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Spectralink IP-DECT Base Station

Installation Guide

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Warranty

The Product Warranty and Software License and Warranty and other support documents are available at http://support.spectralink.com/.

Contact Information

US Location	UK Location	Denmark Location
+ 1 800-775-5330	+44 134 4206 591	+45 75602850
Spectralink Corporation	Spectralink Europe UK	Spectralink Europe ApS
2560 55th Street	329 Bracknell, Doncastle Road	Bygholm Søpark 21 E Stuen
Boulder, CO 80301	Bracknell, Berkshire, RG12 8PE	8700 Horsens
USA	United Kingdom	Denmark
info@spectralink.com	infoemea@spectralink.com	infoemea@spectralink.com

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About This Guide

This guide explains how to physically install the Spectralink IP-DECT Base Station. For more information about configuration, synchronization and deployment, see the IP-DECT Server 200/400/6500 and Virtual IP-DECT Server One Installation and Configuration Guide and Synchronization and Deployment Guide.

This guide is intended for qualified technicians and the reader is assumed to have a basic knowledge about the Spectralink IP-DECT/DECT/Virtual IP-DECT Server, Spectralink IP-DECT Base Station and Spectralink DECT Repeater.

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.
Site Survey Function in Handset	For more information about the site survey function in handset, refer to the guide available online at http://support.spectralink.com/products.
Synchronization and Deployment	For more information about synchronization and deployment, refer to the guide available online at http://support.spectralink.com/products.
Spectralink IP-DECT/DECT/Virtual IP-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.

Subject	Documentation
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.

Description of Base Station

The Spectralink IP-DECT Base Station is to be used with Spectralink IP-DECT Server 400/6500, Spectralink Virtual IP-DECT Server One and Spectralink DECT Server 2500/8000.

The Spectralink IP-DECT Base Station is designed with two internal antennas and supports antenna diversity.

The Spectralink IP-DECT Base Station is designed with connector for External Antenna.

The Spectralink IP-DECT Base Station is also able to carry out a handover between the RF channels under the same Spectralink IP-DECT Base Station, and handles up to 12 (depending on synchronization configuration) DECT traffic channels simultaneously.

The Spectralink IP-DECT Base Station is able to frame synchronize with other Spectralink IP-DECT Base Stations under the same server.

The Spectralink IP-DECT Base Station can be powered over ethernet (PoE/802.3af) or by a separate power supply (available separately).

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

Installing Spectralink IP-DECT Base Station

Below you will find information about installing the base station.

> **Note:**
>
> Before you install the equipment, ensure that a site planner defines the location of the base stations.
>
> Before you begin the installation, determine the position of the base station for best coverage. The average coverage within buildings is 30 meters/100 feet.
>
> The coverage depends on the construction of the building, architecture, and the choice of building materials.

DECT Frequency Bands

- EMEA, Australia & New Zealand: 1G8: 1880 – 1900 MHz
- South America (SAM): 1G9: 1910 – 1930 MHz
- USA & Canada: 1G9: 1920 – 1930 MHz (DECT 6.0)

Environmental Considerations

- Do not install a device near metal objects and steel constructions.
- Do not position devices in ducts, plenums or hollow spaces used to transport environmentalair except where the duct, plenum or hollow space is created by a suspended ceiling having lay-in panels.
- Do not position devices behind furniture.
- The installation area must be clean, free of traffic and excess dust, dry, and well ventilated.
- The installation area must be within the temperature ranges of 10°C and 40°C/50°F and 104°F.
- The installation area must be between 20% and 80% non-condensing relative humidity.
- For best RF coverage, the device must be mounted vertically on walls.

Power Requirements for the Base Station

The Spectralink IP-DECT Base Station uses:

- 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 a switch adhering to PoE 802.3af when connecting the base station to a PoE power source.

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

Base Station Appearance and Components

Below you will find a description of the base station appearance and components:

Spectralink IP-DECT Base Station - rear
1.   Holes for wall mounted screws 2.   Connection to LAN
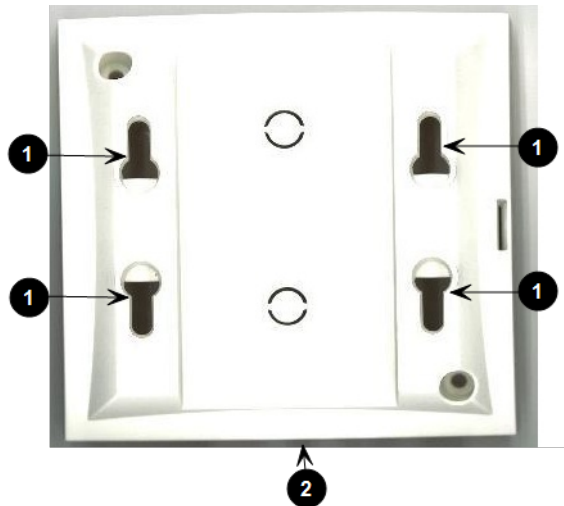
IP-DECT Base Station - front
1.   LED

IP-DECT Base Station
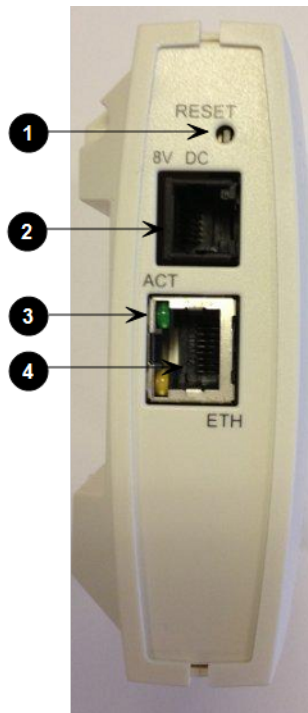
1. Reset button
2. DC
3. LINK/Activity Indicator
4. ETH port (power supply by PoE)

Base Station LED Indicators

Below you will find information about LED indicators on the base station.

Front Cover

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

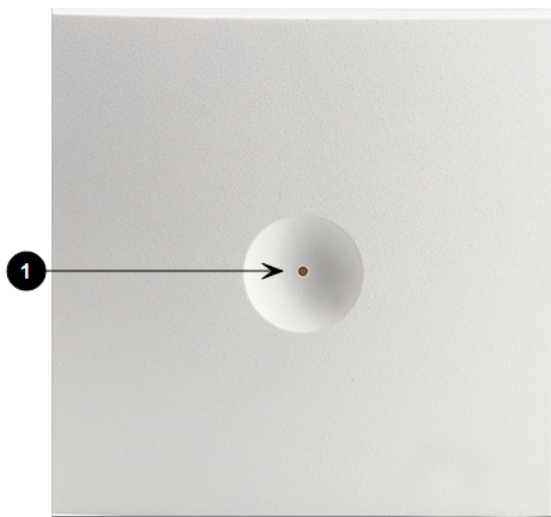| LED Indicator	Meaning
Steady green	OK and idle.
Slow green flashing	OK and active voice call.
Fast green flashing	Busy (all channels are in use).
Slow red flashing	No server connection.
Fast red flashing	No sync over air possible, or sync master is not available, or other error.
Steady red	Reset/shutdown in progress.
Steady red for 5 seconds followed by fast red flashing	Reset to factory settings.

LAN Port on Face Plate

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

Base Station Reset Button

You can restart or reset the base station by pressing the Reset button on the bottom of face plate of the base station.

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.

How to Wall Mount the Base Station

The base station must be mounted vertically on the wall for best coverage.

1. Use a twisted pair cable, cat. 5e or higher between the base station and the network switch.

2. Mount the base station onto the wall using the screws accompanying the base station. For more information, see "Measurements and Mounting Template" on the next page.

> **Note:**
>
> When you place the base station on the screws, ensure that the screws do not touch the printed circuit board.
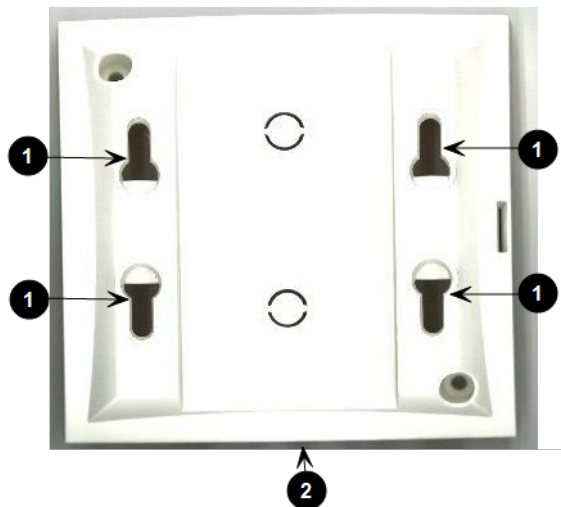
1.	Holes for wall mounted screws
2.	RJ45 port

3. Connect the network cable to the RJ45 port.

4. After installing the base station you need to power it up. For more information, see "Power Requirements for the Base Station" on page 8.

Measurements and Mounting Template

Measurements in Millimeters

Mounting Template

> **Note:**
>
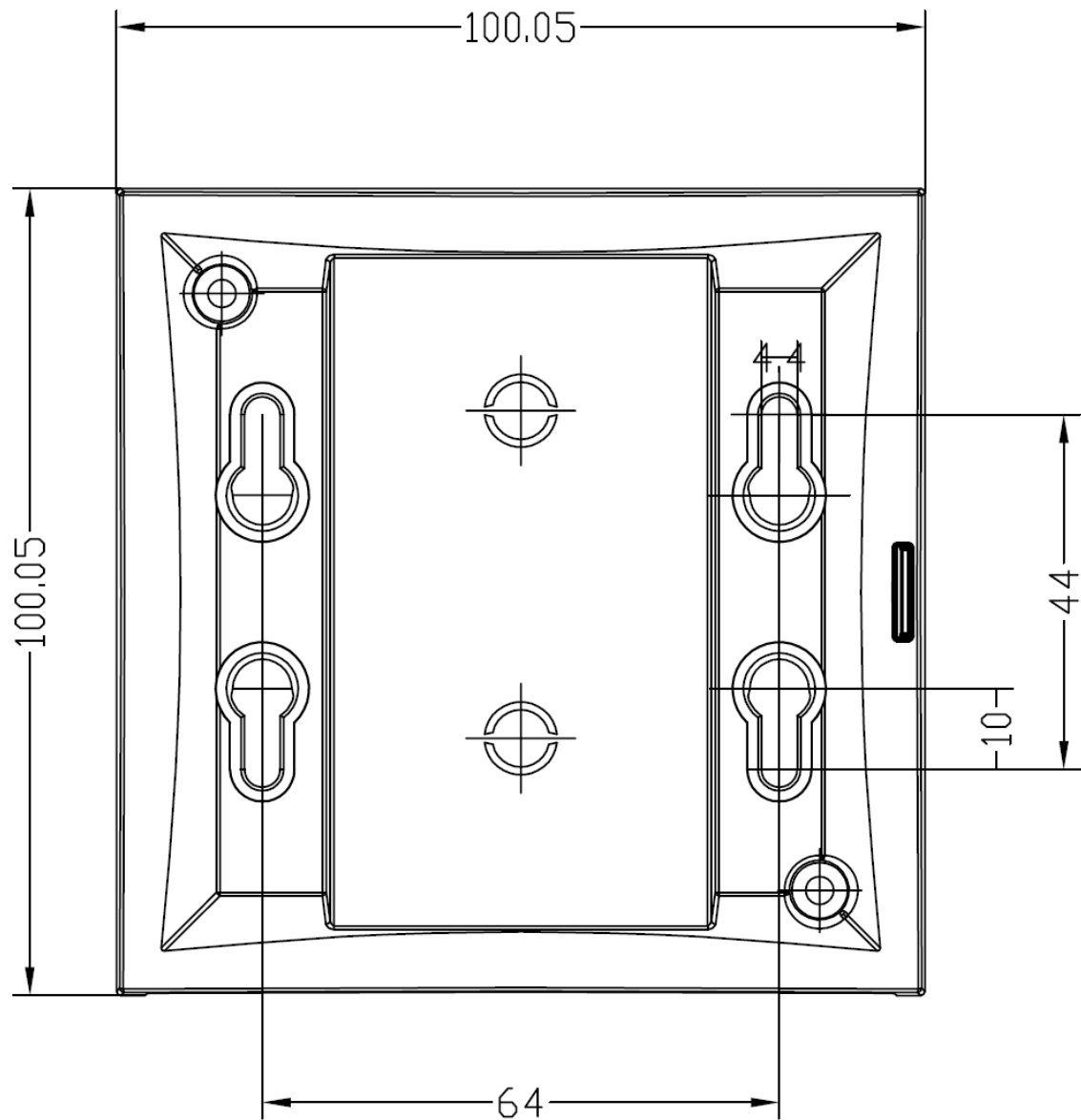> For correct measurement, ensure that this page is printed as either **Actual size** or **Scale 100 %** (**Print** dialog box) on an A4 size paper before using the mounting template below.
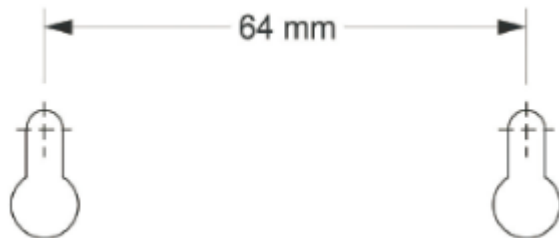
Recording the Installation Information

After completing the installation of the base stations, record the location of each base station and add a descriptive text in the web based Administration Page of the Spectralink IP-DECT/DECT/Virtual IP-DECT Server under **Base station/IP Base Station** (Spectralink DECT Server 2500/8000) or **Administration/Base stations** (Spectralink IP-DECT Server 400/6500/Spectralink Virtual IP-DECT Server).

Technical Specifications

Spectralink IP-DECT Base Station

NETWORK

- 10/100 Mbps Ethernet port
- Manual or dynamic host configuration protocol (DHCP)
- Time and date synchronization from the Spectralink DECT Server
- Event logging
- LED status indication

PROVISIONING

- Base station firmware (License required on server)

RADIO INTERFACE

- RF output 20 to 24 dBm at antenna connection
- Sensitivity: typical -90 dBm measured at antenna connection at BER = 0.001
- Average transmit power: typical 5mW/ch (US) or 10mW/ch. (EU)
- Peak transmit power: typical 125mW (US) or 250mW (EU)
- Typical range:
  - Indoor: 20 - 50 m. (65 - 165 ft.)
  - Outdoor: 300 m. (1000 ft.)
- Full slot DECT radio (12 channels)
- Possible to connect external antenna (Only Spectralink External Antenna can be used)

ELECTRICAL REQUIREMENTS

- Power over Ethernet (IEEE 802.3af)
- PoE Class 1 device
- Typical power consumption: 2 W per unit
- External power supply option available
- External antenna connection (Only Spectralink External Antenna can be used)

- Power over Ethernet (IEEE 802.3af),
- PoE Class 1 device
- Typical power consumption: 2W per unit
- External power supply option available

ENVIRONMENTAL CONDITIONS

- Operating temperature: 10 - 40º C (50 - 104º F)
- Storage temperature: -50 - 70º C (-58 - 158º F)
- Relative humidity: between 20% and 80% (non-condensing)
- Compliance with the requirements of EU directive 2015/863/EU (ROHS) and 2012/19/EU (WEEE)

PHYSICAL CHARACTERISTICS

- Size: 100 x 100 x 43 mm (3.94 x 3.94 x 1.69 in.)
- Size: 100 x 30 x 100 mm (3.9 x 1.2 x 3.9 in.)
- Weight: 120 gr. (4.2 oz)
- Grey-white (NCS 0502-Y)
- Wall-mountable, indoor
- Can be mounted upside down

Note:

The Spectralink IP-DECT Base Station is regulatory-certified for frequency bands used in North America, Europe, Australia and New Zealand.

Product Compatibility

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

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

Spectralink Base Station	
Spectralink IP-DECT Base Station 1G8	K005
Spectralink IP-DECT Base Station 1G9	K005
Power Supply, 8.0V DC	84642600
External Antenna (with 1 m connection cable)	02319507
Connection cable for External Antenna, 7.5 m	14002706

Spectralink DECT Repeater	
Spectralink DECT Repeater 1G8, 2 channels, with connector for external antenna	K018B (02440000)
Spectralink DECT Repeater 1G9, 2 channels, with connector for external antenna	K018B (02441000)
Spectralink DECT Repeater 1G8, 2 channels, without connector for external antenna	K018 (02441100)
Spectralink DECT Repeater 1G9, 2 channels, without connector for external antenna	K018 (02441200)
Spectralink DECT Repeater 1G8, 4 channels, with connector for external antenna	K018 (02441600)
Spectralink DECT Repeater 1G9, 4 channels, with connector for external antenna	K018 (02440200)
Spectralink DECT Repeater 1G8, 4 channels, without connector for external antenna	K018C (02334601)
External Antenna (with 1 m connection cable)	02319507
Connection cable for External Antenna, 7.5 m	14002706
Power Supply (9.0V DC, 350mA)	84642602
Repeater Programming Kit	02509210

Spectralink Server	
Spectralink IP-DECT Server 400	K005 (02344500 / 02344501)
Spectralink IP-DECT Server 6500	K006 (02350000)
Spectralink Virtual IP-DECT Server One	14233244
Spectralink DECT Server 2500	K017 (0270xxxx)
Spectralink DECT Server 8000	K016 (023389xx)
Power Supply, 8.0V DC (only IP-DECT Server 200/400)	84642600
External Antenna (with 1 m connection cable) (only IP-DECT Server 200/400)	02319507
Connection cable for External Antenna, 7.5 m (only IP-DECT Server 200/400)	14002706
Power Supply, 19.0V (only DECT Server 2500)	84769905
Power Supply, 19.0V (only DECT Server 8000)	84769902
Cable for Power Supply: AU version	84687011
Cable for Power Supply: DK version	84687012
Cable for Power Supply: EU version	84687013
Cable for Power Supply: UK version	84687014

Spectralink DECT Media Resource	
Spectralink DECT Media Resource (only IP-DECT Server 6500 and Virtual IP-DECT Server One)	K006

Spectralink Virtual IP-DECT Media Resource	
Spectralink Virtual IP-DECT Media Resource (only Virtual IP-DECT Server One)	14233270