

IMG A-Series

THE GPU OF EVERYTHING

Fastest GPU IP ever created

What is IMG A-Series?

IMG A-Series is the fastest GPU IP ever released. It evolves the PowerVR GPU architecture to fulfil the graphics and compute needs of the full spectrum of next-generation devices. Designed to be “The GPU of Everything” A-Series is the ultimate solution for multiple markets, from automotive, AIoT, and computing through to DTV/STB/OTT, mobile and server.

In every dimension A-Series delivers significant improvements over the previous generation, at the same clock and process, offering:

- 2.5x the performance
- 8x faster AI processing
- 60% lower power

Compared to other GPU IP solutions available today A-Series delivers higher performance, lower power and lower bandwidth and all within a smaller silicon area.

The Gamers GPU

Most mobile GPUs struggle to deliver consistent gaming experiences due to thermal constraints – they are fast for a short while, then slow to unacceptable levels and then never recover, resulting in a disappointing user experience. A-Series delivers sustained performance for extended game play at consistent frame rates avoiding thermal panic clock throttling, glitches or overheating.

Jane, VP of Chukong Technologies says: “Gaming today requires considerable graphics processing capability. With gaming accounting for over 40% of all smartphone use having the best GPU is a key differentiator. Imagination is again pushing the boundaries of what is possible with mobile graphics, combining fast and consistent GPU performance with sustained battery life”

IMG A-Series features

HyperLane

The A-Series features Imagination's HyperLane technology; individual hardware control lanes, each isolated in memory, enabling different tasks to be submitted to the GPU simultaneously for secure GPU multitasking. All A-Series GPUs support up to eight HyperLanes.

AI Synergy

HyperLane also enables a new feature, AI Synergy. This new option enables SoC designers to take advantage of the incredible levels of compute capability in the A-Series to accelerate their AI workloads. AI Synergy delivers programmable AI in the lowest silicon area, while a unified software stack enables flexibility and great performance.

So why choose IMG A-Series?

- The best performing GPU IP ever
- 2.5x performance density compared to the best current shipping PowerVR devices
- Scales for use in all GPU market segments
- Single core options from 1 PPC to 2.0 TFLOPS
- High-performance density giving the best implementation cost for chip manufacturers and device price for consumers
- HyperLane technology includes support for multizone hardware virtualization technology delivering stability, security and robustness
- Automotive options package with long-term support, ISO 26262 certification readiness and documentation
- PVRIC 4.1 lossless or visually lossless image compression, guaranteeing 50% bandwidth and footprint reduction all the time
- Advanced flexible direct power control technology
- Unified AI API for use in combination with PowerVR neural network accelerators
- Supports the latest API standards including OpenGL® ES, Vulkan™, OpenCL™

To find out how the IMG A-Series can help you
visit www.imaginationtech.com/IMGA-Series