

Spectralink DECT Server 2500

# Installation Guide

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# Chapter 1: Spectralink DECT Server 2500 Installation

This guide describes how you install the Spectralink DECT Server 2500.

## Installing the Spectralink DECT Server 2500

The Spectralink DECT Server 2500 can be installed on a flat surface or on a wall. Before you start the installation, place the Spectralink DECT Server 2500 on a stable flat surface in the selected location, and inspect the package for any damage and report it to the reseller or distributor immediately.



### Important

Please review all the safety instructions for important safety and regulatory information

## Specifications

**Table 1** Physical Dimensions

Physical dimensions	
Height	177mm
Width	194 mm
Depth	328 mm
Weight	1.16 kg (excl. power supply)

**Table 2** Power Supply

Power supply	
AC Input	100-240 VAC, 50/60 Hz

**Table 3** Power Consumption

Power consumption	
Typical AC Power Consumption	45 Watt
Max. AC Power Consumption	Max 60 Watt

**Table 4** Environment

Environment	
Operating temperature	0°C - 40°C (22° - 104°F)
Storage temperature	-30°C - 70°C (40° - 158°F)
Relative humidity	20% - 80% Non condensing
Operating altitude	Up to 2000 m (6,500 ft)
Operating ESD level	4 KV

## Spectralink DECT Server 2500 Components

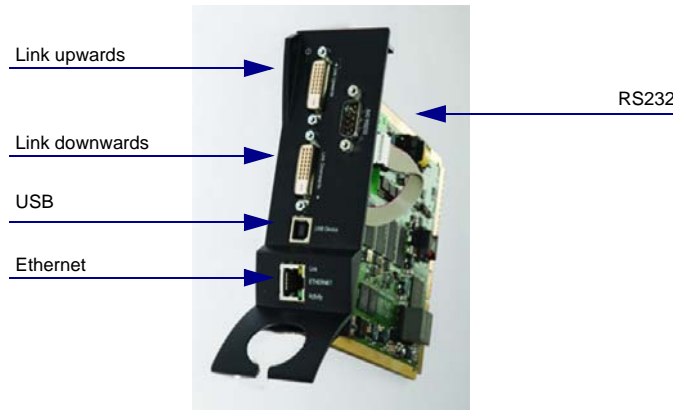
The following table contains all Spectralink DECT Server 2500 parts and their part numbers.

Picture	Description	Part Numbers
	Base Station Interface card (8 base stations)	0233 9100
	Analogue Interface card (16 lines)	0233 9200
	Analogue Interface card (8 lines)	0233 9220
	CPU card without link option	0233 9900

Picture	Description	Part Numbers
	Media Resource Card	0233 9700
	Mains adaptor	8476 9904 - AV only
	EU mains cable	8468 7013
	UK mains cable	8468 7014
	US mains cable	8468 7015
	RS232 cable	13281100

## Connections

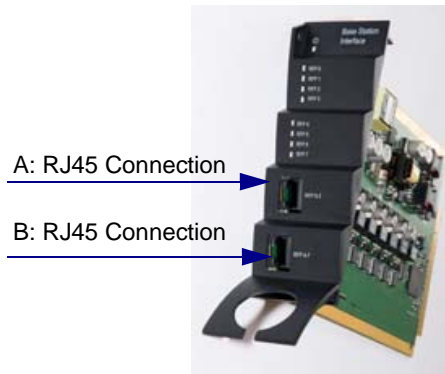
**Figure 1** CPU Card Connections



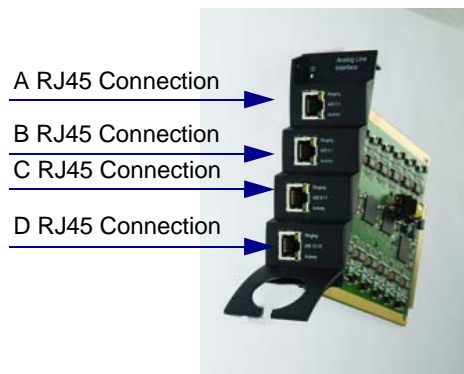
### Note

Link connections must not be left open. You have to either plug in a link cable or a terminator connector for protection and for stable functionality.

**Figure 2** RJ45 Connections for Base Stations

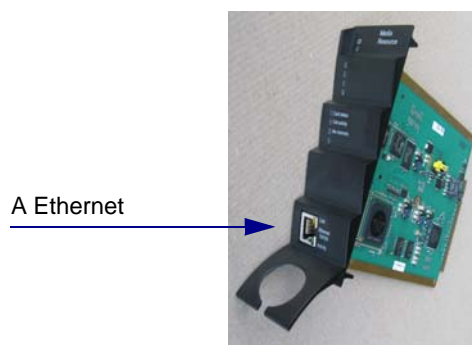


**Figure 3** RJ45 Connections for AB Lines





**Figure 4** Media Resource Card Connection



## General Installation Information

### General Mounting Safety Precautions



#### **Important**

Electrical shock hazards from the telecommunication network and AC mains are possible with this equipment. To minimize risk to service personnel and users, the system must be connected to an outlet with a third-wire earth connection.

- Keep the area around the Spectralink DECT Server 2500 clean and free of clutter.
- Decide on a suitable surface that will hold the Spectralink DECT Server 2500 unit. It should be situated in a clean, dry, and dust-free area that is well ventilated. Avoid areas where heat, electrical noise, and electromagnetic fields are generated.
- Place it near an earthed power outlet.

### Installing the Spectralink DECT Server 2500 on a Flat Surface

Before you start installation, take notice of the following safety precautions.

- Ensure the surface can support the weight of the unit.
- Never install the Spectralink DECT Server 2500 on the floor.
- Never place anything on top of the Spectralink DECT Server 2500. The top plate must be free to allow sufficient cooling.

#### To Install the Spectralink DECT Server 2500 on a Flat Surface

- 1 Remove the Spectralink DECT Server 2500 from its package.
- 2 Before placing the unit, carefully turn it upside down and mount the four rubber pads supplied in the package. One must be placed at each corner of the bottom plate.
- 3 Place it on a clean, flat, horizontal surface.

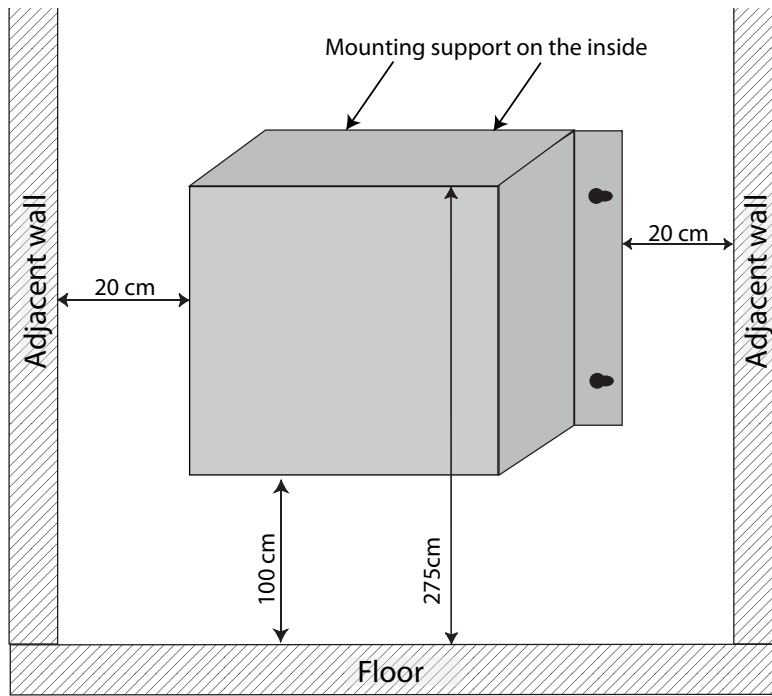
## **Installing the Spectralink DECT Server 2500 on a Wall**

Before you start installation, take notice of the following safety precautions.

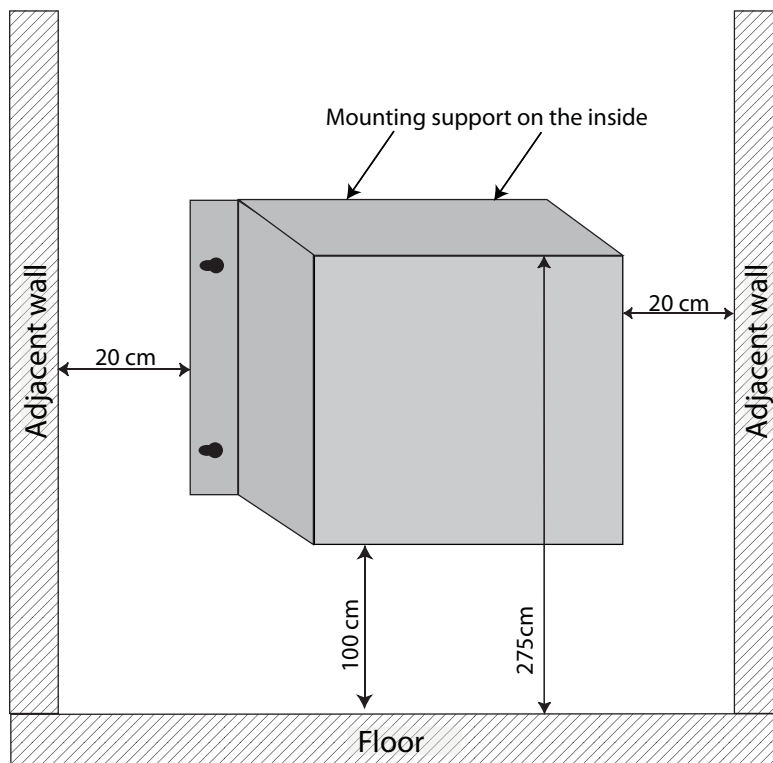
- Ensure the wall quality is good enough for holding the unit. Avoid high-porous surfaces, joints and similar.
- Never use countersunk screws.
- Leave at least 10 centimeter of free air above the unit for ventilation.

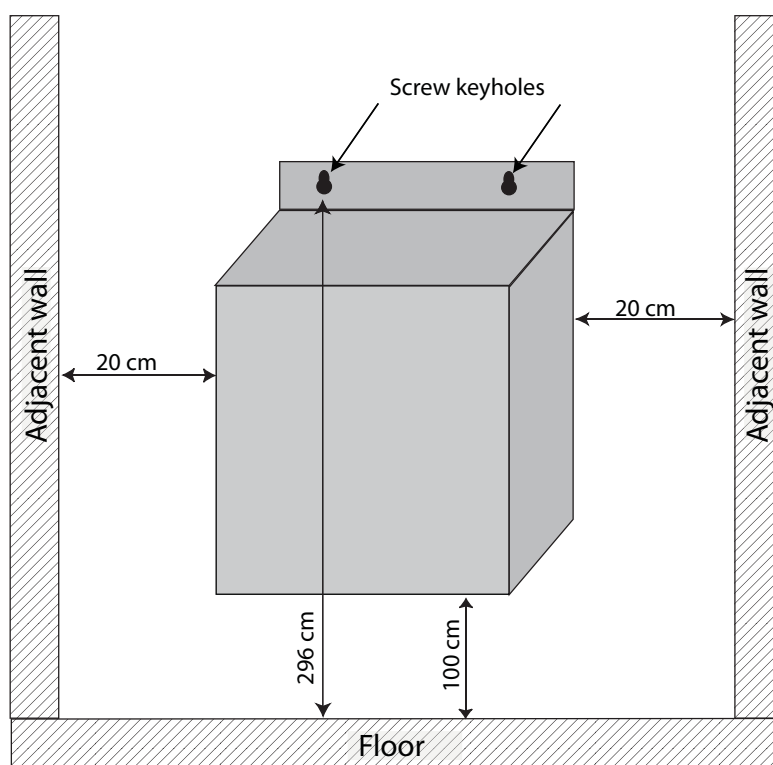
Mount the Spectralink DECT Server 2500 securely using two screws. Use wall plugs, expansion bolts or other appropriate fastening methods in relation to the wall material. Remove any drilling dust.

**Figure 5** Wall mounting method 1



**Figure 6** Wall mounting method 2



**Figure 7** Wall mounting method 3

## Connecting the Spectralink DECT Server 2500 Cables

When the Spectralink DECT Server 2500 has been mounted, the cables can be connected.

### Cable Safety Precautions

Before you connect the cables, ensure to take the following electrical safety precautions.

- Always use an earthed socket for power.
- Use a power cord with protective earth (PE) connection suitable for the country where it is being used and with the appropriate local approvals.
- Power supply cables must be connected prior to connecting any interface cables.
- The interface cables must be removed before any interface card is removed or replaced.
- When unplugging power, unplug AC mains power first before unplugging the power connector from the Spectralink DECT Server 2500.
- The AC adapters must never be hanging by their own weight in the AC mains connector or the output connector.

## To Connect Power Cable

The Spectralink DECT Server 2500 has one power plug on the back panel.

- 1 Plug a suitable power cord into the AC power adapter.
- 2 Insert the AC power adapter output connector firmly into the socket on the Spectralink DECT Server 2500 so that the retention clip snaps to the plug.
- 3 Plug the AC power adapter into mains.
- 4 When powering down the unit, the power connector must be unplugged to ensure the unit is completely powered off.

## Installing Interface Cards and CPU Cards

Before you install an interface or a CPU card ensure to take the following precautions.

### Safety Precautions

Cards contain static sensitive circuitry and may be destroyed or damaged by electrostatic discharge (ESD).

- Make sure you re using proper ESD equipment to prevent damage to the system.
- Fill all empty slots with blanking front plates to close the front.

### To Install Interface Cards

- 1 With two hands, gently slide the interface card into the unit. Give it a gentle push on the last centimeter so that it enters the backplane connector properly.

Avoid pushing on the front connectors - push only on the plastic parts at the top and bottom.

**Figure 8** Installing Interface Cards



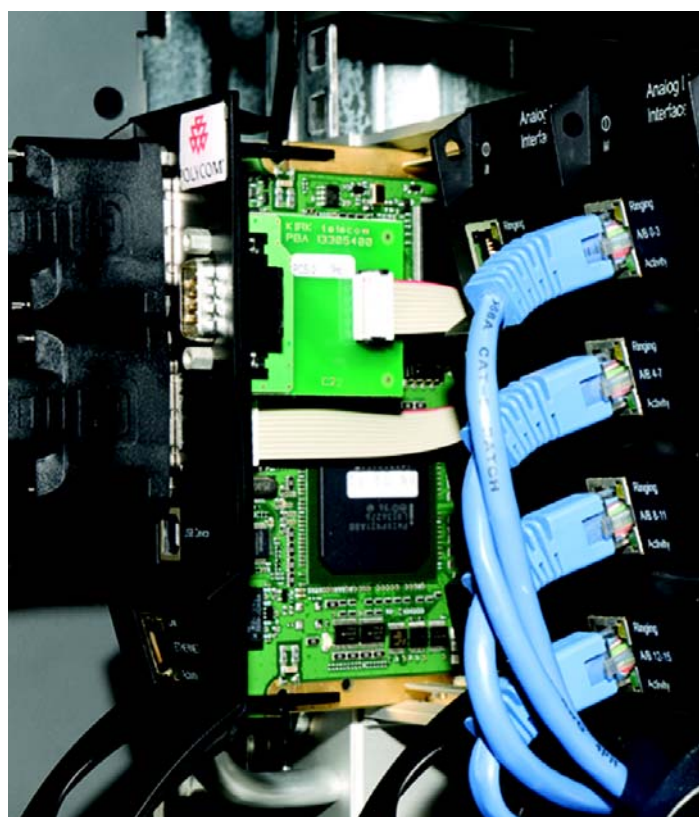
- 2 Plug the interface cables into the card as described in [Connecting Interface Cables](#).

#### To Install CPU Cards

- 1 Ensure that the Spectralink DECT Server 2500 is powered off completely.
- 2 With two hands, gently slide the card into the unit. Give the card a gentle push on the last centimeter so that it enters the backplane connector properly.

Avoid pushing on the front connectors - push only on the plastic parts at the top and bottom.

**Figure 9** Installing CPU card



- 1 Plug the interface cables into the card as described in [Connecting Interface Cables](#).
- 2 Connect the Spectralink DECT Server 2500 to a PC using the RS232 cable.
- 3 Connect the power and reboot the unit.

### Connecting Interface Cables

The front interface of the Spectralink DECT Server 2500 is provided with connectors for the different interfaces provided. Please see the Spectralink DECT Server 2500 Configuration Guide for the actual pin-out of the different connectors.

The cables can be harnessed in two ways as shown in the following figures depending on the installation requirements.

**Figure 10** *Harnessing cables to the back and out*





**Figure 11** *Harnessing cables to the side and out.*



Regardless of which way is used for harnessing, you must guide the cables through the opening in the plastic front. This ensures safe retention of the cable.

## Chapter 2: Replacing Components

The Spectralink DECT Server 2500 is designed to minimize down-time. Several components can be replaced while the system is up.

### *Component Replacement*

The following components are hot-swappable:

- Interface cards
- AC adapters

The following require a power down of the system:

- Backplane
- CPU card

Before replacing any components, take notice of the component replacement precautions.

### **Component Replacement Precautions**

- Cards contain static sensitive circuitry and may be destroyed or damaged by electrostatic discharge (ESD.)
- All maintenance tasks must be performed by qualified, authorized personnel only.
- Use only original replacement parts.
- Make sure you are using proper ESD equipment, to prevent damage to the system.
- Fill all empty slots with blanking front plates to close the front.

### To Replace a New Hot-swappable Card

- 1 Ensure the Spectralink DECT Server 2500 unit is properly earthed.
- 2 Unplug all interface cables on the card that needs to be replaced, noticing which goes where.
- 3 Remove the cables from the opening in the plastic front.
- 4 With two hands, gently pull out the card.
- 5 Gently slide the new card into the unit. Give it gentle push on the last centimeter so that it enters the backplane connector properly. Avoid pushing on the front connectors, push only on the plastic parts at the top and bottom.
- 6 Plug the interface cables into the card.

### To Replace or Install a New CPU Card

- 1 Power off the Spectralink DECT Server 2500 completely.
- 2 Ensure the Spectralink DECT Server 2500 unit is properly earthed.

- 3** Unplug all interface cables on the card.
- 4** Remove the cables from the opening in the plastic front.
- 5** With two hands, gently pull out the card.
- 6** Gently slide the new card into the unit. Give it gentle push on the last centimeter so that it enters the backplane connector properly. Avoid pushing on the front connectors, push only on the plastic parts at the top and bottom.
- 7** Plug the interface cables into the card.
- 8** Connect power and reboot the unit.

### Replacing the Backplane

The backplane cannot be replaced on-site. The Spectralink DECT Server 2500 will have to be returned for repair or be replaced with a new one. If a new Spectralink DECT Server 2500 is to be installed, you can move the cards from the faulty Spectralink DECT Server 2500 to the new one.

## Chapter 3: Regulatory Notices

This section contains important safety regulations for the SPECTRALINK DECT Server 8000.

### *International Regulatory and Product Information*

#### **United States Federal Communication Commission (FCC)**

**Part 15: Class A Statement.** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. Test limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio-frequency energy and, if not installed and used in accordance with the instruction manuals, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his or her own expense.

#### **United States Safety Construction Details:**

- All connections are indoor only.
- No direct connections to public networks.
- Unit is intended for RESTRICTED ACCESS LOCATION.
- Unit is to be installed in accordance with the National Electrical Code.
- The branch circuit overcurrent protection shall be rated 20 A for the AC system.
- This equipment has a maximum operating ambient of 40°C. The ambient temperature in the rack shall not exceed this temperature

#### **CE Mark R&TTE Directive**

SPECTRALINK declares that the SPECTRALINK DECT Server 8000 is in conformity with the following relevant harmonized standards:

EN 60950-1: 2006 + A11:2009 + A1:2010 + A12:20116100-3-261

EN55022: 2010/AC2011

EN55024: 2010

EN61000-3-2: 2006 + A1:2009 + A2:2009

EN61000-3-3: 2008

Following the provisions of the Council Directive 1999/CE on radio and telecommunication terminal equipment and the recognition of its conformity.



This SPECTRALINK product has been marked with the CE mark. This mark indicates compliance with EEC Directives 89/336/EEC, 73/23/EEC 1999/5/EC. A full copy of the Declaration of Conformity can be obtained from SPECTRALINK Europe ApS, Langmarksvej 34, 8700 Horsens, Denmark.



The WEEE Marking on this equipment indicates that the product must not be disposed of with unsorted waste, but must be collected separately.

## Canadian Department of Communications

This Class [A] digital apparatus complies with Canadian ICES-003.

**Notice:** The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunication network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment malfunctions, may give the telecommunications company causes to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

**Caution:** Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

## *Important Safety Instructions and Product Information*

Before using your telephone equipment, you should always follow basic safety instruction to reduce the risk of fire, electrical shock and injury to persons, and damage to property.

- 1 Read and understand all instructions
- 2 Follow all warnings and instructions including those marked on the product
- 3 Unplug this product before cleaning. Do not use liquid cleaners or aerosol cleaners. Use damp cloth for cleaning
- 4 Do not install the telephone equipment in the bathroom or near a wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool
- 5 The product should be operated only from the type of power source indicated on the instructions. If you are not sure of the type of power supply, consult your dealer or local power company.
- 6 Do not overload wall outlets and extension cords as this can result in fire or electrical shock.

- 7 Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in fire, electrical shock, or injury. Never spill liquid of any kind into this product.
- 8 To reduce the risk of electrical shock or burns, do not disassemble this product. Opening or removing covers may expose you to dangerous voltages, dangerous electrical current, or other risks. Incorrect reassemble can cause electrical shock when the appliance is subsequently used. If the product need repair, consult your dealer.
- 9 This product does not support connections to outside plant.
- 10 Refer servicing to qualified service personnel under the following conditions:
  - If liquid has been spilled into the product
  - If the product has been exposed to rain or water
  - If the product does not operate normally when following the operating instructions in the manual. Adjust only those controls that are covered by the operation instructions. Improper adjustment of other controls may result in damage and will often require extensive work by qualified service personnel to restore the product to normal operation.
  - If the product has been dropped or cabinet has been damaged
  - If the product exhibits a distinct change in performance

## Warning

- 1 Avoid using telephone during an electrical storm. There may be a risk of electrical shock from lightning
- 2 Do not use the telephone to report a gas leak in the vicinity of the leak
- 3 Do not place the unit near microwave ovens, radio equipment, or non-ground connected televisions. These appliances may cause electrical interference to the base or handset
- 4 Installation must be performed in accordance with all relevant national wiring rules
- 5 Plug acts as Disconnect Device - The socket outlet to which this apparatus is connected must be installed near the equipment and must always be readily accessible
- 6 The system will not operate in the event of a blackout. Please keep a backup phone for emergencies

## Intrinsic safety

Do not install the unit in conditions where there is a danger of electrically ignited explosions.

## Exposure to Sunlight, Heat and Moisture

Do not expose the unit to direct sunlight for long periods. Keep away from excessive heat and moisture.

## Spare Parts and Accessories

Use only approved spare parts and accessories. The operation of non-approved parts cannot be guaranteed and may even cause damage.

## RF Compliance Information

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## NOTICES

**FCC Note:** This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**IC Note:** Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. The term "IC:" before the certification /registration number only signifies that the Industry Canada technical specifications were met.

Privacy of communications may not be ensured when using this telephone.

**Information to user:** The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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## Appendix A: RJ45 Wiring

The following table shows the assignments of wire pairs to plug and socket pins of the RJ45 cable.

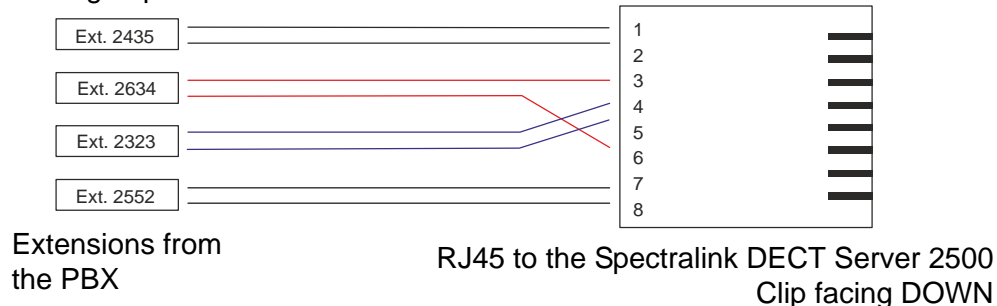
**Table 1** RJ45 cable wiring

Pin	Pair	Wiring	Connector A	Connector B	Connector C	Connector D
1	2	tip	1	5	9	13
2	2	ring	1	5	9	13
3	3	tip	2	6	10	14
4	1	ring	0	4	8	12
5	1	tip	0	4	8	12
6	3	ring	2	6	10	14
7	4	tip	2	7	11	15
8	4	ring	3	7	11	15

# Appendix B: Cable Connections

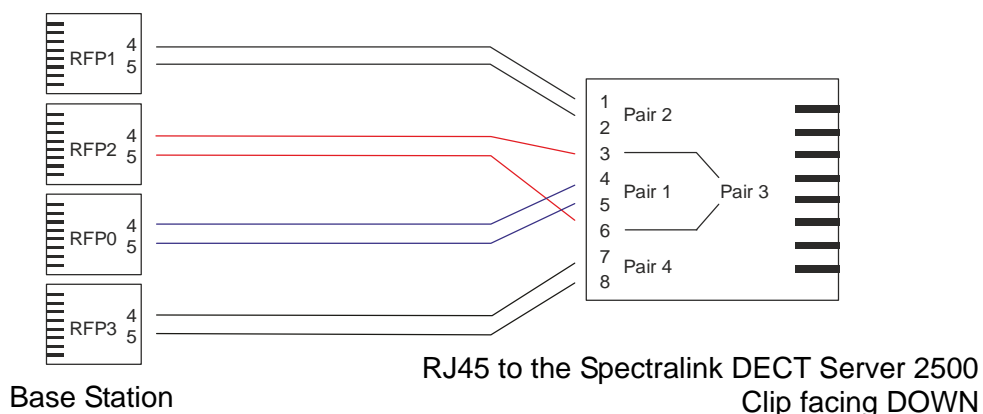
## Analogue Interface Card

### Analogue pin out



## Base Station Interface Card

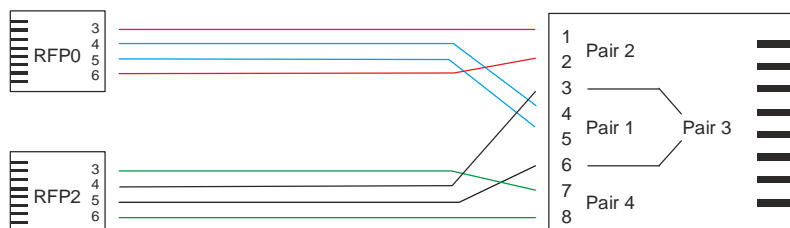
### 4 Channel Base Station pin out



RFP6: It is available in two versions with 4 or 8 channels; both with none blind slot radio. It has a RJ45 connector. (All previous RFPs have a RJ11 connector).

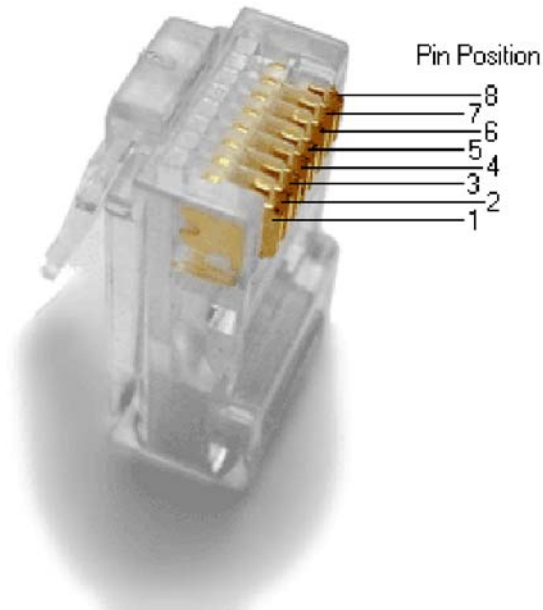
8 channels on RFP6: Pair 1 on RFP RJ45 is used for control and the first 4 voice channels. The next 4 channels are on pair 3 on the RFP6 RJ45 connector. On DECT Server BIF08 cards the two pairs must be connected to either the pair 1 & 2 or to pair 3 & 4 on the same connector.

### 8 Channel Base Station pin out



## RJ45 Pins

**Figure 1** RJ45 Pin Position





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