

# Machine vision, a growing market driven by industrial and automation applications<sup>1</sup>

## OUTLINE:

- Market forecasts:  
The global industrial and automation camera market expands to US\$5.5 billion in 2026, at 7.4% CAGR<sup>2</sup>.  
Yole's forecast is for 5.0 million units MV cameras in 2026.  
Yole's forecast is for about 26.9 million units ADC<sup>3</sup> camera modules in 2026.
- Technology trends:  
CIS<sup>4</sup> is now dominating the industrial vision market, with 86% of market sales in 2020. CCD<sup>5</sup> will remain some niche markets.
- Supply chain:  
Keyence remains the biggest camera player with a market share of 17.0%.  
This company is followed by Cognex (14.0%) and FLIR (9.0%).  
Latest news: FLIR brings machine vision cameras to Teledyne's portfolio. Read Yole's article on [i-Micronews](#).  
The rest players are also focusing on different area of industrial with high competition each other.

*"The displacement of CCD by CIS has favored volume growth of the machine vision market". asserts **Richard Liu, Technology and Market Analyst in the Photonics, Sensing & Display division at [Yole Développement \(Yole\)](#). "This greatly simplifies the complexity of the industrial cameras. Compact cameras, including smart cameras, can more easily be developed and are more suitable for use in various industrial environments".***

Indeed, Yole expects the global industrial camera market to expand from US\$3.6 billion in 2020 to US\$5.5 billion in 2026, at 7.4% CAGR.

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<sup>1</sup> Extracted from: [Machine Vision for Industry and Automation 2021](#), Yole Développement

<sup>2</sup> CAGR: Compound Annual Growth Rate

<sup>3</sup> ADC: Automated Data Capture

<sup>4</sup> CIS: Complementary metal oxide semiconductor Image Sensors

<sup>5</sup> CCD: Charge Coupled Devices

In this context, Yole investigates disruptive technologies and related markets in order to point out the latest innovations and underline the business opportunities.

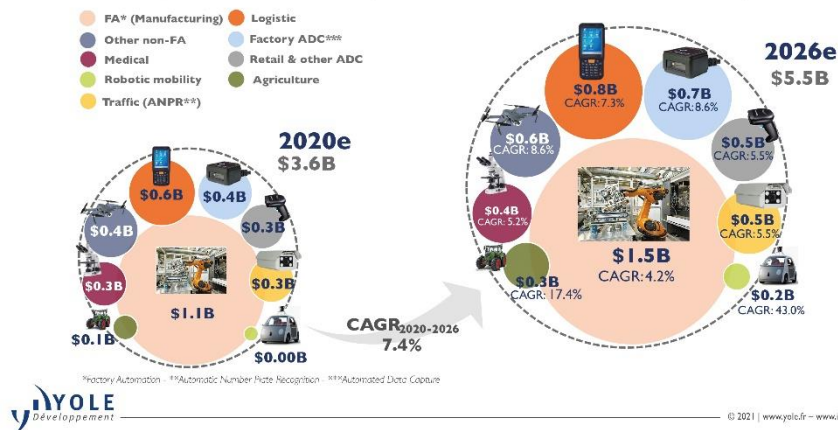
Released today, the Machine Vision for Industry and Automation 2021 report includes market trends and forecasts, supply chain, technology trends, technical insights and analysis, take away and outlook. This study also delivers an in-depth understanding of the ecosystem and main players' strategies at camera and image sensor level.

What are the economic and technological challenges of the machine vision for industry and automation applications? What are the key drivers? Who are the key players to watch, and what innovative technologies are they working on?

Yole presents today its vision of the machine vision for industry and automation.

### 2020-2026 Industrial and automation camera market forecast By application (\$B)

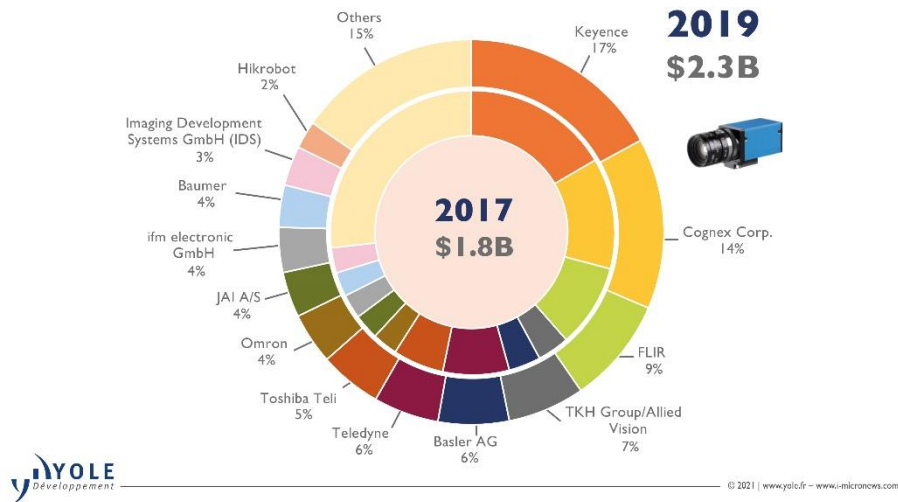
(Source: Machine Vision for Industry and Automation 2021 report, Yole Développement, 2021)



As analyzed by Yole's team in the new Machine Vision for Industry and Automation 2021 report, Yole estimates that CIS now account for over 86% of the industrial camera market. The development of other imaging modalities such as 3D technology and multi-spectral imaging in industrial cameras promotes diversification in the application of machine vision in the industry, the penetration of new technologies will therefore increase further. In a virtuous circle scenario, the applications for machine vision products are becoming more extensive. This behind-the-scenes technology further promotes the overall development of consumer electronics manufacturing, automotive manufacturing and other manufacturing industries, while improving manufacturing accuracy, meaning that the demand for machine vision technology will continue to increase. Each country and region's upgrading of industry, including Industry 4.0, will greatly accelerate the development of automation and promote the development of machine vision.

### 2019 Industrial camera market shares

(Source: Machine Vision for Industry and Automation 2021 report, Yole Développement, 2021)



The COVID-19 pandemic accelerated e-commerce dominance which heavily rely on logistic automation.

According to **Pierre Cambou, Principal Analyst in the Photonics and Sensing Division at Yole**: “Furthermore, in the context of robotization of industrial and logistic processes vision guided robots also have a card to play. Be the inspection, counting, positioning, or picking for example, a rising impulse for their adoption leads the robotic industry and the subsequent machine vision market to even further heights”.

Autonomous vehicles are capable of sensing their environment and operating without human involvement. And that’s not just passenger cars, but other autonomous vehicles, such as logistics trucks, and all kinds of autonomous moving tools that require multiple vision cameras to recognize surrounding objects. These products are driven by machines instead of human beings, which will be revolutionary and will further develop the market for machine vision. Yole estimates that the cameras in this area will become a significant segment reaching US\$211 million in 2026 with a CAGR of 43%.



All year long, Yole Développement publishes numerous imaging-related reports and the CMOS Image Sensor Quarterly Market Monitor. In addition, experts realize various key presentations and organize key conferences. More information on i-Micronews.

In this regard, the market research and strategic consulting company will participate to the “Post pandemic market insights in CIS industry” presentation at Image Sensors Europe 2021 on March 1, 2021, 11:00 AM. Register today on i-Micronews.

In addition, discover Yole’s analysts’ presentation during the Machine Vision & IR for Industry Forum 2020, taking place in China last September: click on i-Micronews.

*Make sure to be aware of the latest news coming from the imaging industry and get an overview of our activities, including interviews with leading companies and more on [i-Micronews](#). Stay tuned!*

### Press contacts

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### About our analysts

**Richard Liu** is a Technology and Market Analyst in the Photonics, Sensing & Display division at Yole Développement, part of Yole Group of Companies. Based in Shenzhen (China), Richard is dedicated on imaging activity (Monitors) as well as the development of technology & market reports. Prior to Yole, Richard was engaged in camera module design on image sensor, AF/OIS at Onsemi, before this, he worked as a customer-application-technologist in Micron/Aptina Imaging. Richard has over 12 years post graduate experience in both of imaging semiconductor and camera module industry, he has the successful track record in developing projects for the tier one smart phone and module makers, which brought him wide industry connection in the CMOS image sensor supply chain and ecosystem. Richard graduated from Wuhan University (China) and holds an Electronics Engineering Degree.

**Pierre Cambou** MSc, MBA, is a Principal Analyst in the Photonics and Sensing Division at Yole Développement (Yole). Pierre's mission is dedicated to imaging related activities by providing market & technology analyses along with strategy consulting services to semiconductor companies. He is responsible for the CIS Quarterly Market Monitor while he has authored more than 15 Yole Market & Technology reports. Pierre has an Engineering degree from Université de Technologie de Compiègne (France) and a Master of Science from Virginia Tech. (VA, USA), Pierre also graduated with an MBA from Grenoble Ecole de Management (France).

### About the report

#### **Machine Vision for Industry and Automation 2021**

*The industrial vision market matters, and the ecosystem is reconfiguring* – Performed by Yole Développement

#### **Companies cited:**

Allied Vision Technologies (AVT), ams, Banner Engineering, Basler AG, Baumer Electric AG, Bosch Security Systems, Brandywine Photonics, Buhler GmbH, Chromasens GmbH, Cognex Corp., Daewon GSI Co., Ltd., Datalogic, Daheng, Delta Technology Corp., Digital Recognition, FLIR Integrated Imaging Solutions Inc., Genetec Inc., Gilden Photonics, Gpixel, Hamamatsu Photonics KK, Huaray, Headwall Photonics, Hefei Angelon Electronics Co., Hefei Growking, Hikrobot, Optoelectronic Technology Co., Hefei Meyer Optoelectronic Technology Inc., Hefei Taihe Optoelectronic Technology, Honeywell, IC Intracom, ifm electronic GmbH, Imaging Development Systems GmbH (IDS), JAI A/S, Keyence, Leica Microsystems, LMI Technologies, Lumenera Corp., Matrox, MAV Systems, Microscan Systems, Inc., and more...

#### **Related reports:**

- [Sensors for Robotic Mobility 2020](#)
- [Thermal Imagers & Detectors 2020](#)
- [3D Imaging & Sensing 2020](#)
- [CMOS Image Sensor Quarterly Market Monitor](#)
- [iRAY T3S Thermal Camera Performance Analysis](#)

### About Yole Développement

Founded in 1998, Yole Développement (Yole) has grown to become a group of companies providing marketing, technology and strategy consulting, media and corporate finance services, reverse engineering and reverse costing services and well as IP and patent analysis. With a strong focus on emerging applications using silicon and/or micro manufacturing, the Yole group of companies has expanded to include more than 80 collaborators worldwide... [More](#)

**For more information and images, please visit our website [i-Micronews](#)**

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