

Code Examples

Release Notes

Product name: Code Examples

Release number and version: V1.0.2

Type of release: Official Release

Release method: Infineon GitHub

AUTOSAR specification: None

Compiler support: Tasking v1.1r1

Processor platform: AURIX™ TC2xx

Date: 2020-02-11

Previous release number and version: V1.0.1

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.

New issues identified since the last release of this document are detailed first, followed by all issues identified in previous versions of this release.

Note: This release is not intended for production use.

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

The code examples provide a guide on how to use and configure the peripherals of AURIX™ TC2xx devices through the Infineon Low Level Drivers (iLLDs). All the projects should be compiled using the AURIX™ Development Studio.

1.2 Released items

The release contains 80 code examples, each providing all the required files for compiling and running it as a standalone project.

Table 1 Release content

Component	Version	Specifications
ADC_Background_Scan_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
ADC_Group_Scan_1_KIT_TC297_TFT	V1.0.1	Type Code example
		Known Issues None
		Release Changes V1.0.1: Changed baud rate from 9600 to 115200. Added a median filter on the oversampled bits for UART to improve reliability.
ADC_Single_Channel_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
ASCLIN_LIN_Master_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
ASCLIN_Shell_UART_1_KIT_TC237_TFT	V1.0.0	Type Code example
		Known Issues None
ASCLIN_Shell_UART_1_KIT_TC275_SB	V1.0.0	Type Code example
		Known Issues None

Component	Version	Specifications
ASCLIN_Shell_UART_1_KIT_TC277_TFT	V1.0.0	Type Code example
		Known Issues None
ASCLIN_Shell_UART_1_KIT_TC297_TFT	V1.0.1	Type Code example
		Known Issues None
		Release Changes V1.0.1: Renamed macro ENDL to ENDLINE due to a conflict with iLLDs
ASCLIN_SPI_Master_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
ASCLIN_UART_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
Blinky_LED_1_KIT_TC234_TFT	V1.0.0	Type Code example
		Known Issues None
Blinky_LED_1_KIT_TC237_TFT	V1.0.0	Type Code example
		Known Issues None
Blinky_LED_1_KIT_TC265_TFT	V1.0.0	Type Code example
		Known Issues None
Blinky_LED_1_KIT_TC275_SB	V1.0.0	Type Code example
		Known Issues None
Blinky_LED_1_KIT_TC277_TFT	V1.0.0	Type Code example
		Known Issues None
Blinky_LED_1_KIT_TC297_TFT	V1.0.0	Type

Component	Version	Specifications
		Code example
		Known Issues None
BUS_Register_Protection_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
CCU6_ADC_1_KIT_TC297_TFT	V1.0.1	Type Code example
		Known Issues None
		Release Changes V1.0.1: Changed baud rate from 9600 to 115200
CCU6_Interrupt_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
CCU6_PWM_Capture_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
CCU6_PWM_Generation_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
CPU_Perf_Counters_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
CPU_Trap_Recognition_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
DMA_ADC_Transfer_1_KIT_TC297_TFT	V1.0.1	Type Code example
		Known Issues None
		Release Changes V1.0.1: Changed baud rate from 9600 to 115200. Added a median filter on the

Component	Version	Specifications
		oversampled bits for UART to improve reliability.
DMA_Linked_List_Mode_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
DMA_Mem_to_Mem_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
DSADC_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
ERU_Interrupt_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
FCE_CRC_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
Flash_Programming_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
GPIO_LED_Button_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
GPT12_PWM_Capture_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
GPT12_Timer_Concatenation_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
GPT12_Timer_Interrupt_1_KIT_TC297_TFT	V1.0.0	Type Code example

Component	Version	Specifications
		Known Issues None
GTM_ATOM_Interrupt_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
GTM_ATOM_PWM_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
GTM_TIM_Capture_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
GTM_TOM_Interrupt_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
GTM_TOM_PWM_1_KIT_TC234_TFT	V1.0.0	Type Code example
		Known Issues None
GTM_TOM_PWM_1_KIT_TC237_TFT	V1.0.0	Type Code example
		Known Issues None
GTM_TOM_PWM_1_KIT_TC265_TFT	V1.0.0	Type Code example
		Known Issues None
GTM_TOM_PWM_1_KIT_TC275_SB	V1.0.0	Type Code example
		Known Issues None
GTM_TOM_PWM_1_KIT_TC277_TFT	V1.0.0	Type Code example
		Known Issues None
GTM_TOM_PWM_1_KIT_TC297_TFT	V1.0.0	Type Code example

Component	Version	Specifications
		Known Issues None
I2C_Read_Ext_Device_1_KIT_TC297_TFT	V1.0.0	Type Code example Known Issues None
Interrupt_Prio_1_KIT_TC297_TFT	V1.0.0	Type Code example Known Issues None
IOM_PWM_Monitor_1_KIT_TC297_TFT	V1.0.0	Type Code example Known Issues None
IOM_Signals_Comparison_1_KIT_TC297_TFT	V1.0.0	Type Code example Known Issues None
MTU_MBIST_1_KIT_TC297_TFT	V1.0.0	Type Code example Known Issues None
MULTICAN_1_KIT_TC297_TFT	V1.0.1	Type Code example Known Issues None Release Changes V1.0.1: Renamed files from MULTICAN_1.c and MULTICAN_1.h to MULTICAN.c and MULTICAN.h, corrected accordingly the include instructions.
MULTICAN_FD_1_KIT_TC297_TFT	V1.0.0	Type Code example Known Issues None
MULTICAN_GW_TX_FIFO_1_TC297_TFT	V1.0.0	Type Code example Known Issues None
Multicore_1_KIT_TC275_SB	V1.0.0	Type Code example

Component	Version	Specifications
		Known Issues None
Multicore_1_KIT_TC277_TFT	V1.0.0	Type Code example
		Known Issues None
Multicore_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
PWM_Buzzer_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
RAM_Run_Function_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
SCU_Clock_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
SCU_Die_Temp_Sensor_1_KIT_TC297_TFT	V1.0.1	Type Code example
		Known Issues None
		Release Changes V1.0.1: Version number increased to be synchronized with the tutorial document
SCU_Emergency_Stop_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
SCU_Power_Down_Idle_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
SCU_Power_Down_Sleep_1_KIT_TC297_TFT	V1.0.1	Type Code example
		Known Issues

Component	Version	Specifications
		None
		Release Changes V1.0.1: Version number increased to be synchronized with the tutorial document
SCU_Power_Down_Standby_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
SCU_Reset_Detection_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
SMU_Emergency_Stop_Alarm_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
SMU_Fault_Signaling_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
SMU_IR_Alarm_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
SMU_Reset_Alarm_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
SPI_CPU_1_KIT_TC297_TFT	V1.0.1	Type Code example
		Known Issues None
		Release Changes V1.0.1: Changes in the implementation, in order to use interrupts.
SPI_DMA_1_KIT_TC297_TFT	V1.0.0	Type Code example
		Known Issues None
STM_Interrupt_1_KIT_TC234_TFT	V1.0.0	Type Code example

Component	Version	Specifications
		Known Issues None
STM_Interrupt_1_KIT_TC237_TFT	V1.0.0	Type Code example Known Issues None
STM_Interrupt_1_KIT_TC265_TFT	V1.0.0	Type Code example Known Issues None
STM_Interrupt_1_KIT_TC275_SB	V1.0.0	Type Code example Known Issues None
STM_Interrupt_1_KIT_TC277_TFT	V1.0.0	Type Code example Known Issues None
STM_Interrupt_1_KIT_TC297_TFT	V1.0.0	Type Code example Known Issues None
STM_System_Time_1_KIT_TC297_TFT	V1.0.0	Type Code example Known Issues None
UART_DMA_Transfer_1_KIT_TC297_TFT	V1.0.0	Type Code example Known Issues None
UART_VCOM_1_KIT_TC297_TFT	V1.0.1	Type Code example Known Issues None Release Changes V1.0.1: Changed baud rate from 19200 to 115200
Watchdog_1_KIT_TC297_TFT	V1.0.0	Type Code example Known Issues

Component	Version	Specifications
		None

1.3 Compatibility

All the code examples are compatible with AURIX™ Development Studio V1.1.10.

2 Summary of changes

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

Version 1.0.2:

- Updated the name of all the code examples developed for the board KIT_AURIX_TC297_TFT to end with the suffix “_KIT_TC297_TFT”
- Added the following code examples for the board KIT_AURIX_TC297_TFT:
 - ADC_Single_Channel_1_KIT_TC297_TFT, BUS_Register_Protection_1_KIT_TC297_TFT, CPU_Trap_Recognition_1_KIT_TC297_TFT, Flash_Programming_1_KIT_TC297_TFT, GPT12_Timer_Interrupt_1_KIT_TC297_TFT, SCU_Power_Down_Standby_1_KIT_TC297_TFT, SMU_Fault_Signaling_1_KIT_TC297_TFT, STM_System_Time_1_KIT_TC297_TFT
- Added the following code examples for the board KIT_AURIX_TC234_TFT:
 - Blinky_LED_1_KIT_TC234_TFT, GTM_TOM_PWM_1_KIT_TC234_TFT, STM_Interrupt_1_KIT_TC234_TFT
- Added the following code examples for the board KIT_AURIX_TC237_TFT:
 - ASCLIN_Shell_UART_1_KIT_TC237_TFT, Blinky_LED_1_KIT_TC237_TFT, GTM_TOM_PWM_1_KIT_TC237_TFT, STM_Interrupt_1_KIT_TC237_TFT
- Added the following code examples for the board KIT_AURIX_TC265_TFT:
 - Blinky_LED_1_KIT_TC265_TFT, GTM_TOM_PWM_1_KIT_TC265_TFT, STM_Interrupt_1_KIT_TC265_TFT
- Added the following code examples for the board KIT_AURIX_TC275_SB:
 - ASCLIN_Shell_UART_1_KIT_TC275_SB, Blinky_LED_1_KIT_TC275_SB, GTM_TOM_PWM_1_KIT_TC275_SB, Multicore_1_KIT_TC275_SB, STM_Interrupt_1_KIT_TC275_SB
- Added the following code examples for the board KIT_AURIX_TC277_TFT:
 - ASCLIN_Shell_UART_1_KIT_TC277_TFT, Blinky_LED_1_KIT_TC277_TFT, GTM_TOM_PWM_1_KIT_TC277_TFT, Multicore_1_KIT_TC277_TFT, STM_Interrupt_1_KIT_TC277_TFT
- examples updated (all to version V1.0.1):
 - ADC_Group_Scan_1_KIT_TC297_TFT, ASCLIN_Shell_UART_1_KIT_TC297_TFT, CCU6_ADC_1_KIT_TC297_TFT, DMA_ADC_Transfer_1_KIT_TC297_TFT, SCU_Die_Temp_Sensor_1_KIT_TC297_TFT, SPI_CPU_1_KIT_TC297_TFT, SCU_Power_Down_Sleep_1_KIT_TC297_TFT, UART_VCOM_1_KIT_TC297_TFT

Version 1.0.1:

- Added the following code examples: ADC_Background_Scan_1, ADC_Group_Scan_1, Blinky_LED_1, CCU6_ADC_1, CCU6_PWM_Capture_1, GTM_TIM_Capture_1, GTM_TOM_PWM_1, IOM_PWM_Monitor_1, IOM_Signals_Comparison_1, MTU_MBIST_1, MULTICAN_FD_1, Multicore_1, RAM_Run_Function_1, SCU_Power_Down_Idle_1, SCU_Power_Down_Sleep_1, SPI_DMA_1, Watchdog_1
- MULTICAN_1 updated to version V1.0.1

3 Limitations and deviations

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

3.1 Limitations

There are no limitations towards the established usage of the projects for the purpose of demonstrating AURIX™ TC2xx microcontroller hardware and software products.

3.2 Deviations

There are no deviations towards the established usage of the projects for the purpose of demonstrating AURIX™ TC2xx microcontroller hardware and software products.

3.2.1 HIS-MISRA violations

Not applicable for this product.

4 Installation

Please refer to the **Infineon-AURIX_Getting_Started_with_AURIX_Development_Studio-EN.pdf** document, which can be found at <http://www.infineon.com/aurixdevelopmentstudio>.

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Document reference

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