

# C6Accel Software Development Tool



## Overview

For application developers using TI's system-on-chips (SoCs), the free C6Accel software development tool makes the development process quick, easy and cost effective. C6Accel is a powerful tool that gives ARM developers access to 100s of ready-to use DSP kernels. This enables ARM application developers to leverage the DSP as a powerful accelerator on TI TMS320C6000™ DSP + ARM devices. With C6Accel, system developers of any skill level can leverage the computational power of TI's DSPs to create various end applications, such as adding complex analytics in imaging systems, adding additional audio channels with effects into audio systems or power measurement and analysis to a power metering system.

## Technical details

- C6Accel library adheres to TI's specified algorithm interface called eXpressDSP™ Algorithm Interoperability Standard (xDAIS). This allows execution of C6Accel under the Codec Engine framework alongside other multimedia codecs (see Figure 1).

- Availability of production-ready DSP kernels through ARM-side APIs reduces learning curve and time to market for ARM SoC developers.
- Allow system developers to realize greater value from the DSP beyond the traditional codecs operation.
- Asynchronous calling feature allows for parallel processing on ARM and DSP (see Figure 2).
- Users of C6Accel package, can explore adding own custom kernels to the algorithm which is available in complete source.
- Compatible with TI SoCs based on TI's TMS320C6000™ DSP, including DSP+ARM devices and DaVinci™ video processors.

## Community support

C6Accel is supported by TI's online community. Complete collateral, Code Composer Studio™ IDE drivers, user guides and all required documentation for the DSP is available today. Various examples in audio/musical special effect, digital filter design and many others will be available in the community.

[www.ti.com/c6accel-pbcom](http://www.ti.com/c6accel-pbcom)

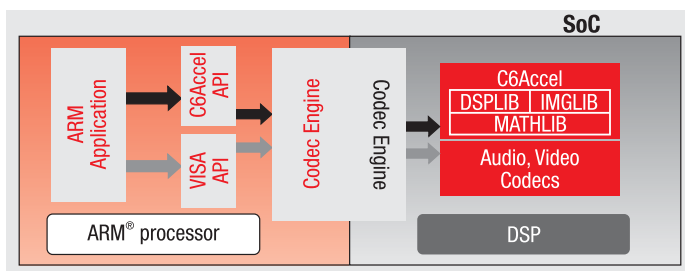
## Key Features and Benefits

- **Easy to interface:** Creates ARM-side APIs that abstract the DSP.
- **Availability of tested and benchmarked kernels:** Provides easy access to 100s of optimized DSP kernels, allowing system developers to add differentiation without writing DSP code (see Figure 3 on the following page).
- **Reduces learning curve:** Enables programming without learning DSP coding or architecture.
- **Performance:** Utilizes DSP to run ready-to-use algorithms, allowing more efficient use of the SoC and avoiding processor upgrades (see Figure 4 on the following page).

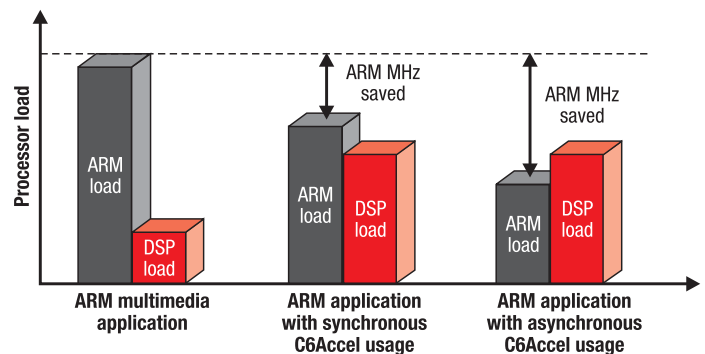
## Get started today

This feature-rich software development tool, C6Accel, is available today as a free download. To download your version today, please visit [www.ti.com/c6accel-pbtf](http://www.ti.com/c6accel-pbtf).

The C6Accel software development tool is supported by TI's extensive Developer Network,



▲ Figure 1. SoC view of C6Accel.

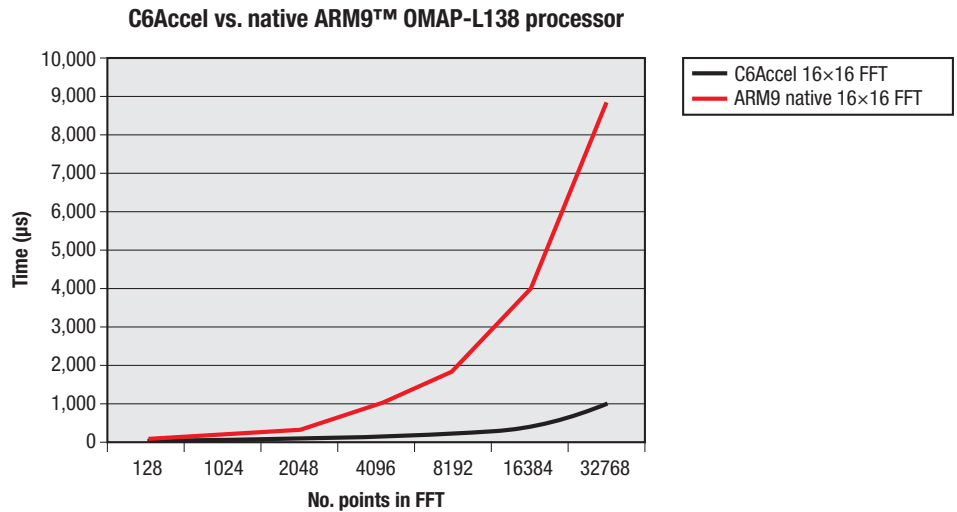


▲ Figure 2. Benefits of synchronous and asynchronous calling in C6Accel.

Categories	Types of Functions
DSP library	Filtering /FFT Vector/Matrix functions
Image Library	Color space conversion Edge detection/Image filtering Image analysis and arithmetic
Math Library	Data type conversion Arithmetic Trigonometric

▲ Figure 3. Categories of DSP functions in C6Accel.

user guides, videos and online communities. With the C6Accel design tool, TI continues to bring solutions to market to help make designing with DSPs and ARM MPUs easier, help you get to market faster and reduce your overall development costs.



▲ Figure 4. C6Accel vs. native ARM9™ OMAP-L138 processor.

## TI Worldwide Technical Support

### Internet

TI Semiconductor Product Information Center Home Page  
support.ti.com

TI E2E™ Community Home Page  
e2e.ti.com

### Product Information Centers

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<b>Brazil</b>	Phone	0800-891-2616
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	Fax	+1(972) 927-6377
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International	+49 (0) 8161 80 2121	
Russian Support	+7 (4) 95 98 10 701	
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Fax	+49 (0) 8161 80 2045	
Internet	support.ti.com/sc/pic/euro.htm	

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