

**API Technologies RF, Microwave & Microelectronics** | A leader in high-performance RF, Microwave and Microelectronic solutions, API designs, develops and manufactures one of the world's largest selection of filters, passive & active components, amplifiers, power amplifiers, sources, mixers, microelectronics and integrated microwave assemblies. Our custom designed and commercial off-the-shelf (COTS) products support critical applications like wireless, medical, GPS, industrial, oil & gas, avionics, communications, and more.



**Filters | Co-site Interference Mitigation, Wireless Telecom & Public Safety 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. API Technologies produces a wide range of filter-based assemblies and sub-systems, such as receiver multicouplers and transmit combiners, in multiple platforms, integrating passive or active components ideal for deployment into base stations, communication towers and other wireless applications.



**Indoor Coverage | 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. DAS trays fit in traditional 19" racks with other networking and communication equipment and serves as the backbone for multiple spatially separated antennas to provide seamless indoor coverage.



**Space Filter Products | Filters, Multiplexers, & Switched Filter Banks for Space**

API Technologies is a leader in the design and manufacture of filter and multifunction filter-based integrated assemblies for use in LEO, MEO, GEO, space and SATCOM applications. Space flight hardware is designed to meet the harshest satellite and launch vehicle profiles and operational spacecraft environments. API Technologies' solutions are ideal for use in communication up-and-downlinks, space exploration, satellite payloads, and deep space applications. We are actively participating in new proposals, designs and manufacturing techniques for our worldwide customer base supporting OneWeb.



**SAW Products & Delay Lines | Standard and Custom Options Available**

API Technologies designs and manufactures high performance SAW Filters for commercial, industrial, and medical requirements. API's design library consists of filters from 20 MHz up to 2600 MHz. API's ultra low phase noise Voltage Controlled SAW Oscillators (VCSOs) offer high performance in frequencies from 100 MHz to 20 GHz. Delay line types offered include BAW (Bulk Acoustic Wave), SAW (Surface Acoustic Wave), Coaxial - High Frequency, LC (Lumped Constant), and Steel-Pulse Compression. Our SAW Delay Lines are ideal for commercial radar applications and available in standard or custom designs with a frequency range of 20 MHz to 2000 MHz and .1  $\mu$ sec to 10  $\mu$ sec delays.



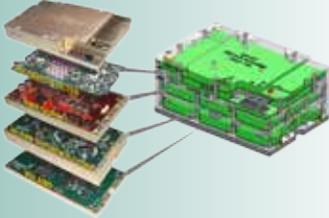
**RF Components | Phase Shifters, Rotary Joints, Couplers, Power Dividers & Mixers**

API's broad offering of passive components are ideal for demanding applications where exacting repeatability contributes to enhanced system test and performance. Broadband directional couplers are available to cover all major communication frequency bands in various dB values and power dividers are custom designed to maximize port isolation. Rotary joints have been proven to perform in outdoor applications such as commercial radar platforms and API's phase shifters are used in test labs worldwide. Our hybrid mixer line offers double and triple balanced configurations in many industry-standard surface mount, drop-in and connectorized housings.



### Amplifiers | LNAs, High Frequency Amplifiers, Driver Amplifiers

API Technologies offers a broad selection of Low Noise Amplifiers (LNAs) up to 40 GHz. These amplifiers are provided to diverse markets such as Wireless Infrastructure, WLAN, Smart Energy, Connected Home and Automation, GPS/GNSS, Test & Measurement, Energy Management. API's line of High Frequency Broadband Amplifiers are ideal for commercial applications like medical imaging technology. These user-configurable designs start at 4 GHz and reach up to 50 GHz. API's driver amplifiers and gain blocks are a convenient solution when additional gain is required over frequency bands up to 26 GHz.



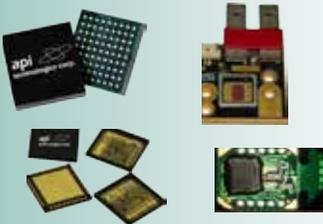
### Power Amps & Amplifier Subsystems | GaN, LDMOS, GaAs & Bipolar Devices

API brings the use of today's most advanced tools to our design and manufacturing of Power Amplifiers operating up to 26 GHz and 3200W pulsed output. In addition to the wide bandwidth and high efficiency, API can incorporate built-in user control interfaces, high input protection circuitry, built-in monitoring, voltage regulation, thermal temperature compensation, and harmonic filters fault monitoring to provide solutions to our customers varied requirements. Excellent design capability, plus API's extensive in-house machining capability, provide for rapid prototype development and production. Select from our standard product offering or allow API to design a power amplifier to your unique requirement.



### Frequency Sources | Surface Mount, Low Phase Noise

API offers the broadest selection of sources in the industry. Configurations include standard or custom designs for Phase Locked Oscillators (PLO), Dielectric Resonator Oscillators (DRO), Coaxial Resonator Oscillators (CRO), Voltage Controlled Oscillators (VCO), Multiplied Phase Locked Oscillators (MPLO), Comb Generators, and Frequency Synthesizers. API's line of affordable surface mount synthesizers are ideally suited for commercial applications where a low cost, non-hermetic solution is desired. These configurable designs feature superior phase noise performance, a programmable EPROM, all in a small .800" square package.



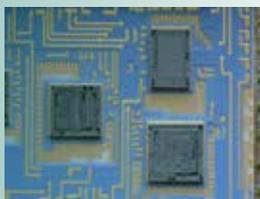
### Microelectronics | State-of-the-Art Engineering and Manufacturing Capabilities

API's custom microelectronic solutions utilize multiple technologies including mixed signal and power, RF, Microwave, and mmW, optoelectronics, thin film and SAW fab. Specific product solutions include SAW-based subsystems, high performance hybrid assemblies, microcircuits, and multi-chip modules for space, satellites, and support network applications. Products are designed and manufactured in one of API Technologies' MIL-PRF-38534 Class K certified facilities. With strict attention to size and weight, these custom solutions are built to user specifications for space, SATCOM, medical and high-rel industrial applications.



### Power Solutions | Switched Power Distribution Units

The **AC SMARTStart**® intelligent switched and sequenced Power Distribution Units (PDUs) provides local and remote control (Telnet, SNMP, or Web) to outlet groups. These units monitor input line voltage, total load current, and line frequency. The **DC SMARTStart**® is a NEBS Level 3 certified, UL recognized DC Solid State Switched power distribution unit with circuit protection and remote power cycling. Network operators can power cycle or auto reset all 12 solid state breakers as well as the 2 ROCB mains breakers, either manually by front panel push buttons or remotely with RS-232 serial console port 10/100 BASE-T or LAN TCP/IP socket or telnet session.



### High Temperature Solutions | Electronics Packaging

API's high temperature electronics packaging is designed for maximum reliability and continuous operation at ultra high temperatures and under severe mechanical shock and vibration. API utilizes chip and wire technology and manufactures multi-layered substrate designs using a thick film interconnect system. API has developed advanced attach methods for large foot print, unconventional devices such as MEMS & ceramic components to ensure full system in package is achievable. This enables us to package silicon devices to overcome the failure modes observed on conventional PCB's at high temperature.