

About A6105D PC Blade V5340 and V5320 Upgrade Kits

Introduction

This guide explains how to install

- *V5340 Host Card Upgrade Kits* (V5340 kits) and,
 - *V5320 Host Card Upgrade Kits* (V5320 kits)
- in ClearCube® A6105D PC Blades (*A6105D blade* or *A6105D* from this point forward).

Audience

ClearCube Technology, Inc. employees and Authorized Partners are authorized to install PCoIP® Host Cards in ClearCube products.

Configuration types and required host cards

The picture below shows that a

- *Quad configuration* (supporting up to four monitors) requires a V5340 host card *and* a V5320 host card
- *Dual configuration* (supporting up to two monitors) requires a V5320 host card.

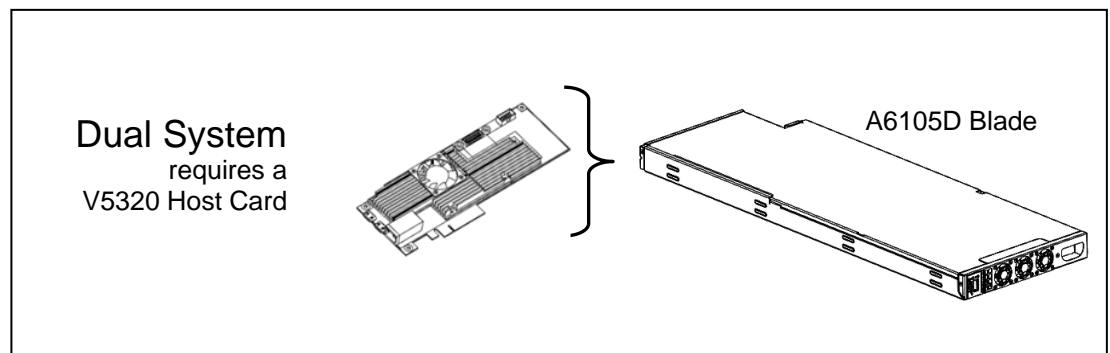
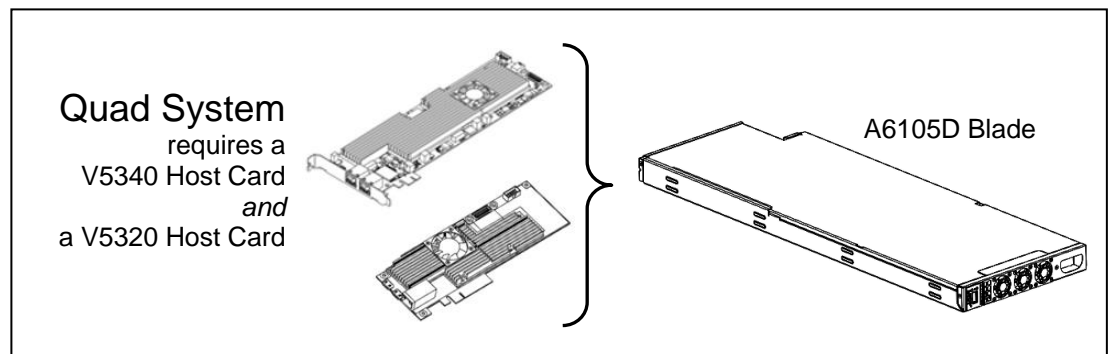


Figure 1. The host cards required for quad and dual systems

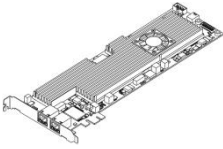




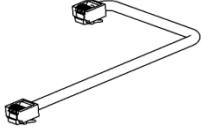
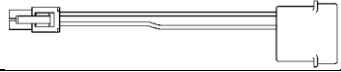
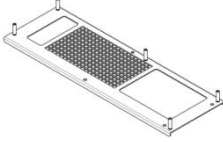

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About A6105D PC Blade V5340 and V5320 Upgrade Kits, Continued

V5340 Upgrade Kit contents

The table below shows the contents of the V5340 kit (components are not shown to scale).

NOTE: Quad systems require a V5320 Host Card and a V5340 Host Card. You must install both cards.

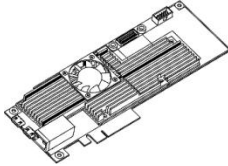
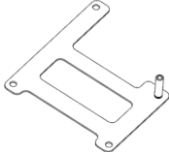
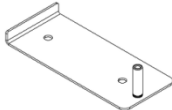
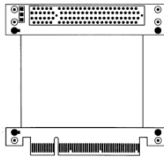



Part	Description	Pieces
	(A) V5340 Host Card	1
	(B) Pan head screw with external washer	5
	(C) Pan head screw without washer	4
	(D) Blue, twinaxial cable	1
	(E) Gray, 10-pin flat cable	1
	(F) 8.5-inch CAT5e (Ethernet) cable	1
	(G) V5340 power adapter	1
	(H) V5340 bracket	2
	(I) Video configuration label	1
	This <i>Quick Start Guide</i>	1

Continued on next page

About A6105D PC Blade V5340 and V5320 Upgrade Kits, Continued

V5320 Upgrade Kit components

The table below shows the contents of the V5320 Kit (components are not shown to scale).

Part	Description	Pieces
	(J) V5320 Host Card	1
	(K) V5320 bottom bracket	1
	(L) V5320 top bracket	1
	(M) PCIe [®] flex riser card NOTE: If the blade you are updating contains a flex riser card, ClearCube recommends using the existing flex riser card. This riser is included for systems that do not contain one.	1
	(N) Hex head screw	5
	(P) Pan head screw with external washer	2
	(R) Video configuration label	1
	This <i>Quick Start Guide</i>	1

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Process: Upgrade Overview

Introduction

Upgrading V53x0 Host Cards consists of multiple stages including

- removing firmware from a blade,
 - removing and installing upgrade kit components, and
 - installing host card drivers.
-

Process overview

The table below shows each stage in the in the process of upgrading V53x0 Host Cards in an A6105D blade.

Stage	Description
1	Remove existing GPU/graphic drivers (with associated hardware installed)
2	Open blade
3	<i>If installing a V5340 kit: Remove V5240 and bracket</i>
4	Remove V5220 and brackets
5	<i>If installing a V5340 kit: Install V5340 bracket, cables, and host card</i>
6	Install V5320 brackets, cables, and host card
7	Close blade
8	Install drivers

Additional documentation resources

The list below shows all related documentation resources.

- *PC-over-IP® Device Firmware Support and Compatibility Guide*
- *PC-over-IP System User's Guide*
- *A-Series Blade and Chassis User's Guide*
- *Operating System Image Requirements for ClearCube® Blades*

All documentation is available from ClearCube Support.

<http://www.clearcube.com/support/>



Before You Begin

Personal and product safety

Observe the following.

WARNING: Disconnect the computer's power supply from its AC power source before performing any installation steps or maintenance, including opening or moving the device. Failure to do so can cause personal injury, cause damage to devices, or both.

CAUTION: Electrostatic discharge (ESD) can damage upgrade kit components and the computer in which you are installing a kit. Be sure to wear an anti-static wrist strap to prevent ESD, or take safety measures (such as touching the anti-static bag containing the host card) before touching any components.

Firmware requirements

Ensure that host cards and zero clients

- use the same version TERA firmware
- if updating a V5340, use compatible versions of TERA and COMM firmware, and
- only use firmware from ClearCube Support.

See *PC-over-IP Device Firmware Support and Compatibility Guide* and *PC-over-IP System User's Guide* and on the ClearCube Support site for information about firmware support and for instructions about upgrading firmware.

Driver installation prerequisite

Uninstall all GPU drivers or graphics drivers before installing an upgrade kit. In dual- and quad-monitor systems, the V5320 GPU driver should be the only graphics driver on the A6105D.

NOTE: Before removing any graphics drivers, ensure that the associated hardware is installed on the blade. Many graphics drivers require that the associated hardware is present for successful removal.

Required items

Before installing the upgrade kit, be sure to have

- a Phillips screwdriver, and
 - V53x0 drivers
-

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Preparing and opening an A6105D blade

Before you begin

Be sure to observe the notes below.

NOTE: Ensure that you have removed all existing GPU and graphics drivers as described in “[Driver installation prerequisite](#)” on page 5.

NOTE: ClearCube recommends leaving all HDD SATA cables in place. If you must disconnect any SATA cables, mark them so you can easily reconnect each cable in the correct position. For more information about how SATA headers correspond to HDDs, see *A-Series Blade and Chassis User’s Guide*.

Procedure: open the blade

The table below shows how to prepare and open an A6105D blade for upgrade.

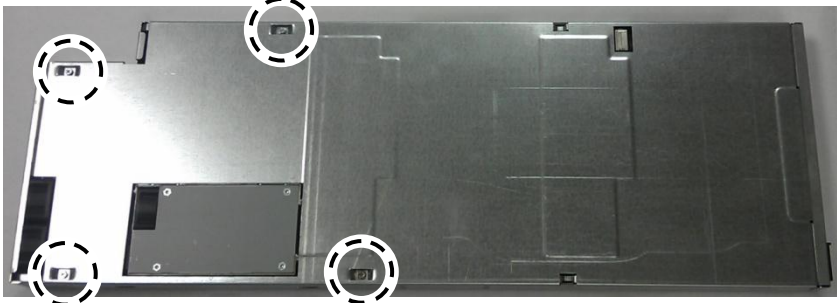
Step	Action
1	Power off the blade and remove it from the chassis.
2	Place the blade on a stable surface such as a desk or a bench so the power connector is in the upper left, and the front LCD panel is in the lower right as shown below.
3	Remove the four screws from the side of the blade. Lift the cover up and slide to the left to remove. 

Figure 2. The location of the blade cover screws

Next steps:

If you are installing a ...	Then ...
V5340 Upgrade Kit	Continue to “ Removing V5240 Host Card and Brackets ” on page 7.
V5320 Upgrade Kit	Continue to “ Removing V5220 Host Card and Bracket ” on page 9.

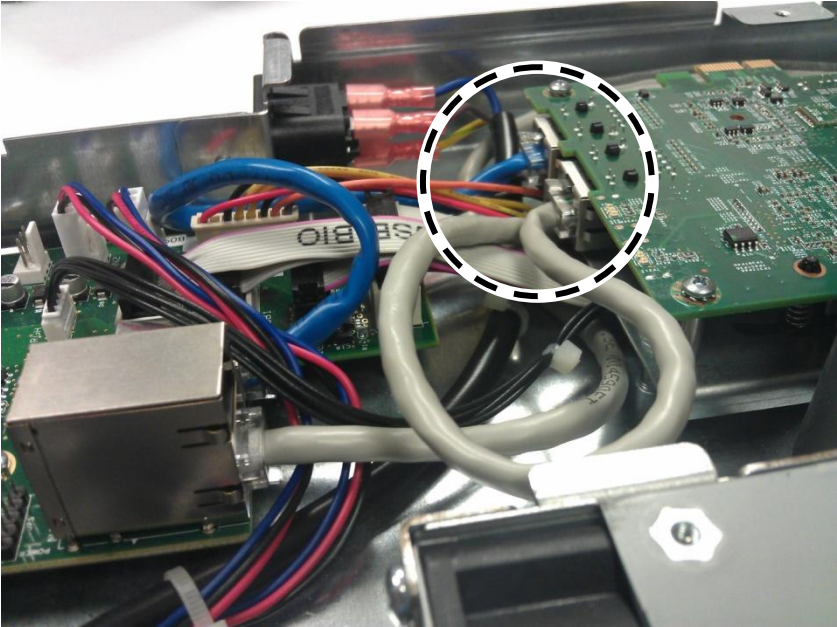
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Removing V5240 Host Card and Brackets

Procedure:
removing the
V5240 Host
Card

This procedure assumes you have removed all graphics drivers and performed the steps shown in the previous section. The table below shows how to remove a V5240 Host Card from an A6105D blade.

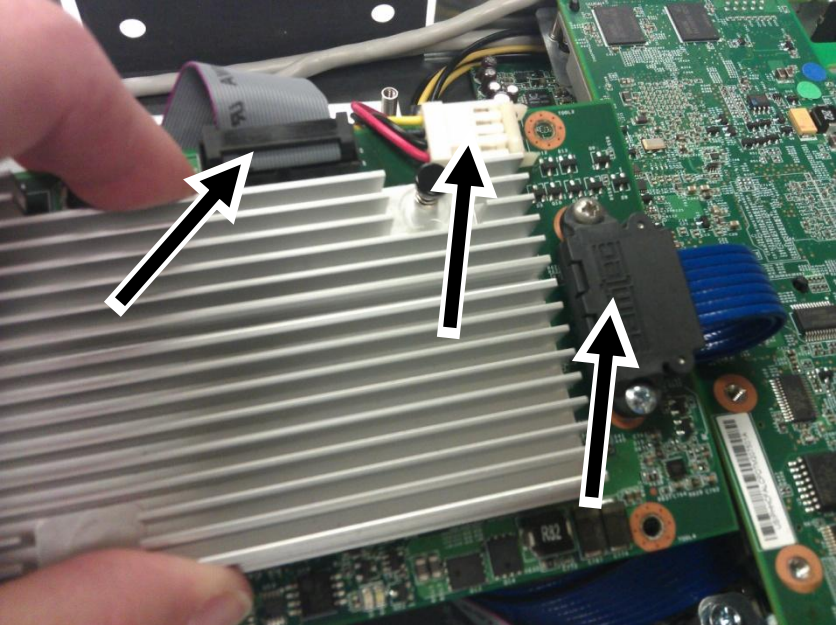
NOTE: This procedure is for V5340 kits only.

Step	Action
1	<p>Mark the V5240 Ethernet cables to identify the RJ-45 ports they are connected to for correct reassembly. Remove the Ethernet cables from the V5240 Host Card.</p>  <p style="text-align: center;"><i>Figure 3. V5240 Ethernet cables</i></p>
2	Remove the screws from the perimeter of the V5240 Host Card.

Continued on next page

Removing V5240 Host Card and Brackets, Continued

Procedure:
removing the
V5240 Host
Card
(continued)

Step	Action								
3	Carefully lift the V5240 Host Card and rotate it toward yourself to remove the cables. The table and picture below shows each cable to remove. <table border="1" data-bbox="618 558 1360 768"> <thead> <tr> <th>Step</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Remove the screws from the blue, twinaxial cable, then remove the cable from the V5240 Host Card.</td> </tr> <tr> <td>2</td> <td>Remove the V5240 power cable.</td> </tr> <tr> <td>3</td> <td>Remove the gray, 30-pin flat cable from the V5240 Host Card.</td> </tr> </tbody> </table>  <p><i>Figure 4. Removing cables from the V5240 Host Card</i></p>	Step	Action	1	Remove the screws from the blue, twinaxial cable , then remove the cable from the V5240 Host Card.	2	Remove the V5240 power cable .	3	Remove the gray, 30-pin flat cable from the V5240 Host Card.
Step	Action								
1	Remove the screws from the blue, twinaxial cable , then remove the cable from the V5240 Host Card.								
2	Remove the V5240 power cable .								
3	Remove the gray, 30-pin flat cable from the V5240 Host Card.								
4	Lift the V5240 Host Card up out of the blade, and place the host card in an anti-static bag.								
5	Remove the hex head screws from the V5240 bracket and set them aside to attach the V5340 bracket in a later procedure. Remove the bracket from the blade.								


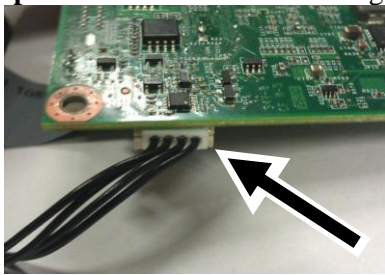
Next steps: remove the V5220 Host Card and brackets as shown below.

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Removing V5220 Host Card and Brackets

Procedure:
removing the
V5220 Host
Card

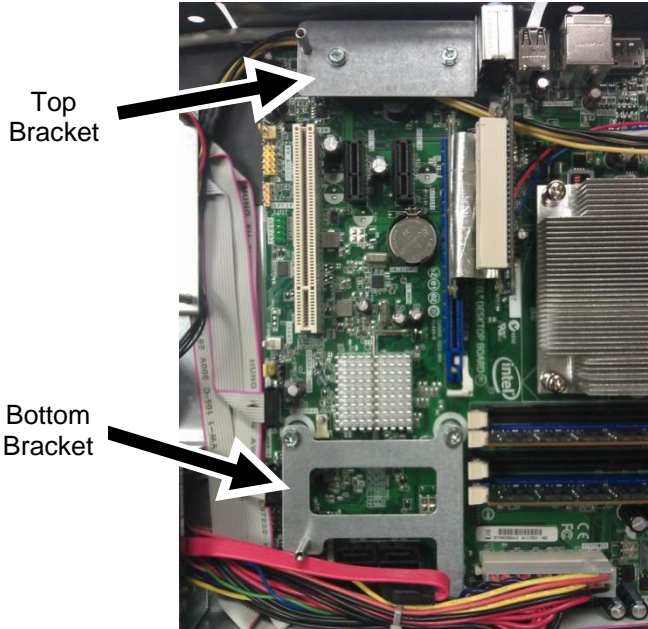
This procedure assumes you have removed all graphics drivers and performed the steps shown in “[Procedure: open the blade](#)” on page 6. The table below shows how to remove a V5220 Host Card from an A6105D blade.

Step	Action
1	Remove the screws from the upper-left and lower-left corners of the V5220 Host Card.
2	<p>Pull the V5220 Host Card away from the PCIe flex riser card and carefully lift up the host card so you can remove the connected cables.</p> <p>NOTE: ClearCube recommends leaving an existing PCIe flex riser card in the blade. The PCIe flex riser card in the kit is intended for systems that do not contain a riser card.</p>  <p><i>Figure 5. Removing the V5220 Host Card from the PCIe flex riser card</i></p>
3	<p>Remove the V5x20 power cable on the bottom edge of the card.</p>  <p><i>Figure 6. The V5x20 power cable</i></p>
4	Remove the Ethernet cable from the opposite edge of the card.
5	<p>Only if the V5220 was connected to a V5240 card:</p> <ul style="list-style-type: none"> Carefully rotate the host card so the fan faces up, and remove the screws from the blue, twinaxial cable. Then remove the twinaxial cable from the V5220 Host Card. Remove the gray, 30-pin flat cable from the V5220 Host Card.

Continued on next page

Removing V5220 Host Card and Brackets, Continued

Procedure:
removing the
V5220 Host
Card
(continued)

Step	Action
6	Remove the V5220 Host Card and place it in an anti-static bag.
7	<p>Remove the hex head screws from the V5220 top bracket and the V5220 bottom bracket and then remove the brackets from the blade.</p> <p>NOTE: ClearCube recommends leaving all HDD SATA cables in place. If you must disconnect any SATA cables, mark them so you can easily reconnect each cable in the correct position. For more information about how SATA headers map to HDDs, see <i>A-Series Blade and Chassis User's Guide</i>.</p>  <p>NOTE: Existing V5220 brackets do not accommodate V53x0 Host Cards. Be sure to remove these brackets and replace them with the V5320 brackets in the kit.</p>

Next steps:

If you are installing a ...	Then ...
V5340 Upgrade Kit	Continue to " Installing the V5340 " on page 11 .
V5320 Upgrade Kit	Continue to " Installing the V5320 " on page 13 .

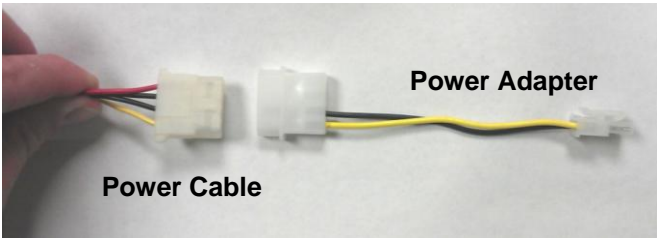

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Installing the V5340 Kit

Procedure:
installing the
V5340 kit

The table below shows how to install a V5340 Host Card in an A6105D blade.

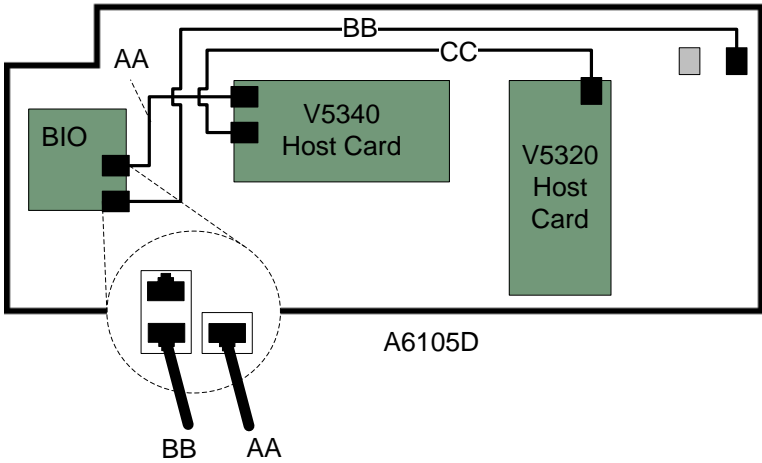
NOTE: This procedure is for V5340 kits only.

Step	Action
1	<p>Connect the V5340 power adapter (G) to the V5340 power cable (part of the blade's power supply cables).</p>  <p>Figure 8. Connecting the V5340 power adapter to the power cable</p>
2	<p>Secure the V5340 bracket (H) to the blade frame using the four hex head screws you removed from the V5240 bracket.</p> <p>NOTE: Ensure the Ethernet cable (shown as CC in Figure 10 on page 12), the V5x20 power cable, and the V5340 power cable are routed under the bracket, along each side. If the blade uses only one or two HDDs, route unused cables under the bracket.</p>
3	<p>The list and picture below shows how to connect cables to the host card before installing it. Remove the V5340 Host Card (A) from the kit and then:</p> <ul style="list-style-type: none"> • Connect the blue, twinaxial cable (D) to the V5340 Host Card. Insert screws (C) into the cable connector and tighten. • Connect the V5340 power adapter (G) to the host card. • Connect the gray, 10-pin flat cable (E) to the host card.  <p>Figure 9. Connecting cables to a V5340</p>

Continued on next page

Installing the V5340 Kit, Continued

Procedure:
installing the
V5340 kit
(continued)

Step	Action
4	Rotate the host card so the fan faces the motherboard and the twinaxial and gray, flat cables extend away from the PCIe flex riser card.
5	<p>Connect Ethernet cables as shown in the picture below (for clarity, only the relevant components are shown).</p> <p>NOTE: You will install the V5320 Host Card in the next procedure.</p>  <p><i>Figure 10. Ethernet cables for a V5340 kit installation</i></p>
6	Fasten the V5340 Host Card to the V5340 bracket with screws (C).
7	Place the video configuration label (I) on the side of the blade. This label contains information critical for deployment and configuration.

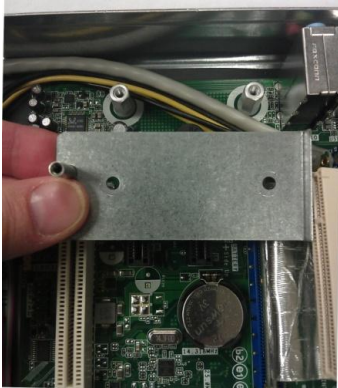

Next steps: install the V5320 Host Card and brackets as shown below.

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Installing the V5320 Kit

Procedure:
installing the
V5320 kit

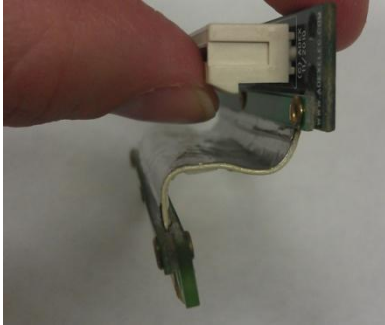
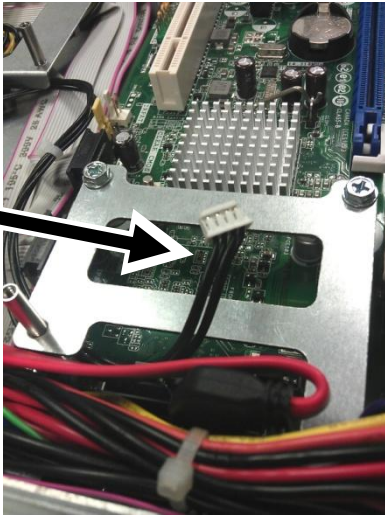
The table below shows how to install the V5320 Host Card, brackets, and components.

Step	Action
1	<p>Fasten the V5320 top bracket (L) to the standoffs near the top edge of the blade frame. Ensure that the Ethernet cable and the black and yellow power cable (from the power supply) are routed between the hex standoffs underneath the bracket.</p>  <p><i>Figure 11. Routing cables under V5320 top bracket</i></p> <p>Orient the bracket so the threaded insert is on the <i>left</i>, and place the bracket on the standoffs. Fasten the bracket to the standoffs with hex head screws (N).</p>
2	<p>Place the V5320 bottom bracket (K) on the standoffs adjacent to the DIMM slots, and use hex screws (N) to fasten it to the standoffs.</p>  <p><i>Figure 12. The V5320 bottom bracket</i></p> <p>NOTE: ClearCube recommends leaving all HDD SATA cables in place. If you disconnect any SATA cables, mark them so you can easily reconnect each cable in the correct position.</p>

Continued on next page

Installing the V5320 Kit, Continued

Procedure:
installing the
V5320 kit
(continued)

Step	Action
3	<p>Only if the blade does not <u>already</u> contain a PCIe flex riser card: Gently bend the cable as shown below (avoid bending the cable where it joins either connector). Insert the cable in the ×16 PCIe connector (nearest the DIMM slots on the motherboard).</p> <p>NOTE: If the blade you are updating already contains a PCIe flex riser card, ClearCube recommends using the existing one. The flex riser card is included for systems that do not already contain one.</p>  <p style="text-align: center;"><i>Figure 13. Bending the PCIe flex riser card</i></p>
4	<p>Route the V5x20 power cable under the V5320 top bracket and up. (The base of the cable is located on the BIO Board, located above and to the left of the power supply.)</p>  <p style="text-align: center;"><i>Figure 14. Routing the V5x20 power cable under the bottom bracket</i></p>

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Installing the V5320 Kit, Continued

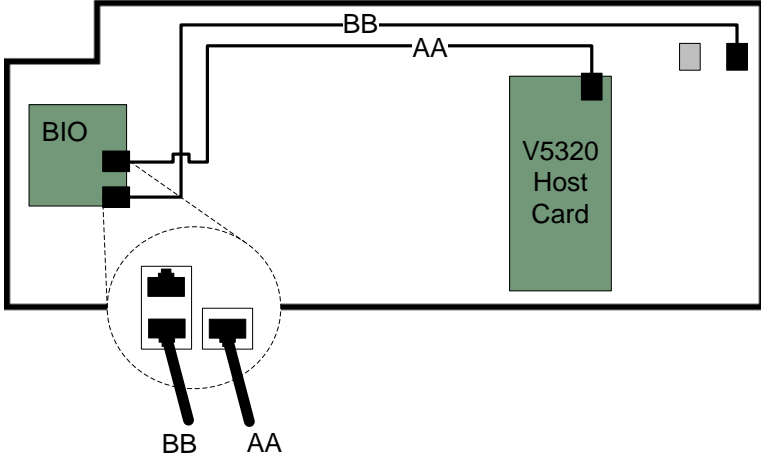
Procedure:
installing the
V5320 kit
(continued)

Step	Action						
5	<p>The table below shows the next step to take.</p> <table border="1"> <thead> <tr> <th>If you are installing a...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>V5320 Upgrade Kit</td> <td>continue to step 6.</td> </tr> <tr> <td>V5340 Upgrade Kit</td> <td>take the steps shown in the list below.</td> </tr> </tbody> </table> <p>If you are installing a V5340 kit</p> <ul style="list-style-type: none"> connect the blue, twinaxial cable (D) to the V5320 Host Card. Insert screws (C) in the cable connector and tighten, and connect the gray, 10-pin flat cable (E) to the V5320 Host Card. 	If you are installing a...	Then ...	V5320 Upgrade Kit	continue to step 6 .	V5340 Upgrade Kit	take the steps shown in the list below.
If you are installing a...	Then ...						
V5320 Upgrade Kit	continue to step 6 .						
V5340 Upgrade Kit	take the steps shown in the list below.						
6	<p>Orient the V5320 Host Card (J) so the fan faces the motherboard. Connect the Ethernet cable to the RJ-45 port on the edge of the card:</p> <ul style="list-style-type: none"> For V5340 kits: connect cable CC as shown in Figure 10 above. For V5320 kits: connect cable AA as shown in Figure 15 below. 						
7	<p>Connect the V5x20 power cable to the connector on the edge of the host card (see Figure 6 on page 9 for the location of the connector).</p>						
8	<p>Lower the host card into the blade and insert the card into the PCIe flex riser card (M). Push firmly to fully seat the card. Ensure that the Ethernet cable is routed along the edge of the blade (for all kits, this is cable BB as shown in Figure 15 below).</p>						
9	<p>Align the host card with the threaded insert on each bracket. Use pan head screws (P) to fasten the host card to the brackets.</p>						

Continued on next page

Installing the V5320 Kit, Continued

Procedure:
installing the
V5320 kit
(continued)

Step	Action
10	<p>Ensure all Ethernet cables are connected correctly.</p> <ul style="list-style-type: none"> • If you are installing a V5340 kit, ensure Ethernet cables match Figure 10 on page 12. • If you are installing a V5320 kit, ensure that Ethernet cables match the picture below.  <p><i>Figure 15. Ethernet cables for a V5320 kit installation</i></p>

Next steps: close the blade as shown below.

Continued on next page



Closing the Blade

Procedure:
closing the
blade

The table below shows how to close the blade.

Step	Action
1	Ensure all cables in the blade are fully seated, and that no cables are exerting pressure on components (such as DIMMs or heat sinks) or are obstructing airflow.
2	Replace the blade cover and fasten with the cover's flat head screws.
3	Place the video configuration label (R) on the side of the blade. NOTE: The video configuration label contains MAC address and serial number information that is critical for deployment and configuration. Be sure to place the label on the blade.

Next steps: create a PCoIP session to connect a zero client to the host and then install drivers.

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About Connecting Devices

Introduction

This section shows default IP addresses for ClearCube devices using PCoIP technology and refers to information about connecting devices.

IP address assignment and defaults

ClearCube host cards are configured for environments using a DHCP server. If a DHCP server is unavailable when a host is powered on, the host card uses a default, static IP addresses (a *fallback* IP address). The list below shows the fallback IP addresses of V53x0 Host Cards:

- V5320 Host Card—**192.168.1.101**
- V5340 Host Card—**192.168.0.41**

NOTE: There is a timeout period of **90 seconds** before a host card uses a fallback address. If a host card is set for DHCP and a DHCP server is unavailable, you are unable to connect during this timeout period.

Administrators can change the address assignment mode of host cards and zero clients from DHCP mode to static mode using the browser-based Administrative interface. See “Using the Web Interface” in *PC-over-IP System User’s Guide* for more information.

Connecting from a zero client

See *PC-over-IP System User’s Guide* for detailed instructions about connecting to a host card from a zero client. Before connecting, be sure you have

- installed the V5340 video and audio drivers (available from ClearCube Support) on the host computer
 - connected the computer to a zero client (and a network switch if applicable), and
 - connected monitors to the zero client.
-

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Host Card Drivers

Remove existing video drivers

As noted in “[Driver installation prerequisite](#)” on page [5](#), remove all GPU and graphics drivers from the blade before installing V5320 drivers.

List of drivers

The list below shows V5320 Host Card drivers to install.

- **GPU driver** (*required*)

NOTE: ClearCube recommends always using the **Perform a clean install** option when installing this driver, available from the Display Driver Installer.

- **Audio driver** (*required*)

- **PCoIP Host software** (*optional—see note below*)

A user agent and drivers *for systems with V5x20 host cards only* that provide session-related features from a right-click menu.

NOTE: Systems with V5x40 Host Cards do not support this driver.

Downloading drivers

All host card drivers and software are available on the Support site. From the Support site, select the **V5320** product page, and then click **drivers**.

Contacting Support

The table below shows how to contact ClearCube Support.

Web	www.clearcube.com/support/
Email	support@clearcube.com
Toll-free	(866) 652-3400
Direct	(512) 652-3400