Mobile phones and automotive sectors are fueling camera module revenues
Camera Module Industry report from Yole Développement, August 2015

LYON, France – September 9, 2015: Driven by mobile phones and automotive sectors, the Compact Camera Module (CCM) industry will be multiplied by 2.5 between 2014 and 2020, reaching a total aggregate revenue of US$51 billion by 2020. According Yole Développement’s new report entitled Camera Module Industry, mobile phones segment will grow from 72% to 74% of revenues due to improving specifications and average selling price. Therefore mobile phones manufacturers meet the increased market demand for higher quality photos and propose innovative products with more and more efficient camera modules. Under this context, the “More than Moore” market research and strategy consulting company Yole Développement (Yole), highlights the CCM price increase: “This trend is a real surprise. Indeed, at Yole, we follow the electronic components market for the mobile phones industry for a long time and we know the strategic importance of price in this sector”, comments Pierre Cambou, Activity Leader at Yole. This market demand is partly answered by the penetration of Auto Focus (AF) and the Optical Image Stabilization (OIS) application (see the illustration below) reaching US$ 5.5 billion in 2020, with 21% CAGR between 2015 and 2020. Such figure highlights the strategic importance of the AF & OIS applications in the mobile phones sector and the possible implication of those technologies in future sensing applications.

Camera Module Industry report is the first technology & market analysis focused on the camera module market and technologies, performed by Yole’s analysts. It has been performed in collaboration with Jean-Luc Jaffard, formerly at STMicroelectronics and part of Red Belt Conseil. In this report, both experts propose a comprehensive overview of the CCM applications (mobile, Digital Single Lens Reflex (DSLR), automotive, medical, security, machine vision...) and key players. The report includes revenue forecast, volume shipment and sub-component breakdown by application.

“There is a different market trajectory for the lens and sensor markets, which are now maturing at approximately 14% CAGR with the
emergence of giant billion-dollar companies”, explain Yole’s analysts. CCM and auto-focus manufacturing markets, which are still very fragmented and growing at roughly 20% CAGR, should experience consolidation over the next five years.

The stakes are high, since the mobile phones market is maturing and micro-cameras are key differentiators. The consumer appetite for slimmer mobile devices is forcing CCM players into a major technological race while at the same time demanding massive investment to keep up with volume. The CCM industry greatly benefited from the adoption of high-resolution cameras in mobile phones, since doubled by the adoption of front-facing ones. Current revenues are mainly driven by the increasing resolution of both rear and front-facing mobile cameras. But new applications, especially in the automotive area, are starting to play an important role.

“Automotive has a long way to go: technologies are just good enough to enter the current market as they reach consumer expectation”, asserts Pierre Cambou from Yole. “The technology will quickly evolve and serve the autonomous vehicle trend,” he adds.

Automotive has had a significant impact on the CCM ecosystem. Automotive cameras have shifted from an add-on feature to must-
have standard equipment, and regulations in the European Union and the United States are encouraging this transition. Automotive module revenue reached US$1.2 billion in 2014, and growing at a CAGR of 36% should reach US$7.9 billion by 2020. This exceptional growth has mainly benefited the CCM industry’s second-tier players, but the response of market leaders will be worth watching. As the camera module application moves from imaging to sensing, the automotive Advanced Driver Assistance System (ADAS) application is the perfect barometer of what’s to come for the entire camera module industry.

The computing sector is also an area analyzed by the market research and strategy consulting firm, Yole. This market is important in value but its growth is stable. According to Yole’s analysts, the computing sector could expect a large growth with the addition of innovative sensors (3D, depth, motion, IR). New applications in video interaction are to revolutionize computing camera usages.

Yole’s report, Camera Module Industry looks systematically at the CCM applications on key CMOS Image Sensors (CIS) growth areas and their respective technology issues. A detailed description of this report is available on i-micronews.com, imaging reports section.
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.

- Author:

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.

From 1996 to 1999, Jean-Luc Jaffard paved the way of imaging activity at STMicroelectronics being at the forefront of the emergence and growth of this business. At STMicroelectronics Imaging division he has been appointed Research Development and Innovation Director managing a large multidisciplinary and multicultural team and was later on promoted Deputy General Manager and Advanced Technology Director in charge of identifying, sourcing or developing the breakthrough Imaging Technologies and Applications to transform them into innovative and profitable products. In 2010 he was appointed STMicroelectronics Intellectual Property Business Unit Director, a dedicated business structure in charge of exploiting the wide range of intellectual asset of the company. In January 2014 he created the Technology and Innovation branch of Red Belt Conseil, to support High Tech actors like SME, Research Institutes, Start-ups, Analysts, Investors and public authorities. Jean-Luc Jaffard owns multiple patents in semiconductor and Imaging domains and has been invited speaker in many conferences worldwide. He studied Electronic and Microelectronic and has been graduated from Ecole Supérieure d’Electricité of Paris in 1979.

- Companies cited in the report:


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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