Pixelworks Announces Seventh Generation Visual Processor, Redefining the Performance Boundaries for Mobile Gaming

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Pixelworks X7 Enables Breakthrough Visual Performance for Mobile Gaming by Combining High Frame Rate, High Resolution and HDR with Extremely Low Latency and Reduced Power Consumption

SHENZHEN, China, Nov. 17, 2021 /PRNewswire/ -- Pixelworks, Inc. (NASDAQ: PXLW), a leading provider of innovative solutions for video and display processing, today unveiled its latest seventh generation mobile visual processor at its product launch event in Shenzhen, aiming to exceed users' expectations and growing demand for uncompromised visual performance on mobile games. Specifically designed to solve the fundamental pain points for visual performance of games on mobile devices, the X7 incorporates Ultra-low Latency MotionEngine® Technology coupled with upgraded intelligent display and Low Power Super-Resolution.

The Pixelworks X7 processor dramatically improves video and image quality on both LCD and OLED screens as well as enables refresh rates of up to 180Hz for FHD+ resolution and 144Hz for WQHD+ resolution, providing device manufacturers with extensive and comprehensive functions for achieving intelligent and superior display performance on mobile devices, from smartphones, gaming devices, tablets to AR/VR HMD.

"Our X7 processor brings together the industry's highest quality and most advanced display enhancement features to enable breakthrough, PC-like visual performance for mobile gaming," said Leo Shen, Sr. VP, GM of Mobile BU, Pixelworks. "Leveraging over two decades of Pixelworks display processing expertise, together with more recent collaboration efforts with game engine partners, we are eliminating the boundaries for gaming on a mobile device – making high resolution, high frame rate and reduced power consumption a reality, while simultaneously driving down latency to nearly zero. The alignment of our X7 processor and a growing gaming ecosystem provides significant benefits to both mobile device manufacturers and end users, as the demand for AAA games on mobile devices continues to grow faster than all other gaming platforms."

The Pixelworks X7 processor combines the features from all previous generations, with painstaking optimization for increased performance advantages targeted at significantly elevating the visual experience for mobile gaming. New and enhanced features of the X7 visual processor include:

Ultra-low Latency MotionEngine® Technology: The mature MotionEngine® technology upgraded the low frame rates that are common in mobile games to smoother, smarter, higher frame rate motion quality. The new X7 visual processor takes superior motion to a completely new level through a closely integrated solution together with gaming content creation and production by cooperating with the market's leading game engine platform. As a result of this integration with the mobile gaming ecosystem and deeper algorithm optimization, the X7 visual processor effectively reduces the latency after frame interpolation to the lowest level physically achievable. Additionally, by offloading processing from the GPU to deliver the optimal and smoothest animation, the X7 dramatically lowers the power consumption of mobile devices, enabling high frame rate gaming over extended periods of time.

Low Power Super-Resolution: With a more than 20-year history of delivering image processing innovation to leading providers of projectors, video streaming services and smartphones, Pixelworks has succeeded in bringing cinematic visual quality from the big screen to devices with much smaller displays. The X7 visual processor is the first generation to incorporate Pixelworks' Low Power Super-Resolution Technology, which leverages newly advanced algorithms to improve picture quality by boosting content resolution from low resolution to high resolution, while allowing the mobile device to remain in a low power consumption state. As a result, users are able to enjoy the benefits of both greatly enhanced visual quality and enriched content and meaningfully longer high quality gaming and video experiences. The Low Power Super-Resolution Technology will greatly enhance the visual quality of low-resolution games and enrich the variety of game content to be played on mobile devices.

3D Noise Reduction: Pixelworks X7 processor takes the elimination of noise reduction for videos with dim lighting to a completely new level. Due to underexposure, video distortion or noise can make motion look blurry and dark, and rough when the display window is enlarged. Pixelworks' new 3D Noise Reduction not only compensates for the visual noise of 2D images, but also conducts dynamic analysis between frames for more precise noise reduction, resulting in motion that is more clear and true to life.

AI Always-On HDR: Pixelworks X7 processor inherits and optimizes the AI capabilities originally introduced in its i6 processor. Utilizing low-power AI to detect the characteristics of content, the X7 significantly improves the display quality of photos, games and videos by dynamically tuning local contrast and sharpness for an always-on HDR experience, including dynamic detection and preservation of skin tones for a more natural look across color gamuts and custom viewing modes. More specifically, by intelligently adjusting attributes of the display panel for ambient light conditions, user settings, and the dynamic contrast, sharpness, brightness, and color temperature of content, Pixelworks' AI Always-On HDR delivers optimal visual performance, while greatly enhancing the viewing experience for human eyes.

Excellent Color Calibration: Color accuracy is the foundation of visual quality. The patented high-efficiency calibration technology incorporated in the Pixelworks X7 processor enables consumers to enjoy real-to-life color for all apps and content spanning the sRGB, DCI-P3 and custom color gamuts. Pixelworks' advanced calibration also provides color accuracy across the entire screen by correcting for color shift artifacts that can occur on AMOLED panels at low brightness. Additionally, leveraging a newly introduced De-Mura algorithm, the calibration solution effectively mitigates several common display problems, such as color spot, bright spot, dark point caused by strenuous lighting condition.

"We are delighted to cooperate with Pixelworks in building the ecosystem for mobile gaming," said Beibei Xiao, Greater China Business General Manager, Unity, "The release of Pixelworks X7 processor is a major breakthrough in elevating the frame rate, reducing game latency and lowering power consumption for mobile games. It relieves the pain points bothering content creators, production platforms, and mobile device manufacturers in upgrading the visual quality for mobile gaming. We look forward to having in-depth cooperation with Pixelworks and bring more fascinating mobile games to our users."

Availability
The Pixelworks X7 visual processor is expected to be available for commercial production in Q1 2022.

About Pixelworks
Pixelworks (NASDAQ: PXLW) provide industry-leading content creation, video delivery and display processing solutions and technology that enable highly authentic viewing experiences with superior visual quality, across all screens – from cinema to smartphone and beyond. The Company has more than 20 years of history delivering image processing innovation to leading providers of consumer electronics, professional displays and video streaming services. For more information, please visit the company's web site at www.pixelworks.com.

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