

FAQ - External antennas - output power / cable loss

Valid for:	N640	N670	N870	N870E	Embedded Integrator	Virtual Integrator
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Introduction

The Effective radiated power from an Gigaset N870E with the Gigaset delivered Antennas (3dB) is compliant with the German / European regulations for the DECT radiated power. Check your own country regulations.






3dB


Gain must be $\leq 3\text{dB}$




When using an external antenna, the formula **Antenna gain - cable loss $\leq 3\text{dB}$** is still valid.




Reduce power with 5 dB


8 dB

Gain must be $\leq 3\text{dB}$, 5dB power reduction is needed



We need to reduce the power with 5dB to match the European regulations.

Cable dB gain loss

The cable loss depends on:

- Cable type
- Cable Length
- Cable diameter

Examples:

Type	Diameter	Loss
RG223	5.4 mm	Loss/100m: 60 dB
RG174/U	2.8 mm	Loss/100m: 142dB
Aircell 5	5 mm	Loss/100m: 45 dB
Aircell 7	7 mm	Loss/100m: 21 dB
Ecoflex 15	15 mm	Loss/100m: 16 dB

Example:

Using 5 meter RG223 cable = 3 dB loss

Antenna gain - cable loss <= 3dB

8 dB - 3 dB = 5 dB is still 2 dB to high.

The signal strength can be further reduced by external hardware or by the system: [FAQ - Base stations Edit](#)