Filters for Military, Space, Commercial, and Wireless / Low PIM Applications

API Technologies has built its reputation on designing and delivering the most challenging RF & Microwave filters in the industry. We remain on the leading edge of microwave filter technology through innovative, out-of-the-box engineering, new platform designs reaching increasing levels of complexity, and our ability to provide fully integrated multifunction assemblies.

Our diverse program experience includes filters, multiplexers and integrated assemblies used in a wide variety of defense electronics, space, border security and commercial communication systems where function and reliability are crucial. We offer standard, configurable and custom designs and the ability to tailor an ideal solution to your unique product requirements.

Filter topologies include lumped element, cavity, ceramic, SAW, suspended substrate, tubular and waveguide.

High Performance, Fully Customizable Filters

API Technologies specializes in high quality RF, microwave filters for commercial, defense and space applications where superior performance in the smallest footprint possible is required. Our extensive portfolio of filter products includes bandpass, bandreject, lowpass and highpass filter designs, operating at frequencies from 1 MHz to 50 GHz, encompassing a wide range of topologies including cavity, lumped, ceramic, coaxial, SAW and suspended substrate.

SAW Filters | 20 MHz up to 2600 MHz

API Technologies designs and manufactures high performance SAW Filters for commercial, industrial, medical, and military requirements. API provides standard and customizable solutions for narrowband and GPS band applications, standard IF and RF bands. Our designs include SPUDT, Coupled Resonator Filter (CRF), Impedance Element Filter (IEF), Transverse Coupled Resonator Filter (TCRF), Resonators, and Surface Transverse Wave (STW).

COTS-Based Filtered GPS LNAs

API Technologies’ 312 Series Filtered GPS LNA is designed to amplify GPS signals by filtering out interference. This standard, off-the-shelf assembly has a short lead time, excellent anti-jam performance and a Sub 2 dB noise figure. It is configurable to user-specified gain, supply bias options, GPS band frequencies, and a number of ouputs. The 312 Series is COTS part qualified to the most critical of environments for military and airborne applications. Semi-custom and fully customizable designs are also offered.

Switched Filter Banks | Standard Designs with Customizable Channels

API Technologies offers standard Switched Filter Bank designs from 20 MHz to 7500 MHz and user-configurable channels, and custom assemblies with frequencies up to 26GHz and beyond. Our configurable solutions significantly reduce development cycle time, resulting in cost savings and faster time to market. The rugged construction of our units makes them ideal for military and high-end commercial applications needing superior signal integrity, including electronic warfare (EW) and electronic intelligence (ELINT).

Integrated Assemblies & Filter Subsystems

A leader in the design and development of custom filtering solutions, API Technologies produces a wide range of filter-based assemblies and sub-systems. API has expertise in integrating filters with passive and active components, including couplers, power dividers, delay lines, and amplifiers to improve optimization across the system. Our high performance filter-based assemblies are ideal for deployment into multiple platforms including military, space and wireless systems.
Vertically Integrated Filter Solutions

Space Filters, Multiplexers & Switched Filter Banks

API Technologies is a leader in the design and manufacture of filter modules and multifunction filter-based assemblies for use in defense and commercial space and SATCOM applications. Space flight hardware is designed to meet the harshest spacecraft launch vehicle profiles and operational spacecraft operating environments. API Technologies’ solutions are ideal for use in space exploration, satellite payloads, DoD, commercial, LEO, MEO, GEO, and deep space applications.

Distributed Antenna System (DAS) Solutions

API Technologies offers a complete line of standard and configurable low PIM Distributed Antenna System (DAS) products to meet the ever-increasing user demands on carriers for coverage and capacity, 100% compliant with neutral host requirements. Our DAS interface trays deliver un-compromised performance, with a modular design, to deliver improved cellular coverage and eliminate ‘dead zones,’ without the additional costs of expensive infrastructure.

Co-Site Interference Mitigation Filters

API Technologies has developed and produced high quality, High Q Filters and assisted major wireless carriers and installers with co-location solutions at BTS sites for over three decades. Using state-of-the art design software, precision CNC machining, and the highest quality materials available, our design team consistently achieves the highest performance features including low PIM (passive intermodulation), high isolation and low insertion loss.

Vertically Integrated Filter Solutions

Subsystems

- Multifunction Filter Assemblies
- Digital Frequency Discriminators
- Instantaneous Frequency Measurement
- Upconverters/Downconverters
- Frequency Activity Detectors
- Frequency Multipliers
- RF Distribution Subsystem

Integrated Filter Assemblies

- Switched Filter Banks
- Filtered GPS LNAs
- DAS Interface Trays
- Co-Site Mitigation Solutions
- Wireless Assemblies

Filters

- Bandpass, Lowpass, Highpass, Bandreject
- Duplexers/Diplexers, Multiplexers
- Dielectrically Loaded Cavity Filters
- Lumped Element, Ceramic, Interdigital, Cavity, Combline, Suspended Substrate, SAW, Tubular and Waveguide

Learn more at micro.apitech.com/filters