



CathexisVision DSC Neo Alarm Panel Integration White Paper

Contents

1	Introduction	2
1.1	Integration Purpose	2
1.2	Requirements	2
2	Integration Components and Features	3
2.1	General Device Features.....	3
2.2	Device Objects	3
2.3	Device Events.....	5
2.4	Metadatabase.....	6
2.5	Maps	7
3	Conclusion	8

1 Introduction

This document details the features/abilities of the DSC Neo ITv2 Alarm Panel device when integrated with CathexisVision.

1.1 Integration Purpose

This document will detail the integration of the DSC Neo PowerSeries Alarm Panel with the CathexisVision software. This driver communicates with the panel via the ethernet connection on the Internet and HSPA Dual-Path Alarm Communicator TL2803G-EU. Functionally, this integration will entail the triggering of standard CathexisVision Events, based on the triggers from the DSC Neo Panel.

1.2 Requirements

1.2.1 General Requirements

- Integration supported on Windows and Linux 32/64-bit units.
- Internet and HSPA Dual-Path Alarm Communicator TL2803G-EU communicator module.

1.2.2 CathexisVision Requirements

1.2.2.1 *Software*

CathexisVision 2018 Service Pack 4 and later.

1.2.2.2 *License*

License Name	License Description
CDSC-2000	DSC Neo ITv2 Device license.

1.2.3 DSC Requirements

The following hardware components were used to test this integration:

PowerSeries Neo Security Control Panel HS2128

- Firmware version: V01.13.01.20.

Internet and HSPA Dual-Path Alarm Communicator TL2803G-EU

- Firmware version: 4.17.
- Protocol version: 2.17.

Full Message LCD Hardwired Security Keypad HS2LCD

- Firmware version: V01.11.01.13.

Consult the relevant DSC documentation for the hardware and firmware details of specific devices.

2 Integration Components and Features

2.1 General Device Features

- The DSC Neo PowerSeries Alarm Panel device can be used to integrate with third-party systems.
- A DSC Neo simulator is included with the device to assist third-party developers with API implementation.
- The DSC Neo driver sends and receives UTF-8 encoded XML messages over UDP.
- CathexisVision receives event messages from the DSC Neo device.

2.2 Device Objects

Object Type		Feature
Partition	General Object Features	<ul style="list-style-type: none"> • The partition object is a group of zones. • It is used to arm/disarm the associated zones. • The panel keypad (or commands from the NVR) are used to control the device and its state changes, which affect its properties in CathexisVision. • The partition states are updated as events occur on the panel.
	Object Properties	<ul style="list-style-type: none"> • ID • Name • Zones • Ready Status • Armed • Arm Mode • Alarm • Fire Alarm • CO Alarm • Alarm Memory • Fire pre-alert • Trouble • Has bypassed zones • Delay in progress • Armed with no entry delay • Programming mode • Enabled door chime • Audible Bell • Audible keypad buzzer alarm
	States	<ul style="list-style-type: none"> • Alarmed • Armed • Not ready to arm • Ready to arm • Ready to force arm • Troubled
	Command	<ul style="list-style-type: none"> • Arm without entry delay

		<ul style="list-style-type: none"> • Away Arm • Instant Stay Arm • Night Arm • Quick Arm • Stay Arm • Stay Arm no entry delay • User Arm
Communicator	General Object Features	<ul style="list-style-type: none"> • Lost connections, and reconnections will take several seconds to display. • The device type is the same as the communicator panel's model number. • If the inbound or outbound encryption key is incorrect the communicator object will try to configure encryption.
	States	<ul style="list-style-type: none"> • Connection down • Configuring encryption • Inbound Encryption Key Mismatch • Outbound Encryption Key Mismatch • Connected
	Object Properties	<ul style="list-style-type: none"> • ID • Name • Connection • Device Type • Software version • Protocol version
	Commands	N/A. There are no commands for this object.
Zone	General Object Features	<ul style="list-style-type: none"> • The zone object cannot be controlled while the partition is armed. • Right-click the zone object and select the desired command. • The zone states are updated as events occur on the panel.
	States	<ul style="list-style-type: none"> • Alarm • Bypassed • Closed • Delinquency • Fault • Low battery • Open • Tamper
	Object Properties	<ul style="list-style-type: none"> • ID • Name • Open • Alarm • Alarm in memory • Bypassed • Tamper • Fault

		<ul style="list-style-type: none"> • Low battery • Delinquency • Partitions • Lost Alarm Type
	Commands	Unbypass
Communication Channel	General Object Features	<ul style="list-style-type: none"> • The communication channel object connects using UDP. • It won't go down when communication with the panel is lost. • The communicator object can be used to trigger events when communication with the panel is either established, lost, or when encryption errors occur.
	Object Properties	<ul style="list-style-type: none"> • ID • Name • Channel Status • Details • Creation type • Creation time • Idle time (min)
	States	<ul style="list-style-type: none"> • States are up or down. • Indicates connection between the device and the software
	Commands	N/A. There are no commands for this object.

2.3 Device Events

Event Element	Features/Abilities
General	This will list all events sent from this device.
Device Event Types	<ul style="list-style-type: none"> • ID • Time • Zone name • Zone number • Description
Event Actions	<ul style="list-style-type: none"> • Zone bypass • Entry Delay • Exit Delay • Partition Alarm • Quick Exit Delay • System Alarm • Trouble • Zone Alarm • Zone open/closed • Zone trouble

2.4 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.

Database Element	Features/Abilities
General	<ul style="list-style-type: none"> • The database tab allows one to navigate the databased entries, for each individual database. • In the database tab, each database is presented as a table. • It has built in filters, and the ability to navigate by timestamp. • If a database entry has an associated recording, this recording can be launched from within the database tab.
View Options	<ul style="list-style-type: none"> - Zone events. - Alarms. - Arming. - Entry/exit delay. - Trouble.
Sort Options	The Events are sorted based on the following parameter: Time.
Easy Search	<ul style="list-style-type: none"> - Event Type. - Partition Name. - Partition Number. - Zone Name. - Zone Number. - Description. - State. - Arm Method. - User. - Audible. <p>Or</p> <ul style="list-style-type: none"> - Zone number. - Description. - State. - Arm Method. - User. - Audible. - Urgency. - Restarted. - Device Type. - Device Number.
Filter	A Time range, within which the search will be conducted, may also be set.
Export	Generate Metadatabase reports in PDF or CSV format.
Manage Reports	Generate scheduled Metadatabase reports.
Go to Time	The time and date boxes can be used to navigate to a required timestamp

2.5 Maps

It is possible to add the DSC Neo device to a site map, which will allow for a number of action options when objects are triggered. These options include the animation of triggered zones and connecting to site cameras when zones are triggered.

Map Element	Features/Abilities
General	<ul style="list-style-type: none"> • Device objects can be embedded in a site map which offers multiple action options when: <ul style="list-style-type: none"> ○ Messages are received from the device, ○ The device triggers an event, ○ The user manually initiates a map action.
Map Action Triggers	Map actions may be set to trigger on Left-Clicks, State Changes, and Events.
Map Actions Options	<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. • Show a Device Event Notification.

3 Conclusion

This document was designed to deal specifically with the DSC Neo ITv2 Alarm Panel integration. For further information about the CathexisVision software, consult the main manual (<http://cathexisvideo.com/>). For support, email support@cat.co.za.