



lib_xcore_math: xcore optimised math (README)

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vendor

XMOS

version

2.4.0

scope

General Use

description

VPU-optimized math for the xcore architecture

category

General Purpose

keywords

arithmetic, DSP, VPU, math

devices

xcore.ai

1 Summary

lib_xcore_math is an arithmetic and DSP library which leverages the Vector Processing Unit (VPU) of XS3/*xcore.ai* based devices in order to accelerate costly operations on vectors of 16- or 32-bit data. Included are functions for block floating-point arithmetic, fast Fourier transforms, discrete cosine transforms, linear filtering and more.

2 Features

- ▶ Block Floating-Point Vector API
- ▶ Vector/Array API
- ▶ Scalar API
- ▶ Linear Filtering API
- ▶ Fast Fourier Transform API
- ▶ Discrete Cosine Transform API



3 Known issues

- ▶ None

4 Development repo

- ▶ [lib_xcore_math](#)

5 Required tools

- ▶ XMOS XTC Tools: 15.3.0

6 Required libraries (dependencies)

- ▶ None

7 Related application notes

- ▶ None

8 Support

This package is supported by XMOS Ltd. Issues can be raised against the software at www.xmos.com/support



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