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# ADVANCED IC PACKAGING

**2007 EDITION**

**A Strategic Report on Key  
Advanced IC Packaging  
Technologies and Markets**

## Report Coverage

- Wafer-Level Packages (WLPs)
- Stacked Packages
- System in Package (SiP)
- Interconnection
- Flip Chip
- Bumping
- Substrates

## Report Highlights

- Through-Silicon Vias
- Back-Side Filled WLPs
- Embedded Passives
- Bumping Processes
- Bump Composition
- Industry Update
- Market Forecasts, 2007–2011



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# Advanced IC Packaging

## Synopsis

Annual IC shipments will move past 200 billion units in the very near future (see Figure 1). To support the diverse requirements of this enormous volume, the industry must offer a broad portfolio of advanced IC packaging technologies.

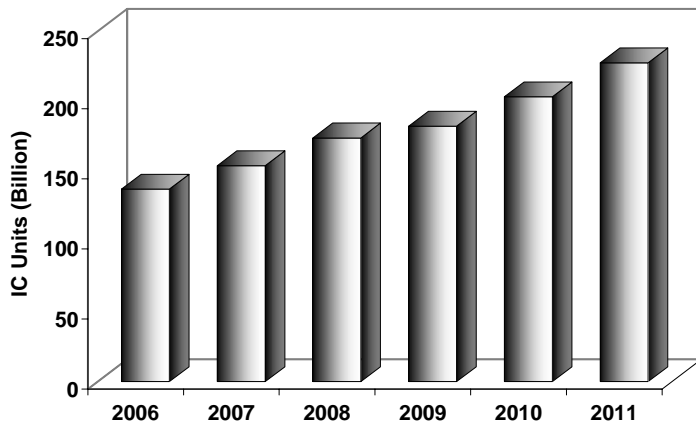


Figure 1 IC Unit Forecast

*Electronic Trend Publications* (ETP) in its report, **Advanced IC Packaging, 2007 Edition**, uses information from IC packaging industry insiders to present the most realistic picture available regarding advanced IC packaging technologies and markets.

Chapter 3, **The State of the Industry**, reviews the status of the semiconductor industry as of mid-year 2007.

Chapter 4, **Wafer-Level Packages (WLPs)**, presents important WLP designs that have been introduced over the past year, along with an overall forecast of the WLP market. Major styles of WLPs—standard redistribution, stand-off, and back-side filled—are forecast.

Chapter 5, **Stacked Packages**, explains the basics of this critical packaging technology, along

with a sampling of the latest products. Forecasts include units, prices, packaging revenue, package types, device types, first-level interconnection, and applications. Through-silicon via (TSV) technology is discussed in depth.

In a similar manner, Chapter 6, **System in Package (SiP)**, presents information on the evolving market for ICs combined with passive devices within a single package. Forecasts include units, prices, packaging revenue, device types, interconnection, and applications.

Chapter 7, **Interconnection, Flip Chip, and Bumping**, contains a detailed review of first-level package interconnection. Flip chip forecasts are provided, both within the package and as bare die on the PCB. Trends in wafer bumping are discussed extensively. Unit forecasts are given for bump styles, UBM processes, and bump composition. Bumping costs are discussed.

Chapter 8, **Substrates**, includes an overview of substrate types, materials, and highlights of recent developments. Detailed forecasts covering all major substrate materials are provided for substrate units, area, and revenue.

Throughout chapters 4–8, the newest packaging products and latest research from numerous companies and organizations are described.

Trends in advanced IC packaging are important to your business. **Advanced IC Packaging, 2007 Edition** will provide you with an effective and economical tool for assessing the future of this market. Please take a few moments to review the report's outline on the following pages. The report sells for \$2495, with extra copies \$350. Each copy includes both a hardbound version and a single-user PDF file on CD-ROM. Corporate licensing is available—contact us for pricing. Order your copies today!

## About the Author

**Sandra Winkler** is the senior analyst for IC packaging at Electronic Trend Publications (ETP). She began her analyst career as an independent consultant to the telecommunications industry nearly 20 years ago. Since 1995, Ms. Winkler has authored all of ETP's widely cited reports on IC packaging. She has spoken at numerous industry conferences and is a contributing editor for *Chip Scale Review* magazine. Ms. Winkler has an MBA from Santa Clara University.

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The advanced packaging products, services, and research of the following companies and organizations are interspersed throughout the report:

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