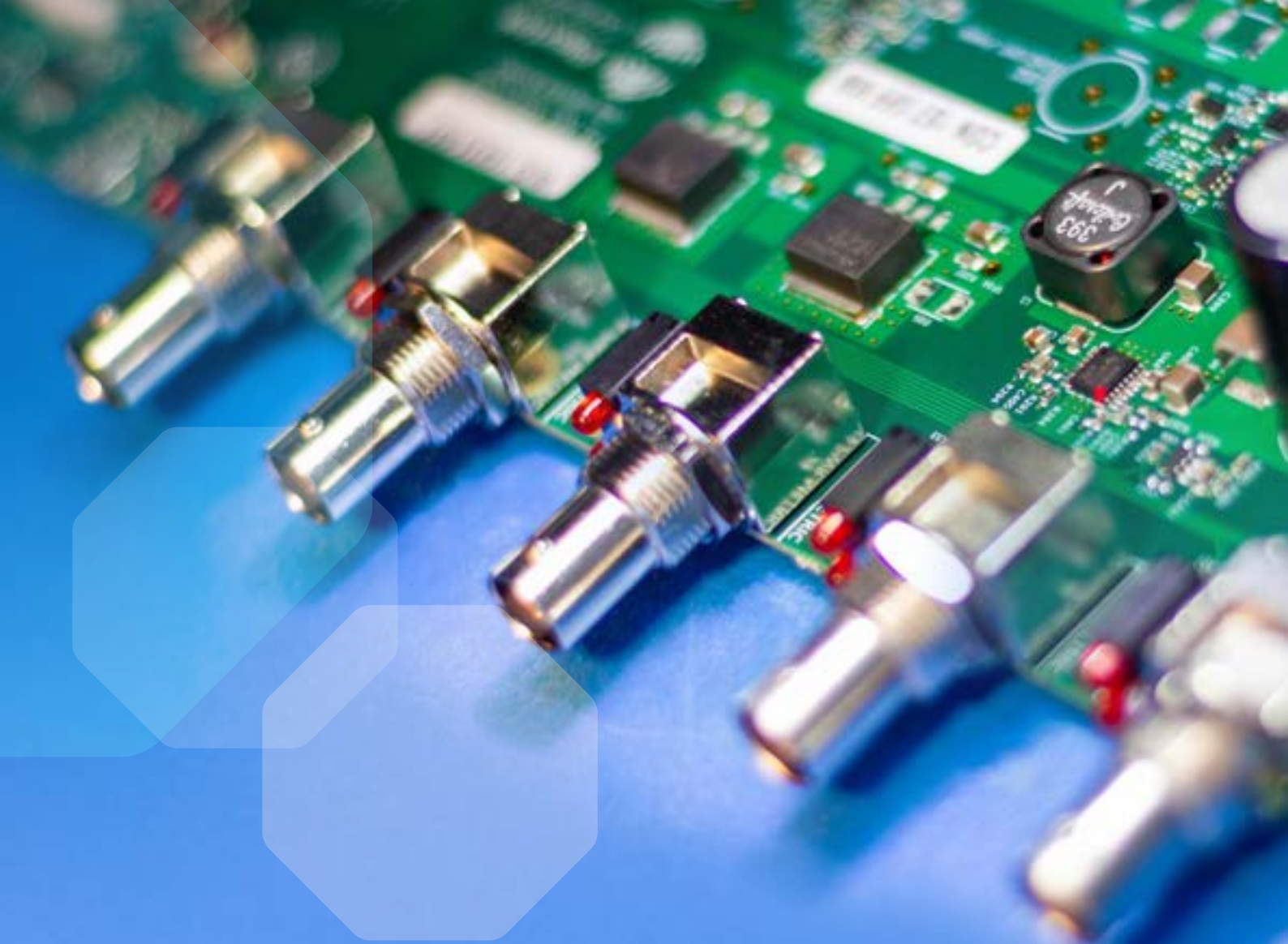




A Full Turnkey Service

Accelerated concept development through
design to volume manufacture



Full Turnkey Service

Accelerated concept development through design to volume manufacture

Taking a product from prototype development into a scaled-up manufacturing process can be extremely challenging, particularly where the final product needs to be made in volume to exacting Quality, Cost and Timeframe standards.

Plextek provides a comprehensive set of manufacturing services from concept design, prototyping and production to complete box build and full production test. It can also review the overall sustainability of the product which is key in meeting today's environmental requirements.

Working in close collaboration, the manufacturing team at Plextek translate your ideas into robust, scalable, tested and approved designs and transfer to either onshore or offshore volume production depending on your market needs. From the outset, Plextek ensure that the product and the manufacturing process are optimised for each other, making the product more cost effective and reducing time to market.



Skillset & Facilities

Plextek offering a full toolbox of capabilities

Plextek is an independent electronics design consultancy based South-East of Cambridge. Our work covers TRL 1 research through to TRL 9, designing and manufacturing systems and subsystems which are required to meet strenuous specifications across a range of markets.

Our skillset includes electronics, signal generation, signal conditioning, antenna design, digital signal processing and software algorithms necessary to support the design, development and supply of bespoke sensing and communication systems.

We have also been appointed for various roles acting on behalf of our clients as an independent technical reviewer and as a Customer Friend.

Plextek's facility is a secure site based on the outskirts of Cambridge with easy access to major road and rail networks. Our custom-built facility includes fully equipped radio test labs on-site and a separate two-storey Electromagnetic Compatibility (EMC) pre-compliance building, with the lower level available for equipment storage.

We have dedicated laboratory facilities including

- SMT assembly
- Environmental testing (including humidity)
- Anechoic chamber
- Shielded room
- Test equipment for digital, RF & product level test & development;
- Mechanical workshop.

EMC and RF propagation test facilities including an open-field facility allowing testing over a range of several hundred metres

We maintain a wide set of simulation & design tools: Agilent ADS; Ansoft Designer; CST Microwave Studio; Microwave Office (AWR); Semcad; Matlab & MathCAD; NEC-2.



Plextek is one of the few technology consultancies with this level of expertise in manufacturing, built up over decades of activity.

Hand in hand with the manufacturing partners

A critical part of Plextek's New Product Introduction (NPI) process.



With a proven track record, we offer a service to not only design and develop products that can be manufactured in a cost effective manner, but also to carry a design from low volume prototypes and process development into volume production.

It is important that the critical elements of specifying, designing and developing new products encompass the strategy of the manufacturing and test processes at the earliest stages of concept.

Plextek has developed strong global links with a range of approved Contract Manufacturers in different industries and is able to match products to the most appropriate manufacturing location / facility in all aspects such as volume, technology and logistics. Suppliers are identified based on experience, approvals, reputation, and capabilities. As a result, it offers a low-risk route to manufacturing, especially for companies that do not have a wide experience of managing external contract manufacturing facilities and offshore suppliers. The success of this capability has resulted in delivery of over six million products so far, for different customers across all sectors.

The ability to provide this service enables our clients to focus on their core business skills without concern for manufacture or logistical issues.



Quality Assurance & Accreditations

Committed to deliver outstanding quality across our products and services.

Plextek holds BS EN ISO9001:2015 certification and has a comprehensive Quality Management System (QMS) that supports simple short term study programmes through to complex design and volume supply contracts.

Plextek hold Cyber Essentials Plus and JOSCAR Stage 2 accreditation.

Plextek Approved Vendor List have Quality Management Systems in place as a basic requirement and approvals including AS9100 (Aerospace), ISO/TS 16949 (Automotive), ISO13485 (Medical Devices), IS14001 (Environmental Management System)



Case Study

Design development and volume supply of a vehicle tracking device- RedTail Telematics



Vehicle Asset Management System (VAM) products enable efficient management of vehicular fleets and offer driver-behaviour monitoring for the vehicle insurance markets

The design needed to be as small and compact as possible to enable fitment into often cramped locations within vehicle. The resultant design focused on the development of a highly complex custom antenna design to meet the installation challenges

Our approach was to model the electromagnetics of the entire product, allowing us to predict the impact of design changes and reduced the need for costly iterations. The antenna design process used by Plextek took into account the VAM

product placement in the vehicle and, in particular, consideration of materials close to the VAM unit that might affect the performance of the antenna system.

The final VAM product used a custom designed multiband-band cellular antenna, integrated onto a PCB substrate together with a custom GPS antenna. This solution exceeded the performance requirements set out in the standards, resulting in a lower product cost than the equivalent COTS antennas and enabled integration into a small form factor product package.

Plextek is responsible for the design and manufacture of the Redtail Telematics range of Vehicle Asset Management (VAM) products and to date along with other vehicle tracking devices we have designed have manufactured over six million units.



Plextek

Exceptional technology
to positively impact the future

Get in touch to find out how Plextek can help you
to deliver your next innovation in technology.

[email](#)