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## Quilt packaging advanced interconnect technology for biomedical applications

Microelectronics plays an increasingly important role in biomedical technology and healthcare delivery and data collection. System optimization of decreased size and power consumption are critical for continued adoption of such technologies, and advanced packaging of microelectronic circuits and sensors will play an expanding role in the ability of patients and healthcare providers to unobtrusively utilize these new electronics systems. The semiconductor industry has generally been focusing on relatively straightforward integration of similar materials and processes to achieve cost benefits and performance increases. Traditionally, this integration has been in the microelectronics packaging in the form of wire-bonds, bumping, or more recently chip stacking with TSV (Through-Silicon-Via). However, these approaches leave much to be desired for the integration of disparate materials, process technologies and sensor systems requiring low latency, wide bandwidth and various substrate materials. An alternative to these approaches is "Quilt Packaging" interconnect technology, which delivers monolithic-like electrical performance enabling sub-micron chip-to-chip alignment accuracy. Quilt packaging is currently being developed for multiple applications for biomedical purposes, specifically MEMs sensors and optical systems integration.

### Biography

Jason M Kulick is currently the President, Co-Founder of Indiana Integrated Circuits LLC, USA. He has led IIC through startup, licensing, multiple projects & investment rounds since 2009. He serves as the Principal Investigator on IIC research projects & oversees day-to-day operations and responsible for new business development & customer engagement besides intellectual property protection, valuation & licensing. He is an Inventor on several pending patents, author or co-author on over 25 peer-reviewed publications.

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