

# Image Sensor Packaging Markets and Trends

## A Strategic Report on Image Sensor Packaging

### Report Highlights

#### Technical Trends

#### Product Information for Key Companies

#### Analysis and Forecasts 2007–2012

### Synopsis

*Electronic Trend Publications* (ETP) in its report, **Image Sensor Packaging Markets and Trends**, uses information from semiconductor industry insiders to present the most realistic picture available regarding packaging technologies and markets for image sensor products.

Chapter 1 of the report explains the scope and methodology of the report, while Chapter 2 summarizes the report's key market data.

Chapter 3, **Technical Trends**, presents a review of image sensor technology. Topics include an overview of CCD and CMOS sensors, advantages of CMOS sensors over CCDs, general applications for image sensors, a description of the sensor's role in a digital camera, and packages used by image sensors.

Chapter 4, **Product Information for Key Companies**, presents the newest image sensor products and latest research from over 20 companies and organizations.

Chapter 5, **Forecasts**, presents information on image sensor packaging markets. The forecasts include CCD and CMOS units, overall units by package family, package assembly prices, average I/O counts, average assembly costs, and package assembly revenue. The image sensor packaging market is poised for substantial growth in the coming years.

**Image Sensor Packaging Markets and Trends** will provide you with an effective and economical tool for assessing the future of the image sensor packaging market. Please take a few moments to review the report's outline on the following page. The report is delivered by email as a single-user PDF file. The report sells for \$1195, with extra single-user licenses at \$250 each. Corporate licensing is available—contact us for pricing.

### 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.



#### Electronic Trend Publications

1975 Hamilton Avenue, Suite 6  
San Jose, CA 95125  
Tel: (408) 369-7000 Fax: (408) 369-8021

#### *A Technology Market Research Company*

info@electronictrendpubs.com  
www.electronictrendpubs.com

# Image Sensor Packaging Markets and Trends

## Table of Contents

### Chapter 1 Introduction

### Chapter 2 Executive Summary

### Chapter 3 Technical Trends

#### Overview

#### CCD Pixel Arrays

#### CMOS Pixel Arrays

#### Commercial CMOS Growth and Maturity

#### Advantages of CMOS Image Sensors Over CCDs

#### Where Are Image Sensors Found?

#### The Sensor's Role in a Digital Camera

#### Packages Used by Image Sensors

### Chapter 4 Product Information for Key Companies

Amkor Technology

Atmel

Canon

Cypress Semiconductor

DALSA Semiconductor

Eastman Kodak

Fairchild Imaging

Foveon

Hamamatsu Photonics

IBM Corporation

Kyocera

Micron Technology

Oki Electric Industry

OmniVision

Panavision SVI

ROHM Co.

Samsung Electronic Co.

SiliconFile Technologies

Sony Corporation

STMicroelectronics

Tessera Technologies

Toshiba

Tower Semiconductor

ZyCube Co.

### Chapter 5 Forecasts

#### Image Sensor Forecast

#### Image Sensor Packaging Forecast

### List of Tables and Figures

#### CCD Pixel Array

#### CMOS Pixel Array

#### Side Braze Package

#### VisionPak® LCC Cross Section

#### OptiML Module Compared with a Conventional Camera Module

#### OptiML Surface-Mount and Wire-Bond Modules

#### CCD vs. CMOS Image Sensor Units

#### CCD vs. CMOS Image Sensor Revenue

#### Total Image Sensor Market, 2007–2012

#### CCD Image Sensor Market, 2007–2012

#### CMOS Image Sensor Market, 2007–2012

#### Image Sensor Package Units, 2007–2012

#### Image Sensor Package Percentages, 2007 vs. 2012

#### Average I/O Count by Package Type

#### Average Price per I/O, 2007–2012

#### Average Package Assembly Cost, 2007–2012

#### Packaging Revenue for Image Sensors, 2007–2012

Published February 2008, 40 Pages

## Order Form

### Payment Method

Check in the amount of \$ \_\_\_\_\_ is enclosed.

Invoice per P.O. # \_\_\_\_\_

Please charge: Visa MasterCard American Express

Card # \_\_\_\_\_ Exp. \_\_\_\_\_

Name On Card \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Telephone \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

Image Sensor Packaging Markets and Trends (Single-User PDF File)

\$1195

Extra Single-User Licenses (\$250 each)

**Returns:** No return privileges. **International Orders:** Must be prepaid, please contact us for payment arrangements.

### Electronic Trend Publications

1975 Hamilton Ave., Suite 6

San Jose, CA 95125

Tel: (408) 369-7000 Fax: (408) 369-8021

www.electronictrendpubs.com

Subtotal

TOTAL