

# N870E - Antennas

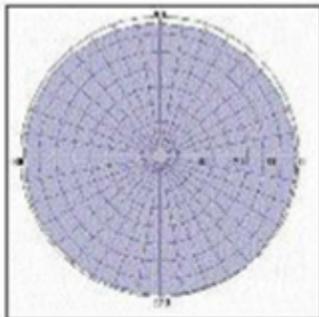
## Introduction

For installations in special environments the antenna angle and orientation can be changed to improve radio wave propagation and to reduce interferences or reflections. The two detachable external antennas are adjustable at 45°-90° angles. N870E has 2 TNC connectors which are also suitable for third-party antennas. The N870E is based on the same hardware and software and has the same features and upgrade possibilities as the Gigaset N870IP PRO multicell. The N870E can be used in mixed mode with the standard N870IP multicell.

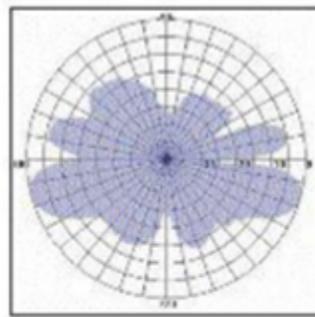


The N870E preferred antenna position is vertical like above.

Antenna characteristics:



Horizontal Direction



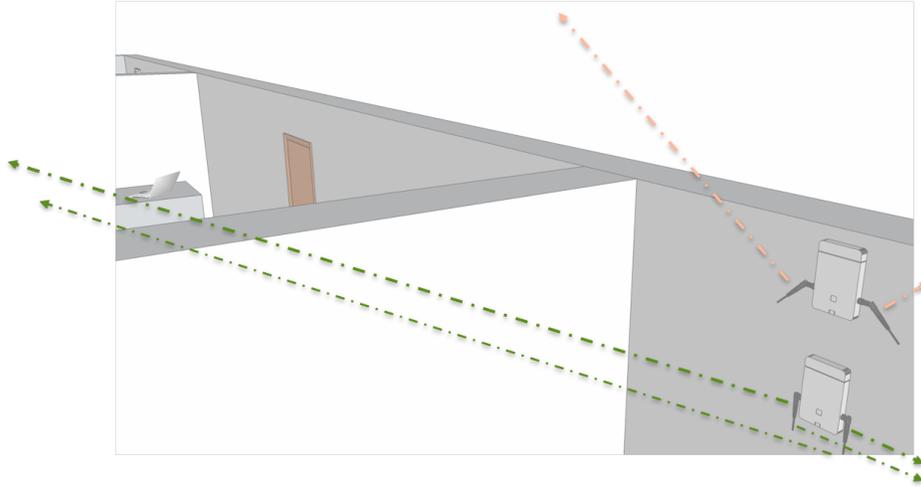
Vertical Direction

Antenna position:

- The strongest DECT signal from a dipole antenna is at right angles to the dipole
- This stronger DECT signal should run directly into the room to be covered
- This stronger DECT signal should not be reflected indirectly into the target room via a neighboring metal surface
- The movable, align able antennas make it possible to improve the DECT signal depending on the mounting orientation of the housing
- However, the optimal alignment of the antennas can only be determined by a DECT measurement

Below an example why in normal situations the vertical antenna position is the preferred antenna position.

- The strongest DECT signal covers the working area/ floor where the users are located/walking around
- An antenna angle towards the ceiling creates less coverage on the area the users/DECT base stations are located, the strongest DECT signal is send to the other floors



- It is an misunderstanding that an external antenna has more DECT range then an internal antenna
- The possibility to change the antenna position can improve the DECT range and reduce interferences or reflections
- An wrong antenna position can also cause less DECT range and even call interruptions

### Third party antennas

Instead of the Gigaset external antennas, you can connect also third party antennas. Gigaset has tested the following antennas from HUBER+SUHNER.

# HUBER+SUHNER

Gigaset does not sell these antennas !!!



Always replace both Gigaset antennas with the same external third party antennas, only then the optimum DECT quality is obtained. Some antennas mentioned below have one connector, this means that you need to buy 2 antennas.

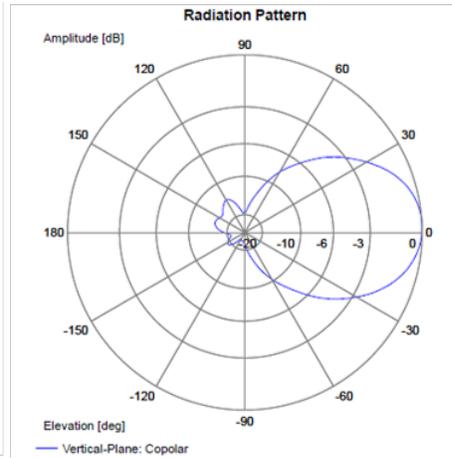
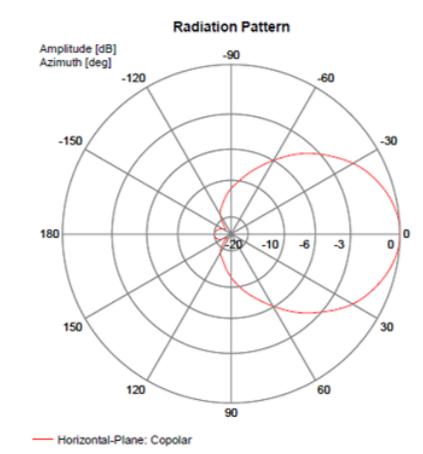
- Connect both external antennas to maintain antenna diversity
- The antennas should be of the same type
- Keep at least 30 cm between the antennas
- Place both antennas in the same area. One inside and one outside is not supported
- Antenna cables should be of the same type and length, keep the length as short as possible
- Every meter of cable will be ... dB gain loss ([depends on the used cable](#))

Antenna	Characteristic	Diagram
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SENCITY® Spot-S  
Railway Cellular  
Antenna 1318.17.0015



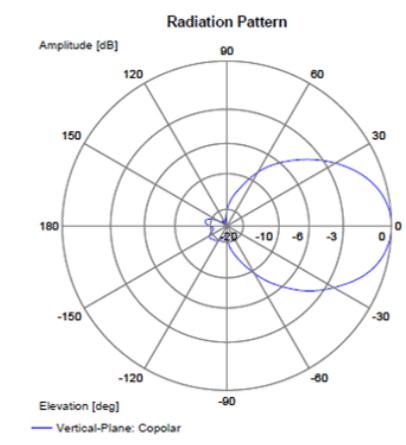
Frequency range (MHz): 1755 - 1910  
Input impedance (Ω): 50  
V.S.W.R: 1.5  
3dB beam width (v) (°): 70  
Gain (dB): 8  
Polarization type: Vertical  
Max. input power (W): 50  
DC grounded: no  
Connector: N-jack female



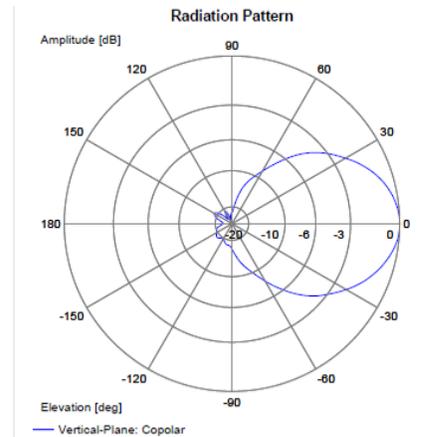
SENCITY® Spot-S  
indoor Antenna  
1319.26.0027



Frequency range (MHz): 1880 - 1930  
Input impedance (Ω): 50  
3dB beam width (v) (°): 75  
Gain (dB): 8  
Polarization (°): +/- 45  
Max. input power (W): 10  
DC grounded: no  
Connector: 2 x SMA-jack female



Left

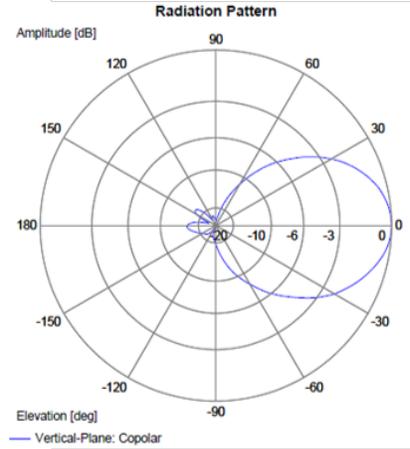
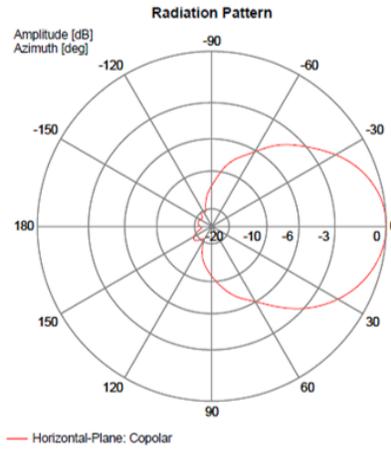


Right

SENCITY® Spot-S  
indoor Antenna  
1319.19.0003



Frequency range (MHz): 1850 - 1990  
Input impedance (Ω): 50  
3dB beam width (v) (°): 65  
Gain (dB): 8  
Polarization type: Vertical  
Max. input power (W): 10  
DC grounded: no  
Connector: SMA-jack female



SENCITY Omni-L DECT  
Antenna 1319.17.0121



Frequency range (MHz): 1880 - 1930  
Input impedance (Ω): 50  
V.S.W.R.: 1.5  
Gain (dB): 7  
Polarization type: Vertical  
Max. input power (W): 25  
DC grounded: yes  
Connector: N-jack female

