

CathexisVision Carbon 5 White Paper







Contents

1. Introduction	3
1.1 Resources and System Components	3
1.2 Supported Languages	4
1.3 Requirements and Specifications	4
1.3.1 General Requirements	4
1.3.2 License Requirements	5
1.3.3 Ports to Open	5
2. Features and Abilities	6
2.1 Monitoring Tab	7
2.2 Databases Tab	9
2.2.1 Metadatabase Interface	9
2.2.2 Video Database Interface	10
2.3 Maps Tab	10
2.4 Configuration Tab	12
2.5 Feature Search	13
2.6 Archive Player	14
2.7 Site Monitors	15
2.8 Dashboard Tab (Enterprise Only)	16
2.9 Hardware Tab (Enterprise Only)	17
2.10 Monitors (MultiSite and Enterprise)	19
2.11 Alarms (MultiSite and Enterprise)	19
3. Conclusion	23

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.





1. Introduction

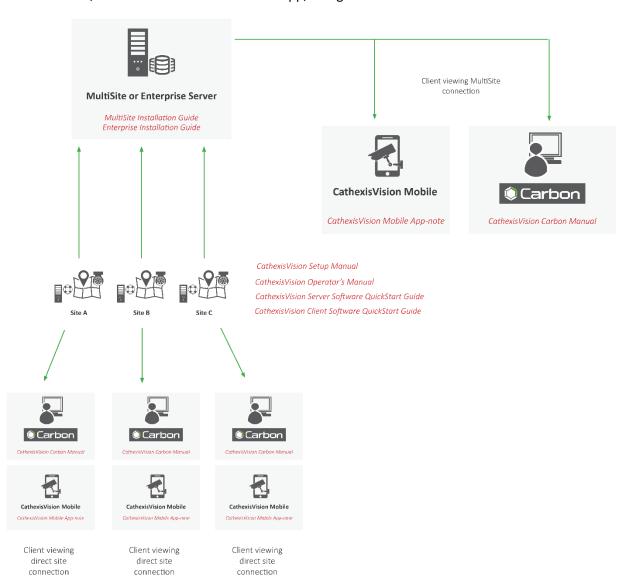
Carbon is a desktop client user interface.

This *CathexisVision Carbon 5 White Paper* outlines the features and abilities of Carbon 5 when using this interface to access:

- a single site (a single CathexisVision site installation)
- multiple sites (a CathexisVision Multisite installation)
- multiple sites (a CathexisVision Enterprise installation)

1.1 Resources and System Components

The diagram below illustrates the basic components of Carbon 5, CathexisVision sites, Enterprise servers, MultiSite servers, and the CathexisVision Mobile app, along with the documents relevant to each.







For more information about Carbon 5, CathexisVision Mobile 5 app, or MultiSite and Enterprise products, see the following, available on the Cathexis website (http://cathexisvideo.com/):

- CathexisVision Suite 5.1 Release Notes
- Carbon 5 Quick Reference Guide
- CathexisVision MultiSite 5 Installation Guide
- CathexisVision Enterprise 5 Installation Guide
- CathexisVision Mobile 5 App-note
- CathexisVision Mobile 5 Quick Guide
- CathexisVision Mobile 5 White Paper

Consult the CathexisVision Setup Manual for information on setting up CathexisVision.

1.2 Supported Languages

- English,
- German,
- Russian,
- Croatian*,
- French*,
- Italian*,
- Portuguese*,
- Spanish*,
- Ukrainian*.

1.3 Requirements and Specifications

1.3.1 General Requirements

- CathexisVision 2022.1 and later on the site to which the Carbon GUI is connecting.
- CathexisVision Carbon 3.1 or later.
- Windows 10 and later; Window Server 2019 and later.
- Minimum 8GB of RAM required.





^{*}Note: These languages are supported in Carbon 4.2 and later.



1.3.2 License Requirements

License	Name	Description
None	Carbon	Local sites must be licensed as per existing requirements.

For information on the licensing requirements for MultiSite and Enterprise installations, consult the CathexisVision Software Product Description and Licensing document, available on the Cathexis website (https://cathexisvideo.com).

1.3.3 Ports to Open

Open the following ports on an NVR site for incoming connections from Carbon, CathexisVision, or CathexisVision Mobile	NVR site	TCP 30010 to 30100
Open the following ports on an Enterprise/MultiSite to allow	MultiSite	TCP 28000 to 28019
incoming Carbon or site connections	Enterprise	TCP 28000 to 28029





2. Features and Abilities

The available features depend on the connection being made from the Carbon interface.

A single site connection allows the user to view/review cameras and other resources from one site only, navigating with the following tabs:	 Monitoring Databases Maps Configuration Feature search Archive player Site monitors
A MultiSite connection allows the user to view/review cameras and other resources from multiple sites, navigating with the following tabs:	 Monitoring Databases Maps Configuration Feature search Archive player Site monitors Monitors Alarms
An Enterprise connection allows the user to view/review cameras and other resources from multiple sites, navigating with the following tabs:	 Monitoring Databases Maps Configuration Feature Search Archive player Site monitors Monitors Alarms Dashboard Hardware



2.1 Monitoring Tab

The Monitoring tab is where cameras can be viewed, reviewed, searched, and archived. A map can also be added to a panel in the Monitoring tab.

	Features/Abilities
General	 Create and save custom layouts, or use automatic options. Enterprise connections allow the user to view cameras from multiple sites at one time in the Monitoring tab. Layouts can display cameras in live and review mode simultaneously, and maps can be included in a saved layout. The view and review tools drop-down menu is available using a mouse right-click or using the menu icon from the main panel.
Monitoring Options	 Resource view editor (customised resource view) Monitoring tab settings Live streaming stats
Monitoring Tab Settings	 Adjacent cameras: enable or disable Show stream information Show stream statistics Left side panel: enable or disable Right side panel: enable or disable
Layout Options	 Create and save custom templates Add maps and/or cameras to a template Auto layout Black screen monitoring (BSM) Monitoring using the side panel
View and Review Tools: Drop-down Menu	 Copy link Send to monitor Switch between live/review modes Sync review Pause/un-pause all Export snapshot Archive Add bookmark Bookmarks Smart search Advanced (connection logs) Overlays Dewarping Video format Video quality
Smart Search Tools	 Snap search Motion quick search Motion search Feature search





Dewarping	 Disable Single Quad Panorama single Panorama double Overview
Top Menu Bar Icons	 Templates Action Archive Bookmark Save layout Cast Event BSM (black screen monitoring) Alarm BSM (black screen monitoring) Full screen
Action Icon	 Switch all feeds to live/review Review all feeds/review all live feeds Pause all feeds Unpause all feeds Clear all panels
Main Display Tools	 Interactive timeline Date and time pop-up on timeline Click to show/un-show PTZ control Operate PTZ control Area zoom on an Axis or Dahua PTZ camera Click to mute/unmute camera Navigate panel history Minimise/maximise panel Close panel Adjacent Cameras Review controls
Review Controls	 Select track (where available) Go to beginning (Home)/end Play/step forward/backwards Adjust playback speed Tags Bookmarks Live/Review mode switch Sync review Date/time panel
Review Controls: Compact Mode	 Play backwards. Pause. Play forwards. Set tags.







	Switch to live mode.
	Open date/time panel.
	Place map in a template/layout.
	View individual cameras in a new panel.
	Open a camera group from the map.
	View state of output and control output.
Maps	View state of input.
	Open layout from the map.
	Navigate panel history.
	Reset view.
	Show/hide camera viewing areas.

2.2 Databases Tab

The databases section combines access to metadatabases (text) and video database recordings in one interface. The icons distinguish between the two types.

A unique metadatabase is created on the server for an integration. Carbon has configurable filters based on device event information and time stamping. The filtered event/s, and the associated video, are available for review in a new window. An archive can then be created and exported.

2.2.1 Metadatabase Interface

Δ	h	il	it	i	es	
_	v	•			C	۱

General	 View and filter options vary according to the integration or database selected. Search results may be filtered then exported. The Export tool allows further selections to be made in the COLUMNS tab, where items may be unchecked.
Interface	 Custom view View options (if available) Sort by Play mode. Max rows Database menu Controls Filter Go to (exact time date) Filter this page
Play mode	NormalSkipLoop
Database Options	ExportManage reports





	• Settings
	First.
Controls	Previous.
(for	Next.
pages)	• Last.
	Refresh.

2.2.2 Video Database Interface

Abilities

General	 Search results may be filtered then exported. The Export tool allows further selections to be made in the COLUMNS tab, where items may be unchecked.
Interface	 Play mode. Max rows. Database menu. Controls. Go to (exact time/date). Filter this page.
Database menu	Export.Settings.
Controls (for pages)	 First. Previous. Next. Last. Refresh.

2.3 Maps Tab

The Carbon GUI provides configurable site maps that feature multi-layered, hierarchical, interactive interfaces providing representation and control of a site and its resources.

Abilities

General	 When viewed from the Maps tab, cameras will open as pop-ups over the map when double-clicked. To view a map's camera in the Monitoring tab, drag and drop an icon into an empty display panel. In addition to the map editing tools detailed below, the top panel tools allow users to align and distribute icons, and copy and paste properties/settings from one icon onto another. All resources (with the exception of permission groups) may be added to the map as objects. However, the list below shows map objects that currently perform actions.
View Map	Edit tool



		Navigate (back/forward)
		Reset view
		Show/hide camera viewing area
		Save map
		Change settings (name and image)
		Toggle select/pan
		Select by object type
		Distribute row
	Top panel	Distribute column
	tools	Align row
		Align column
		Copy (icon)
		Paste
		Paste special
		Show grid
	Layers	Add layers (map/window)
		Opacity
	Basic	Rotating whole resource
		Change foreground/background colour
Мар		Rotation
Editing	Icon	• Size
Tools		Opacity
	Text	• Colour
		Show: Auto/Show/Hide
		Wrap mode
		Size mode
		Viewing area: None/sector/manual/fisheye
	Camera	Colour (Viewing area)
		Opacity
		Fill mode
		● Angle
		• Size
		Add PTZ zone
	PTZ	Add PTZ preset
		• Colour
		Opacity
		State unknown: foreground/background colour
	Input	State high: foreground/background colour
		State low: foreground/background colour
		Click action: None/On/Off/Pulse/Toggle
	Output	State unknown: foreground/background colour
		State on: foreground/background colour
		State off: foreground/background colour



		Cameras
		PTZ camera
	Available	Fisheye camera
	Objects	Camera group
	(perform	• Inputs
Мар	actions)	Outputs
Objects		Maps
		• Layouts
		Switch on
	Output	Switch off
	Actions	Pulse
		Toggle

2.4 Configuration Tab

The Configuration tab allows users to view and organise resources, users, roles, and permissions.

- The Configuration Tab can be used to modify access rights.
- Access levels are renamable in Carbon and are called Roles.
- New users may be added on Enterprise connections.
- For sites connections, new users must be added on the CathexisVision client/server software.

Н	ome	 Manage LDAP server settings (Enterprise connections) Configure push notifications (Site connections)
Resource management		 View all resources Add or edit camera groups Add or edit VMS event groups Delete maps Auto generated or manually configured resources tree options
User Manage- ment	Users	 Create new user (Enterprise installation only) Change user details Change permissions for a single user Add resources to a user Change global permissions for a user (Configuration, Maps) Assign a role to a user (inherited roles) Remove a role from a user
	Roles	 Add a new role Modify a role Add resources to the role Change global permissions for the role (Configuration, Maps) Add another role to the role (inherited roles)
	Permissions	ViewReviewExport





		 PTZ Presets Control (output/map) Edit (maps) Manage views (metadatabase) Manage reports
	Resources	 Cameras Feature databases Inputs. Outputs. Resource group. Layouts. Maps. Site monitors VMS events. Video databases. Metadatabases. Monitors (MultiSite and Enterprise)
Permission	Groups	 Add a permission group. Edit a permission group. Choose Domain, and Type of Resource. Available to domain only, or global. Add resources.
Groups	Resource	 Cameras. Inputs. Outputs. Video databases. Metadatabases. Maps.

2.5 Feature Search

General		 Upload or select an image of a person or vehicle to search for similar images. Images can be 'sent' from the Monitoring tab by select Smart search/Feature search in the context (right-click) menu.
	Site	 Select from multiple sites (Enterprise only)
	Search for	• Person
		Vehicle
Query	Search day	Select date
parameters		Not set
	Maximum	• 10
	matches	• 100
		• 1000





	Time filter	• 00:00 to 23:59
		All cameras
	Camera filter	Choose camera
Factor		Load or paste images
reatu	ire area	Select/isolate a region
		Choose camera
		Copy camera into feature area
		Select track
Po	view	Play backwards
ne.	view	Pause
		Play forwards
		• Tags
		Open archive builder
	Select tool	Select all
		Clear all
		Select/deselect camera
	View	Standard
		By camera
	Sort by	• Score
		• Time
Search		Ascending/descending
results	Thumbnail	Small
	Size	Medium
		• Large
		Standard
	Aspect ration	• Tall
		Wide
	Minimum Score	• 0 to 50

2.6 Archive Player

General		 The archive player is available as a separate app, but can also be used from the Carbon interface.
	Folders	Up Browse
Folder view		Back (home screen)
(browse)	Sort	Alphabetical
(biowse)		Newest first
		Oldest first
Home	View options	• Clips
screen		Transactions
view	Top panel tools	Clear all
		Show all



	Sequential mode
	Template
	Timeline slider
	Home
	Step backwards
	Play backwards
	Pause
	Play forwards
Review tools	Step forwards
Review tools	Adjust playback speed
	Skip 10s forwards/backwards
	Start/end tag
	Archive
	• Close
	Adjust time and date
	Calendar tool

2.7 Site Monitors

General	 Controllable from Carbon user interfaces (including the mobile device) View live streams as shown by the site monitor in the controller tab Multiple-camera synchronised review supported Corridor and wide aspect ratio cameras supported Virtual monitor walls to mimic the positions of physical monitors Local site connection only. The site monitor is unable to view remote sites. GPU decoding supported by site monitor GPU-accelerated display in site monitor Map-driven site navigation in site monitor tab
Resources panel	 Standard view Server view Custom view
Layouts panel	My layoutsGlobal layouts
PTZ Panel	 Open iris Close iris Auto iris Focus near Focus far Auto focus Manual control panel Zoom in/out Presets





Мар	• View
Templates	Choose from custom or standard
	Monitors
View	• Wall
	Select system
	Clear all
Tools	Identify
10015	Switch to live
	Adjacent camera viewing
Manage video walls	Create new wall
ivialiage video walls	Edit wall

2.8 Dashboard Tab (Enterprise Only)

The Dashboard tab allows the user to view information about sites, servers, and cameras.

This tab allows the user to locate the time and place of a disconnected camera or server easily. The information can be used to search footage from the monitor tab around the time of the incident.

	Features/Abilities
	Status of resources is presented in a summary format.
General	This is represented visually as well as in the table.
General	A colour code is used to represent status.
	Items in the table can be selected to open a 24-hour view.
Visual	• Sites.
Summary/Infographic	Servers.
Summary/miograpme	Cameras.
	Green: sites, servers, cameras up.
Status on Visuals	Red: sites, servers, cameras, down.
Status on Visuais	Grey: status unknown.
	Orange: packet loss.
	Green: cameras up
	Brown: cameras up and down
Status on 24-hour Chart	Red: cameras down.
Status on 24-nour Chart	Green/yellow: cameras up with packet loss.
	Dark green: cameras up and status unknown.
	Grey: camera status unknown.





2.9 Hardware Tab (Enterprise Only)

The Hardware tab allows the user to view specifications and addresses of cameras, and specifications and status of disks and servers.

Features/Abilities

General		 Various sort options are available to change how items appear in the main display. Once items have been sorted, the Export tool can be used to generate reports. The SETTINGS and COLUMNS tabs on the export tool can be used to adapt the appearance of the final report further.
	List Display Options	 Single site or multi-view Sort by category Sort table alphabetically or numerically
Cameras Tab	Sort by Category Options	 Camera manufacturer Camera model Camera firmware
	Main Panel Columns	 Site Server Manufacturer Model Firmware Name Serial Number MAC Address
	List Display Options	 Single site or multi-site view Sort table alphabetically or numerically
Databases Tab	Main Panel Columns	 Name Site Server (name) Capacity Tracks Recording duration Status Slices
	List Display Options	 Single site or multi-site view Sort by category Sort table alphabetically or numerically
Disks Tab	Sort by Category Options	 Disk manufacturer Disk model Disk firmware
	Main Panel Columns	HealthSiteServer



		 Manufacturer Model Rotation Capacity Firmware Serial number Power-on years Temperature
	List Display Options	 Single site or multi-site view Sort by category Sort table alphabetically or numerically
	Sort by Category Options	 Motherboard CPU OS family OS version SW version
Servers Tab	Main Panel Columns	 Site Server Machine Network interfaces Motherboard CPU CPU speed Memory Serial number IO board OS family OS version SW version Site role (slave, master, or unknown) Time Time zone Master time Enterprise time difference



2.10 Monitors (MultiSite and Enterprise)

Features/Abilities

Set Up Monitor	View Options Options: Basic Live Streaming Control Manage View (Camera Panels)	 The Monitors feature allows for monitors to be added to Enterprise or MultiSite domains. The CathexisVision Carbon Monitor (also known as the Video Wall Manager) is a separate desktop application. Monitors Video Wall Clear Identify Mimic video mode: No video, Single frame, Stream Maximise or restore panels Change template Add or change cameras (resources) Add multiple cameras using auto layout selection Add multiple cameras using auto add selection Open camera group
	Create Video Wall	 Open saved layout Open saved map Add video wall Add resources to video wall Delete video wall
Manage Video Walls	View Video Wall	Quick access to single monitor control
	Control Monitor	 Add or change a monitor camera Copy a layout into a monitor Add a camera group to the monitor
	Edit Video Wall	Adjust the size and position of mimic monitors within the Video Wall

2.11 Alarms (MultiSite and Enterprise)

Features/Abilities

General	Alarms are available in MultiSite and Enterprise installations.
General	There are two options: Open alarms and Alarm report.
	Alarms listed in the Open alarms panel can be filtered according to the
	following parameters:
	o Sync filters
Filters	o Text filter
Filters	 Open alarms belonging to the user
	 A specified user
	 A specified domain
	 A specified alarm





		(Critical priority alarms
			High priority alarms
			Medium priority alarms
			Low priority alarms
		C	New alarms
			Assigned alarms
			Active alarms
			Alarm tags
		• C	pen alarms can be sorted by the following categories:
			Alarm priority
			> Key
			Time
			> Alarm
			Priority Priority
Open	On an Alamas		Domain Domain
Alarms	Open Alarms		Description
			Owner Owner
			State State
			Tags
			Trigger time
			Arrival time
		• A	larms can be previewed.
			ight-clicking an alarm entry and selecting Handle Alarm will open
			he Alarm Viewer.
			- Resources, Bookmarks, Layouts, or Cameras with Activity.
			- Select template, open template editor, or remove template.
			- Actions: Switch all feeds to live, review all live feeds,
			pause/unpause all feeds, or clear all panels.
			- Open Archive builder.
			- Open or add bookmarks.
	Right-click		- Save a layout.
	Options		- Save a layout Send/cast a layout to a monitor.
	Options		- Open Black Screen Monitor.
			- Make monitors panel full screen.
			- Settings Menu: Resource view editor, Monitoring tab settings,
			Live streaming stats.
			Alarm Information:
			- Switch between Resources and Procedures.
			- Search alarms.
			- Add a camera to the viewing panels
			- Alarm information will be listed.
		• A	ssign to Me
			Assign the alarm to the current users.





		 Remove one's ownership of the alarm.
		Close
		 Close alarm.
		• Tags
		 Add a tag to an alarm.
		 Select a tag: False alarm, Thief, or other.
		Choose columns
		○ Key
		o Alarm
		 Trigger time
		o Domain
		o Owner
		○ Tags
		o Time
		o Priority
		o Arrival time
	Further	 Description
	Options	o State
	·	View new alarms
		o Filter new alarms
		Collapse new alarms panel
		Live preview
		 Filter new alarms
		Collapse live preview panel
		 Change number of columns in live preview panel
		 Icon shows time elapsed since alarm began
		Table view lock
		Scroll up and down table
		Alarms listed in the Alarms panel can be filtered according to the
		following parameters:
		o Templates
		o Text filter
		Specified time period
		A specified user
	Filters	A specified domain A specified plants
Alarm		A specified alarmAlarm tags
Report		o Priorities
		Alarm states
		Set maximum number of results shown
		Collapse filters panel
		Reset entire filter panel to default state
		Open alarms can be sorted by the following categories:
	Alarms	Key
		o Time



	o Alarm
	o Priority
	o Domain
	 Description
	o Owner
	o State
	o Tags
	o Trigger time
	o Arrival time
	Alarm Viewer.
	Add tags.
	Refresh alarm report
	Choose columns
	о Кеу
	o Alarm
	 Trigger time
	o Domain
	o Owner
	○ Tags
	o Time
	o Priority
Further	o Arrival time
Options	o Description
	○ State
	Export
	o PDF or CSV
	o A3 or A4
	 Page orientation (portrait or landscape)
	Manage report templates
	o Edit template
	 Search report templates
	o Add new template
	Scroll up and down table



3. Conclusion

Note: This white paper was designed to cover the features and abilities of Carbon 5.

For more information about CathexisVision, consult the CathexisVision Operator's Manual and the CathexisVision Setup Manual (https://cathexisvideo.com/).

For technical support, email support@cathexisvideo.com.

USEFUL LINKS

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

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