



UNITED ELECTRONICS COMPANY

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- United Electronics Company, Advanced Electronics Division, operating as UEC, consists of four complementary businesses that service the Aerospace and Defense, Commercial, Medical, and Industrial markets.
- UEC Advanced Electronics Division's Capabilities:
 - Engineering Design, Development & Product Realization
 - Mobile Power Management Solutions
 - Intelligent Battery Systems / Gen3 6T Lithium-Ion Battery Design, Development & Manufacturing
 - Life Cycle Management, Repair & Refurbishment, and Design/Re-Design Engineering Services
 - Custom Integrated Microwave Components & Assemblies (Space-level components)
 - High-End Contract Manufacturing Services



- UEC Advanced Electronics, located in Charleston, SC, is an engineering design, and product development contract manufacturing services company.
- UEC Signal Technologies, located in Fair Lawn, NJ, specializes in engineering solutions with non-standard issues associated with RF-Microwave & analog product development, life cycle management, design & redesign solutions, and manufacturing services.
- UEC RF-Microwave, located in Sacramento, CA, & Reno NV, is a provider of custom RF components and integrated microwave assemblies.
- UEC Advanced Circuit Technologies, located in Rochester, NY, is a full-service electronic manufacturing company providing circuit card assemblies, modules, and box assemblies.



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ADVANCED
ELECTRONICS



ADVANCED CIRCUIT
TECHNOLOGIES



RF
MICROWAVE



SIGNAL
TECHNOLOGIES

➤ Engineering Design & Product Realization Services

- Power management
- Power conversion AC/DC, AC/AC, bi - & uni-directional
- Energy storage

➤ Military Batteries, Vehicles & Tactical Devices

- Gen 3 6T Li-ion batteries
- 12V, 24V, 38V, batteries (manned & autonomous vehicles)

➤ Contract Manufacturing Services

- Complex cable and wire harness assemblies
- Complex electromechanical assemblies
- AS9100D & ISO9001:2015

➤ Contract Manufacturing Services

- SMT, circuit card assemblies
- Box, module, systems integration

➤ Test Solutions

- Environmental test
- Functional test
- Flying probe

➤ Microelectronics

- 10K cleanroom
- Thick-film hybrid manufacturing & testing

➤ Engineering & Manufacturing Solutions

➤ Conformal Coating

- Parylene
- Acrylic
- Urethane
- Silicone

➤ AS9100D & ISO 9001:2015

➤ RF Components & Microwave Solutions.

➤ 15 Years' Space Heritage

- Amplifiers
- Frequency Converters
- MIL-PRF-38534

➤ Product Offerings

- Amplifiers
- Detector Log Video Amplifier
- Frequency Converters
- Integrated Microwave Assemblies (IMAs)
- Antenna Systems
- TWT Driver Amps
- Log Video Amplifiers

➤ Design & Analysis

➤ Manufacturing

- Rapid prototyping
- Environmental testing
- X-Ray
- AOI

➤ Hybrid Assemblies

➤ Screening

➤ Test & Alignment

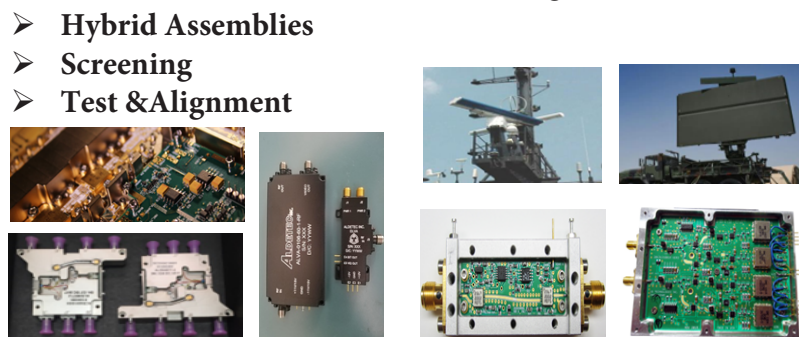
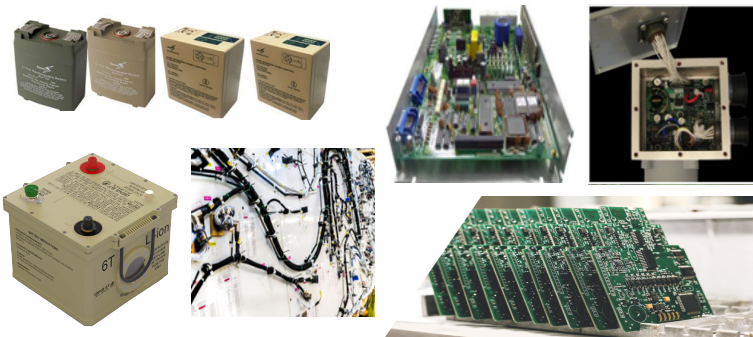
➤ Engineering solutions for Non-Standard RF Microwave & Analog Product Development

- Surface Mount Solutions
- RF Power Amplifiers 100MHz - 18GHz.
- GaN, GaAs, LDMOS, MMIC
- Custom LNAs 500MHz - 20GHz
- Broadband Amplifiers 100MHz-20GHz
- Custom Frequency Synthesizers 400MHz-10GHz
- Up/Down converters 70MHz-18GHz

➤ Product Life-Cycle Support Services

- Manufacturing, reverse engineering, & component-level repair service.

➤ Engineering, Manufacturing, Design, & Redesign Services



ADVANCED
ELECTRONICS

Charleston, SC



ADVANCED CIRCUIT
TECHNOLOGIES

Rochester, NY



SIGNAL
TECHNOLOGIES

Fair Lawn, NJ



RF
MICROWAVE

Sacramento, CA

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 3,600sf 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.

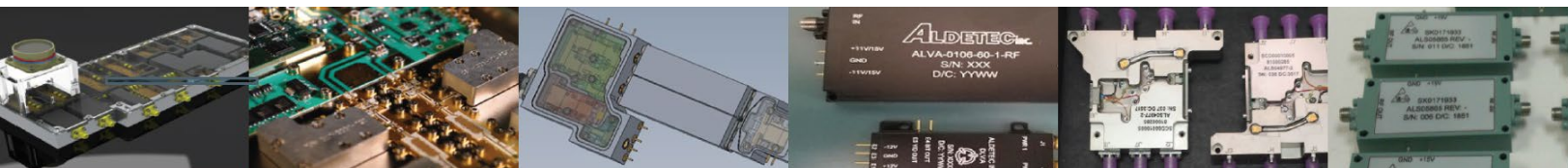
Capabilities

- **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, duplexing, and duplexing.
- **Control Systems:** Control via inter-integrated circuits (I2C), 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), and custom waveforms.

Products

- **Communication Amplifiers:** Highly linear amplifiers designed for the frequency range of 700-2700 MHz.
- **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.

Location

- Fair Lawn, New Jersey

Business Focus

- Providing “unique” solutions for non-standard RF Microwave & Analog product development requirements.
- End-to-End Life Cycle Support, (legacy repair, engineering services & depot).
- Engineering & Manufacturing Design and Re-Design Services.

Key Markets

- Aerospace & Defense
- Transportation
- Nuclear Power
- Industrial
- Medical

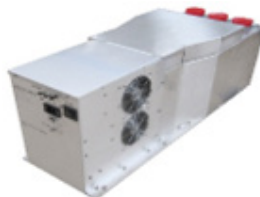


Highlights

- UST is skilled in design/manufacturing of form, fit and function replacement assemblies in dealing with obsolescence mitigation.
- UST is a second solution repair provider who can repair/refurbish assemblies with little to no documentation.
- Highly reliable, cost-effective solutions.
- Engineered products designed to fully integrate into new and existing systems.
- Wide-ranging support for long term product life cycle requirements.
- Our New Jersey facility encompasses over 23,000sf² of engineering, integration, production, and testing facilities with ~35 employees.
- UST is ISO 9001:2015, IPC-610 class III and class II, J-std-001, ROHS compliant.

United Signal Technologies (UST) is an Engineering, Manufacturing and Service company specializing in providing solutions for non-standard RF Microwave & Analog development, Product life cycle support and Engineering design & redesign services.

| RF Microwave & Analog Products | End-to-End Life Cycle Support (Legacy Repair & Depot) | Engineering Services (Design/Development/Support) |
|--|--|---|
| <ul style="list-style-type: none"> ■ RF Power Amplifiers 100MHz to 18GHz ■ Gan (Gallium Nitride), GaAs (Gallium Arsenide), LDMOS (Laterally-diffused) ■ (Metal-oxide), MMIC Based (Monolithic microwave integrated circuit) ■ Custom LNAs (Low Noise Amplifiers) ranging from 500MHz to 20GHz ■ Broadband Amplifiers (100MHz to 20GHz) ■ Custom VCO (Voltage Controlled Oscillator) ranging from 500MHz to 20GHz) ■ Custom Frequency Synthesizers 400MHz to 10GHz | <ul style="list-style-type: none"> ■ Evaluation and Repair/Refurbishment ■ Reverse Engineering ■ Specializing in; <ul style="list-style-type: none"> • Power Supplies • DC/DC & AC/DC • Amplifiers (LNAs, Power) • Up-Converters/Down-Converters • Circuit Card Assemblies • Displays • RF/Microwave Switches • Legacy Radar Equipment • Antennae • High Voltage • Power systems • Communication Systems | <ul style="list-style-type: none"> ■ Form Fit Function Assemblies dealing with Obsolescence Mitigation ■ Rapid Design and Prototype ■ Environmental Qualification ■ Test Fixture Design /Development ■ Specializing In; <ul style="list-style-type: none"> • Power Supplies • RF/Microwave & Analog Product • Circuit Card Assemblies • Integrated Sub-assemblies |



UEE ADVANCED ELECTRONICS
Charleston, SC
62,000 ft²

UEE ADVANCED CIRCUIT TECHNOLOGIES
Rochester, NY
35,000 ft²

UEE SIGNAL TECHNOLOGIES
Fair Lawn, NJ
30,000 ft²

UEE RF MICROWAVE
Sacramento, CA
16,000 ft²