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ADVANCED IC PACKAGING TECHNOLOGIES, MATERIALS AND MARKETS

2017 EDITION

A Strategic Report Covering the Latest Technologies in IC Packaging, Enabling Portable and Other Electronics

Report Coverage

- Fan-out WLPs
- Multi-row QFNs
- Interconnection Technologies
- Through-Silicon Vias (TSV)
- 2.5D and 3D Integration
- Stacked Packages
- System-in-Package

Report Highlights

- Industry Outlook
- Market Analysis and Forecasts, 2015–2021
- Multichip Packaging Technology Trends
- Key Application Forecasts
- Company Profiles

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Advanced IC Packaging Technologies, Materials and Markets, 2017 Edition

Synopsis

The demand for consumer electronics and mobile communications devices that keep us connected is driving electronics manufacturers to deliver ever-more compact and portable products. Today's users ask for solutions that deliver more functionality, added performance, higher speed, and smaller form factors. Software systems and billions of networked devices are rapidly coalescing into a vast Internet of Things.

All of these forces are driving semiconductor companies to develop new advanced IC packaging technologies to provide greater silicon integration in increasingly miniaturized packages. The last decade has seen an explosion of new products including fan-out wafer-level packaging (FOWLPs), stacked IC packages and complex system-in-packages (SiPs), as well as advances in package substrates, flip chip interconnection and through-silicon vias. All these advances are enabling significant improvements in packaging density and opening new market opportunities for manufacturers.

This latest report from **New Venture Research (NVR)**, ***Advanced IC Packaging Technologies, Materials and Markets, 2017 Edition***, reveals the latest technology and market trends in the IC packaging industry by focusing on the most advanced packaging products and solutions–those critical to success in developing cutting-edge products and in maintaining technological leadership. Every market or application segment discussed in the report includes quantitative analysis based on the most current historical years, 2015 and 2016, as well as forecasts from 2017 through 2021. Each of the six chapters examines the market from a different perspective.

Chapter 3: Overview of Worldwide IC Packaging Markets, outlines the major IC packaging families and the latest market and application trends. This chapter also includes an overview of the major industry trends driving the semiconductor sector, including mergers and acquisitions, the Internet of Things, artificial intelligence and machine learning, and global economic trends. Total market forecasts include units, prices, packaging revenue, package types and device types.

Chapter 4: Advanced IC Packaging Markets provides an in-depth discussion of the technologies and market trends of the semiconductor industry's advanced packaging solutions:

- Fan-out wafer-level packaging (FOWLP)
- Multi-row QFN packaging (MRQFN)
- Vertically stacked multichip packages: TSOPs, QFNs, FBGAs, and WLPs
- System-in-packages (SiPs): package-on-packages, package-in-packages, multichip modules and stacked WLPs used as components in SiPs

This chapter analyzes the total market and individual market segments from a number of views, including their characteristics, functions, applications, technology, and the key challenges facing the various advanced packaging solutions. Numerous tables and figures provide detailed market data and forecasts for unit shipments, revenues, prices, I/O-count, and die usage. The chapter ends with an examination of the substrate materials and embedded components used in SiP assembly. Forecasts include package units, area of shipped materials, and substrate revenues.

Chapter 5: Interconnection Technologies and Solutions, provides a comprehensive examination of wire bonding and flip chip technology and market trends, and includes in-depth analysis of flip chip markets in terms of specific devices and packaging types. The chapter also examines the market potential of through-silicon vias (TSVs) for 2.5D and 3D packaging. The chapter tables and figures present unit shipments and revenue forecasts for each market segment.

Chapter 6: Company Profiles presents profiles of twenty-one advanced packaging companies from across the IC packaging spectrum, including large and small competitors from among OSATs, foundries and IDMs. Each profile gives a short company background and presents examples of their advanced packaging products.

Advanced IC Packaging Technologies, Materials and Markets, 2017 Edition is an effective tool for companies determined to stay informed about the latest advances in IC packaging, and in assessing the future of this important industry. The report sells for $3995 and is delivered by email as a single-user license PDF file. Additional single-user licenses are available for $350 each and a corporate license is $1500. With the purchase of the report, an Excel spreadsheet of all tables may be obtained for an additional $1000, or a printed copy may be purchased for $250.

About the Author

Jerry Watkins is an independent senior analyst with more than 20 years of direct experience in the field of market research and consulting. He has worked for leading research companies such as Frost & Sullivan, Lucid Information Services, and NSI Research, both in management and as a writer. Mr. Watkins has authored many syndicated reports, previously in the telecommunications and office automation sectors and more recently in the semiconductor industry writing on subjects that include IC packaging and merchant embedded computing. He holds two university degrees, including a B.A. in History and an M.A. in International Studies, but he feels that market research best fulfills his life-long passion for inquiry into difficult subject matters and making it comprehensible to a wide audience. Mr. Watkins has lived and worked in Silicon Valley for most of his career.

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