

# Unmanned Aerial Systems (UAS)

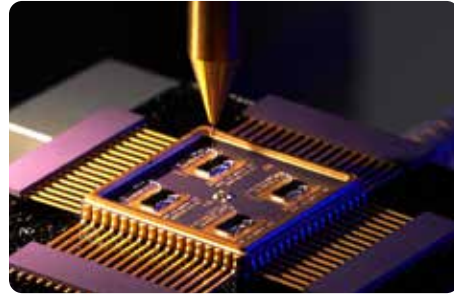


## Increase Scale & Speed with the Leader in Hi-Rel Microelectronics

From Wafer to Flight, Micross provides a complete ecosystem of semiconductor solutions and technologies optimizing size, weight, power, performance, and cost, enabling the next generation of UAS.

- ▶ Offering a comprehensive portfolio of military-grade COTS solutions
- ▶ End-to-end DMEA trusted advanced packaging and test capabilities
- ▶ Miniaturization and power efficiency of electronics, optimizing performance and cost for current and next generation UAS platforms

## Leverage the US-Based Global Leader in High-Reliability Microelectronics



Micross Components supports the U.S. DoD UAS ecosystem with secure, high-reliability microelectronics—while helping programs align to UAS Blue certification expectations for traceability, custody, and U.S.-based manufacturing.

Micross has spent more than 45 years enabling mission-critical aerospace and defense platforms with components, packaging, and test services designed for harsh environments and long program lifecycles. For UAS developers, our focus is straightforward: deliver performance, reduce risk, and provide the documentation required to support compliance.

### 1. Secure, Qualified U.S.-Based Supply Chain

Micross is a DMEA-trusted source and the largest ITAR-registered OSAT provider in the US, ensuring secure microelectronics manufacturing for defense applications. Our U.S.-based facilities deliver deep traceability, obsolescence management, and full custody of supply chain processes—critical for UAS Blue compliance.

### 2. Ease UAS Blue Certification

Micross facilitates UAS compliance through:

- Source Access & Controlled US-Based Processes: All manufacturing and assembly occur within secure, U.S.-based facilities.
- Supply Chain Custody & Traceability: Full traceability from wafer to finished component, minimizing risk and ensuring integrity.
- Audit-Ready Artifacts: Comprehensive qualification reports, process certifications, and compliance evidence available for audit and program assurance.

### 3. Advanced Packaging to Optimize SWaP

Through DoD-backed initiatives, Micross provides secure 2.5D/3D wafer-level integration on 200 mm and 300 mm platforms—enabling significant size, weight, and power (SWaP) reduction for compact, high-performance UAS and Counter-UAS systems.

### 4. Proven Hi Reliability Component Expertise

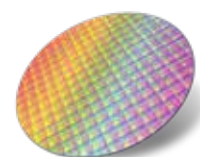
A 45-year heritage of delivering high-reliability components, boards, and services to aerospace and defense programs. Micross provides MIL PRF 38534/38535 Class H/Q/V components, hermetic ICs, MCMs, and advanced power supplies that meet stringent performance and quality standards, along with the most comprehensive end-to-end advanced packaging and test solutions.

### 5. Hi-Rel RF & Microwave Solutions

Our RF/microwave portfolio includes GaN/GaAs amplifiers, PIN switches, multi-chip modules, and attenuators designed for operation up to 40 GHz under MIL STD environmental and radiation-screening conditions.

### 6. Lifecycle Sustainment & Qualification Services

Beyond component supply, Micross provides up-screening, environmental and reliability testing (HTOL/LTOL, HAST, THB), DMSMS/obsolescence support, and long-term die storage for component sustainment—helping keep fielded UAS platforms mission-ready over time.



From Wafer



Die & Wafer



Packaging & Assembly



Component Modification



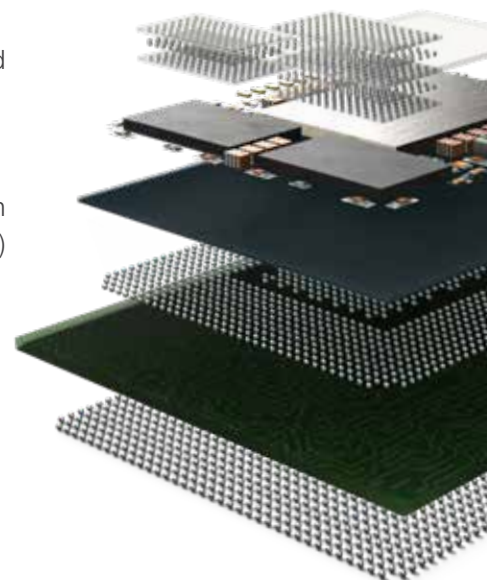
Test & Qualification



COTS & Custom Products



To Flight



## Electronic Warfare



Signal encryption and frequency hopping to protect against jamming and spoofing.

### Micross Solutions

- Signal Conditioning ICs
- RF Power Amplifiers
- Cryptographic ICs
- Low-Noise Amplifiers (LNAs)
- High-Speed Comparators

## Payload Systems

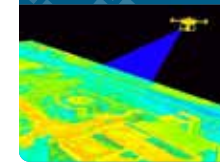


Advanced components ensure efficient processing, communication, and operation.

### Micross Solutions

- Microcontrollers (MCUs) & Microprocessors (MPUs)
- Inertial Measurements Units (IMUs)
- Battery Management (BMS)
- Hall Effect Sensors
- Motor Control ICs

## LiDAR 3D Imaging



LiDAR technology requires high data-rate IC to capture and process high-resolution 3D data.

### Micross Solutions

- Laser Diodes (LDs) & Avalanche Photo-diodes (APDs)
- Signal Processing: ADC/DAC
- Silicon Photonics: Silicon Photomultipliers (SiPMs)
- Micro-Electro-Mechanical Systems (MEMs)
- Pulse Width Modulation

## RF, Radar & Communications



Low noise, high performance RF communications optimize control, navigation, transmission & security.

### Micross Solutions

- Switches, Amplifiers, and Attenuators & Frequency Conversion
- Custom & Multi-Function ICs Integrating Multiple OEM devices
- Power Amplifiers for Stable RF Systems
- RF Testing & Screening
- Phase Shifters for Phased / Steerable Radar Arrays

## AI, Data Processing & Networking



Chiplets and Advanced Packaging Enable real-time decision-making learning, command, and control.

### Micross Solutions

- AI Optimized Chiplets / Advanced 2.5/3D Packaging
- Memory: STT-MRAM, SRAM, DRAM, Flash, Etc.
- Nuclear Event Detectors (NED)
- MIL-STD-1553 Data Bus Components
- Data & Power Couplers, Harnesses and Distribution

## Power Systems



High density & efficient power systems improve flight time and payload capacity

### Micross Solutions

- COTS & Custom Hybrid and PCB DC-DC Power
- High Efficiency and High Density Power Conversion
- MIL-STD-461 EMI Filters: Signal Integrity for Power Systems
- VPX and VNX Architectures
- COTS & Custom Discrete Diodes & Diode Assemblies

## Imaging, Targeting & Tracking



High reliability ICs ensure accurate mapping, targeting, tracking and inspection.

### Micross Solutions

- CMOS, CCD & Backside Illuminated Image Sensors
- Image Signal Processors (ISPs)
- Multi-Core Processors for High Throughput Video Data
- Thermal & Multi-spectral Sensors
- Fiber-optic RX/TX

## PNT & GPS



Positioning and GPS ICs enable reliable positioning, navigation, location and tracking

### Micross Solutions

- UART, I2C, and SPI Interface ICs
- GNSS Receiver ICs
- Accelerometer and gyroscope MEMs
- Clock Generators, Real-Time Clocks (RTC)
- Real-Time Kinematic (RTK) Processing

# End-to-End Microelectronics - From Wafer to Flight

Micross is the Largest US-Based OSAT (Outsourced Semiconductor Assembly & Test) provider of high reliability microelectronics, serving unmanned systems designers with access to end-to-end microelectronic services and technologies.

18 World Class Manufacturing Operations (650,000+ ft<sup>2</sup>) in North America & Europe. AS9100 & ISO9001 Certified.

Micross is a **DMEA Trusted Source** for Microelectronics Packaging, Test, and Process Screening

## Die & Wafer → Packaging & Assembly → Component Modification → Testing & Qualification → COTS & Custom Products



Distribution & Wafer Processing  
Apopka, FL



Packaging & Assembly  
Apopka, FL



RHSD, TCE, BGA Reballing, CGA  
Crewe, UK



Test & Qualification  
Clearwater, FL



Hi-Rel Components  
Apopka, FL



PCB Power  
Ballerup, DK



Distribution & Wafer Processing  
Los Alamitos, CA



Packaging & Assembly  
Milpitas, CA



RHSD, Lead Attach, Trim & Form  
Manchester, NH



Test, Qualification, & Upscreening  
Milpitas, CA



Hi-Rel Components  
Portsmouth, UK



Hi-Rel Diodes  
Reynosa, MX



Wafer Processing  
Milpitas, CA



Packaging & Assembly  
Portsmouth, UK



BGA Reballing & Component Harvest  
Round Rock, TX



Test & Qualification  
Wichita, KS



Hybrid Power  
San Jose, CA



Hi-Rel RF  
Shirley, MA



Distribution & Wafer Processing  
Norwich, UK



2.5/3D Heterogeneous Integration  
Raleigh, NC



Couplers & Harnesses  
Sunrise, FL

## Serving Leading Manufacturers of Unmanned Systems, Including...



### Micross Heritage

With Over 45+ Years Experience, Micross has Strengthened it's Capabilities to Offer the Broadest Microelectronic Solutions Available from One Source.



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