



LifeSize® Passport™ Installation Guide

October 2009

Copyright Notice

©2009 LifeSize Communications Inc, and its licensors. All rights reserved.

LifeSize Communications has made every effort to ensure that the information contained in this document is accurate and reliable, but assumes no responsibility for errors or omissions. Information in this document is subject to change without notice. Companies, names, and data used in examples herein are fictitious unless noted. This document contains copyrighted and proprietary information, which is protected by United States copyright laws and international treaty provisions. No part of the document may be reproduced or transmitted, in any form or by any means, electronic or mechanical, for any purpose, without the express written permission from LifeSize Communications.

Trademark Acknowledgments

LifeSize® is the trademark of LifeSize Communications Inc. All other trademarks are the property of their respective owners.

Patent Notice

For patents covering LifeSize® products, refer to <http://www.lifesize.com/support/legal>.

Contacting Technical Services

If you have questions, concerns, or need assistance, contact your LifeSize Partner.

Providing Customer Feedback

LifeSize Communications welcomes your comments regarding our products and services. If you have feedback about this or any LifeSize product, please send it to feedback@lifesize.com. Contact information for LifeSize Communications is as follows:

<i>Method</i>	<i>Address</i>
Internet	http://www.lifesize.com
E-mail	support@lifesize.com
Phone	(877) LIFESIZE or (877) 543-3749 (512) 347-9300
Fax	(512) 347-9301

Preparing for Installation

As you prepare to install LifeSize Passport, consider the physical conditions of the room, compatibility with displays, and your network configuration and settings. LifeSize recommends you collect your network settings and system identification information before you begin installation. Refer to “Initial Configuration” on page 5.

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, LifeSize Focus can be placed at one end or corner of the room, as its beam forming microphone array cancels echo from wall reflections behind it and detects clear sound up to 2.7 meters (9 feet) in front of it. However, in a multi-user conference room, a LifeSize MicPod should be placed in the middle of the participants as its sound detection pattern is omnidirectional with a radius of 3 meters (10 feet).

Warning: Avoid routing cables from the codec across foot-traffic areas as tripping on the cables can cause both personal injury and permanent damage to the connectors in the cables and the codec itself. If cables must cross foot-traffic areas, use some form of cable management system or strategy to lessen the possibility of tripping.

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

Consult your administrator or LifeSize Partner for specific lighting requirements for your environment.

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 is not supported by the connected display.

Placement Behind a Firewall

LifeSize recommends you place your system behind a firewall and block, at minimum, the following ports:

- 22 (ssh)
- 23 (telnet)
- 80 (http)
- 443 (https)

If you require these ports to remain open, ensure that you change the default administrator and command line interface passwords to be very secure. For information about changing the default administrator password, refer to the *LifeSize Passport User Guide*.

For information about changing the command line interface password, refer to the *LifeSize Passport Automation Command Line Interface* document.

You can also disable ssh and web access on the system by configuring preferences in the user interface. By default, telnet access is disabled. For more information about remote access, refer to the *LifeSize Passport User Guide*.

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 have a Domain Name Service (DNS) server configured or use a Dynamic Host Configuration Protocol (DHCP) server that automatically sets a DNS server.

Initial Configuration

During the installation process, LifeSize Passport prompts you to configure it for the first time. LifeSize recommends that you gather all the necessary information prior to installation. The following sections provide guidelines for collecting, and a means of recording, this data. You may need to consult your network administrator for network settings and system identification information.

Note: The initial configuration screens also appear when you perform a system reset. For more information about restoring default settings, refer to the *LifeSize Passport User Guide*.

Language

Select the language to display in the user interface. The default is English.

Administrator and User Passwords

Some functions and preferences available from the user interface are accessible only to administrative users with a password. For security reasons, LifeSize recommends that you change the default administrator password (1 2 3 4) during the initial configuration.

Optionally, you can set a user password to control access to user preferences that enable the user to do the following:

- Change the appearance of the user interface.
- Specify how calls are answered.
- Change camera settings.
- Configure audio settings.
- Reboot the system.

The administrator and user passwords can contain any combination of the numbers 0-9 and the symbols * (star) and # (pound) up to 16 characters in length.

Note: If you set a user password, you can also use the administrator password to access user preferences.

Administrator Password: _____

User Password: _____

System Identification

Information that identifies the system to users appears throughout the user interface.

Set the **Location** preference to your location. The default is the United States. The **Time Zone** preference sets the system time that appears in the status bar on the main page of the user interface. It defaults to Greenwich Mean Time. You must set this preference even if you specify an NTP server during the initial configuration (refer to “Network Settings” on page 6).

The **System Name**, **Video Number**, and **Voice Number** appear in the user interface on the main screen. The system name may also appear in the local and corporate directories. LifeSize recommends that you change the default system name to one that meaningfully identifies the system to your users.

System Name: (to identify this installation in the network): _____

Video Number: _____

Voice Number: _____

Video and Voice Dialing Preferences

LifeSize systems support either the IP or ISDN protocol for video dialing. The default setting for the **Video Dialing** preference is *Auto* which enables the system to determine the best method to use to place calls.

LifeSize Passport supports VoIP and ISDN for voice calls. *VoIP* uses H.323 or SIP.

When placing a call using the **Voice Call** button, you can dial IP addresses as well as VoIP or ISDN phone numbers.

When placing a call using the remote control you can dial IP addresses. This enables systems inside a corporate network without access to a gateway to call other LifeSize systems in the network using system IP addresses.

Network Settings

By default, DHCP is enabled on LifeSize systems. If you choose *Disabled* for the **DHCP** preference, you must enter an **IP address** (the locally configured IP address if not assigned by a DHCP server), **Subnet Mask** (used to partition the IP address into a network and host identifier), and **Default Gateway** (the IP address of the default gateway the system uses).

IP Address: _____

Subnet Mask: _____

Default GateWay: _____

You can enter the **Hostname** of the system. If you do not have a DHCP server that automatically sets a DNS server, you can enter the IP addresses to configure **DNS Servers**. You can also define the domain names to search when resolving hostnames. DNS translates names of network nodes into addresses; specify this preference to use DNS to resolve the hostnames of devices to IP addresses.

Hostname: _____

DNS Servers: _____

Name Search Domains: _____

If you choose an option other than *Auto* (the default) for the **Network Speed** preference, ensure that the option matches the speed and duplex configured on your network switch.

Network Speed: _____ Network Duplex: _____

You can enter the hostname or IP address of a Network Time Protocol (NTP) server to set the system date and time automatically. The LifeSize system ignores the value you specify for the NTP Server Hostname if the **DHCP** preference is set to *Enabled* and the DHCP server can pass an NTP server address to the LifeSize system.

Network Time Protocol (NTP): _____

Audio Preferences

The default for **Active Microphone** is *Auto*. The system detects attached audio input devices and makes one of them the active microphone in this order: microphone in, camera 1.

To set the audio level for the active microphone, select **Active Microphone Volume** and press **OK** on the LifeSize remote control. An audio meter appears. The audio meter is calibrated in decibels (dB) below digital full scale on the transmitted voice. The maximum level is 0 dB.

You can also test the primary output speakers for the appropriate audio level or to ensure they are working properly. Select *Auto* for **Primary Audio Output Test** to cycle through a test on your available speakers. The test continues until you select *Off*.

LifeSize Passport Components

Your LifeSize Passport package contains the following components:

- One of the following cameras and cables:
 - LifeSize Focus and a 2.9 M (9.5 ft) cable. (Contact LifeSize or your LifeSize Partner for optional 7.5 M (24.6 ft) or 15 M (49.2 ft) cables.)
 - LifeSize Camera and a 7.5 M (24.6 ft) cable. (Contact LifeSize or your LifeSize Partner for the optional 15 M (49.2 ft) cable.)

The LifeSize Camera option requires the additional audio component:




- LifeSize MicPod (see “Optional Peripherals” on page 11 for the dual LifeSize MicPod option)
- LifeSize Passport codec
- LifeSize Remote Control (including three AAA batteries)
- One ferrite
- Quick reference card
- Documentation CD

Installing LifeSize Passport


To install your LifeSize Passport system, remove all components from the product packaging, including cables, 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 the room that houses the codec is properly ventilated and temperature controlled.



Refer to the LifeSize 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 side of the remote control.
 - a. Before inserting the batteries, stretch each of the two straps across the outer battery slot closest to it.
 - b. Insert the two outer batteries, negative end (-) first against the spring, then press the positive (+) end into place, 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 first to trap the longer cloth strap beneath it. Then 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. Complete one of the following options to install the camera and audio components:
 - 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 port marked with the camera symbol  on the back of the codec.
 - b. To install LifeSize Camera 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 and plug the opposite end into the port marked with the camera symbol  on the back of the codec.
 - Insert the end of the cable from the LifeSize MicPod into the microphone port marked with the microphone symbol  on the back of the codec. (Refer to "Optional Peripherals" on page 11 for the dual LifeSize MicPod option.)

Warning: Tripping on the LifeSize MicPod cord can cause personal injury as well as permanent damage to the LifeSize MicPod cord connector and the connector in the codec. 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" on page 12.

3. Insert the video display cable into the port on the rear of your display and the opposite end into the port marked with the HD display 1 symbol  on the back of 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 LifeSize system starts, illuminating a blue LED on the front of the codec. See “Status Icons” on page 15 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 appears and prompts you to configure the system. Refer to “Initial Configuration” on page 5 and the information you collected there previously to guide you through your configuration choices. Use the arrow keys on the remote control to navigate the preferences that appear in the initial configuration screens. Icons and their descriptions that appear at the bottom of each screen correspond to keys on the remote control and indicate what operations are available for the screen or a selected object.

If the initial configuration screen does not appear and the display is blank, refer to “Troubleshooting Installation Issues” on page 13.

The bottom of the screen contains the system status bar and the navigation bar. The system status bar indicates system and network status. When the system is booting, status also appears at the top of the **REDIAL** list to indicate the current state of the system. See “Status Icons” on page 15 for an explanation of status icons you may encounter.

Locking the LifeSize Codec

You can lock the LifeSize codec with a secure loop to prevent physical removal of the device. For assistance, contact your LifeSize Partner or LifeSize Technical Services.

Optional Peripherals

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

Peripheral	Usage
Microphone in	<p>For use with a single or dual LifeSize MicPod configuration.</p> <p>In a single LifeSize MicPod configuration, you can add a LifeSize MicPod extension cable (15 meters, 49.2 feet) to the LifeSize MicPod.</p> <p>In a dual LifeSize MicPod configuration, you use a combination of two LifeSize MicPods, one splitter cable, and extension cables in large rooms to create wider coverage of audio input. Refer to “Configuring Dual LifeSize MicPods” on page 11 for supported configurations.</p>
Audio Out (Line Out)	<p>For use with external line level output speakers that are not built into display 1 or with a headset (left plus right).</p> <hr/> <p>Warning: Excessive sound pressure from earphones and headphones can cause hearing loss.</p> <hr/>
USB	Reserved for future use.

Configuring Dual LifeSize MicPods

Using the splitter cable, you can connect a combination of extension cables and two LifeSize MicPods to the single LifeSize MicPod port on your LifeSize codec for maximum omnidirectional audio coverage in large conference rooms.

Dual LifeSize MicPod configurations are limited to two LifeSize MicPods and one splitter cable. (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.

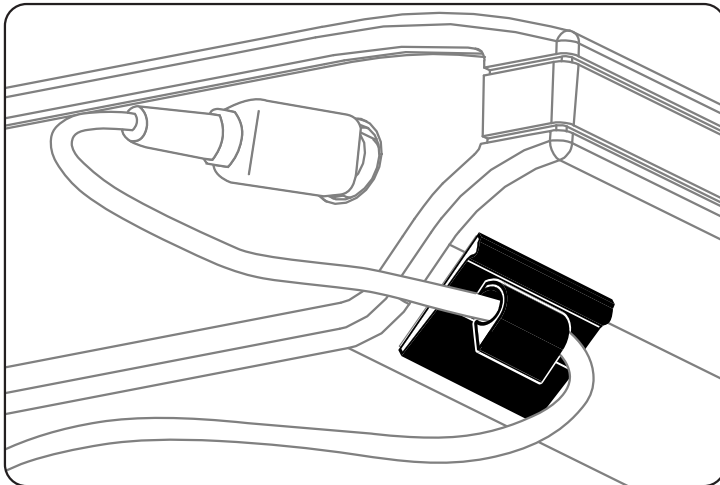
Warning: Tripping on the LifeSize MicPod cord can cause personal injury as well as permanent damage to the LifeSize MicPod cord or extension cable connector and the connector in the codec. LifeSize recommends that you use the cable strain relief clip included in the LifeSize MicPod product box as described in “Attaching the LifeSize MicPod Strain Relief Clip” on page 12.

LifeSize Passport detects any cable attached to its microphone input as a LifeSize MicPod. If a LifeSize MicPod is not attached to the extension or splitter cable and the microphone input is selected as the active microphone, no audio is available. The No Active Microphone 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

If the LifeSize MicPod is installed in an area where the cord could be pulled or tripped upon, LifeSize recommends using the strain relief clip (included with your LifeSize MicPod) to reduce the chance of disconnecting or damaging the plug or LifeSize Passport. LifeSize also recommends that you use some form of cable management system or strategy to lessen the possibility of tripping.

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:



Post-Installation Configuration

Depending on your environment, you may need to make the following additional adjustments to the configuration of your LifeSize Passport and your network before you can make a test call to verify your installation.

If you use static Network Address Translation (NAT) to assign a public IP address to your LifeSize Passport for communication with devices outside your private network, you must enable static NAT on your LifeSize Passport before placing calls.

If your LifeSize system communicates with other devices through a firewall, you must configure your firewall to allow incoming and outgoing traffic to the LifeSize system through the reserved ports. Users placing calls through a firewall to systems with IP addresses may experience one-way audio or video if the firewall is not properly configured to allow video and audio traffic.

If you are using H.323 gatekeepers in your environment and want to place calls using a name or extension with the H.323 protocol, you must configure the H.323 settings for LifeSize Passport.

If you are using Session Initiation Protocol (SIP) servers in your environment to place calls using the SIP protocol, you must configure the SIP settings for LifeSize Passport.

For more information on configuring these preferences, refer to the appropriate section of the *LifeSize Passport User Guide*.

Placing a Test Call to LifeSize Systems

The following default entry appears in the **REDIAL** list and local directory for a new system:

- **LifeSize Demo** (demo.lifesize.com)

You can use this entry to place a test call to an available LifeSize demonstration system. For more information on placing a call, refer to the *LifeSize Passport User Guide*.

Note: To use this entry, you must specify a DNS server in **Administrator Preferences : Network : General** or use DHCP that automatically sets a DNS server. If a DNS server is not configured, a call to either of these entries shows the call status as unavailable, because the call cannot resolve to the IP address.

Troubleshooting Installation Issues

Installation issues you may encounter with LifeSize Passport system typically involve display output issues, improperly connected cables, or network bandwidth or connectivity. When investigating a system problem, first inspect all external cable connections. Ensure that connections are correct and secure, and that nothing is obstructing the cables. For more information about troubleshooting issues you may encounter with LifeSize Passport, refer to the *LifeSize Passport User Guide*.

No Power



To troubleshoot a power problem, complete the following steps:

1. Disconnect the power supply unit (PSU) from the codec and the AC source.
2. Plug an appliance you know works into the AC source to determine if the source works.

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 good.
4. Connect the PSU to LifeSize Passport. If LifeSize Passport fails to boot and the green LED dims, there may be a problem with the codec.


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
<p>The unit is configured to obtain an address using DHCP and no DHCP server is available.</p> <p>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.</p>	<p>Verify that the unit is plugged into a network that has a DHCP server present.</p>
<p>Faulty Ethernet cable connection.</p>	<p>Replace the Ethernet cable with a high quality cable.</p>
<p>The unit is configured to use a static IP address, but no IP address has been entered.</p>	<p>Identify and enter the necessary IP information if you disable DHCP.</p>
<p>Network connection is unavailable.</p> <p>A red network symbol  appears in the status bar on the main screen.</p>	<p>Inspect your network connection.</p>

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 LifeSize Passport” on page 8. Only LifeSize Focus and LifeSize Camera are supported with LifeSize Passport.
- Verify that the blue LED on the front of the camera is lit and not blinking, indicating that power is active.
- From the main screen of the user interface, press  on the LifeSize 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

If the image appears too dim, you can adjust the **HD Camera Brightness** preference in **User (or Administrator) Preferences : Diagnostics : High Definition Camera**. You can also add a light source to improve the subject's illumination. Refer to "Room Configuration" on page 3 for more information.

Status Icons

The following table identifies the icons that can appear in the system status bar.

Icon	Condition
	Indicates that the communication subsystem is initializing. If this icon reappears after the system has booted, a problem has occurred. Reboot the system.
	Indicates that the system is initializing. When the system is initializing, functionality on the main screen is disabled and no entries appear in the REDIAL list. This icon also appears when a new device is connected to the system after the system boots and disappears when the device is ready. If the icon 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 indicator) in progress  (yellow indicator) disconnected  (red indicator)
System Overheating	<p>This yellow indicator warns you when the system temperature is above normal operating temperature. The codec adjusts fan speed automatically to cool itself. </p> <p>This red indicator warns that the system is overheated and approaching the maximum allowed operating temperature and will automatically reboot after reaching it. </p> <hr/> <p>Warning: Temperatures that require the codec to reboot can permanently damage codec components. Ensure the room that houses the codec is properly ventilated and temperature controlled.</p> <hr/>