tamper</li> <li>• Normal</li> <li>• Cable A Fault</li> <li>• Cable B Fault</li> <li>• Cable A and B Fault</li> <li>• Software Trap</li> </ul>
<b>Tamper</b>	A  indicates that the device is currently not in a tamper state; a  indicates that it is.
<b>Cable Fault</b>	A  indicates that there is currently no cable fault; a  indicates that there is.
<b>Software Trap</b>	Indicates the Software Trap. Please consult Southwest Microwave for more information.
<b>Service Status</b>	This field shows whether or not the 'Universal Installation Tool II' is currently communicating with the device.
<b>Version</b>	This field shows the hardware/firmware version.
<b>Licensed</b>	A  indicates that the module is unlicensed; a  indicates that it is.
Context Menu Commands	
<b>Set Tag</b>	Sets the device tag. All objects associated with the MicroPoint device will be tagged with this.

Relay	
<b>Name</b>	Name of the Relay object.
<b>Device Address</b>	Address of the RelayOutputModule.
<b>Device Tag</b>	Tag set for the RelayOutputModule.
<b>State</b>	Indicates the state of the object. State options are: <ul style="list-style-type: none"> <li>• Unknown (if there is no connection)</li> <li>• Unlicensed</li> <li>• Normal Position; Relay is energized</li> <li>• Alarm Position; Relay is de-energized</li> </ul>



Context Menu Commands	
Set relay to Normal Position	Will set the relay to Normal position.
Set relay to Alarm Position	Will set the relay to Alarm position.

RelayOutputModule	
<b>Name</b>	Name of the RelayOutputModule.
<b>Device Address</b>	Address of the RelayOutputModule.
<b>Device Tag</b>	Tag for the RelayOutputModule. Right-click to set.
<b>State</b>	Indicates the state of the device. State options are: <ul style="list-style-type: none"> <li>• Unknown</li> <li>• Tamper</li> <li>• Normal</li> </ul>
<b>Tamper</b>	A  indicates that the device is currently not in a tamper state; a  indicates that it is.
<b>MAC Address</b>	MAC address of the RelayOutputModule.
<b>Version</b>	This field shows the hardware/firmware version.
<b>Licensed</b>	A  indicates that the module is unlicensed; a  indicates that it is.
Context Menu Commands	
<b>Set Tag</b>	Sets the device tag. All objects associated with this device will be tagged as such.

- *MicroTrack II*





MicroTrack	
<b>Name</b>	Name of the MicroTrack object.
<b>Device Address</b>	Address of the MicroTrack device.
<b>Device Tag</b>	Tag for the device. Right-click to set.
<b>State</b>	Indicates the current state of the device. State options are: <ul style="list-style-type: none"> <li>• Unknown</li> <li>• Tamper</li> <li>• Normal</li> <li>• Cable A Fault</li> <li>• Cable B Fault</li> <li>• Cable A and B Fault</li> <li>• Software Trap</li> </ul>

<b>Tamper</b>	A  indicates that the device is currently not in a tamper state; a  indicates that it is.
<b>MAC Address</b>	MAC address of the MicroTrack device.
<b>Cable Fault</b>	A  indicates that there is currently no cable fault; a  indicates that there is.
<b>Software Trap</b>	Indicates Software Trap. Please consult Southwest Microwave for more information.
<b>Service Status</b>	This field shows whether or not the <b>'Universal Installation Service Tool II'</b> is currently communicating with the device.
<b>Version</b>	This field shows the hardware/firmware version.
<b>Licensed</b>	A  indicates that the module is unlicensed; a  indicates that it is.
<b>Context Menu Commands</b>	
<b>Set Tag</b>	Sets the device tag. All objects associated with this device will be tagged as such.







- *Model 330*

Model330	
<b>Name</b>	Name of the Model330 object.
<b>Device Address</b>	Address of the Model330 device.
<b>Device Tag</b>	Tag for the device. Right-click to set.
<b>State</b>	Indicates the current state of the device. State options are: <ul style="list-style-type: none"> <li>• Unknown (if there is no connection)</li> <li>• Tamper</li> <li>• Normal</li> <li>• Alarm</li> </ul>
<b>Sensor Alarm</b>	Indicates True/False. Please consult Southwest Microwave for more information.
<b>Tamper Alarm</b>	Indicates True/False. Will trigger if the device's enclosure is opened.
<b>Path Alarm</b>	Indicates True/False. Please consult Southwest Microwave for more information.
<b>Auxiliary Alarm</b>	Indicates True/False. Please consult Southwest Microwave for more information.
<b>Service Alarm</b>	This field shows whether or not the <b>'Universal Installation Service Tool II'</b> is currently communicating with the device.
<b>MAC Address</b>	MAC address of the device.
<b>Version</b>	This field shows the hardware/firmware version.
<b>Licensed</b>	A  indicates that the module is unlicensed; a  indicates that it is.
<b>Context Menu Commands</b>	
<b>Set Tag</b>	Sets the device tag. All objects associated with this device will be tagged as such.

- *Relay Output Module II-8*

RelayOutputModule	
<b>Name</b>	Name of the RelayOutputModule.
<b>Device Address</b>	Address of the RelayOutputModule.
<b>Device Tag</b>	Tag for the RelayOutputModule. Right-click to set.
<b>State</b>	Indicates the state of the device. State options are: <ul style="list-style-type: none"> <li>• Unknown</li> <li>• Tamper</li> <li>• Normal</li> </ul>
<b>Tamper</b>	A  indicates that the device is currently not in a tamper state; a  indicates that it is.
<b>MAC Address</b>	MAC address of the RelayOutputModule.
<b>Version</b>	This field shows the hardware/firmware version.
<b>Licensed</b>	A  indicates that the module is unlicensed; a  indicates that it is.
Context Menu Commands	
<b>Set Tag</b>	Sets the device tag. All objects associated with this device will be tagged as such.

- *Remote Polling Module II (RPM II)*

RPM	
<b>Name</b>	The name of the auxiliary input.
<b>Device Tag</b>	The tag set for physical hardware.
<b>Version</b>	This field shows the hardware/firmware version.
<b>MAC Address</b>	MAC address of the device.
<b>Tamper</b>	A  indicates that the device is currently not in a tamper state; a  indicates that it is.
<b>Low input voltage</b>	A  indicates that the device is currently not in a low input voltage state; a  indicates that it is.
<b>Line break</b>	A  indicates that the device is currently not in a line break state; a  indicates that it is.
<b>There are no context menu commands for this object.</b>	

## b. CathexisVision Events

Event Element	Features/Abilities
<b>General</b>	<ul style="list-style-type: none"> <li>All states and properties can be used to trigger events.</li> <li>The integration device can be controlled as an Action and all context menu commands are available for the relevant objects.</li> </ul>
<b>Event Types</b>	Input Event, Input Module Event, Auxiliary Input Event, Cable Alarm, CableCell Group Event, MicroPoint Event, MicroTrack Event, Model330 Event, Relay Event, Relay Module Event and Remote Polling Module.
<b>CathexisVision Event Actions</b>	Right-Click Commands can be used as event actions on objects (see above)

## c. Metadatabase

A unique metadatabase is created on the CathexisVision server for this integration. It is fully searchable with configurable filters based on device event information (as above) and time stamping. The filtered event/s and the associated video will then be available for review in a new window from which an archive can be created and exported.

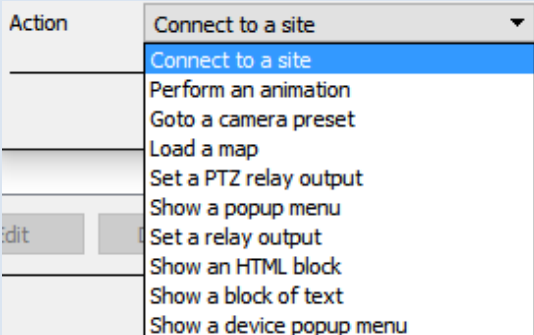
Note: Sector object metadatabase information only available in the Southwest integration metadatabase driver version 2.2.2, which is supported in CathexisVision 2018.4 and later.

Database Element	Features/Abilities
<b>General</b>	<ul style="list-style-type: none"> <li>An integration database can be created using the Intrepid (2.2.2) driver.</li> <li>All Device events are recorded in the integration database.</li> </ul>
<b>View Options</b>	The metadatabase may be viewed by the following options: <ul style="list-style-type: none"> <li>All</li> <li>AuxiliaryInputEvent</li> <li>CableAlarm</li> <li>CableCellGroup,</li> <li>InputEvent,</li> <li>InputModuleEvent,</li> <li>MicroPointEvent,</li> <li>MicroTrackEvent,</li> <li>Model330Event,</li> <li>RelayEvent,</li> <li>RelayModuleEvent,</li> <li>RemotePollingModule.</li> </ul>
<b>Sort Options</b>	The metadatabase may be sorted by: <ul style="list-style-type: none"> <li>Device event time.</li> </ul>
<b>Easy Search</b>	The metadatabase may be searched specifically for: <ul style="list-style-type: none"> <li>Device Address</li> </ul>

	<ul style="list-style-type: none"> <li>• Device Tag</li> <li>• Description.</li> </ul>
<b>Filter</b>	<p>The metadatabase may be filtered according to:</p> <ul style="list-style-type: none"> <li>• Time</li> <li>• Event Type</li> <li>• Device Address</li> <li>• Device Tag</li> <li>• Description</li> </ul>
<b>Export</b>	Database entries may be exported in CSV and PDF format.

### d. Maps

The CathexisVision GUI provides for configurable site maps that feature multi-layered, hierarchical, interactive interfaces providing representation and control of a site and its resources.

Map Element	Features/Abilities
<b>General</b>	Device objects can be embedded in a site map, which offers multiple action options when messages are received from the device, the device triggers an event, and/or the user manually initiates a map action.
<b>Map Action Triggers</b>	<ul style="list-style-type: none"> <li>• All device objects may be set to trigger a map action if the user left-clicks on map.</li> <li>• Some device objects may be set to trigger a map action if a state change message is received from the device.</li> <li>• All device objects may be set to perform a map action if a specific, or any event occurs on the device.</li> <li>• Device objects, which can be configured to trigger CathexisVision events, may also be set to perform a map action when specific states, or events are triggered.</li> <li>• Commands that can be issued to Device objects in the integration section can also be issued to the same Device objects on the map.</li> </ul>
<b>Map Actions Options</b>	<p>When triggered (see above), objects may perform the following map actions (where applicable):</p> 

## 3 Conclusion

Remember that this document was designed to deal specifically with integration. For further information about the CathexisVision software, consult the main manual (<http://cathexisvideo.com/>). For support, email [support@cat.co.za](mailto:support@cat.co.za).