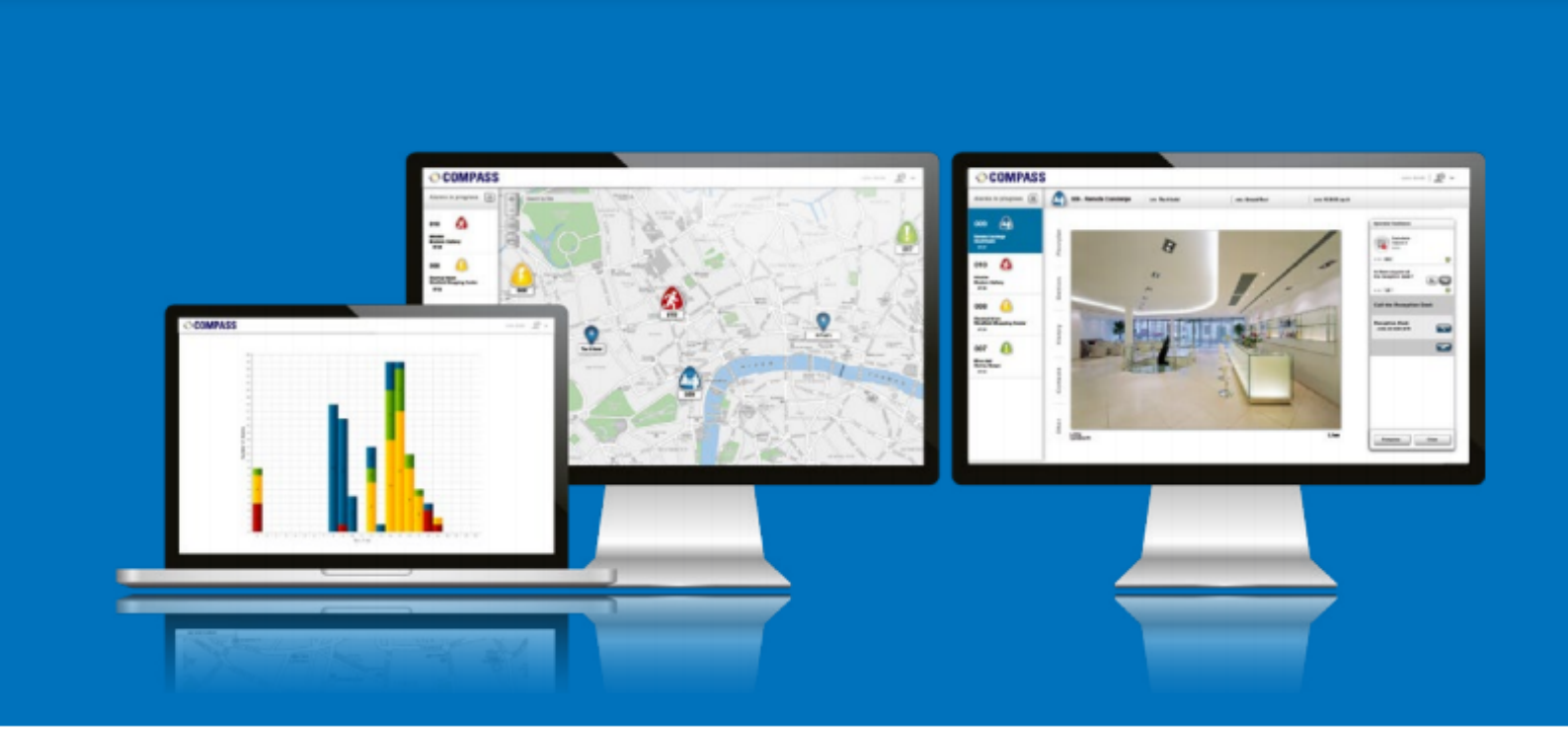

Motorola Solutions Compass Decision Management System™

Avigilon Control Center

Driver Version 1.8.x

Integration Guide

Part Number 354160

COMPASS™
DECISION MANAGEMENT SYSTEM

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Please contact the Compass Tech Support team at compasstechnicalsupport@motorolasolutions.com with any suggested corrections and/or improvements to this manual.

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1 About This Guide

This guide is written for users of the Motorola Solutions Compass Decision Management System™. It provides installation and configuration information for the system variants, as well as a description of the hardware and specifications.

Please ensure you read the instructions provided in the guide before using the system.

1.1 Safety notices

This guide uses the following formats for safety notices:

WARNING

Risk of serious injury or death!

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Caution

Risk of injury!

Indicates a hazardous situation which, if not avoided, could result in moderate injury, damage the product, or lead to loss of data.

Notice

Indicates an important situation which, if not avoided, may seriously impair operations.

Additional information relating to the current section.

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2 Supported versions

The Avigilon Control Center driver is supported on Motorola Solutions Compass Decision Management System™ version 2.2.7.x and later.

> **Notice**
>
> For more information about the supported Avigilon Control Center versions, refer to Compass release notes.

2.1 Supported cases

The Motorola Solutions Compass Decision Management System™ supported cases are given in Table 1: Supported cases.

Table 1: Supported cases

Supported	Unsupported
Automatic creation of logical devices	Digital inputs and outputs
Get live and recorded video	High definition stream management (HDSM)
PTZ commands	ACC failover solution
Get live snapshots	Using webhooks on ACC Linux appliances
Get recorded snapshots	
Video Search snapshots (FastRec snapshot)	
Receiving alarms using webhook mode	

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3 Before you begin

Before you begin, make sure you have completed the requirements given in Table 2: Pre-installation checklist.

Table 2: Pre-installation checklist

Requirement	✓
A running instance of the Avigilon Control Center Server with a Standard or Enterprise version license.	☐
A running instance of the Avigilon Web Endpoint API.	☐
IP access to the Avigilon Control Center server.	☐
Valid administrator credentials to the Avigilon site.	☐
An installation of Avigilon Control Center client for the configuration of alarms.	☐
An Motorola Solutions Compass Decision Management System™ installation.	☐
A Compass driver for Avigilon Control Center downloaded.	☐
Time sync between Compass and Avigilon Control Center servers.	☐
A valid Compass license for the driver.	☐
All cameras are configured to use the H264 codec.	☐

Notice

Only Standard and Enterprise versions are compatible with Compass.

The version can be verified in the administration panel of the Avigilon Control Center Client application.

Notice

Install the Avigilon Control Center Client Web Endpoint Service 7 from https://support.avigilon.com/s/?language=en_US.

Notice

The Compass server should have a certificate issued by a trusted CA. Webhooks don't work with self-signed certificates.

4 Configuration in Avigilon Control Center

You must configure users in Avigilon Control Center before you can configure Motorola Solutions Compass Decision Management System™.

4.0.1 Avigilon Control Center user settings

To use Compass with Avigilon Control Center you must enable user inactivity timeout and set to 1 hour.

> **Notice**
>
> User settings are mandatory.

To enable inactivity timeout in Avigilon Control Center, do as follows:

1. Go to ***Site Setup***.
2. Select the site, then select ***Users and Groups***.

   The ***Users and Groups*** window opens.
3. Select the user to edit and select ***Edit User***.

   The ***Add/Edit User*** window opens.
4. Check the ***Enable login timeout*** check box and set ***Idle Time*** to 1 hour, refer to Figure 1.
5. Click ***OK***.

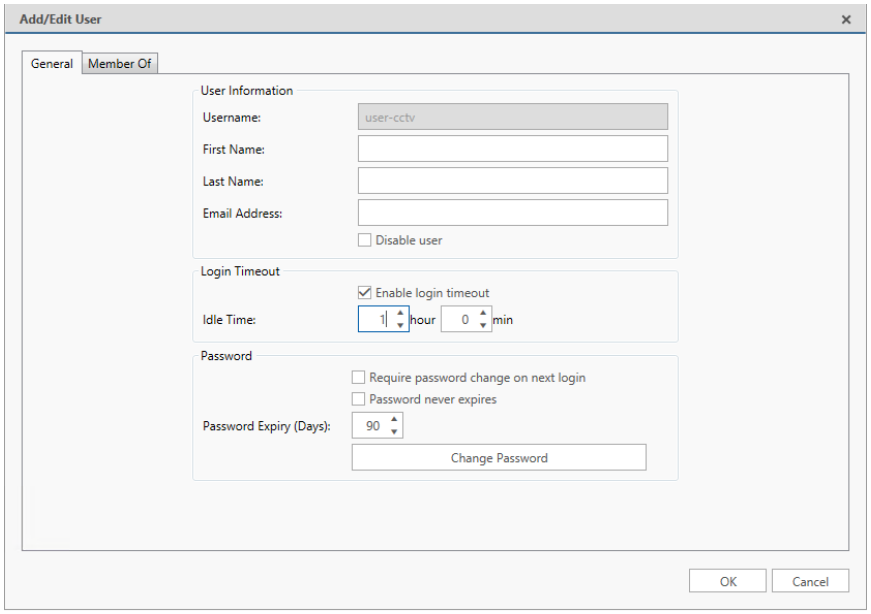

Figure 1: Avigilon Control Center set idle time

4.0.2 Configure alarms in Avigilon Control Center Client

To create an alarm in Avigilon Control Center, do as follows:

1. In Avigilon Control Center Client, select ***Alarms***.

   The ***Alarms*** configuration window opens.

2. Select ***Add*** to configure a new alarm.

   The ***Add Alarm*** window opens.

3. Choose which video analysis will be used, for example, motion, or person detection, and which cameras will be used as alarm trigger sources.
4. Check the ***Auto-acknowledge alarm when motion stops*** check box.
5. Choose which cameras will be used with the alarm.
6. Click ***Next***.
7. Configure the alarm recipients:
   a. Select ***Add Recipients...***.
   b. Select the users that will be notified when the alarm is triggered.
   c. Click ***Next***.
8. Click ***Next***.
9. Name the alarm.

10. From the dropdown, select the alarm priority level.
11. From the dropdown, set the alarm schedule to ***Always***.
12. Check the ***Enable alarm*** check box.
13. Click ***Finish***.

    The alarm setup is complete.

Notice

You can create multiple alarms. You must do step thru step for each alarm that you will configure in Compass.

Notice

Enable alarm must be checked to allow Avigilon Control Center to send alarms to Compass Control Center.

Notice

You must add at least one alarm recipient and camera associated with the alarm.

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5 Configuration in Compass

Before configuration, the appropriate driver must be installed. To do this, you must install Avigilon Control Center driver.

1. Run ***Setup - driver-avigilonacc_<driverversion>.exe***.
2. Accept the License Agreement and select ***Next***.
3. If necessary, specify the Streamer IP address and port, and select ***Next***.
4. If necessary, specify the Service Adapter IP address and port, and select ***Next***.
5. Select ***Install***.
6. Specify the Instance Manager IP address, then select ***Next***.
7. Select ***Yes*** to close the ***Setup*** dialog.

   The installation will now run and when completed successfully the completed window will be displayed.
8. Select ***Finish*** to exit setup.

5.1 Device configuration

After the driver is installed, it must be configured in Compass as a global device. To configure a driver, do as follows:

> **Notice**
>
> Use an account with configuration privileges to log in.

1. In Compass, log in to ***product configuration*** .
2. Access the ***Global Devices Menu***.
3. Use the ***PLUS*** button to create a new global device.
4. In the ***Create global device*** window, do as follows:
   a. Set the ***Name*** as Avigilon.
   b. Set the ***Brand*** as Avigilon.
   c. Set the ***Model*** as Core 2.5.

Notice

Name, ***Brand*** and ***Model*** are mandatory fields.

5. In the ***CONNECTION DATA*** section and in the ***OPTIONAL PROPERTIES*** section fill in the necessary information and press ***Save***.

   The Avigilon parameters are given in Table 3: Avigilon Control Center parameters and Figure 2.

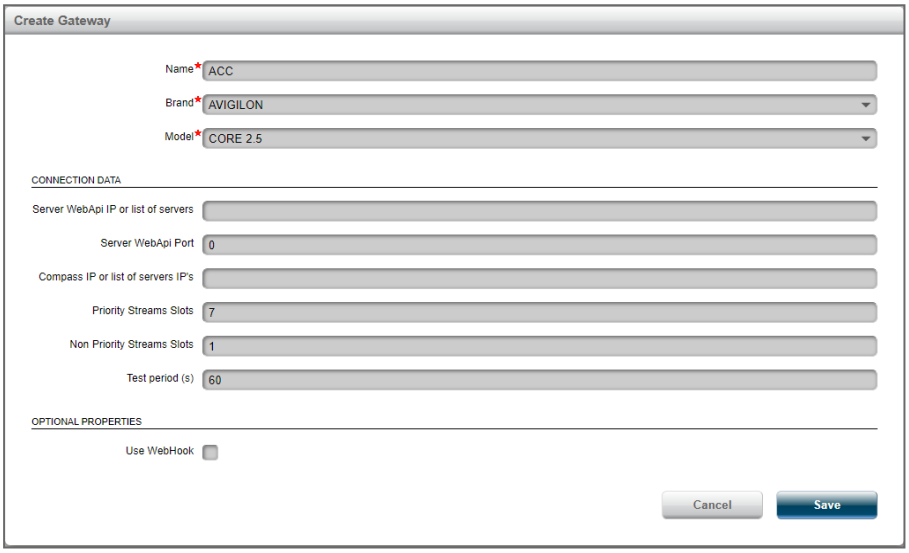

Figure 2: Avigilon Control Center parameters

Table 3: Avigilon Control Center parameters

Parameters	Description
Server WebApi IP or list of servers	The IP address of the running installation of Web Endpoint API If Avigilon Control Center is configured with failovers, separate them with a semicolon. For example: 1.1.1.1; 2.2.2.2
Server WebApi Port	The port number `8443` (Avigilon Control Center Standard and Enterprise installed on Windows Server) `443` (Avigilon Control Center Standard and Enterprise installed on Linux Server)

Parameters	Description
Compass IP or list of servers IP's	The IP address of the running installation of Compass If Compass is configured with failovers, separate them with a semicolon. For example: 1.1.1.1; 2.2.2.2
Priority Streams Slots	The number of priority stream slots The default value is `7`
Non Priority Streams Slots	The number of non priority stream slots The default value is `1`
Test period (s)	Time between Web Endpoint API testing
Use WebHook	Select this check box if you want the driver to receive alarms by webHooks instead of connecting directly to Avigilon Control Center

Tip

Priority Streams Slots are reserved for live video, for example, alarms and video recording. To learn more about stream slots, refer to the User Manual.

Tip

Non-Priority Streams Slots are reserved for pre-alarm processing. To learn more about stream slots, refer to the User Manual.

Tip

If you want to receive alarms using webhook mode, make sure that Compass is running with a certificate issued by a trusted CA.

6. For each Avigilon site, an Compass site must be mapped within the global device configuration interface. Select ***New***.

   The ***New site mapping*** window opens.

Notice

A Control site mapping must be created to control the connection to the Web Endpoint API. A technical generic detector is automatically created.

7. Choose which Compass site the Avigilon site will be added to.

8. Click ***Save***.

Tip

You can map to an existing Compass site, or create a new site.

5.1.1 Uninstall driver

Notice

Make sure there are no devices associated with the driver you want to uninstall.

Notice

Before you start the uninstall procedure, make sure the instance manager and the driver are running.

To uninstall a driver, do as follows:

1. Access the folder of the driver you want to uninstall.

   Default path: *Compass folder/drivers/<DriverFolder>*.
2. From the driver folder, run *unins000.exe* with admin privileges.
3. Select *Yes*.
4. If there are no devices configured that use the driver you want to uninstall, select *Yes*.
5. In the pop-up window confirming the driver was uninstalled successfully, select *OK*.

5.1.2 Update driver

Notice

To update the driver, you need a new installer/updater.

Notice

Running an installer/updater of a driver version that is already installed does not take any effect.

Notice

Before you start the update procedure, make sure the instance manager and the driver are running.

To update a driver, do as follows:

1. Run ***Setup-driver-aviglonacc_driver_version>.exe***.
2. Accept the License Agreement and select ***Next***.
3. Select ***Install***.
4. Specify the Instance Manager IP address and select ***Next***.
5. Select ***Yes*** to close the setup dialog.

   When the installation is successful, a completion window is displayed.
6. Select ***Finish*** to exit setup.

5.1.3 Map to an existing site

To map to an existing Compass site, do as follows:

1. From the dropdown, select the site to map to.
2. Enter the parameters given in Table 4: Compass site mapping parameters.
3. If necessary, select the check boxes:
   - ***Acknowledge when alarm is received***: Select this check box if you want Compass to inform Avigilon Control Center that the alarm was received.
   - ***Acknowledge when alarm is cleared***: Select this check box if you want Compass to inform Avigilon Control Center that the alarm was cleared.

   

   Notice

   It is not mandatory to check the checkboxes. You can check one or more.
4. Select ***Save***.

Table 4: Compass site mapping parameters

Parameter	Description
Site Name	The name of the site in the Avigilon Control Center, exactly as it appears in the Control Center Client application
User	The default username
Password	The default password
Time to retrieve alarms before startup (min)	Determines how often the data is retrieved (in minutes)

5.1.4 Map to a new site

If you do not have an existing Compass site, you must map to a new site. To map to a new Compass site, do as follows:

1. From the dropdown, select ***Create new site***.
2. Enter the parameters given in Table 5: Compass site mapping parameters.

Table 5: Compass site mapping parameters

Parameter	Description
Site Name	The name of the site in the Avigilon Control Center, exactly as it appears in the Control Center Client application
User	The default username
Password	The default password
Time to retrieve alarms before startup (min)	Determines how often the data is retrieved (in minutes)

Notice

The recommended alarms polling period configuration is 60000 ms. This can be decreased to process a higher volume of data, but will increase the number of resources used.

3. If necessary, select the check boxes:
   - ***Acknowledge when alarm is received***: Select this check box if you want Compass to inform Avigilon Control Center that the alarm was received.
   - ***Acknowledge when alarm is cleared***: Select this check box if you want Compass to inform Avigilon Control Center that the alarm was cleared.

Notice

It is not mandatory to check the checkboxes. You can check one or more.

4. Select ***Save***.

   The ***New Site*** window opens.
5. Select Static site or Mobile site.
6. Enter the site Name.

7. Select ***Save***.

   The ***Create Logical Devices automatically*** dialog opens.

Figure 3: New Physical device associated to the Global device

6 Alarms

An alarm is an occurrence that must be verified by an operator. An alarm can originate in a device or system, Motorola Solutions Compass Decision Management System™ or the Operator (Alarm On-demand).

In Avigilon Control Center, alarms can have the following status change events:

- ACKNOWLEDGED
- TRIGGERED
- PURGED
- CLAIMED
- UNCLAIMED

6.1 Configure alarms

> **Notice**
>
> Alarms must be configured one at a time.

To configure alarms, do as follows:

1. Access ***Configuration***.
2. Select ***Sites***.
3. Select ***Select your site***.
4. Select ***Alarms***.
5. In the search field, search for `Avigilon`.

   All available Avigilon alarms are shown.
6. Configure the alarms you want to receive.

6.2 Alarms triggered by the driver

Alarms can be triggered when the driver condition changes, refer to Table 6: Alarms triggered by drivers.

Table 6: Alarms triggered by drivers

Condition trigger	Compass alarm type
Connection lost	ALARMSENSOR_CONNECTION_LOST
Connection OK	ALARMSENSOR_CONNECTION_RESTORED

7 Firewall requirements

When setting up a network of Motorola Solutions Compass Decision Management System™ equipment that includes firewalls, the following information should be used to configure the firewalls.

The integration between Avigilon and Motorola Solutions Compass Decision Management System™ is made through Web Endpoint API with REST protocol. Refer to Table 7: Firewall requirements.

Table 7: Firewall requirements

Brand/model	Description	Source	Destination	Protocol/port
Avigilon ACC	Live/recorded video and alarms	ACC	Compass Server	TCP/8443 *
Avigilon ACC	Live/recorded video and alarms	ACC	Compass Server	TCP/443 **

* Windows only
** Linux only

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8 Frequently asked questions

Examples of Motorola Solutions Compass Decision Management System™ frequently asked questions are given in Table 8: Compass frequently asked questions.

Table 8: Compass frequently asked questions

Issue	Solution
How do I record streaming video?	Open the Avigilon Control Center Client and check to make sure that it is possible to get recorded video from the camera you are testing.
How do I live stream video?	Access Avigilon Control Center, then open a live stream with VLC and Onvif Device Manager.
Compass fails to log in to Avigilon Control Center	Use the username and password for Compass to log in to the Avigilon Control Center client. Sometimes the password can expire.
My problem isn't listed	Repeat the steps in Avigilon Control Center. See "Supported versions" on page 3. If what you want to do is not available, contact your Compass reseller.

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9 Troubleshooting

When you use Motorola Solutions Compass Decision Management System™ it can be necessary to carry out troubleshooting.

9.0.1 Establish a connection with Web Endpoint API

You can use a browser or command prompt to test your connection with Web Endpoint API

To test Web Endpoint API with your browser, do as follows:

1. Open a browser window.
2. Access the URL `https://<ip>:<port>`.

   The expected result is shown in Figure 4.

Figure 4: Web Endpoint API web browser troubleshooting result

To test Web Endpoint API with command prompt, do as follows:

1. Open the ***Windows Start*** menu and type `cmd`.
2. Alternatively, use the shortcut `Windows` + `R` and type `cmd`.
3. Execute the following command:

   `telnet <IP Address> <PORT>`

   The expected result is shown in Figure 5.

Figure 5: Web Endpoint API command prompt troubleshooting result

9.0.2 Verify Avigilon Control Center Site Logs for errors

Avigilon Control Center events that result in an error can have an effect on Compass, for example, connection failures, service restarts, or failed login attempts.

To verify the Avigilon Control Center Site Logs for errors that can impact Compass, do as follows:

1. Start Avigilon ACC Client.
2. Login to the affected site.

> **Notice**
>
> Use an account with configuration privileges to log in.

3. Open ***Site Logs***.
4. Search for events that can have an impact on Compass.
5. If any events are present, fix them and check if the issue has been resolved in Compass.

9.0.3 PTZ cameras

Represented by  , Pan, tilt and zoom (PTZ) cameras allow large areas to be monitored by a single camera.

9.0.4 Move a PTZ camera

If you are unable to move a PTZ camera, do as follows:

1. From the Compass interface, select ***Configuration***.
2. Access the ***Global Devices*** menu.
3. Select the applicable site.

   The site menu opens.
4. Select ***Logical Devices*** and search for the camera.

   All cameras associated with the site are shown. Refer to Figure 6.

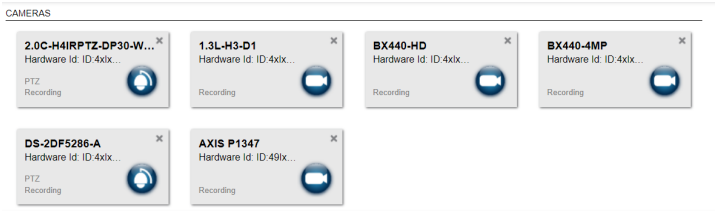

Figure 6: Physical devices cameras

9.0.5 PTZ camera created incorrectly

If you have a PTZ camera but it was not created as one, do as follows:

1. Access the Onvif Device Manager.
2. Connect to your camera.
3. Check to make sure that the cameras has a PTZ control.
4. If the camera has a PTZ control but was not created as a PTZ camera, delete the camera and refresh your devices.
5. If the problem continues, contact your administrator.

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10 Other tools

Avigilon Control Center uses various tools to integrate with Motorola Solutions Compass Decision Management System™.

Processexp

Proccessexp is available in the ***Compass tools*** folder. The primary function is to list all system processes.

Baretail

The primary function of Baretail is to show driver logs. To determine the driver, do as follows:

1. From Compass, select ***Configuration***.
2. Select ***System Status***.
3. Select ***Agents***.
4. Expand the agents to find which driver is used by your device.