

The Global Market for Advanced Image Sensors 2025-2035

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Abstracts

Image sensors are integral components of various imaging and vision systems including cameras. They are semiconductor devices capable of converting incoming light photons into electrical signals that form digital images. Advances in image sensor technologies are enabling new imaging applications across consumer electronics, industrial automation, automotive, security, medical, and more verticals.

The Global Market for Advanced Image Sensors 2024-2035 provides a comprehensive analysis of the global image sensor market and emerging technologies shaping its future. It evaluates market size, growth forecasts, key trends, drivers and challenges across image sensor types, end-use applications, regions and leading companies. The report examines advanced image sensor technologies like on-sensor AI, quantum sensors, event-based vision and flexible sensors. It profiles innovations in materials like perovskites, graphene and quantum dots that promise better image quality and form factors. Technology benchmarking and application impact assessment is provided for innovations in dynamic vision, lensless imaging, nanophotonics, miniature spectrometers and sparse/efficient sensing.

Application analysis is provided for smartphones, automotive, machine vision, medical imaging, surveillance, drones and more. Regional market growth is quantified for North America, Europe, APAC, Middle East and Latin America. Profiles of 60 companies leading next-gen image sensor development are included.

Insight into CMOS, 3D, infrared, spectral, thin-film, x-ray, miniaturized and wavefront sensors is provided. Market data covers historic (2018-2021) and forecast (2022-2035) revenues. Challenges around adoption, standards and computing trade-offs are explored.

With detailed market data and technology benchmarking, this report enables product developers, investors and imaging companies to identify growth opportunities, emerging applications/capabilities, partnership opportunities and market threats.

Report contents include:

Global image sensor market size and forecasts to 2035, segmented by type, application, region

Analysis of trends in improving image quality, on-sensor intelligence, size/cost optimization

Overview of innovations in materials like perovskites, quantum dots, graphene for sensors

Profiles of 60 companies leading development of advanced CMOS, 3D, infrared and other image sensors. Companies profiled include Hefei Haitu Microelectronics Co. Ltd., MantiSpectra, Omnivision, Onsemi, Panasonic, Qurv Technologies, Samsung Electronics, SK hynix Inc., Spectricity and SWIR Vision Systems.

Technology analysis of emerging sensing methods - quantum, spectral, dynamic vision, lensless

Benchmarking of SWIR, hyperspectral, flexible X-ray, event-based and wavefront image sensors

Applications in smartphones, automotive/ADAS, machine vision, medical imaging, surveillance

Market data and growth drivers for image sensors in smart building, drones, biometrics

Regional demand growth in North America, Europe, Asia Pacific, Middle East and Latin America

Historic and 10-year forecast market revenues globally and for key sensor applications

Impact of trends in autonomous mobility, Industry 4.0, precision medicine on image sensors

Partnership opportunities, IP activity, strengths/weaknesses of leading sensor vendors

Contents

1 RESEARCH METHODOLOGY

2 EXECUTIVE SUMMARY

- 2.1 The global image sensor market
- 2.2 Advanced image sensor technologies
 - 2.2.1 Improving image quality
 - 2.2.2 Greater intelligence
 - 2.2.3 Size/form factor
 - 2.2.4 Cost optimization
 - 2.2.5 On-sensor AI technology
- 2.3 Market trends
 - 2.3.1 Smartphone Cameras
 - 2.3.2 Automotive and Mobility
 - 2.3.3 Machine vision and Industrial Inspection
 - 2.3.4 Medical Imaging
 - 2.3.5 Video Surveillance and Security
 - 2.3.6 Biometrics
 - 2.3.7 Drones
- 2.4 Pricing trends
- 2.5 Global Market Size and Growth Projections
 - 2.5.1 By type
 - 2.5.2 By end use market
 - 2.5.3 By region
- 2.6 Competitive landscape
- 2.7 Market growth drivers
- 2.8 Market and technology challenges

3 TECHNOLOGY ANALYSIS

- 3.1 Technology description
 - 3.1.1 Evolution of Image Sensor Technology
 - 3.1.2 Conventional image sensors
 - 3.1.3 Photodetectors
 - 3.1.4 Pixel size scaling
 - 3.1.5 High Dynamic Range (HDR)

- 3.1.6 Polarization and multispectral sensing
- 3.1.7 Feature miniaturization
- 3.1.8 Advanced packaging
- 3.2 Materials Innovation
 - 3.2.1 Perovskites
 - 3.2.2 Quantum Dots
 - 3.2.3 Graphene Photodetectors
 - 3.2.4 Organic Photodiodes
 - 3.2.5 Nanowire Photogates
- 3.3 Types of advanced image sensors
 - 3.3.1 CMOS Image Sensors
 - 3.3.1.1 Technology description
 - 3.3.1.1.1 Hybrid OPD-on-CMOS image sensors
 - 3.3.1.1.1.1 SWOT analysis
 - 3.3.1.1.2 Hybrid QD-on-CMOS image sensors
 - 3.3.1.1.2.1 SWOT analysis
 - 3.3.1.1.3 Key players
 - 3.3.1.2 Global market to 2035
 - 3.3.2 3D Image Sensors
 - 3.3.2.1 Technology description
 - 3.3.2.2 SWOT analysis
 - 3.3.2.3 Key players
 - 3.3.3 Infrared and Spectral Image Sensors
 - 3.3.3.1 SWIR (Short Wave Infrared) Image Sensors
 - 3.3.3.1.1 Technology description
 - 3.3.3.1.1.1 Quantum dot-on-silicon (QD-Si)
 - 3.3.3.1.2 Markets and applications
 - 3.3.3.1.3 SWOT analysis
 - 3.3.3.1.4 Key players
 - 3.3.3.1.5 Global market to 2035
 - 3.3.3.2 Hyperspectral Image Sensors
 - 3.3.3.2.1 Technology description
 - 3.3.3.2.2 Markets and applications
 - 3.3.3.2.3 SWOT analysis
 - 3.3.3.2.4 Key players
 - 3.3.3.2.5 Global market to 2035
 - 3.3.4 Thin film photodetectors
 - 3.3.4.1 Technology description
 - 3.3.4.2 Markets and applications

- 3.3.4.3 SWOT analysis
- 3.3.4.4 Global market to 2035
- 3.3.5 Flexible x-ray image sensors
 - 3.3.5.1 Technology description
 - 3.3.5.2 Markets and applications
 - 3.3.5.3 SWOT analysis
 - 3.3.5.4 Key players
 - 3.3.5.5 Global market to 2035
- 3.3.6 Quantum image sensing
 - 3.3.6.1 Technology description
 - 3.3.6.2 Markets and applications
 - 3.3.6.3 SWOT analysis
 - 3.3.6.4 Key players
- 3.3.7 Miniaturized spectroscopy
 - 3.3.7.1 Technology description
 - 3.3.7.2 Markets and applications
 - 3.3.7.3 SWOT analysis
 - 3.3.7.4 Key players
 - 3.3.7.5 Global market to 2035
- 3.3.8 Event vision sensors
 - 3.3.8.1 Technology description
 - 3.3.8.2 Markets and applications
 - 3.3.8.3 SWOT analysis
 - 3.3.8.4 Key players
 - 3.3.8.5 Global market to 2035
- 3.3.9 Wavefront imaging
 - 3.3.9.1 Technology description
 - 3.3.9.2 Markets and applications
 - 3.3.9.3 SWOT analysis
 - 3.3.9.4 Key players
 - 3.3.9.5 Global market to 2035

4 MARKETS AND APPLICATIONS

- 4.1 Smartphone Cameras
 - 4.1.1 Market overview and trends
 - 4.1.2 Global market revenues to 2035
- 4.2 Automotive Cameras and ADAS
 - 4.2.1 Market overview and trends

- 4.2.2 Applications
 - 4.2.2.1 ADAS Safety Applications
 - 4.2.2.2 Self-Driving Vehicles
 - 4.2.2.3 In-Cabin Monitoring
 - 4.2.2.4 Surround View
- 4.2.3 Global market revenues to 2035
- 4.3 Machine Vision and Industrial Imaging
 - 4.3.1 Market overview and trends
 - 4.3.2 Applications
 - 4.3.2.1 Automated optical inspection
 - 4.3.2.2 Robot machine vision
 - 4.3.2.3 Product defect analysis
 - 4.3.2.4 Barcode and character recognition
 - 4.3.2.5 Assembly line guidance
 - 4.3.2.6 Dimensional measurement
 - 4.3.3 Global market revenues to 2035
- 4.4 Medical and Scientific Imaging
 - 4.4.1 Market overview and trends
 - 4.4.2 Key trends
 - 4.4.3 Applications
 - 4.4.3.1 Endoscopes
 - 4.4.3.2 Microscopes
 - 4.4.3.3 X-ray and CT scanners
 - 4.4.3.4 DNA sequencers
 - 4.4.3.5 Wearable electronics
 - 4.4.4 Global market revenues to 2035
- 4.5 Security and Surveillance
 - 4.5.1 Key trends
 - 4.5.2 Applications
 - 4.5.2.1 Closed Circuit TeleVision (CCTV)
 - 4.5.2.2 Network IP cameras
 - 4.5.2.3 Body-worn cameras
 - 4.5.2.4 Drone-based monitoring
 - 4.5.3 Global market revenues to 2035

5 COMPANY PROFILES 202 (60 COMPANY PROFILES)

6 REFERENCES

List Of Tables

LIST OF TABLES

- Table 1. Markets for image sensors.
- Table 2. Total addressable markets for advanced image sensors.
- Table 3. Global market revenues 2018-2035, by image sensor type (millions USD).
- Table 4. Global market revenues 2018-2035, by end use market (millions USD).
- Table 5. Global market revenues 2018-2035, by region (millions USD).
- Table 6. Market growth drivers for advanced image sensors.
- Table 7. Market and technology challenges in advanced image sensors.
- Table 8. TRL for OPD-on-CMOS detectors.
- Table 9. QD-on-CMOS fabrication .
- Table 10. Key players in CMOS image sensors.
- Table 11. Global market for CMOS image sensors to 2035, by type (millions USD).
- Table 12. Key players in 3D Image Sensors.
- Table 13. SWIR detection technologies.
- Table 14. Technology readiness level of SWIR detectors.
- Table 15. Markets and applications for SWIR imaging.
- Table 16. Key players in SWIR Image Sensors.
- Table 17. Global market for short-wave infra-red (SWIR) image sensors to 2035 (millions USD).
- Table 18. Markets and Applications for hyperspectral imaging
- Table 19. Key players in hyperspectral Image Sensors.
- Table 20. Global market for hyperspectral imaging to 2035 (millions USD).
- Table 21. Markets and Applications for thin film photodetectors.
- Table 22. Global market for thin film photodetectors to 2035, (millions USD).
- Table 23. Markets and applications for flexible x-ray image sensors.
- Table 24. Key players in flexible x-ray Image Sensors.
- Table 25. Global market for flexible x-ray image sensors to 2035, (millions USD).
- Table 26. Types of quantum image sensors and their key features/.
- Table 27. Applications of quantum image sensors.
- Table 28. Key players in quantum image sensors.
- Table 29. Markets and applications for Miniaturized spectroscopy.
- Table 30. Key players in Miniaturized spectroscopy.
- Table 31. Global market for Miniaturized spectroscopy to 2035 (millions USD).
- Table 32. Markets and applications for Event-based vision.
- Table 33. Key players in Event-based vision.
- Table 34. Global market for Event-based vision to 2035 (millions USD).

Table 35. Markets and applications for wavefront imaging.

Table 36. Key players in wavefront imaging.

Table 37. Global market for wavefront imaging to 2035 (millions USD).

Table 38. Key smartphone camera image sensor specifications.

Table 39. Global market revenues for advanced image sensors in smartphone cameras, by type, to 2035 (millions USD).

Table 40. Global market revenues for advanced image sensors in automotive cameras and ADAS, by type, to 2035 (millions USD).

Table 41. Global market revenues for advanced image sensors in Machine Vision and Industrial Imaging, by type, to 2035 (millions USD).

Table 42. Global market revenues for advanced image sensors in Medical and Scientific Imaging, by type, to 2035 (millions USD).

Table 43. Global market revenues for advanced image sensors in Security and Surveillance, by type, to 2035 (millions USD).

List Of Figures

LIST OF FIGURES

- Figure 1. Global market revenues 2018-2035, by image sensor type (millions USD).
- Figure 2. Global market revenues 2018-2035, by end use market (millions USD).
- Figure 3. Global market revenues 2018-2035, by region (millions USD).
- Figure 4. Working principle of an image sensor.
- Figure 5. Quantum dot image sensor.
- Figure 6. Graphene Photodetector.
- Figure 7. SWOT analysis: OPD-on-CMOS image sensors.
- Figure 8. Hybrid QD-on-CMOS image sensor architecture.
- Figure 9. SWIR Vision Systems' CQD photodetectors
- Figure 10. Emberion's QD-graphene SWIR photoconductor
- Figure 11. SWOT analysis: QD-on-CMOS image sensors.
- Figure 12. Global market for CMOS image sensors to 2035, by type (millions USD).
- Figure 13. SWOT analysis: 3D image sensors.
- Figure 14. SWOT analysis: SWIR image sensors.
- Figure 15. Global market for short-wave infra-red (SWIR) image sensors to 2035 (millions USD).
- Figure 16. SWOT analysis: Hyperspectral image sensors.
- Figure 17. Global market for hyperspectral imaging to 2035 (millions USD).
- Figure 18. SWOT analysis: Thin film photodetectors.
- Figure 19. Global market for thin film photodetectors to 2035, (millions USD).
- Figure 20. SWOT analysis: flexible x-ray sensors.
- Figure 21. Global market for flexible x-ray image sensors to 2035, (millions USD).
- Figure 22. SWOT analysis for Quantum image sensing.
- Figure 23. SWOT analysis: Miniaturized spectroscopy.
- Figure 24. Global market for Miniaturized spectroscopy to 2035 (millions USD).
- Figure 25. SWOT analysis: Event-based vision.
- Figure 26. Global market for Event-based vision to 2035 (millions USD).
- Figure 27. SWOT analysis: Wavefront imaging.
- Figure 28. Global market for wavefront imaging to 2035 (millions USD).
- Figure 29. Global market revenues for advanced image sensors in smartphone cameras, by type, to 2035 (millions USD).
- Figure 30. Global market revenues for advanced image sensors in automotive cameras and ADAS, by type, to 2035 (millions USD).
- Figure 31. Global market revenues for advanced image sensors in Machine Vision and Industrial Imaging, by type, to 2035 (millions USD).

Figure 32. Global market revenues for advanced image sensors in Medical and Scientific Imaging, by type, to 2035 (millions USD).

Figure 33. Global market revenues for advanced image sensors in Security and Surveillance, by type, to 2035 (millions USD).

Figure 34. ChipSense platform from MantiSpectra.

Figure 35. Samsung Electronics' Image Sensor ISOCELL Vision 63D.

Figure 36. SK hynix's CMOS Image Sensor.

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