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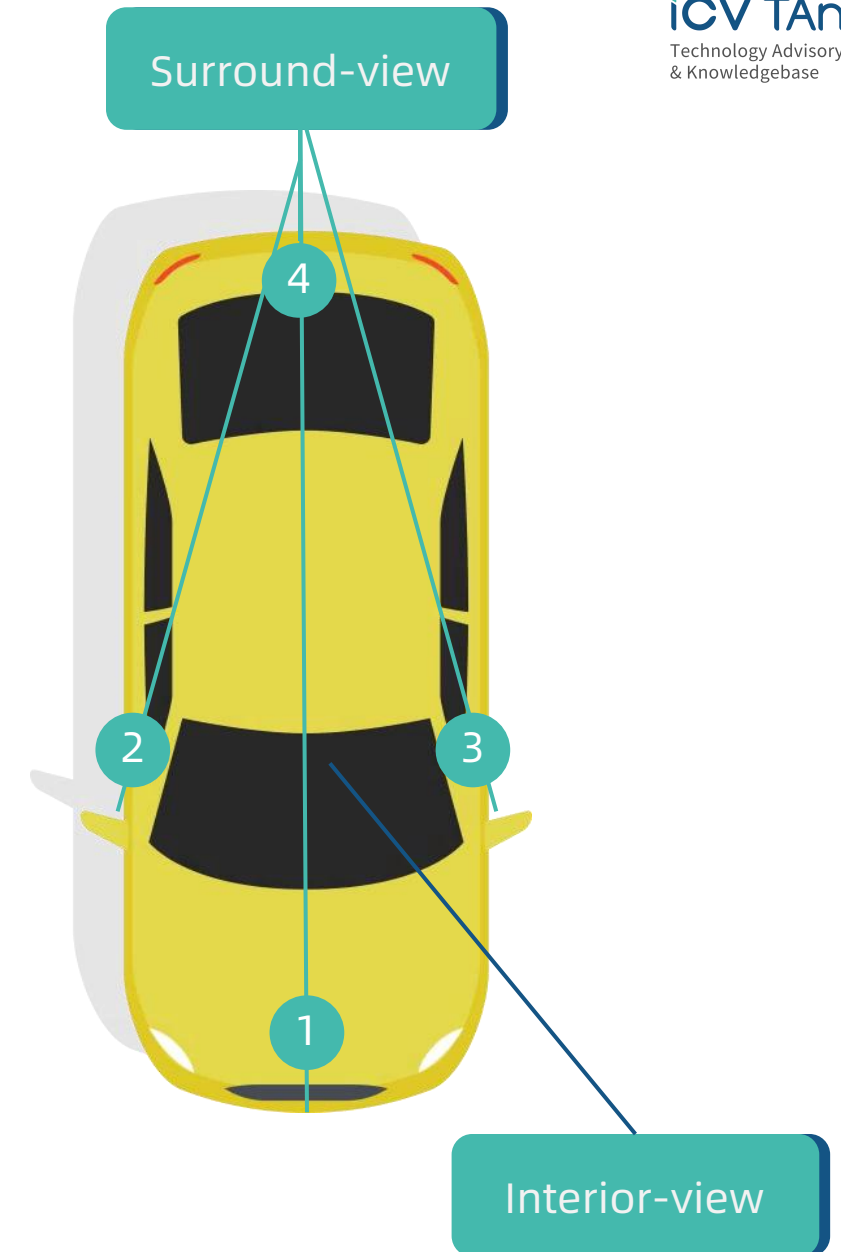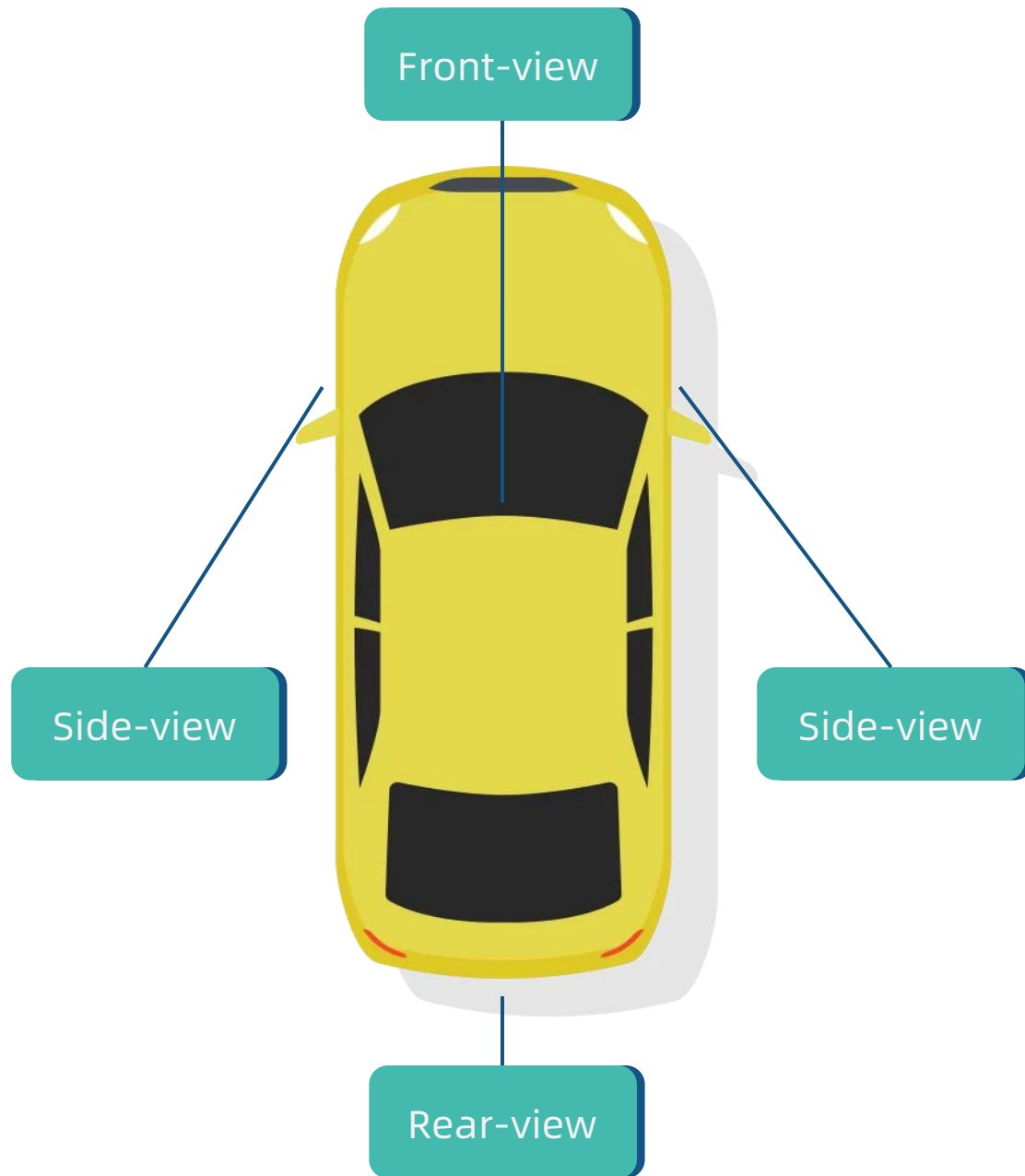& Knowledgebase

AUTOMOTIVE CMOS IMAGE SENSORS (CIS)

Market Research Report
2022

Introduction

This report aims to evaluate the market of Automotive CMOS image sensor.

Automotive CMOS image sensor (CIS) is an integral component of advanced driver assistance systems. CIS has high sensitivity, low noise, and low power consumption. These sensors can capture clear images in low-light conditions and produce high-resolution images for advanced driver assistance systems (ADAS). Moreover, CIS is designed to withstand harsh environmental conditions, making them ideal for automotive applications.

In conclusion, automotive CIS plays a crucial role in modern vehicles, providing drivers with clear images and enhancing their situational awareness. With the growth of ADAS systems, the importance of automotive CIS in vehicle safety is set to increase.
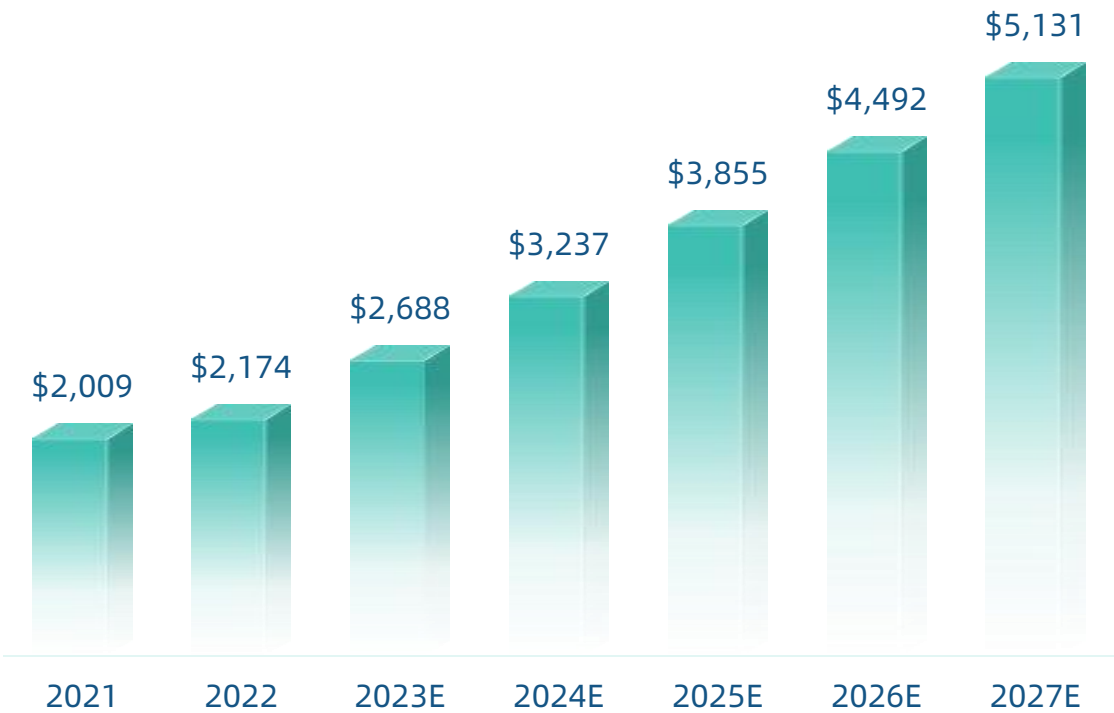
Front-view

Side-view

Side-view

Rear-view

Surround-view

Interior-view

1
2
3
4

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Assumptions: Configuration Table

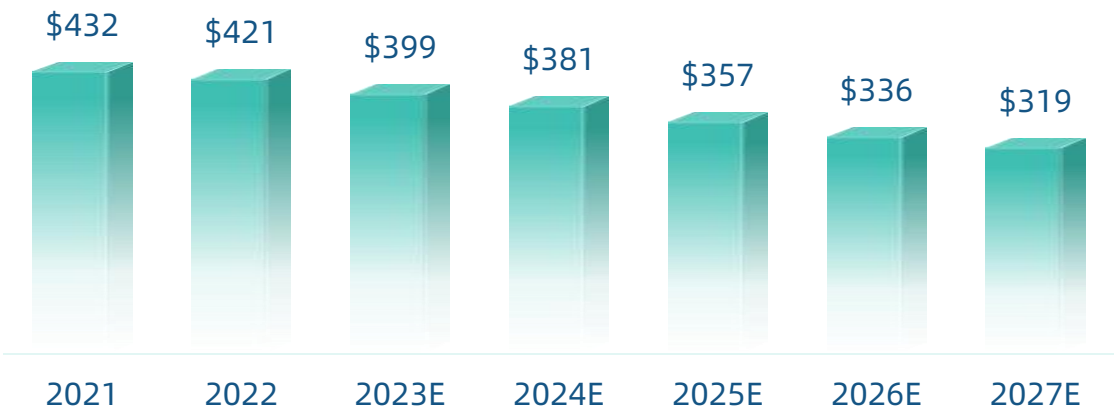|	Front-view	Rear-view	Side-view	Surround-view	Interior-view
L0	0	0.6	0	0	0
L1	1	1	0	0	0
L2/L2+	1	1	2	4	0
L3	1	1	2	4	1
L4/L5	3	1	4	4	2

After considering the current vehicle configurations and ADAS technologies, ICV has established more reasonable assumptions for the number of cameras required for different levels of autonomous driving configurations. These assumptions will be used for market analysis and forecasting going forward.

Global Market Overview

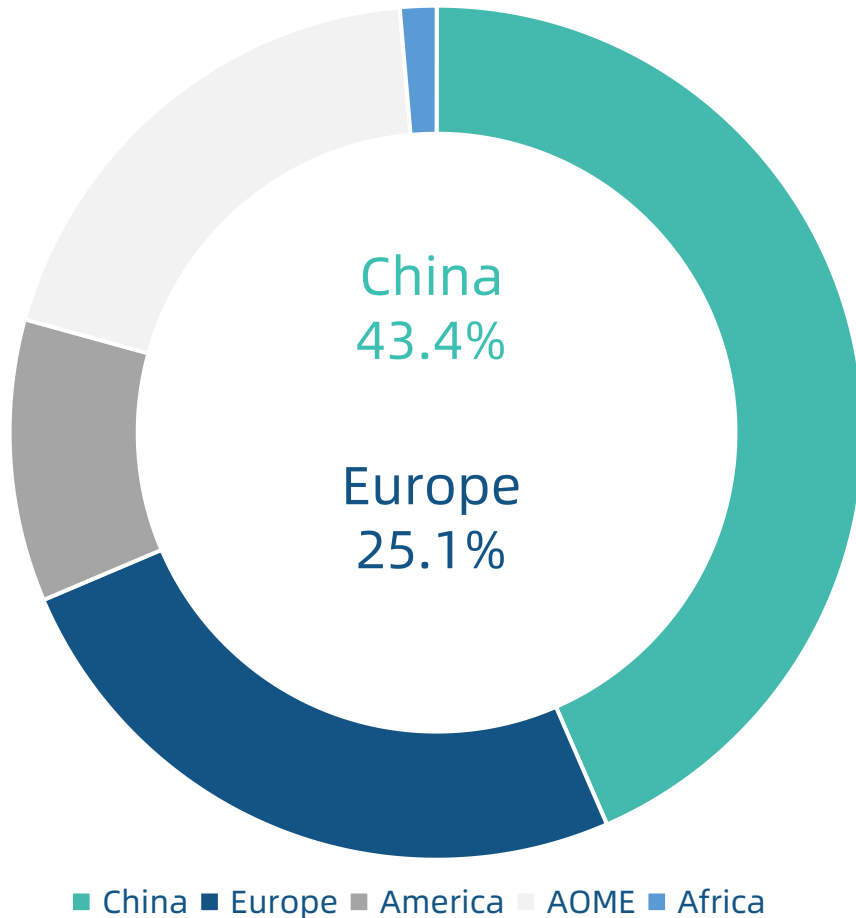## Global Market Size Forecast – Factory Installed
(USD in Million)

Global Market Size Forecast – Post-factory
(USD in Million)
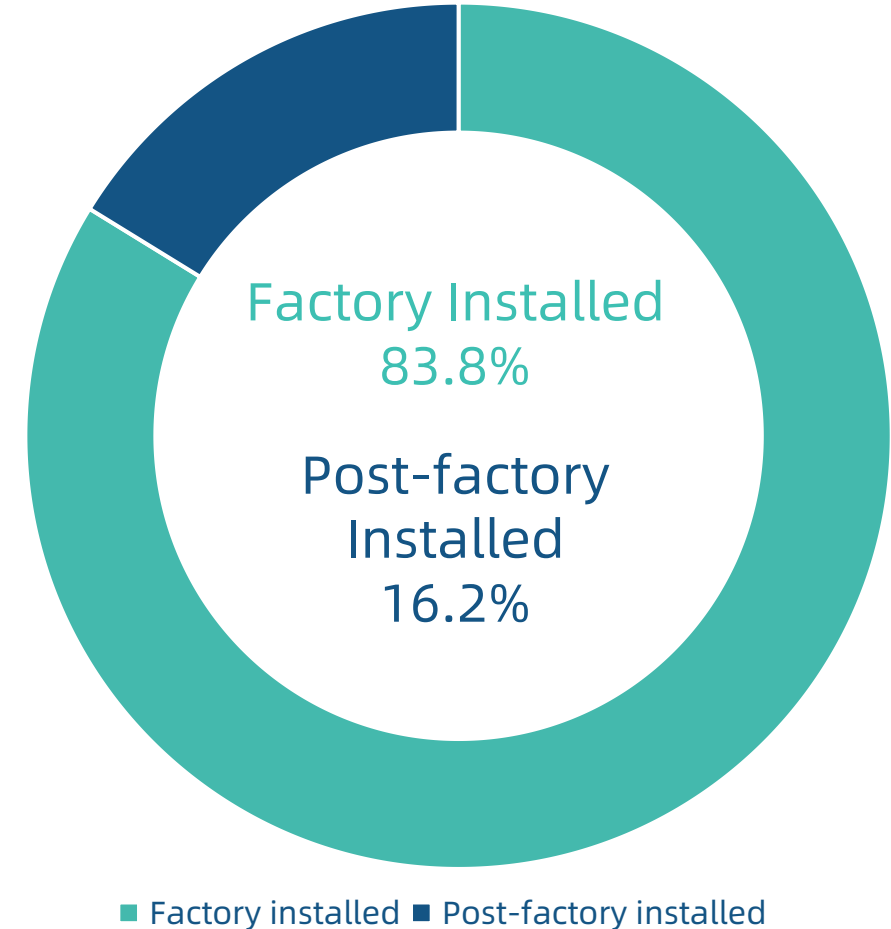

Factory Installed:
- 2021: $2,009
- 2022: $2,174
- 2023E: $2,688
- 2024E: $3,237
- 2025E: $3,855
- 2026E: $4,492
- 2027E: $5,131

Post-factory:
- 2021: $432
- 2022: $421
- 2023E: $399
- 2024E: $381
- 2025E: $357
- 2026E: $336
- 2027E: $319

Market Segments

Market Share – by Region (2022)

China
43.4%

Europe
25.1%

■ China ■ Europe ■ America ■ AOME ■ Africa

Market Share –by Distribution Channel (2022)

Factory Installed
83.8%

Post-factory
Installed
16.2%

■ Factory installed ■ Post-factory installed

Market Size Forecast - China
(USD in Million)

Year	Value
2021	$987
2022	$1,128
2023E	$1,342
2024E	$1,573
2025E	$1,875
2026E	$2,173
2027E	$2,442

Market Size Forecast - Europe
(USD in Million)

Year	Value
2021	$666
2022	$652
2023E	$743
2024E	$870
2025E	$1,004
2026E	$1,152
2027E	$1,312

The market of automotive CIS in China was worth $1.13 billion in 2022, it was estimated to grow to $2.44 billion in 2027, resulting at a 6-year CAGR of 13.7%.
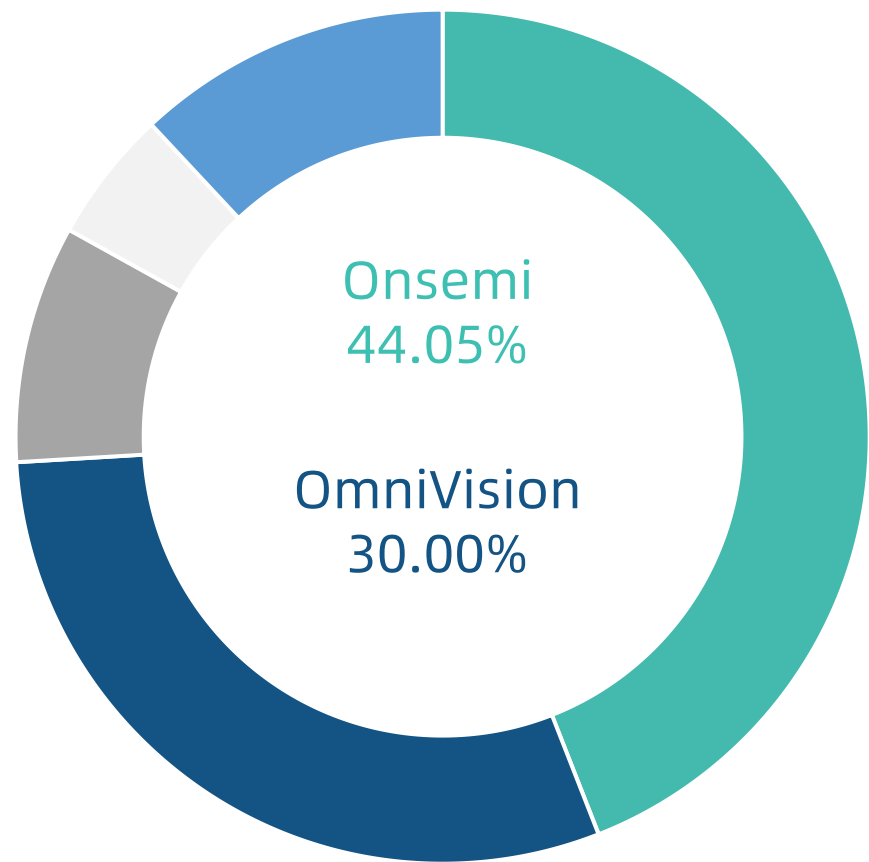
The European market was the second largest segment, it was worth $652 million in 2022 and is estimated to increase to $1.31 billion in 2027, with a 6-year CAGR of 12.3%.
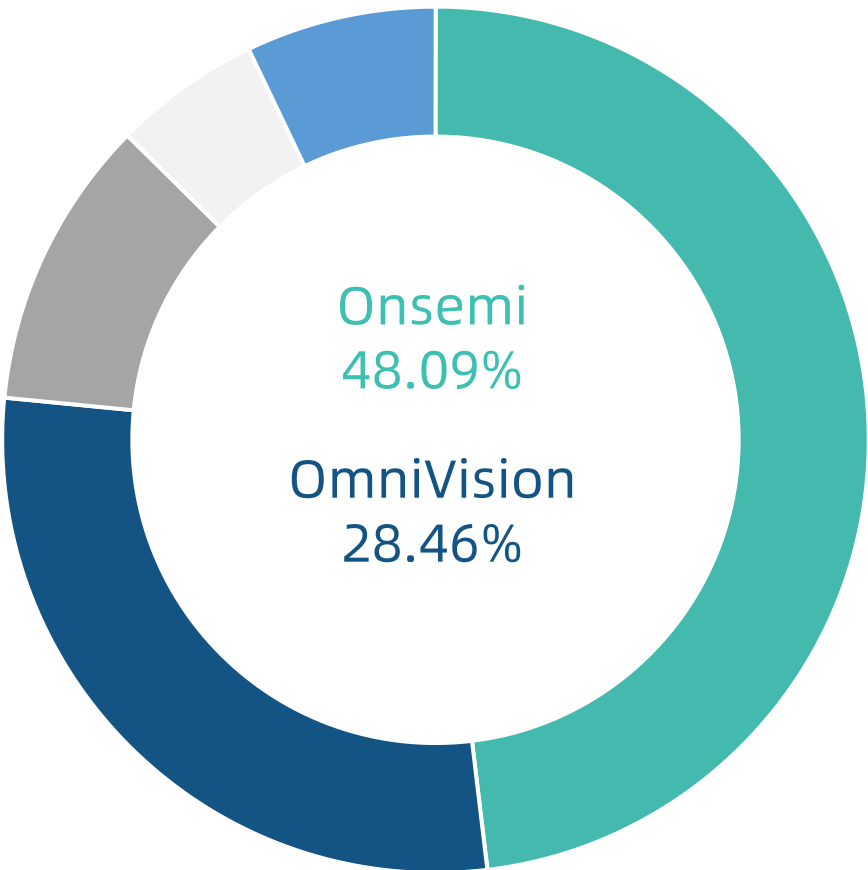
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Competitive Landscape

Automotive CIS Revenue Share by Vendor（2022）

Onsemi
44.05%

OmniVision
30.00%

■ onsemi ■ OmniVision ■ Samsung ■ SONY ■ Others

Automotive CIS Revenue Share by Vendor（2023E）
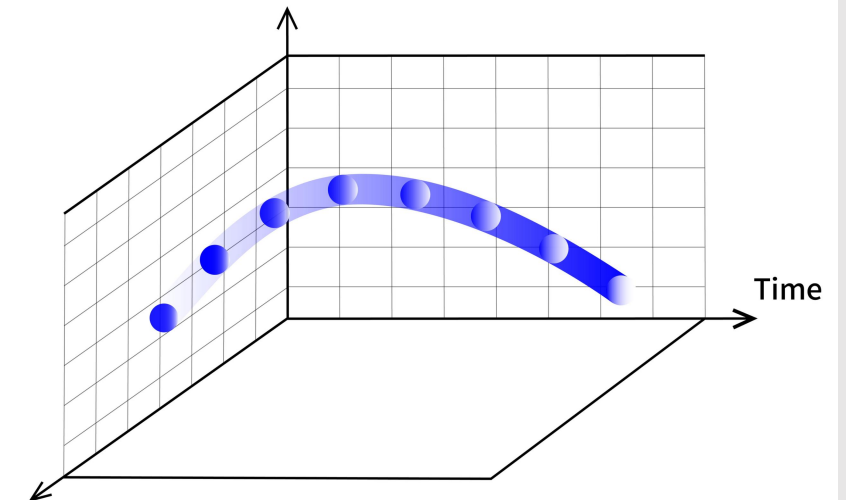
Onsemi
48.09%

OmniVision
28.46%

■ onsemi ■ OmniVision ■ Samsung ■ SONY ■ Others

CIS vs. EVS

CMOS Image Sensor
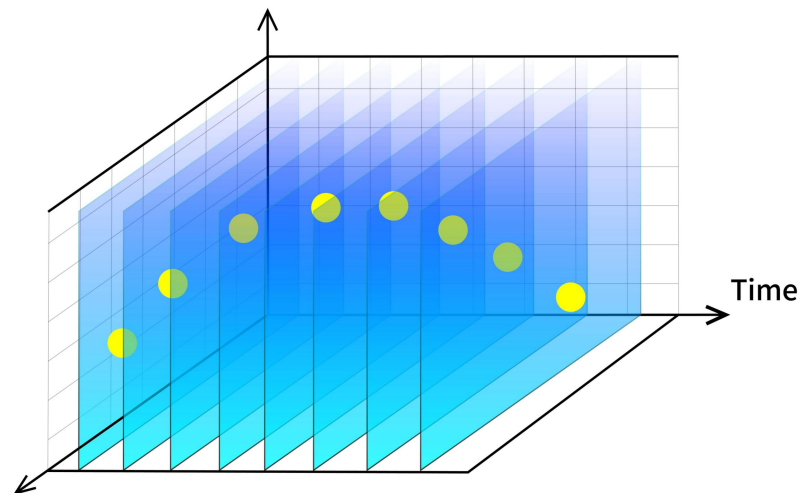
Event-Based Vision Sensor

About ICV TAnK

At ICV we are passionately curious about New Technology, and we strive to deliver the most robust market data and insights, to help our customers make the right strategic decisions.

We bring together the deepest intelligence across the widest set of capital-intensive industries and markets. By connecting data across variables, our analysts and industry specialists present our customers with a richer, highly integrated view of their world.

That is the benefit of The New Intelligence. We are able to isolate cause and effect, risk andopportunity in new ways that empower our customers to make well-informed decisions with greater confidence.

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