CathexisVision
Video Surveillance Management Solutions

Matrix COSEC Integration

White Paper

Contents

1. Introduction

This White Paper indicates the features/abilities of the Matrix COSEC Access Control and Time Attendance solution when integrated with CathexisVision.

Matrix COSEC is an Access Control system that manages time and attendance. It is adaptive, modular, scalable and function-rich. The system controls entries and exits, monitors, and tracks people's movement.

Note: This integration tracks time and attendance events. However, only time data is sent to CathexisVision. To view details of attendance, the user must access the Matrix COSEC web interface.

For a detailed guide on the installation and configuration of the Matrix Cosec device with **CathexisVision**, please refer to the **CathexisVision Matrix Cosec Access Control Integration App-note,** available on the Cathexis website.

1.1 Integration purpose

The CathexisVision integration of the Matrix COSEC Access Control and Time Attendance solution allows for local and remote monitoring and operation from within the CathexisVision interface. All 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 are also databased. Operators with sufficient access rights are able to issue certain commands to the device, such as Open, Lock, Unlock, and Normalise.

1.2 Requirements

1.2.1 General requirements

- Matrix COSEC 16.6.1

- CathexisVision 2021.2

- Windows 10: 64-bit and later; Windows Server 2016 and later

- Minimum of 4GB of RAM required

Note: Cathexis makes a best attempt to ensure that the equipment and license requirements of third-party equipment are adequately specified. However, it is possible that the requirements of third-party equipment may change over time, including the interface hardware/firmware and licensing. The user is advised to clarify the latest requirements directly with the third-party equipment supplier.

This integration was tested on:

Hardware name	COSEC VEGA
Hardware model number	COSEC VEGA FEX
Firmware as tested	V01R44
Third-party software name	MATRIX COSEC (Admin Management Portal Web, COSEC Monitor, COSEC Web)
Third-party software version	Version: 16.6.1
Third-party software license/s required	Licenses on dongle

1.2.2 CathexisVision license requirements

License Name		Description
CMCO-2000	Matrix COSEC device	This license is the "base" license to integrate with an access control system. It is applied to the server to which the access control device is connected. It will allow for the connection of a single Matrix COSEC controller.
CMCO-1001	Matrix COSEC object	These licenses apply to the doors, or readers, in an access control system. The CMCO-1001 will license a single door/reader, and may be added on a door-by-door basis.
CMCO-3000	Matrix COSEC bundle	This license includes the CMCO-2000 Matrix COSEC device license, and also provides support for unlimited CMCO-1001 reader licenses.

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

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 objects.

2. Features and Abilities

This section indicates the features/abilities of the Matrix COSEC software when integrated with CathexisVision.

2.1 General device features

- CathexisVision communicates with the Matrix COSEC device via TCP using an IP address. This connects to the server which in turn connects to the device.
- This integration only runs on Windows units.
- Device objects support overlays.

2.2 Device objects

Device objects populate automatically once communication is established. As the panel supports many expansion modules, the objects displayed in CathexisVision will vary depending on the objects that are configured on the panel.

Object Type	Abilities
General	- This integration has Device, System, and Communication Channel objects. - Objects are automatically created as soon as communication between the CathexisVision unit and device is established. - Device objects can be commanded as an action of a CathexisVision system event. - Device objects support overlays.

		• Objects may be linked to cameras to associate device events with video footage.
Device	**Object properties**	• Name. • Site. • Device Type. • Application Type. • MAC • Device IP. • Status. • License.
	Command	• Open. • Lock. • Unlock. • Normalise.
	Overlays	• The Device object supports overlays in the camera feed. • Overlays display time. • Overlay location, text size, text colour, and background colour are configurable. • Overlays displays the Device name and the Device event.
	Connection status	Some examples of Connection Status values: • Offline. • Disconnected.
System	**Object Properties**	• Name. • Status. • COSEC version.
	States	• Connected. • Disconnected
Communication Channel	**Object properties**	• Name. • Channel Status. • Details. • Creation Type. • Creation Time. • Idle time (min).
	Channel status	• Up. • Down.

2.3 Device events

The CathexisVision Matrix COSEC integration generates Communication, Access and Time, Alarm, System, and Door events, which are triggered on the device and reflected in CathexisVision.

Event Element		Features/Abilities
General		• Events triggered on the device are sent to CathexisVision. • Device event types are Communication, Access and Time, Alarm, System, and Door.
Device Event Types	**Communication**	• Dongle/License key not found. • Connection down. • Connected.
	Access and Time	• User Allowed. • Use Denied.
	Alarm	• Tamper. • Door Abnormal. • Door Force Open. • Door Fault. • Panic.
	System	• Configuration Change. • Login to ACS. • Credentials Deleted. • Master Controller. • Power On. • Enrolment
	Door	• Door Status changed. • Door Open/Close.
CathexisVision System Events		Access Control objects (e.g., Door) may be controlled as a result of a CathexisVision system event: • Access control object → Clear all alarm, Open, Lock, Unlock, and Normalise.

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	• All device events are databased. • Database entries include the footage from cameras linked to device objects. • Multiple cameras may be linked to multiple objects. • Device event metadata 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	• All. • Access event. • Time event. • Door event. • Alarm event. • System event. • Communication event.
Sort Options	• Device event time.
Easy Search	• Site name • Master Controller ID. • Door Controller ID. • Device name. • User ID. • User name. • Description. • Direction • Allowed • Event detail.
Filter	• Time. • Event type • Site ID • Master controller ID. • Door controller ID. • Device name. • User name. • Description. • Direction. • Allowed. • Event detail.
Export	Database entries may be exported in CSV and PDF format.

2.5 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. • 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.

3. Conclusion

This document was designed to deal specifically with this integration.

For further information about the CathexisVision software, consult the **CathexisVision Setup Manual** (https://cathexisvideo.com/).

For support, email support@cat.co.za.

USEFUL LINKS

*To view **tutorial videos** on CathexisVision setup, visit https://cathexisvideo.com/resources/videos*

*Find answers to Cathexis **Frequently Asked Questions**: https://cathexis.crisp.help/en/?1557129162258*