
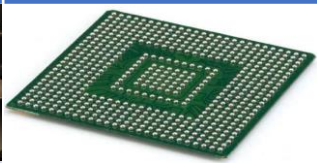
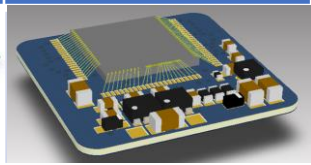


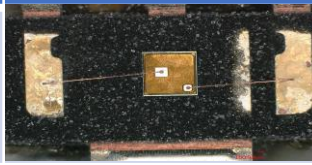


*Integra Technologies is a global provider of semiconductor die prep, packaging, assembly, test, reliability qualification, DPA and FA services for high-reliability applications*

Die Prep	Packaging & Assembly	Advanced Packaging & Assembly	Electrical Testing	Reliability Qualification	DPA & FA
					
<p><b>Wafer Thinning &amp; Polishing:</b> Final target thicknesses down to 50um in production (down to 10um in engineering) for wafer sizes up to 300mm.</p>	<p><b>Standard IC Packages:</b> Plastic Hermetic &amp; Ceramic; QFN &amp; DFN; Flip Chip; Ball Grid Array (BGA).</p>	<p><b>System-in-Package (SiP) Module:</b> Turnkey design, assembly &amp; final test solution development.</p>	<p><b>Test Software Development:</b> Characterization, production, NPI volumes: RF, Mixed Signal, Analog, Linear, Digital, Imaging &amp; Power devices.</p>	<p><b>Plastic Encapsulated Microcircuit (PEM) Qualification:</b> &gt;1,000 lots processed to NASA PEM-INST-001 &amp; custom flows.</p>	<p>Control Laser Corporation FALIT Laser Ablation system for advanced decapsulation of Copper and Silver Bond Wire ICs.</p>
<p><b>Wafer Dicing:</b> Full-Auto Disco systems for wafers up to 300mm; Dice Before Grind (DBG) process for eliminating backside chips.</p>	<p><b>Die-Attach:</b> non-conductive &amp; conductive Epoxy; Eutectic Solder; Silver Glass.</p>	<p><b>Multi-Chip Module (MCM):</b> Turnkey design, assembly &amp; final test solution development.</p>	<p>Experienced in Military test flows for 883/750 designated packages &amp; <b>up-screening</b> of COTS. Full temperature range of -55C to +200C.</p>	<p><b>Device Reliability Qual:</b> JEDEC &amp; MIL-STD. HTOL, ELFR, IME, Burn-In up to +175C. LTOL to -65C. RF HTOL capable, HV 500V+.</p>	<p><b>Destructive Physical Analysis (DPA):</b> Comprehensive MIL-STD-1580, 883, 750, 202 services for all device technologies.</p>
<p><b>Die Pick:</b> Outputs to waffle pack, Gel Pak, film frame, and tape &amp; reel; Electronic map reading capabilities for picking inkless wafers.</p>	<p><b>Interconnect:</b> Flip-Chip Bond; Gold Ball Bond; Gold Wedge &amp; Aluminum Wedge Bonds.</p>	<p><b>BOM Selection:</b> Assist in selection, sourcing &amp; purchasing BOM.</p>	<p><b>Wafer Probe:</b> Up to 300mm wafer probe, -40C to +150C. Production volume, NPI &amp; Manual Characterization. <b>Bare Die testing</b> is available.</p>	<p><b>Package Reliability Qual:</b> JEDEC &amp; MIL-STD. THB (85/85) / HAST, biased &amp; unbiased. Temp Cycling. In-house MSL Qual.</p>	<p><b>Failure Analysis (FA):</b> Fully equipped lab for root cause failure mechanisms. Package and die level construction analysis.</p>
<p><b>Die Inspection:</b> Automated and manual visual inspections to commercial, military, medical, space, and custom specifications.</p>	<p><b>Encapsulation:</b> Transfer Mold; Glob-Top/Dam &amp; Fill; Lid options; Lid Seal options.</p>	<p><b>Program Management:</b> New package introduction to technology transfer to large volume offshore factories.</p>	<p><b>Package Test:</b> 3mm X 3mm to 45mm X 45mm automated tray to tray, room to +135C Tube to Tube, SOIC, PLCC, DIP, -40C to +135C.</p>	<p><b>Additional Services:</b> Laser or Ink mark, Lead or Ball scan, Tape &amp; Reel, Dry Bag, FGI drop ship services available.</p>	<p><b>Additional Services:</b> Particle Impact Noise Detection (PIND); X-Ray Fluorescence (XRF); Fine &amp; Gross Seal Test.</p>