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Ambarella S5 IP Camera SoC Delivers 4K 10-bit H.265 Video and Multi-Imager Capabilities to the Professional Surveillance Industry

Low power architecture and 14nm technology deliver 4Kp30 video at less than 1.4 Watts of power consumption

SANTA CLARA, Calif.--(BUSINESS WIRE)-- Ambarella, Inc. (NASDAQ: AMBA), a leading developer of low-power, HD and Ultra HD video processing semiconductors, today introduced the S5 System-on-Chip (SoC) targeting professional high-quality 4K and multi-imager IP camera designs. The S5 offers advanced features including 4K multi-exposure High Dynamic Range (HDR) fusion, 360° de-warp and ultra-low light processing. Maximum performance is 4Kp120 or 8Kp30 of H.264/AVC and 4Kp60 frames of H.265/HEVC, while supporting flexible multi-streaming, rate control and transcoding functions. The S5 supports the high-quality Main10 HEVC Profile (10-bit H.265) for outstanding representation of high contrast scenes and a wide color gamut. In addition, it leverages Ambarella's SmartHEVC™ technology to radically reduce 4Kp30 video bitrates to between 512 Kbps and 4 Mbps, minimizing network bandwidth requirements and saving on storage costs. The S5 image sensor interface and its advanced 1-Gigapixel/s Image Sensor Pipeline (ISP) can be configured as up to four independent sensor inputs to allow development of high resolution multi-imager cameras.

"The S5 will play a critical role in the industry's shift to 4K and H.265," said Fermi Wang, President and CEO of Ambarella. "With it, our partners gain a leading-edge image processor that delivers low power consumption, superior image quality, smart H.265 compression and a powerful quad-core CPU."

The S5 includes a 1.2 GHz quad-core ARM® Cortex®-A53 64-bit CPU with floating point and NEON™ available for user applications. A Linux-based Software Development Kit (SDK) allows customers to develop highly differentiated products including 4Kp60 traffic cameras, 4x4K multi-imagers and surround view cameras, with support for advanced features including intelligent video analytics, in-camera edge storage and transcoding.

Ambarella will demonstrate the S5 at a private event during ISC West in Las Vegas, April 6-8, 2016.

S5 Feature Summary

- | H.265/HEVC Main/Main10 Profile Level 5.1 encoding up to 4Kp60 with SmartHEVC™ low-bitrate streaming
- | H.264/AVC Baseline/Main/High Profile Level 5.1 encoding up to 4Kp120 or 8Kp30
- | Multi-streaming with on-the-fly settings for resolution, frame rate, quality and transcode
- | Sub-LVDS/SLVS-EC/MIPI®/HiSPi™ sensor interfaces configurable as up to 4 independent interfaces
- | ISP with line-interleaved multi-exposure HDR MCTF 3D noise reduction, High ISO low-light, defog and contrast enhancement
- | Multi-imager support for up to four 4K sensors with stabilization, de-warp and image stitching
- | 180/360° de-warping with multiple windows, electronic PTZ and rotation
- | 1.2 GHz quad-core ARM Cortex-A53 CPU with floating point, NEON SIMD
- | Ambarella low-power architecture combined with 14nm FinFET technology enables 4Kp30 encoding, including DDR, at less than 1.4 Watts

Pricing and Availability

For pricing and availability please contact Ambarella at www.ambarella.com/about/contact/inquiries

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About Ambarella

Ambarella, Inc. (NASDAQ: AMBA), is a leading developer of low-power, high-definition and Ultra HD video compression and image processing solutions. The company's products are used in a variety of cameras including security IP-cameras, wearable cameras, flying cameras and automotive video processing solutions. Ambarella compression chips are also used in broadcasting TV programs worldwide. Ambarella is the recipient of the Global Semiconductor Alliance 2015 awards for "Most Respected Public Semiconductor Company" and "Best Financially Managed Semiconductor Company," both with sales of between \$100M and \$500M. For more information about Ambarella, please visit www.ambarella.com.

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