

## **PRESS RELEASE**

### **A\*STAR IME AND IAI'S ELTA SYSTEMS LTD TO DEVELOP THROUGH-SILICON VIA SUBSTRATE TECHNOLOGY FOR POWER AMPLIFIER DEVICES**

#### **Enables Smaller, Faster, Lighter and More Thermally-efficient Multi-chip Modules for High Performance Wireless Applications**

**Singapore, 7 March 2011** — The Institute of Microelectronics (IME), an institute of the Agency for Science, Technology and Research (A\*STAR), and electronic defence systems company ELTA Systems Ltd. (ELTA), a group and a wholly owned subsidiary of Israel Aerospace Industries (IAI), have inked an agreement to design and develop a novel through-silicon via (TSV) substrate technology for multi-chip module packaging. The collaboration will result in new applications in multi-chip modules in radar, communication, and electronic warfare systems. The new technology platform would enable miniaturisation of wireless applications that are faster, lighter and can withstand higher temperatures.

“Our collaboration with ELTA presents an excellent opportunity for IME to build upon the leadership we’ve established in the area of 3D IC packaging over the years,” said Professor Dim-Lee Kwong, Executive Director of IME. “Through our combined knowledge and industrial acumen, our joint goal is to develop innovative manufacturing and design processes to address the challenges associated with the use of TSV substrate technologies. We expect the resultant technology to have a fundamental impact on the defence systems industry, and on a wider scale, the worldwide semiconductor packaging market.”

“The collaboration with IME will bring forth ELTA’s vision into reality. Utilising IME’s leadership and expertise in packaging and assembly processes, together with ELTA’s innovative system solutions, will position both IME and ELTA as industry leaders,” said Joseph Fouks, General Manager of the Microwave Systems Division, ELTA.

“As an authority in TSV substrate technology from both the design and fabrication standpoints, IME commands a unique position in the TSV packaging domain,” said Yaniv Maydar, Head of Engineering and Technology Department, ELTA. “We look forward to benefitting from their industry-honed expertise in the area, as well as their capabilities in IC packaging design and wafer level moulding.”

By providing high density, very fine pitch interconnects and better stress tolerance between the die and substrate, TSV substrate technology is increasingly viewed as a critical means of resolving the growing geometric and material incompatibility between printed circuit boards and ICs. Apart from the greater miniaturisation they afford, TSV substrate technology also offers more flexibility and shorter time-to-market. IME has been spearheading the development of this disruptive technology through its TSV research programme and the 3D TSV consortium which it leads.

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### **About the Institute of Microelectronics (IME)**

The Institute of Microelectronics (IME) is a research institute of the Science and Engineering Research Council of the Agency for Science, Technology and Research (A\*STAR). Positioned to bridge the R&D between academia and industry, IME's mission is to add value to Singapore's semiconductor industry by developing strategic competencies, innovative technologies and intellectual property; enabling enterprises to be technologically competitive; and cultivating a technology talent pool to inject new knowledge to the industry. Its key research areas are in integrated circuits design, advanced packaging, bioelectronics and medical devices, MEMS, nanoelectronics, and photonics. For more information, visit IME on the Internet: <http://www.ime.a-star.edu.sg>.

### **About the Agency for Science, Technology and Research (A\*STAR)**

A\*STAR is the lead agency for fostering world-class scientific research and talent for a vibrant knowledge-based and innovation-driven Singapore. A\*STAR oversees 14 biomedical sciences, and physical sciences and engineering research institutes, and nine consortia & centres, which are located in Biopolis and Fusionopolis, as well as their immediate vicinity.

A\*STAR supports Singapore's key economic clusters by providing intellectual, human and industrial capital to its partners in industry. It also supports extramural research in the universities, hospitals, research centres, and with other local and international partners.

### **About IAI/ELTA**

Israel Aerospace Industries Ltd. is a recognised leader in the aerospace and defence industry and Israel's largest industrial exporter. ELTA Systems Ltd., a group and wholly owned subsidiary of IAI, is one of Israel's leading defense electronics companies and a leader in Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR), Early Warning Command and Control, Home-Land Security (HLS), Self-Protection and Self-Defense, and Fire Control applications.

Please visit [www.iai.co.il](http://www.iai.co.il) for more information.

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