AI Appliance 1 to AI Appliance 2 Upgrade Kit

Installation Guide

VMA-AIA1-CG1-UPGK VMA-AIA1-CG2-UPGK

For

VMA-AIA1-CG1 VMA-AIA1-CG2

© 2022, Avigilon Corporation. All rights reserved. AVIGILON, the AVIGILON logo, AVIGILON are trademarks of Avigilon Corporation. Intel is a trademark of Intel Corporation or its subsidiaries in the U.S. and/or other countries. Other names or logos mentioned herein may be the trademarks of their respective owners. The absence of the symbols ™ and ® in proximity to each trademark in this document or at all is not a disclaimer of ownership of the related trademark.

This document has been compiled and published using product descriptions and specifications available at the time of publication. The contents of this document and the specifications of the products discussed herein are subject to change without notice. Avigilon Corporation reserves the right to make any such changes without notice. Neither Avigilon Corporation nor any of its affiliated companies: (1) guarantees the completeness or accuracy of the information contained in this document; or (2) is responsible for your use of, or reliance on, the information. Avigilon Corporation shall not be responsible for any losses or damages (including consequential damages) caused by reliance on the information presented herein.

Avigilon Corporation
avigilon.com

20221109

Table of Contents

Introduction 4

Before You Start 4

Confirm Package Contents 4

Required Tools 5

Installing the AI Appliance Upgrade Kit 6

Opening the AI Appliance 6

Removing the Original GPU Card 10

Replacing the Original GPU Card 11

Installing the Second GPU Card (VMA-AIA1-CG2-UPGK only) 12

Replacing the Support Label 14

Reattaching the Cover 15

Upgrading the AI Appliance Firmware 16

Confirming the Installation 17

Reconfiguring Analytics Settings 18

For More Information 19

Introduction

Avigilon provides two upgrade kits to upgrade either first-generation AI Appliance 1 model (VMA-AIA1-CG1 or VMA-AIA1-CG2) to its equivalent second-generation AI Appliance 2 model (VMA-AIA2-CG1 or VMA-AIA2-CG2). These kits provide a cost-effective way to upgrade your already deployed AI Appliance 1 model and take advantage of Avigilon's Next Generation Video Analytics and face recognition.

Before You Start

To upgrade:

- An AI Appliance VMA-AIA1-CG1 model, use the upgrade kit with part number VMA-AIA1-CG1-UPGK
- An AI Appliance VMA-AIA1-CG2 model, use the upgrade kit with part number VMA-AIA1-CG2-UPGK

Note: If the AI Appliance is an operating part of your security system, be aware that it must be shut down to complete this procedure.

Be aware of the following limitations:

- The site to which the AI Appliance is connected must be using the ACC software Release ACC 7.12.4 or later before the AI Appliance Upgrade Kit is installed.
- All the analytics settings configured on the AI Appliance are not retained. After the upgrade is completed, you must reconfigure the following:
    - Analytics events
    - Site rules that depended on these now non-existent analytics events
    - Alarms that depended on these now non-existent analytics events
    - Analytics self-learning progress

After the upgrade, new analytics features will be available on the AI Appliance:

- Face Mask Detection
- Face Recognition

These are in addition to the Classified Object Detection and Appearance Search features available on the AI Appliance 1 models.

The camera settings for Classified Object Detection and Appearance Search set in the Server Analytics tab are retained. After the upgrade, you will be able to enable the video feeds from non-analytics cameras to be processed for these two analytics as well.

Confirm Package Contents

Confirm that the kit you are installing contains the following:

	VMA-AIA1-CG1-UPGK	VMA-AIA1-CG2-UPGK
GPU	1 x Nvidia Quadro RTX 4000	2 x Nvidia Quadro RTX 4000
Cables	1 x GPU Power Cable	2 x GPU Power Cable
USB	USB with firmware upgrade package	
Label	Avigilon Support Label Sticker with upgraded part number	

Required Tools

The following tools are not included in the kit package, but are needed to complete the installation:

- Phillips #2 screwdriver

Important: It is recommended that you always use an antistatic mat and antistatic strap while working on components inside the system.

Installing the AI Appliance Upgrade Kit

Before starting to install the kit:

1. Shut down the AI Appliance. Press the power button on the front panel, and wait for the light to stop blinking to indicate shutdown is complete.

   WARNING — Opening or removing the system cover while the system is powered on may expose you to a risk of electric shock.

2. Disconnect all network, power and peripheral cables from the AI Appliance.
3. After the AI Appliance is unplugged, press and hold in the power button for 20 seconds to flush power out.
4. If applicable, remove the system from the rack.

   Important: Whenever you need to lift the system, get others to assist you. To avoid injury, do not attempt to lift the system by yourself.

Install the kit components in the following order:

Opening the AI Appliance 6

Removing the Original GPU Card 10

Replacing the Original GPU Card 11

Installing the Second GPU Card (VMA-AIA1-CG2-UPGK only) 12

Replacing the Support Label 14

Reattaching the Cover 15

Upgrading the AI Appliance Firmware 16

Confirming the Installation 17

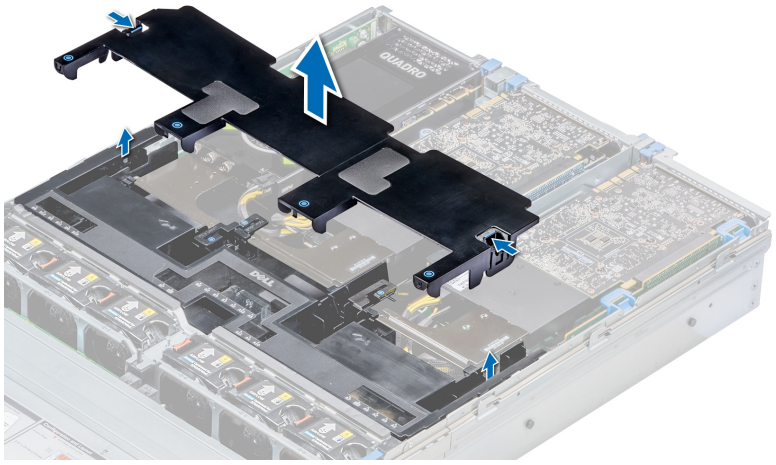
Reconfiguring Analytics Settings 18

Opening the AI Appliance

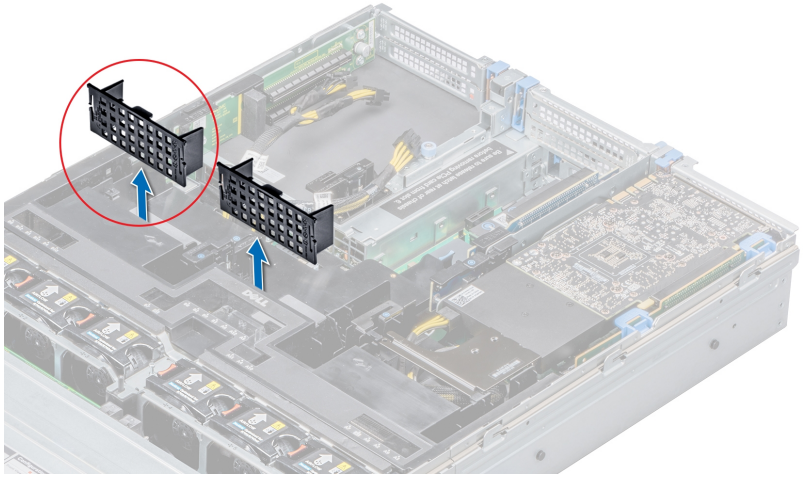
1. At the top of the AI Appliance, unlock the latch release then lift and rotate the latch towards the back of the unit. The cover slides back and is released from the body.

   Tip: Use a Phillips #2 screwdriver to remove the shipping screws before unlatching the cover if you are removing the cover of an AI Appliance for the first time.

2. Release and remove the top part of the air shroud by pressing in the clips, then holding it at both ends and lifting it away from the system.



3. AIA CG2 Only. Remove and discard the shroud filler for riser 3 only (the outer riser, circled in red in the diagram below) from the GPU air shroud slots.



Ensure that the PCIe card holder latches on GPU air shroud and risers are closed before installing the GPU.

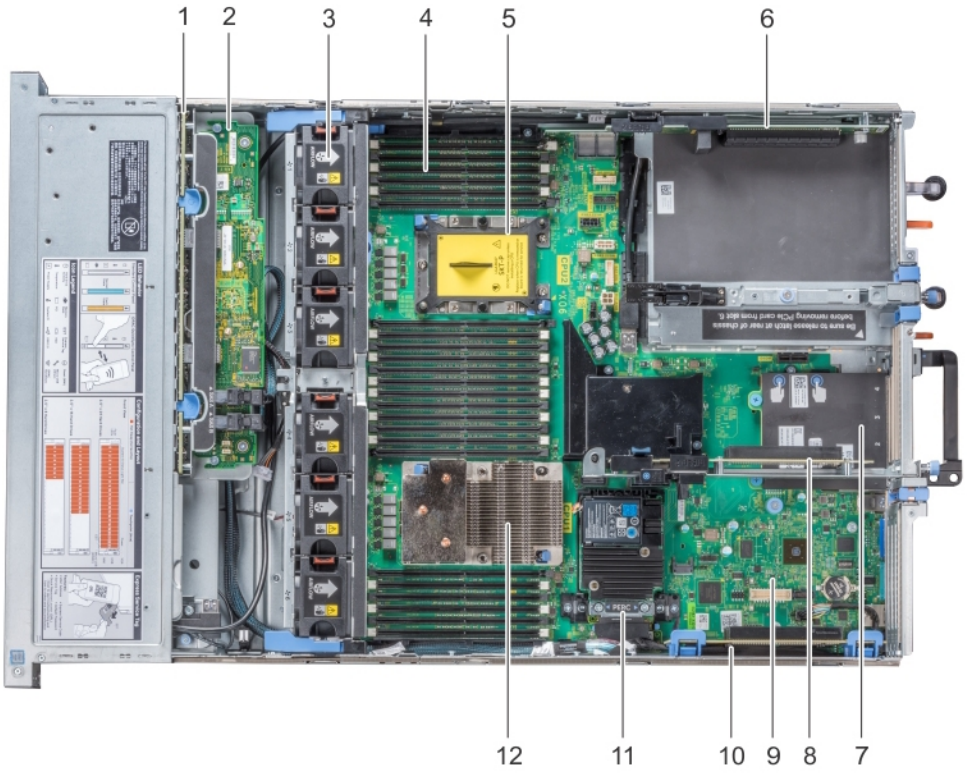
4. View the interior of the AI Appliance and identify the locations where the components of the kit will be installed.

   The view below shows the details of an AI Appliance with all of the covers and cards removed, and important components labeled with numbers.

   Important: The view below does not show the pre-installed cards in slot 1 of Expansion Card Riser 1 (labeled 10 in the diagram) and slot 7 of Expansion Card Riser 3 Slot 7 (labeled 6 in the diagram).

   The components affected by the AI Appliance upgrade kit are:

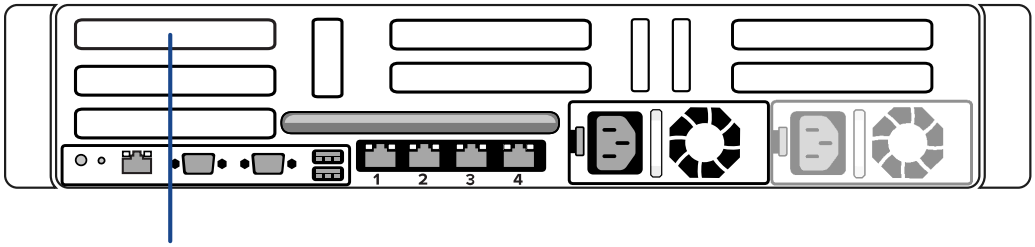
   - 10—Expansion Card Riser 1
     The first or only RTX 4000 GPU card replaces the original GPU card in Slot 1 of this riser.
   - 6—Expansion Card Riser 3
     - The BOSS card in slot 7 of this riser needs to be removed to install the second RTX 4000 GPU card and then reinstalled.
     - The second RTX 4000 GPU card is installed in Slot 8 of this riser.



Note: The other components pointed out in the diagram are not affected by installing the AI Appliance Upgrade Kit.

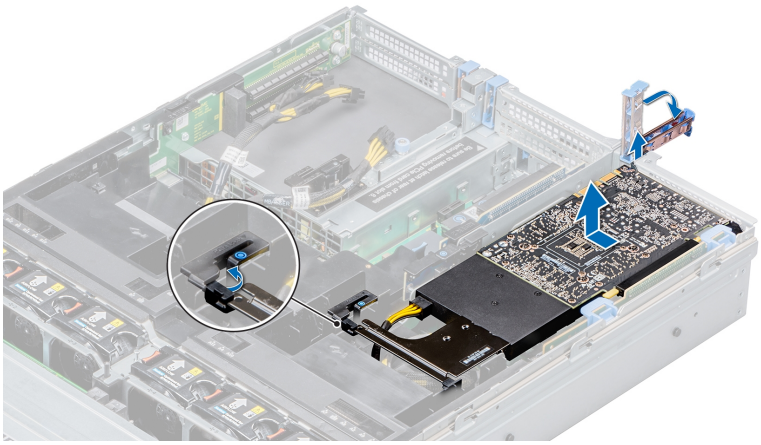
Removing the Original GPU Card

1. From the back of the AI Appliance, locate where the original GPU card is installed.



GPU 1: Riser 1 PCIe Slot 1

2. Lift the expansion card latch to release the slots in expansion riser 1.
3. Disengage the PCIe card holder latch on the GPUcard.
4. Hold the GPU by its edges and slide out the GPU at an angle to release it from the connector on the riser.



5. Disconnect the GPU power cable from the GPU and system board.

> **Note:** The card in this illustration does not match the appearance of the actual card installed in slot 1.

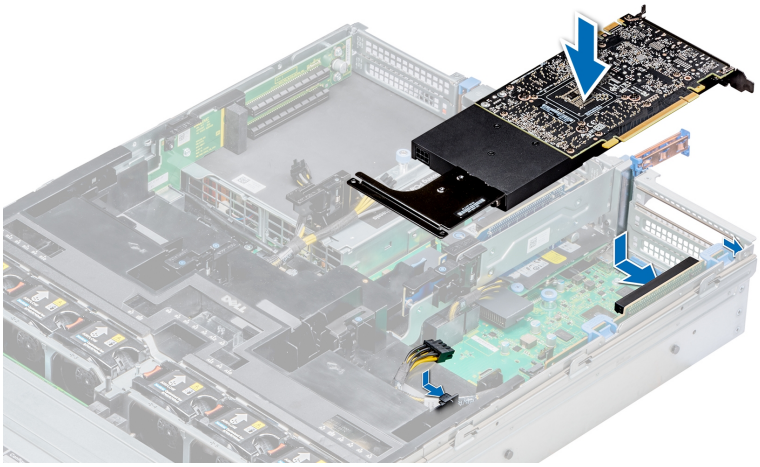
The original GPU is no longer needed, and can be safely redeployed for another use.

Replacing the Original GPU Card

After the original GPU is removed, install the new GPU card in the same slot to replace the original card.

1. Unpack the GPU card and prepare it for installation.
2. Connect the GPU power cable to the connector on riser 1 and route the cable through the slot on the GPU air shroud.
3. Connect the 8-pin power connector on the other end of the GPU power cable to the GPU.
4. Ensure the expansion card latch is still lifted.
5. Align the connector on the GPU with the connector for slot 1 on the riser.
6. Insert the GPU into the riser until it is fully seated.
7. Press the PCIe lock on the GPU air shroud and riser to release the PCIe card holder latch.

   Ensure that the GPU edges are seated properly in the GPU air shroud slot and PCIe card holder latch to secure the GPU in place.



8. Close the expansion card latch to hold the cards and slot covers in place.

> **Tip:** Check that the slot covers for the empty slots are still in place after closing the expansion card latch.

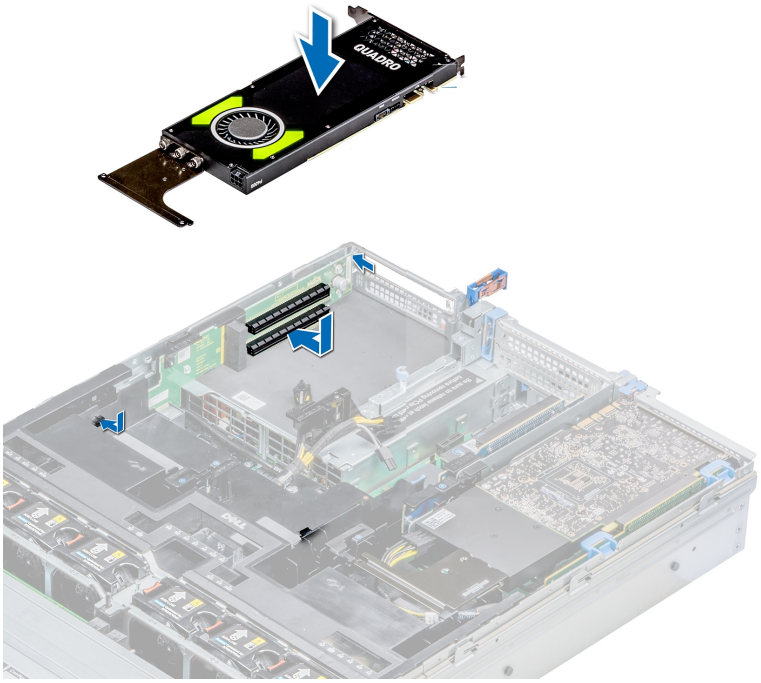
Installing the Second GPU Card (VMA-AIA1-CG2-UPGK only)

1. Unpack the second GPU card and prepare it for installation.
2. Lift the expansion card latch and remove the BOSS card in Riser 3 PCIe Slot 7 to access the empty slot below.

   Hold the BOSS card by its edges and slide it out at an angle to release it from the connector on the riser.
3. Remove the filler bracket from Slot 8.

   > **Tip:** Store the filler bracket for future use. Filler brackets must be installed in empty expansion card slots to maintain Federal Communications Commission (FCC) certification of the system. The brackets also keep dust and dirt out of the system and aid in proper cooling and airflow inside the system.

4. Install the GPU card in Slot 8:
   a. Connect the GPU power cable to the connector labeled RSR3 on the system board.
   b. Connect the 8-pin connector on the other end of the GPU power cable to the GPU card.
   c. Align the connector on the GPU card with the connector.
   d. Insert the GPU card edge connector firmly into the expansion card connector until the card is fully seated.



e. Press the PCIe lock on the GPU air shroud and riser to release the PCIe card holder latch.

   Ensure that the GPU edges are seated properly in the GPU air shroud slot and PCIe card holder latch to secure the GPU in place.

5. Reinstall the BOSS card in Slot 7, above the GPU card.
6. Close the expansion card latch to hold the cards and slot covers in place.

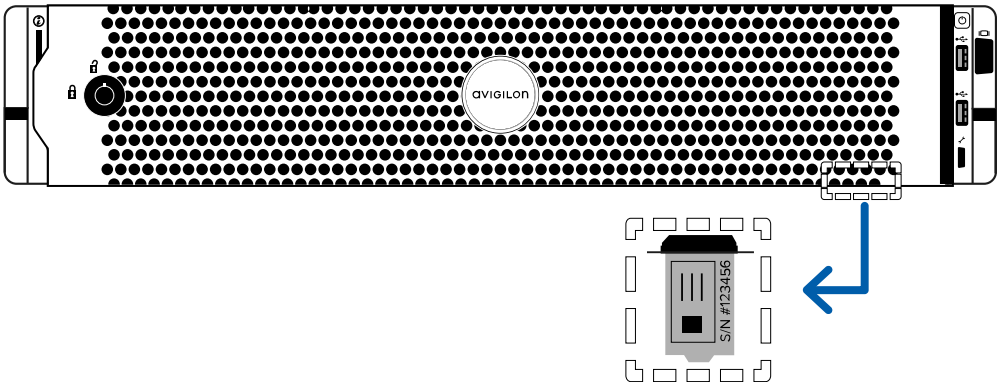
> **Tip:** Check that the slot covers for the empty slots are still in place after closing the expansion card latch.

Replacing the Support Label

You can find Identification information for the AI Appliance on the support information tag, accessed from a slide-out tab located under the lower right of the front bezel. The information on this tag includes the AI Appliance part number and serial number.

A sticker that updates the part number to VMA-AIA2-CG1A (if the VMA-AIA1-CG1-UPGK was installed) or VMA-AIA2-CG2A (if the VMA-AIA1-CG2-UPGK was installed) is included in the upgrade kit. To ensure you receive the fastest support when calling Avigilon Tech Support, we recommend applying this new sticker on your system to indicate that it has been upgraded.

1. Locate and pull out the support information tag.



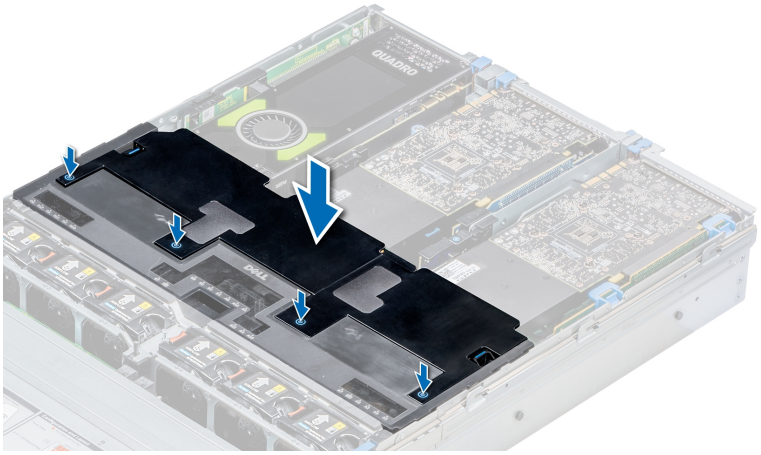
2. Peel the new sticker with the updated part number from its backing and place it over the original sticker.

   Be careful not to obscure the original serial number for the appliance, as this is needed for warranty or service purposes.

Reattaching the Cover

When all the components of the kit have been installed:

1. Ensure all expansion card latches are closed and there are filler covers for all empty slots.
2. Reinstall the top of the cooling shroud. Do not reinstall the shroud fillers.



3. Close and lock the AI Appliance cover.
4. If the AI Appliance was rack mounted and removed to install the kit, remount it into the rack.
5. Reconnect all the peripherals and cables.

> **Important:** Ensure that both of the 750W power supplies are connected to mains power. The upgraded Appliance requires both power supplies to properly function.

6. Power on the AI Appliance.

Upgrading the AI Appliance Firmware

After upgrading the analytics processing power of either AI Appliance 1 model (VMA-AIA1-CG1 or VMA-AIA1-CG2) to the equivalent AI Appliance 2 model, you must upgrade the firmware on the appliance.

> **Note:** There may be errors reported from the ACC system related to missing or unexpected GPUs after performing the hardware upgrade but prior to the firmware upgrade. The firmware upgrade corrects these issues, and adds new analytics capabilities to the AI Appliance.

On a workstation connected to the same site as the AI Appliance:

1. Insert the USB provided with the upgrade kit into a USB port.
2. Copy the firmware (`.fp`) file from the USB to a location accessible to the Server Management page.
3. On a workstation connected to the same site as the AI Appliance, start and log in to the ACC Client software.
4. Log in to the site from the System Explorer.
5. Select the AI Appliance in the System Explorer and click **Server Management** to open the device sign in page.
6. Log in to the Server Management page with the user ID `administrator` and the password for the AI Appliance system administrator.

To upgrade the firmware from the Server Management page:

1. Navigate to the Device panel.

   If necessary, scroll to show the Upgrade Firmware pane.
2. In the Upgrade Firmware pane, click on **Drop '.fp' file here or click to upload** and navigate to the location where the firmware package (.fp) file was saved.
3. Click **OK** to confirm you want to continue. An upload progress indicator appears. Wait while the file is uploaded and verified.

   > **Important:** You can cancel a firmware upgrade that is in progress only during the upload and verification phase. Click **Cancel upload** before the file has uploaded.

   After the file is verified, the firmware upgrade automatically starts. The device will reboot several times during the upgrade. The Web UI Communication Lost message appears while the device is rebooting. The one-time migration process to upgrade the AI Appliance firmware takes about 20 to 35 minutes. When the device has rebooted, the connection to the Server Management page is restored in your

web browser.

> **Note:** If an error occurs during the upload phase or the upgrade process or if the firmware becomes corrupted, you are prompted to remove the file.

Confirming the Installation

Verify the upgrade is successful:

1. Log in to the ACC Client on a workstation on the same network as the AI Appliance.
2. In the System Explorer, click **Site Setup**, and click Site to expand the site containing the upgraded AI Appliance .
3. Navigate to (or search for) the upgraded AI Appliance and click .
4. Click **Server Management**.
5. Enter the administrator credentials for the AI Appliance.
6. On the Server Management **Dashboard**, check that:
    - The status indicators on the ACC Server and System cards are green.
    - The part numbers have been updated:
        - If you installed the VMA-AIA1-CG1-UPGK to upgrade a VMA-AIA1-CG1, the updated part number is **VMA-AIA2-CG1A**.
        - If you installed the VMA-AIA1-CG2-UPGK to upgrade a VMA-AIA1-CG2, the updated part number is **VMA-AIA2-CG2A**.
    - In the **Accelerators** panel review the status information about the GPU cards installed in the appliance that are used for accelerated analytics processing.

      After installing an AI Appliance 1 to AI Appliance 2 Upgrade kit and before updating the firmware, this panel displays:
        - For the VMA-AIA1-CG1 model: 1x RTX 4000s
        - For the VMA-AIA1-CG2 Model: 2x RTX 4000s
7. Log out of the Server Management and close the panel.

> **Tip:** The site and server names in the ACC software remain the same after the firmware upgrade. If these names are unchanged from the default part numbers provided when the original appliances were installed, consider changing them in the ACC Client as well to avoid confusion about their capabilities.

Reconfiguring Analytics Settings

All of the analytics settings on an AI Appliance are reset to their default state as part of the upgrade. You will have to reconfigure the following for the AI Appliance in the ACC Client software:

- Analytics events
- Site rules that depended on these now non-existent analytics events
- Alarms that depended on these now non-existent analytics events
- Analytics self-learning progress

As well as reconfiguring events, site rules, and alarms for Classified Object Detection and Appearance Search, you can now define them for Face Mask Detection and Face Recognition.

Limited Warranty

Avigilon warranty terms for this product are provided at **avigilon.com/warranty**.

For More Information

For additional product documentation and software and firmware upgrades, visit **support.avigilon.com**.

Technical Support

Contact Avigilon Technical Support at **support.avigilon.com/s/contactsupport**.