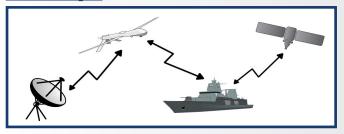
### **RF and Microwave Design and Development** Services

NuWaves is the preferred partner of concept-to-production RF and Microwave Systems and Subsystems. By providing advanced RF/MW expertise in military and defense electronics, we will advance your mission and commit to your project success.

## **Concept to Production**

#### Step 1 Concept



**NuWaves** 

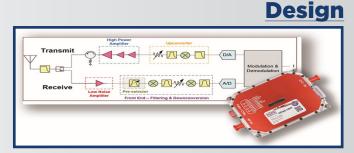
**RF** Solutions

NuWaves provides quick turn design solutions and specification development to address problem statements and opportunities through system level design expertise. NuWaves uses state-of-theart design techniques to provide cost effective solutions to the end user. We offer a full spectrum of RF solutions with a full understanding of the technical challenges.

#### Step 3 Qualification



In-house Military Standard, DO-160 Standard, and system level testing for application specific and platform certification. NuWaves frequently designs and tests to MIL-STD documents and we quickly and cost effectively meet stringent system level qualification requirements. NuWaves has an inhouse anechoic chamber, vibration/shock table, and temperature and humidity chambers to test a wide range of EMI/EMC and environmental conditions for military applications.



We offer a full suite of system and sub-system design, synthesis, and analysis services to advance your RF and Microwave capabilities. NuWaves provides custom designs for power amplifiers, transmitters, receivers and front-ends, high power frequency converters and signal sources, and systems/sub-systems. Quick turn designs are achieved by leveraging our broad range of past experience in designing for military and defense applications.

#### Step 4 Production

Step 2



production with High in-house quantity manufacturing, production, and test team. NuWaves is certified to AS 9100:2016 Rev D and ISO 9001:2015 standards. We provide contract manufacturing for defense, military, and commercial customers. NuWaves is a cost effective, yet high value one-stop-shop offering services from concept to production.

오 132 Edison Drive, Middletown, Ohio 45044



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# **NuWaves RF** Solutions

## **RF and Microwave Design and Development** Services

# **Core Competencies and Key Capabilities**

<ul> <li>Power Amplifiers</li> <li>Power Amplifier Design</li> <li>Bi-directional Amplifiers</li> <li>Transmit/Receive Modules</li> <li>Radio Heads</li> <li>Designs up to 32 GHz</li> </ul>	<ul> <li>Transmitters</li> <li>Wireless Range Extension</li> <li>Radio Heads</li> <li>High-Power Signal Sources</li> <li>Broadband Techniques</li> <li>Specification Development</li> </ul>
Broadband Techniques	110 200
<ul><li>High-Power Signal Sources</li><li>Specification Development</li></ul>	High Power Signal Sources
	and Frequency Converters
<ul> <li>Receiver and Front-Ends</li> <li>Low Power Receivers</li> <li>Low Noise Front-End Amplifiers</li> <li>RF Tuners</li> <li>Modulator and Demodulator Design</li> <li>Specification Development</li> </ul>	<ul> <li>Up-converters/Down-converters</li> <li>Transverters</li> <li>Frequency Conversion</li> <li>RF Frequency Multipliers</li> <li>High-Power Signal Sources</li> <li>Frequency Sources</li> <li>Specification Development</li> </ul>
Systems and Sub-Systems         • RF Propagation Analysis       • GNU Radio Development       • Miniaturization	

- Antenna Modeling, Analysis, and Design
- System Modernization
- System Sustainment
- Vibration Testing
- **EMI** Confidence Testing
- Mechanical Design
- Printed Circuit Board (PCB) Layout
- Circuit Card Test and Manufacturing

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- **Engineering Consulting** Services
- Test Bed Developments
- Gap Analytics and Studies
- Independent Third Party Evaluation
- **Product Reconfiguration**
- **Obsolete Product Repair** ٠
- Research and Development
- Component Replacement Program
- DoD & Aerospace Electronics

- Custom RF and Analog Filters
- **RF** Phase Control
- **RF** Systems Integration
- Custom Synthesizers
- Local Oscillator Distribution
- Low Phase Noise Designs
- Communications Engineering
- Product Development

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