LifeSize® Passport™ Series
Installation Guide

Installing your Passport System

This guide explains how to install LifeSize Passport and LifeSize Passport Connect systems. For information about using and configuring your system, refer to the *LifeSize Passport Series User and Administrator Guide* available from lifesize.com/support.

Preparing for Installation

As you prepare to install your system, consider the physical conditions of the room, compatibility with displays, and your network configuration and settings.

If you are not using DHCP, you may need guidance from your network administrator to complete the initial configuration. You will need to manually set an IP address, subnet mask, and default gateway for your LifeSize system.

Network Bandwidth

Poor audio and video quality may result from insufficient bandwidth on your network. LifeSize recommends that your network be capable of at least 1 Mb/s for a high definition video call. During video calls with lower bandwidths, LifeSize systems automatically select the best resolution that can be achieved with the available bandwidth.

Domain Name Service Server

If you intend to use domain addresses for placing calls, you must configure a Domain Name Service (DNS) server or use a Dynamic Host Configuration Protocol (DHCP) server that automatically sets a DNS server.

Room Configuration

The size, shape, layout, and occupancy of the room dictate where you place your video conferencing components. For example, in a small office installation of LifeSize Passport, place the LifeSize Focus at one end or corner of the room. In a multi-user conference room, place the LifeSize MicPod at the center of the group of participants.

On LifeSize Passport Connect, place the USB camera equal distance from both speakers. For displays with speakers on each side or on the bottom, place the camera in the center at the top. For optimal audio, use Line Out speakers to experience less distortion and delay.

| WARNING | Avoid routing cables from the codec across foot-traffic areas. Tripping on the cables can cause both personal injury and permanent damage to the connectors in the cables and the codec itself. |

The lighting in your environment affects image quality. The optimal lighting for LifeSize systems is 300 to 500 LUX. If light levels are too low, consider adding artificial lighting. Indirect light from shaded sources or reflected light from pale walls often produces excellent results. Avoid the following:

- direct sunlight on the subject matter, the background, or the camera lens
- direct illumination of the subject matter and camera lens
- colored lighting
- harsh side lighting or strong light from above

LifeSize Passport Components

Your LifeSize Passport package contains the following components:

- One of the following cameras and cables:
    - USB camera
    - LifeSize Focus and a 2.9 meter (9.5 foot) cable. Contact your LifeSize Partner for optional 7.5 meter (24.6 foot) or 15 meter (49.2 foot) cables.
    - LifeSize Camera 200 and a 7.5 meter (24.6 foot) cable. Contact your LifeSize Partner for the optional 15 meter (49.2 foot) cable. This option requires the additional audio component.
- LifeSize MicPod (LifeSize Passport only)
- Codec and power supply
- Remote control, including three AAA batteries
- One ferrite
- Quick reference card
- Documentation CD
- Standard cable kit

Installing your System

First read the *LifeSize Safety and Regulatory Notices* for important safety information, available from lifesize.com/support.

WARNING   Exercise care when connecting cables to the codec. Face the back of the codec or ensure that all connectors are visible when connecting a cable to the codec.

Remove all components from the product packaging and place them in the desired positions in your conference room or office.

WARNING   Do not place anything on top of, below, or adjacent to the codec that can obstruct air flow around the unit or generate heat. Doing so can cause the system to overheat and reboot. Prolonged overheating can result in damage to the codec. Ensure that the room that houses the codec is properly ventilated and temperature controlled.

Refer to the quick reference card included with your system for a visual depiction of the proper setup. The numbers that appear on the quick reference card correspond to the following steps:

1. Open the battery compartment on the back of the remote control.

   a. Before inserting the batteries, stretch each of the two straps across the outer battery slot closest to the battery.

   b. Insert the two outer batteries, negative end first against the spring, and press the positive end into place, thus trapping the cloth straps beneath the batteries.

   c. Lay the longer cloth strap over both batteries and insert the center battery's negative end against the spring to trap the longer cloth strap beneath it. Press the positive end of the battery into place.

   d. Lay the ends of the cloth straps over the center battery and install the cover.

2. Install the USB camera for LifeSize Passport Connect, or one of the following camera and audio components for LifeSize Passport:

   a. To install LifeSize Focus as both your camera and audio component, insert the camera cable into the port on the rear of the camera and plug the opposite end into the camera 📷 port on the codec.

   b. To install LifeSize Camera 200 as your camera component and LifeSize MicPod as your audio input device, complete the following steps:

      • Insert the camera cable into the port on the rear of the LifeSize Camera 200 and plug the opposite end into the camera 📷 port on the codec.

      • Insert the end of the cable from the LifeSize MicPod into the microphone 🎤 port on the codec. Optionally, you can add a LifeSize MicPod extension cable (not included) to the LifeSize MicPod. The extension cable is 15 meters, 49.2 feet and LifeSize recommends using no more than one extension cable. Refer to Configuring Dual LifeSize MicPods for the dual LifeSize MicPod option.

WARNING   LifeSize recommends that you use the cable strain relief clip included in the LifeSize MicPod product box as described in Attaching the LifeSize MicPod Strain Relief Clip.

---

3. Insert the video display cable into the port on the rear of your display and the opposite end into the HD Display **HD** port on the codec. Insert the display power cord into a power outlet on the wall.

    NOTE   If you plan to use external speakers not built into the display, connect the speakers to the port marked with the line out symbol ((⇒ on the back of the codec.

4. Insert the network cable into the network port marked with the LAN symbol on the back of the codec. Attach the ferrite to the network cable within 10 centimeters (four inches) of the codec. Insert the opposite end of the network cable into a network port.

5. Insert the cord from the power adapter into the power outlet marked **DC 19V** on the back of the codec. Insert one end of the power cord into the power adapter and the opposite end into a power outlet on the wall.

    The system starts and illuminates a LED on the front of the codec. The system status bar at the bottom of the screen indicates system and network status. See Status Indicators for more information about the state of the system as it boots or as conditions change.

    The camera initializes the first time it is connected to a codec. This process may take several minutes.

    WARNING   Do not disturb or disconnect the devices during this time as you may damage the system.

6. An **Initial Configuration** screen prompts you to configure the system. Refer to the *LifeSize Passport Series User and Administrator Guide* to complete the initial configuration and place a test call to verify your installation.

    If the initial configuration screen does not appear and the display is blank, refer to Troubleshooting Installation Issues.

Placement Behind a Firewall

Refer to the *LifeSize Passport Series User and Administrator Guide* for information about configuring the system for firewall traversal.

Supported Display Types and Resolutions

LifeSize Passport can connect to 720p HD displays through an HDMI cable. Supported display resolutions include the following:

- 720p
- 768p

> NOTE   LifeSize Passport automatically sets the **Display Resolution** preference in
> **Administrator Preferences : Appearance : Displays** to *Auto* if you select
> an option for this preference that the connected display does not support.

Optional Peripherals

You can connect the following optional peripherals to enhance your LifeSize system:

Peripheral	Usage
Audio Out (Line Out)	For use with external line level output speakers that are not built into display 1 or with a headset (left plus right).
USB	For use with audio over USB devices and USB to serial adapters. *LifeSize Passport Connect:* Used for the USB camera.

Configuring Dual LifeSize MicPods

In a dual LifeSize MicPod configuration, you use a combination of two LifeSize MicPods, one splitter cable, and extension cables in large rooms for maximum omnidirectional audio coverage.

You cannot use multiple splitters to connect to more than two LifeSize MicPods; however, you can use variations on three configurations of extension cables:

- If you connect the male end of the splitter directly to the codec, you can use none, or one extension cable to connect a LifeSize MicPod to each of the female ends of the splitter.
- If you use one extension cable to connect the codec to the splitter, you can use none, or one extension cable to connect a LifeSize MicPod to each of the female ends of the splitter.
- If you use two extension cables to connect the codec to the splitter, you must connect both LifeSize MicPods directly to the female ends of the splitter.

> WARNING   LifeSize recommends that you use the cable strain relief clip included in
> the LifeSize MicPod product box as described in Attaching the
> LifeSize MicPod Strain Relief Clip to avoid personal injury or damage to
> the unit.

LifeSize Passport detects any cable attached to its microphone input as a LifeSize MicPod. When **Active Microphone** is set to *Auto,* LifeSize Passport Connect uses whichever device is connected, LifeSize MicPod or USB camera. If both devices are connected, LifeSize MicPod is used for the active microphone. If no device is attached and the microphone input is selected as the active microphone, no audio is available. The 🎤 indicator does not appear in the status bar and the **Active Microphone** field in the **System Information** page reports *Microphone In* as the active microphone.

Attaching the LifeSize MicPod Strain Relief Clip

Before attaching the strain relief clip to the codec, ensure the codec surface is clean (free of dirt, dust oil, and other residues) and dry. The adhesive tape on the strain relief clip is intended for a single use. Attach the strain relief clip to the codec and route the LifeSize MicPod cable through the strain relief clip as shown in the following illustration:
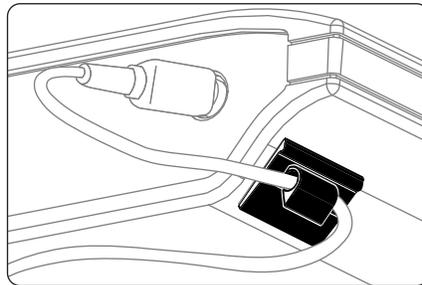
To obtain a replacement strain relief clip, contact your LifeSize Partner.

Troubleshooting Installation Issues

Installation issues you may encounter typically involve display output issues, improperly connected cables, or network bandwidth or connectivity. For more information about troubleshooting issues, refer to the *LifeSize Passport Series User and Administrator Guide*.

Loose Cables

Improperly connected or loose cables are common causes of issues with hardware units. When investigating a system issue, first inspect all external cable connections. Ensure that connections are correct and secure, and that nothing is obstructing the cables.

No Power

To troubleshoot a power issue, complete the following steps:

1. Disconnect the power supply unit (PSU) from the codec and the AC source.

2. Plug a working appliance into the AC source to determine if the source is functioning.

3. If the AC source works, plug the PSU into the AC source, but do not connect the PSU to LifeSize Passport. If the green LED on the PSU illuminates, the PSU is probably functioning.

4. Disconnect the PSU from the AC source. Connect the PSU to the LifeSize codec. Reconnect the PSU to the AC source. If the LifeSize codec fails to boot and the green LED on the PSU dims, the codec may be the source of the issue.

IP Address Displays Invalid Value

After you complete the initial configuration, if the IP address that appears at the top of the main screen displays an invalid value, one of the following conditions may exist:

Condition	Resolution
The unit is configured to obtain an address using DHCP and no DHCP server is available. **Note:** The DHCP client self-assigns an address in the 169.254 class B network and the red network symbol ⊥ appears in the status bar on the main screen.	Verify that the unit is plugged into a network that has a DHCP server present.
Faulty Ethernet cable connection.	Replace the Ethernet cable with a high quality cable.
The unit is configured to use a static IP address, but no IP address has been entered.	Identify and enter the necessary IP information.
Network connection is unavailable. A red network symbol ⊥ appears in the status bar on the main screen.	Inspect your network connection.

Camera Issues

Video from the camera appears in a small window on the main screen of the user interface above the **REDIAL** list. If no video from the camera appears, do the following:

• Ensure that the camera is properly connected to the LifeSize codec as described in Installing your System. LifeSize Passport supports only LifeSize Focus and LifeSize Camera 200.
LifeSize Passport Connect supports only USB cameras.

• Verify that the LED on the front of the camera is lit and not blinking.

• From the main screen, press ⬤ on the remote control to access the **System Menu**. Press ▢ to access page 2 of the **System Information** page. Ensure that the status of the camera is **Ready**.

Improving a Dim Image

On LifeSize Passport, adjust the **HD Camera Brightness** preference. For LifeSize Passport Connect, you can adjust the saturation and contrast to improve the image. These preferences are available in **User** (or **Administrator**) **Preferences : Diagnostics : High Definition Camera**. You can also add a light source to improve the subject's illumination. Read more at Room Configuration.

Status Indicators

The following table identifies the indicators that may appear in the system status bar.

Icon	Condition
	Indicates that the communication subsystem is initializing. If this indicator reappears after the system has booted, a problem has occurred. Reboot the system.
	Indicates that the system is initializing. Functionality on the main screen is disabled. This indicator also appears when a new device is connected to the system after the system boots and disappears when the device is ready. If the indicator persists, a problem has occurred and rebooting the system is necessary.
	Indicates that the system does not have an active microphone. Check the device's connections and then check the option you selected for the **Active Microphone** preference.
Network Status	Identifies the network status, as follows: connected (green) in progress (yellow) disconnected (red)
H.323	LifeSize Passport only: Indicates the status of the registration process with the H.323 gatekeeper. The yellow indicator appears when your system is trying to register with the gatekeeper. If the registration fails, the red indicator appears. If the system is registered to a gatekeeper, the system shows its status.
SIP	Indicates the status of the registration process with the SIP server. The yellow indicator appears when your system is trying to register with the SIP server. If the registration fails, the red indicator appears.
System Overheating	The yellow indicator warns you when the system temperature is above normal operating temperature. The codec adjusts fan speed automatically to cool itself. The red indicator warns that the system is overheated and approaching the maximum allowed operating temperature and will automatically reboot after reaching it. **Warning:** Temperatures that require the codec to reboot can permanently damage components. Ensure the room that houses the codec is properly ventilated and temperature controlled.
	Indicates the status of registration with LifeSize Connections. The yellow indicator appears when you are disconnected. The red indicator appears when the server is unavailable.