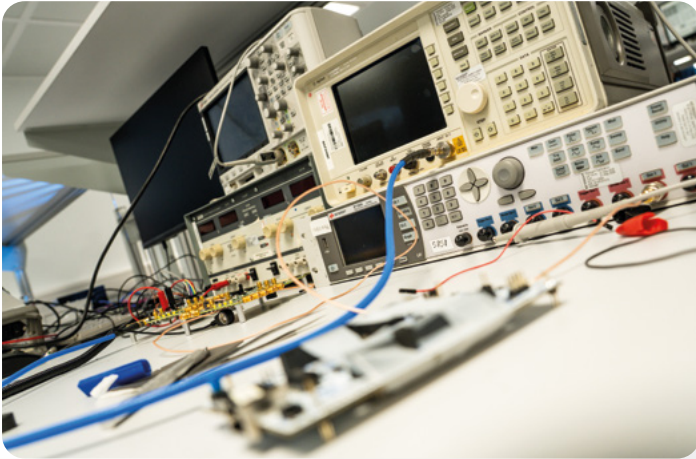


ADVANCED MANUFACTURING

Vertical operations for high-frequency RF technologies



Equipped for RF innovation



Filtronic brings together radio frequency (RF) system design, manufacturing, testing and quality assurance in our advanced, purpose-built production centres. By managing every stage of the technology lifecycle, from concept to full-scale production, we accelerate and optimise the development of RF systems for next-generation space, defence and telecoms applications.

INTEGRATED DESIGN, MANUFACTURING AND TESTING

As a vertically integrated business, Filtronic offers a unique combination of in-house design, manufacturing and testing, enabling us to develop RF products from prototype through to high-volume production at pace. Our microelectronic manufacturing facilities are configured specifically for high-frequency technology production, supporting intricate mmWave assemblies where precision, quality and repeatability are fundamental to success.

DESIGN FOR OPTIMAL MANUFACTURING

Our engineers design complex modules and systems specifically for volume manufacturing in our own facilities – saving time in the development process, creating products that are right first time, and helping our customers get to market faster. Whether we are supporting a new concept or scaling an existing product, we design for manufacturability, using process engineering innovations to optimise every element of production.

COLLABORATION ON COMPLEX CHALLENGES

We work alongside customers to develop best in class solutions, solving complex connectivity challenges where the systems we develop push the limits of RF electronics and materials. We help customers to move confidently from Technology Readiness Levels (TRL) 4 to 9 – turning ambitious concepts into deployable RF systems at speed and scale.

Equipped for RF innovation

PROPRIETARY MMIC DESIGN

Our manufacturing capabilities are reinforced by our ability to design our own custom monolithic microwave integrated circuits (MMICs). Our MMIC engineers design on a wide range of substrates, including GaAs (Gallium Arsenide), GaN (Gallium Nitride) and InP (Indian Phosphate). This MMIC design capability within our vertically integrated structure gives us a competitive edge, allowing us to develop precision devices to suit challenging performance requirements.

TESTED TO PERFECTION

We verify all our subsystems through comprehensive in-house testing, providing complete assurance in their compliance with stringent performance parameters. Our testing regime covers environmental testing in extreme temperatures, radiation and vacuum conditions, as well as power and noise figure testing, thermal and mechanical stress testing.



Our advanced production facilities

High-volume, high-quality manufacturing

Our world-class facilities in the UK and US provide pristine, quality-controlled environments for manufacturing high volumes of precision RF products reliably and consistently.

- Fully automated epoxy and solder dispense.
- Range of die attach materials – automated or hand-applied for low-volume MIL-STD-883.
- Automated bonding – ball, wedge and ribbon.
- Skilled manual bonding for new product introduction or rapid prototyping.
- Hermetic sealing – vacuum baked to eliminate contaminants.
- Testing systems up to 114GHz.

SEDGEFIELD, UK

Manufacturing centre of excellence

Total size: 42,000ft²

Engineering labs: 6,000ft²

ISO 7 & 8 Clean rooms: 12,000ft²

LEEDS, UK

Defence & filter design centre

Total size: 2,100ft²

Engineering labs: 1,050ft²

ESD safe work area: 700ft²

MANCHESTER, UK

Satcom design centre

Total size: 2,300ft²

Engineering labs: 1,200ft²

ESD safe work area: 1,100ft²

CAMBRIDGE, UK

Digital systems design centre

Total size: 2,900ft²

ESD safe work area: 350ft²

SALISBURY, US

RF for critical comms assembly and testing

Total size: 16,000ft²

Temperature-controlled area: 5,000ft²

ESD safe work area: 3,000ft²