



# Meet the PowerVR Series9XE and Series 9XM GPUs

Raising the bar on graphics and compute

## PowerVR 9XE and 9XM GPUs maintain fillrate density leadership

With the new PowerVR Series9XE and 9XM GPUs, SoC vendors and OEMs can minimize costs and power consumption while ensuring best possible user experience for gaming and GUI in devices such as smartphones, automotive infotainment, set-top boxes and TVs.

Consumers today want exciting graphical applications and technologies in their devices, but they also often want those devices at the lowest possible cost. The new PowerVR GPUs deliver compelling graphical capabilities for even constrained price points, giving SoC developers a flexible family of GPUs that provides the right level of performance for products to stand out at any price point.

## A wide range of flexible configurations

9XE and 9XM GPUs represent the continuing evolution of the PowerVR Rogue architecture to provide the smallest silicon footprint and power profile. Imagination is initially rolling out several IP cores in each family, offering multiple ALU and texture performance balance points, coupled to single and multi-cluster designs. Need something a little bit different? A highly scalable architecture enables easy, efficient generation of new IP cores to meet specific customer and market demands, with increases in area met by corresponding increases in fillrate and/or performance.



## Highlights

- The best performance/mm<sup>2</sup>
- 9XE GPUs provide improved gaming performance while maintaining the same fillrate density compared to the previous generation
- 9XM GPUs use several new and enhanced architectural elements to achieve up to 70% better performance density than the competition, and up to 50% better than the previous 8XEP generation
- Bandwidth savings of up to 25% over the previous generation GPUs through architectural enhancements including parameter compression and tile grouping
- Memory system improvements: 36-bit addressing for improved system integration, improved burst sizes for efficient memory accesses, and enhanced compression capabilities
- Extremely low power consumption with Imagination's proven Tile Based Deferred Rendering (TBDR) technology
- Support for latest graphics and compute and vision APIs
- Optional support for PVRIC3, the latest PowerVR lossless image compression technology for optimal system integration efficiency

