

## ZARLINK ADVANCED PACKAGING

### Expertise in micro-packing—smaller, faster, more reliable

Zarlink's Advanced Packaging division delivers a competitive advantage for its customers by miniaturising electronic components to create smaller, smarter and more reliable circuit solutions with a board footprint significantly smaller than individual ICs.

### Proven Micro-Packaging Expertise

With a track record of success in designing and developing Advanced Packaging modules, Zarlink's micro-packing expertise is at the heart of mission-critical and cutting-edge medical, telecom, industrial, aerospace and military applications.

- Key technology in ultra-reliable applications, such as pacemakers, defibrillators and hearing aids
- Designed and assembled a module for the world's smallest pacemaker
- Developed patented in-body antenna technology for medical products
- Designed world's smallest network timing module for Stratum 3 applications
- Developed "circuit on steel" packaging technology that halves the footprint of motor drive controllers and enhances reliability
- Developed and manufactured low-cost microwave splitter components

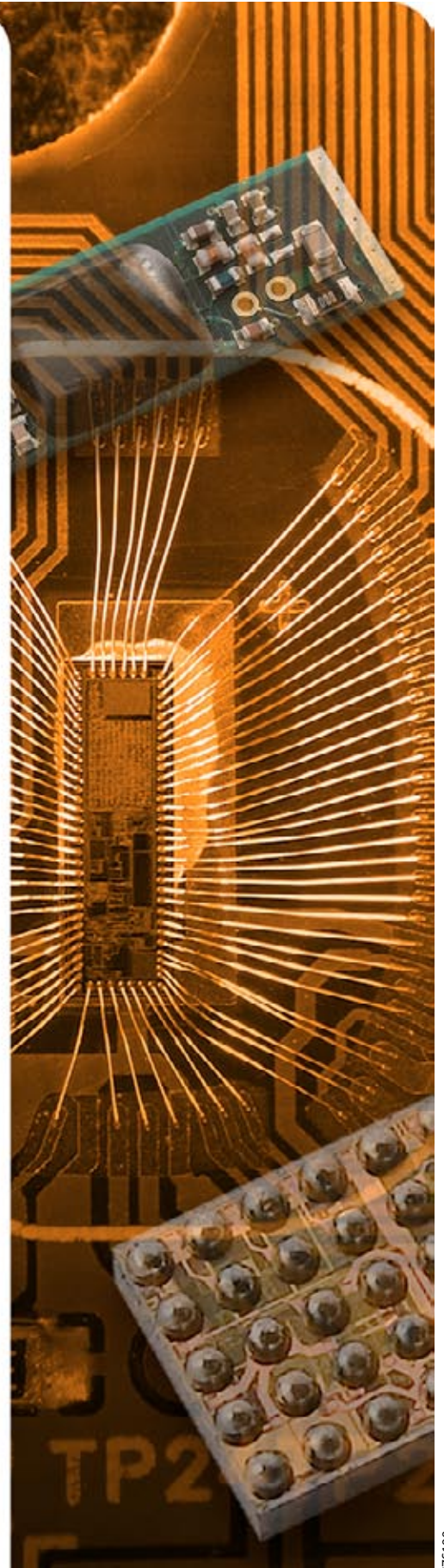
### Packaging Technologies

Zarlink Advanced Packaging specialises in the custom design and manufacture of electronic packaging and supports all major technologies, including:

- Hermetic die packaging
- Flip chip
- SIP (system-in-a-package)
- RF PCB and BGA modules
- Die stacking
- Flexible substrates
- Optical module assembly

### Improve Performance, Reduce Cost

Our packaging solutions enhance circuit and thermal performance capabilities with increased product reliability. SIP technology delivers significant reductions in both design cost and time-to-market over competing custom silicon options.



## Leader in Micro-Packaging Design and Manufacturing

Zarlink Advanced Packaging employs over 40 engineers supported by the latest hardware and software design tools to provide one of the most experienced Advanced Packaging design facilities in Europe. This integrated research, design and manufacturing facility is supported with onsite business services, sales and project management capabilities for seamless customer service delivery.

### Design Expertise

- Analogue, digital, RF and antenna circuit design
- Design integrity—modelling, simulation and FMEA
- Design verification—test system design and implementation
- Commercial evaluation—design for manufacture and value engineering
- Analysis and design documentation—3D CAD (Pro Engineer)
- PCB and ceramic substrate design using latest PCB layout software
- Rapid prototyping processes
- Knowledge of worldwide medical and telecom standards

### Manufacturing Capabilities

- Class 1000 clean rooms for medical micro assembly
- SMT pick & place/reflow
- Die placement
- Wire bonding
- Component test & marking
- Mixed signal electrical test
- Traceability back to individual silicon wafer number



### Zarlink Advanced Packaging

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