



## **PRESS RELEASE**

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### **TechSearch International Analysis Examines FO-WLP Developments and Sensor Packaging Trends**

Mobile devices, specifically smartphones, represent the single greatest volume driver for MEMS and other sensors today. Sensors found in these products include electronic compasses, motion sensors, barometers, microphones, and fingerprint sensors. Package types include land grid arrays (LGAs), leadframe packages such as QFNs, and wafer level packages (WLPs). Apple is expected to account for 28 percent of the total smartphone sensor market as a result of increased sensor adoption. With the trend toward smart factories, industrial applications are also expected to account for increased sensor demand.

New FO-WLP versions are targeting high-performance applications including networking, data centers, and artificial intelligence. Fan-out on substrate versions such as ASE's Fan-Out Chip-on-Substrate (FOCoS), TSMC's InFO\_oS, and Amkor's Silicon Wafer Integrated Fan-out Technology (SWIFT™) are being considered as a low-cost heterogeneous integration alternative to silicon interposers. FO-WLP on substrate fills the interconnect gap between lower-density FO-WLP and the highest density silicon interposers.

The analysis is provided in the latest Advanced Packaging Update, an 84-page report with full references and an accompanying set of 46 PowerPoint slides. The report also provides results from TechSearch International's annual survey on substrate design rules. The design rules include body size, core thickness, via and pad diameter, minimum bump pitch supported, and substrate finish.

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