Space

Hi-Rel Market Solutions

With 45+ years of space heritage and over 100,000 units in service, Micross is the one source solution for hi-rel microelectronics... from product design through manufacture, test, and qualification.

micross®

one source. one solution.®

SPACE-GRADE SOLUTIONS

Control, Communications & RF Sensors

- GaN Power Amplifiers
- Switches
- Attenuators
- Low Noise Amplifiers
- Dedicated RF Communications
- Various Serial Communications Protocols
- Integrated Phased Array Antenna Electronics

Power Control & Battery Management

- DC-DC Hybrid Power Modules
- Custom DC-DC PCB Power Solutions
- JANS Diodes
- Hi-Rel Hermetic Packaging
- Switching Regulators

Optimized Microelectronics

- Advanced Hi-Rel Packaging & Integration
- PEMS Upscreening & Qualification
- 2.5/3D Heterogeneous Integration
- Component Modification: RHSD, BGA Reballing, CGA Attach

Data Processing & Networking

- Discrete Logic, MRAM, Analog Building Blocks & Power Modules
- MIL-STD-1553 Data Bus Couplers
- Harness Assemblies
- Optical Transceivers

FULL TURNKEY FLIGHT MODEL SOLUTION

- Support Chip Design
- Wafer Processing
- Packaging Design
- Assembly
- Environmental Screening
- Electrical Test & Burn-In
- Lot Validation Tests
- Final Product

45^+ YEARS OF SPACE FLIGHT HERITAGE

WITH $100,000^+$ UNITS IN SPACE

NASA • esa • JAXA • इसरो isro

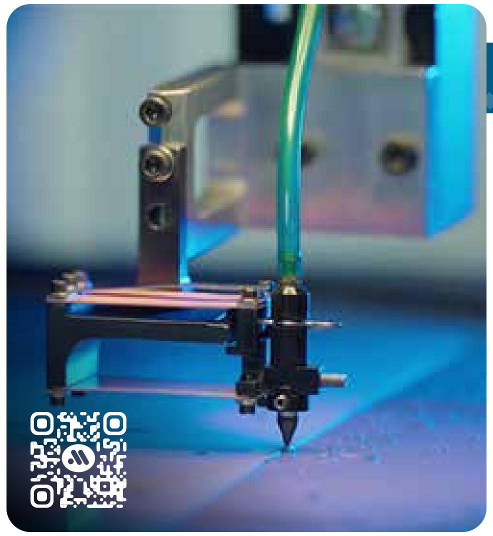
OPIR • METOP • Earthcare • Vulcan • SWARM • Aerion • Sentinel Gallileo • AEHF TerraSAR-X • Cassini • Milstar • GPS • GOES Delta • CentaurSA • Atlas

Distribution

Largest Franchised Offering of Bare Die & Wafer

Complete Line Card at micross.com/die-distribution

APOGEE SEMICONDUCTOR
ANALOG DEVICES
avalanche technology
MICROCHIP
ISOCOM LIMITED
RENESAS
TEXAS INSTRUMENTS
Wolfspeed



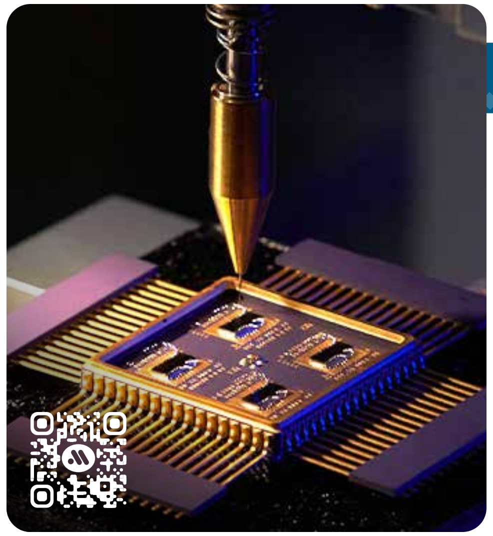
Wafer Processing

One Source for You Bare Die & Wafer Needs

micross.com/wafer-processing

Micross is the largest worldwide value-added bare die processor with a comprehensive array of capabilities to fully process wafers, including:

- Wafer Probe
- Wafer Bumping & RDL
- Wafer Mapping / Wafer Inking
- Wafer Thinning
- Wafer Dicing / Sawing
- Die Plating / Pick & Place
- Visual Inspection
- Customized Outputs



Packaging & Assembly

Complete Packaging & Assembly Solutions

micross.com/component-design-packaging

Micross has the industries broadest range of formats and technologies with complete test capabilites.

- Ceramic 400/600 mil DIP
- Small Outline J-Lead
- 2 and 4-Sided LCC
- Zig-Zag
- Gull-Wing
- Ceramic Quad Flat Pack
- Ceramic Pin Grid Array
- Flat Pack
- Formed Lead Flat Pack
- Metal Can

Hi-Rel ICs & Components

QML Certified Supplier

micross.com/hi-rel-ics-components

Micross is certified to MIL-PRF-38535 Class Q & V and MIL-PRF-38534 Class H, with over 1,800 SMD part numbers.

- Memory: STT-MRAM, SDRAM, DDR2, DDR3, EPROM...
- Optocouplers
- GaN, SiC, Power Devices
- MIL-STD-1553 Data Bus
- Logic Devices
- Analog
- Component Distribution

DC-DC Power Conversion

Leader in Power Management Solutions

micross.com/hi-rel-power-solutions

Our standard and radiation-hardened converters are at the heart of systems powering mankind's most mission critical applications.

- MIL-PRF-38534 Class K Hermetic Hybrid DC-DC Converters: 5W - 120W
- MIL-PRF-38534 Class H Hermetic Hybrid DC-DC Converters: 5W - 20W
- Space-Grade Custom Board Based DC-DC Converters: 5W - 400W
- MIL-PRF-38534 EMI Filters

RF & Microwave

Streamline Development & Reduce Risk

micross.com/hi-rel-rf-solutions

Over 20 years of custom and COTS RF & microwave solutions for space... with zero flight failures!

- Switches: GaAs, PIN, SPSI through SP8I Available with Driver
- Amplifiers: LNAs, Driver Amplifiers, & Power Amplifiers in GaAs or GaN
- Attenuators: VVAs or DSAs With or Without Driver
- Frequency Conversion: Vector Modulators, Frequency Multipliers

Diodes & ISOPAC® Assemblies

Hermetic, Non-Cavity, Double-Plug Construction

micross.com/hi-rel-diodes

Micross designs and manufactures discrete power products in axial and surface-mount packages, as well as custom assemblies.

- Zener Diodes: Power Ratings of 1.5W and 5W
- Rectifier Diodes: JANS Standard, Fast & Ultrafast Recovery
- TVS Diodes: JANS, Power Ratings of 500W and 1500W
- Schottky Diodes: JANS, 40V, 3A

Testing & Qualification

Meeting Critical Program Requirements

micross.com/silicon-turnkey-solutions

Our core engineering and manufacturing strengths provide advanced solutions in environmental, electrical test and specialty packaging.

- Component and Board Test/Inspection & Qualification
- RF & Digital, Electrical & Environmental Testing
- Burn-In & Mechanical Reliability Testing
- Wafer Probe and Turnkey Test & Device Characterization

Couplers & Harness Assemblies

20+ Years of Space Flight Heritage

micross.com/data-bus-products

Micross is a best-in-class supplier of MIL-STD-1553 data bus couplers and harness assemblies and RF/wideband transformers

- In-Line Couplers
- Configurable with Single and Dual Termination
- Configurable Options for Lead Wire
- Box Couplers
- Custom Wiring Harnesses

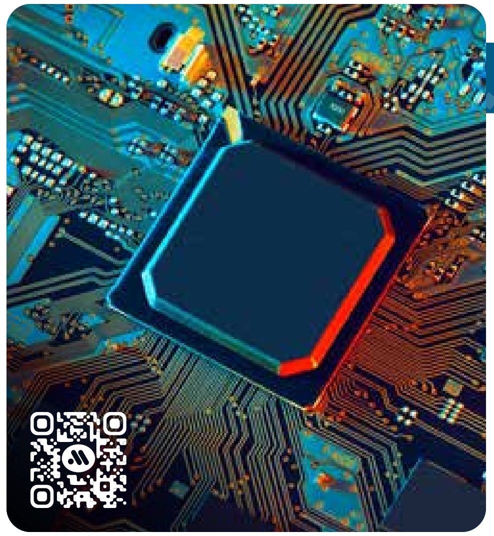
PEMS Upscreening

Complete PEMS/COTS Upscreening & Qual.

micross.com/cots-up-screening

Overcome the challenges of sourcing high-reliability custom component solutions, upscreen the latest commercial technology for your application.

- Screening to NASA Instructions (PEM-INST-001) and Custom Requirements
- Advanced Automated Test Capabilities: VLSI & High Power RF
- FPGAs, Processors, SoC, ASICs, RF, Memory, Analog, Digital, Mixed Signal and Logic Devices
- Designed-for-Test (DFT) or Designed-for-Manufacture (DFM) Development



Adv. Packaging & Integration

DMEA Trusted Source: Post CMOS Processing

micross.com/adv-interconnect-technologies

Micross AIT offers advanced packaging and 3D integration solutions that enable higher performance systems with decreased SWaP.

- 300mm Wafer Processing Capabilities
- 2.5 & 3D Heterogeneous Integration
- Through-Silicon Vias (TSV)
- Si Redistribution Layers (RDL)
- Wafer Bumping & Wafer Level Packaging
- Novel Microfabrications & MEMS

Component Modification

Best-in-Class Proprietary Processes

micross.com/component-modification

From pioneering RHSD in 1984, Micross remains the leader as the one source solution for component services. Turnkey & SMI available.

- Robotic Hot Solder Dip (RHSD)
- BGA Reballing
- Tin Whisker Elimination & Gold Embrittlement Mitigation
- Lead Attach, Trim, Form, and Reconditioning
- CGA Attach – Mitigate the Effects of CTE Mismatch, Shock & Vibration

One Source. One Solution.

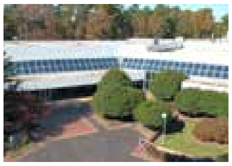
NORTH AMERICA

Apopka, FL
Die & Hi-Rel Components

Woburn, MA
Die Express

San Jose, CA
Hi-Rel Power Solutions

Sunrise, FL
Data Bus Products



Raleigh, NC
Adv. Interconnect Technology

Milpitas, CA
Silicon Turnkey Solutions

Shirley, MA
RF & Microwave Solutions

Reynosa, MX
Hi-Rel Diodes

Clearwater, FL
Counterfeit Mitigation Testing

Manchester, NH
Component Modification

Round Rock, TX
Component Modification

Melville, NY
Headquarters

EMEA & APAC

Norwich, UK
Die & Wafer Solutions

Portchester, UK
Hi-Rel Components

Herlev, DK
Hi-Rel Power Solutions

Crewe, UK
Component Modification

Portsmouth, UK
Hi-Rel Components

Engineering & Program Management Support

Micross' Highly Experienced Global Field Sales, and Expert Engineering Teams Provide Complete Application Support from Design Specification to Post-Production Sustainment and Program Management.

About Micross

Micross is the most complete provider of advanced microelectronic services and component, die and wafer solutions. With the broadest authorized access to die & wafer suppliers, an extensive portfolio of hi-rel power, RF, optoelectronics, memory, data bus, logic, and SMD/5962 qualified products, and the most comprehensive advanced packaging, assembly, modification, upscreening, and test capabilities, Micross is uniquely positioned to provide unparalleled high-reliability solutions, from bare die, to fully packaged devices including hermetic ICs/MCMs, PEMs, ASICs, FPGAs, and PCBs, to complete program life-cycle sustainment. For more than 45 years, Micross has been a trusted source for the aerospace, defense, space, medical, energy, communications, and industrial markets.

micross®
one source. one solution.®

Quote Request:	micross.com/quotes
General Request:	micross.com/info
Technical Support:	micross.com/tech-support