TASKING

®

TASKING VX-TOOLSET FOR ARM CORTEX-M

NOW SUPPORTING INFINEON'S TRAVEO™ T2G AND NXP`S S32K3 SERIES OF MULTI-CORE MICROCONTROLLERS

INTRODUCING THE TASKING VX-TOOLSET FOR ARM® CORTEX-M

TASKING®'s newest embedded software development platform is designed to take advantage of the highly popular ARM architecture. ARM's presence in many automotive systems such as airbag, body electronics and instrument clusters and their broad silicon supplier base (NXP, Infineon, TI, ST..) are key factors behind their increased market growth. Market analysis shows that ARM will continue to maintain its position as a leading 32-bit architecture for embedded automotive applications.

The release of TASKING's next generation of ARM development tools introduces substantial performance gains in multi-core SW development which take advantage of advanced performance and safety features available in the new multi-core ARM product offerings from Infineon (TRAVEO T2G CYT2, CYT3 and CYT4) and NXP S32K3 General-Purpose MCUs (S32K312, S32K314, S32K322, S32K324, S32K342 and S32K344).

Developed with its proprietary Viper technology, the TASKING® VX-toolset for ARM continues to offer unparalleled code optimization performance, advanced multicore support, an integrated debugger, and integration into the popular Eclipse™ platform (IDE). The integrated compiler, assembler and linker seamlessly provide all the functionality needed to generate safety compliant software.

The VX-toolset for ARM will provide industry leading safety features as the toolset is suitable for Automotive and Industrial application development supporting ISO26262 up to ASIL D and IEC61508 up to SIL3. The TASKING VX-toolset for ARM v6.0r1 has been certified for the development of safety critical software applications by safety experts from TÜV-Nord.

The TASKING® ARM toolset has been tested for ISO C11 and ISO C++14 conformity using industry accepted validation suites like Perennial® and Plum Hall®. In addition, the optimization techniques of the compiler have been evaluated with real-world applications and benchmark standards such as Nullstone and EEMBC.

Product Features

- Fully integrated embedded development environment based on 64-bit Eclipse IDE with C/C++ compiler
- Integrated multi-core debugger with ARM Instruction set simulator (single core only) and OSEK Kernel aware debugging
- Highly configurable linker with versatile script language for optimal memory control
- Integrated MISRA C and CERT C code checking, profiling through code instrumentation and run-time error checking capabilities
- Support for the Cortex Microcontroller Software Interface Standard (CMSIS) Intrinsic functions (register and instruction accesses)
- Assemblers supporting multiple ARM architectures and operating modes (ARM, ARM & Thumb/Thumb-2 or Thumb/Thumb-2)
- Compliant to relevant industry standards: Fully supports the C11 and C++14 language and library features as defined by ISO, as well as the ARM ABI
  - C/C++ libraries, run-time libraries, floating-point libraries
- Software examples based on the TRAVEO T2G sample driver library (SDL) v6.6.0 to simplify development on Traveo-II devices

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The integrated embedded debugger can program object files in the ELF/DWARF object format, support multi-core debugging using a SEGGER J-Link probe and interface with popular third-party debuggers. Additional advanced debugger features include:

- ARM instruction set simulator (debug prior to hardware availability)
- RTOS-specific shared library supporting POSIX and ThreadX kernels
- RADM* to read, format and report kernel data structures for any commercial
  or proprietary RTOS (Based on the OSEK ORTI 2.0 and 2.1)

The new version of the TASKING® ARM toolset no longer supports PinMapper or Software Platform builder.

ARM® ARCHITECTURAL SUPPORT

The TASKING® VX-toolset for ARM provides support for a wide range of ARM processors, such as ARMv6-M, ARMv7-M, and ARMv7E-M. TASKING® offers complete C compiler support for the following Cortex-M microcontrollers: M0+**, M1, M3, M4, M7. TASKING® has expanded its ARM support to include the recently released TRAVEO T2G devices from Infineon. With the latest patch v6.0r1p1 released in August 2022 , NXP`s S32K3 General-Purpose MCUs are now also supported.

EVALUATION LICENSE & ADDITIONAL INFORMATION

For additional information on the TASKING® VX-toolset for ARM including Evaluation Licenses, Product Pricing, Supported License Models, Product Demonstrations and/or Product Usage please contact us at **www.tasking.com/contact** or visit our support page at **www.tasking.com/support**.

* RADM – RTOS Aware Debugging Module

** The toolset supports both the M0 and M0+ ARM architectures (The M0+ retains full instruction set and tool compatibility of M0).