



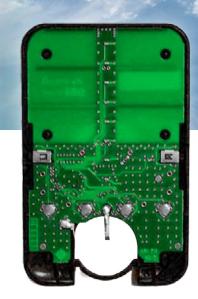
High-Quality Direction-Finder

Antenna And Electronics Design



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The customer required the design of a creditcard sized handset that gives direction and distance guidance when finding a lost object, while also requiring a low-power design for long life.



Requirements & Issues

- Credit-card size handset, designed for consumer convenience
- Thin design, but with enough room to house a directional antenna
- Long range to locate lost items
- Good directionality (7dBi) to improve and extend the range of the wireless receiver
- Designed with an easy to use functionality



The Solution

- Thin design required miniaturisation of a directional antenna, so Captec developed a short, high-gain antenna for the device
- Low-power techniques using small battery design to increase longevity
- Selection of the best transceiver ICs available to enable a high level of integration
- Proprietary protocol and pairing methods for encrypted communications





The Outcome

- A design that has been put into volume production
- Spin-out products themed for pet location
- New design of tag for a more common battery type
- Excellent customer reviews for finding pets and crashed model aircrafts, rockets and drones



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