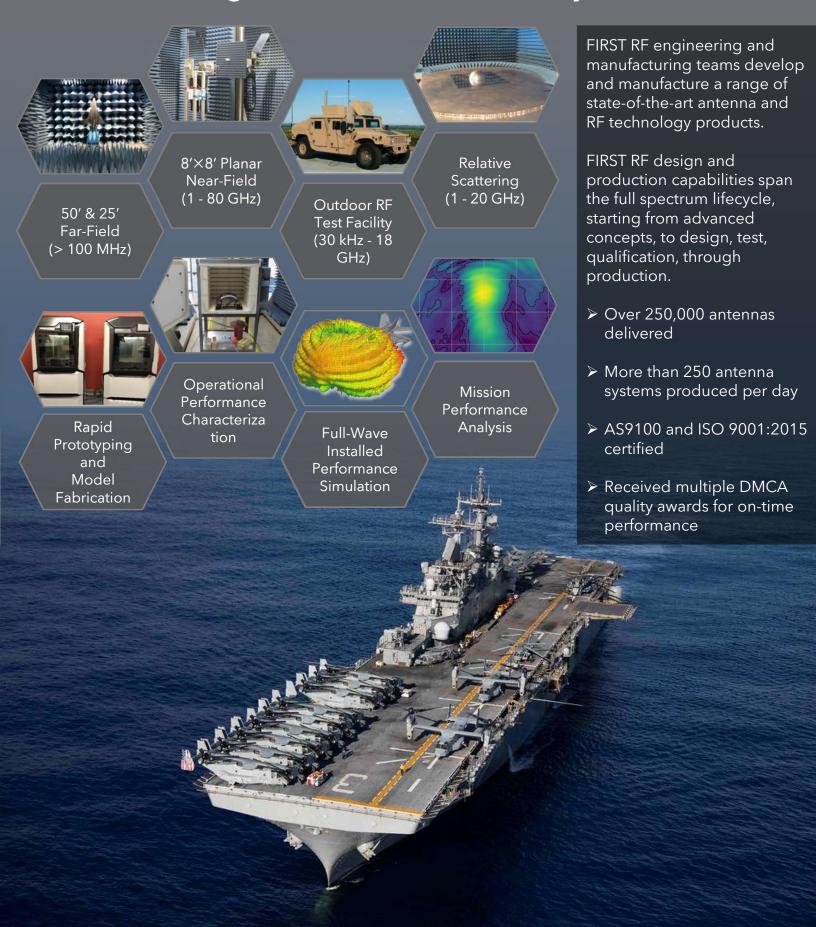


## IN-HOUSE R&D

## Award-Winning Production and Quality



### **TECHNOLOGIES**

## WIDE RANGE OF Customizable Solutions

FIRST RF antennas and RF systems provide affordability, high performance, and reliability, to do more with less. Active programs and products cover the following markets:

- Conformal Antennas
- Electronic Warfare
- Communications
- Radar

FIRST RF markets COTS products and works with customers to develop and modify products that meet unique needs.

FIRST RF has various patents and patent-pending technologies related to ultra broadband antennas, navigation, radar and phased array technology.



# CURRENT TECHNOLOGY AREAS



Broadband Antennas & RF Systems



High Shock High Temp Conformal Antennas



Digital RF Interfaces



High Capacity Back Haul



Low-Cost Phased Arrays



Remote Sensing



Multiband Frequency Converters



Active RF Cancellation



Low Probability of Detection



Multi-Beam Phased Arrays



Covert Comms



Tactical Data Link

In 2005, FIRST RF received the Army's Top 10 Inventions of the Year award, which started as an SBIR contract for a broadband EW antenna system for CREW systems. FIRST RF antenna systems are designed for affordability, reliability, optimum RF and mechanical performance.

#### APPLICATIONS

MMW Communications and Sensing

Fixed and Mobile Radar

> Conformal Antennas

Communications

Navigation and Electronic Warfare



#### PROVEN PERFORMANCE

- > Over 160,000 tactical vehicular antenna systems have been delivered in support of operations in the Middle East.
- Phased array systems, both large and small, for missile defense, SATCOM, ground communications and airborne relays covering from UHF through Ka-Band. Platforms include airborne (manned and unmanned), ground vehicles, amphibious, maritime, and space applications.
- > Munitions antennas: GPS, Low Observable, end-fire/wrap-around antennas, all built at a fraction of the cost of competing solutions.

- Ultra-Wideband Antennas for Electronic Warfare: VHF through C-Band from a single aperture, highpower handling, both mobile and fixed site applications.
- > Airborne Communications antennas for JTRS. TCDL and AMF Programs.
- ➤ Ultra-wideband antennas (300:1 single-structure antenna)
- Low-cost Attitude and Heading Reference (AHRS) System
- Body-wearable antennas
- > Anti-RPG, Sniper Fire Detection, Weather, and **Obstacle Avoidance Radar Antenna Systems**
- Space Reflectors

#### FIRST RF HAS SUCCESSFULLY DEVELOPED TECHNOLOGY WITH...

#### SYSTEMS INTEGRATORS:

SRC, ITT, Raytheon, Northrop Grumman, Lockheed Martin, General Dynamics, Cubic, Argon ST, BAE Systems, Sierra Nevada Corp., Cobham, LGS, and Honeywell.

#### GOVERNMENT CUSTOMERS:

U.S. Army, Air Force, and Navy, Marine Corps, MDA, DARPA; NASA, NOAA; Johns Hopkins **University Applied Physics** Laboratory and the Jet Propulsion Laboratory.

#### UNIVERSITY CUSTOMERS:

University of Colorado, Perdue, University of Massachusetts, and CALTECH.



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