



Optex REDWALL/REDSCAN Integration White Paper

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1. Introduction

This document indicates the features/abilities of the Optex REDSCAN Laser Scan Detector (which is part of the Optex REDWALL product range) solution when integrated with CathesisVision. Functionally, this integration will include the triggering of standard CathesisVision system events, based on information received from the device.

For instructions on installation or configuration of the integration, please consult the ***Optex REDSCAN Integration App-note***, available on the Cathesis website, and/or the ***CathesisVision Setup Manual***.

1.1 Integration Purpose

The Optex REDWALL/REDSCAN Laser Scan detector is an outdoor detector that scans large areas for movement.

CathesisVision receives information from the REDWALL device, allowing for local and remote monitoring of the within the CathesisVision interface. Multiple devices can be added, and CathesisVision will receive information from each device regarding the trigger and the type of alarm that is triggered.

Device objects may be linked to cameras, allowing associated footage to be databased according to the configuration of CathesisVision events and alarms which trigger on information received from the device. All messages from the device (even those not configured to trigger a CathesisVision alarm or event) are also databased. A heartbeat received from the device will alert CathesisVision in the event of a communication failure.

1.2 Requirements

1.2.1 General Requirements

- CathesisVision 2017 Service Pack 2 and later.
- REDWALL version PIE-1.

Note:

1. As CathesisVision has integrated with the REDWALL module version PIE-1, any REDWALL devices using this module will also be integrated with CathesisVision.
2. For information regarding the regular operation of an Optex device, please consult the relevant manufacturer's documentation.

1.2.2 CathesisVision License Requirements

License Code	License	Description
CORL-2000	Optex REDWALL Laser Scan Detector device license.	This license is the “base” license to integrate with a laser scan system. It is applied to the server to which the laser scan device is connected. It will allow for the connection of a single controller.
CORL-1001	Optex REDWALL Laser Scan Detector object license.	These licenses apply to the detectors (sensors), in a laser scan system. CORL-1001 will license a single detector, and may be added on a detector-by-detector basis.
CORL-3000	Optex REDWALL Laser Scan Detector bundle license.	This license includes the CORL-2000 device license, and also provides support for unlimited CORL-1001 detector licenses.

Note: In this integration, individual devices will require a license for each device.

A NOTE ON CAMERA CHANNELS

The CathesisVision software packages have **limits on camera channels**. A multi-sensor camera is physically a single device (camera) but it **requires a camera channel for each one of the internal cameras**. The same applies to an encoder: a 16-channel encoder will account for 16 camera channels on the CathesisVision software, even though it is a single device. Even when a camera or device only uses a single IP license, the camera channel limit will still apply.

1.3 Integration Components

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

Device	The device is CathesisVision software’s interface, which handles all the interaction between CathesisVision and the integrated hardware. When an integration is added to the CathesisVision 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 objects.

2. Features and Abilities

This section indicates the features/abilities of the Optex REDWALL Laser Scan software when integrated with CathesisVision.

2.1 General Device Features

- CathesisVision receives event messages from the Optex REDWALL Laser Scan device.
- System and Sensor device event messages can be used to trigger a CathesisVision system event.

2.1.1 Connection

- Communication between CathesisVision and the device takes place via an Ethernet connection.
- A heartbeat received from device monitors communication with CathesisVision and indicates whether device is in Normal or Offline state.

2.1.2 Device

- All device messages are databased.
- The device can be embedded in a site map which offers multiple action options when messages are received from the device, and/or the device triggers an event.

2.1.3 Integration Objects

- The REDWALL/REDSCAN device only has Sensor objects, which are generated automatically when events are received from the particular devices.
- Some device objects can be used to trigger events, and some can be controlled as event actions.

2.2 Device Objects

Object Type	Abilities
<p>General</p>	<ul style="list-style-type: none"> This integration has Sensor objects. Objects are automatically created as soon as communication between the CathesisVision unit and device is established. Device objects cannot be commanded as an action of a CathesisVision system event. Events on the device can be used to trigger CathesisVision system and map events. <p>Objects may be linked to cameras to associate device events with video footage.</p>
<p>General</p> <p>Object Properties</p> <p>Sensor</p> <p>State Indication</p> <p>Object Conditions</p>	<ul style="list-style-type: none"> Sensor object has multiple state options, dependent on device and event. Indicates condition of various facets of the object. See below. <ul style="list-style-type: none"> Name. State. Alarm. Latest Detection. Multiple Locations. Trouble. Tamper. Licensed. <p>The Sensor object supports multiple states which indicate the condition of the sensor. These are:</p> <ul style="list-style-type: none"> Normal/Offline status (heartbeat). Master Alarm Condition. Disqualification Circuit Activated. Anti-rotating Function Activated. Anti-masking Function Activated. Sensor Error Condition. Dirt on Laser Window. Tamper Circuit Activated. Fault Circuit Activated <p>The sensor object may have various object conditions, besides the states, which are indicated in device events. These include but are not limited to:</p> <ul style="list-style-type: none"> Alarm state. Nature of the 'Latest Detection' message, e.g.: <ul style="list-style-type: none"> Creep. Far. Far near. Indication of whether detection made in multiple locations.

	<ul style="list-style-type: none"> • Tamper indication. • Note: Presence of conditions dependent on device and event type.
Command	<ul style="list-style-type: none"> • N/A.

2.3 Device Events

A CathesisVision Event has a trigger, which causes an action. The Optex REDWALL/REDSCAN device can be used to trigger an event. The device cannot be controlled.

Event Element	Features/Abilities
General	<ul style="list-style-type: none"> • A message is displayed when communication to the device is lost. • Status and Detection type events may be configured. • Events are populated in the device events section, and in the Meta-database.
Event Triggers	REDWALL sensor objects (and groups of appropriate objects), and object conditions may be used to trigger CathesisVision events: <ul style="list-style-type: none"> • Sensor Object (and groups of objects). • Notification. • Latest Detection. • Multiple locations. • Object ID.
Event Type	<ul style="list-style-type: none"> • Detection. • Status.
CathesisVision Event Actions	All CathesisVision events can generate actions, such as: <ul style="list-style-type: none"> • Recording cameras and trigger cameras. • Sending alarms to base-stations. • Sending emails. • Control PTZ/virtual output/virtual input. • Play audio clip. The Optex REDWALL device cannot be controlled as an event action.

2.4 Metadatabase

A unique metadatabase is created on the CathesisVision 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.

Database Element	Features/Abilities
General	<ul style="list-style-type: none"> • All device events are databased. • Database entries include the footage from cameras linked to device objects. • Multiple cameras may be linked to multiple objects.

	<ul style="list-style-type: none"> • Device event metadata is displayed where applicable. • Databased device events may be viewed in the embedded video player, which includes the usual CathesisVision video review tools.
View Options	<ul style="list-style-type: none"> • Detection events. • Status Events.
Sort Options	<ul style="list-style-type: none"> • Device event time.
Easy Search	<ul style="list-style-type: none"> • Object. • Notifications. • Latest Detection. • Multiple Locations.
Filter	<ul style="list-style-type: none"> • Time. • Event Type. • Object. • Notification. • Latest Detection. • Multiple Locations.
Export	Database entries may be exported in CSV and PDF format.

2.5 Maps

The CathesisVision 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
General	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.
Map Action Triggers	<ul style="list-style-type: none"> • All device objects may be set to trigger a map action if the user left-clicks on map. • Some device objects may be set to trigger a map action if a state change message is received from the device. • All device objects may be set to perform a map action if <i>any</i> event occurs on the device. • Device objects, which can be configured to trigger CathesisVision events, may also be set to perform a map action when specific CathesisVision events are triggered.
Map Actions Options	When triggered (see above), objects may perform the following map actions (where applicable): <ul style="list-style-type: none"> • Connect to a site. • Perform an animation. • Go to a camera preset. • Load a map. • Set a PTZ relay output. • Show a popup menu. • Set a relay output.

- Show an HTML block.
- Show a block of text.
- Show a device popup menu.

3. Conclusion

This document was designed to deal specifically with this integration. For further information about the CathesisVision software, consult the **CathesisVision Setup Manual** (<http://cathesisvideo.com/>).

For support, email support@cathesisvideo.com.

USEFUL LINKS

To view **tutorial videos** on CathesisVision setup, visit <https://cathesisvideo.com/resources/videos>

Find answers to Cathesis **Frequently Asked Questions**: <https://cathesis.crisp.help/en/?1557129162258>