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## Impulse FPGA Software from KCL

KCL is now the UK Distributor for Impulse Accelerated Technologies and is supporting and reselling their software-to-hardware FPGA compilation and verification tools and libraries.

[Press Release](#) ▶

Main products are:

- Impulse C™ C-Language Development Tool
- Impulse CoValidator™ HDL Test Bench Generator
- Impulse CoDeveloper™ Video Development Kit
- Impulse CoDeveloper™ Embedded/DSP Kit
- Impulse C™ Math and Image Processing Libraries

### Impulse C™ C-Language Development Tool

Impulse C™ is a C-language development tool for FPGA accelerated computing. Use familiar C-language programming methods to create applications targeting a wide range of FPGA based computing platforms. Impulse CoDeveloper™ tools include a software-to-hardware compiler, interactive parallel optimizer, and Platform Support Packages allowing you to quickly develop high-performance applications for a wide range of FPGA-based boards and systems.



[More Information](#) ▶

### Impulse CoValidator™ HDL Test Bench Generator

Impulse CoValidator™ generates HDL compatible with all IEEE-compliant VHDL simulators, and also generates scripts for ModelSim®, allowing you to generate HDL test benches and launch simulation with just a few keystrokes. Catch errors before place-and-route, saving hours, days or even weeks of development time. Generate an HDL test bench, data files, and simulator scripts for hardware validation and hardware/software equivalency checking.



[More Information](#) ▶

### Impulse CoDeveloper™ Video Development Kit

Impulse CoDeveloper™ is ideal for high-throughput streaming video applications. This development kit showcases the ability of the FPGA to provide a flexible, single-chip solution for high-throughput video processing. The Impulse C-to-FPGA tools, used in combination with Xilinx® FPGA tools and reference examples, enable video application developers to rapidly develop video processing solutions using software programming methods.



[More Information](#)

### Impulse CoDeveloper™ Embedded/DSP Kit

Impulse CoDeveloper™ is ideal for DSP application development. Get started fast with software-to-hardware programming. Impulse now offers a classroom-ready kit for teaching FPGA programming concepts. Learn how to develop C code that can be synthesized to run as hardware and/or as software on an FPGA. This kit enables students to quickly move individual algorithms or entire systems to an FPGA. Students can quickly experiment with hardware/software partitioning, parallel processing, pipeline optimization, floating- and fixed-point math, and more. This kit features a Xilinx Spartan 3A FPGA board, and includes all required design tools and libraries for fast development of advanced DSP and embedded applications. A companion textbook is available.



[More Information](#)

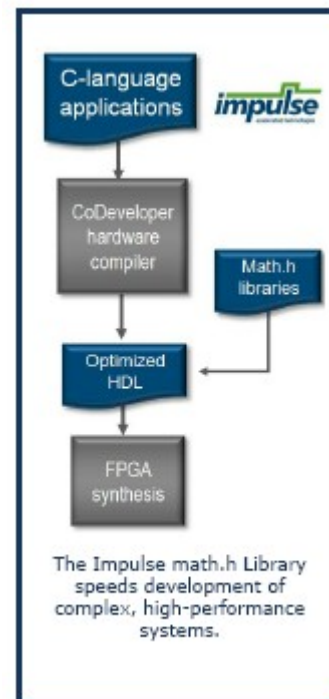
### Impulse C™ Math and Image Processing Libraries

Impulse provides standard and customised IP libraries for application domains.

The Impulse C™ **Math and Image Processing Libraries** accelerate your FPGA based algorithm development and extend the operations provided in Impulse C. Library components are provide with standard C-language function prototypes, allowing them to be easily invoked from C, using the same function calling methods C programmers are familiar with. These C-callable functions represent optimised hardware elements that are instantiated, through the use of synthesis and place-and-route tools, in the target FPGA.

The **math.h Library** implements standard C math.h functions. This library is provided as a set of HDL files and related configuration files implementing common mathematical operations. Most of these functions involve the use of floating point numbers, either single or double-precision. The Impulse C math.h library is royalty free; all of the included elements can be incorporated into your projects with no restrictions or deployment fees.

The **Image Processing Library** adds components for video and image processing, including convolutions filters, colour converters and other useful functions and modules.



**math.h Library**

[More Information](#)

**Image Processing Library**

[More Information](#)

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