PRESS RELEASE

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TechSearch International's Analysis Shows Demand for Panel Level Packaging Growing: Imbalances in Supply and Demand Noted

TechSearch International's *2025 Flip Chip and WLP: Trends and Market Forecasts* report examines supply and demand for flip chip, fan-in wafer level packages (WLPs), and fan-out WLPs (FO-WLP), including panels.

Demand for flip chip continues to increase in a wide variety of products from consumer to AI data centers. Taiwan still accounts for the largest share of the solder and Cu pillar market, but companies in China have added significant capacity, pushing global utilization down to 61% this year. Substrates to support fine pitch bump pitch and large body packages are discussed, including redistribution layer (RDL) interposers, build-up substrates, R&D on glass core substrates, and alternatives such as ceramic and silicon core.

Fan-in WLP demand continues to be driven by its use in smartphones and other consumer applications. A CAGR of 5.6% in units is projected from 2024 to 2029. China accounts for the largest market share.

The FO-WLP market is divided into four segments: high-density round carrier, low-density round carrier, low-density panel, and high-density panel. The main driver for panel level packaging is cost reduction, but companies are also looking for larger form factor to support the growing body size. Low-density FO-WLP, with one or two RDLs, typically has ≥10µm lines and spaces and represents the largest unit volumes. High-density FO-WLP with multiple RDLs and <10µm line represents the largest wafer volumes. High-density fan-out also includes the redistribution layer (RDL) interposers for high-performance applications such as AI training and inferencing and network switches. Some of these products use an embedded silicon bridge.

Companies in China added more FO-WLP capacity than any other region and utilization in 2024 was only 24% due to the massive capacity expansion. Utilization is projected to be 94% in 2028 as a result of growing demand. High yield is critical to justify both high-density and low-density panels economically.

TechSearch International's report also covers equipment for bonding and highlights bumping and WLP suppliers.

The120-page report comes with full references and a set of nearly 200 PowerPoint slides. It provides a comprehensive view of the global advanced packaging market with a deep analysis of the drivers for supply and demand.

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 ~20,000 contacts in North America, Asia, and Europe. For more information, contact TechSearch International at tel: 512-372-8887 or see www.techsearchinc.com. Follow us on LinkedIn.