
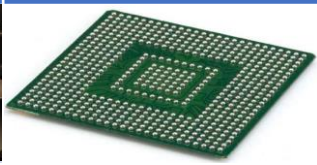
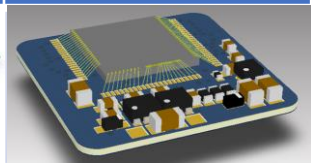


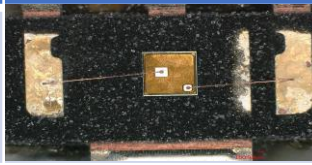


Integra Technologies is a global provider of semiconductor die prep, packaging, assembly, test, reliability qualification, DPA and FA services for high-reliability applications

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