

### MICROWAVE SOLUTIONS

# HIGH CUSTOMIZATION | EFFICIENT PACKAGING SUPERIOR PERFORMANCE

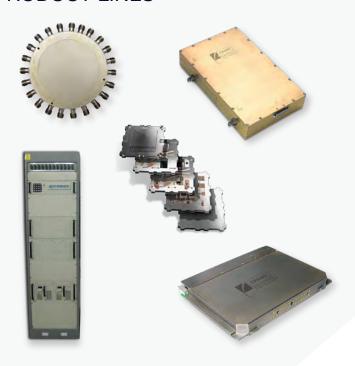
Crane Aerospace & Electronics designs and manufactures high-performance RF, IF and millimeter-wave components, subsystems and systems for commercial aviation, defense, and space. With over 60 years of experience, we have proven capabilities in major military, communications, electronic warfare, radar, and satellite systems.

#### PRODUCT CAPABILITIES

- Beamformers
- Component and Single Function Devices
- Integrated Microwave Assemblies
- Multi-Mix® Multi-Fabrication Technology
- Space Qualified Products
- Switch Matrices



#### PRODUCT LINES



#### INTEGRATED MICROWAVE ASSEMBLIES

Frequency Converter Assemblies: Soft-board and ceramic substrates and topologies (microstrip, stripline, suspended substrate). Small size and high performance.

Complex Oscillator Assemblies: Advanced Frequency Synthesizers, Digitally Tuned Oscillators (DTOs), Phase Locked Oscillators (PLOs), Multiple Output Master Oscillators. Frequencies from 50 MHz to 22 GHz.

Signal Routing and Control Systems: Switch matrices and assemblies covering RF through microwave frequency ranges, varying in application from system redundancy and antenna selection to complex SATCOM teleport applications. Specializing in fulfilling demanding performance applications.

Multi-Mix® Microtechnology: Innovative process for microwave, multilayer integrated circuits and micromultifunction modules (MMFM®) using a fusion bonding process. UHF to millimeter wave.

**Beamformers:** Developed to specific customer requirements for use in phased array systems. UHF to millimeter wave.









#### COMPONENT AND SINGLE FUNCTION DEVICES

Low Noise Fundamental Oscillators: Voltage Controlled Oscillators, Crystal, Dielectric and Coaxial Resonator Oscillators. Frequencies from 50 MHz to 26 GHz.

Ferrite Based Components: Isolators and Circulators; miniature, broadband drop-in units, low to high power. Frequencies from 400 MHz to 26 GHz.

Mixer Products 0.5 MHz. to 26.5 GHz: Double balanced and triple balanced mixers with RF/LO. Frequencies from 0.5 MHz to 26.5 GHz.

Passive and Control Components: Power dividers, directional couplers, hybrids, modulators, phase shifters and other control devices.

Detectors, Limiters, and Comb Generators: Detectors, limiters, and comb generators offering broad frequency ranges and small packages.

Active Signal Detection Products: Log Amps, Detector Log Video Amplifiers (DLVA), and Threshold Detectors. Small packages, multi-octave bandwidths, fast rise and fall times, and advanced CW immune capabilities.

# COUNT ON CRANE AEROSPACE & ELECTRONICS

Crane Aerospace & Electronics delivers mission-critical and innovative components, systems, and services for commercial aircraft, defense, and space markets. Products and services are organized into six integrated solutions: Cabin Systems, Electrical Power Solutions, Fluid Management, Landing Systems, Microwave Solutions, and Sensing Components & Systems.

Partner with Crane, your trusted market leader in demanding commercial aerospace, defense, and space markets. For more information or to request a quote, contact us at www.craneae.com.





## INNOVATIVE | TRUSTED | COLLABORATIVE

340 North Roosevelt Ave. Chandler, AZ 85226 United States Phone: +1 (480) 961-6293 www.craneae.com







The information in this document is a derivative of a document cleared by the Department of Defense (DOD) Office of Security Review (OSR) for public release. OSR case numbers 10-S-0983 dated March 11, 2010, 11-S-1325 dated February 23, 2011 and 13-S-1769 dated August 9, 2013.