Camera module industry: Where companies fit in this US$51 billion market
Camera Module Industry report, August 2015

LYON, France – September 29, 2015: “We have witnessed the compact camera module (CCM) ecosystem’s increasing complexity and its significance with respect to the global micro-electronics industry”, says Pierre Cambou, Activity Leader at Yole Développement (Yole). “CCMs, mainly developed for mobile phone applications, have become technological marvels. They bring together heterogeneous sub-components from the semiconductor industry, the optical industry in the form of optical lens sets, and more recently the micro-motor industry.”

In this context Yole, the “More than Moore” market research and strategy consulting company, has produced its first deep added-value analysis dedicated to the CCM industry. Entitled Camera Module Industry (August 2015), this report provides a market analysis at the module manufacturing, image sensor, lens and AutoFocus (AF) & Optical Image Stabilization (OIS) levels. It gives a detailed description of the supply chain, its key players and the dedicated competitive landscape. In this report, Yole’s analysts review the technologies’ evolution and identify future developments.

In its latest report, Yole details a US$20 billion market in 2014 that will grow to US$51 billion by 2020 thanks mainly to the mobile phone and automotive sectors. Yole’s experts share their vision of the industry and analyze the CCM supply chain.

Industrial companies, mostly CMOS Image Sensor (CIS) manufacturers, want to expand their activities towards the downstream part of the CCM supply chain. In this strategy, such players are developing innovative solutions at the module level. This is the case of the following CCM
leaders: Sony (see the April 2015 interview with Mr Yasuhiro Ueda, President of Sony Semiconductor Corporation by Yole), Samsung and Panasonic.

The consumer and mobile phone sectors are following the “divide and rule” dogma. Smartphone integrators like Apple and Google are served by a very fragmented supply chain, allowing them to select the best suppliers and get the most innovative solutions at the best price. The unstable CCM supply favors Chinese players’ efforts to penetrate the mobile phone market. Samsung, unlike Apple and Google, has its own suppliers and subsidiaries.

In the automotive area, Yole’s analysts are seeing a different set of players, including Omnivision, LG Innotek and Sunny, thriving. The CCM leaders, such as Sony, Sharp and Largan, are mainly concentrated on mobile phones. Explosive growth will probably reshuffle the automotive camera market several times. Technology is not yet a big driver as it has only just become “good enough”. CCMs should play an increasing role as Advanced Driver Assistance System (ADAS) becomes more demanding.

“Because of the supply chain complexity, the wind of change should come from the technology providers,” comments Pierre Cambou from Yole. “The whole momentum is governed by technology adoption rates. The tempo mainly comes from Apple, particularly in high resolution rear cameras, phase detection pixels, AF and OIS. Korea is driving laser autofocus and 1.1 micron pixels and China high resolution front cameras. Monitoring these technology changes is exactly what Yole is all about. The CCM industry is in the midst of a fascinating innovation drive.”

From a geographical point of view, the CCM industry is controlled by Asian firms, mainly Korean and Japanese. However Yole’s analysts are also witnessing the rise of Chinese firms and restructuring of Taiwanese firms. An ongoing price war has leveled the market, and most players have operations in China or Vietnam. There is a clear market split between players mainly delivering sub-5Mp resolution cameras for the computing and low-end mobile fronts, and players producing above-5Mp for high-end rear mobile cameras. Successful strategies exist at both ends of the market, even though the rise in resolution makes the low-resolution option more challenging.
Today, being a part of the main mobile handset makers’ supply chain is a key success factor. While the rich Korean ecosystem has been able to develop itself thanks to Samsung and LG, a threat is growing due to over-dependency on a few main mobile players. Japanese CCM players have successfully negotiated the demise of their own domestic mobile manufacturers, first by serving Apple and then by moving into China and serving the rising stars there. Taiwanese players’ fortunes range widely. Largan, which serves all market players, is Taiwan’s greatest success. However, other Taiwanese players have had limited market access since only a few significant mobile handset manufacturers still use a 100% Taiwanese supply chain.

Yole’s report covers the entire supply chain and provides a complete player ranking analysis with respect to the CCM industry’s different activities. A complete description of this analysis is available on i-micronews.com, in the imaging reports section.
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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.

Camera Module Industry report from Yole Développement will be available on September 24, 2015.

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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, Genious 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, Mobileeye, 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 ...

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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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