IMG CXT GPU

RAYS YOUR GAME

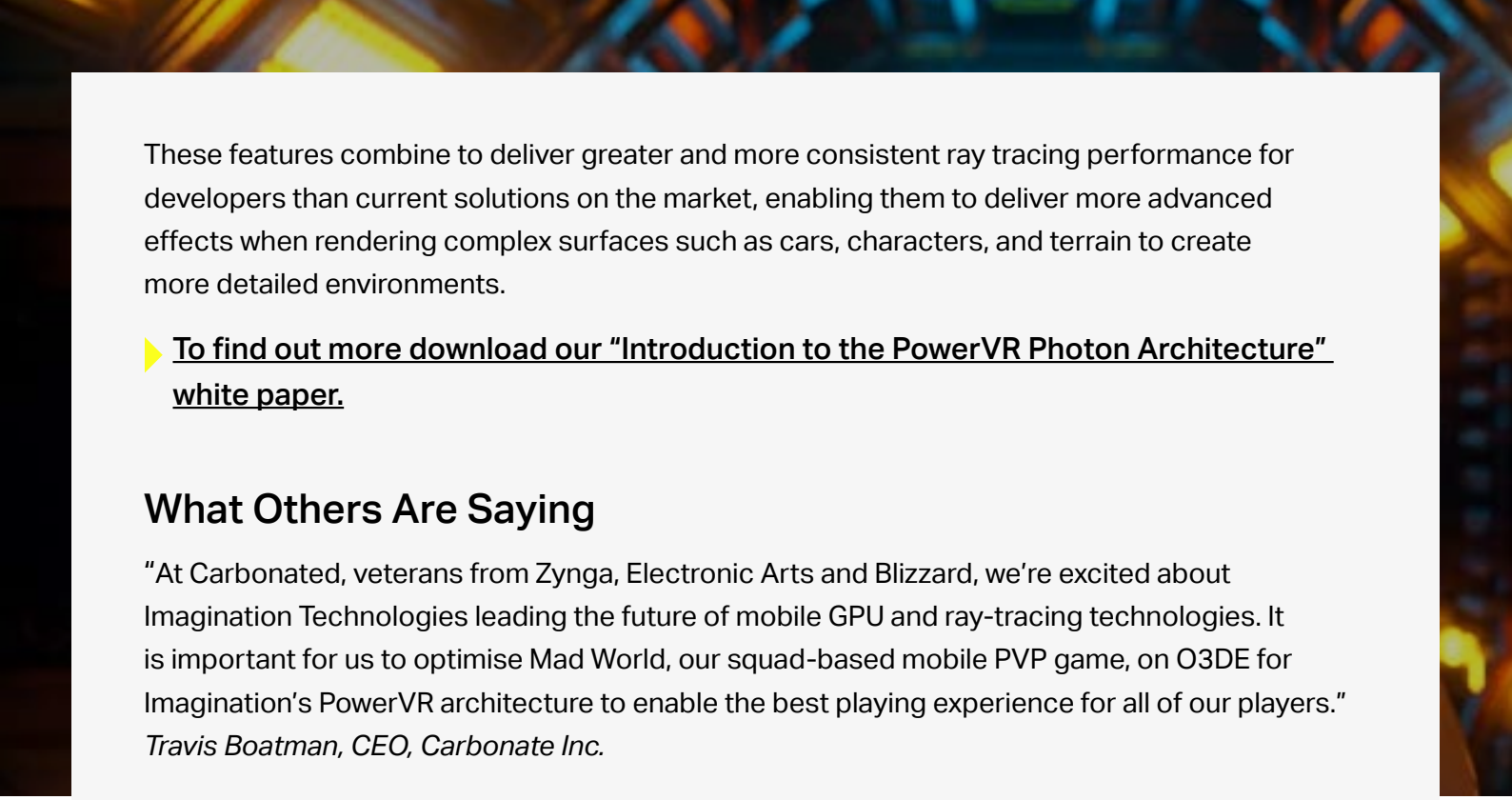
What is IMG CXT?

IMG CXT is our new flagship GPU IP. As well as outstanding performance for conventional rasterised graphics, IMG CXT introduces the revolutionary PowerVR Photon architecture, bringing high-performance, desktop-quality ray traced visuals to the palm of your hand. Delivering up to 1.3GRay/s, CXT-powered devices will bring features such as ray traced shadows, reflections, global illumination, and ambient occlusion with high frame rates to users on the go.

The Revolutionary PowerVR Photon Architecture

The PowerVR Photon architecture represents a decade of development in making ray tracing not just viable, but rapid, in low-power embedded devices such as smartphones. Ray tracing can be performed with varying levels of performance and efficiency and to highlight this Imagination established the Ray Tracing Levels System, identifying six levels of ray tracing, from Level 0 to Level 5. The Photon architecture represents the first Level 4 Ray Tracing Level System (RTLS) solution.

Our Level 4 RTLS solution is possible thanks to a new GPU block called the Ray Acceleration Cluster (RAC), a new, low-power, dedicated hardware GPU block that accelerates and offloads more of the ray tracing computations from the shader cores compared to less-efficient Level 2 RTLS architectures. The RAC consists of the Ray Store, Ray Task Scheduler and Coherency Gatherer and is closely coupled to two 128-wide Unified Shading Clusters (USCs) featuring high-speed dedicated data paths for the most efficient and low-power ray traced deployment.



These features combine to deliver greater and more consistent ray tracing performance for developers than current solutions on the market, enabling them to deliver more advanced effects when rendering complex surfaces such as cars, characters, and terrain to create more detailed environments.

To find out more download our "Introduction to the PowerVR Photon Architecture" white paper.

What Others Are Saying

"At Carbonated, veterans from Zynga, Electronic Arts and Blizzard, we're excited about Imagination Technologies leading the future of mobile GPU and ray-tracing technologies. It is important for us to optimise Mad World, our squad-based mobile PVP game, on O3DE for Imagination's PowerVR architecture to enable the best playing experience for all of our players."
Travis Boatman, CEO, Carbonate Inc.

"Ray tracing is regarded as the next generation of the graphics technology revolution and is the direction that Tencent Games continues to explore. We are very pleased to see Imagination, the industry leader in ray tracing technology, releases hardware ray tracing IP. We will work closely to explore the application of this technology in games. Imagination has many years of experience in graphics rendering and processing with high performance and low power consumption. Together, we will strengthen our technical cooperation to achieve a leap in the quality of the gaming experience."
Wei Nan, Engine Technical Deputy Director, Tencent Games.

"Perfect World Games and Imagination have a shared vision for a new generation of GPUs, based on the PowerVR architecture, to achieve high performance and low power consumption. Imagination is an industry leader in ray tracing technology, and we hope to explore the application of this technology in games and other scenarios together."
Xu Dan, Head of Technical Center, Perfect World Games.

So why choose IMG CXT?

- Brings desktop-quality ray traced visuals to mobile IP – for the first time
- The first Level 4 RTLS
- Up to 2.5x greater power efficiency than current shipping Level 2/3 RTLS solutions
- Scalable to desktop and data centre (up to 9TFLOPS FP32 and over 7.2GRay/s)
- 50% more compute and geometry performance than the previous generation

Go to imaginationtech.com to find out how IMG CXT can help you

Request Product Spec