

LTE/4G Antennas - Explained

4G/LTE & Cellular Frequencies



The Correlation Coefficient for LTE performance

“The performance of a MiMo system is dependent on the propagation characteristics of the environment and the characteristics of the antennas. The environment could vary between an indoor scenario where the angular spread of scattered field is large, to an outdoor uncluttered environment where the angular spread is more confined.

In both cases the ideal antenna (for good diversity performance) should have radiation patterns with low correlation over the possible angles of multipath components.”

Excerpt from: ***Predicting the LTE Performance of an Antenna by Means of Radiation Pattern Analysis*** by Dr Derek Nitch (CTO of Poynting Antennas)

For the full article, go to www.poyntingcommercial.com > about us > interesting articles

Why you need TWO antennas for optimum LTE

and later you may need even more than two...

Question

So, why two antennas?

Answer

With two antennas cross polarisation can be achieved that is needed for optimal MiMo performance. LTE works on a MiMo (Multi Input - Multi Output) system and thus the antennas need to be isolated or uncorrelated to each other to ensure proper MiMo efficiencies.

Question

Can I use my current Poynting antenna I have for LTE?

Answer

Yes! Ask us how...

However, we also have bespoke solutions with TWO antennas in ONE enclosure - our sexy alternative to two separate antennas.

Question

On which bands should an LTE antenna function?

Answer

It is imperative that LTE antennas cover most of the bands to ensure that it not only works today, but also in the future when new LTE bands are allocated.

See our range of antennas and the frequency bands they cover on the inside of this guide.