**Arm Keil MDK v6 is the most comprehensive software development solution for Arm-based microcontrollers and includes all components that you need to create, build, and debug embedded applications. Keil MDK includes the following features:**

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| **Tools** | * **Keil Studio, an IDE that is a set of VS Code extensions. It is available in the cloud and on the desktop.**
* **µVision (Windows only), which supports all Cortex-M devices.**
* **Arm Compiler for Embedded including assembler, linker, and highly optimized run-time libraries that are tailored to Arm Cortex-M based devices for optimum code size and performance. A functional safety qualified version is included in MDK-Professional.**
* **Arm Debugger, a command-line debug tool.**
* **CMSIS-Toolbox, a set of command line tools that create and build projects based on CMSIS-Packs.**
* **Arm Virtual Hardware Fixed Virtual Platforms, our modelling technology for Arm Cortex-M-based cores and subsystems.**
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| **Middleware** | **MDK-Middleware provides free-to-use software components for communication peripherals in microcontrollers (TCP/IP, USB, and file system).** |
| **CMSIS-Packs** | **CMSIS-Packs can be added anytime which makes new device support and middleware updates independent from the toolchain:*** **Device and board support is added via packs listed on the CMSIS-Pack index.**
* **Other software components delivered in CMSIS-Packs.**
* **CMSIS offers software packs that contain components for core support, DSP and NN libraries, and a free-to-use real-time operating system.**
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| **Functional Safety (FuSa)** | **The Arm FuSa Run-Time System is a set of embedded software components qualified for use in the most safety-critical applications in automotive, railway, medical, and industrial systems. It is part of MDK-Professional, together with components like the Arm Compiler for Embedded FuSa and a FuSa C library.** |
| **Debug Probes** | **MDK supports many different debug and trace adapters:*** **ULINKpro for instruction trace-based code coverage and performance analysis**
* **ULINKplus for power-aware debugging**
* **ULINK2/ME for simple run/stop debugging**
* **and a variety of third-party debug adapters.**
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