

## IMG DXT GPU

# RAY TRACING FOR THE MASSES

IMG DXT is Imagination's ground-breaking ray tracing GPU that scales to unlock cutting-edge graphics for all mobile device users. Delivering even greater performance levels and power efficiency while bringing affordable and usable ray tracing into the mainstream. DXT offers everything a customer might need in a GPU for them to integrate it into their next-generation game-ready mobile devices.

## IMG DXT Features

### Fragment Shading Rate (FSR) for Vulkan®

Offering support for Fragment Shading Rate (FSR) for Vulkan, IMG DXT frees up performance headroom for developers. FSR decreases the number of fragments processed and significantly increases graphics performance with minimal impact on visual quality.

[Watch our demo](#) which shows how FSR and ray tracing combine to great effect.

### 2D Dual-Rate Texturing

The DXT has an innovative patented special mode inside its texture processing unit (TPU) that creates a "fast path" for post-processing effects. The result is a near doubling of bilinear filtering performance with minimal area growth and an overall reduction in power consumption.

## Improved texture and compute performance

The DXT features a new shader processing unit (SPU) design. The DXT GPU delivers 50% more top end compute and texture (ALU/TPU) performance per SPU, thanks to a new triple SPU design (3x ALU/TPU units), where previous architectures focussed only on a dual SPU design (2x ALU/TPU units).

## Pipelined Data Masters

Adding pipelining, the data masters can now start creating the workloads for the next 3D scene, while the current scene is being rendered, without gaps. Enabling workload generation while boosting performance and increasing power efficiency.

## ALU register bank performance has doubled

Improvements to the Unified Store have increased the throughput of the ALU register banks. IMG DXT has twice as many register banks as the previous generation.

## Why choose IMG DXT?

- ▲ DXT for flagship mobile has 50% higher maximum single-core performance compared to the previous generation.
- ▲ DXT cores offer up to 25% better performance density than our previous generation thanks to architectural enhancements.
- ▲ Still the only Level 4 raytracing solution in the industry
- ▲ Scalable ray tracing for mobile silicon. Available in a variety of sizes; from a half-sized ray tracing acceleration cluster (RAC) up to a four-RAC configuration.

■ ■ Imagination is a partner of OPPO in O3DF's Mobile Device Working Group and we are working closely together to optimise performance for next-gen GPU architectures. The IMG DXT brings new opportunities to integrate market-leading, realistic graphics across smartphone ranges, unlocking ray tracing and FSR for more mobile gamers. We look forward to working with Imagination on building out the O3DE mobile renderer and enabling developers to take full advantage of this game-changing, open-source technology. ■ ■

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For more information, visit us at  
[imaginationtech.com/dxt](https://imaginationtech.com/dxt)