Space Products & Capabilities

• Full TurnKey Flight Model Solution
• Comprehensive Test Capability including Mixed Signal ASIC
• In-house Test Hardware And Software
• In-house Burn-In Platform Development
• High Pin Count CQFP And CGA Packaging
• Monolithic & Multi-Chip Modules
• Column Grid Array (CGA) QML Certified Line
• CTE enhancement of lead-less carriers (BTCE)
• Broad Component Expertise
• Highest Level of Quality & Customized Support
• Customized Customer SCD’s
• Radiation Testing Support
• ESA ESCC 9000 Component Processing
• MIL-PRF-38535 V-Level Assembly
• MIL-PRF-38534 Class K

Support Chip Design & Wafer Fabrication
Wafer Probe
Wafer Saw
Die Inspection
Hermetic Packaging Design & Selection
Assembly Including CGA
Environmental Screening
Electrical Test & Burn-In
Lot Validation Tests
Fully Qualified Flight Model
Space Capabilities

Support Chip Design & Wafer Fabrication

Assembly Including CGA

Wafer Probe

Environmental Screening

Wafer Saw

Electrical Test & Burn-In

Die Inspection

Hermetic Packaging Design & Selection

Lot Validation Tests
Micross is the leading one-source, one-solution global provider of Bare Die & Wafers, Advanced Interconnect Technology, Custom Packaging & Assembly, Component Modification Services, Electrical & Environmental Testing and Hi-Rel Products to manufacturers and users of semiconductor devices. In business for more than 35 years, our comprehensive array of high-reliability capabilities serve the global Defense, Space, Medical, Industrial and Fabless Semiconductor markets. Micross possesses the sourcing, packaging, assembly, test and logistics expertise needed to support an application throughout its entire program cycle.

The devices contained in the table below are representative of the variety, complexity and breath of space products for which Micross has proven manufacturing capability.

<table>
<thead>
<tr>
<th>DISCRETE</th>
<th>INTERFACE</th>
<th>MIXED SIGNAL</th>
<th>LINEAR</th>
<th>MEMORY</th>
<th>VLSI</th>
<th>SPECIAL FUNCTION</th>
<th>LOGIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diode</td>
<td>Analog MUX</td>
<td>A/D Converter</td>
<td>Analog Gate</td>
<td>DRAM</td>
<td>4 bit Slice Microprocessor</td>
<td>Data Synchronizer</td>
<td>BI-Bus Transceiver</td>
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<tr>
<td>Diode Array</td>
<td>Analog Switch</td>
<td>Controller</td>
<td>Analog Switch</td>
<td>Dual-Port RAM</td>
<td>DMA Address Generator</td>
<td>Avionic Receiver-Transmitter</td>
<td>BICMOS</td>
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<tr>
<td>Diode Bridge</td>
<td>Clock Driver</td>
<td>D/A Converter</td>
<td>Current Switch</td>
<td>ECL/PAM</td>
<td>Dual-Rate Demodulator</td>
<td>Cache Tag RAM</td>
<td>CMOS</td>
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<tr>
<td>FET Array</td>
<td>Decoder/Counter Driver</td>
<td>Custom IC</td>
<td>Current Buffer</td>
<td>EEPROM</td>
<td>FFT Processor LAN</td>
<td>Checker/Generator</td>
<td>STL</td>
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<tr>
<td>Hall Effect Switch</td>
<td>Driver</td>
<td>PLLs</td>
<td>Four Quadrant Multiplier</td>
<td>FIFO</td>
<td>Control Peripherals</td>
<td>Clock Generator</td>
<td>ECL</td>
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<tr>
<td>IGBT Transistor</td>
<td>Line Driver</td>
<td>DSP based measurements</td>
<td>Instrumentation AMP</td>
<td>Module</td>
<td>SARAM, SSRAM</td>
<td>Data Synchronizer</td>
<td>PLD</td>
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<tr>
<td>MOSFET Transistor Array</td>
<td>Logic Level Driver</td>
<td>LVDS drivers &amp; health monitoring</td>
<td>Log Amp</td>
<td>Nonvolatile RAM</td>
<td>SDRAM, DDR</td>
<td>DC-DC Converter</td>
<td>Serial Adapter</td>
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<tr>
<td>Optocoupler</td>
<td>MOSFET Driver</td>
<td>DC Characterization</td>
<td>Phase Decoder</td>
<td>PROM</td>
<td>DDR3</td>
<td>Four Phase Clock Driver</td>
<td>Shift Register</td>
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<tr>
<td>Optocoupler/Transistor</td>
<td>Motor Controller</td>
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<td>Phase Locked Loop</td>
<td>Scatter/Peripherals</td>
<td>VLSI</td>
<td>Freq. To Digital Converter</td>
<td>TTL (L, LS, AS, S, H, etc.)</td>
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<td>Multiplexer</td>
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<td>RMS Sensor</td>
<td>SCI Controller</td>
<td>FPGA</td>
<td>Function Generator</td>
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<td>VCO</td>
<td>Log Adder</td>
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<td>SiC diodes</td>
<td>Power Driver</td>
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<td>Voltage Comparator</td>
<td>Manchester Encoder/Decoder</td>
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<td>Supervisory</td>
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<td>Voltage Follower</td>
<td>Nuclear Event Detector</td>
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<td>Voltage Reference</td>
<td>Phase-Freq. Detector</td>
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<td>Tri-Quint Counter</td>
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<td>Voltage To Freq.</td>
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<td>Converter</td>
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</tbody>
</table>

A SELECTION OF SPACE PROGRAMS THAT MICROSS HAS PARTICIPATED IN:

- Cassini
- NPOESS
- AEHF 1-6
- Milstar
- Astrolink
- Aeron
- SWARM
- Sentinel
- Earthcare
- Metop 2nd Generation
- TerraSAR-X

April 09, 2018 • Revision 1.2
QUALIFICATIONS

• Certified to V-Level Class S for MIL-PRF-38535. MIL-PRF-38535 Qualified Manufacturer Listing (QML) Certification for Column Attach
• Pursuing Class ‘K’ for MIL-PRF-38534 for programs requiring space level processing for hybrids and memory modules.
• ESA ESCC 9000 Component Processing
• NASA NSTS 5300.4 and EEE-INST-002 Plastic Up-qual.
• Certified to AS9100 and ISO9001.
• Radiation shielded packaging available. Boosts TID by >6X.
• Regularly audited by DSCC, hundreds of customers and various DOD agencies.
• Micross employee experience levels contribute tremendously to the final product quality and reliability levels. Average employee experience is 15+ years.
• Poised to meet the toughest customer specifications and standards.
• DSCC QML
  - MIL-PRF-38534, Class H and Class K
  - MIL-PRF-38535, Class Q
  - MIL-PRF-38535, Class V (assembly only)
  - Laboratory Suitability (MIL-STD-883)
• SMD, Q level and M level
• NSTS 5300.4
• EEE-INST-002
• ECSS-ST-60-13
• MIL-STD-883, Commercial Laboratory Suitability
• Capabilities for Class S Manufacturing
• Customer-specific, Source Control Drawing (SCD)