

ANTENNA FEASIBILITY/ TRADE-OFF STUDY

Maximise your product's wireless performance with custom antenna design solutions

The antenna is the most common point of failure in a wireless design. When designed correctly, the antenna creates a high performance wireless product this is certification ready.

Antenna design is a very complex process that requires simulation tools and experienced RF antenna designers. Digi's Wireless Design Services has a state of the art RF testing lab along with experienced engineers that design hundreds of certification ready products each year.

Antenna feasibility/trade-off study involves simulations and/or prototyping multiple antenna solutions (up to 5) that meet the customer's mechanical constraints and performing measurements on each prototype. Gain, efficiency, radiation pattern, polarization, isolation between antennas (if applicable) and return loss will be measured. Analysis of the results will pinpoint the optimal antenna solution for lowest risk path to certification and best wireless performance.

Schedule time to complete is 4-6 weeks. This includes time necessary for Digi WDS to design and build PCB prototypes at PCBExpress (Sunstone Circuits).

The customer should provide the following items:

1. Mechanical files and/or device prototypes
2. Schematics/PCB files
3. Bill of Materials
4. Device use cases
5. Expected annual usage
6. Cellular carrier(s) if applicable

The deliverables are as follows:

1. Antenna trade-off report
2. Antenna part number or custom design (printed trace antenna only)
3. Optimum antenna location
4. Recommendations for next steps

For more information on how Digi WDS/Antenna Design can bring powerful, reliable connectivity to your assets, visit www.digi.com/wds

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