POLYCOM®

# Polycom® RSS™ 4000 System Getting Started Guide

7.0.0 | Oct. 2011 | 3725-32871-002/C

### Trademark Information

Polycom®, the Polycom "Triangles" logo, and the names and marks associated with Polycom's products are trademarks and/or service marks of Polycom, Inc., and are registered and/or common-law marks in the United States and various other countries.

All other trademarks are the property of their respective owners.

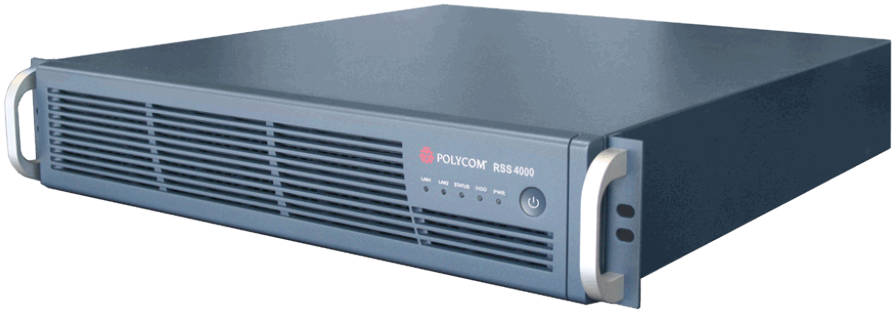
### Patent Information

The accompanying product is protected by one or more U.S. and foreign patents and/or pending patent applications held by Polycom, Inc.



Polycom, Inc.
4750 Willow Road
Pleasanton, CA 94588-2708
USA

# Table of Content




# General Safety Precautions

Follow these rules to ensure general safety:

- Keep the area around the Polycom® RSS™ 4000 unit clean, free of clutter and well ventilated.
- Decide on a suitable location for the equipment rack that will hold the Polycom® RSS™ 4000 unit and is near a grounded power outlet.
- Use a regulating uninterruptible power supply (UPS) to protect the Polycom® RSS™ 4000 unit from power surges and voltage spikes, and to keep it operating in case of a power failure.

# System Hardware Installation

**To unpack the system package:**

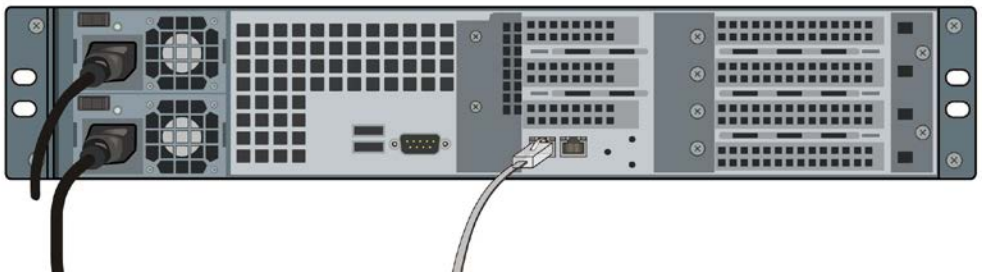
1. Check the package to ensure its completion.
2. Open the package and check the items included. The following items should be included:
   - One Polycom® RSS™ 4000 server unit
   - Two power cables
   - Two RJ-45 network cables
   - One DB-9 serial port cable
   - A CD
   - A license and a user registration card
3. Take all items out of the package and check if any of them is in poor condition.

If you find damage, file a claim with the delivery carrier. Polycom is not responsible for damage sustained during shipment of this product.

**To install system hardware**

1. Place the Polycom® RSS™ 4000 unit on a stable flat surface in the selected location.
2. Insert each power cord connector into the rear of the unit and connect each to an appropriately rated socket outlet. The Polycom® RSS™ 4000 unit is supplied with two power cords, BOTH power cords should be connected to the mains power supply during normal operation.
3. Connect the LAN cable to LAN1 in the back of the system.

   The LAN2 port is used when the system runs in the maximum security mode.
4. Turn on the power switch.



Plug Acts as Disconnect Device:

- The socket outlets to which this apparatus is connected must be installed near the equipment and must always be readily accessible.
- In order to fully isolate the equipment then both power cords should be disconnected otherwise the system will remain energized.

# System Indicators

When the system is running, indicators on the front panel indicate operating conditions of the system. Refer to the table below for the indicators and their explanations.

| Indicator | Panel Identifier | Status | Explanation |
|---|---|---|---|
| LAN1 Activity Status Indicator | LAN1 LED | Green light on | Network port is functioning normally, with no data being transmitted |
| | | Green light blinking | Network port is functioning normally, with data being transmitted |
| | | Off | No Network connection |

| Indicator | Panel Identifier | Status | Explanation |
|---|---|---|---|
| System Status Indicator | STATUS LED | Blue light on | System is functioning normally, with no resources being used (idle) |
| | | Blue light blinking | System is functioning normally, with resources being used |
| | | Red light on | System alert, with no resources being used (idle) |
| | | Red light blinking | System alert, with resources being used |
| Hard Disk Status Indicator | HDD LED | Blue light on | Hard disk is functioning normally |
| | | Blue light blinking | System is recording |
| | | Red light on | Hard disk is functioning abnormally |
| Power Status Indicator | Power LED | Green light on | Power is functioning normally |
| | | Red light blinking | Power alert |

# Preparations before Configuration

## Obtaining the Network Information

Before the initial configuration, get the following information from your network administrator to configure Polycom® RSS™ 4000 to your local network:

- IP address, subnet mask, and default gateway IP address to be assigned to Polycom® RSS™ 4000.
- (Optional) DNS server address.
- (Optional) Gatekeeper address, and the H.323 prefix and E.164 number to be assigned to the Polycom® RSS™ 4000.

## Obtaining the Product Activation Key

Before using Polycom® RSS™ 4000, you need to obtain the product activation key. When you power on and log in to the Polycom® RSS™ 4000 for the first time, the system displays the product activation page, prompting you to enter a product activation key.

**To obtain the product activation key**

1. Enter the following website address in the address bar of the browser: **http://support.polycom.com**, and go to the Polycom Support Center.
2. Enter your Email address and password to log in or register for a new account.
3. Go to **Licensing & Product Registration > Activation/Upgrade**.
4. Follow the page prompts step by step to generate the Key Code required for system activation.

   If you are required to enter the License Number and Serial Number of the device, you can find them from the document provided with the Polycom® RSS™ 4000 device.
5. Record the activation key (Key Code) on the page.

# Initial IP Address Modification

The system default IP address of LAN 1 port before delivery is:

IP Address: 192.168.1.254

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.1

There are two ways to change the system initial IP address:

- Via Web interface (Recommended)
- Via Console or Telnet connection

**To change IP address via the Web interface:**

1. Connect your computer to the LAN 1 port of the Polycom® RSS™ 4000 with a cross-over network cable, or connect your computer and Polycom® RSS™ 4000 to the same switch in the LAN.
2. Set your computer IP address to be in the same network segment as the Polycom® RSS™ 4000.
3. Run the Web browser on your computer, enter **https://<system IP address>** in the

address bar, and then press Enter.

By default, Polycom® RSS™ 4000 Web server has an untrusted certificate and uses the HTTPS protocol to set up SSL secure connection with client end.

- If you use Internet Explorer as a browser, you will be prompted that the security certificate for the website has some problem. Please choose Continue to this website to enter the Login page.
- If you use Firefox browser, you will be prompted that the connection is not trusted. Please add the site being connected to Security Exception as suggested on the page and enter the Login page.

After you install the security certificate issued by the Certification Authority in your system, you will not receive this alert again.

4 (Optional) Select a language for the Web interface from the *Select language* list in the top right of the page.

5 On the Login page, enter the administrator's username and password, and then click the **Log In** button.

The default username and password are both **admin**.

6 The *Product Activation* page displays when you first-time log in. Enter the activation key in the **Activation Key box** and click **Update**.

If you do not activate the system, you can still use the Web interface, but cannot perform calling, recording, live streaming and video playing operations using the system.

7 When prompted to restart the system, select No to proceed with setting the IP address.

8 Click **System Config > IP Setting** and configure the following parameters in the Network Setting area.

***Table 1-1** Signaling Network Parameters Description*

| Parameter | Description |
|---|---|
| Obtain an IP Address Automatically (DHCP) | Specifies the system to obtain an IPv4 automatically.<br>**Note:** Obtaining an IP Address Automatically is not recommended. For best results, the system should be configured with a static IP address. |
| Using the following IP Address | Specifies whether to use a static IPv4 address. You need to manually enter the IP address and subnet mask. |

| Parameter | Description |
|---|---|
| Enable IPv6 | Specifies whether to enable IPv6 related functions. |
| Obtain an IP Address Automatically (IPv6) | Specifies whether to obtain the IPv6 address automatically using Stateless Address Auto-configuration (SLAAC). |
| Using the following IP Address (IPv6) | Selects this option to manually configure a static IPv6 address. You need to enter the link local address, site local address and global address. |
| Enable ICMP V6 DAD | Specifies whether to enable the Duplicate Address Detection (DAD) to ensure the IPv6 address set to the system is unique in the local network. |
| Enable ICMP Echo | Specifies whether to enable the system to respond to an ICMP echo request (Ping) sent from other devices in the network. In some high-security environments, you may need to disable this option to protect the system from Ping attacks. |
| LAN Speed | Specifies the speed/duplex modes for LAN port. Supports the 10/100M Full Duplex or Half Duplex mode and the 1000M network. Select **Auto** to use auto-negotiation.<br>**Note:** When setting LAN port speed, contact your network administrator to ensure that the switch link rate matches the system port speed. |

9 In the **General System Network Settings** area, configure the following settings.

***Table 1-2*** *General System Network Parameters Description*

| Parameter | Description |
|---|---|
| Enable Destination Unreachable Message | Specifies whether to enable the system to forward ICMP destination unreachable messages that come from other network devices when the system is configured to serve as a router. |
| Host Name | Specifies the host name of the system. |
| Domain | Specifies the domain name of the system. |
| Gateway | Specifies the address of the interface to use for accessing the IPv4 gateway. |
| Default IPv6 Gateway | Specifies the address of the interface to use for accessing the IPv6 gateway. |

| Parameter | Description |
|---|---|
| Preferred/Alternate DNS Server Address | Specifies the preferred or alternate DNS server addresses here for the system to resolve domain names. |
| NAT Public (WAN) Address | Specifies whether to enable the Network Address Translation (NAT). Network Address Translation environments use private internal IP addresses for devices within the network, while using one external IP address to allow devices on the LAN to communicate with other devices outside the LAN.<br>Enter the external IP address here if this option is enabled. |

10 Click **Update** and confirm to restart the system to apply the setting.

**To change IP address via RS-232 Console or Telnet:**

1 Connect your PC to the RS232 port of the Polycom® RSS™ 4000 with a serial port cable and activate the console port (115200，8bits).

2 After you logged in to the console port, input the default password **POLYCOM** to enter the system.

3 Enter "?" or "help" after the prompt "#" and the system displays available command information.

4 Change IP address using the command in the format below:

**set lan1 ip {dhcp | static <ip> netmask <mask> gw <gateway>}**

For example, to set the IP address of LAN1 port to 172.21.103.29, subnet mask to 255.255.255.0 and gateway address to 172.21.103.254, enter the following command:

```
# set lan1 ip static 172.21.103.29 netmask 255.255.255.0 gw 172.21.103.254

Reboot is require in order for the change to take effect. Reboot now? [Y for yes
 / N for no]Y

restart system ...
```

5 After the system is restarted, activate the device according to Steps 3 to 6 described in the section *To change IP address via the Web interface*.

Points to note:

- The same steps are also applicable for a Telnet connection.
- Only one console (Telnet or RS232) at a time can be connected.

# Installing Multicast Controls (Optional)

When you activate the device and subsequently connect to the system's web management interface for the first time, you will be prompted that a Polycom RSS 4000 multicast add-in is required at the top of the browser. Make sure you use the Internet Explorer browser. If you have already purchased the multicast license, please install the controls according to the prompt on the screen. Only after this installation can your computer receive multicast videos sent by Polycom® RSS™ 4000 system.

- If you use an IE7.0 or IE8.0 browser, please first confirm the Security Mode option (**Tools > Internet Options > Security**) is disabled before installing the controls, to ensure successful installation and normal use of the multicast function.
- If you use the Windows 7 operation system, you must log in to the system as an administrator to be able to install the controls.

# Gatekeeper Configuration (Optional)

If a gatekeeper is configured on your network, register the Polycom® RSS™ 4000 to the gatekeeper to simplify calling.

**To register the system with the gatekeeper:**

1 Click **System Config > Signaling Setting > H.323** in the Web configuration interface.

2 Set the following parameters in the gatekeeper page:

*Table 1-3 Gatekeeper Parameters Description*

| Parameter | Description |
|---|---|
| Register to Gatekeeper | Indicates whether or not to register to the gatekeeper. You must check this option to set the following parameters. |
| Primary (Alternate) Gatekeeper | Indicates whether the system has been registered to the primary (or alternate) gatekeeper.<br>**Note**: The alternate gatekeeper is used when the primary gatekeeper is not available. |
| Gatekeeper IP Address | Specifies the IP address for the primary or alternate gatekeeper. |
| Gatekeeper Port | Specifies the port number for the primary or alternate gatekeeper. |

| | |
|---|---|
| Register's User Information to Gatekeeper | Specifies whether to register the system to Polycom DMA 7000 for H.235 .0 authentication.<br>When H.235.0 authentication is enabled, the gatekeeper ensures that only trusted endpoints are allowed to access the gatekeeper. |
| Gatekeeper User | Specifies the user name for registration with the Polycom DMA server. |
| Gatekeeper Password | Specifies the password for registration with the Polycom DMA server. |
| System Prefix/E164. | Specifies the E.164 number for the system. |
| System H.323Alias | Specifies the H.323 alias for the system. |

3 Click **Update** and a dialog box will pop up, in which you should confirm to restart the system to apply the setting.

# SIP Configuration (Optional)

If your network supports the Session Initiation Protocol (SIP), you can use SIP to connect IP calls. The Polycom® RSS™ 4000 system supports only the integration with Polycom DMA SIP server.

**To configure the SIP settings:**

1 Click **System Config > Signaling Setting > SIP** in the menu bar at the top of the page.

2 Set the following parameters in the **SIP** page:

*Table 1-4 SIP Parameters Description*

| Parameter | Description |
|---|---|
| Enable SIP | Specifies whether to enable the SIP in the system. You need to set the SIP server-related parameters after this function is enabled. |
| Transport Type | Specifies the transport layer protocol used for communicating with the SIP server. It needs to be consistent with the protocol supported by the SIP server. |
| Register to SIP Server | Specifies whether to register the system to the Polycom DMA SIP server. |

| Parameter | Description |
|---|---|
| SIP Server | Specifies the IP address, connection port, and domain name of the SIP server for registration service. |
| Register User Information | Specifies the user name and password that authenticates the system to the SIP Server. |
| Outbound Proxy Server | For communication with the SIP server when the system is configured on the internal network, an outbound proxy server is required to implement traversal of the firewall or NAT. In this case, you need to set the IP address and port number for the outbound proxy server. |

3 Click **Update** and confirm to restart the system to apply the setting.

# Ready for Use

The system is now ready for use. For additional configuration instructions, refer to the user guide.

# Maximum Capacity

| Feature | Description | Device maximum capacity | | |
|---|---|---|---|---|
| | | Small | Medium | Large |
| Signaling Connection | How many devices can connect to a Polycom® RSS™ 4000 simultaneously?<br>**Note:** Include connection types: recording with live streaming, recording only and playback. | 15 | 15 | 15 |
| Conference Recording | How many conferences can be recorded simultaneously?<br>**Note:** Include connection types: recording with live streaming and recording only. | 5 | 10 | 15 |
| Single-point Conference Live Streaming | How many single-point conferences can be live streamed simultaneously?<br>**Note:** The conferences being live streamed can also be recorded. | 4 | 6 | 8 |
| Multipoint Conference Live Streaming | How many multipoint conferences can be live streamed simultaneously?<br>**Note:** The conferences being live streamed can also be recorded. | 2 | 3 | 4 |
| Playback | How many endpoints can connect to Polycom® RSS™ 4000 to view playback simultaneously? | 15 | 15 | 15 |
| Web Playback / Live Streaming | How many web connections are supported to view playback (or live streaming) simultaneously?<br>**Note:** After purchasing and activating the HD Live Streaming option, the web playback (live streaming) connections will increase from 100 to 200. | 100/200<br>[128 kbps ~ 1024 kbps] – It supports 200 simultaneous archived playbacks / live steaming;<br>(1024 kbps ~ 2048 kbps] – It supports 100 simultaneous archived playbacks / live streaming;<br>(2048 kbps ~ 4096 kbps] – It supports 50 simultaneous archived playbacks / live steaming. | | |

The resources used for playback, conference recording, and live streaming increase progressively; and they are exclusive. For example, on a Small Model device, if there are already four single-point conferences being live streamed (also being recorded.), and then the fifth live streaming will be rejected, but one more recording and ten sessions of playback are allowed.

# TCP/UDP Port Usage

| Usage | | Type | Port Range |
|---|---|---|---|
| http | | TCP | 80 |
| https | | TCP | 443 |
| Trace (for technical support usage) | | UDP | 60001(configurable) |
| Telnet | | TCP | 23 |
| SMTP | | TCP | 25 |
| RTSP Streaming | | TCP | 554 |
| | | UDP(optional) | Random (for source port) |
| Endpoint | RAS | UDP | 1719 |
| | Q.931 Socket | TCP | 1720 |
| | H.245 Socket | TCP | 10000 – 10199 (configurable) |
| | audio / video / data | UDP | 20000 – 20999 (configurable) |
| | SIP BFCP | TCP | 20000 – 20049 (configurable) |
| | | UDP | 10000 – 10049 (configurable) |

# Notes Regarding On Demand Archive and Live streaming

The UDP ports used for on demand archives and live streaming are randomly chosen on Polycom® RSS™ 4000. You need to configure firewalls and Windows Media Player for usage with Polycom® RSS™ 4000 on demand archives and live streaming.

## Configuring Windows Media Player to receive streaming media

**To use UDP ports to receive streaming media:**

1. Launch Window Media Player on your computer;
2. Click **Tools > Options > Network**;
3. Enable **RTSP/UDP** (or **UDP**) and "**Use ports**", and define the port range.

Open an outbound UDP port range matching what is used by Windows Media Player, or open all UDP ports outbound from Polycom® RSS™ 4000 to effectively bypass the firewall for outbound traffic. Also open the port range used by Windows Media Player for inbound traffic to the viewing PC.

**To use TCP ports to receive streaming media:**

1. Launch Window Media Player on your computer;
2. Click **Tools > Options > Network**;
3. Disable **RTSP/UDP** (or **UDP**).

Disable UDP connections in WMP will force to use TCP Port 554 only.

# Hardware Specification

| Parameter | Description |
|---|---|
| Hardware Capability | Intel Xeon 2.33GHzx2, 4G RAM, 1TBx2 Hard disk<br>(Disk 1: 1TB / Disk 2(for mirroring): 1TB)<br>Note: V5.0 system has same capacity on both Disk 1 and Disk 2, but 500GB out of 1TB is reserved for Linux upgrade. After migrating to v6.0 or later, this 500GB is available. |
| Form Factor | 2U 19” rack mount |
| Height | 89 mm |
| Width | 441 mm |
| Depth | 485 mm |
| Gross Weight | 19.5 kg |
| Power Supply | 700W ATX AC power supply w/PFC,<br>1 + 1 Redundant Power Supply |
| AC Voltage | 100 - 240 VAC, 60-50 Hz, 10-4 Amps |
| Operation System | Linux |

# Polycom Solution Support Services

Polycom Implementation and Maintenance services provide support for Polycom solution components only. Additional services for supported third-party Unified Communications (UC) environments integrated with Polycom solutions are available from Polycom Global Services and its certified Partners. These additional services will help customers successfully design, deploy, optimize and manage Polycom visual communications within their UC environments. Professional Services for Microsoft Integration is required for Polycom Conferencing for Microsoft Outlook and Microsoft Office Communications Server integrations. For additional information and details please see http://www.polycom.com/services/professional_services/index.html or contact your local Polycom representative.