

This is a major new version of the IDE, and contains many new features and enhancements over the previous v10.2.1 and earlier releases.

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## Summary of Changes - version 10.3.0 - December 2018

- Major restructure of product installation structure to allow future minor product updates to be potentially delivered via Eclipse Software Update mechanism
- Upgraded supplied GNU ARM Embedded Toolchain to GCC7 2018q2-update
- Added support for MCUXpresso SDK v2.5.0
- Upgraded integrated version of MCUXpresso Config Tools to v5
- IDE now provides a workspace preference to allow the location of the SDK Drag&Drop installation folder to be changed. However by default a central 'mcuxpresso' folder is still used. Current install location label displayed in the "Installed SDKs" View  
IDE now generates part support information from installed SDKs into the workspace rather than into a central 'mcuxpresso' folder, improving behavior when multiple IDE instances are being used
- New "Faults" view compatible with LinkServer, P&E and SEGGER debug connections implemented (replacing the previous "vectpc" pseudo-register in Registers view for LinkServer debug connections). This view provides a decoding of the Cortex-M cpu's fault registers and stack backtrace to assist the user in tracking down the cause of hard faults and other processor exceptions
- New implementation of the "Registers" View, allowing categorisation of certain registers groups, as well as providing access to additional CPU registers for P&E and SEGGER debug connections
- SWO Trace now supported via SEGGER J-Link and P&E Micro debug probes (in addition to LinkServer LPC-Link2 debug connections).  
-Note that only recent versions of P&E probes support SWO  
-For more information on SWO trace with P&E probes, please see the P&E Micro blog article [here](#)
- NXP LPC-LINK2 CMSIS-DAP firmware soft-loaded by IDE updated to v5.224, providing noticeable performance improvements over previous v5.183. For standard (debug+SWO) firmware, flash programming speed increases of typically ~10% along with increases in SWO trace speed. For Non-bridged firmware (debug only), flash programming speed increases of typically ~20%
- Project Explorer View enhanced to emphasise currently selected project, along with displaying its current build configuration
- Editing Memory Configuration for projects is now done in place rather than spawning separate editing dialog
- IDE now only creates a debug launch configuration for the current build configuration when a project is debugged (if one does not yet exist), rather than for all build configurations
- New SDK creator wizard to create a "board SDK" from an existing project (with settings modified using the MCUXpresso Config Tools). This "board SDK" can then be used to create new projects for custom boards
- Package associated with an SDK project can now be modified via the MCU entry of the project's "Project Settings" virtual nodes in the Project Explorer view
- IDE now supports additional build configurations being specified in SDK example definition files
- Added Linux Tools Libhover to preinstalled plugins (providing tooltips for standard C library calls)
- Upgraded to a later version of the P&E Micro plugin (v3.8.3)
- Upgraded to a later version of the SEGGER software (v6.40)

- Updated FreeRTOS TAD plugin to v1.0.8
- Support heap using Newlib (identified as heap #6)
- Support FreeRTOS 10.1.1
- Fix highlight of free section in Heap Usage view
- Windows version of IDE now uses "busybox" (from "GNU MCU Eclipse Windows Build Tools" project) , to provide a Unix-like layer for GCC tools to run under, rather than the "msys" package used by previous releases
- Modified order of entries added to local shell's path when building projects under Windows - providing small improvement in build speeds
- Additional LinkServer flash drivers provided for RT1060 and RT1064
- Preliminary LinkServer support for LPC55xx devices
- Added basic support for Cortex-M33 secure projects
- Added support for Cortex-M33 No DSP variant
- LinkServer debug executable now allows probe selection by serial number (mainly intended for command line flash programming operations)
- Redlib updates
  - Fixed snprintf() / vsnprintf() to prevent hard fault when NULL buffer passed
  - Fixed issue with number sequences generated by rand()
- Made ordering of C Libraries in drop down lists consistent across various menus
- Allow user to only choose valid FPU settings in the Architecture tab of Project Settings
- "Quick Settings" option now allows reconfiguring multiple projects (where projects have compatible settings)
- Fixed issue that could cause a project to lose modifications to its memory configuration
- Grouped SDK actions under new "SDK Management" entry of Project Explorer popup menu
- Fixed issue that could cause a project's list of associated SDK components to be lost
- Fixed issue with sorting of boards in SDK project wizards not taking any current selection into account
- Fixed issue with default peripherals.c/h files being automatically (and incorrectly) added during SDK example import
- Fixed issue with Import of >1 SDK examples sometimes failing to correctly pickup some IDE default settings
- Fixed issue with SDK Project Component Manager when adding components with conditional sources to an existing project
- Improved handling of C library family setting when importing multiple SDK examples
- Fixed issue that could cause the IDE to block if requested to change the SDK associated with a project
- Fixed issue with SDKs become unusable after cancelling an unzipping operation
- Fixed issue with SDK New Project Wizard when no board selected which could cause wrong header files to be generated
- Fixed issue with SDK New Project Wizard such that main.c file always included the BOARD\_InitDebugConsole() call even when the debug console component is not selected
- Fixed issue with handling of derived peripherals containing '\_' in name
- Implemented partial workaround for underlying Eclipse issue that can cause a "Target Not Available" dialog if starting a debug session with the Disassembly view open

- Fixed issue with SEGGER launch configurations failing to reset MCU after programming flash
- Fixed issue with launch configurations created using standard Eclipse functionality, as opposed to automatically created using MCUXpresso IDE
- Enhanced handling of additional bespoke launch configurations
- Fixed issue with sorting in Probe selection dialog
- Fixed long standing issue with LinkServer launch configuration tabs changing order every time the launch config editor is open
- Fixed issue that could cause the launch configuration selection dialog to be displayed twice in some circumstances
- Fixed longstanding issue with that prevented Instruction Trace and SWO Trace being used together
- Fixed issue with Instruction Trace Config view not correctly loading saved configuration files
- GUI Flash Tool will now automatically select the highlighted binary file from Project Explorer View