PRESS RELEASE

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Limits to Growth: Build-up Substrate Shortage Crisis

TechSearch International's latest Advanced Packaging Update report highlights the shortage of build-up substrates for high-performance packages including AI training and inferencing modules, server CPUs, and high-end network switch products, including co-packaged optics. This category of advanced packaging is experiencing strong growth in unit volumes, but the substrate shortage results from demand for larger, more complex build-up substrates with higher layer counts. The substrate area for Nvidia's Rubin's is 51 percent larger than the area for its Blackwell. The substrate area for its Nvidia's Vera CPU is 15 percent larger than the area for its Grace. A build-up substrate capacity and demand analysis is provided. Material shortages such as glass fiber for substrate cores are easing next year but could be a problem in the future with the larger body sizes.

AI data center growth is driving semiconductor industry revenue. While server CPUs and AI training and inferencing modules that include HBM make up the majority of data center component revenue, data center growth is driving demand for other components, including leadframe packages. The report highlights trends in data center packages and the downside of data center growth, which have caused memory shortages and price hikes affecting smartphone and PC shipments this year.

TechSearch International's analysis of OSAT financials is included, with revenue projections. A market forecast for BGA/LGA packages is included with examples. The report covers CSP applications along with package examples from TechSearch International's recent product teardowns. Market forecasts for FBGAs, FLGAs, QFNs including Cu clip, molded interconnect substrate (MIS) packages, and stacked die CSPs are provided.

The Update is a 93-page report with full references and a set of more than 80 PowerPoint slides.

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.

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