ClientCube 3 with Secure KVM Switch Quick Start Guide

About ClientCube 3 with Secure KVM Switch

Package contents and documentation

The list below shows the contents of a ClientCube 3® package.

- **ClientCube 3**, preconfigured with

    - **Zero clients**

    - **Device cabling** including ClientCube 3 power cable, integrated zero client power cables, and integrated video cables

    - **Vertiv® Cybex™ Secure Desktop KVM Switch**

- This *Quick Start Guide*

- *Cybex™ SC Switching System Installation Guide*, and

- *Zero Client Quick Start Guide* for installed zero clients.

For more information

The section above shows documentation included with the ClientCube 3. For additional information about PCoIP® technology (including zero clients and PCoIP host cards), see the documents below at www.clearcube.com/support:

- *PC-over-IP System User's Guide*

- *PC-over-IP Device Firmware Support and Compatibility Guide*

Continued on next page

P/N G0200186 Rev A, 1.0.04.04.2017

ClientCube 3 front features

The picture below shows the front of a ClientCube 3 (depending on the model, product appearance and features might differ slightly).

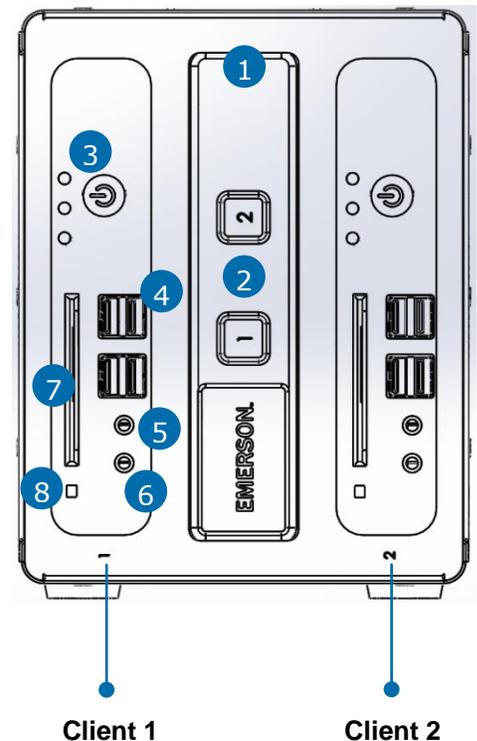|	Description	
1	Secure KVM switch.	
2	Port (zero client) selectors.	
3	Zero client power button and session indicators (see zero client *Quick Start Guide* for more information).	
4	Front USB ports (not switched).	
5	Audio out	Audio devices plugged into zero clients are not switched. Devices plugged into the audio connector on the rear of the KVM are switched.
6	Audio in	
7	CAC reader. Zero client CAC readers are not switched.	
8	CAC indicator. See zero client *Quick Start Guide* for more information.	

Figure 1. ClientCube 3, front view

P/N G0200186 Rev A, 1.0.04.04.2017

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ClientCube 3 rear features

The picture below shows the rear of a ClientCube 3 (depending on the model, product appearance and features might differ slightly).

	Description
1	LAN connector (*Client 1*)
2	LAN connector (*Client 2*)
3	USB mouse and keyboard (*switched*)
4	3.5 mm audio connector (*switched*)
5	HDMI 1.4 video connectors (*switched*)
6	Power cable
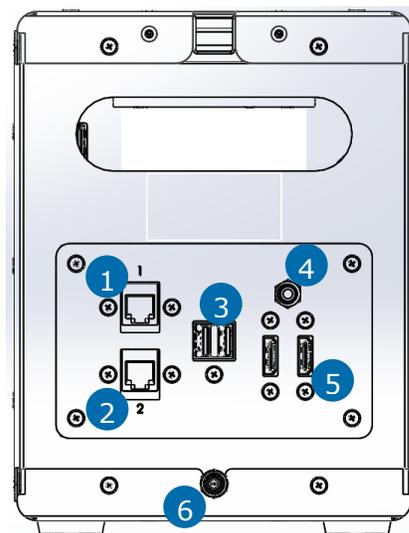
Figure 2.   ClientCube 3, rear view

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ClientCube 3 architecture

ClientCube 3 enables users to connect to two remote computing resources (physical computers or virtual machines) while using the same mouse, keyboard, video displays, and audio devices for both computers. After connecting to different computing devices, users can press port selector buttons on the front of the ClientCube 3 to switch between computers.

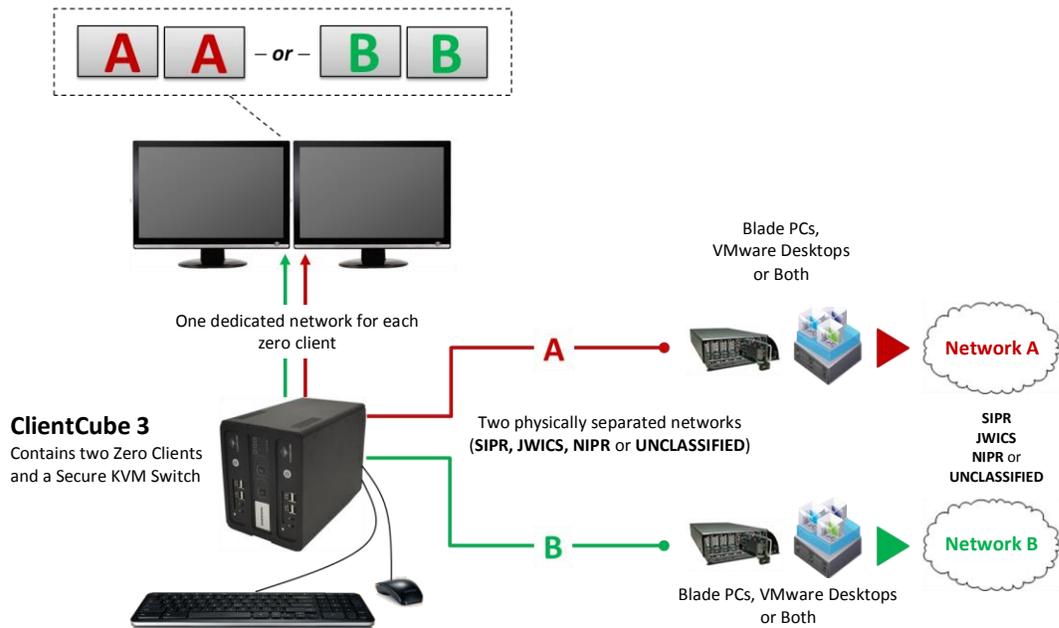The figure below shows the high-level architecture of ClientCube 3 deployments.

Figure 3.   Overview of typical ClientCube 3 deployment

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Before You Begin

Personal and product safety

CAUTION:	Prevent ESD (electrostatic discharge) damage to ClientCube 3 and smart card readers by always discharging your body and smart card before using a reader (for example, by touching a grounded, unpainted, metal object). ESD can vary depending on many environmental conditions, including clothing that users wear and how they handle smart cards. ESD damage can potentially cause unsupported card reader behavior including failure. Always perform ESD prevention steps before using a card reader.

Inspect packaging

If ClientCube 3 packaging or hardware (including tamper-evident seals on the Secure KVM) shows any evidence of disruption, call ClearCube Support immediately at **(800) 652-3400**.

Not included in package

Before installing a ClientCube 3, be sure to have

- a network cable for each zero client (fiber or copper, depending on configuration)
- monitors and monitor cables
- USB keyboard and mouse
- optionally, a network switch
- optionally, audio input and output devices (such as a headset, speakers, or microphone)

Before setup

The table below shows steps to take after unpacking a ClientCube 3.

Step	Action
1	Ensure all required infrastructure is in place and is configured. Depending on your deployment, this can include • DHCP servers • a copper network (including switches, routers, and so on) • a fiber network (including media converters, switches, routers, and so on) • VMware® Horizon infrastructure, and • CAC or smart card components and authentication/single-sign-on infrastructure
2	Record MAC addresses of zero clients and host cards for use during deployment and configuration. (A configuration label on each ClearCube device specifies a MAC address for the PCoIP device.)

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Before You Begin, Continued

Step	Action
3	If you are using physical computers with PCoIP host cards, download and install audio and GPU drivers appropriate for your host card. ClearCube host cards only support drivers available from ClearCube Support.
4	Optionally, install a CAC driver on any computing devices requiring CAC support.

Setting up ClientCube 3

Set up ClientCube 3

The table below shows how to set up ClientCube 3. All items listed below are shown in "ClientCube 3 rear features" above.

NOTE	Follow the steps in the order listed below—be sure to connect all video cables before connecting power to ClientCube 3 (note that connecting power automatically powers on ClientCube 3).

Step	Action
1	Connect Ethernet cables to the LAN connectors (**1** and **2**) on the rear of the ClientCube 3.
2	Connect one or more displays to the HDMI connectors (**5**).
3	Connect a keyboard and mouse to the USB connectors (**3**).
4	Optionally, connect an audio device to the 3.5 mm jack (**4**).
5	Connect the ClientCube 3 power cable (**6**) to a power outlet **Result:** Secure KVM and zero clients power on.

P/N G0200186 Rev A, 1.0.04.04.2017

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Configure devices and connect

The table below shows how to configure zero clients and remote hosts, and how to connect.

Step	Action
1	Configure zero clients using the zero client *on-screen display* (OSD). **NOTE** For more information about the OSD and configuration, see the appropriate zero client *Quick Start Guide* (included) and *PC-over-IP System User's Guide* (download from ClearCube Support).
2	If you are using physical devices with PCoIP host cards, use a Web browser to configure the host card as appropriate for your environment. For more information, see the documentation cited above.
3	From the zero client OSD, click **Connect**. **Result:** If you are using direct connection or reserved DHCP addresses, you are connected to the remote host specified during configuration. If you are using DHCP and device discovery, a list of available hosts is displayed. Select a host to connect to.

Setting up ClientCube 3 with KM Switch

Set up ClientCube 3 and KM

The table below shows how to set up ClientCube 3 with a KM switch.

NOTE	Be sure that ALL components (monitors, remote computers, zero clients, and so on) are powered OFF before performing any of the steps below. Follow the steps in the order listed below (note that connecting power automatically powers on ClientCube 3).

Step	Action
1	Be sure that all components (including monitors) are powered off as noted above.
2	Connect Ethernet cables to the zero clients in the rear of the ClientCube 3, and connect the other end of the cables to the remote computers for each zero client (through a network switch or by direct connection).
3	Connect one or more displays to the zero clients in the rear of the ClientCube 3.
4	Connect a keyboard and mouse to the Console portion of the Secure KM.
5	Optionally, connect speakers to the Console portion of the Secure KM.
6	Power on all monitors (do not power on any other devices yet).
7	Connect the ClientCube 3 power cable to a power outlet, and then connect the power adapter to ClientCube 3. **Result:** Secure KM and zero clients power on.

See the section below for KM and monitor configuration information.

Configure KM and monitors

The KM switch comes with many pre-defined monitor configurations and arrangements. You can also create custom monitor arrangements. See the included KVM Switch documentation for detailed information configuring monitors and more

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Connecting to Physical Devices

Dependencies

If you are connecting to physical devices (such as Blade PCs) with PCoIP host cards, use a Web browser to configure the host card as appropriate for your environment. For more information about Host Card configuration, see the appropriate zero client *Quick Start Guide* (included) and *PC-over-IP System User's Guide* (download from ClearCube Support).

Connect to physical devices

From the zero client OSD, click **Connect**.

If you are using direct connection or reserved DHCP addresses, you are connected to the remote host specified during configuration. If you are using DHCP and device discovery, a list of available hosts is displayed. Select a host to connect to. You are now connected to a remote host.

Configuring Zero Clients for VM Connections

Overview

Interaction between a KVM, zero clients, and VMware components requires setting options on the zero client to bridge the USB keyboard and mouse to VMs. Set bridging options from the zero client Web interface before connecting to VMs.

NOTE	Be sure that zero client TERA firmware is version 4.2 when connecting to VMs. Higher firmware versions can cause mouse-related display issues. See *PC-over-IP System User's Guide* on Support site for information about identifying the zero client firmware version.

Find zero client IP address

Use the zero client IP address to access the device's Web interface for additional configuration steps.

From the zero client OSD in the upper-left portion of the screen, click **Options > Configuration**. The Configuration screen shows the zero client's IP address. Record this IP address and click **Cancel** to close the screen.

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Configuring Zero Clients for VM Connections, Continued

Configure zero client

The table below shows how to bridge the mouse and keyboard connected to the Secure KM.

Step	Action
1	From a Web browser, open a zero client's Web interface by entering one of the IP addresses you recorded in the previous procedure (you can safely dismiss any security-related prompts that browsers display).
2	Click **Log In** (by default, a password is not required).
3	From the main menu, click **Permissions > USB** to display the USB page.
4	From the Bridged Devices section, click **Add New**.
5	Enter **050D** in the Vendor ID text box and enter **104A** in the Product ID text box. Click **Add**. The bridged device IDs are now shown above the Add new button.
6	Click the **Apply** button located at the bottom of the screen. A success message is displayed.
7	To restart the zero client, click **Diagnostics > PCoIP Processor** and then click **Reset**. A message is displayed. Click **OK**. This ends the PCoIP session with the zero client. Repeat this procedure for all zero clients in the ClientCube 3.

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Connecting to VMs

Dependencies If you are connecting to VMs, these instructions assume you are using VMware products and have your environment functioning and configured (including Domain users associated with VMs).

For more information about zero client configuration, see the appropriate zero client *Quick Start Guide* (included) and *PC-over-IP System User's Guide* (download from ClearCube Support).

Connect to VM The table below shows how to connect to a VM from a zero client. These instructions assume you have completed the steps shown in "Configuring Zero Clients for VM Connections" on page 9.

Step	Action
1	From a zero client OSD, click **Connect**. When the Certificate Warning is displayed, click **Continue**.
2	Enter the user credentials and click **Login**.
3	Select a VM to connect to, and click **Connect**. The VM desktop is displayed.
4	Click **Connect** to connect to another VM as shown in the previous steps.

Additional Information and Support

Documentation resources See "Package contents and documentation" and "For more information" on page 1 for a list of documentation about ClientCube 3 components and concepts.

Contacting Support

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

P/N G0200186 Rev A, 1.0.04.04.2017