

AURIX Development Studio

Release Notes

Product name: AURIX™ Development Studio

Release number and version: V1.7.2 build 20220617-0730

Type of release: Official Release

Release method: Infineon corporate website

AUTOSAR specification: None

Compiler support: Not applicable

Processor platform: Not applicable

Date: 2022-06-16

Previous release number and version: V1.6.0 build 20220329-1249

About this document

Scope and purpose

This document details the release contents, all known issues in the release and the changes from the last release, together with information on tools, compiler options and support packages.

Changes implemented since the last release of this document are detailed first, followed by all changes implemented in previous versions of this release.

Attention: *Refer to the Limitations and deviations chapter before using the software for integration.*

Intended audience

This document is intended for anyone using the AURIX™ Development Studio and the AURIX™ microcontroller products from Infineon Technologies AG.

Reference documents

- None

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1 Release contents

1.1 Release overview

This release is for building software on AURIX™ microcontroller products from Infineon Technologies AG.

1.2 Released items

The release contains the file AURIX-studio-setup_1.7.2.exe.

Table 1 Release content

COMPONENT	DESCRIPTION
AURIX-studio-setup_1.7.2.exe	<p>Installer for the AURIX™ Development Studio development environment</p> <p>This is a self-extracting installation program which contains the following software components:</p> <ul style="list-style-type: none"> • AURIX™ Development Studio 1.7.2: Integrated Development Environment for AURIX™ • AURIX™ Flasher 2.5.3: Flashing tool for AURIX™ Devices • DAS 7.3.7: Infineon AURIX™ Drivers • iLLD 1.0.1.12: Infineon Low Level Drivers • Oracle JRE11: Java Runtime Environment • TASKING Debugger v1.1r8 - Can only be used for non-commercial purposes • TASKING Compiler v1.1r8 - Can only be used for non-commercial purposes • iSystem winIDEA 9.21.96 • TASKING PinMapper for AURIX™ Development Studio v1.1r6 • GNU Make 4.2.1 • GNU Coreutils 5.3.0

1.3 Safety

This product is a software customization. This product is developed according to project specific lean process for tool development. Safety process related documents are not in the scope of deliverables of this product and hence not produced.

1.4 Compatibility

This product is a standalone product for the main use-cases of producing and testing non-commercial software on AURIX™ microcontroller products from Infineon Technologies AG.

The AURIX™ Development Studio has been tested on Windows 10 operating system.

2 Tool information

Please look in to the Getting Started guide for more details.

2.1 Supported sub-derivate

Not applicable

3 Summary of changes

This chapter describes the new features and fixes for issues from previous version(s).

3.1 Changes implemented in release V1.7.2

Table 2

Module	Description of changes
Debugger	<ul style="list-style-type: none"> Updated winIDEA debugger Added core synchronization to winIDEA. If a breakpoint causes a core to stop, all other cores will stop Fixed bug that prevented debugging of the PPU with the winIDEA debugger Fixed bug that prevented the usage of winIDEA for a project if the project is renamed
Device Support	<ul style="list-style-type: none"> Added support for TC32x devices
MCS Support	<ul style="list-style-type: none"> Added external TASKING MCS Toolchain, which allows to build MCS code using external compiler/assembler/linker.
Build Booster	<ul style="list-style-type: none"> Build Booster configuration made available through user interface in project settings Build Booster operation is now relative to a specific build configuration rather than the whole project, in order to allow build configuration with different source paths in the same project
Include Paths Auto-discovery	<ul style="list-style-type: none"> Include paths auto-discovery operation is now relative to a specific build configuration rather than the whole project, in order to allow build configuration with different source paths in the same project
AURIX Profiler	<ul style="list-style-type: none"> Added AURIX Profiler

3.2 Changes implemented in release V1.6.0

Table 3

Module	Description of changes
Debugger	<ul style="list-style-type: none"> Added winIDEA debugger as possible option for debugging Integrated TASKING Debugger 1.1r8 Fixed bug that sporadically prevented the correct core to be selected when a breakpoint is hit Fixed bug that prevented correctly stepping over struct or array assignment instructions Fixed bug that affected register view performance during debug Fixed bug that prevented the FSS view to correctly show printf calls result
Managed build	<ul style="list-style-type: none"> Added the possibility to remove the "-C" option in the generated makefiles for advanced usage, by blanking the value of the "processor" option Project libraries build booster improved to decrease wait time before build start Fixed bug that prevented TASKING Assembler flags to be correctly copied to generated makefiles

Summary of changes

Module	Description of changes
	<ul style="list-style-type: none"> Fixed bug that prevented library project to be correctly archived during build process Fixed bug that forced Linker to get called at every build, even if no changes were made to any source file
New Project Wizard	<ul style="list-style-type: none"> Fixed bug that prevented projects to be correctly created if remote templates repository is not reachable
DAS	<ul style="list-style-type: none"> Integrated DAS version 7.3.7
Project Importer	<ul style="list-style-type: none"> Project Metadata shown also for locally imported projects Changed display of error message when remote repository is not reachable
Project Exporter	<ul style="list-style-type: none"> Fixed a bug which prevented some project files to be correctly copied in the destination folder
Compiler	<ul style="list-style-type: none"> Integrated TASKING Toolchain 1.1r8
Libraries Updater	<ul style="list-style-type: none"> Functionality added. It is now possible to upgrade and rollback the libraries of a project
AURIX™ Flasher	<ul style="list-style-type: none"> Added AURIX™ Flasher version 2.5.3
OneEye	<ul style="list-style-type: none"> Updated version of supported OneEye to latest.
Platform	<ul style="list-style-type: none"> Added link to AURIX™ Development Studio Forum

3.3 Changes implemented in release V1.5.4

Table 4

Module	Description of changes
OneEye	<ul style="list-style-type: none"> Added support to OneEye. OneEye can be installed with ADS, and can be started from within ADS for the active project.
Managed build	<ul style="list-style-type: none"> TASKING Processor and Package options made visible and editable using the UI Fixed a bug which was preventing the TASKING Assembler flags to be correctly used during the build process Fixed bug which was preventing imported non-managed make based projects to correctly build
Platform	<ul style="list-style-type: none"> Eclipse upgrade to version 2021-09 Added Markdown viewer and editor Fixed unlinked page in the Help Documentation
Compiler	<ul style="list-style-type: none"> Integration of version 1.1r8 of the non-commercial TASKING Toolchain Fixed bug which was preventing the Linker to complete processing in certain situations
Project Exporter	<ul style="list-style-type: none"> Removed generation of .exportedSettings file. Project are now exported in standard Eclipse format
New Project Wizard	<ul style="list-style-type: none"> Removed iLLD set choice. All projects are now created with the full iLLD set

3.4 Changes implemented in release V1.5.2

Table 5

Module	Description of changes
Managed build	<ul style="list-style-type: none"> Added support to projects which are located in an external folder, and not in the workspace Default include paths have been changed to use Eclipse variables in order to be independent from the project name Fixed bug that prevented the project to be built if the project contains folders with empty characters in the name Fixed bug that caused a delay in the project build even if the project sources was not changed from the last build Fixed bug that occasionally prevented the build working directory to be deleted Fixed bug that prevented the file specific build settings to be opened Fixed bug that prevented the built-in “make” program to be used, if “make” is contained also in the bin folder of an external toolchain Fixed bug that occasionally prevented the correct sequence of “build” and “flash” to be executed when using the function “Build Active Project” Fixed bug that caused the building of a project to fail if any command exceeds the maximum number of characters allowed by the shell
Platform	<ul style="list-style-type: none"> Added possibility to build the project, including libraries boosting and includes auto discovery, using the contextual menu “Build Project”
Project Importer	<ul style="list-style-type: none"> Added number of projects currently shown in the list Removed empty projects from the AURIX™ Code Vault projects list
Project Exporter	<ul style="list-style-type: none"> Fixed bug that prevented to import a previously exported project, if the project was exported using ADS version 1.5.0
New Project Wizard	<ul style="list-style-type: none"> UI improvements for screens with lower resolution Fixed bug that caused a project to have a wrong folder structure, if the project is created in a non-default location

3.5 Changes implemented in release V1.5.0

Table 6

Module	Description of changes
Managed build	<ul style="list-style-type: none"> Added support to AURIX™ TC334 lite Kit Added possibility to create a static Library Project Added g++ compiler support in External GCC Toolchain Added support to C++ constructors and destructors Added the root of a project in the list of Compiler Include paths
Platform	<ul style="list-style-type: none"> Added possibility to import projects from AURIX™ Code Vault (only available from within IFX Network) Removed possibility to import AURIX™ Code Examples from IFX BitBucket
Project Importer	<ul style="list-style-type: none"> Added capability to import projects which were not previously exported using the AURIX™ Development Studio export function, but which contain a *.project Eclipse file

Module	Description of changes
Project Exporter	<ul style="list-style-type: none"> Changed UI texts

3.6 Changes implemented in release V1.4.2

Table 7

Module	Description of changes
Managed build	<ul style="list-style-type: none"> Added support to TC33xLP_A-Step device Fixed bug that caused the selected CPU setting to get lost after resetting the Toolchain Settings to their default Fixed bug that prevented the External TASKING Toolchain to be used with any device but the TC29xTP_B-Step and TC29TA/TX/TF_B-Step Fixed bug that prevented a project from being built if any used iLLD folder contains *.c files which are the only includers of other iLLD header files contained in different folders Fixed bug that caused the Floating-point custom settings to be ignored if deactivated
Platform	<ul style="list-style-type: none"> Added documentation for Compiler Include paths Auto-discovery function and creation and configuration of an external TASKING Toolchain Fixed bug that would occasionally cause the UI to freeze while a project is building Fixed bug in installation program, which forced a system reboot after the installation Fixed bug that caused the build folder not to refresh correctly after a build, if the project was copied and pasted from another
Debugger	<ul style="list-style-type: none"> Integration of version 1.1r7 of the non-commercial TASKING debugger Fixed bug that prevented the Memory View to correctly display data when scrolling Fixed bug that caused the Expression View to display no data Fixed bug that caused sporadic crash when creating/editing expressions in the Expression View Fixed bug that prevented the Expression View to correctly refresh the data of configured expressions Fixed bug that prevented float values to be correctly displayed in Variables View Fixed bug that prevented all elements of array variables to be shown in Variables View

3.7 Changes implemented in release V1.4.0

Table 8

Module	Description of changes
Managed build	<ul style="list-style-type: none"> Enhanced support for external GCC toolchain Added auto discovery of include paths

Module	Description of changes
	<ul style="list-style-type: none"> Removed percent display of build progress Fixed bug that prevented triggering of build enhancement if an empty source file is present in the project
AURIX PinMapper	<ul style="list-style-type: none"> Added "Open AURIX PinMapper" button in the toolbar
Quick Links	<ul style="list-style-type: none"> Added Quick Links feature, which enables easy access to documentation and functions Added warning to the user if the PinMapper perspective is left without saving changes

3.8 Changes implemented in release V1.3.2

Table 9

Module	Description of changes
Managed build	<ul style="list-style-type: none"> Removed use of external "sed" call for *.d dependency files post processing Removed percent indicator from build progress bar Fixed bug that caused the build to fail if build booster is triggered before project indexing is complete Fixed bug that prevented "Build Active project" command to correctly trigger an incremental build
PinMapper	<ul style="list-style-type: none"> Fixed bug that caused the creation of a PinMapper configuration file for imported projects
Platform	<ul style="list-style-type: none"> Fixed icon shown in start menu Activated excluded source files indexing and indexing of open files by default
Project Importer	<ul style="list-style-type: none"> Fixed bug that wrongly interpreted Doxygen "\brief" command as part of the project metadata, wrongly recognizing the metadata as available for the project

3.9 Changes implemented in release V1.3.0

Table 10

Module	Description of changes
PinMapper	<ul style="list-style-type: none"> Integration of version 1.1r6 of the TASKING PinMapper for AURIX™ Development Studio
Platform	<ul style="list-style-type: none"> Eclipse base framework migrated to version 2020-06 Fixed bug that prevented the Eclipse indexer to correctly recognize uint*_t data types
AURIX™ Flasher	<ul style="list-style-type: none"> "Build and Flash" command bound to Ctrl + Alt + F Keyboard shortcut
Project Importer	<ul style="list-style-type: none"> Project list sorted alphabetically Title column size changed to improve content visibility
New Project Wizard	<ul style="list-style-type: none"> Infineon Low Level Driver (iLLD) updated to version 1.0.1.12 Added support for AURIX™ TC375 lite kit

3.10 Changes implemented in release V1.2.4

Table 11

Module	Description of changes
Debugger	<ul style="list-style-type: none"> Integration of version 1.1r6 of the non-commercial TASKING debugger Fixed bug that caused the IDE to freeze when expression are used Fixed bug that caused Expressions to disappear Fixed bug that prevented to step over struct variables assignments Fixed bug that prevented the debugger to work correctly with the board KIT_A2G_TC375_ARD_SB (hitex ShieldBuddy with AURIX™ TC37x)
New Project Wizard	<ul style="list-style-type: none"> User Interface improvements Fixed bug that prevented the right version of the iLLDs to be added in new projects when the board KIT_AURIX_TC275_LITE (AURIX™ TC275 lite Kit) is selected

3.11 Changes implemented in release V1.2.2

Table 12

Module	Description of changes
Debugger	<ul style="list-style-type: none"> Integration of version 1.1r5 of the non-commercial TASKING debugger General improvement of user experience Added “Live Variables Mode” in Variables view Fixed single core/all cores pause and resume functionality Fixed bug that prevented correct data visualization in Expression view
Managed Build	<ul style="list-style-type: none"> Added support to TC36xDP_A-Step device Added External TASKING and GCC Toolchain configurations Added “Libraries” Linker option
New Project Wizard	<ul style="list-style-type: none"> User Interface improvements Fixed bug that prevented the right version of the iLLDs to be added in new projects when device TC37xTX_A-Step is selected
AURIX™ Flasher	<ul style="list-style-type: none"> Added “Flash current project” functionality, using AURIX™ Flasher
Platform	<ul style="list-style-type: none"> Added “Open AURIX Forum” button Added new “C/C++ Projects” view with improved Copy/Paste and Project rename support
DAS	<ul style="list-style-type: none"> DAS Version updated to 7.2.0

3.12 Changes implemented in release V1.2.0

Table 13

Module	Description of changes
Debugger	<ul style="list-style-type: none"> Integration of version 1.1r4 of the non-commercial TASKING debugger Added support to TC3xx debugging

Summary of changes

Module	Description of changes
	<ul style="list-style-type: none"> Removed unsupported TASKING import function Fixed a bug that lead to an error popup if the “Generic Infineon AURIX Board” node is selected in Debug view
Compiler	<ul style="list-style-type: none"> Integration of version 1.1r4 of the non-commercial TASKING debugger Added support to TC3xx debugging
Managed Build	<ul style="list-style-type: none"> Added support to C++ language and toolchain options Added support to TC3xx devices Improved time required to build a project Changed the makefile generator in order to prevent failures in the “clean” phase, if the command is too long for the console The default shell program is now forced to “sh”. Fixed some non-working linker parameter Fixed a bug that prevented the toolchain from recompiling new header files in the “Configuration” folder Fixed a bug that lead to corrupted makefiles if a project is cleaned manually Fixed built-in symbols and macros
New Project Wizard	<ul style="list-style-type: none"> User Interface refactored and improved Added support to TC3xx devices CMake decommissioned Removed obsolete files from project template
Metadata Editor	<ul style="list-style-type: none"> User Interface improvements
Project Importer	<ul style="list-style-type: none"> User Interface improvement Added capability to import project from any folder and independently from their metadata Fixed a bug that lead to incorrect project settings import
Platform	<ul style="list-style-type: none"> Added version number to Splash Screen Added support and documentation to printf Removed “Processor” setting view Fixed an error in the installation program, that prevented the “Uninstall” program from removing all installation files

3.13 Changes implemented in release V1.1.10

Table 14

Module	Description of changes
Debugger	<ul style="list-style-type: none"> Integration of version 1.1r3 of the non-commercial TASKING debugger Fixed visualization of variables in Variables and Expressions views Removed Tracer view
Managed Build	<ul style="list-style-type: none"> Linker map file is now created in ASCII format All unsaved files are now automatically saved upon debug start Fixed bug that prevented the linking of custom assembly files

Summary of changes

Module	Description of changes
	<ul style="list-style-type: none"> Fixed rename of a project, which used to break the build
New Project Wizard	<ul style="list-style-type: none"> User Interface refactored and improved Fixed addition of include folders during project creation, when folders contain no header files Fixed conflicts with already existing folders in workspace during project creation
Metadata Editor	<ul style="list-style-type: none"> User Interface refactored and improved Fixed wrong behavior on Enter Key pressed for boards, keywords and documents
Project Importer	<ul style="list-style-type: none"> User Interface refactored and improved Build folders are now ignored during import Full-text search algorithm improved
Project Exporter	<ul style="list-style-type: none"> Added warning in case of possible override of existing files
Platform	<ul style="list-style-type: none"> Changed list of supported Boards Added button to open IDE documentation in the toolbar C/C++ perspective is now the default perspective when IDE is started Improved console output format Added new *.c and *.h file templates Terminal window is now visible by default in Debug perspective (requires new workspace)

3.14 Changes implemented in release V1.1.8

Table 15

Module	Description of changes
Debugger	<ul style="list-style-type: none"> Integration of version 1.1r2 of the non-commercial TASKING debugger Improved multi core synchronization during debugging Improved variable data transfer from the device during a debug session Removed "Startup Registers" configuration view Improved "Resume debug" button function Fixed "Unknown parent id" and "Cannot read source file" background errors
Documentation	<ul style="list-style-type: none"> Added Help documentation accessible from within the IDE
Managed Build	<ul style="list-style-type: none"> Added compiler standard library to project includes
New Project Wizard	<ul style="list-style-type: none"> Fixed tooltip for iLLD selection options
Project Importer	<ul style="list-style-type: none"> Removed support for GitHub Code Examples Repository from within the IDE Added new Infineon Code Examples HTTP Repository Implemented Last used Code Examples Repository as the default selection
Platform	<ul style="list-style-type: none"> Compiler errors and code syntax recognition improvements Changed default installation folder Number of buffered build console lines increased to 5000 Build console output is grouped by build target Added Serial Terminal to available tools

Summary of changes

Module	Description of changes
	<ul style="list-style-type: none"> Removed unused dependencies

3.15 Changes implemented in release V1.1.6

Table 16

Module	Description of changes
Platform	<ul style="list-style-type: none"> Updated license texts Added link to Getting Started as menu entry

3.16 Changes implemented in release V1.1.4

Table 17

Module	Description of changes
Debugger	<ul style="list-style-type: none"> Integration of version 1.1r1 of the non-commercial TASKING debugger Removed "Instruction Simulator" from the available targets Fixed support with ShieldBuddy board
Managed build	<ul style="list-style-type: none"> Integration of the TASKING non-commercial compiler version 1.1r1
New Project Wizard	<ul style="list-style-type: none"> Fixed case sensitivity in project name validation phase Added additional supported boards
Metadata Editor	<ul style="list-style-type: none"> Fixed issue with multiline keywords and document names Fixed issue with carriage return at the end of keywords and documents
Project Importer	<ul style="list-style-type: none"> Complete restyling of the UI. Fixed Network issues for the GitHub repository
Platform	<ul style="list-style-type: none"> Updated license texts Changed workspace default name Added link to TASKING website Removed spaces from installation folder Added missing window names Fixed issue with hanging background processes started by the IDE Added Help menu functions
DAS	<ul style="list-style-type: none"> DAS Version updated to 7.1.9

3.17 Changes implemented in release V1.1.2

Table 18

Module	Description of changes
Debugger	<ul style="list-style-type: none"> Integration of updated version of the non-commercial TASKING debugger
Managed build	<ul style="list-style-type: none"> Changed optimization level Removed unsupported platforms Fixed bug that prevented building of project located in drives whose name is not "C:" Fixed editing of toolchain settings

Summary of changes

Module	Description of changes
Metadata Editor	<ul style="list-style-type: none">• UI Improvements
Project Importer	<ul style="list-style-type: none">• General user experience improvements
Platform	<ul style="list-style-type: none">• Changed Logo/Splash Screen and naming• Removed unused dependencies• Minor cosmetic changes• Changed default workspace folder• Improved logging• Fixed project documentation opening• Removed wrong license information

3.18 Changes implemented in release V1.1.0

Table 19

Module	Description of changes
Debugger	<ul style="list-style-type: none">• Integration of first version of the non-commercial TASKING debugger• Removed GDB support
Managed build	<ul style="list-style-type: none">• Integration of the TASKING non-commercial compiler• Removed GCC support• Added “Release” configuration
New Project Wizard	<ul style="list-style-type: none">• General UI improvements
Metadata Editor	<ul style="list-style-type: none">• Attributes renamed and aligned between UI, project files and repository index file.
Project Importer	<ul style="list-style-type: none">• General UI improvements
Project Exporter	<ul style="list-style-type: none">• Compiler configuration is also exported
Platform	<ul style="list-style-type: none">• Eclipse upgrade to version 2019-03
DAS	<ul style="list-style-type: none">• DAS Version updated to 7.1.8

4 Known issues

Title	Identifier	Description
Debugger		
Core0 not resumed after breakpoint hit on another core	AURIX_E2U-1059	If a breakpoint is hit on any other core but Core 0, after a "Resume" operation all cores except Core 0 are resumed. Core 0 needs to be selected and resumed manually.
Build process		
Leaving root folder empty after build breaks successive builds	AURIX_E2U-1416	If, after a successful build, all source files are moved from the project root folder to a subfolder, successive builds will fail because the root "subdir.mk" file is not correctly updated.
Platform		
"Includes" virtual folder not updated when build configuration is switched	AURIX_E2U-1521	The "Includes" virtual folder of the "C/C++ Projects" doesn't show the correct set of include folders for the active build configuration. This issue affects only projects which were created in a previous ADS session. The set of include folders used for building the project is correct, and not affected by this issue.
PinMapper		
Device selection when creating a PinMapper document with "External GCC Toolchain" active	AURIX_E2U-1509	When an "External GCC" build configuration is selected, manually creating a new PinMapper configuration file does not display the correct project device in the "Select device and package for the new pin mapper document" wizard step. It is necessary to select the option "Show all" and to manually search for the correct device/package.

5 Limitations and deviations

This chapter describes the limitations and deviations due to software/hardware design constraints.

5.1 Limitations

There are no limitations towards the established usage of the project environment for the purpose of creating software running on AURIX™ microcontroller products from Infineon Technologies AG.

5.2 Deviations

There are no deviations towards the established usage of the project environment for the purpose of creating software running on AURIX™ microcontroller products from Infineon Technologies AG.

5.2.1 HIS-MISRA violations

Not applicable for this product

6 Installation

Please refer to the **Getting Started** document, which can be downloaded from <https://www.infineon.com/AURIXdevelopmentstudio>

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Document reference

None

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