Silex Microsystems and BroadPak Bring 2.5D IC Packaging Capabilities to the Mainstream Market through Low-Cost, High-Performance Silicon Interposers

Silex Microsystems - April 08, 2013

JARFALLA, Sweden and SAN JOSE, Calif., April 8, 2013 – Silex Microsystems, the world's largest pure-play MEMS foundry, and BroadPak, a leading provider of ultra-high performance 2.5D silicon interposer and 3D integration technologies, today announced the immediate availability of their jointly developed silicon interposer solution in high-volume manufacturing. Leveraging the advanced interposer co-design methodology and system integration expertise of BroadPak with the proven interposer manufacturing capabilities of Silex, this new solution delivers a cost-effective, ultra-high performance, reliable and high-yield silicon interposer that will enable a broader market to realize the benefits of 2.5D packaging.

While market analyst firm Yole Developement expects the market for interposers to grow by 88% annually through 2017, Silex and BroadPak believe their partnership can accelerate this market adoption by overcoming the cost, engineering, reliability and supply chain bottlenecks. 3D-IC designs are widely recognized as the next step towards meeting the growing performance
requirements such as increased bandwidth, reduced latency, and lower power. 2.5D silicon interposers, which are double-sided die used to stack chips side by side, have emerged as the most effective way to accelerate the adoption of 3D-IC, but these solutions are costly and complex, which presents significant design, integration, reliability and supply chain challenges. Recognizing these bottlenecks, Silex (which has been successfully shipping silicon interposers since 2005) and BroadPak (which has delivered some of the most advanced ultra-high performance substrates in the industry) combined their expertise to deliver a complete 2.5D silicon interposer solution that solves these hurdles that have prevented many companies from participating in this space.

"This partnership is a critical step in enabling companies to benefit from silicon interposers because most companies don't have the integration techniques and methodologies to even start a 2.5D IC design and the current solutions have been too costly and high-risk to implement," said Peter Himes, Vice President of Marketing and Strategic Alliances for Silex Microsystems. "The combined Silex/BroadPak solution opens up this market to a very large portion of customers that have been unable to compete in this space due to overwhelming cost, engineering and integration challenges."

"BroadPak and Silex have created a technical solution and the supply chain infrastructure that the industry has been waiting for," said Farhang Yazdani, President and CEO of BroadPak. "To date, silicon interposer technology has been limited to a very small number of companies. We are now enabling the mass adoption of silicon interposer by lowering the cost and providing the co-design, heterogeneous integration and the required supply chain infrastructure in a complete package."

**About the Silex/BroadPak Solution**

The new Silex/BroadPak solution is ideally suited for a wide range of applications such as power, mixed signal, networking, consumer, microcontroller and embedded processor-based applications. The solution consists of a robust interposer for 2.5D packaging, which has been designed and characterized for thermal-stress and signal integrity performance by BroadPak and also optimized for manufacturing by Silex. The unique challenges of 2.5D/3D-IC packaging require special engineering expertise to deliver cost effective solutions to meet the reliability, warpage and signal/power integrity requirements of the packaged components as well as an optimized and robust manufacturing process. The Silex/BroadPak partnership has been formed to meet this critical need for the industry.

**Program Availability**

The Silex/BroadPak solution has been tested and verified and the two companies have successfully produced samples and prototypes. Customers interested in more information can contact BroadPak at +1 (408) 922-9006, (e-mail: inquiry@broadpak.com) for a full discussion of the engineered packaging options and supply chain management through this partnership.

**About Silex 3D and Interposer Technology**

Silex has been in the ‘2.5D packaging space’ since 2005 when it shipped its first commercial interposer in high volume. Since then, Silex's TSV technologies (Sil-Via® and Met-Via®) have gained wide industry recognition for providing high quality, high reliability and cost effective TSV solutions for MEMS and MEMS-CMOS packaging needs. To date, the company has shipped over 50k wafers on 6” and 8”, and Silex TSV technology has been implemented in over 50 products.

**About Silex Microsystems**

As the world’s largest pure-play MEMS foundry, Silex Microsystems is driving the sensory system
revolution by partnering with the world's most innovative companies to commercialize MEMS technologies that are changing the world. Our unique expertise in providing cutting-edge MEMS foundry services, innovative process technologies and proven high volume production capabilities enable MEMS innovators to rapidly, cost-effectively and reliably commercialize and ramp products to high volume. At Silex, customers work closely with the industry's most knowledgeable and creative MEMS manufacturing experts and benefit from our global ecosystem of development partners to take MEMS to market faster. [www.silexmicrosystems.com](http://www.silexmicrosystems.com)

**About BroadPak**

As a leading provider of ultra-high performance 2.5D silicon interposer and 3D integration technologies, BroadPak provides cost effective packaging solutions to clients varying from networking, communication, medical, aerospace, defense and consumer electronics. BroadPak brings proven methodologies and expertise to provide a competitive edge to the customers. Over the years BroadPak has architected and delivered some of the most advanced ultra high performance substrates in the industry for many of the leading companies, including memory stacking, 3D wafer level stacking, mixed IP die stacking, system in package (SIP), 10G/40G/100G high speed Ethernet PHY/SerDes and high frequency parallel interfaces. BroadPak provides comprehensive dedicated 2.5D/3D silicon interposer design, integration and supply chain management for mixed process nodes and IPs. [www.broadpak.com](http://www.broadpak.com)

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