

FILTRONiC

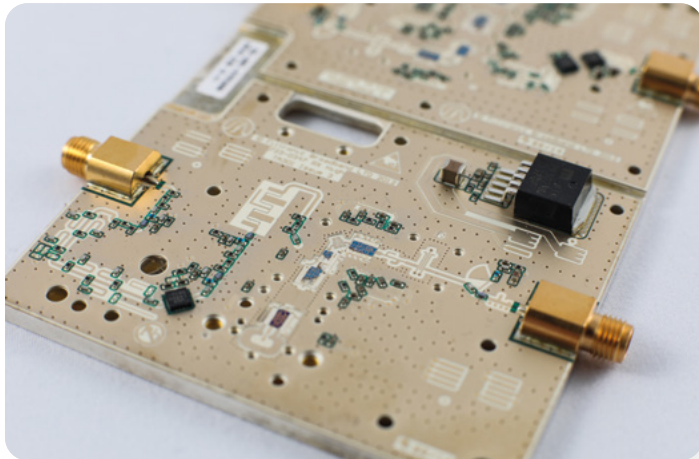
RF FILTERS

Clarity in every
connection



filtronic.com

Isolating signals for clearer communications



Filtronic radio frequency (RF) filters are designed to protect signal integrity, improve system performance and support reliable communications in complex operating environments.

Our customised, precision-manufactured filters help customers mitigate interference, optimise spectrum use and maintain signal clarity for mission-critical defence, space and terrestrial applications.

CUTTING THROUGH THE NOISE

As communication systems move into higher frequencies and operate in increasingly congested spectrum environments, it has never been more important to deploy high-quality RF filters to sustain clear, interference-free signals.

Filtronic designs and manufactures RF filters that enable precise frequency control, interference mitigation and enhanced signal selection. We develop filters covering the entire frequency range, with particular expertise in higher mmWave frequencies where our filters support transformational new applications in space and defence.

FOUNDED ON FILTER INNOVATION

Our track record of RF filter ingenuity dates back to our foundation in 1977. Filtronic started out developing prototype filters for electronic countermeasure systems on military aircraft. We have never stopped exploring new filter possibilities, using novel materials and device architectures to develop ever-more compact filters with higher performance for today's fast-changing communications landscape.

WORKING TOGETHER TO SOLVE CHALLENGES

Collaboration is our passion. We work with customers and partners to solve complex filter design challenges and address key priorities, from miniaturisation to adaptive filtering. Together we develop powerful, customised filter systems for some of the most demanding operational environments on Earth – and beyond.

Isolating signals for clearer communications

MANUFACTURED AND TESTED TO PERFECTION

Every Filtronic filter is manufactured and extensively tested in our own state-of-the-art facilities – providing complete quality assurance and traceability. Because we control every stage of the process in-house, we can design filters specifically for optimal manufacturing – helping to improve yields, minimise waste and reduce whole-life costs.

FILTER APPLICATIONS

SPACE

Secure signals for satellite communications

Our lightweight, compact filters offer the high reliability and durability needed for successful satellite communications. Payload-mounted filters are designed to withstand extreme conditions and radiation in space, while effectively attenuating unwanted signals and noise.

DEFENCE

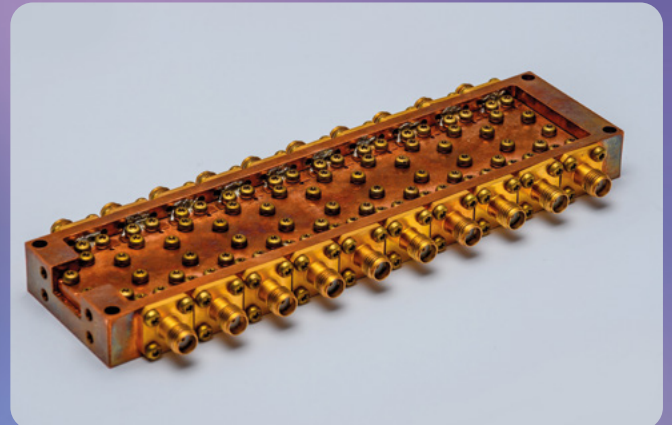
Uninterrupted communications for critical missions

Defence systems operate in crowded electromagnetic environments where spectrum control is critical. Our filters play a key role in reducing noise and enhancing signals for radar, communications and electronic warfare systems. They are built to withstand extreme temperatures, shock and electromagnetic interference in battlefield situations.

TELECOMMUNICATIONS

Driving the evolution of modern wireless systems

Our RF filters shape the performance and efficiency of wireless communication networks globally. Designed to support higher data rates and increased capacity, they are essential components in base stations and infrastructure for 4G, 5G and emerging 6G networks.



Our filter technologies

Customised for cutting-edge communications

We manufacture a range of filter types, which can be customised for specific applications using different topologies – from ceramic and combine to lumped element and metal cavity.

SWITCHED FILTER BANKS

Integrated modules for enhanced efficiency

Modern communication platforms demand improved filter performance in smaller, lighter and more efficient packages. By integrating filter and switch components into a single, compact module, our switched filter banks eliminate transitions between circuits, reducing switching times and enhancing performance.

TUNEABLE FILTERS

Adaptive filters for dynamic applications

As communication networks become more dynamic, filtering technologies need to become more flexible. We specialise in adaptive filters, offering configurable architectures that can adjust to changing operational requirements. Our tuneable filters work across a range of frequencies and can be adjusted digitally or manually.

INTERFERENCE-MITIGATION FILTERS

Minimise spectral emissions and interference

Interference-mitigation filters provide a simple, cost-effective way to minimise spectral emissions and reduce interference. Filtronic has a long track record of designing these custom filters, helping to reduce unwanted signals, improve system resilience and protect critical communications.

MULTIPLEXERS

Rapid signal selection and sorting

Our range of diplexers, triplexers and multiplexers allows multiple RF signals of different frequencies to share a common path, without interference. They combine multiple filters in a single device to route and isolate several frequency bands simultaneously – saving space, simplifying installation and supporting high-performance RF systems.