

## PRESS RELEASE

Contact: Jan Vardaman FOR IMMEDIATE RELEASE (512) 372-8887 June 20, 2018

## TechSearch International Analyzes Trends in FO-WLP including Panel Activity

While Apple remains the main customer for TSMC's Integrated Fan-Out WLP (InFO-WLP), an increasing number of companies are adopting a large area version of FO on Substrate. HiSilicon has been in production with ASE's FOCoS for several years and MediaTek just announced a logic device for networking applications using TSMC's InFO on Substrate (InFO\_oS). TSMC's FO-WLP platform has been extended to mobile 5G. A Multi-Stacking Technology (MUST) for 3D stacking based on InFO has been introduced for a baseband processor and a memory die. TSMC's InFO antenna in package (InFO\_AIP) targets an RF front-end module (FEM) for mmWave applications.

A number of companies and research organizations have reported progress on developing large area process or panel fan-out wafer level packages (FO-WLPs). ASE and Deca Technologies are cooperating to produce a panel version of the M-Series FO-WLP. Nepes has developed a 600mm x 600mm FO-WLP panel process using a liquid crystal display (LCD) production line with a fingerprint sensor as a first product. Powertech Technology's first product on its panel line will be a PMIC. Samsung Electro-Mechanics (SEMCO) has developed a chip-first panel FO-WLP process that is scheduled for introduction this year. Unimicron has established a pilot production line for panel RDL based on a glass substrate.

The latest Advanced Packaging Update is a 72-page report with full references and an accompanying set of 42 PowerPoint slides. The report also examines trends in integrated photonics packaging and an analysis of OSAT financials. A discussion of 3D sensing modules highlights production examples. VCSEL technology developments are introduced.

TechSearch International, Inc., founded in 1987, is a market research leader specializing in technology trends in microelectronics packaging and assembly. Multi- and single-client services encompass technology licensing, strategic planning, and market and technology analysis. TechSearch International professionals have an extensive network of more than 18,000 contacts in North America, Asia, and Europe. For more information, contact TechSearch at tel: 512-372-8887 or see <a href="www.techsearchinc.com">www.techsearchinc.com</a>. Follow us on twitter @Jan\_TechSearch

Tel: 512-372-8887 • Fax: 512-372-8889

tsi@techsearchinc.com