

# High-performance RF

Help us transform the future of RF, microwave and mmWave.

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# Solving complex RF, microwave and mmWave challenges

"Filtronic employs a special kind of person. They are experts in their field, confident communicators who love to collaborate, solve problems, and step up to a challenge." Filtronic is a world-leading radio frequency technology specialist. We design, manufacture and test advanced products that transmit, receive and condition radio waves in mission-critical communications networks worldwide.

# High-performance RF, Microwave and mmWave design and manufacture

Filtronic has a rich history of innovation and an entrepreneurial spirit that drives everything we do, making it an exciting and inspiring place to work. We value the individual expertise and contributions of all our team members, and everyone is encouraged to play their part in our continued growth and technological leadership. We recognise that it is the ingenuity, intelligence and dedication of our people that truly set us apart.

# **Employee benefits**

We want every employee to be fully engaged in the success of our business, and we offer excellent employee benefits and support schemes. These include a generous annual holiday allowance, contributory pension scheme, life assurance, plus occupational payments for family leave and sickness. We also run Cycle2Work and Save as You Earn (SAYE) schemes.

## **Training and development**

Working in the dynamic and rapidly advancing RF communications arena requires our people to constantly develop and update their skills and knowledge. We identify and deliver targeted training, ensuring everyone is fully equipped to support our clients, build their career, and continuously improve our performance.

## **Graduate opportunities**

Filtronic has a successful, structured graduate scheme. It gives candidates with relevant degree qualifications a clear pathway into careers in electronic product design, manufacturing and engineering.

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# Our values and behaviours

Integrity

Act with integrity; being honest and fair, always keeping our promises.

Do the right thing, not the easy thing, speak up if it's not right.

Deliver on your promises.

Be truthful, always being honest and open.

Be fair and ethical in your work and decision making.

Take responsibility for your own actions, learn from mistakes when they happen.

Respect

**Be respectful to all;** it is the foundation of our culture.

Be inclusive, always respecting and valuing others.

Act how you want to be treated; being kind, considerate and respectful of others and their opinions.

Be supportive and positive in all your working relationships.

Value the importance of equality, diversity and inclusivity.

Be open-minded and upfront with people.

**Excellence** 

Strive for excellence; it is what our clients and colleagues expect and what we endeayour to deliver.

Perform to the highest professional standards.

Be innovative and pragmatic with problem solving.

Take pride in our work, paying attention to detail.

Be agile and flexible in your approach.

Be curious and challenge constructively to improve how we work.

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# The Filtronic brand

Filtronic design and manufacture RF-to-mmWave components and subsystems for mission-critical communication networks.

Our clients depend on us to deliver high-performance RF solutions solving their challenging requirements.

We accelerate their market entry, reduce whole-life & development costs, minimise cost of quality and provide them with a competitive advantage.

# Our purpose:

To be the trusted provider of innovative RF solutions.

# Our vision:

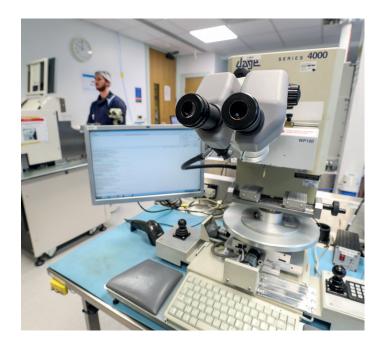
Enabling the future of RF, microwave and mmWave communication.

# Our mission:

Creating value for our clients



# Where we excel



- We help our clients get to market quicker – increasing their sales revenues and market share.
- Our capabilities and technologies reduce the overall cost of data communication, lowering the cost per Gbps.
- Taking unique challenges & providing a customised solution, we lower development & NRE costs, minimising the cost of quality for our client.
- We solve problems, engineer to engineer, we drive down whole life costs.
- We like to know our clients inside out, identifying ways to improve their products, increasing their premium & providing them with a competitive advantage.

# Recent achievements

- Market leader in mmWave technology, specialists in E Band
- Major technology supplier to the HAPS industry
- Sole source supplier in the USA for number one telecom provider
- Experts in hybrid manufacture for Aerospace and Defence
- Pushing the boundaries of trackside to train communication (>10Gbps)



# High performance RF solutions for complex communication markets



# Telecommunications infrastructure (4G & 5G)

Filtronic is a key supplier to leading players in the telecommunications

infrastructure market, and we are the 'go-to' partner of choice for advanced mmWave applications. We differ from other players in the 5G backhaul market because we offer highly integrated, fully calibrated transceiver modules that simply drop-in between the baseband modem module and the antenna. This plug-and-play architecture eliminates the need for clients to develop inhouse mmWave expertise resulting in significantly reduced time to market, lower overall development costs and minimal cost of quality.



# Critical communications

Reliability, availability and security are critical attributes for public safety

communications networks operated by emergency services. Filtronic products meet the demand for higher resilience and longer-range systems. We have expanded our offering with a range of Tower Top Amplifiers (TTAs), designed to be OEM-agnostic and deliver best-inclass performance. By manufacturing the components in our own facilities, we assure clients of secure supplies and responsive lead times for these critical products.



# Aerospace and defence

Filtronic is a longestablished supplier to the defence and aerospace industry.

We supply transmit and receive modules (TRMs) for the latest generation AESA radars, as well as filters and other RF components and sub-systems where our engineering, design and highly specialised manufacturing capabilities add significant value.



### Space

Providing internet connections to underserved communities is a high priority for many countries.

Considerable progress is being made to develop airborne communications networks that overcome the limitations of terrestrial networks. These enable radio communications to be established in remote areas with no infrastructure, or areas hit by natural disasters where infrastructure has been damaged.

Filtronic is an expert in the design, development and delivery of next generation, high-performance transceiver modules, enabling high-capacity HAPS-to-ground and inter-HAPS data transmission using E-band frequencies. Our experience pushes the boundaries of current E-band technology. Our class-leading transceiver technology platforms, can be applied within the ever growing Low Earth Orbit satellite market.



# A history of innovation



|   | 1977 | Company founded by Professor David Rhodes at Leeds University.   |
|---|------|--|
|   | 1979 | First employees recruited  |
|   | 1989 | Filtronic components receive a Queens award for technology. Wireless infrastructure business established.                        |
|   | 1992 | Filtronic Comtek established to focus on 2G – global systems for mobile communications (GSM).                                    |
|   | 1994 | Filtronic Comtek plc listed on the UK stock exchange.  |
| • | 1999 | Acquisition of Fujitsu Silicon plant in Newton Aycliffe to produce GaAs (Gallium arsenide) wafers.                               |
|   | 2002 | Triton chipset, transmit and receive multi-function MMICs developed for mobile backhaul.   |
|   | 2003 | Company reorganises into three divisions: Wireless Infrastructure,<br>Handset Products and Integrated Products.                  |
|   | 2010 | Acquisition of Isotek holdings Ltd.  |
|   | 2011 | Development of mmWave capabilities, including Neptune,<br>Proteus and later versions including Theseus, Orpheus and Morpheus II. |
|   | 2013 | Headquarters relocate to NETPark science park in Sedgefield,<br>County Durham.   |
|   | 2015 | Company listing moves to the AIM stock market.   |
|   | 2017 | Launch of contract manufacturing services, principally for defence and aerospace.  |
|   | 2020 | Launched Morpheus II, market leading transceiver product and Tower<br>Top Amplifier range.                                       |

Awarded Queens Award for Enterprise: International Trade.

Founded by Professor David Rhodes at Leeds University in 1977, Filtronic quickly became the largest company ever to be spun out of a UK university. The company gained a reputation for innovation, quality and technical knowledge, and took on its first employees in 1979.

The company's operations were purely in electronic warfare until 1989, and the company grew quickly, often via acquisitions and by entering new international markets, including the US.

Today, we maintain our innovative and entrepreneurial spirit, developing specialised and bespoke products in our advanced microelectronic manufacturing operations in the UK and USA.

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# Pushing the boundaries of electronic engineering

A career at Filtronic is for people who thrive on challenges. We relish working at the cutting-edge of engineering advancements, realising new possibilities and extending the capabilities of RF electronics and materials. At Filtronic, you will work alongside some of the world's leading electronic engineers, renowned in their field and recognised as pioneers of precision microelectronic manufacturing. If you're excited by the opportunity of working with the very best minds in RF engineering, Filtronic is the place for you.



# **Transformational technologies**

Filtronic manufactures a whole range of high-performance RF devices and sub-systems. Our specialities include power-amplifiers, transceivers, MCPs, SIPs, MMICs and filters operating from DC to over 100GHz. Our technologies fall into three broad categories:

### Transmit and receive

Filtronic design and manufacture a range of transmit and receive products including transceivers, transmit and receive modules, front end modules and power amplifiers. Our products provide high-performance and are competitively priced, significantly reducing clients time to market.

## Passive and active RF solutions

We are a key supplier of advanced high performance RF communications products to the telecommunications infrastructure and critical communications markets. Our products are used in wireless communication equipment, point-to-point communication systems and adjacent aerospace and defence sectors.

### Integrated sub-systems

Filtronic develops and integrates RF solutions for mission-critical environments. We partner with clients by offering design, manufacture and test of high-performance RF devices & subsystems. Specialties include developing, power-amplifiers, transceivers, MCPs, SIPs, MMICs and filters operating from DC to over 114 GHz.

# Sedgefield, UK

- 13,000 ft<sup>2</sup> total size
- 2,000 ft<sup>2</sup> ISO 8 clean rooms
- 2,000 ft² engineering laboratories
- 5,000 ft² of ESD safe work area for sensitive designs

# Salisbury, USA

- 16,000 ft<sup>2</sup> total size
- 20,000 ft² under temperature control
- 5,000 ft² of ESD safe work area for sensitive designs

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# **Business Address**

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