

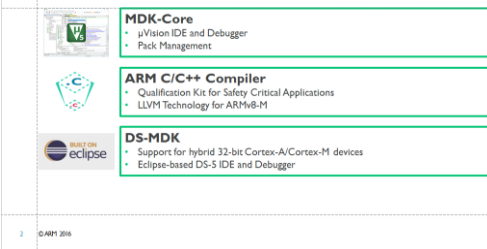
GRAPHICS/SEQUENCES

TEXT



Keil MDK is the most comprehensive software development solution for ARM-based microcontrollers.

MDK Key Components



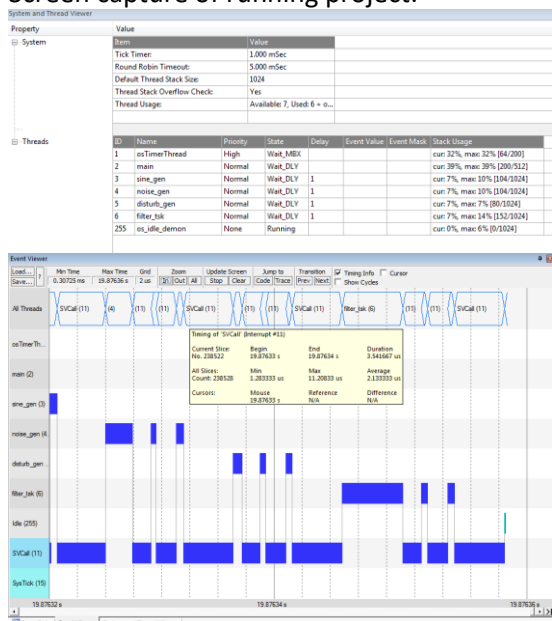
MDK includes the following components: MDK-Core, ARM C/C++ Compiler, and DS-MDK. It's easy to learn and use.

MDK-Core contains all development tools including IDE, Debugger, and a tool to manage Software Packs that add device and board support and software components that can be selected for your target application. The μ Vision editor provides context-sensitive help, code completion and dynamic syntax checking.

The compilation tools include a safety certified compiler specifically targeted towards Cortex-M devices and an LLVM based compiler to support latest ARM architectures. MDK – being developed by ARM engineers – supports already ARMv8-M.

DS-MDK adds support for hybrid 32-bit Cortex-A/Cortex-M devices and uses an Eclipse-based IDE with its own Debugger while using the same mechanisms for Pack support as MDK.

Screen capture of running project:

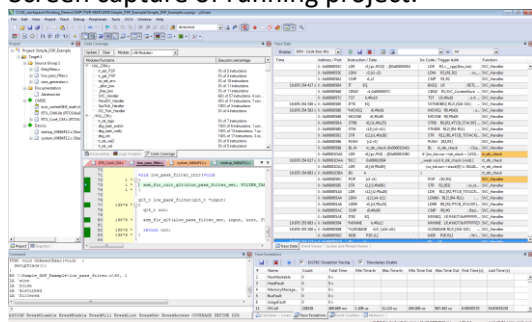


Every edition of MDK comes with **CMSIS-RTOS RTX**, a real-time operating system specifically targeted towards ARM Cortex-M-based microcontrollers. Debugging an RTOS application is easy using the built-in μ Vision debugger with full Kernel awareness.

Screen capture of running project:

The new **Component Viewer** gives the user a deep insight into the running application and its software components. Watch live how the components behave and identify critical conditions early in the development stage.

Screen capture of running project:



Together with the ULINKpro debug adapter, you can analyze running applications on-the-fly without stopping the code execution. Connecting to the target's CoreSight debug logic, you can read and modify memory, display variable changes in the logic analyzer or identify performance bottlenecks using Performance Analyzer and Execution profiler. Trace all instructions of your application and save the complete execution history to disk which helps to find sporadic errors. Use Code Coverage analysis for software validation and certification.

<div> <h3>Introducing MDK-Plus</h3> <div> <div> <p>Network Component • TCP/IP Connectivity using IPv4</p> </div> <div> <p>USB Device • Support for popular USB Device Classes (HID, MSC, ADC, CDC)</p> </div> <div> <p>File System • Store data on SDHC/MMC, Flash, RAM, USB</p> </div> <div> <p>Graphics Component • Create compelling HMI's for user interaction</p> </div> <div> <p>CMSIS-RTOS RTX • Hard realtime, code size optimized, energy efficient</p> </div> </div> <div> <div>6</div> <div>© ARM 2016</div> <div>ARM</div> </div> </div>	<p>The new MDK-Plus edition is for price sensitive users who are looking for comprehensive middleware. It includes software components for IPv4 networking, USB Device, file storage, and a graphical user interface library. The middleware is optimized for Cortex-M targets with event-driven I/O and uses CMSIS-RTOS RTX to maximize energy efficiency and increase the overall system performance.</p>
<div> <h3>MDK Editions</h3> <div> <div> <p>MDK-Cortex-M</p> <p>For ARM Cortex-M based microcontroller projects.</p> </div> <div> <p>MDK-Plus</p> <p>For ARM Cortex-M, ARM7, ARM9. Includes middleware: IPv4 Networking, USB Device, File System, Graphics.</p> </div> <div> <p>MDK-Professional</p> <p>For ARM Cortex-M, ARM7, ARM9. Includes middleware: IPv4/IPv6 Networking, USB Host & Device, File System, Graphics, mbed components.</p> </div> </div> <div> <div>7</div> <div>© ARM 2016</div> <div>ARM</div> </div> </div>	<p>[MDK-Plus is already on-screen. Other editions flying in as the narrator continues] For those who do not need middleware, the Cortex-M edition is the best choice for developing software for more than 3200 ARM Cortex-M based devices.</p> <p>Users who require dual-stack IPv4/IPv6 connectivity, USB Host support, and want to connect to the ARM mbed IoT Device Platform should have a closer look at MDK-Professional.</p>
<div> <h3>Screen capture of download and support:</h3> <p>The screenshot shows the ARMKEIL website. The top navigation bar includes 'Products', 'Download', 'Events', and 'Support'. The 'Product Download' section lists various MDK-ARM versions with their release dates and notes. Below this, there is a 'New Case' form for submitting support requests. The form includes fields for 'Product of Interest', 'Product Type', 'LIC/PSN/Flex SN', 'Product', 'Rev', 'Priority', 'Area', 'Summary', and 'Description'. There is also an 'Attachment' field with a 'Browse...' button. At the bottom of the form, there are 'Save' and 'Reset' buttons.</p> </div>	<p>Visit www.keil.com to download a free evaluation version of MDK. Every purchased MDK edition is entitled to twelve months of technical support and software updates which can be renewed annually. Experienced ARM application engineers provide technical support and work together closely with the MDK product development teams for your benefit.</p> <p>Using MDK, you take advantage of over 25 years of our experience in supporting embedded software development. For more information, visit www.keil.com/mdk.</p>