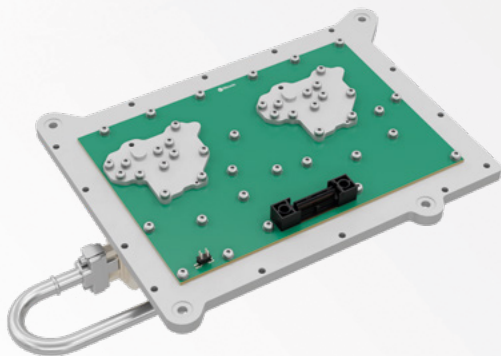
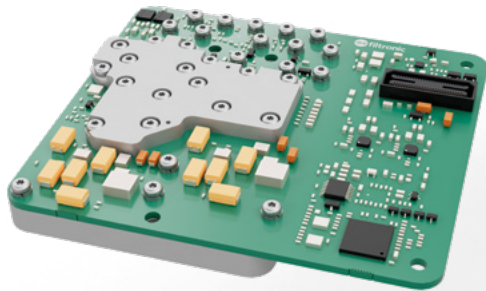


TRANSMIT AND RECEIVE (TxRx)

Communications backbone for RF networks



Foundations for high-speed connectivity



Filtronic TxRx systems underpin reliable signal transmission and reception in radio frequency (RF) communications around the world. Our transceivers and transmit and receive modules (TRMs) provide the foundations for ultra-fast, high-volume communications across space, defence and telecoms applications.

Our expertise in Tx/Rx technologies at mmWave frequencies is opening up new possibilities for high-performance applications – from radar and sensing systems to multi-orbit satellite communications.

SEND AND RECEIVE WITH CONFIDENCE

Every RF system depends on the ability to send and receive signals with exceptional accuracy, speed and reliability. Filtronic transceivers and transmit and receive modules (TRMs) provide the foundation for ultra-high capacity, low-latency wireless networks on Earth and far into space.

We design and manufacture TxRx systems across a large range of frequency bands, with particular expertise in mmWave bands. Our packaged modules help customers to maximise performance and capacity while reducing complexity, size, weight and power.

TxRx TECHNOLOGIES: TRANSCIVERS AND TRMs

Transceivers combine transmit and receive functionality and are used in communication systems ranging from tactical radio and telecommunications to satellite networks. Transmit/receive modules (TRMs) integrate transmit and receive signal paths with additional RF functions such as power and low-noise amplification, filtering, attenuation and phase control. Commonly used in electronically steerable antenna arrays, TRMs provide the precise control of signal amplitude and phase required for beamforming and beam steering.

FREQUENCY INNOVATION – FROM X-BAND TO MMWAVE

Filtronic has developed high-performance mmWave transceivers across Ka-band and higher frequencies, supporting the evolution of high-capacity satellite and terrestrial communications. Our broader microwave expertise extends into X-band, supporting demanding defence applications including military satellite communications, radar and electronic warfare.

Foundations for high-speed connectivity

AGILE APPROACH TO CUSTOMER SUPPORT

We support customers throughout the technology development lifecycle, from design to qualification and manufacturing. Our agile approach enables us to provide expertise where it's needed most, whether we're designing new TRMs for specific applications, helping customers refine their own designs for optimal production, or manufacturing products to customer specifications.

TxRx APPLICATIONS

SPACE

Multi-orbit connectivity across converged networks

Integrated TxRx systems support sophisticated space architectures, connecting satellites, ground infrastructure and user terminals. Our payload transceivers support high-bandwidth inter-satellite, direct-to device and satellite-to Earth communications, and we are extending capabilities across all orbits – from HAPs to GEO and beyond.

DEFENCE

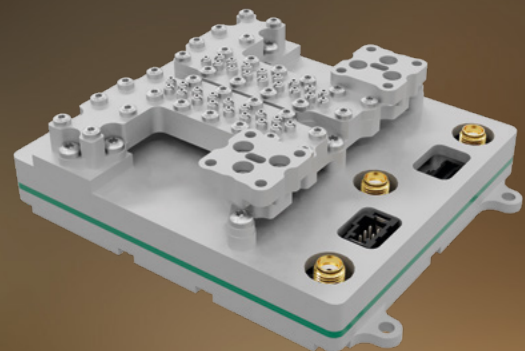
Vital connections for tracking, sensing and protection

Advanced TxRx technologies enable tactical communications, electronic warfare and next-generation radar systems to perform consistently in contested operational environments. We develop secure, interoperable TxRx systems for mission-critical applications, including TRMs for airborne AESA radar, search, track and target systems.

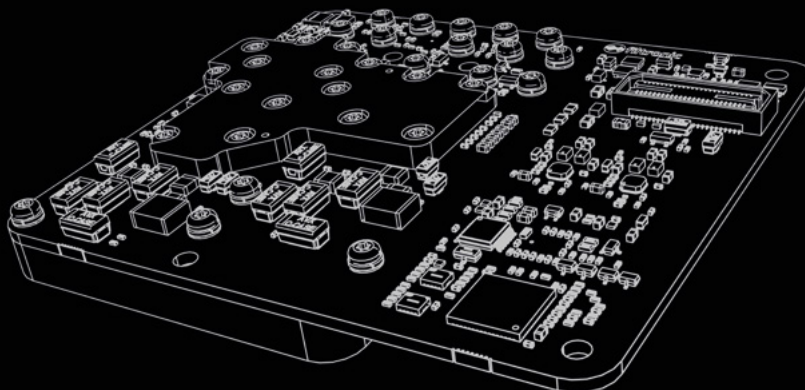
TERRESTRIAL

Secure signals for critical communications

As communication systems get ever more complex, our TxRx technologies help to maximise efficiency and performance. Our systems enable multi-gigabit data rates in 4G, 5G and emerging 6G networks and deliver secure connectivity for critical communications and high-speed private networks.



Our TxRx technologies



Morpheus X2 transceiver

Integrated module for power, efficiency and reliability.

Our Morpheus X2 E-band transceiver module provides seamlessly integrated transmit and receive capability for advanced RF systems where power, size and efficiency are equally important. Designed to simplify complex RF architectures, Morpheus X2 enables customers to integrate proven, future-proof TxRx functionality into high-capacity communications, sensing and satellite applications.

CHOOSE MORPHEUS X2 FOR:

- High power and extended range.
- High capacity and high data rates.
- Superior spectral efficiency.
- Simple installation.

Hercules II transceiver

Robust, high-capacity system for challenging applications.

Engineered for seamless integration into outdoor units, Hercules II combines our Morpheus II transceiver with Cerus SSPAs to deliver outstanding performance in high-capacity networks. It enables long-range, high-throughput links in even the most demanding environments. The compact, rugged module is ideally suited for high-frequency private networks, HAPS and next-generation communication platforms.

CHOOSE HERCULES II FOR:

- High-power, low-latency performance.
- Long-range, high-throughput connectivity.
- Ultra-high data rates.
- Reliable operation in demanding environments.