

## Compact camera module market: the access to technology is key

Camera Module Industry report, August 2015

**LYON, France – October 28, 2015:** *“Critical technology shifts including 3D, computational, motion, infrared (IR) are ahead of us, with the camera module ultimately becoming the hub for multi-sensing,” says Pierre Cambou, Activity Leader at [Yole Développement \(Yole\)](#). Yole reveals its vision of the Compact Camera Module (CCM) industry in its first technology and market analysis dedicated to the CCM world. This report is entitled [Camera Module Industry report](#) and is based on both “bottom-up” and “top-down” methodologies.*

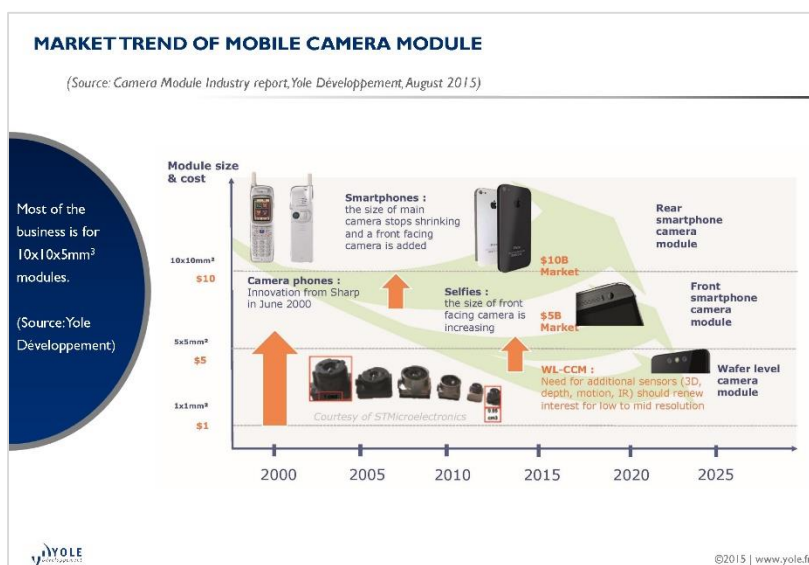
*With the camera module industry report, The “More than Moore” market research and strategy consulting company confirms its strategic positioning and discloses a new step towards a better understanding of this imaging industry and its technical evolution.*

*The camera module industry report from Yole, provides market data on key CCM metrics and dynamics (revenue forecast, volume shipments and sub-component breakdown by application), detailed market shares, a strong application focus on the key CIS growth areas (mobile, automotive, medical, security, machine vision ...). This analysis also proposes an overview of key technical insight, the future technology trends and challenges.*

Access to technology is key in the CCM industry. At the image sensor level, access to Sony’s state-of-the-art 3D stacked sensors is a prerequisite for high-end, high-resolution modules.

The integration of Phase Detection Auto Focus (PDAF) is another key technology feature. Most CMOS Image Sensors (CIS) vendors are quickly closing the technology gap with Sony, but as the investments get larger and larger only the biggest companies will be able to compete.

One key on-going technology shift for high-end CCM is the integration of Optical Image



Stabilization (OIS) functionality. This critical feature is mainly provided by Korean and Japanese Voice Coil Motors (VCM) manufacturers. The high demand for VCM technology means stronger negotiating power for players with access to it. Other propositions using wafer-level techniques are being scrutinized. The Camera Module Industry report discusses the pros and cons of alternative Auto Focus (AF) & OIS technologies.

Under this new CCM analysis, Yole proposes a technical analysis of each application including current and future technology trends. In the automotive sector for example, forward facing cameras are increasing in complexity. Yole's experts detail several examples:

- Volvo equips all of its cars with the City Safety triple camera system. It has announced that its future system will implement a stereo and central camera.
- Subaru Eyesight (from Fuji Heavy Industry) is a stereo camera system that equips most vehicles of the brand sold in Japan
- ...

CCM's future will also include new sensor types that serve not only sensing but also video and photography. *"Many developments are currently underway, especially for 3D"* explains Pierre Cambou from Yole. *"The smartphone revolution is not yet 10 years old and the action sports camera revolution is not even three years old,"* he adds. The imaging industry is digesting waves of innovation at a pace unseen anywhere else. The sensing revolution, including computational imaging techniques, will probably be next to occur.

Yole's report, [Camera Module Industry](#), covers market and technology insights for successfully navigating this changing landscape. A detailed table of content as well as list of companies are available on [i-micronews.com](http://i-micronews.com), imaging reports section.



**About [Camera Module Industry](#) report:**

Rates: Euros 5,990.00 (Full report - Multi user license). For special offers and the price in dollars, please contact [David Jourdan](#) (Phone: +33 472 83 01 90).

*The Compact Camera Module (CCM) industry reached \$20B in 2014 and should increase to \$51B by 2020. High stakes in mobile and explosive growth in automotive are fueling CCM players' revenues.*

- **Authors:**

From 1999, **Pierre Cambou** has been part of the imaging industry. He has earned an Engineering degree from Université de Technologie de Compiègne and a Master of Science from Virginia Tech. More recently he graduated from Grenoble Ecole de Management's MBA. Pierre took several positions at Thomson TCS which became Atmel Grenoble in 2001 and e2v Semiconductors in 2006. In 2012 he founded a start-up called Vence Innovation (now Irlynx) in order to bring to market a disruptive Man to Machine interaction technology. He joined Yole Développement as Imaging Activity Leader in 2014.

- **Companies cited in the report:**

AAC Technologies, Ability Opto, Alps, Apple, Asia Optical, Brigates, BYD Microelectronics, Calin Technology, Cammsys, Cha Diostech, Chicony, Continental, Cowell Optics, Cresyn, Crystal-Optech, Ddk, DJI, Foxconn, Fujifilm, Fujinon, Fujitsu, Galaxycore, Genius Optical, Google, Gopro, Haesung Optics, Himax, Hirose, Hoya, Huawei, IM, Intel, Jawah, JSR, Kantatsu, Kinko Optical, Kolen, Kyocera, Largan, Lenovo, LG Innotek, Liteon, Magna, Materion, Mcnex, Microsoft, Mitsumi, Mobileye, Nalux, New Shicoh, Nidec, NTK, O-Film, Omnivision, On Semiconductor, Optis, Panasonic, Parrot, Partron, Pixart, Pixelplus, Powerlogic, Primax, Q-Tech, Samsung, Schott, Semco, Sharp, Sekonix, SK Hynix, Softkinetic, Sony, ST Microelectronics, Sunny, Sunex, Superpix, Suyin, TDK, Tessera, Toshiba, Truly, Valeo, Viavi (Fr. JDSU), Volvo, Xiaomi, Zeiss, Zte and more ...

**About Yole Développement**

Founded in 1998, [Yole Développement](#) has grown to become a group of companies providing marketing, technology and strategy consulting, media and corporate finance services. With a strong focus on emerging applications using silicon and/or micro manufacturing, the Yole Développement group has expanded to include more than 50 collaborators worldwide covering MEMS, Compound Semiconductors, LED, Image Sensors, Optoelectronics, Microfluidics & Medical, Photovoltaics, Advanced Packaging, Manufacturing, Nanomaterials and Power Electronics. The group supports industrial companies, investors and R&D organizations worldwide to help them understand markets and follow technology trends to develop their business.

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