Spectralink IP-DECT Server 200

Deployment and Installation Guide

14212650-IG, Edition 1.0
April 2018, Original document

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About This Guide

This guide describes how to deploy and install a Spectralink IP-DECT Server 200. It does not describe the configuration of the Spectralink IP-DECT Server 200.

Configuration of the Spectralink IP-DECT Server can be done using the following 3 methods:

- DHCP Option pointing to enterprise own Provisioning Server
- Manual configuration
- Configuration done by service provider (when deployed with UCaaS platforms).

It is assumed, that your handsets have been registered to the system, so that you can subscribe each handset using an activation code - if needed.

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Related Documentation

All Spectralink documents are available at http://support.spectralink.com/.

Safety and Handling information is available online at http://support.spectralink.com/products.

Regulatory information is available online at http://support.spectralink.com/products.

Subject	Documentation
Spectralink DECT Handset	For more information about the handset, refer to the user guide available online at http://support.spectralink.com/products.
Spectralink IP-DECT/DECT Server	For more information about the server, refer to the guide available online at http://support.spectralink.com/products.
Spectralink DECT Repeater	For more information about the repeater, refer to the guide available online at http://support.spectralink.com/products.
Provisioning	For more information about provisioning, refer to the guide available online at http://support.spectralink.com/products.
Spectralink Technical Bulletins	Available online at http://support.spectralink.com/products.
Release Notes	Document that describes software changes, bug fixes, outstanding issues, and hardware compatibility considerations for new software releases. Available online at http://support.spectralink.com/products.
Spectralink DECT Training material	In order to gain access to the Spectralink training material, you must attend training and become Spectralink Certified Specialist. Please visit http://-partneraccess.spectralink.com/training/classroom-training for more information and registration.
Regulatory information	Regulatory information is available online at http://support.spectralink.com/products.
Safety and Handling Information	Safety and Handling information is available online at http://support.spectralink.com/products.

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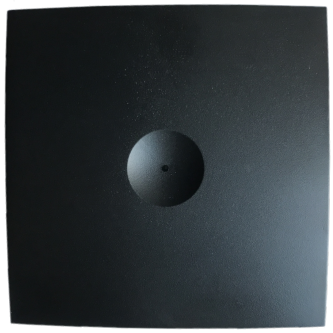
Description - Spectralink IP-DECT Server 200



The Spectralink IP-DECT Server 200 is a single cell system (one built-in base station in the server) supporting SIP lines only.

The Spectralink IP-DECT Server 200 is designed with connector for External Antenna.

Up to 3 additional Spectralink DECT Repeaters can be added to the Spectralink IP-DECT Server 200.

The Spectralink IP-DECT Server 200 supports up to 12 registered handsets and 6 simultaneous calls.

The DECT radius of coverage is up to 600 meters/2000 feet with a handset in free sight.

Power Requirements for the Spectralink IP-DECT Server 200

- Power over Ethernet (PoE 802.3af).
- Maximum power supply consumption is 3.0W (IEEE 802.3af class 1 device).

Use a standard PoE adapter or a PoE-enabled port on an ethernet switch adhering to PoE 802.3af when connecting the Spectralink IP-DECT Server 200 to a PoE power source.

Use an 8V-DC power supply when using a port without PoE.

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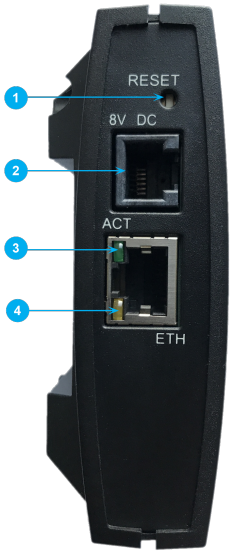
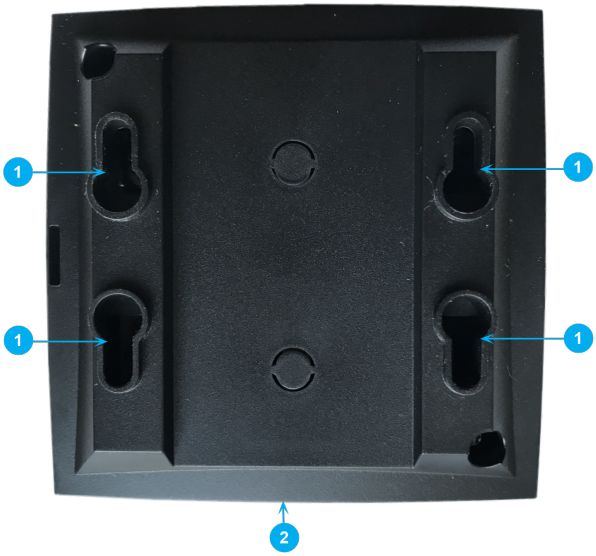
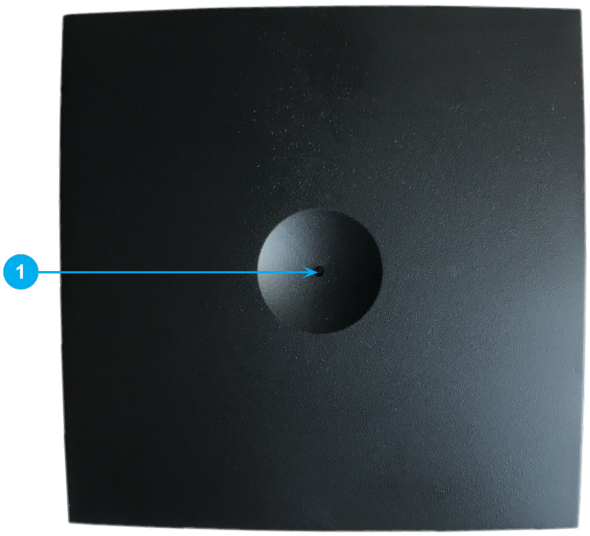
Spectralink IP-DECT Server 200 Appearance and Components

Below you will find a description of the Spectralink IP-DECT Server 200 appearance and components:

Spectralink IP-DECT Server 200 - bottom	Spectralink IP-DECT Server 200 - rear
	
1. Reset button 2. DC 3. LINK/Activity Indicator 4. ETH port (power supply by PoE)	1. Holes for wall mounted screws 2. Connection to LAN

Spectralink IP-DECT Server 200 - front



1. LED

Spectralink IP-DECT Server 200 Reset Button

You can restart or reset the Spectralink IP-DECT Server 200 by pressing the Reset button on the bottom of face plate of the server.

The following table contains a description of the different actions that take place when pressing the Reset button.

Press button	Action
Short press (2 to 5 sec.)	System restarts when button is released.
Long press (5 to 9 sec.) until front LED flashes red, then release button	Resets the system to factory default settings (original IP settings - DHCP) and restarts the system. Firmware version is not affected.

Spectralink IP-DECT Server 200 LED Indicators

Below you will find information about LED indicators on the server.

Front Cover

The server front cover has one indicator describing the server faults and failures. The indicator is off when the server is not powered. The LED flashes when the server initializes. The indicator is on when the server is operating.

LED Indicator	Meaning
Steady green	OK and idle.
Slow green flashing	OK and active voice call.
Fast green flashing	Busy (all channels are in use).
Steady red	Reset/shutdown in progress.
Steady red for 5 seconds followed by fast red flashing	Reset to factory settings.
Red flashing	Error or rebooting

LAN Port on Face Plate

LED Indicator	Meaning
LINK Indicator - yellow	Link layer software has established connection.
LINK Indicator - green flashing	Activity

When Ordering Handsets and Spectralink IP-DECT Server 200

Note:

It is recommended to plan your installation before ordering the Spectralink DECT Handsets and Spectralink IP-DECT Server 200.

1. Allocate up to 4 - 6 handsets per Spectralink IP-DECT Server 200.

   Note:

   The unit provides a coverage radius of approximately 75 meter/245 feet and supports 6 simultaneous calls.

   - If you want to use phone calls with all handsets all the time, allocate up to 6 handsets per Spectralink IP-DECT Server 200.
   - If you want to allow more users to use the system, you can allocate up to 12 handsets per Spectralink IP-DECT Server 200 (up to any 6 handsets can be used at the same time).
2. Determine which handsets will be associated with each new (or existing) Spectralink IP-DECT Server 200 on your virtual PBX. This will ensure you receive correct activation codes that link your handset accounts with your Spectralink IP-DECT Server 200s when you order.
3. Within the same 30 meters/100-feet radius you can install up to 5 Spectralink IP-DECT Server 200s.

   Example: 5 Spectralink IP-DECT Server 200s in the same 30 meters/100-feet radius support up to 20 simultaneous calls, and up to 30 handsets in normal use.

Special Transmission Limitations and Requirements

- In multiple floor installations, transmission range across floors will likely be less than 75 meters/245-feet.
- Transmission range across heavy walls will likely be less than 75 meters/245-feet.
- Spectralink IP-DECT Server 200s are normally installed at or near the center of a 75 meters/245-feet radius cell.

  At the Spectralink IP-DECT Server 200 installation point, either Ethernet with PoE or Ethernet without PoE plus a nearby AC outlet and a PoE AC adaptor / PoE injector are required.

Prepare your Handsets and Spectralink IP-DECT Server 200 for Installation

Before permanently installing Spectralink IP-DECT Server 200s, complete the following steps:

1. Charge the battery in the handsets so the handsets can be subscribed and tested.

   For more information, see Handset User Guides.

2. Turn on the Spectralink IP-DECT Server 200(s) and verify the power LED is light is on.

   For more information, see "Power Requirements for the Spectralink IP-DECT Server 200" on page 6 and "Spectralink IP-DECT Server 200 LED Indicators" on page 9.

3. Subscribe the new handsets to the server(s). Also, if needed, ensure that you have the activation codes for the handsets ready.

   For more information about subscribing the handset and creating Login, see Handset User Guides.

4. Before physically installing the Spectralink IP-DECT Server 200 onto walls:
   - Place the Spectralink IP-DECT Server 200s close to their planned locations.
   - Establish test calls between handsets in the areas where they will be used.
   - Verify range and sound quality.
   - Change the location of the Spectralink IP-DECT Server 200 if necessary to ensure optimal call coverage and voice quality.

Find the Best Installation Locations

1. Avoid areas with large metal surfaces and heavy machinery that may interfere with base unit signals.
   - Keep Spectralink IP-DECT Server 200s at least 1,2 meters/4 feet away from steel constructions.
   - Do not place Spectralink IP-DECT Server 200s directly on metallic surfaces.
   - Do not hide Spectralink IP-DECT Server 200s behind furniture or other physical objects.
   - Do not paint Spectralink IP-DECT Server 200s. Paint contains metallic/carbon particles that can affect transmission.
2. Locate ethernet access and either PoE or AC power outlets required to support the Spectralink IP-DECT Server 200s.

   Note:

   Order Spectralink IP-DECT Server 200 with AC Adaptor bundle if you do not have PoE, or simply add a standard PoE switch or standard PoE injector to power the server. Depending on the type of product bundle ordered - the AC power supply for the IP-DECT Server 200 may be included.
3. Verify with the end users where coverage is needed so the Spectralink IP-DECT Server 200 can be placed near center of the 75 meters/245-feet radius where users are normally situated.

   Tip:

   Also identify areas where coverage is not required to simplify the installation.
4. Spectralink IP-DECT Server 200s should preferably be placed between 2.4 - 3.6 meters/8 - 12 feet high on a wall (and no higher than 6 meters/20 feet). If placed lower, a passersby may interfere with the signal. The connectors can be pointed either up or down.
5. Do NOT install units upside down or on the ceiling. Doing so decreases coverage by 40 - 50%.
6. Ensure there is no heavy use of DECT headsets or residential DECT phone systems with individual transmitters in the same area you are installing your additional DECT devices. This can cause interference and could affect performance of the Spectralink IP-DECT Server 200s.

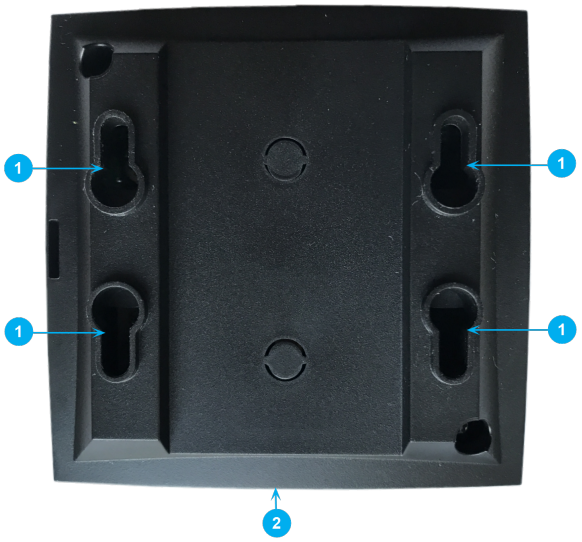
Wall-Mount and Power on the Spectralink IP-DECT Server 200

For best RF coverage, the Spectralink IP-DECT Server 200 must be mounted vertically on walls.

1. Mount the Spectralink IP-DECT Server 200 on the wall using the anchors and screws accompanying the product.

   Note:

   When you place the Spectralink IP-DECT Server 200 on the screws, ensure that the screws do not touch the printed circuit board.



1. Holes for wall mounted screws
2. RJ45 port

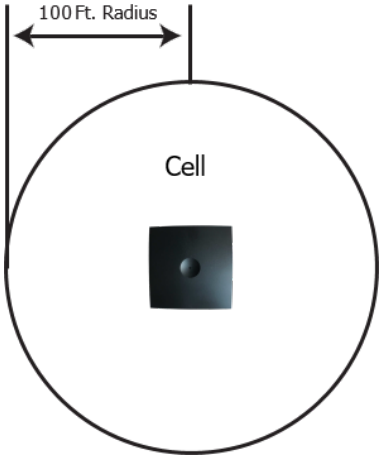
2. Connect the RJ45 plug to the ethernet connector at the bottom of the Spectralink IP-DECT Server 200.

3. After installing the Spectralink IP-DECT Server 200 you need to power it up.

Different Installation Use Cases

Installing a Single Spectralink IP-DECT Server 200 in a Small Area

Small area is defined as: a radius of less than 30 meters/100 feet.



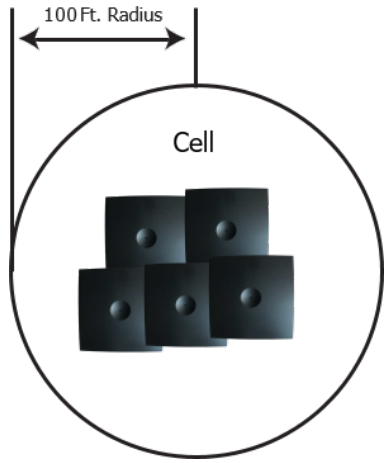
1. Follow the previous instructions and select the optimal location for the Spectralink IP-DECT Server 200 within a 30 meter/100-feet radius cell that contains the users and the areas where they are situated.
2. If the coverage area has multiple floors or goes across heavy walls, the Spectralink IP-DECT Server 200's range may be limited to ~15 meter/~50 feet or less for the floor above or across the heavy walls.

   Test the Spectralink IP-DECT Server 200s' range and call quality before permanently installing them.

Installing Multiple Spectralink IP-DECT Server 200 in a Small Area

Small area is defined as: a radius of less than 30 meters/100 feet.

The image below shows a single-cell configuration supporting up to 5 Spectralink IP-DECT Server 200s within a 30 meters/100-feet radius. Users can talk within their own 30 meters/100-feet cell.



1. Follow the previous instructions and select the optimal locations for up to 5 Spectralink IP-DECT Server 200s serving up to 30 handset users and the areas where they are situated. Ideally, mount the individual Spectralink IP-DECT Server 200s about 0,6 meters/2 feet apart from each other, but place all near the center of the cell as in the diagram above.
2. In coverage areas with multiple floors or heavy walls, the Spectralink IP-DECT Server 200s' range may be limited to ~15 meters/~50 feet or less for the floors above or across the heavy walls.

   Test the Spectralink IP-DECT Server 200s' range and call quality before permanently installing them.

   - The same limit of up to 5 Spectralink IP-DECT Server 200s per 30 meters/100-feet radius cell applies across floors and heavy walls.
   - You will achieve the best results by mounting all the Spectralink IP-DECT Server 200s either high on the wall near where most users reside most of the time, or on the side of any heavy wall where most users reside most of the time.

Installing Single Spectralink IP-DECT Server 200s in Large Areas

Large areas defined as: each area with a radius larger than 30 meters/100 feet; 30 meters/100-feet cells do not overlap.

The image below shows 2 independent cells over 30 meters/100 feet apart with 1 Spectralink IP-DECT Server 200 in each.

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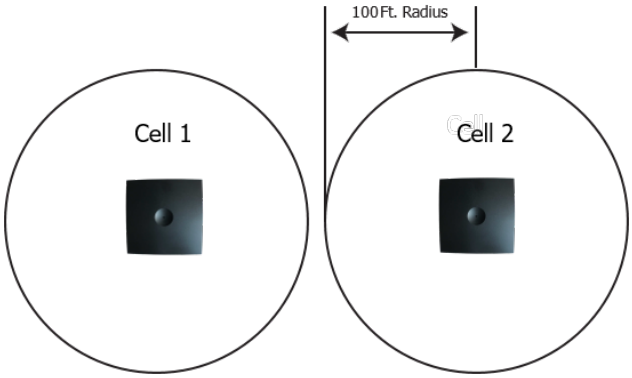
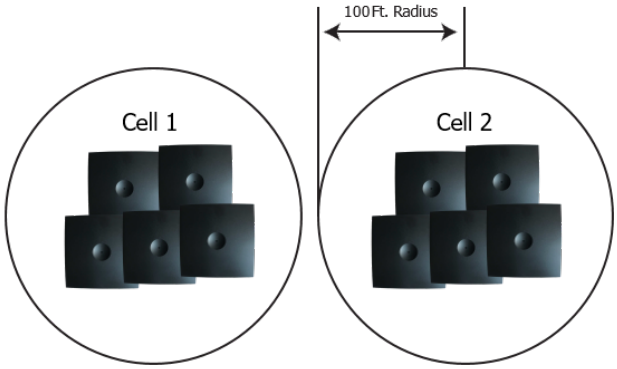


1. Follow the previous instructions and select the optimal location for each Spectralink IP-DECT Server 200 within its own 30 meters/100-feet radius cell.
2. The cells in this configuration do not overlap, which means each Spectralink IP-DECT Server 200 can be installed and will operate independently.

Installing Multiple Spectralink IP-DECT Server 200s in Large Areas (1)

Large areas defined as: each area with a radius larger than 30 meters/100 feet; 30 meters/100-feet cells do not overlap.

The image below shows 2 independent cells over 30 meters/100 feet. apart with 1 Spectralink IP-DECT Server 200 in each.

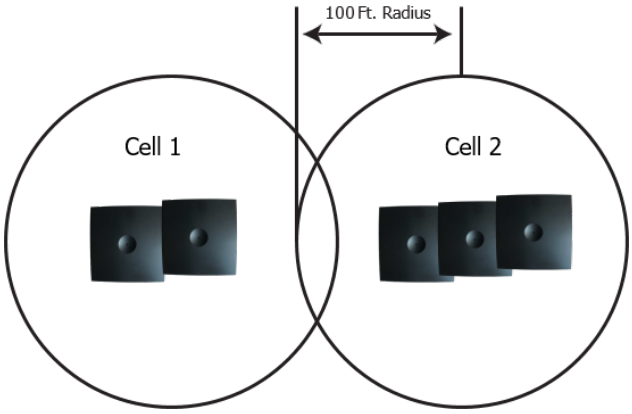


1. Follow the previous instructions for installing multiple Spectralink IP-DECT Server 200s and select the optimal locations for up to 5 Spectralink IP-DECT Server 200s.
2. If each cell has a ~30 meters/~100 feet radius that does not overlap with adjacent cells, then each Spectralink IP-DECT Server 200 can be installed and will operate independently.
3. If the 30 meters/100 feet radius cells overlap, then the maximum number of Spectralink IP-DECT Server 200s installed in the area that overlaps must be 5 or fewer to avoid interference. See "Installing Multiple Spectralink IP-DECT Server 200s in Large Areas (2)" on the next page.

Installing Multiple Spectralink IP-DECT Server 200s in Large Areas (2)

Large areas defined as: radius larger than 30 meters/100 feet; 30 meters/100-feet cells overlap.

The image below shows overlapping cells supporting up to 5 base units (total).



Users can talk within their own 30 meters/100-feet radius cells. Users from both cells can talk in the common (overlapping) area. Cells on adjacent floors can also overlap.

1. Follow the previous instructions for installing multiple base units and select the optimal locations for up to 5 base units.
2. Where the 30 meters/100 feet radius cells overlap, then the maximum number of base units installed in the area that overlaps must be 5 or fewer to avoid any interference. This includes where adjacent floors may overlap.

Product Compatibility

If you have any questions about product compatibility, contact your system administrator.

You can use the Spectralink IP-DECT Server 200 with other Spectralink products as identified by the type approval model ID and/or part number located on the label of the product.

Spectralink Server	
Spectralink IP-DECT Server 200	K005 (7234 5600/723 45601)
Power Supply, 8.0V DC	8464 2600
External Antenna (with 1 m connection cable)	0231 9705
Connection cable for External Antenna, 3 m	1400 2704
Connection cable for External Antenna, 7.5 m	1400 2706

Spectralink DECT Repeater	
Spectralink DECT Repeater 1G8, 2 channels, with connector for external antenna	K018B (0244 0000)
Spectralink DECT Repeater 1G9, 2 channels, with connector for external antenna	K018B (0244 1000)
Spectralink DECT Repeater 1G8, 2 channels, without connector for external antenna	K018 (0244 1100)
Spectralink DECT Repeater 1G9, 2 channels, without connector for external antenna	K018 (0244 1200)
Spectralink DECT Repeater 1G8, 4 channels, with connector for external antenna	K018 (0244 1600)
Spectralink DECT Repeater 1G9, 4 channels, with connector for external antenna	K018 (0244 0200)
Spectralink DECT Repeater 1G8, 4 channels, without connector for external antenna	K018C (0233 4601)
External Antenna (with 1 m connection cable)	0231 9705
Connection cable for External Antenna, 3 m	1400 2704
Connection cable for External Antenna, 7.5 m	1400 2706
Power Supply (9.0V DC, 350mA)	8464 2602
Repeater Programming Kit	0250 9210

Spectralink Server Licenses for 200	
Lync/SfB + Security (TLS, SRTP) | IP-DECT Server 200	1407 5511
Security (TLS, SRTP) | IP-DECT Server 200	1407 5281