

# API Technologies Solutions Guide



# Markets We Serve

## Defense & Government

For more than 70 years, API's high-reliability systems, subsystems, and components have been used in support of defense and government programs throughout the world. A trusted engineering and manufacturing partner, our program concentration areas span missile defense, electronic warfare, radar, CNI, C4ISR and SATCOM, military aircraft, and secure communications.

## Commercial Aerospace

From fuel pump control assemblies to highly integrated multi-layer hybrid microcircuits, API offers a mix of custom and standard products to commercial aerospace providers. Beyond products, API offers qualified manufacturing with AS9100, Rev C and ISO-9001:2008 facilities, as well as a full-line of in-house testing services.

## Space

API manufactures and qualifies space-grade electronic components and assemblies for use in defense and commercial satellite payloads, as well as in space flight programs. This includes radiation hardened electronics and microelectronics, and custom filter products. With several facilities in North America and Europe certified to MIL-STD-38534, Class H & K, as well as having the ability to meet select NASA qualifications, API is committed to excellence in space product design engineering and quality.

## Medical

As a leader in high-reliability, life-saving electronics and electromechanical medical device manufacturing, API supports a variety of medical device OEMs specializing in technically advanced products that demand a high-level of expertise. All off-shore and on-shore manufacturing facilities are ISO-certified and offer the traceability required for the medical marketplace. Along with the recently acquired ISO 13485:2003, API also offers a variety of COTS and semi-custom electronic components for a variety of medical device applications.

## Communications & Enterprise Security

API supports the Telecommunications and Information Technology industries with products ranging from wireless filtering to secure networking devices and intelligent power strips. These leading-edge products are helping protect critical data, ensure 'always on' access to IT, voice and other critical systems essential to Fortune 500 businesses around the world, and enable wireless providers the ability to utilize smaller ranges of the available spectrum while mitigating interference.

## Industrial & Transportation

Leveraging our heritage in the development of high-reliability products, API designs and manufactures electronic components and systems used in the products that touch our everyday lives. By utilizing off-the-shelf, semi-custom, and custom-designed products at both our domestic and low-cost off-shore manufacturing facilities, we are able to help customers reduce costs and shorten product lifecycles and time to market.

## Energy

API is a leading manufacturer of proprietary and custom-designed electronics for Oil & Gas and Alternative Energy programs around the world. Able to tolerate extreme temperatures, our products offer a long life span and superior reliability – even in the world's most inhospitable environments.



# Featured Certifications

ISO-9000

AS-9100

ISO-13485

MIL-PRF-15733

MIL-PRF-28861

MIL-C-11015

MIL-PRF-49470

MIL-PRF-38534 Class H & K

## Electronics Manufacturing Services

Trusted U.S. and International contract manufacturing and New Product Introduction services for defense and commercial customers.

Applications include: Defense, Industrial, Medical, New Product Introductions



## Secure Systems & Information Assurance

Information assurance and cyber security products that offer protection when comprised data could have financial, political and/or life-threatening consequences.

Applications include: Defense, Government & Civilian Agencies, Industrial, Commercial

### Build to Print

- CCA/PCB & Electromechanical Assemblies
- Sub Assemblies & Final Product Assemblies
- Prototypes, Pilot Builds & Production Volumes
- Glass Microwave Integrated Circuits (GMIC)
- Low/High Temperature Co-Fired Ceramics
- Thick Film/Thin Film
- New Product Introduction (NPI) Support
- Turnkey &/or Consigned Material Management

### CCA/PCB Assembly

- PCB Layout Services
- SMT & Thru-Hole
- Single or Double Sided
- Leaded or RoHS-Compliant
- Fine Pitch, BGA & Micro-BGA
- High-Density Interconnect
- Multi-Chip Modules (MCM)
- Chip-on-Board Assembly
- Wire Bonding/Die Bonding
- Flip Chip
- Conformal Coating

### Box Build & Final Assembly

- System Integration
- Cable & Wire Harnessing
- Hardware Integration/Encapsulation
- Packaging

### Test & Inspection

- Automated Optical Inspection (AOI)
- X-Ray Inspection
- Flying Probe Testing
- Functional Testing
- In-Circuit Testing
- Shock/Vibration/Thermal
- Test Engineering Support

### Secure Communications

- SST™/EMCON® TEMPEST Communications
- SST™/EMCON® TEMPEST Laptops
- SST™/EMCON® TEMPEST Computers
- SST™/EMCON® TEMPEST Monitors
- SST™/EMCON® TEMPEST Phones
- SST™/EMCON® TEMPEST Printers
- SST™/EMCON® TEMPEST Scanners
- SST™/EMCON® TEMPEST Teleconferencing
- SST™/EMCON® TEMPEST Thin Clients

### Rugged & Bespoke IT Systems

- Rugged Displays
- Rugged Computers & Servers
- Rugged Printers, Faxes & Scanners
- Rugged Laptops

### Secure Access

- Remote Device Administration
- CAC/PIV Access & Authentication Solutions
- USB & Device Security Solutions

### Encryption Solutions

- Dynamic Communities of Interest (COI)

# RF/Microwave & Microelectronics

World leader in high-reliability RF, microwave and millimeter wave subsystems, modules, and components for defense, space, and commercial applications. Leading designer and manufacturer of some of the world's smallest, high-performance microelectronics and custom hybrid solutions.

Applications include: Defense (CNI, Electronic Warfare, Jamming/Anti-Jamming, Radar, Missile Defense, C4ISR, UAV/UAS, IFF, Satellite Links), Space, Commercial & Military Aircraft, Communications, Industrial, Oil & Gas



## Filters

- Switched Filter Banks
- Bandpass
- Lowpass / Highpass
- Band Reject
- Diplexers / Triplexers / Multiplexers
- Lumped Element / Cavity / Tubular / Ceramic / Suspended Substrate
- SAW Filters
- Waveguide

## Amplifiers

- High Power Amps
- GaN SSPA
- High Linearity Amps
- Low Phase Noise Amps
- Filtered GPS LNAs
- Automatic Gain Control Amps
- Transmit Receive Modules
- LNAs & Gain Blocks

## Frequency Sources

- Synthesizers
- Phase Locked Oscillators
- DROs / CROs / VCOs
- SAW Oscillators
- Frequency Multipliers
- Complex Sources & Subsystems

## Antennas

- Wearable
- Rugged
- Patch
- Planar
- Custom/Integrated Assemblies
- Active Antenna Arrays

## Silicon Diodes & Capacitors

- Frequency Multiplier Diodes
- Tuning Varactor Diodes
- Pin Diodes
- MNS Chip Capacitors

## Integrated Microwave Assemblies

- Switched Filter Banks
- Upconverters / Downconverters
- Preselectors & Receiver Front Ends
- Cosite Modules
- IFMs & Discriminators
- Synthesizers
- Frequency Activity Detectors
- Amplifier Subsystems
- RF Distribution Networks

## RF Passive & Active Components

- Delay Lines
- Rotary Joints
- Phase Shifters
- Power Divider / Combiners
- Mixers
- Switches
- Limiters & Detectors
- Receiver Protectors
- Attenuators
- Hi-rel Diodes & Drivers
- A/D & D/A Converters
- Voltage References

## Microelectronics Solutions

- Space Level Vregs
- Linear Op Amps
- Diode Drivers
- DC to DC High Temperature
- A/D & D/A Converters
- Thin & Thick Film, LTCC
- Resistors / Inductors
- Optical Transceivers
- High Operating Temp Modules

## AESA Radar Solutions

- Quad Transmit Receive Modules
- Scalable Active Antenna Array Unit

## Design & Testing

- Complete Dynamic & Climatic Testing
- Custom Design Solutions

# Electromagnetic Integrated Solutions

Supplier of trusted components for EMC compliance, energy efficiency, and power management. Includes testing/compliance services and the world's largest selection of EMI filtering components.

Applications include: Industrial, Medical, Alternative Energy, Transportation, Communication, Commercial & Military Aircraft, and Defense



## EMI Filter Solutions

### EMI Testing Services

- Military
- Automotive
- Commercial
- International

### Advanced Ceramics

- Structural Ceramics
- Capacitor Arrays
- SMPS Modular Capacitors
- Planar Capacitors
- Discoidal & Tubular Capacitors

### Coaxial Filters & Interconnects

- Resin & Hermetically Sealed Filters
- Motor-Line Feed-Through Filters
- High Current/High Voltage Filters
- Miniature Hermetically Sealed & Surface Mount Filters
- Filter Plates & Terminal Blocks
- Combo D-Sub Filtered Connectors
- Ribbon & Datacom Connectors
- USB Filtered & ESD Protected Connectors

## Magnetics

- Current Transformers
- Power Inductors/Chokes
- Switch Mode Power Supply Inductors
- Lighting Chokes & Inductor/Filters
- Toroidal Power Transformers
- Laminate Power Transformers
- Modem & Module Transformers
- Air Coils

## Specialty Connectors & Harnessing

- Circular Connectors
- Mini-MIL Connectors
- Audio Connectors
- Glass-Sealed Connectors
- Value-Added Terminations, Cables & Harnesses

## Power Filters & Film Modules

- Commercial Power Filters
- Military/Aerospace Power Filters
- Power Entry Modules
- Film Feed-Through Filters
- Film Modules

## Power & Systems Solutions

Leading manufacturer of AC and DC power distribution products, circuit protection systems, rectifiers, systems solutions, and Explosive Ordnance Disposal (EOD) products.

Applications include: Military, Commercial, Industrial, Telecom, Government, C4ISR, Shipboard, Airborne, Mission Critical, Homeland Security, and First Responders



### Rugged Power Distribution

- Rugged AC Switched PDU
- Three Phase PDU
- High Powered PDU
- Rugged Mobile DC Power Rectifier
- Power Entry & Export Panels
- Solid State DC PDU
- MIL-STD 810 & 461 Compliance

### Specialty Power Distribution

- AC Three Phase PDU
- AC Switched PDU (AC SMARTStart®)
- Electronic Switched PDU
- AC-DC Monitored Rectifier
- DC Switched PDU (DC SMARTStart®)
- DC Breaker and Fuse Panels

### Rack Mount Power Strips

- Basic AC Power Strips
- Metered AC Power Strips
- Monitored AC Power Strips
- Switched AC Power Strips
- 380V DC Power Strips

### Systems Solutions

- Visual Landing Aids
- Stabilized Glide Slope Indicator
- Radar Threat Indicator
- Transmitter Assemblies
- Customized Solutions
- Build to Print

### Explosive Ordnance Disposal (EOD)

- Video Aiming Systems
- Laser Aiming Systems

**api**   
**technologies corp.**

## Power & Systems Solutions

## RF/Microwave & Microelectronics

## Electromagnetic Integrated Solutions

## Electronics Manufacturing Services

## Secure Systems & Information Assurance

# About API Technologies

API Technologies Corp. is a trusted provider of RF/microwave, microelectronics, and security solutions for critical and high-reliability applications. The company designs, develops and manufactures electronic components, modules, systems and products for technically demanding defense, commercial/industrial and aerospace applications. API Technologies' customers include many leading Fortune 500 companies, as well as a majority of NATO governments. While API was founded in 1981, our heritage brands have served the demanding, hi-rel marketplace for more than 60 years. API Technologies trades on the NASDAQ under the symbol ATNY.

[www.apitech.com](http://www.apitech.com) • +1.855.294.3800

[power.apitech.com](http://power.apitech.com)