

Polycom® Pano™

Polycom® announces the release of the Polycom® Pano™ device software version 1.1.1. This document includes the latest information about new and updated features available on the Pano device and Polycom® Pano™ App, including relevant features on the Polycom® Cloud Service.

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Supported Documents

Refer to the following documents located at [Polycom Support](#) for more information on the new features described in these release notes.

- *Polycom Pano Administrator Guide*
- *Polycom Pano User Guide*

What's New for Version 1.1.1

Topics:

- [Increased International Support for Wireless Capability](#)

Version 1.1.1 is a maintenance release for Pano only.

This release includes bug fixes, security updates, and wireless support in additional countries.

Increased International Support for Wireless Capability

Some countries have unique regulatory requirements for wireless devices. In this release, Polycom upgraded the Pano system firmware to include wireless interface power tables that meet the following country or regional requirements:

- Argentina
- Indonesia
- Israel
- South Korea
- Malaysia
- Mexico
- Taiwan
- United Arab Emirates

The upgrade also includes a generic power table that meets worldwide standards, which have a common set of parameters for operating in the 2.4 GHz band. To facilitate a quicker response to type approvals, the generic power table is shipped with Pano systems to countries in which Polycom obtains approval, allowing you to immediately order your Pano system and use its wireless capability. Power tables for approved countries are updated in the subsequent Pano system software release based on the details of the approval (including, in some instances, the ability to operate in the higher-capacity 5 GHz band).

Countries that don't require type approval, or the type approval is held by an entity other than Polycom, can use the generic power table.

Polycom Labs Features

Topics:

- [Pano App Content Layout Control](#)

Polycom occasionally releases features to provide early access to an area of new innovation and capability within the Polycom solution ecosystem.

Note: Experimental features are neither tested nor supported. These features might, or might not, become official features in a future release.

Pano App Content Layout Control

When sharing local content with the Pano App, you can maximize or restore the content window on the Pano system.

This works only when the Pano system and the device using the Pano App are on the same network (i.e., not connected through the Polycom Cloud Service).

You can enable this feature in the Pano App settings by selecting **Lab Features > Maximize/Restore Controls**.

Software Version History

Pano System Software Version History

Software Version	Release Date	Description
1.1.1	March 2018	(Pano only) Bug fixes, security updates, and wireless support in additional countries.
1.1	December 2017	Release includes the following new features: 802.1X authentication and PKI certificate support; TLS 1.0 disabled; provisioning service support; new option for integrating with Polycom video systems; LLDP support for PoE+; new administrative user roles for the Polycom Cloud Service; and a built-in Office 365 authentication provider for accessing the Polycom Cloud Service Administration portal.
1.0.1	August 2017	Includes upgraded Pano system firmware that increases international support for wireless capability.
1.0	June 2017	Initial release that includes support for wired and wireless content display; non-touch and touch display capabilities; integrated blank canvas options for sharing and collaborating; infinite blackboard or whiteboard canvas size; an integrated toolbar for interacting with content (including real-time annotation tools); multi-finger gesture detection for content interaction (e.g., erase, zoom, pan, and move); an administrative web interface; integration with Polycom video systems; connectivity to the Polycom Cloud Service; and the ability to share content with the Pano App. This release also includes Polycom Cloud Service Content Sharing, which is a Polycom Labs feature.

Pano App Software Version History

Software Version	Release Date	Description
1.1	December 2017	Release includes the following new features: the ability to end sessions and disconnect from the Pano system; audio support with Pano App for Windows; sharing video at up to 1080p and 30fps. This release also includes Pano App content layout control, which is a Polycom Labs feature.
1.0.1	June 2017	Includes user interface updates.
1.0	June 2017	Initial release that includes local content sharing; automatic detection of nearby Pano systems; and the ability to save content displayed on a Pano system. This release also includes Polycom Cloud Service Content Sharing, a Polycom Labs feature.

Supported Displays

Topics:

- [Tested Touch-Capable Monitors](#)

The Pano device can present content streams on user-supplied, non-touch or touch monitors that support up to 4K (UHD) 60fps RGB444 output over HDMI 2.0.

Tested Touch-Capable Monitors

The Pano device supports single- and multi-touch input from a HID-compliant device.

The following touch-capable monitors have been tested with the device and provide an optimal touch experience.

Tested Touch-Capable Monitors

Size (inches)	Touch Technology	Brand	Model/Part Number
22	Capacitive	Elo®	E497001
46	Capacitive	Elo®	ET4602L
55	InGlass™	Dell	C5518QT (black)
65	InGlass	Volanti	VD-6500-0B0C-1100 (black)
65	InGlass	Volanti	VD-6500-0Q0C-16P3 (white)
70	IR	Sharp	PN-L703B (black)

Supported Browsers

You can access the Pano system web interface using the following browsers:

- Apple® Safari® 9 and later
- Google Chrome™ 46.0.2490.86 and later
- Mozilla® Firefox® 42.0 and later
- Microsoft Edge™ (all versions)

Supported Miracast-Certified Devices

You can display content from your Miracast-certified Android or Windows device to the Polycom Pano system monitor.

Windows or Android devices can discover and connect directly with the Polycom Pano system and do not have to be on the same network.

The Polycom Pano system supports content sharing from the following Android and Windows devices:

- Miracast-certified devices running Windows 10
- Samsung Galaxy smartphones and tablets running Android version 4.4 or later

Note: Polycom cannot guarantee connectivity with all Miracast-certified devices, but connectivity has been validated to work well with Samsung smartphones and tablets using Android version 4.4 or later and the Microsoft Surface® 3 Pro and Surface® 4 Pro running Windows 10. Check your device documentation on how to enable and use its screen mirroring feature.

Supported AirPlay-Certified Devices

You can share the screen and audio of an AirPlay-certified iPhone®, iPad®, or Mac® computer.

Polycom cannot guarantee connectivity with all these devices but has validated the following:

- iPhone 6 and newer running at least iOS® version 10
- iPad Air and newer running at least iOS version 10
- Mac computers running at least macOS® version 10.12

Supported Operating Systems for Pano App

The Pano App can run on the following operating systems:

- Windows 7, 8.1, and 10
- macOS 10.11 and later

Products Tested with Pano App

Polycom products are tested extensively with a wide range of products. You can view a list of the products that have been tested for compatibility with this release.

Polycom strives to support any system that is standards-compliant and investigates reports of Polycom systems that are not interoperable with other vendor systems. Note that the following list is not a complete inventory of compatible equipment, but the products that have been tested with this release.

Note: Polycom recommends that you upgrade all of your Polycom systems with the latest software versions. Any compatibility issues may already have been addressed by software updates. Refer to Polycom Service Policies at http://support.polycom.com/content/support/service_policies.html to see the Current Polycom Interoperability Matrix.

Products Tested with this Release

Product	Tested Versions
Polycom® RealPresence® Group Series	6.1.5
Polycom Pano	1.1.1, 1.1, 1.0.1
Polycom® RealPresence Debut™	1.3.1
Polycom® Centro™	6.1.5
Polycom® RealPresence Trio™	5.5.2
Polycom® Open Telepresence Experience™ 300 (with ITP)	3.1.4

Note: When the Pano App is connected to a RealPresence OTX 300 or RealPresence Group Series system, only the app can start content sharing (and not, for example, the OTX Touch Pad). You can, however, stop content sharing from the Touch Pad or RealPresence Group Series system.

Language Support

The Pano device user interface provides support for the following languages:

- Chinese (Simplified)
- Chinese (Traditional)
- British English
- American English
- French
- German
- Hungarian
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese (Brazilian)
- Russian
- Spanish

System Constraints and Limitations

Topics:

- [Polycom Cloud Service](#)
- [Miracast-Certified Devices](#)
- [AirPlay-Certified Devices](#)
- [Pano App](#)
- [Capacity](#)
- [HDCP Not Supported](#)
- [Downloading Certificate Signing Requests](#)
- [Downloading System Logs](#)
- [Integrating with Polycom Video Systems](#)

The following sections provide information on constraints and limitations when using the Pano device.

Polycom Cloud Service

If you did not provide an email address with your purchase, or your Pano device is shipped to China, Mexico, Brazil, or Argentina, you must activate your Pano device maintenance service on [Polycom Support](#) and provide an email address before your Polycom Cloud Service account can be created.

Miracast-Certified Devices

For some Miracast-certified devices, the behavior of the security code differs from what is expected when connecting to the Pano device.

The following variances may be notable depending on your organization's security plan:

- Android devices that require an eight-digit security code are not able to connect to the Pano device since its security code contains only four digits.
- Some Android devices or operating systems may only require a security code during the first attempt to connect. To force their personal device to prompt for a security code after the initial attempt, a user can remove the Pano device from the list of connected devices (also referred to as "forget" a device).
- Systems running the Windows operating system only require a security code during the first attempt to connect. To force personal device to prompt for a security code after the initial attempt, a user can remove the Pano device from the list of connected devices (also referred to as "forgetting" a device).
- Huawei® devices may only require a security code during the first attempt to connect.
- As of the December 15, 2016, release of the Samsung software update, the method to send a security code from a Samsung device to a Pano system has changed. A user must press and hold the desired Pano system selection in the list of devices, then select the option to send the entered security code to that system.

AirPlay-Certified Devices

Connecting to a Pano device with an AirPlay-certified device running iOS version 9.x installed is only supported when the devices are on the same subnet.

The Pano device does not support casting from direct streaming sources such as web links, YouTube™, or Google Chromecast™ when sharing content using an AirPlay-certified device. If you share content that streams by sending direct links to the Pano device, the content is not shown.

For some AirPlay-certified devices, the behavior of the security code differs from what is expected when connecting to a Pano device. The following variances may be notable depending on your organization's security plan:

- The security code is not highlighted on the Pano device when the device or system attempting to connect is running iOS 9 and in charging mode.
- If a user attempts to connect to a previously connected Pano device, and the security code has not changed, the user is not prompted for a security code and the connection is unsuccessful.

Pano App

Internet Explorer version 11 or later must be installed on a Windows system using the Pano App to access a shared component that does not exist in previous versions of the browser.

To prevent unexpected results when connecting to the Polycom Cloud Service, make sure the time clock of the system on which the Pano App is installed matches the current local time.

The Pano device displays a blank panel or screen when the last content source from the Pano App is disconnected.

When Bluetooth® is enabled, the Pano App can search for nearby Pano systems that have enabled Bluetooth broadcasting and that are registered to the same Polycom Cloud Service account (when you are signed in to the service). This feature is available to users of Windows 10 and macOS 10.8 or later with hardware supporting Bluetooth version 4.0 or later.

Capacity

The following table helps answer questions about the Pano system's capacity (e.g., content sharing activity and number of connected devices).

Pano System Capacity Frequently Asked Questions

Question	Answer
How many blackboards and whiteboards can be open at the same time (including in the content tray) during a session?	The maximum is 70.
How many content snapshots can be open at the same time (including in the content tray) during a session?	Between 15–20.

Question	Answer
How many Pano App users can connect (but not share content) at the same time?	There is no known limit for connections to a Pano system through the cloud. If the devices are on the same network, up to four can connect directly.
Is there a limit to how many content saves can occur simultaneously with the Pano App?	Up to four (the same number of devices that can directly connect to a Pano system at the same time).
How many AirPlay-certified devices can share content at the same time?	Four (only three if HDMI is also used to share).
How many Miracast-certified devices can share content at the same time?	Four (only three if HDMI is also used to share).
Is capacity affected by the quality (e.g., resolution) or type of content shared?	No.
How long can a session last?	Sessions do not end if there is active content. A session could end if the sharing device's connection through the Pano App times out due to inactivity (e.g., sleep mode) or network issues.

HDCP Not Supported

The High-bandwidth Digital Content Protection (HDCP) standard does not support the use of HDCP by a Pano system. If you connect a content source that sends HDCP-encrypted content, the Pano device displays a blank screen or default non-HDCP screen provided by the source. To ensure that content displays correctly, send content in a format other than HDCP.

Note: Due to a policy established by Apple Computer, Inc., you cannot disable the HDCP encryption service on the DVI or HDMI outputs of a computer that is manufactured by Apple Computer, Inc.

Downloading Certificate Signing Requests

Downloading a certificate signing request (CSR) from the Pano system web interface using the Safari browser may not save the file with the correct extension (.pem).

Polycom recommends updating to at least Safari version 10.1.1 and macOS version 10.12.5 or using another browser.

Downloading System Logs

On iOS devices, you can only download Pano system logs using the Safari browser. The log files are named `unknown.dms`, which you must rename with a `.tgz` extension to view.

Integrating with Polycom Video Systems

To integrate your Pano system with a Polycom video system, make sure that the systems are connected to networks that allow connectivity between them.

For example, if the Pano system is connected to the Internet, while the Polycom video system is on a trusted network, the Pano system would not be able to detect and pair with the Polycom video system and functionality may be limited.

For more information on how to integrate with a Polycom video system, refer to the *Polycom Pano Administrator Guide* available on [Polycom Support](#).

Security Updates

This release includes patches for Spectre — CVE-2017-5753 and CVE-2017-5715.

For more information, refer to: [Polycom Security Center](#).

Installing Pano App 1.1

Topics:

- [Installing Pano App from the Command Line](#)

Unlike in previous releases of the Pano App, you can upgrade without having to first uninstall the app (unless you are using version 1.1 Alpha or Beta).

Installing or uninstalling the Pano App requires administrative rights on the device.

Installing Pano App from the Command Line

If you are a system administrator, you can install the Pano App using the command line.

The installation file with an `.msi` extension supports silent Windows installations.

The installation file with a `.dmg` extension supports silent Mac installations.

Remember the following when installing the Pano App from the command line:

- The `.msi` and `.dmg` files are intended for centralized distribution by system administrators.
- When you save one of these installation files to your local disk, do not rename it (the filename should be consistent with the installation package).

Install Pano App on Windows from the Command Line

You can install the Pano App on Windows using the command line.

1. Save the `Polycom Pano App.msi` installation file to a directory on your local disk (e.g., `C:\Downloads`).
2. Run the command to install version 1.1 of the app or upgrade from 1.0 or 1.0.1.
Example: `msiexec /qn /l*v log.txt /i "C:\Downloads\Polycom Pano App.msi"`

Uninstall Pano App on Windows from the Command Line

You can uninstall the Pano App on Windows using the command line.

1. Run the command to uninstall the app using the `.msi` file.
Example: `msiexec /qn /x "C:\Downloads\Polycom Pano App.msi"`

Install Pano App on Mac from the Command Line

You can install the Pano App on Mac using the command line.

1. Mount the `.dmg` file to get the `.pkg` file.
Example: `hdiutil attach /filepath/PolycomPanoApp.dmg`
2. Run the command to install the `.pkg` file.

Example: `installer -pkg /filepath/PolycomPanoApp.pkg -target
CurrentUserHomeDirectory`

Note: This command only works for installing version 1.1.

Uninstall Pano App on Mac from the Command Line

You can uninstall the Pano App on Mac using the command line.

1. Enter `cd /Applications.`
2. Enter `rm -r -f *PolycomPanoApp*.`

Known Issues

The following table lists known issues in the Pano 1.1.1 system.

Note: These release notes do not provide a complete listing of all known issues that are included in the software. Issues not expected to significantly impact customers with standard voice or video conferencing environments may not be included. In addition, the information in these release notes is provided as-is at the time of release and is subject to change without notice.

Known Issues

Category	Issue ID	Release	Description	Workaround
Application	EN-35220	1.1	(Windows 10 users only) When you share the Windows Media Player application, if another window (such as a notification window or other application) covers the shared application, the content sharing hangs.	Make sure the shared application is always on top, or share your desktop instead.
Application	EN-35843	1.1	(Windows 10 users only) When you share the "Movies & TV" or "Chrome" applications, if another window (such as a notification window or other application), the content goes black.	Make sure the shared application is always on top, or share your desktop instead.
Application	EN-53049	1.1	(Windows users only) When your device has two displays in duplicate mode and you are sharing a PowerPoint deck, starting Slide Show may cause truncated content.	Do one of the following: <ul style="list-style-type: none">Change the display setting to Extend these displays.Remove or disable the second monitor.

Category	Issue ID	Release	Description	Workaround
Application	EN-55047	1.1	If you share a Microsoft Word file with the Pano App when connected to a Pano device, the content sometimes does not display correctly while scrolling through the document.	No workaround currently available.
Application	EN-57340	1.1	If your laptop runs on battery only and you share 1080p content for over an hour, your laptop may power off automatically because of power exhaust.	Plug in the power supply during prolonged sharing.
Application	EN-58795	1.1	(Windows users only) Audio shared with the Pano App from a Lenovo™ T420 system may have poor quality.	Stop the content and share it again.
Application	EN-60567	1.1	When connected to a Pano device that is registered to the Polycom Cloud Service, sometimes the wrong device name displays in the Pano App.	Disconnect and reconnect to the Pano device.
Application	EN-61241	1.1	Content shared using the Pano App may take up to a minute to display with some devices.	Disable and re-enable the audio on the device.
Configuration	EN-17320	1.0	Changing the Room Name for a Pano system that is paired with a Polycom video system fails when the value provided exceeds 40 characters.	Use 40 or fewer characters when entering a value for the Room Name.

Category	Issue ID	Release	Description	Workaround
Content	EN-35262	1.1	Content on the Pano system sometimes does not display in a call when other content is already shared to a paired RealPresence Group Series system using Polycom People +Content™. This occurs when the systems are connected with an HDMI splitter or HDMI USB adapter.	Share content to the paired Pano system using the Pano App.
Content	EN-61318	1.1	Content shared from an AirPlay-certified device may not display on the Pano system.	In the Pano system web interface, go to General Settings > Screen Mirroring and disable and re-enable AirPlay.
Integration	EN-35762	1.1	When a RealPresence Group Series system is unpaired from a Pano system, its monitor profile does not revert to Content, then Far, then Near as expected.	In the RealPresence Group Series system interface, reconfigure the monitor profile settings after unpairing.
Integration	EN-49285	1.1	If a Pano system is paired to a new RealPresence Group Series system, the name of the one it was previously paired to still displays in the Connected to field on the General Settings > Pairing page of the Pano system web interface.	Disconnect then reconnect the Pano system to the newly-paired RealPresence Group Series system. The correct name should display.
Integration	EN-60925	1.1	When connecting the Pano system to a RealPresence Group Series system using an HDMI USB adapter, pairing is not successful if the video system is in sleep mode.	Wake the RealPresence Group Series system, reconnect it to the Pano system, and complete the pairing process again.

Category	Issue ID	Release	Description	Workaround
Maintenance	EN-59501	1.1	Sometimes the software update status on RealPresence Resource Manager indicates a Pano system update is in progress when it is not. This occurs when manually checking for available updates from RealPresence Resource Manager in the Pano system web interface.	No workaround currently available.
Security	EN-60037	1.1	Updating the Pano system software with RealPresence Resource Manager fails when TLS is enabled.	No workaround currently available.
Security	EN-63607	1.1	Installing valid .pem certificates that don't end with a new line may fail silently or return a, "The upload failed" error.	Make sure that the .pem certificate ends with a new line following -----END CERTIFICATE-----
Application	EN-79684	1.1	While sharing video content from your iOS or Mac device to the Polycom Pano system monitor using AirPlay, you can't hear the content audio on the Pano side.	Turn your iOS or Mac device volume up or down.
Application	EN-79686	1.1	While sharing streamed video content from your iPhone device to the Polycom Pano system monitor using AirPlay, if you play the video full screen on the iPhone, the Pano system may stop displaying the content.	None.

Resolved Issues

The following table lists resolved issues in the Pano 1.1.1 system.

Resolved Issues

Category	Issue ID	Found in Release	Description
Application	EN-35262	1.1	Content on the Pano system sometimes doesn't display in a call when other content is already shared to a paired RealPresence Group Series system using Polycom People+Content™. This occurs when the systems are connected with an HDMI splitter or HDMI USB adapter.
Application	EN-59300	1.1	The Pano system becomes unresponsive if you turn the monitor off and on repetitively. You need to reboot the Pano system to fix this problem.
Application	EN-66002	1.1	The Pano system advertises itself and nearby Windows, Android, and Apple devices can detect it. However, the Pano system doesn't allow any connections to itself wirelessly.
Application	EN-66650	1.1	Sometimes, you can't connect to the Pano system from a Miracast-capable device.
Application	EN-67270	1.1	The Polycom Pano system may stop broadcasting itself as a Miracast device, causing other Miracast-enabled devices unable to discover it. You need to restart it to resolve the problem.
Security	EN-68420	1.1	The Pano system needs to include patches for Spectre — CVE-2017-5753 and CVE-2017-5715.
Application	EN-74658	1.1	After you switch the Pano HDMI input from one laptop to another, for a short duration, the Pano system still shows the screen of the first laptop.
Application	EN-75752	1.1	Sometimes, an Airplay-capable device can find the Pano system but can't connect to it using Airplay.

Category	Issue ID	Found in Release	Description
Documentation	EN-76093	1.1	<p>The <i>Polycom Pano Administrator Guide</i> doesn't include full network port usage for AirPlay. You may need to open Network access to Pano bidirectionally to TCP ports 4100-4115 for AirPlay audio control, and incoming to UDP ports 4100-4115 for AirPlay audio data.</p> <p>Polycom is updating the <i>Polycom Pano Administrator Guide</i> to include this information in version 1.2 and later.</p>

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