

SENSOPAD™ - novel, low cost, inductive position sensors



Sensopad Technologies Ltd

**Development and patent of inductive sensor
technology for a lower cost and faster
response.**

Expertise and domain knowledge

- Position sensing
- Inductive physics
- Automotive products
- Product development
- Industrial design



Our client asked:

Can a low-cost, accurate and rugged, non-contact position sensing technology be created for the demanding industrial and automotive markets?

The project story:

- Sagentia Innovation has a track record of developing novel robust sensors and delivering them into various markets.
- The first-generation of Sagentia Innovation's inductive sensor technology was developed in the mid-1990s; this was successfully deployed in toys and other consumer applications such as pen input devices.
- In the 2000's, electronics technology had advanced, enabling Sagentia Innovation to further develop and patent a second generation of inductive sensor technology, which was lower cost and had a much faster response.
- A spin-out company (Sensopad Technologies Limited) was formed to exploit this second generation technology, which was called Sensopad™.
- The exclusive automotive rights to the Sensopad™ technology were bought by TT Electronics (now owned by Kyocera-AVX), who market the product as their Autopad™ range and an example is shown on the right.
- Several other licenses were agreed to exploit the technology in non-automotive markets.
- Sensopad™ ASICs were developed, initially for automotive products, but subsequently used in several other markets.

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Results: deliverables and outcomes

- TT Electronics achieved £100M of orders for their Autopad™ sensors displacing Hall-effect sensors in cars.
- The robust technology continues to meet clients' needs in many other applications, for example it allows non-contact sensing of valve & piston position and it enables precise dosing systems.
- Sagentia Innovation continues to lead the development of inductive position sensing systems, with the third generation (InTrack and MuTrack) enabling higher accuracy and through-metal sensing.