

FAQ – Roger BaseStation antenna

- 1) Q: What is the emitting power limit allowed by EU and US regulations ?
A: EU : The maximum emitting power allowed by regulations is 20dBm¹ EIRP²
US : The maximum emitting power allowed by regulations is 30dBm EIRP
- 2) Q: What system elements are taken into consideration to measure the emitting power ?
A: The complete system is measured (transmitter and antenna), $P_{EIRP\ Device} + G_{Antenna} \leq P_{EIRP\ max}$
- 3) Q: What is the Roger BaseStation's emitting power ?
A: The Roger BaseStation emitting power is set to 18.5 ± 1.5 dBm EIRP – the antenna itself has no gain (0dBi³).
The variation is due to the tolerance of electronic components.
- 4) Q: Can I mount an antenna with gain on the Roger BaseStation ?
A: EU : The Roger BaseStation emitting power is already set to the maximum in compliance with EU regulations.
Having an antenna with gain will result in a total emitting power above the limit, and is therefore not allowed.
US : It is not permitted to replace the antenna mount on the BaseStation, although the resulting emitting power would remain below the 30dBm limit.
- 5) Q: Why is the Roger BaseStation antenna glued ?
A: US regulations do not allow the user to change the antenna because it will change the properties of the certified device. Although this is not currently not mandatory in EU, similar regulations will be in force shortly.

Definitions

¹ dBm = The power ratio in decibel (dB) between the effective measured power and one milliwatt (mW).

20dBm = 0.1W

30dBm = 1W

² EIRP = Effective Isotropically Radiated Power

³ dBi = effective antenna gain compared with an hypothetical perfect antenna distributing equal energy in all directions