

Qualcomm Unveils Snapdragon Virtual Reality Reference Platform for Immersive User Experiences on Standalone Head Mounted Displays

-- Snapdragon VR820 Allows OEMs to Quickly Develop All-In-One VR HMDs --

BERLIN, Sept. 1, 2016 /PRNewswire/ -- Qualcomm Incorporated (NASDAQ: QCOM) today announced at IFA 2016 that its subsidiary, Qualcomm Technologies, Inc., has introduced its first virtual reality (VR) reference platform, the Qualcomm® Snapdragon™ VR820. Based on the powerful Snapdragon 820 processor, the Snapdragon VR820 enables OEMs to quickly develop standalone head mounted displays (HMDs) optimized for VR content and applications while meeting the processing and performance demands of an all-in-one, dedicated VR headset.

"Consumers everywhere are captivated by truly immersive VR experiences, and Qualcomm Technologies' capabilities in graphics, displays, video, audio, computer vision and sensor technologies, as well as power and thermal efficiencies proven over years of smartphone innovation, uniquely positions us to help customers bring these experiences to life," said Anthony Murray, senior vice president and general manager, IoT, Qualcomm Technologies International, Ltd. "The Snapdragon VR820 integrates key technologies and features for an exceptional VR experience and provides a springboard for OEMs and developers to usher in the next generation of truly portable and untethered devices that we think are necessary for mass consumer adoption of VR."

Developed with Goertek, a leading global ODM, the Snapdragon VR820 includes advanced features such as integrated eye tracking with two cameras, dual front facing cameras for six degrees of freedom (6DOF) and see-through applications, four microphones, gyro, accelerometer, and magnetometer sensors, all contained in an elegant, sleek and comfortable design. The reference platform combines Goertek's innovative system design including mechanical, electrical, optical, acoustic, and firmware development with the groundbreaking computing, graphics, sensor fusion, audio, connectivity, power management, VR software and system capabilities of the Snapdragon 820.

The platform is built upon the [groundbreaking Snapdragon VR Software Development Kit \(SDK\)](#) providing OEMs and developers with access to optimized, advanced VR features, to help simplify development and improve VR performance and power efficiency with the Snapdragon 820 for standalone VR HMDs.

Snapdragon 820: Designed with VR in Mind

The Snapdragon VR820 is built upon the powerful Snapdragon 820 mobile processor, which is designed to support and advance the requirements for immersive VR. The Snapdragon 820 processor is an ideal solution that allows the platform to provide compelling visual and auditory experiences, as well as intuitive interactions.

- **Visual Quality:**

- Qualcomm® Adreno™ 530 GPU for next-generation console-quality VR gaming and apps, while delivering up to 40 percent improvement to graphics performance and compute capabilities compared to its predecessor
- Smooth, stereoscopic 3D, with foveated rendering, and support for the latest graphics APIs
- 1440x1440 resolution per eye, AMOLED panel that supports up to 70Hz
- 360° 4K video playback processing with HEVC compression and display refresh rates at 70 FPS
- Qualcomm® TruPalette™ display gamut mapping, color enhancement comprehensive control over colors

- Qualcomm® EcoPix™ pixel compression, with variable refresh for extended battery life
- **Sound Quality:**
 - Stereo, binaural positional audio, and 3D surround sound, powered by Qualcomm Aqstic™ audio technologies
 - Four microphones with Fluence™ HD noise filtering and active noise cancellation
- **Intuitive Interactions:**
 - Dual Qualcomm Spectra™ camera ISPs combined with Qualcomm® Hexagon™ DSP for advanced vision features such as look-through imaging and 3D reconstruction, eye-tracking and hand gestures
 - Predictive, monocular visual motion tracking with full 6DOF at 800Hz for smooth tracking of head motion in movement as well as rotation
 - Ultra-fast sensing, processing with average motion to photon latency under 18ms
- **Powerful computing:**
 - Custom-designed 64-bit Qualcomm® Kryo™ quad-core CPU for high-performance computing
 - Integrated Hexagon 680 DSP for efficiently processing advanced vision, audio, and Qualcomm All-Ways Aware™ ultra-low power "always-on" sensor technology without impacting CPU processing load

The Snapdragon VR820 is anticipated to be available in Q4 2016 with the first commercial devices based on the platform expected to be available shortly thereafter.

About Qualcomm Incorporated

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