



## Release Notes

# Polycom® RealPresence® Mobile, Version 3.0 for Android® Devices

Polycom is pleased to announce the release of the Polycom® RealPresence® Mobile application.

This document provides the latest information about the RealPresence Mobile application, version 3.0, for Android-powered smart phones and tablet devices.

## Software Version History

Version	Release Date	Features
3.0	July 2013	Support for H.264 high profile calls (outgoing and incoming). Support for Auto-answer incoming calls. When enabled, this feature allowed users to choose to mute the audio or video of auto-answered calls. Support for the following devices: <ul style="list-style-type: none"><li>• Samsung Galaxy S4 GT-I9500 Phone</li><li>• Samsung Galaxy Note 8.0 GT-N5100 Tablet</li><li>• LG Optimus G pro LG-F240L Phone</li><li>• Sony Xperia ZL L35h Phone</li><li>• Sony Xperia Z SGP312 Tablet</li></ul> Enabled users to hide or display local self-view.
2.3	March 2013	Support for the Polycom RealPresence CloudAXIS™ solution.
2.2	February 2013	Support for the following new features on non-Tegra 2 Android tablets: <ul style="list-style-type: none"><li>• Polycom SmartPairing™ SmartPairing enables a tablet to control and swipe calls to Polycom HDX and Group Series devices.</li><li>• Content Sharing<ul style="list-style-type: none"><li>– Only supported in the professional mode.</li><li>– Only PDF files can be shared.</li></ul></li></ul> Support for the enterprise Scalable Video Coding (SVC) solution on non-Tegra 2 Android tablets and phones. IVR service in SVC calls is also supported.
2.1	December 2012	Bug fix.
2.0	November 2012	Support for H.460 firewall traversal in basic mode. Access to media statistics. Support for Samsung Galaxy Note 10.1" SHW-M480K tablet.

Version	Release Date	Features
1.3.1	August 2012	Support for the following devices: <ul style="list-style-type: none"> <li>• Samsung Galaxy Tab 2 7" GT-P3110 tablet</li> <li>• Samsung Galaxy Tab 2 10" GT-P5100 tablet</li> <li>• Samsung Galaxy Note GT-I9220 phone</li> <li>• Samsung Galaxy SII GT-I9100 phone</li> <li>• Samsung Galaxy SIII GT-I9300 phone</li> <li>• ASUS Transformer Pad TF300T tablet</li> </ul> Added Android 4.1 support for tablets that use hardware codecs.
1.3	June 2012	Ability to run on Android phone. Support for firewall/NAT.
1.1	February 2012	XOOM and Galaxy: Enhanced user interface experience. DROID XYBOARD: Added automatic provisioning support.
1.0.4	January 2012	XOOM and Galaxy: Added support for Android 4.0.
1.0.3	December 2011	XOOM and Galaxy: Enabled users to disable H.323 calls. User interface enhancements. Added support for server provisioning, AES for H.323 calls, and H.460 firewall traversal.
1.0.2.1	November 2011	DROID XYBOARD: Software release specially for DROID XYBOARD.
1.0.2	October 2011	XOOM and Galaxy: Fixed some known issues.
1.0	October 2011	XOOM and Galaxy: Initial release.

## Hardware and Software Requirements

Manufacturer	Model	Android Version	Network Requirements	Optional Peripheral Devices
ASUS	Transformer Pad TF300T tablet	4.2.1	<ul style="list-style-type: none"> <li>Wireless Local Area Network (WLAN), 802.11 a/b/g/n</li> <li>3G or 4G network</li> </ul>	<ul style="list-style-type: none"> <li>3.5 mm headset</li> <li>Stereo Bluetooth® headset</li> </ul>
HTC	One X phone	4.1.1		
	One S phone	4.0.4		
LG	Optimus G pro LG-F240L Phone	4.1.2		
Motorola	DROID XYBOARD tablet	4.0.4		
Samsung	Galaxy Tab 8.9" SHV-E140S tablet	4.0.4		
	Galaxy Tab 2 7" GT-P3110 tablet	4.1.1		
	Galaxy Tab 2 10" GT-P5100 tablet	4.1.2		
	Galaxy SII GT-I9100 phone	4.1.2		
	Galaxy SIII GT-I9300 phone	4.1.2		
	Galaxy Note 10.1" SHW-M480K tablet	4.1.2		
	Galaxy Note GT-I9220 phone	4.0.3		
	Galaxy S4 GT-I9500 Phone	4.2.2		
	Galaxy Note 8.0 GT-N5100 Tablet	4.1.2		
Sony	Xperia ZL L35h Phone	4.1.2		
	Xperia Z SGP312 Tablet	4.1.2		



RPM Android version 3.0 supports Tegra-2 devices (XOOM tablet and Galaxy Tab 10.1" GT-P7510/GT-P7500 tablet) with 'audio only'. To enjoy full features (RPM 2.3 release) of this application on your Tegra-2 tablets, download **REALPRESENCE MOBILE - TEGRA 2** from **Google Play**.

**To view your Android system version:**

>> From your device, touch **Settings > About device > Android Version**.

## Interoperability

### Polycom CMA<sup>®</sup> System and RealPresence Resource Manager System

The RealPresence Mobile application can register to the Polycom CMA Server version 6.2 and newer and Polycom RealPresence Resource Manager server version 7.1 and newer. Some management features have limitations relative to other Polycom endpoints. For example, software update of RealPresence Mobile is not supported and the QOS monitoring is limited.

### Products Tested with This Release

Polycom RealPresence Mobile systems are tested extensively with a wide range of products. The following list is not a complete inventory of compatible equipment. It simply indicates the products that have been tested for compatibility with this release.



You are encouraged to upgrade all your Polycom systems with the latest software before contacting Polycom support to ensure that the issue has not already been addressed by vendor software updates. Go to [Polycom support website](#) to find the current Polycom Supported Products matrix.

Type	Product	Version
NAT/Firewall/Border Controller	ACME Packet Net-Net 3820	Firmware SCX6.3.0 F-2 GA
	Polycom <sup>®</sup> VBP <sup>®</sup> 5300-ST	11.2.16
	Polycom <sup>®</sup> RealPresence <sup>®</sup> Access Director <sup>™</sup>	2.1.0


Type	Product	Version
Gatekeeper, Gateways, External MCU, Bridges, Call Managers	Polycom® Distributed Media Application™ (DMA®) 7000	5.1.0, 5.2.0, 6.0.2
	Polycom® Converged Management Application™ (CMA®) 4000/5000	6.2.3
	Polycom® RealPresence® Resource Manager	7.1.0, 8.0
	Polycom® RMX® 4000/2000	7.8.0, 8.1
	Polycom® RealPresence® Collaboration Server 800s	8.0.0, 8.1
	Polycom® RMX® 1000	2.4.2
	Polycom® RSS™ 4000	8.0, 8.5
	Broadsoft SIP r17 Server	SP2
	DeltaPath	2.9.3
Endpoints	Polycom® HDX® Series	3.1.0, 3.1.1
	Polycom® RealPresence® Mobile	2.3, 3.0 (iOS) 2.3, 3.0 (Android)
	Polycom® VVX®	4.1.4
	Polycom® CMA® Desktop	5.2.4, 5.2.5
	Polycom® Telepresence M100	1.0.5, 1.0.6
	Polycom® RealPresence® Desktop	2.3, 3.0 (Windows)
		3.0 (Mac)
Polycom® RealPresence® Group Series	4.0.1, 4.0.2	

## Installing and Uninstalling the RealPresence Mobile Application

### To install the RealPresence Mobile application:

- 1 From the Google Play Store application, search for **polycom** or **video conferencing** to find the RealPresence Mobile application.
- 2 Touch **Free**, and then touch **OK** to accept permission. The application downloads and installs itself.

**To uninstall the RealPresence Mobile application:**

- 1 From your device's application list, touch **Settings > Applications > Manage applications**, and then touch  **Video**.
- 2 Touch **Uninstall**.
- 3 When you are prompted to confirm, touch **OK**.



Your user data is deleted when you uninstall the application.

## Setting Up the RealPresence Mobile Application

You can use the RealPresence Mobile application in basic or professional mode.

- Basic mode enables basic calling, but does not include professional features such as sending and receiving content, AES and LDAP.
- Professional mode provides professional features. To use these features, you must register to a provisioning server (a Polycom Converged Management Application™ (CMA®) 4000/5000 or Polycom RealPresence Resource Manager).

Both options enable you to configure network and server settings. Enter settings manually or register to a provisioning server to get the settings automatically. For more information about configuration, see the online help available on [Polycom support website](#).


## Feature Overview

This table lists features available in version 3.0. Features marked with an asterisk (\*) are enabled by a provisioning server.

Category	Features	Android Phone Basic Mode	Android Phone Professional Mode	Android Tablet Basic Mode	Android Tablet Professional Mode
Call functions and capability	Enterprise SVC solution	✓	✓	✓	✓
	IVR service in SVC calls	✓	✓	✓	✓
	Placing H.323 calls	✓	✓	✓	✓
	Enabling and disabling H.323 calling	✓	✓ *	✓	✓ *
	Specifying H.323 gatekeepers	✓	✓ *	✓	✓ *
	Specifying internal or external gatekeepers	✓		✓	
	Receiving H.264 content during H.323 calls		✓		✓
	Receiving H.263 and H.263 + content during H.323 calls		✓		✓
	Registering to SIP servers	✓	✓ *	✓	✓ *
	Specifying SIP proxy servers	✓	✓ *	✓	✓ *
	Placing SIP calls over UDP	✓	✓ *	✓	✓ *
	Placing SIP calls over TCP	✓	✓ *	✓	✓ *
	Receiving H.264 content during SIP calls		✓		✓
	Receiving H.263 and H.263 + content during SIP calls		✓		✓

Category	Features	Android Phone Basic Mode	Android Phone Professional Mode	Android Tablet Basic Mode	Android Tablet Professional Mode
Call functions and capability	Selectable call rates between 64 kbps and 512 kbps	✓	✓	✓	✓
	H.264 content sharing up to 720 p (PDF only)				✓
	H.263 and H.263+ content sharing up to XGA (PDF only)				✓
	<ul style="list-style-type: none"> <li>H.264 encode at up to 320 x 180 (video)</li> <li>H.264 decode at up to 640 x 480 (video)</li> </ul>	✓	✓	✓	✓
	H.264 decode at up to 720 p (content)		✓		✓
	H.264 high profile calls (outgoing and incoming)	✓	✓	✓	✓
	H.263 and H.263+ decode at up to XGA (content)		✓		✓
	Automatic gain control	✓	✓	✓	✓
	Acoustic echo cancellation	✓	✓	✓	✓
	Automatic noise control	✓	✓	✓	✓
	Polycom Siren Lost Packet Recovery	✓	✓	✓	✓
	WLAN, 3G and 4G network support	✓	✓	✓	✓



Category	Features	Android Phone Basic Mode	Android Phone Professional Mode	Android Tablet Basic Mode	Android Tablet Professional Mode
Call control	Muting your audio during a call	✓	✓	✓	✓
	Pause your video during a call	✓	✓	✓	✓
	DTMF during a call	✓	✓	✓	✓
	Viewing call statistics by touching 	✓	✓	✓	✓
	Switching between the front and rear cameras	✓	✓	✓	✓
	Adjusting volume during a call	✓	✓	✓	✓
	Network quality indicator during a call	✓	✓	✓	✓
SmartPairing	SmartPairing			✓	✓
	Transferring calls to HDX or RealPresence Group systems			✓	✓
Security and Encryption	H.460 firewall traversal	✓	✓	✓	✓
	Encrypting H.323 calls		✓		✓ *
	SIP digest authentication	✓	✓ *	✓	✓ *
	RTP keep-alive	✓	✓	✓	✓
	TLS/SRTP support		✓		✓
	BFCP over UDP		✓		✓
	SIP dial string	✓	✓	✓	✓
	Certificate verification (Android 4.0 and later)		✓		✓
	SBC Interoperability	✓	✓	✓	✓
	SIP outbound proxy	✓	✓	✓	✓
SIP fail-over	✓	✓	✓	✓	

Category	Features	Android Phone Basic Mode	Android Phone Professional Mode	Android Tablet Basic Mode	Android Tablet Professional Mode
Professional features	Provisioning service		✓		✓
	Local address book		✓		✓
	LDAP service		✓		✓

## New Features in Version 3.0

This release provides the following new features:

- Support for H.264 high profile calls (outgoing and incoming).
- Support for Auto-answer incoming calls. When you enable this feature, you can choose to mute the audio or video of auto-answered calls.
- Enables you to hide or display local self-view.
- Support for the following devices:
  - Samsung Galaxy S4 GT-I9500 Phone
  - Samsung Galaxy Note 8.0 GT-N5100 Tablet
  - LG Optimus G pro LG-F240L Phone
  - Sony Xperia ZL L35h Phone
  - Sony Xperia Z SGP312 Tablet

## Features in Previous Versions

### Version 2.3

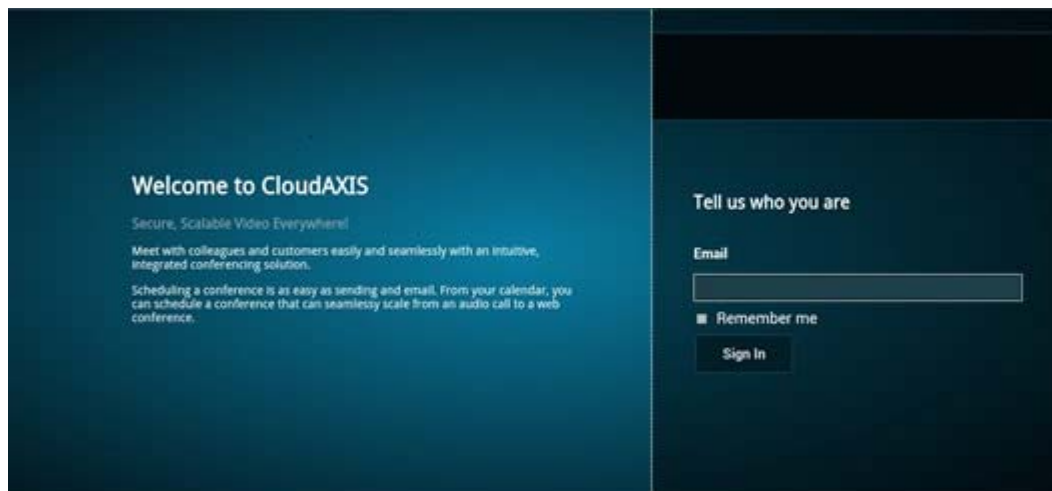
This release adds support for Polycom RealPresence CloudAXIS solution. If you are invited to a CloudAXIS meeting, you will receive a meeting invitation email.

#### To attend a CloudAXIS meeting:

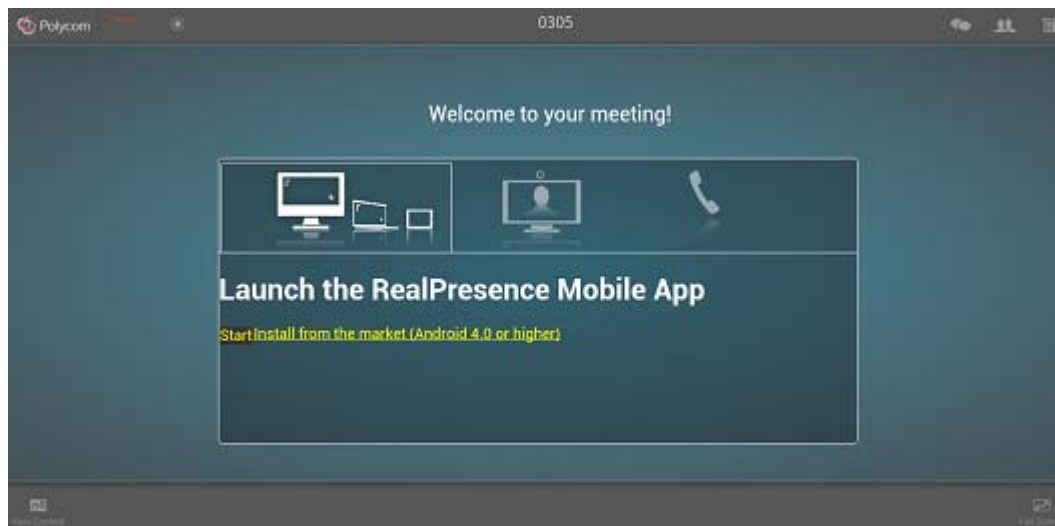
- 1 Open the meeting invitation email.

## Select the web URL, or enter the web URL in a browser address line.

- 1 Enter your email address to sign in to CloudAXIS.



- 2 After you sign in, swipe on the target device panel and select **Video on a Mobile Device**.



- 5 Do one of the following:
  - Click **Start** to launch the RealPresence Mobile application and attend the meeting.
  - Click **Install** to download the application from the Google Playstore.

## Version 2.2

Version 2.2 provides the following new features:

- Features only supported on non-Tegra2 Android tablets:
  - Added SmartPairing in automatic mode and manual mode to enable a tablet to control Polycom HDX or Group Series systems.



### Points to note on SmartPairing:

- You need to enable SmartPairing on the desired Polycom HDX or Group Series system.
- Both manual and automatic pairing are supported on Polycom RealPresence Group Series version 4.0.1 and later.
- To date, only manual pairing is supported on Polycom HDX system version 3.1. For automatic pairing support, please check Polycom HDX latest Release Notes.

- Ability to transfer calls to a Polycom HDX or Group Series system.

When a call is transferred, you can mute the call, adjust its audio volume, send DTMF tones, or the call using your tablet. You can also place calls from the paired HDX or Group Series system.

- Content sharing
  - » Content sharing is only supported by a provisioning server. When you register to a provisioning server, you can view content sent by others in the call or show PDF files to others.
  - » Only PDF files can be shared. You can save desired PDF files to share in either your device's SD card, or use applications such as Dropbox or SkyDrive.

- Features supported on non-Tegra2 Android tablets and phones:
  - Support for the Enterprise Scalable Video Coding (SVC) Solution
  - Support for IVR service in SVC calls.

## Support for SmartPairing

You can pair your tablet with a Polycom HDX or Group Series system and then use your tablet as its remote controller. To do so, you need to first enable Polycom SmartPairing on your tablet. After enabling SmartPairing on your tablet, you can control the paired Polycom HDX or Group Series system, for




example, place a call, adjust the call volume or end the call, using your RealPresence Mobile application. You can also transfer an ongoing call from your RealPresence Mobile to the paired HDX or Group Series system.

For more information about SmartPairing, see the online help available on [http://support.polycom.com/PolycomService/support/us/support/video/realpresence\\_mobile/realpresence\\_mobile.html](http://support.polycom.com/PolycomService/support/us/support/video/realpresence_mobile/realpresence_mobile.html).





- You need to enable SmartPairing on the desired Polycom HDX or Group Series system. For more information, refer to the Release Notes of your desired target system.
- When using ultrasound to detect the RealPresence Group Series system automatically, set the Group Series system's speaker volume at 50% or above for the best user experience.


### To enable SmartPairing:

- 1 Touch  and select **Settings**.
- 2 Select the **Smart Pairing** check box.
- 3 Touch  to go back to the main interface. After SmartPairing is enabled, you can see .
  - **Detected:** When **Auto Detection** is turned on, IP addresses of nearby Polycom HDX or Group Series system that have been detected are listed here.
  - **Manual Pairing:** Enter an IP address of the desired Polycom HDX or Group Series system to pair with it.
  - **Recent Connections:** A list of Polycom HDX or Group Series systems that have been paired recently.

### To place a call from the Polycom HDX or Group Series System:

- 1 Touch . Select a device from either the Detected, or the Recent Connections list. You also can enter a device address in the **Manual Pairing** field.
- 2 Enter a pairing password, if required. After pairing with the desired device successfully, touch .
- 3 Enter a desired number to call.

### To transfer calls to a Polycom HDX or Group Series System:

- 1 During a call, touch .
 

The icon appears when the system detects a Polycom HDX or Group Series system, or has manually-paired to Polycom HDX or Group Series systems recently.

- 2 Select a desired device if more than one device appear.
- 3 Enter a pairing password, if required.

The call is disconnected from your RealPresence Mobile application and is transferred to the selected Polycom HDX or Group Series system. You can use your device to control the call, for example, adjust the call volume, mute or end the call

After a call is transferred, you cannot transfer the call back to your tablet. If the call transferring fails, the call is redirected back to your tablet.



After you unpair from the Polycom HDX or Group Series system, you can no longer control the transferred call.

## Support for the Enterprise Scalable Video Coding Solution

SVC is a scalable media relay conferencing solution based on SVC and Scalable Audio Coding (SAC) codecs. It is an alternative to the AVC mode that has traditionally been supported. Differences between the two modes are listed in the following table.

SVC Mode	AVC Mode
Each participant in the conference call is received by the client as a separate video stream.	The composite video image is determined by the bridge based on administrator configuration.
A Caller ID is indicated by text in the appropriate window, on display throughout the call.	Caller ID information is displayed intermittently.
Double-clicking or tapping on a participant's video, content video, or local preview expands that video to full screen. Double-clicking or tapping again reverts the display to the composite image.  Pinch controls enable you to zoom in and out on a participant's video or content video.	Layout may typically be controlled by dialing **, and then selecting a format.


The SVC solution provides the following features in this release.

- For video send, support 180p (320 x 180)
- For video receive, support up to 360p with no bandwidth limitation, average is 270p (480 x 270) or 180p (320 x 180)
- For video send, support 7.5/15 fps


- For video receive, support 7.5/15 fps
- Support auto layouts of 1x1, 1+1 through 1+5.  
The maximum layout of 1+5 comprises 4 remote participants plus 1 content-sharing frame, and 1 local preview frame.
- Support for AVC content
- Support for SVC auto layouts:
  - Display of last active speakers
  - Dynamic display of resolution, bandwidth, number of participants are adjusted based on network bandwidth and processor capabilities.
- Support for Scalable Audio Coding (SAC) with at least two quality layers
- Ability to mix up to three different audio streams from the MCU
- Ability to mix up to four different SVC video streams (call rate at 512kbps) from the MCUs.

## Version 2.0

Version 2.0 provides the following new features:

- Support for H.460 firewall traversal in basic mode.
- Ability to access Media Statistics by clicking .
- Support for Samsung Galaxy Note 10.1" SHW-M480K tablet

### Access to Media Statistics

To access media statistics, click the antenna icon .

Value	Description
Call Type	SIP or H.323 call type.
Call Encryption	Indicates whether your call is encrypted.
Far Site Name	Name of the far site.
Far Site System	Type of video conferencing system at the far end and its software version.
Call Speed	Negotiated speed (bandwidth) for the call, which is usually the combined video and audio speeds in the call.
Video Protocol	ITU-C video algorithm and annexes used in the current call. The video protocol used depends on the capabilities of the system at the far end as well as on your system's configuration.

Value	Description
Video Format	Picture size currently in use.
Audio Protocol	Audio algorithm and annexes used in the current call. The audio protocol used depends on the capabilities of the system at the far end as well as on your system's configuration.
Audio Rate	Bandwidth specified for the audio portion of the call. The proportion of the audio rate to the video rate depends on the protocol used.
Video Rate	Bandwidth specified for the video portion of the call. The proportion of the video rate to the audio rate depends on the protocol used.
Video Rate Used	Actual bandwidth being used for the video portion of the call. This is a real-time measurement, which normally fluctuates.
Video Frame Rate	Rate your system uses to update the picture seen at the far end. The system can send up to 15 frames per second. If the camera picks up large, continuous, or frequent motions, the software takes longer to assemble the data into video frames, and the frame rate drops. Changes in lighting also reduce the frame rate.
Video Packets Loss Percentage	Total video packet loss as a percentage of the total number of video packets transmitted by your system and those transmitted by the far end.
Video Jitter	Percentage of variation in the video transmission rate.
Audio Packet Lost	Number of audio data packets lost during the call, including transmitted packets and incoming packets. Packet loss indicates congestion or other problems on the network.
Audio Packets Loss Percentage	Total audio packet loss as a percentage of the total number of audio packets transmitted by your system and those transmitted by the far end.
Audio Jitter	Percentage of variation in the audio transmission rate.
Content Protocol	Format used for the recording, compression, and distribution of the content.
Content Format	Display resolution of the content.
Content Rate	Rate your system uses in content transmission.



Value	Description
Content Rate Used	Actual bandwidth being used for the content transmission.
Content Frame Rate	Rate your system uses in content frame transmission.
Content Packets Lost	Number of content data packets lost during the call, including transmitted packets and incoming packets. Packet loss indicates congestion or other problems on the network.
Content Packets Loss Percentage	Total audio packet loss as a percentage of the total number of content packets transmitted by your system and those transmitted by the far end.

## Version 1.3.1

- Support for the following devices:
  - Samsung Galaxy Tab 2 7" GT-P3110 tablet
  - Samsung Galaxy Tab 2 10" GT-P5100 tablet
  - Samsung Galaxy Note GT-I9220 phone
  - Samsung Galaxy SII GT-I9100 phone
  - Samsung Galaxy SIII GT-I9300 phone
  - ASUS Transformer Pad TF300T tablet
- Android 4.1 support for tablets that use hardware codecs

## Version 1.3

- Ability to run on Android devices (HTC One S, HTC One X, HTC JetStream tablets)

### Firewall/NAT Support

This version provides firewall and Network Address Translator (NAT) traversal ability with the following features:

- Ability to keep Real-time Transport Protocol (RTP) NAT mapping alive during a live streaming.
- Support for guest user dialing.
- Ability to support Secure Real-time Transport Protocol (SRTP) and Transport Layer Security (TLS) for the secure transmission of media.

- Ability to support Binary Floor Control Protocol (BFCP) over both TCP and UDP links (UDP preferred). Control signaling can now be forwarded using the best-effort traffic class in firewall and NAT traversal.

Support for the following dial strings when you place calls without registering to server:

H.323	SIP
<ul style="list-style-type: none"> <li>• name@domain</li> <li>• name@IP</li> <li>• extension@domain</li> <li>• extension@IP</li> <li>• IP##extension</li> </ul>	<ul style="list-style-type: none"> <li>• &lt;name&gt;@&lt;domain&gt;</li> <li>• &lt;name&gt;@&lt;ipAddress:port&gt;</li> <li>• &lt;extension&gt;@&lt;domain&gt;</li> <li>• &lt;extension&gt;@&lt;ipAddress:port&gt;</li> </ul>

- Ability to verify server certificates by using installed root certificates (SIP, HTTPS, and LDAP) when establishing TLS connections.
- Ability to interoperate with ACME SBC systems.
- Support for SIP signaling FW/NAT traversal over TCP/TLS as defined in RFC5626.
- Ability to switch to a backup SIP server in case the primary server fails.

## Version 1.1

For Galaxy, XOOM, and DROID XYBOARD:

- Ability to support Galaxy, XOOM, and DROID XYBOARD in one RealPresence Mobile application .apk file
- Usability enhancement

## Version 1.0.4

For Galaxy and XOOM: Support for Android 4.0.

## Version 1.0.3

For Galaxy and XOOM:

- Usability enhancement.
- Ability to disable H.323 calls.
- Ability to receive content using H.239 and BFCP when you are registered to a provisioning server.
- Ability to support AES encryption for H.323 calls when you are registered to a provisioning server.

- Support for H.460 firewall traversal when you are registered to a provisioning server.
- Support for muting your audio and video during a call.
- Ability to allow a provisioning server to supply configuration settings automatically when you are registered to the provisioning server.
- Ability to create a local address book when you are registered to a provisioning server.
- Ability to access LDAP (Lightweight Directory Access Protocol) service when you are registered to a provisioning server. With LDAP service, you can call contacts in your corporate directory or add them to your local address book.

## Version 1.0.2.1

For DROID XYBOARD:

- Dual stack operation that enables the Polycom RealPresence Mobile application to connect to SIP or H.323 systems
- H.264 encode at up to QVGA, 15 fps
- Support for H.460 firewall traversal
- Video receiving at up to 480x352, 30 fps
- Support for Polycom Constant Clarity™ technology, such as Polycom® Siren™ Lost Packet Recovery, which can effectively improve the decreased audio quality caused by packet loss
- Configurable network and bandwidth settings that make the RealPresence Mobile application operate well in virtually any network
- Support for automatic gain control and echo cancellation
- Ability to view network quality during a call

## Version 1.0.2

For Galaxy and DROID XYBOARD: Usability enhancements

## Version 1.0

For Galaxy and DROID XYBOARD:

- Dual-stack operation that enables the Polycom RealPresence Mobile application to connect to SIP or H.323 systems.
- H.264 encode and decode at up to 720p, 30fps.

- Support for Polycom Constant Clarity™ technology, such as Polycom® Siren™ Lost Packet Recovery, which can effectively improve the decreased audio quality caused by packet loss.
- Support for automatic gain control and echo cancellation.
- Ability to view network quality during a call.

## Corrected Issues in Version 3.0

Category	Issue ID	Description
Video	SWEP-3772	When you answered a telephone call, the RealPresence Mobile application remained active and transferred audio to far end. This issue has been fixed.

## Corrected Issues in Previous Versions

### Version 2.3

Category	Issue ID	Description
Call Control	SWEP-3015	When the RealPresence Mobile application is called, BFCP cannot be negotiated as BFCP over UDP.
Content	SWEP-2936	At the far end, the RealPresence Mobile application does not completely display some content files that include special content.

### Version 2.1

Category	Issue ID	Description
Audio/Video	SWEP-2757	No media are shown or heard in the HDX system when the RealPresence Mobile application calls H.323 Business-to-business (B2B) through a SIP trunk to the H.323 HDX system in the other enterprise.

## Version 2.0

Category	Issue ID	Description
Audio	SWEP-1904	In a call on the Galaxy Tab 8.9" SHV-E140S tablet, the RealPresence Mobile application cannot detect audio through the speaker. You must use a headset.
Calling	CMAD-9743	On the XOOM with Android 4.1.1, the system crashes when you press the video mute button while connecting to an IP address.
Calling	CMAD-9748	On the XOOM with Android 4.1.1, the far end cannot receive video during a call.
Calling	CMAD-9383	When you place a point-to-point call from a RealPresence Mobile Android device to a RealPresence Desktop system in a RealPresence Access Director environment, the screen goes black.
Call Control	CMAD-9824	A RealPresence Mobile system cannot hang up a call before the call is set up.
SIP	CMAD-9828	A RealPresence Mobile system in an external network cannot answer a SIP call from an internal network.
User Interface	CMAD-8330	SIP registration fails before SRV lookup returns the record.

## Version 1.3.1

Category	Issue ID	Description
Call Control	CMAD-9021	The RealPresence Mobile application failed to send a keep-alive message with TCP when switched from registering to an RFC 5626 server to a non-RFC 5626 server. This issue has been corrected.
Calling	CMAD-8550	The RealPresence Mobile application did not send an authentication update when the SIP server authentication valid time expired. This issue has been corrected.
CMA Provisioning	CMAD-9024	Endcall callStatsMessage content was not correct. The callStatus should be ENDED in endcall message, not ACTIVE. This issue has been corrected.
Interoperability	CMAD-8588	The RealPresence Mobile application did not support PLI. This issue has been corrected.
Interoperability	CMAD-8590	An external participant appeared on the participant list in a conference-managed screen when monitoring an ad-hoc point-to-point call from CMA Desktop to the RealPresence Mobile application or the RealPresence Mobile application to the RealPresence Mobile application. This issue has been corrected.

Category	Issue ID	Description
Installation	CMAD-8597	The RealPresence Mobile application could not be launched on the Motorola XOOM tablet with Android version 4.1. This issue has been corrected.
Installation	CMAD-8977	You could not launch the RealPresence Mobile application after installing Samsung P7510, Android version 4.0.4 on a tablet device. This issue has been corrected.

## Version 1.3

Category	Issue ID	Description
Interoperability: Polycom HDX systems	CMAD-5331	When you were in an H.323 call with a Polycom HDX 8000 system using the call rate 512 kbps, your people video froze often after a Polycom Telepresence m100 application joined the call. This issue has been corrected.
Interoperability	CMAD-4417	When you attempted to leave a video voice message to a contact that also supported video voice messaging, the recorded message contained only audio (no video). This issue has been corrected.
Interoperability: Polycom HDX systems	CMAD-4361	When you placed SIP calls to a Polycom HDX system, local video was unavailable. This issue has been corrected.
Interoperability: Polycom m100	CMAD-4519	When you and a Polycom m100 application joined a multipoint call hosted by a Polycom HDX 9006 system, local video froze after you were in the call for around 10 minutes. This issue has been corrected.
Interoperability	CMAD-8591	RealPresence Mobile did not send an authentication update when the SIP server authentication valid time expired, which caused authentication failure and disconnected the call. This issue has been corrected.

## Version 1.1

Category	Issue ID	Description
Calling	CMAD-4438	When you call a contact who is already in a call, you get the message 'Unreachable', instead of 'Busy'.
Calling	CMAD-4946	When you call a Polycom CMA Desktop system while your tablet is connected to a monitor using an HDMI cable, your screen turns black for a while after either you or the far end hangs up.
Calling	CMAD-4945	When you place a SIP call with a Polycom HDX 8000 system, your far-end video is displayed with the 4:3 aspect ratio, instead of 16:9.

Category	Issue ID	Description
Content	CMAD-5645	When you are in a multipoint call hosted through a bridge, if two far sites send you content in short succession, you may receive the second content in wrong aspect ratio.
User Interface	CMAD-4951	When you place a call to another XOOM 2 which is in a call with a Polycom RMX system, you receive the message 'Far end hangs up', instead of 'Busy MSG'.
Video	CMAD-4953	When you place an H.323 call to a bridge with 128 kbps as the call rate, the screen turns black for several seconds.
Video	CMAD-3571	In SIP calls hosted by a Polycom RMX1500 system, people video is not displayed. In H.323 calls, people video can be displayed after a three-minute delay.

## Known Issues

The following table lists the known issues for this release. If a workaround is available, it is noted in the table.

Category	Issue ID	Description	Workaround
Audio	SWEP-2636	On the Samsung Galaxy Tab 8.9" and ASUS Transformer Pad TF300T tablets, you cannot adjust the speaker volume by using the hardware Volume control. If a Transformer Pad TF300T tablet is close to Polycom HDX or Group Serial 500 systems which enable Ultrasound, you can hear stridulation from the far end.	It is system limitation of the tablet. The tablet's system volume control is used for RealPresence Mobile. When a tablet uses Acoustic Echo Cancellation (AEC), the system volume control does not work.
Audio	SWEP-4398	The far end can hear an echo if some RealPresence Mobile Android device is in the same conference and does not mute. <ul style="list-style-type: none"> <li>- Sony Xperia Z SGP312 Tablet</li> <li>- Transformer Pad TF300T Tablet</li> <li>- DROID XYBOARD Tablet</li> <li>- Galaxy Tab 2 10" GT-P5100 Tablet</li> <li>- HTC One S Phone</li> </ul>	Use headset or lower the speaker's volume.

Category	Issue ID	Description	Workaround
Audio	CMAD-9416	Loudspeaker volume is too low to be heard during a call. (HTC smart phones)	Use a headset.
Calling	CMAD-8460	H.323 registration fails with notification Configuration error, but provision is successful.	Sign out and sign in again, or force stop the application.
Content	SWEP-4496	If you create a Continuous Presence (CP) only conference call on Polycom® RMX® 4000/2000 system and RMX/Polycom® RealPresence® Collaboration Server 800s version 8.1 with default content settings ( <b>Content Settings: HiResGraphics</b> and <b>Content Protocol: H.264 HD</b> ), the RealPresence Mobile application cannot send or receive content if call rate is set as 384 kbps or below.	<ul style="list-style-type: none"> <li>• Change the RMX <b>Content Settings</b> to <b>Graphics</b>, and <b>Content Protocol</b> to <b>H.263 &amp; H.264 Auto Selection</b>.</li> <li>• Set the call rate on RPM to above 384 kbps.</li> </ul>
General	CMAD-5818	After you closed the Polycom RealPresence Mobile application by stopping the <b>LogService</b> and <b>MainService</b> from <b>Settings &gt; Applications &gt; Running Services</b> , if you then try to launch the application again, you get a message saying that the application has stopped unexpectedly.	<p>Always follow these steps to force close the RealPresence Mobile application:</p> <ol style="list-style-type: none"> <li>1 From your tablet, touch <b>Settings</b>.</li> <li>2 Touch <b>Applications &gt; Manage Applications</b>.</li> <li>3 Touch <b>Video</b>.</li> <li>4 Touch <b>Force Stop</b>, and touch <b>OK</b> to confirm.</li> </ol>
General	SWEP-2677	In very rare conditions, there may be something wrong with the application UI (provision status is not right, sign-out button and call button are grayed out) because it was not stopped properly the last time.  This issue might occur when you update the operating system or force stop the RealPresence Mobile application in Settings.	Reboot the device.
Interoperability	SWEP-3280	Prior to version 4.1.0, Polycom VVX™ 1500 () always reboots when the RealPresence Mobile application sends 320 x 180 video to a Polycom VVX 1500 system.	



Category	Issue ID	Description	Workaround
Localization	SWEP-2756	You can only use English user names to sign into Polycom CMA system and Polycom RealPresence Resource Manager, or register to GK and SIP servers.	
Provisioning	CMAD-6209	When you are signed in to a Polycom CMA server through a WiFi network, if you then switch to another WiFi network and try to search in your corporate directory, it takes a long time before you see an error message about provisioning failure.	
SVC	SWEP-2634	Note these limitations for SVC conference calls. <ul style="list-style-type: none"><li>• RSS is not supported.</li><li>• Only SIP calls are supported.</li><li>• A maximum of four far-end video streams and one content video is supported.</li><li>• Use SIP TCP for SVC conferences.</li></ul>	

Category	Issue ID	Description	Workaround
SIP	CMAD-7896	<p>Placing SIP calls over TCP may fail on the following tablets:</p> <ul style="list-style-type: none"> <li>Transformer Pad TF300T Tablet 4.1.1</li> <li>HTC One S 4.0.3</li> <li>HTC One X 4.1.1</li> <li>Samsung Tab2 7" GT-P3110 Tablet 4.1.1</li> <li>Samsung Tab2 10" GT-P5100 Tablet 4.0.3</li> <li>Samsung Galaxy SII GT-I9100 Phone 4.0.3</li> <li>Samsung Galaxy Note GT-I9220 Phone 4.0.3</li> <li>Xperia ZL L35h Phone 4.1.2</li> </ul> <p>Placing SIP calls over UDP (Default) and SIP over TLS on the above tablets works well.</p> <p>The root cause is TCP/IP stack on Android 4.0.3 will check SIP messages. If TCP packet size is larger than 1500 bytes, it may be dropped by the system.</p>	Use SIP over UDP (Default) or SIP over TLS.
SmartPairing	SWEP-3281	<p>(When using Android tablets with Acoustic Echo Cancellers), SmartPairing fails with ultrasonic detection.</p> <ul style="list-style-type: none"> <li>On Transformer Pad TF300T tablets, auto detection does not work.</li> <li>On Galaxy Tab 8.9" SHV-E140S tablet and Galaxy Tab 2 10" GT-P5100 tablets, auto detection does not work during calls.</li> </ul>	
SmartPairing	SWEP-1819	<p>When there are several Polycom HDX or Group Series systems nearby, your RealPresence Mobile application either fails to detect them all, or returns incorrect IP addresses.</p>	Pair the Group Series or HDX system manually.
SVC	SWEP-2372	<p>When there is 10% packet loss and UDP is used for an SVC call, the screen layout is incorrect.</p>	

Category	Issue ID	Description	Workaround
SVC	SWEP-2736	In a poor network connection, sometimes a participant disconnects automatically from an SVC call. This can result in a participant showing up in two video streams—one frozen and one active. The RMX system will clear the frozen stream in 30 minutes.	
Video	SWEP-3450	In a call with an RMX system that uses an MPM+ media card, a blue edge is displayed at the bottom of the video window.	Use an MPMX media card with the RMX system.
Video	SWEP-3295	On the Samsung Galaxy Tab2 PT-3110 tablet and Samsung Galaxy Tab2 PT-5100, received video is delayed on long calls, or when you are sharing content. This is due to the low CPU capability of the tablets. <b>Note:</b> To avoid performance issues, only 1x1 layout is supported in SVC meetings. Users can only see the active speaker during SVC meetings.	
Video	SWEP-4396	Sometimes the video freezes and flashes for a few seconds for some SVC conference calls	

## Supported Capabilities, Protocols, Algorithms, and Ports

### Capabilities

Call Rate	Video Capability
512 kbps 384 kbps 256 kbps	180p
64 kbps	Audio only

## Protocols

The following table lists the protocols supported in this version of the RealPresence Mobile application.

Protocol	Description
DNS	Domain Name System
H.235	Security and Encryption
H.239	Token Management
H.323	Signaling
H.460	Firewall/NAT Traversal
LDAP, H.350	Directory Services
NTLMv2	Authentication
Polycom LPR™	Lost Packet Recovery
SIP	Session Initiation Protocol



H.239 and BFCP are supported only when you are registered to a provisioning server.

## Resolutions

The following table lists the resolutions supported in this version of the RealPresence Mobile application.

Resolution and Frame Rate	Source
Up to 320x180, 15 fps	People video sent from camera
Up to 640x480 (VGA), 30 fps	People video received from far end
Up to 720p, 7.5 fps	Content received from far end
Up to 720 p, 3 fps (Tablets only)	Content showing from the tablets



Actual transmitted video resolution is determined by several factors, such as camera capability, computer performance, network conditions, the far-end system's capabilities, and whether content is being received.

HD/720p fps is the maximum video receiving capability. The actual resolution is based on the negotiation with the far end.

## Algorithms

The following table lists the algorithms supported in this version of the RealPresence Mobile application.

Algorithm Type	Description
Audio	G.722.1 Annex C G.711u G.711a Siren™ LPR Acoustic Echo Cancellation (AEC) Automatic Gain Control (AGC) Scalable Audio Coding (SAC)
Video	H.264 SVC H.264 AVC H.264 high profile H.263 and H.263+ (for content only)
Encryption	AES-128 media encryption TLS for SIP calls



AES encryption is available only when you are registered to a provisioning server.

TLS encryption is available only when you are registered to a provisioning server.

## Inbound and Outbound Ports

The following table lists the inbound and outbound ports supported in this version of the RealPresence Mobile application.

## Inbound Ports

Port	Function
1720 (TCP)	H.323 Signaling
1719 (UDP)	Registration, Admission, and Status (RAS)
3230 - 3329 (TCP)	Call Signaling
3230 - 3237 (UDP)	Media (RTP/RTCP)
5060	SIP
3238 (UDP and TCP)	BFCP

## Outbound Ports

Port	Function
443 (TCP)	Provisioning, Monitoring, Help Files, HTTPS
389 (TCP)	LDAP
5060	SIP
5061 (TCP)	SIP TLS signaling
1720 (TCP)	H.323 Signaling
1719 (UDP)	Registration, Admission, and Status (RAS)
3230 - 3329 (TCP)	Call Signaling
3230 - 3237 (UDP)	Media (RTP/RTCP)
3238 (UDP and TCP)	BFCP

## Preparing Your Device for Mutual Transport Layer Security

You can establish secure communications using Mutual Transport Layer Security (MTLS) with provisioning servers such as Polycom DMA, CMA, or RealPresence Resource Manager systems.

To establish MTLS connections, the client and server need to hold certificates issued from the same Certificate Authority (CA) and the root certificate of this CA.



To import certificates into your Android device, you need to generate a Certificate Request (CSR) first by using a computer that has installed the openssl tool.

The following example uses Mac as the example.

**To generate and import your certificate:  
Open the Terminal from your Mac computer.**

- 1 Generate the private key *client.key*. For example:  
Mike-MacBook-Pro:~ root# openssl genrsa -out client.key 1024
- 2 Generate the certificate request *client.csr*. For example:  
Mike-MacBook-Pro:~ root# openssl req -new -key client.key -out client.csr

You are about to be asked to enter information that will be incorporated into your certificate request.

What you are about to enter is what is called a Distinguished Name or a DN.

There are quite a few fields but you can leave some blank

For som-----  
Country Name (2 letter code) [GB]:cn ---CSR info.  
State or Province Name (full name) [Berkshire]:bj ---CSR info.  
Locality Name (eg, city) [Newbury]:bj ---CSR info.  
Organization Name (eg, company) [My Company Ltd]:plcm ---CSR info.  
Organizational Unit Name (eg, section) []:caqa ---CSR info.  
Common Name (eg, your name or your server's hostname) []:caqa ---CSR info.  
Email Address []:pp@pp.com ---CSR info.

Enter the following 'extra' attributes to be sent with your certificate request

A challenge password []:1234 ----see [Note1]  
An optional company name []:poly



Write down the challenge password. You will need it later in the procedure.

- 3 Submit the certificate request to your CA:
  - a View the content of the file *client.csr* using the following command, then select and copy its content (from ---BEGIN CERTIFICATE REQUEST to END CERTIFICATE REQUEST---):  
Mike-MacBook-Pro:~ root# cat client.csr
  - b Go to your CA's web interface <http://<CA's IP address>/certsrv/>, then click **Request a certificate**.

- c Click **advanced certificate request**.
- d Click **Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or submit a renewal request by using a base-64-encoded PKCS #7 file**.
- e Paste the content of the file **client.csr** to the text filed under **Saved Request** text field, then click **Submit**.
- f Click **Base 64 encoded** and then click **Download certificate**.

The file is saved as *certnew.cer* by default in the folder **Downloads**.

- 4 Move the generated **certnew.cer** file to your current directory.
- 5 Convert the file *ccertnew.cer* to a .p12 file by using the openssl tool. For example:

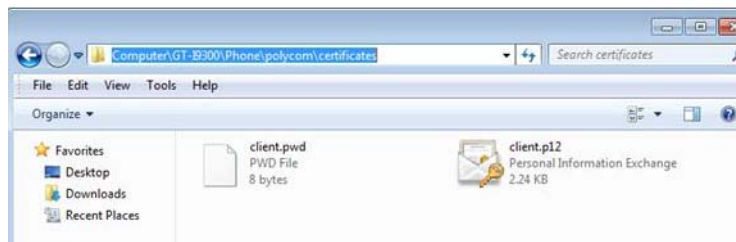
```
Mike-MacBook-Pro:~ root#openssl pkcs12 -export -in certnew.cer -inkey client.key -out client.p12 -name testp12  
Enter Export Password:
```

Verifying - Enter Export Password:



The export password should be the same as the challenge password you set in step 2.

- 6 Encrypt the challenge password you set in Step 2:
  - a Go to <http://www.convertstring.com/EncodeDecode/Base64Encode>.
  - b Enter the challenge password in the text field, and then click **Base64 Encode!**.
  - c Copy the encoded text from the following text field, and save it as a .pwd file, for example, *client.pwd*.
- 7 Connect your Android phone or tablet to a PC using a USB cable, then copy file *client.p12* and *client.pwd* to your phone or tablet's internal storage, under the directory **/polycom/certificates**.





**To import the root certificate of your CA into Android device:**

- 1 Go to your CA's web address <http://<CA's IP address>/certsrv/>, click **Download a CA certificate, certificate chain, or CRL**.
- 2 Select **Base 64**, and then click **Download CA Certificate**.
- 3 Connect your Android phone or tablet to a PC using a USB cable.
- 4 From your Android phone or tablet, tap **Settings > Security > Install from Storage**.
- 5 Follow the screen prompt to enter, or set, screen lock password.
- 6 Name the certificate, or accept the suggested name.
- 7 Click **OK** to install the certificate.

The certificate is now installed on your device.



To establish MTLS connection with servers such as Polycom DMA, CMA, or RealPresence Resource Manager systems, the Polycom DMA, CMA, or RealPresence Resource Manager system should also hold the CA root certificate and the system's certificates.

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