Quido Input/Output Integration

White Paper

Contents

1. Introduction

This document indicates the features/abilities of the Quido Input/Output device when integrated with CathexisVision.

For a detailed guide on the installation and configuration of the Quido Input/Output device with CathexisVision please refer to the **Quido Input/Output Integration App-note,** available on the Cathexis website.

1.1 Integration Purpose

The Quido Input/Output device sends, controls and monitors electronic information such as temperature. The CathexisVision integration allows information from the Quido device information to trigger CathexisVision system events.

Quido I/O is a family of Input/Output modules with digital inputs, outputs, and a thermometer. Inputs are designed to connect voltage or contacts and can distinguish between two states (0 and 1). The outputs are relays with a changeover contact. The thermometer can be connected to a cable of up to 15 meters and is able to measure temperatures in a range from -55 to +125 °C.

1.2 Requirements

1.2.1 General Requirements

- CathexisVision 2016.2 and later.
- Cathexis NVR 64-bit version supported.
- Windows 7 – 64bit and later, Windows Server 2008 R2 and later.
- Quido ETH 30/3.
- TCP connection to device defined port (12376).

Note:
1. If you need information regarding the regular operation of a Quido device, please consult the relevant Quido documentation.
2. When using a serial port connection CathexisVision is unable to detect the Quido device if the Controller or Communications channel has lost connection.

Tested on:

Hardware name	Quido ETH range of I/O thermometer devices
Firmware as tested	2.4/4

1.2.2 CathexisVision License Requirements

The Cathexis Quido integration license requirements are as follows:

License	Name	Description
CQUI-2000	Quido	This license is the "base" license to integrate with an input-output system. It is applied to the server to which the input/output device is connected. It will allow for the connection of a single Quido input/output (multiple channels) device.

Note: In this integration, individual devices will require a license for each device and not per channel.

> **A NOTE ON CAMERA CHANNELS**
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> The CathexisVision 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 CathexisVision 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 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 Quido Input/Output device when integrated with CathexisVision.

2.1 General Device Features

- CathexisVision receives event messages from the Input/Output device.
- System and Input/Output device event messages can be used to trigger a CathexisVision system event.

2.2 Device Objects

Objects are populated automatically as soon as communication with CathexisVision is established.

Object Type		Abilities
General		• This integration has Input, Output, Thermometer and Communication channel objects. • State changes may be used to trigger system events. • The IO objects are populated in CathexisVision on an input status update. • Device objects can be commanded as an action of a CathexisVision system event.
Input	**Object Properties**	• Name. • ID. • State. • Counter.
	States	• Low. • High.
Output	**Object Properties**	• ID. • Name.
	Commands	• Set output. • Clear output. • Pulse output.
Thermometer	**Object Properties**	• IDs. • Name. • Thermometer state. • Low threshold. • High threshold. • Last temperature.

Communication Channel	Object Properties	• IDs. • Name. • Channel status. • Details. • Creation type. • Creation time. • Idle time (min).

2.3 Device Events

Event Element		Features/Abilities
General		• Events triggered on the device are sent to CathexisVision. • Device event types are Input, Output, Thermometer and Communication channel. • Objects may be linked to cameras to associate device events with video footage.
Device Event Types	Input Event	• ID. • Time. • Input ID. • Input name. • State. • Counter.
	Output Event	• ID. • Time. • Output ID. • Output name. • State.
	Thermometer	• ID. • Time. • Thermometer. • State. • Temperature value (Celsius etc.).
CathexisVision Event Actions		• Events generated by the device are reflected in CathexisVision, and can be used to create CathexisVision system events. • An **output** object may be controlled via a CathexisVision event action to perform one of the following commands:

o   Set Output
o   Clear Output
o   Pulse Output

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 the camera/s 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	• Input. • Output. • Thermometer.
Sort Options	• Time.
Easy Search	• ID. • Name. • State.
Filter	• Event. • Event Type. • Object ID. • Name. • State. • Counter. • Temperature.
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 a specific, or 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 states, or 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. Conclusion

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

> **USEFUL LINKS**
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> *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