



ClientCube 2 with Secure KVM or Secure KM Switch Quick Start Guide

About ClientCube 2 with Secure KVM or Secure KM Switch

Package contents and documentation

The list below shows the contents of a ClientCube 2[®] package.

- **ClientCube 2**, preconfigured with
 - **Zero clients**
 - **Device cabling** including ClientCube 2 power cable and adapter, zero client power cables, video cables (with KVM switch only), and (depending on model) USB smart card cabling for KVM switch
 - **Belkin[®] Secure KVM switch** or **Belkin Secure KM Switch**
- This *Quick Start Guide*
- *Secure KVM Switch User Manual* or *Secure KM Switch User Manual*, and
- *Zero Client Quick Start Guide* for installed zero clients.
- **Dual-link DVI cable adapters (Y-cables)** for high-resolutions monitors (2560 × 1600). See *Zero Client Quick Start Guide* for information about using dual-link DVI cables.

For more information

The section above shows documentation included with the ClientCube 2. 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*

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About ClientCube 2 with Secure KVM or Secure KM Switch, Continued

ClientCube 2 front features

The picture below shows the front of a ClientCube 2 (depending on the model, product features might differ slightly).

| | Description | |
|---|---|--|
| 1 | Secure KVM switch <i>or</i> Secure KM switch | |
| 2 | Port selectors | |
| 3 | Zero client power button and session indicators | |
| 4 | USB ports | |
| 5 | Audio out | Audio devices plugged into zero clients are not switched. Devices plugged into the Console connectors on the rear of the KVM or KM are switched. |
| 6 | Audio in | |



Figure 1. ClientCube 2, front view

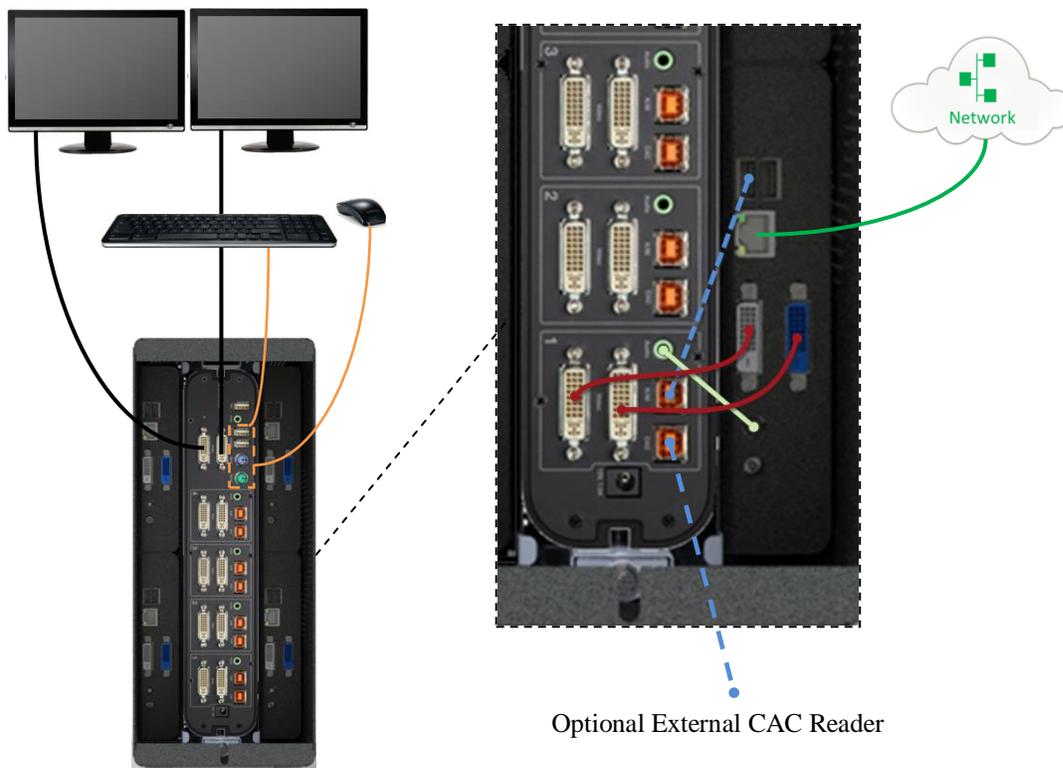
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Cable Configuration

KVM cabling

The picture below shows the default cabling configuration for ClientCube 2 with a KVM switch. For simplicity, cabling is shown between the KVM and only one zero client. The same cabling configuration is used for the remaining zero clients.

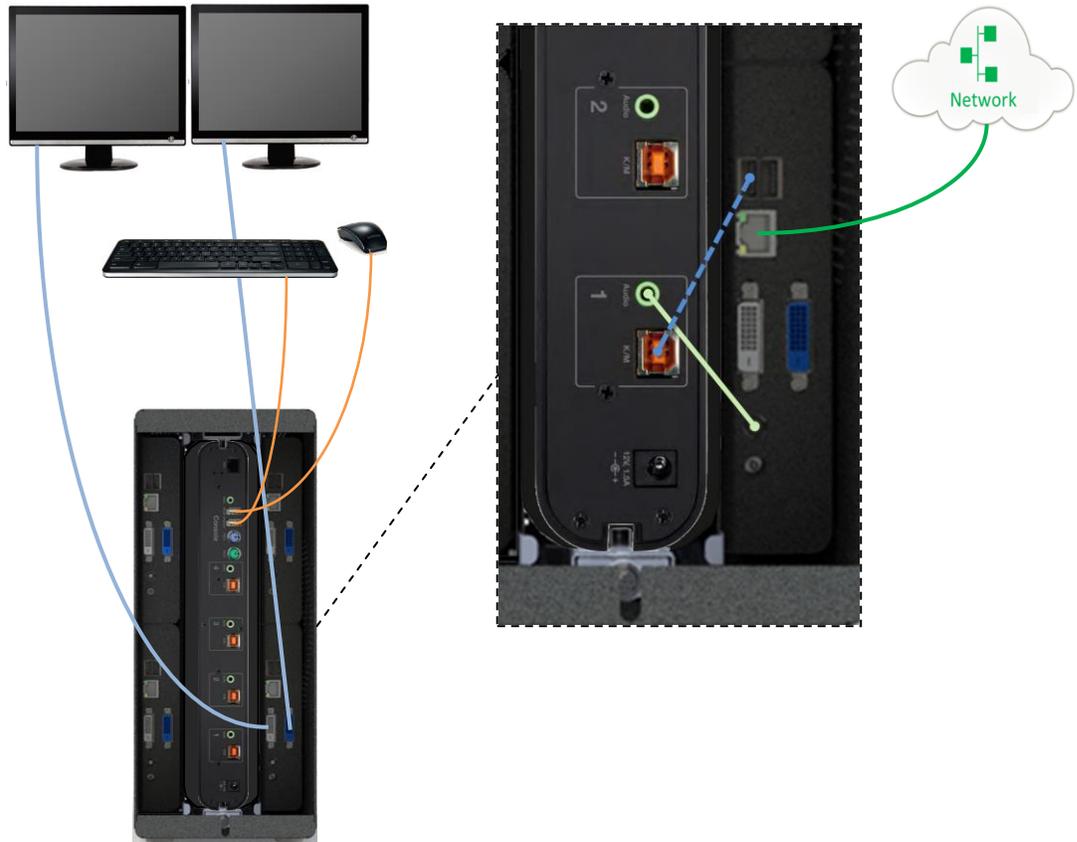


KVM Switch in ClientCube 2

Figure 2. ClientCube 2 with KVM, rear view and default cabling configuration (for simplicity, cabling for only one zero client is shown)

KM cabling

The picture below shows the default cabling configuration for ClientCube 2 with a KM switch. For simplicity, cabling is shown between the KM and only one zero client. The same cabling configuration is used for the remaining zero clients.



KM Switch in ClientCube 2

Figure 3. ClientCube 2 with KM, rear view and default cabling configuration (for simplicity, cabling for only one zero client is shown)

Before You Begin

Personal and product safety

CAUTION: Prevent ESD (electrostatic discharge) damage to ClientCube 2 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 2 packaging or hardware (including holographic seals on the Secure KVM or KM) shows any evidence of disruption, call ClearCube Support immediately at **(800) 652-3400**.

Not included in package

Before installing a ClientCube 2, be sure to have

- a network cable for each zero client
- optionally, a network switch, and
- **KM switch only:** monitor cables.

Before setup

The table below shows steps to take after unpacking a ClientCube 2.

| Step | Action |
|------|---|
| 1 | Ensure all required infrastructure is in place and is configured. Depending on your deployment, this can include <ul style="list-style-type: none"> • DHCP servers • a copper network (including switches, routers, and so on) • a fiber network (including media converters, switches, routers, and so on) • VMware® View 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.) |
| 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. |

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Before You Begin, Continued

Before setup (continued)

| Step | Action |
|------|---|
| 4 | Optionally, install a CAC driver on any computing devices requiring CAC support. |
| 5 | <p>If the ClientCube 2 includes a KM switch and you are connecting to computers with multi-head displays, install the Belkin Advanced Secure KM Switch Mouse Filter driver software (see www.clearcube.com/support).</p> <p>CAUTION Be sure to remove this driver from computers <i>before</i> using the computer without the Secure KM. Failure to remove the driver results in loss of mouse functionality when connected directly to a computer.</p> |

Setting up ClientCube 2 with KVM Switch

Set up ClientCube 2 and KVM

The table below shows how to set up ClientCube 2 with a KVM switch.

NOTE Follow the steps in the order listed below—be sure to connect all video cables before connecting power to ClientCube 2 (note that connecting power automatically powers on ClientCube 2).

| Step | Action |
|------|--|
| 1 | Connect Ethernet cables to ClientCube 2 zero clients. |
| 2 | Connect one or more displays to the Secure KVM Console Monitor Port(s). |
| 3 | Connect a keyboard and mouse to the Console portion of the Secure KVM. |
| 4 | Optionally, connect speakers and a CAC reader to the Console portion of the Secure KVM. |
| 5 | <p>Connect the ClientCube 2 power cable to a power outlet, and then connect the power adapter to ClientCube 2.</p> <p>Result: Secure KVM and zero clients power on.</p> |

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Setting up ClientCube 2 with KVM Switch, Continued

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 <i>on-screen display</i> (OSD). NOTE For more information about the OSD and configuration, see the appropriate zero client <i>Quick Start Guide</i> (included) and <i>PC-over-IP System User's Guide</i> (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. |

Additional steps

Optionally, install ClientCube 2 accessories including color chips to distinguish each port button, and name labels to identify each network. See the included *Secure DVI-I KVM User Manual* for more information.



Setting up ClientCube 2 with KM Switch

Set up ClientCube 2 and KM

The table below shows how to set up ClientCube 2 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 2).

| 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 2, 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 2 (see step 5 in “ Before setup ” on page 6 about driver software for multi-head displays). |
| 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 2 power cable to a power outlet, and then connect the power adapter to ClientCube 2. 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 *Advanced Secure Keyboard/Mouse (KM) Switch User Manual* for detailed information about Seamless Cursor Switching (SCS), configuring monitors, administrator mode, multi-head driver installation, and troubleshooting.

Additional steps

Optionally, install ClientCube 2 accessories including color chips to distinguish each port button. See *Secure KM Switch User Manual* for more information.

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Navigating OSDs and VMs

Using the keyboard

Note that in many cases you can use the keyboard instead of the mouse when navigating the OSD and when making connections to VMs. You can use the keyboard's TAB key and arrow keys to move focus on dialog box elements, and press the ENTER key to make selections. In many cases, this can eliminate the need to use the mouse and toggle mouse modes as described below.

Mouse control: OSD and VMs

When using zero clients with a Belkin Secure KM, special keyboard keystrokes are required to control the connected mouse when zero clients are in a pre-session state (using the zero client *on-screen display* [OSD] shown below) and before configuring VMs. The keystrokes toggle mouse behavior modes for use on the zero client OSD and when configuring VMs for use with a KM. The picture below shows the zero client OSD.

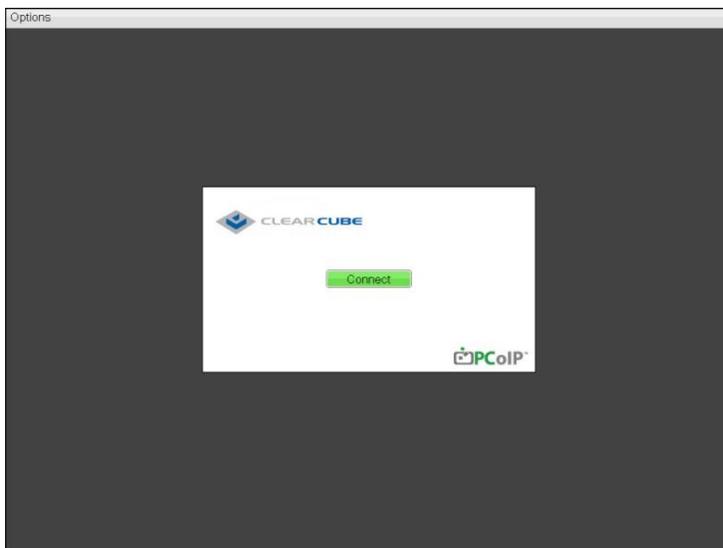


Figure 4. The zero client OSD

The list below shows the keystrokes that toggle mouse modes.

- **CTRL, CTRL, F11, b**
This keystroke sets *relative mode*. Press this key combination when using the mouse to navigate the OSD (and in VM sessions before configuration).
- **CTRL, CTRL, F11, c**
This keystroke sets *absolute mode*. Press this key combination when using the OSD (and in VM sessions before configuration) to enable Seamless Cursor Switching (to move from one monitor to another). To re-gain control of mouse movements, press CTRL, CTRL, F11, b as described above.

NOTE When connecting to VMs, zero clients must use TERA firmware 4.2.0. See *PCoIP Device and Firmware Compatibility Guide* and *PC-over-IP (PCoIP) System User's Guide* for information about upgrading firmware.



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).

Configure zero clients and connect

NOTE This procedure requires switching mouse modes as described in "[Mouse control: OSD and VMs](#)" above.

The table below shows how to connect to physical devices (such as Blade PCs).

| Step | Action |
|------|--|
| 1 | <p>From the keyboard, press CTRL, CTRL, F11, b to set the mouse to relative mode. You can now use the mouse to configure the zero client or connect to a remote host.</p> <p>NOTE For information about the OSD and configuration options, see the documentation cited in "Package contents and documentation" and "For more information" on page 1.</p> |
| 2 | <p>From the zero client OSD, click Connect.</p> <p>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.</p> |



Configuring Zero Clients for VM Connections

Overview

Interaction between a KM, 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

The table below shows how to find a zero client IP address. Use the zero client IP address to access the device's Web interface for additional configuration steps.

NOTE This procedure requires switching mouse modes as described in "[Mouse control: OSD and VMs](#)" above.

| Step | Action |
|------|--|
| 1 | Press CTRL, CTRL, F11, b to set the mouse to relative mode. |
| 2 | 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. |
| 3 | Press CTRL, CTRL, F11, c to toggle to absolute mode and move the mouse to the next zero client's monitor(s). |
| 4 | Press CTRL, CTRL, F11, b to toggle to relative mode and record the zero client's IP address. Repeat this process for all zero clients in the ClientCube 2—remember that you must toggle the mouse to absolute mode to move to the next zero client. |

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 | For deployments with daisy-chained KM and KVMs only: Clear the Enable EHCI option. |

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Configuring Zero Clients for VM Connections, Continued

Configure zero client
(continued)

| Step | Action |
|------|--|
| 7 | Click the Apply button located at the bottom of the screen. A success message is displayed. |
| 8 | 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 2. |



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 11.

| Step | Action |
|------|--|
| 1 | From a zero client OSD, press CTRL, CTRL, F11, b to ensure the mouse is in relative mode. 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. The mouse is unable to perform Seamless Cursor Switching to switch from one monitor (or computer) to the next. Press CTRL, CTRL, F11, c to switch the mouse to absolute mode. |
| 4 | Move the mouse to the next monitor to switch to the next zero client in the ClientCube 2. Once you are on the next zero client's OSD, press CTRL, CTRL, F11, b to toggle to relative mode so you can navigate the screen. Click Connect to connect to another VM as shown in the previous steps. |
| 5 | Once connected to the desktop, press CTRL, CTRL, F11, c to toggle the mouse mode. Seamless Cursor Switching (SCS) is now enabled and you can switch from zero client to zero client by moving the mouse (see the included <i>Secure KM Switch User Manual</i> for information about SCS). Repeat this process and connect to the remaining zero clients in the ClientCube 2 and toggle the mouse mode by pressing CTRL, CTRL, F11, c to enable Seamless Cursor Switching for all zero clients in the ClientCube 2. |



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 2 components and concepts.

Contacting Support

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