

Aldetec specializes in the design and manufacture of **RF amplifiers** tailored for telecommunications, broadcasting, aerospace & defense, and industrial applications. Our expert engineers assess our clients' specific project requirements and collaborate closely to ensure that each power amplifier (PA) is fully optimized for performance, reliability, and efficiency.

We have the expertise to deliver reliable and affordable products that meet your needs. And our commitment to quality and customer satisfaction has made us a trusted partner in the industry for over two decades, providing solutions in the commercial, aerospace & defense, and space sectors.

Product Solutions

- Broadband amplifiers
- Solid state power amplifiers (SSPA)
- Low-noise amplifiers (LNA)
- Block upconverters (BUC)
- Block downconverters (BDC)
- Integrated microwave assemblies (IMA)

Facility Features

Aldetec boasts 16,000 square feet of production space, including:

- **Manufacturing & Assembly:** More than 10,000 square feet of electrostatic discharge (ESD)-protected area.
- **Cleanroom:** Dedicated 3,600 sf Class 2 cleanroom for space flight components.

Certifications

- **ISO 9001:2015:** Ensuring adherence to a global standard for quality management systems.
- **ITAR-Registered:** Guaranteeing compliance with the US government's International Traffic in Arms Regulations requirements for defense-related products.

UEC RF-Microwave Space Sector

Experience: More than 20 years in the space sector, specializing in RF solutions for various payloads.

Specializations:

- **GEO** – Geostationary Earth Orbit
- **MEO** – Medium Earth Orbit
- **LEO** – Low Earth Orbit

Market Focus:

- **Commercial Satellites:** Providing reliable RF solutions for commercial applications.
- **Defense Satellites:** Ensuring compliance with military standards and requirements.

Qualification Standards:

- **MIL-PRF-38534 Class H:** Meeting strict military specifications for high-reliability components.
- **Radiation-Hardened Class K:** Ensuring resilience against radiation for long-term operation in space environments.

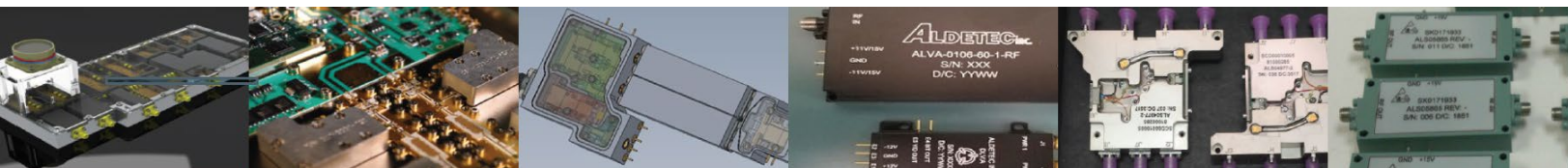
Capabilities

- **Frequency Range:** DC to 50 GHz.
- **Power Output:** Up to 100 watts.
- **Technologies:** Designs utilizing laterally diffused metal oxide semiconductor (LDMOS), gallium arsenide (GaAs), and gallium nitride (GaN) technologies.
- **Waveforms:** Support for continuous wave (CW), pulsed, and modulated waveforms.
- **System Integration:** Expertise in system architecture, rapid prototyping, and quick turnaround.
- **Applications:** Space, commercial, and defense markets.
- **Testing:** In-house vibration, shock, thermal cycle, and thermal vacuum chamber (TVAC) to meet MIL-STD requirements.

Quality Assurance

Aldetec products are manufactured under stringent standards:

- **MIL-PRF-38534 and MIL-STD-883:** Setting performance and reliability requirements for microcircuits.
- **MIL-I-45208:** For inspection systems.
- **ANSI Z540 and MIL-STD-45662A:** For calibration systems.



Broadband Wireless specializes in the design and manufacture of **RF Power Amplifiers (RFPAs)** tailored for telecommunications, broadcasting, aerospace & defense, and industrial applications. We assess our clients' specific project requirements and collaborate closely to ensure that each power amplifier (PA) is fully optimized for performance and efficiency.

Our knowledge and experience ensure we will deliver reliable and affordable products that meet your needs. And our commitment to quality and customer satisfaction has made us a trusted partner in the industry for more than two decades. Let us help you enhance your projects with our cutting-edge RF amplifier technology.

Key Offerings:

- **Volume Manufacturing:** Focused on PA-centric design for seamless manufacturing and delivery.
- **Testing:** Comprehensive RF/electrical PA and system testing to ensure optimal performance.
- **R&D and Custom Solutions:** Tailored solutions to meet unique project requirements.

Capabilities:

- **Frequency Range:** 17 Hz to 6 GHz, with a roadmap extending to 31 GHz.
- **Power Output:** Up to 1000 watts.
- **Linearization Techniques:** Options for predistortion and feed-forward linearization.
- **Technologies:** Designs utilizing laterally diffused metal oxide semiconductor (LDMOS), gallium arsenide (GaAs), and gallium nitride (GaN) technologies.
- **Waveforms:** Support for continuous wave (CW), pulsed, and modulated waveforms.
- **System Integration:** Expertise in system architecture, rapid prototyping, and quick turnaround.
- **Applications:** Solutions for commercial, defense, and medical industries.
- **Testing Services:** Independent RFPA testing services available.

Integrated Solutions:

- **Power Management:** Includes power supplies and voltage regulation, synthesizers, receivers, diplexing, and duplexing.
- **Control Systems:** Control via inter-integrated circuits (I2C), SPI, Ethernet, etc.
- **Detection and Monitoring:** Features for over/under power, voltage, temperature, thermal shutdown, voltage standing wave ratio (VSWR) detection, and blanking.
- **Waveform Support:** Capable of CW, pulsed, code division multiple access (CDMA), wideband code division multiple access (WCDMA), enhanced data rates for GSM evolution (EDGE), long-term evolution (LTE), 5G NR, and custom waveforms.

Products

- **Communication Amplifiers:** Highly linear amplifiers designed for the frequency range of 30 -2700 MHz and beyond.
- **Pulsed Power Amplifiers:**
 - **Radar:** Engineered for radar applications.
 - **FAA:** Designed for Federal Aviation Administration needs.
 - **Naval Weapons Stations:** Specialized for military applications.
- **Medical Amplifiers:** Tailored solutions for medical applications requiring lifesaving reliability.

Why Choose Broadband Wireless Technologies (BWT)?

- **Robustness:**
 - Over 300 million hours of fielded PA time.
 - Mean time between failures (MTBF) calculated between 200,000 and 1 million hours.
 - Failure rate of <1%, with systems in place to ensure genuine components.
- **Short Design Time:** Our efficient processes lead to faster design and delivery of solutions.
- **Innovative Solutions:** We welcome challenges and enjoy solving complex problems for our clients.
- **Competitive Cost:** We offer high-quality products at prices that will meet your budgetary needs.

Choosing BWT means partnering with a reliable and innovative company dedicated to delivering high-value, effective RF power amplifier solutions.