

News Release

March 2, 2015 – Nevada City, California – New Venture Research (NVR) announces the publication of its latest market research report, “Advanced IC Packaging Technologies, Materials, and Markets - 2015 Edition.

More than ever before, IC packaging technology is being challenged by two distinct, yet closely linked product trends. On the one hand, consumers demand more powerful electronics products – from computers to tablets to smartphone – that provide more features and greater functionality; on the other hand, they want their products to be smaller and more lightweight and ergonomic. Meeting this demand requires manufacturers to develop advanced IC packages that combine devices with smaller form factors and ever-greater silicon integration.

This new strategic report from NVR provides a comprehensive analysis of the latest advanced technologies in IC packaging, assembly techniques and materials. The report explores the important trends in multichip packaging, including vertically stacked packages – TSOP, FBGA, QFN and WLP – and complex system-in-package (SiP) solutions: multichip modules (MCMs), package-in-packages (PiPs) and package-on-packages (PoPs). Also discussed are advances in substrate materials and technology that embed passive and active components directly into the substrate, helping SiPs to pack more complexity into the same or smaller packages.

Thanks to their unique applicability in advanced electronics products, and in particular in smartphones and other handheld devices, multichip packages account for a growing share of the overall IC packaging market. In 2015, multichip packaging (MCP) revenue totaled \$14.4 billion, accounting for nearly 30% of total worldwide IC packages. By 2019, MCP revenue will climb to more than \$20 billion, and more than 34% of total IC packages.

Other advanced packages covered in this report include a new generation of quad flat-pack, no lead (QFN) packages sporting multiple rows of leads along the peripheral edges of the package. These advanced multi-row QFNs are expanding the applications of these devices into new markets. Similarly, so-called fan-out wafer level packages (FOWLP), which increase the number of leads traditional WLPs are capable of, have shifted into high volume production, with more than 10% of all WLPs incorporating this new packaging technology.

In addition to specific types of IC packages, the analysis in this report digs deeper into matters of interconnection and the materials used in assembling packages. Interconnection topics include:

- New advances in wire bonding techniques and the metal materials used in the process

- How flip chip assembly is enabling manufacturers to improve on everything from assembly cycle times to thermal dissipation and the all important package size
- The role of through-silicon vias (TSVs) in the inevitable advance toward 2.5D and 3D packaging

The report concludes with profiles of 20 leading packaging companies. In addition to an overview of each company and their advanced IC packaging products, the profiles describe some of their most important solutions and contributions by the companies to this rapidly changing market arena.

The 2015 edition of the *Advanced IC Packaging Technologies, Materials and Markets* is the latest in a 20-year-long tradition of providing in-depth and accurate analysis of IC packaging markets. Its more than 280 pages provide detailed analysis, insights and commentary on a critical technology that contributes to the very existence of the modern electronics marketplace. For more information please contact Karen Williams at kwilliams@newventureresearch.com/, Tel: (408) 244-1100, or Jerry Watkins at jwatkins@newventureresearch.com/, (650) 282-5276, or visit NVR's website at www.newventureresearch.com/