

## IMG B-Series

# DO MORE WITH MULTI-CORE

## What is IMG B-Series?

IMG B-Series is a new range of GPU IP that takes all the advances of IMG A-Series, the fastest GPU IP ever created, and adds even more performance – with a variety of new configuration options that expand the available options for our customers. With its advanced multi-core architecture, B-Series reaches unprecedented performance levels for IP to address a variety of new markets, and enables our customers to create devices with reduced power consumption.

Highlights include:

- Up to 6 TFLOPS of compute
- Up to 30% reduction in power over previous generations
- Up to 25% area reduction on previous generations
- Up to 2.5x higher fill rate than competing IP cores

With scalability at the heart, B-Series is the ultimate solution for multiple markets such as mobile (premium to entry-level), consumer, IoT, DTV, PCIe form factor, server, cloud gaming and ADAS/autonomy.

# IMG B-Series features

## Imagination's Decentralised Multi-Core Approach

The B-Series features Imagination's Decentralised Multi-Core architecture. Our novel approach to multi-core instantiates a flexible number of GPU cores without a direct dependency on a connection to a central unit. In its simplest form, it can act as multiple GPUs inside a single SoC design, but with the ability for the cores to either work independently on different tasks or to jointly work on compute and graphics processing.

► To find out more download our [IMG B-Series Multi-Core Technology Overview](#)

## Imagination Image Compression (IMGIC)

IMGIC is the latest version of our frame buffer compression technology. Frame buffer compression aims to reduce the bandwidth and power consumption generated by reading and writing render targets to and from system memory. IMGIC includes a lossless compression mode; a variable compression rate mode where quality remains perfect, but the compression achieved depends on the contents of the render target. Typically, a reduction of 50% is obtained across a wide range of reference test images.

IMGIC also includes a visually lossless compression mode that guarantees a minimum compression rate, thus ensuring that memory footprint, bandwidth and power consumption are all reduced. IMGIC includes three compression rate levels versus uncompressed:

75% - Effectively perfect image quality

50% - Visually lossless quality

25% - Extreme bandwidth saving

► To find out more download our [IMGIC Overview](#)

# So why choose IMG B-Series?

- Reaches new levels of performance
- Up to 4x multi-core performance
- Up to 6 TFLOPS of compute
- Up to 30% lower power compared to previous generations
- Up to 25% area saving on previous generations
- Up to 2.5x higher fill rate than competing IP cores
- Industry's first ISO 26262 GPU IP
- Decentralised Multi-Core architecture: enables multiple GPUs inside a single SoC to work independently or together
- Imagination Image Compression (IMGIC) for a lossless compression mode, an effectively perfect image quality mode, a visually lossless mode and an extreme bandwidth saving mode
- Supports the latest API standards including OpenGL® ES, Vulkan™ and OpenCL™

**Go to [imaginationtech.com](https://imaginationtech.com) to find out  
how IMG B-Series can help you.**