Optex REDWALL/REDSCAN Integration White Paper

Contents

1 Introduction

This document indicates the features/abilities of the Optex REDSCAN Laser Scan Detector (which is part of the Optex REDWALL product range) when integrated with CathexisVision.[1]

Note:

1. For information regarding the regular operation of an Optex device, please consult the relevant documentation.
2. There is a General Integration section in the main CathexisVision manual. It has vital information about creating an integration database, as well as a general introduction to the Integration Panel. **Read over this section**.

a. Integration Purpose

The Optex REDWALL/REDSCAN Laser Scan detector is an outdoor detector that scans large areas for movement. CathexisVision receives information from the REDWALL device, allowing for local and remote monitoring of the within the CathexisVision interface. Multiple devices can be added, and CathexisVision 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 CathexisVision events and alarms which trigger on information received from the device. All messages from the device (even those not configured to trigger a CathexisVision alarm or event) are also databased. A heartbeat received from the device will alert CathexisVision in the event of a communication failure.

b. Requirements

CathexisVision Requirements

- ***CathexisVision Software***
  - CathexisVision 2017 Service Pack 2 and later.
- ***CathexisVision Licenses***

License Code	License	Description
CORL-1001	Optex REDWALL Laser Scan Detector object license.	Licenses objects.
CORL-2000	Optex REDWALL Laser Scan Detector device license.	Licenses device.
CORL-3000	Optex REDWALL Laser Scan Detector bundle license.	Device and unlimited object licenses.

Optex REDWALL/REDSCAN Requirements

The following are the Optex REDWALL/REDSCAN firmware versions supported for this integration:[2]

- REDWALL version PIE-1.

Note: As CathexisVision has integrated with the REDWALL module version PIE-1, any REDWALL devices using this module will also be integrated with CathexisVision.

[1] While Cathexis has made every effort to ensure the accuracy of this document, there is no guarantee of accuracy, neither explicit, nor implied. Specifications are subject to change without notice.

[2] Cathexis makes a best attempt to ensure that the equipment and license requirements of the 3rd party equipment are adequately specified. However, it is possible that the requirements of the 3rd party equipment may change over time, including the interface hardware/firmware and licensing. The reader is urged to clarify the latest requirements directly with the 3rd party equipment supplier.

2 Features and Abilities

This section details the main features of the integration, and the associated abilities.

a. General Integration Features

Connection

- Communication between CathexisVision and the device takes place over Ethernet connection.
- Heartbeat received from device monitors communication with CathexisVision and indicates whether device is in Normal or Offline state.

Device

- All device messages are databased.
- 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.

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.

b. Device Objects

The REDWALL/REDSCAN device only has Sensor objects, which are generated automatically when events are received from the particular devices.

Object Type	Feature	Abilities
General		• Device objects will be generated automatically when device events are received. • Presence of some object states/properties are dependent on state of object. • Objects may be linked to cameras to associate device events with video footage.
Sensor	**General**	• Sensor object has multiple state options, dependent on device and event. • Indicates condition of various facets of the object. See below.
	State Indication	**The Sensor object supports multiple states which indicate the condition of the sensor**. These are: • 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.

Object Conditions	The sensor object may have various object conditions, besides the states, which are indicated in device events. These include but are not limited to:
	• Alarm state.
	• Nature of the 'Latest Detection' message, e.g.:
	  ○ Creep.
	  ○ Far.
	  ○ Far near.
	• Indication of whether detection made in multiple locations.
	• Tamper indication.
	Note: Presence of conditions dependent on device and event type.

Command	Not possible to command sensor object.

c. Events

A CathexisVision 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	• A message is displayed when communication to the panel 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 CathexisVision events: • Sensor Object (and groups of objects). • Notification. • Latest Detection. • Multiple locations. • Object ID.
Event Actions	All CathexisVision events can generate actions, such as: • 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.

d. Meta Database

A unique meta-database 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.

Database Element	Features/Abilities
General	• All messages received from the device are entered into the database. • Database entries include the footage from cameras linked to device objects. • Multiple cameras may be linked to multiple objects. • Device event meta-data is displayed where applicable. • Databased device events may be viewed in the embedded video player, which includes the usual CathexisVision video review tools.
View Options	The meta-database may be viewed by the following options: • Detection events. • Status Events.
Sort Options	The meta-database may be sorted by: • Device event time.
Easy Search	The meta-database may be searched specifically for: • Object. • Notifications. • Latest Detection. • Multiple Locations.
Filter	The meta-database may be filtered according to: • Time. • Event Type. • Object. • Notification. • Latest Detection. • Multiple Locations.
Export	Database entries may be exported in PDF and CSV format.

e. 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
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	• 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.[3] • All device objects may be set to perform a map action if *any* event occurs on the device. • Device objects which can be configured to trigger CathexisVision events, may also be set to perform a map action when specific CathexisVision events are triggered.
Map Actions Options	When triggered (see above), objects may perform the following map actions (where applicable): • 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. • Show a device event notification.

[3] See the Device Object Features table, above, for state change information.

3 Conclusion

Please remember that this document was designed to deal specifically with this aspect of the software. For further information about the CathexisVision software please consult the main manual (http://cathexisvideo.com/).

For support please contact support@cat.co.za