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New HiveGo CSS Product Line From Silicon Hive and Acutelogic Provides Complete Embedded Camera Imaging Subsystems for SoC Makers.

Silicon Hive and Acutelogic Enter Into Partnership Enabling SoC Makers To Buy One Stop Camera Imaging Solutions Which Combine Silicon Hive's Efficient Programmable Processors With Acutelogic's Ultra-High Quality And Robust Image Processing and Camera Control Algorithms.

Silicon Hive (Eindhoven, The Netherlands), Acutelogic (Tokyo, Japan) launched a new line of products called HiveGo Camera Sub Systems (CSS) at the Photokina Trade Show in Koln Germany today. HiveGo CSS products provide a completely integrated hardware and software subsystem in the form of licensable Intellectual Property (IP) for System on Chip (SoC) manufacturers targeting a variety of consumer electronic devices, in particular camera phones. By combining and co-optimizing the leading technologies in parallel processing and digital image processing, the two companies have created a unique product that can be rapidly integrated in SoC designs. In addition to offering the best-in-class image quality and VLSI performance, the HiveGo CSS product line has the required flexibility to add differentiators and evolving features in software, and to be integrated in various camera systems, supporting a variety of CMOS sensors from 5Mpix to 16 Mpix and beyond.

The two companies have jointly launched three initial products: HiveGo CSS 3016J, HiveGo CSS 3012J and HiveGo CSS 3108J. The three products address different image quality, image processing, and camera control applications found in high and mid-range markets. Specifically HiveGo CSS 3108J targets

higher volume Smart Phones. HiveGo CSS 3016J targets DSC, DVC, and UMPC cameras. HiveGo CSS 3012J targets the high quality imaging demands of Mobile Internet Devices (MIDs). HiveGo CSS 3016J has already been licensed to a lead customer this past summer.

The HiveGo CSS 3016J hardware diagram is shown below in Figure 1. It incorporates Silicon Hive's 3rd generation HiveFlex ISP 2300 scalable SIMD processor, a control processor, and accelerators for filters, scaling, smooth digital zoom, and distortion correction. This hardware configuration enables ultra high quality still capture at up to 260 Mega Pixels per second, or 16MP@15fps 'on the fly', or capturing and processing HD video streams at 1080p 60fps. Being a scalable hardware system, lower or higher performance points are efficiently supported with appropriate processing power and VLSI complexity. Various camera input formats are supported such as SMIA-CCP2 and MIPI- CSI2. In addition there are robust GPIO connections for camera systems controls such as lens, focus, and flash.

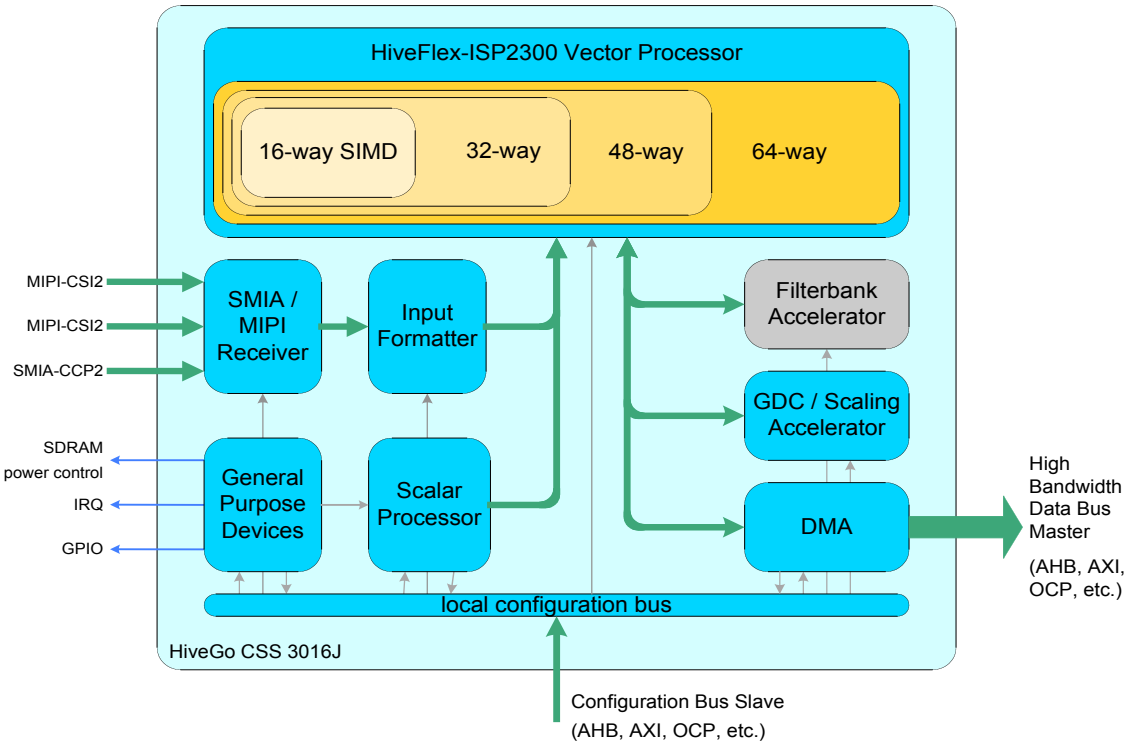

Figure 1 – HiveGo CSS 3016J Hardware Block Diagram

Complementing the camera subsystem hardware, Acutelogic's image signal

processing technology and 3A technology (Auto White Balance, Auto Exposure, Auto Focus) provide a total software package for SoC manufacturers seeking to integrate a flexible and programmable digital camera system in their SoCs. Figure 2 shows a summary of the full range of algorithms available for image signal processing and 3A technology available on the HiveGo CSS 3016J, CSS 3012J, and CSS 3108J platforms. Highlights include: correcting lens imperfections; noise reduction, removal of artifacts. In total the software library includes over 30 different functions, with more to be added as the HiveGo CSS 3012J and CSS 3108J products are released in the future.

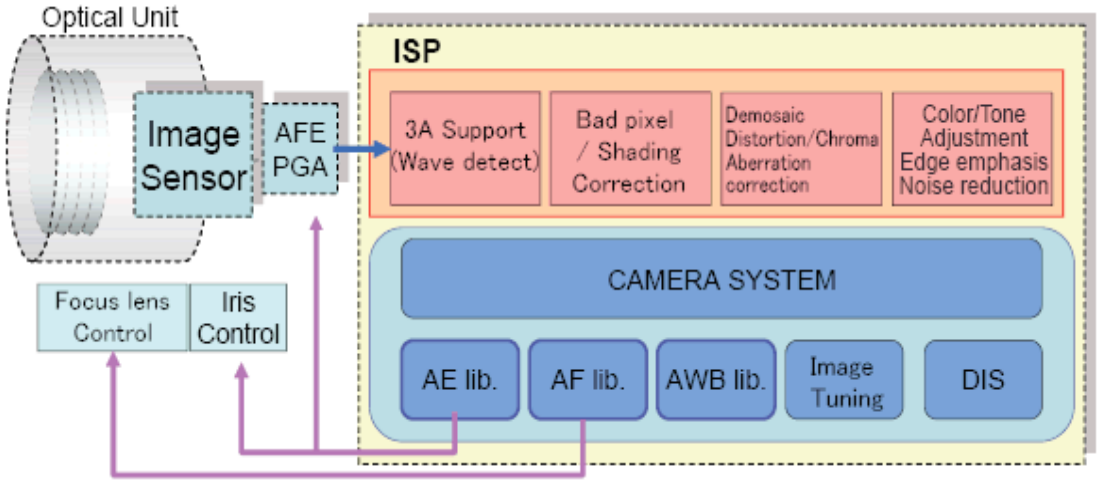

Figure 2 – Examples of Acutelogic's complete ISP and 3A software libraries which allow SoC manufacturers to customize and differentiate their own implementations of HiveGo CSS 3016J solutions.

Silicon Hive has been strengthening its positioning in the embedded imaging market over the last few years. "Driven by consumer demand, the rapid pace in improved image quality and new features in various camera systems requires an integrated, scalable, and flexible camera solution. The HiveGo CSS product line, jointly developed by Silicon Hive and Acutelogic, offers the best-in-class solution for this rapidly growing market demand. Acutelogic is the leading embedded digital imaging solutions supplier in Japan, with many design wins in Asia-Pacific. The partnership enables both companies to profit from technology synergies as well as strong footholds in different market segments and geographies enabling a worldwide presence and round-the-clock customer

support," said Atul Sinha C.E.O. of Silicon Hive.

Acutelogic has been focusing on creating new markets by providing the total solution of digital image processing optimized for each optical system and image sensors. " For mobile applications, High Definition movie functions will soon become available in the market place. There is no doubt that such mobile devices will require a high performance feature set and very low power consumption simultaneously. Silicon Hive has finally solved this longtime trade-off issue. We believe that HiveGo CSS is the perfect solution to meet a vast majority of the needs for super quality DSC and HD movie requirements with a high degree of flexibility and short development cycle," said Osamu Fukushima, CEO of Acutelogic.

Starting at the Photokina Trade Exhibition in Koln Germany Sept. 23 – 28th, both companies are marketing the HiveGo CSS product line worldwide. Both Companies are exitibiting in Silicon Hive's booth in Hall 4, level 1, Stand F 30.

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About Silicon Hive B.V.

Silicon Hive is a worldwide supplier of semiconductor intellectual property. The company designs, builds and licenses application-specific solutions for communications, imaging, and video processing using its tuned programmable HiveFlex processor cores and complete vertical HiveGo solutions. IP cores are supported by HiveCC program development tools, and partner supplied application libraries. Silicon Hive products enable semiconductor and consumer electronics companies to make fully programmable System-on-Chips (SoCs) improving time to market performance. The patented technology originates from 10 years of research within Philips Research and more recent

improvements, additions, and commercialization by Silicon Hive. Silicon Hive B.V. is a venture funded company with investments from New Venture Partners LLC, TVM Capital GmbH, and Philips. http://www.siliconhive.com

About Acutelogic Corporation.

Acutelogic is a total solution provider in the digital image processing arena. The company designs and develops intellectual property for Image Signal Processing with broad experience in complete camera systems, including optical systems, and image sensors. Acutelogic ISP and 3A technology have been licensed and adopted by leading ISP chip vendors in Japan and by worldwide manufacturers of various types of digital imaging products ranging from DSLR to Camera Phones.

Acutelogic also designs and develops intellectual property for High Definition camera module products for non-consumer applications.

Acutelogic was founded in 1998 by the CTO, Takashi Masuda, who pioneered DSC and DVC products for many years in Japan.

For more information, please visit http://www.acutelogic.co.jp/

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