# ClientCube NET-2 Quick Start Guide

## About ClientCube NET-2

**Package contents and documentation**

The list below shows the contents of a ClientCube NET-2® package.

- **ClientCube NET-2**, preconfigured with

  - **Zero clients**

  - **Device cabling** including ClientCube NET-2 power cable, integrated zero client power cables, and integrated video cables

  - **Vertiv® Cybex™ Secure Desktop KVM Switch** *or* **KM 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 NET-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 NET-2, Continued

**ClientCube NET-2 front features**

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

| | | Description | |
|---|---|---|---|
| 1 | | Secure KVM switch or KM 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 or KM 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. | |
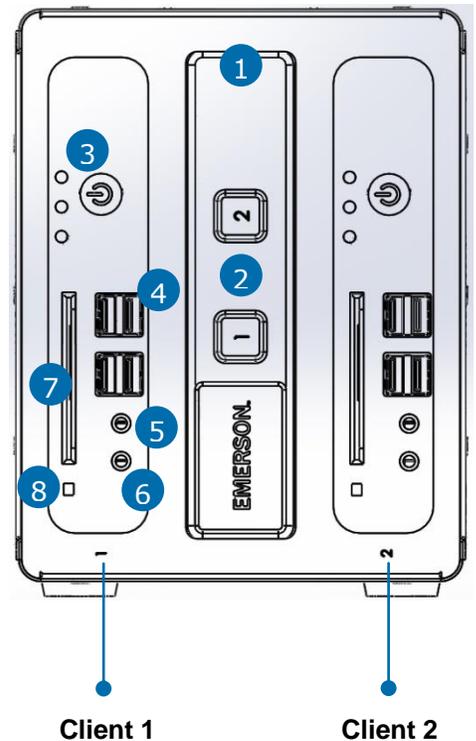
Client 1          Client 2

*Figure 1.    ClientCube NET-2, front view*

# About ClientCube NET-2, Continued

**ClientCube NET-2 rear features**

The picture below shows the rear of a ClientCube NET-2 (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 |
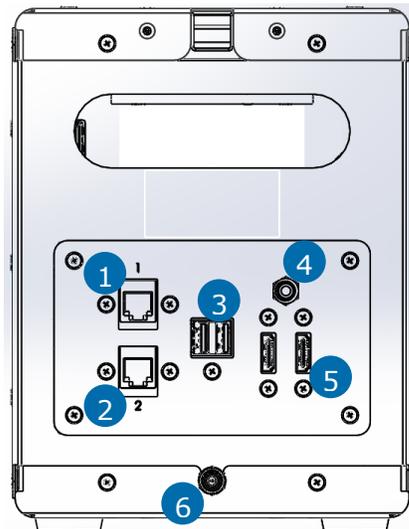
*Figure 2.    ClientCube NET-2, rear view*

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# About ClientCube NET-2, Continued

**ClientCube NET-2 architecture**

ClientCube NET-2 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 NET-2 to switch between computers.

The figure below shows the high-level architecture of ClientCube NET-2 deployments.
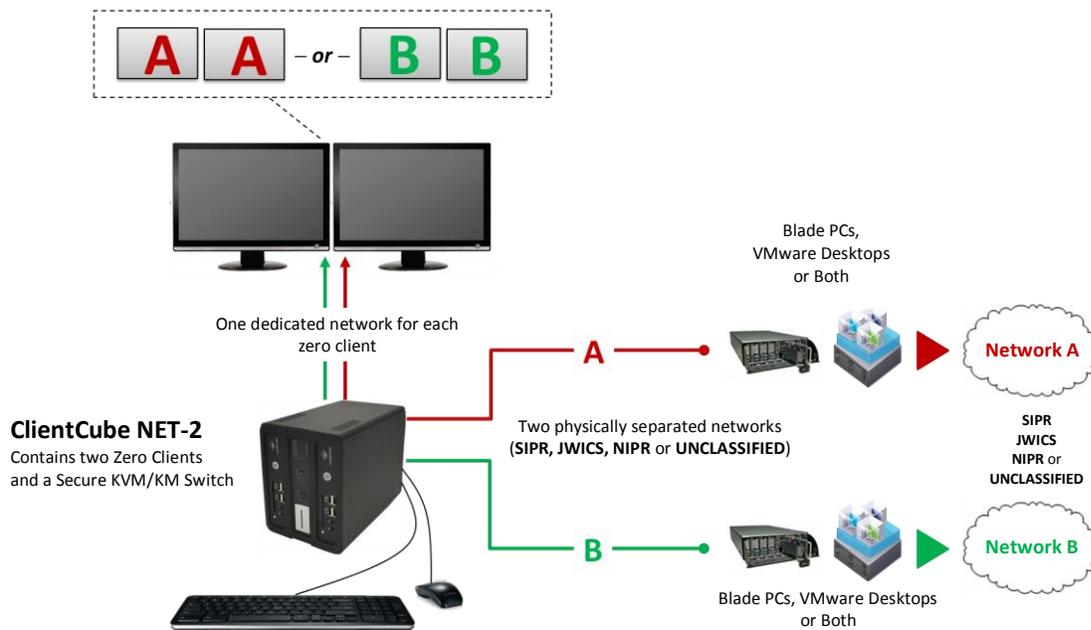
*Figure 3.    Overview of typical ClientCube NET-2 deployment*

# Before You Begin

**Personal and product safety**

**CAUTION:** Prevent ESD (electrostatic discharge) damage to ClientCube NET-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 NET-2 packaging or hardware (including tamper-evident 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 NET-2, 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 NET-2.

| Step | Action |
|------|--------|
| 1 | Ensure all required infrastructure is in place and is configured. Depending on your deployment, this can include<br><br>• DHCP servers<br><br>• a copper network (including switches, routers, and so on)<br><br>• a fiber network (including media converters, switches, routers, and so on)<br><br>• VMware® Horizon infrastructure, and<br><br>• 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.) |

**Before setup**
(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 NET-2 with KVM Switch

**Set up ClientCube NET-2**

The table below shows how to set up ClientCube NET-2 with a KVM switch (see the section after this one for instructions about setting up a ClientCube NET-2 with a KM switch). All items listed below are shown in "ClientCube NET-2 rear features" above.

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

| Step | Action |
|------|--------|
| 1 | Connect Ethernet cables to the LAN connectors (**1** and **2**) on the rear of the ClientCube NET-2. |
| 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 NET-2 power cable (**6**) to a power outlet<br><br>**Result:** Secure KVM and zero clients power on. |

**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).<br><br>**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**.<br><br>**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 NET-2 with KM Switch

**Set up ClientCube NET-2 and KM**

The table below shows how to set up ClientCube NET-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 NET-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 NET-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 NET-2. |
| 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 NET-2 power cable to a power outlet, and then connect the power adapter to ClientCube NET-2.<br><br>**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

*Continued on next page*

# 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 or higher when connecting to VMs. 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.

![ClearCube Logo]

## 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**.<br><br>This ends the PCoIP session with the zero client. Repeat this procedure for all zero clients in the ClientCube NET-2. |

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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 NET-2 components and concepts.

**Contacting Support**

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