

# LIFECYCLE & COMPONENT SOLUTIONS

## IC Interposers & BGA Reballing

For over 30 years, ISI has been a trusted resource to help companies solve their most critical and complex microelectronics development challenges

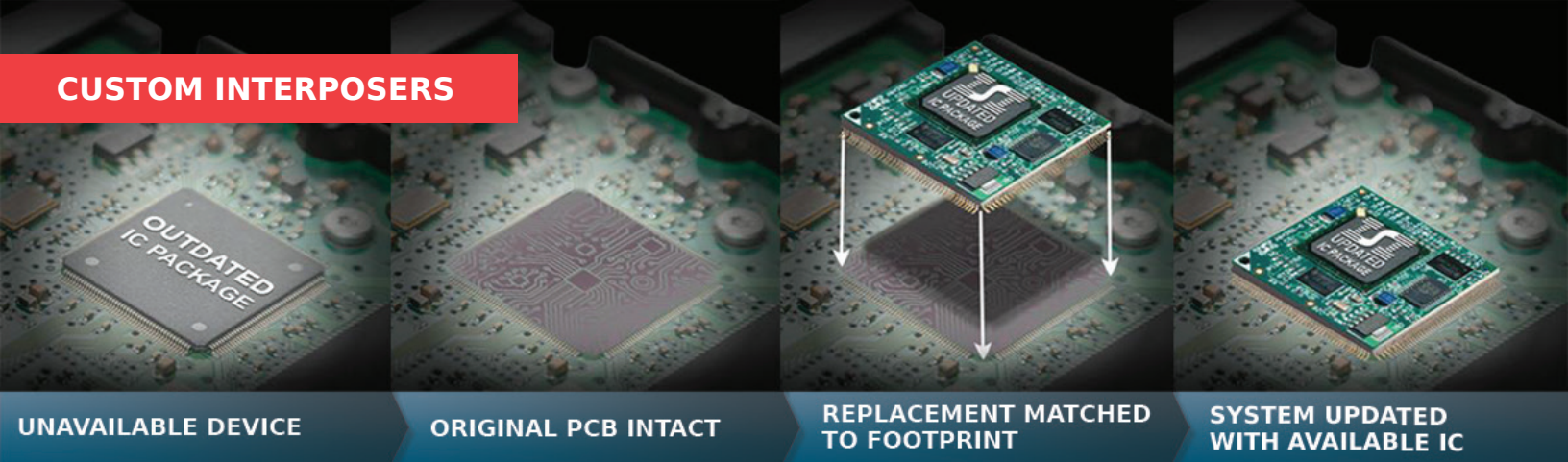
### Lifecycle Solutions

- Replace unavailable devices/ICs
- Eliminate costly board respin
- Avoid gray market and lifetime buys

### Component Solutions

- We reball 100,000+ BGAs annually
- 100% automated optical inspection
- Any pitch, any package, any alloy

## CUSTOM INTERPOSERS



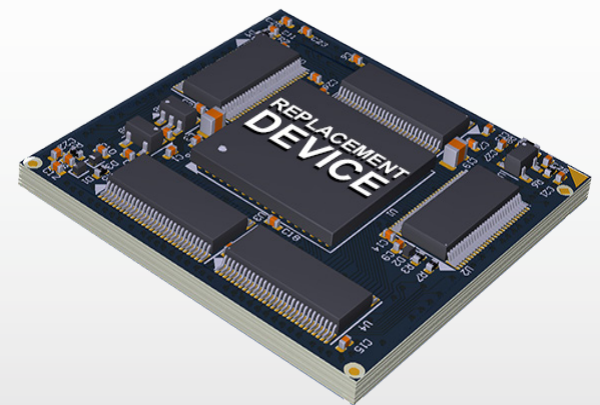
# Replace Unavailable or Obsolete ICs and Avoid Costly PCB Respins with a Customized Interposer

ISI is an industry leader as the world's largest volume IC manufacturer of customized adapter products, designing approximately 150 new adapters each year to help customers through semiconductor shortages, outages, FPGA EOL, FPGA PDN, etc.

We provide a complete turn-key assembly by purchasing all the required components, solder the components to the top of the adapter, and test the completed assembly.

## Quickly Convert Any Package, Style & Pitch

- Overmolding available to encapsulate assembly
- Ultra-thin laminate substrates
- Custom high-performance interconnects
- Automated IC placement equipment
- In-house, high-volume manufacturing capabilities
- JTAG and electrical test capabilities



## Adapt to Any Footprint

Replace any standard IC package

- BGA Adapters
- QFP, SSOP, SOIC, etc.
- PGA/DIP/SIP Adapters

## BGA REBALLING

ISI's process of BGA reballing involves the removal of original solder spheres then attaching replacement spheres of a different alloy. ISI offers solutions to meet any customer's configuration requirements.

- Certified to meet stringent industry criteria
- Cost-effective for high-volume applications
- Any pitch, any package, any alloy
- IC recovery/harvesting
- **Expedited 3-5 day turn time available**

