



QUESTIONS & ANSWERS >>>

Below are a number of frequently asked questions and answers. If you have any additional questions please [contact Sarantel](#).

Q1. How does Sarantel's antenna reduce emissions into the body?

The Sarantel antenna uses patented technology that reduces the near field emissions by over 90% compared with existing technology. The near field is enclosed within the vicinity of the ceramic puck of the antenna.

Q2. How can I reduce my system cost?

The Sarantel antenna acts like a filter but it is also able to resonate across the bandwidth at a high efficiency close to the body. This allows the system design engineer to remove filters from their circuit. A good example is in 3G technologies where there is an extra requirement for filters.

Q3. Why does Sarantel like the term 'Fit and forget'?

The antenna energy fields are concentrated close to the material of the ceramic. This allows the device to act closely to theoretical characteristics and does not detune when placed close to other objects.

Q4. How does Sarantel's antenna improve the global positioning systems (GPS) reliability?

The PowerHelix™ technology operates at virtually any angle, improving the acquisition and maintenance of satellite positions in handheld or mobile devices. The antenna also has a high gain and utilises reflected signals to offer improved positional accuracy in close to body, urban or marginal signal environments.

Q5. Why are Sarantel's GPS antennas more suitable for automotive applications?

The antenna has a much higher beamwidth for picking up satellites; it can be placed inside vehicles even under the seat and the dashboard where air bag devices are located.

Q6. What benefits do the antenna offer to Wireless LAN applications?

The new antenna directs the energy into the appropriate electronic circuits rather than into human tissue or circuits and objects that are within close proximity. Electrical noise is also isolated which increases the reliability and signal strength of Wireless LAN technology.

Q7. How can I fit so much into one small handset?

Antennas today need to be more sophisticated - trying to fit electronic circuits into confined spaces increases the negative effects of electrical noise and common mode rejection issues. The Sarantel antenna reduces the need for both filters and a large ground plane. The near field emissions are far less than with existing technology, allowing the mobile device designer to treat the antenna as a component similar to a capacitor or resistor. The antennas may be embedded into the handset.

Q8. How do I combine mobile telecommunications, Wireless LAN and GPS into one small device?

The Sarantel antenna can be installed within millimeters of other antennas without negative effects due to its reduction in environmental effects. These include crossover from electronic noise within the circuitry, electrostatic energy and magnetic crossover from radio signals.

Q9. If the Government insists that all mobile products must be labelled with SAR (specific absorption rate) levels, how will it affect me?

The debate by medical experts on emissions affecting health will continue. By designing mobile products with lower SARs, companies are able to offer their customers a choice.

Q10. Could I use the Sarantel antenna in other forms of communication device?

Yes, Wireless LAN and mobile communications within PCs, Palm Tops, etc will certainly benefit from the technology.