

Introduction to AURIX™ TC375 Safety Lite Kit

Overview

Idea of Safety Lite Kit (SLK):

- Explore the full potential of AURIX™ TC3xx safety features using the AURIX™ TC375 Safety Lite Kit
- Learn how to build an ISO26262 complaint application on system level
- Understand how to integrate Tricore™ AURIX™ TC3xx as SEooC

The Safety Lite Kit Demonstrator features:

- Existing AURIX™ TC375 Lite kit is used
- The board show cases a wide range of safety functions reflected by a set of typical automotive top level safety requirements
- Possibility to inject error/fault via into the system and monitor the triggering of SMU alarms on OneEye GUI

Supporting Collaterals:

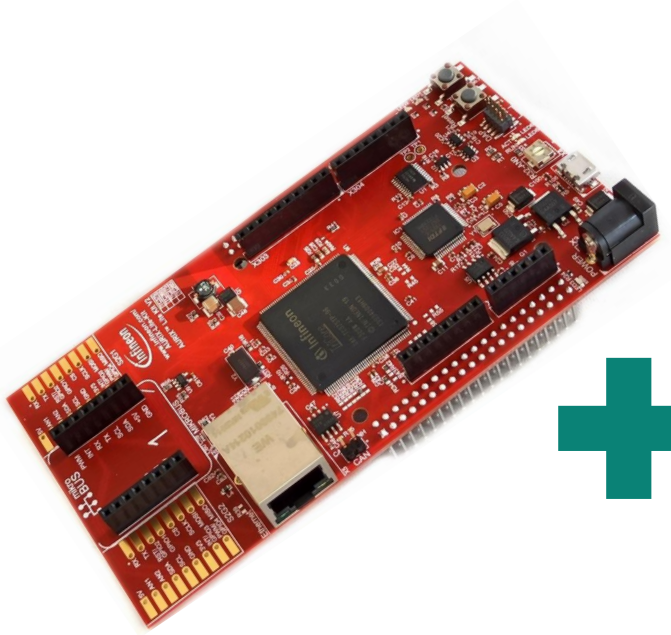
- Quick Start Guide with setup instructions
- Comprehensive Application Note explaining hardware and software safety features
- Free available safety software for demonstration purpose
- Infineon OneEye Graphical user interface

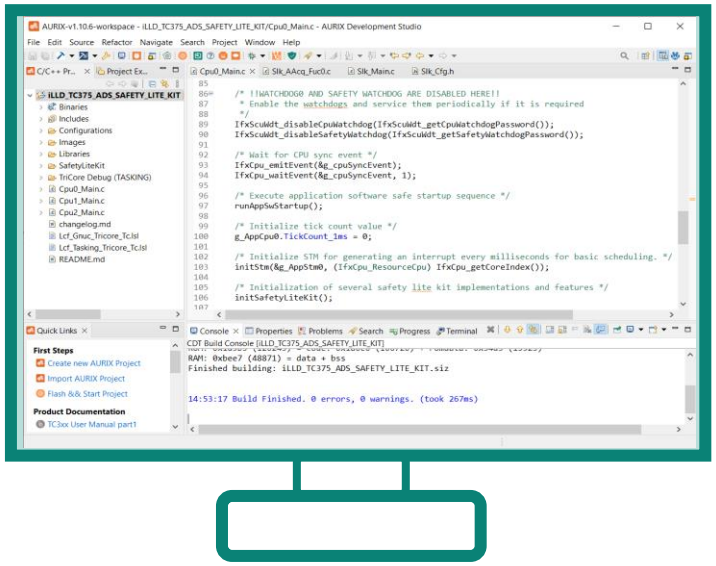


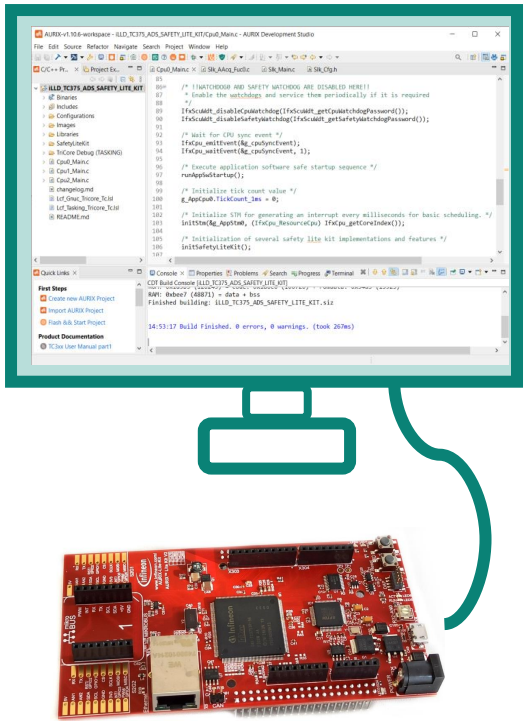
Copyright © Infineon Technologies AG 2025. All rights reserved.

AURIX™ TC375 Safety Lite Kit (1)

AURIX™ TC375 Lite Kit	Safety Software Project	AURIX™ TC375 Safety Lite Kit



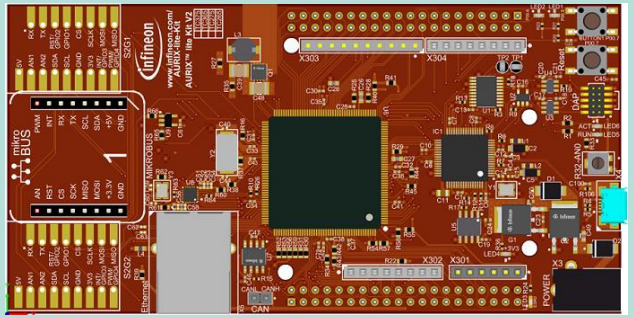




Copyright © Infineon Technologies AG 2025. All rights reserved.

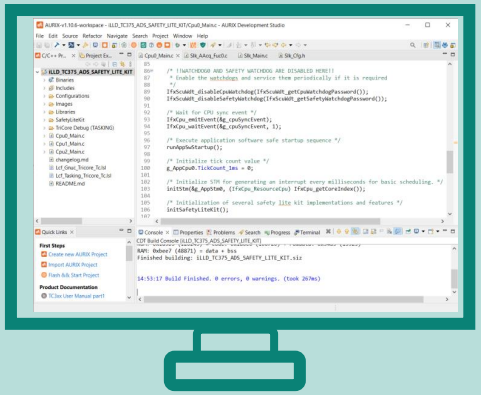
AURIX™ TC375 Safety Lite Kit (2)

AURIX™ TC375 Lite Kit



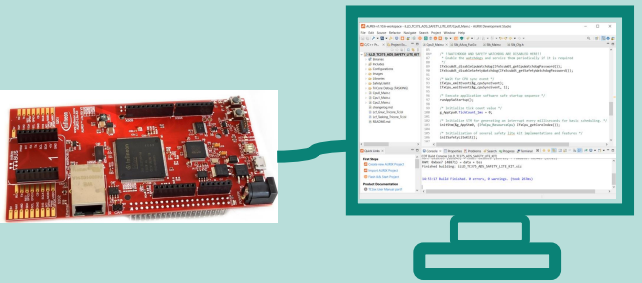
- Infineon's AURIX™ TC375 in LQFP-176 Package
- Two Infineon Shield2Go connectors
- Arduino compatible connector for 3.3 V
- CAN-Transceiver (TLE9251VSJ)
- MikroBUS™ and mikro-USB connector
- DAP and RJ45 connectors
- Low power Ethernet Physical layer transceiver
- USB miniWiggler Micor-AB USB interface
- 3 Low Power user LEDs
- Reset push button
- Potentiometer (10 KOhm) for varaible analog input
- 66.0 x 131.0 mm

Safety Software Project



- Well structured safety software source code project
- Free of cost based on AURIX™ development studio (ADS)
- Infineon OneEye graphical user interface (GUI)
- Real time status of board
- Safety mechanism (SM) test result
- Error injection possibility
- Graphical board alive and alarm LEDs
- Broken wire detection simulation

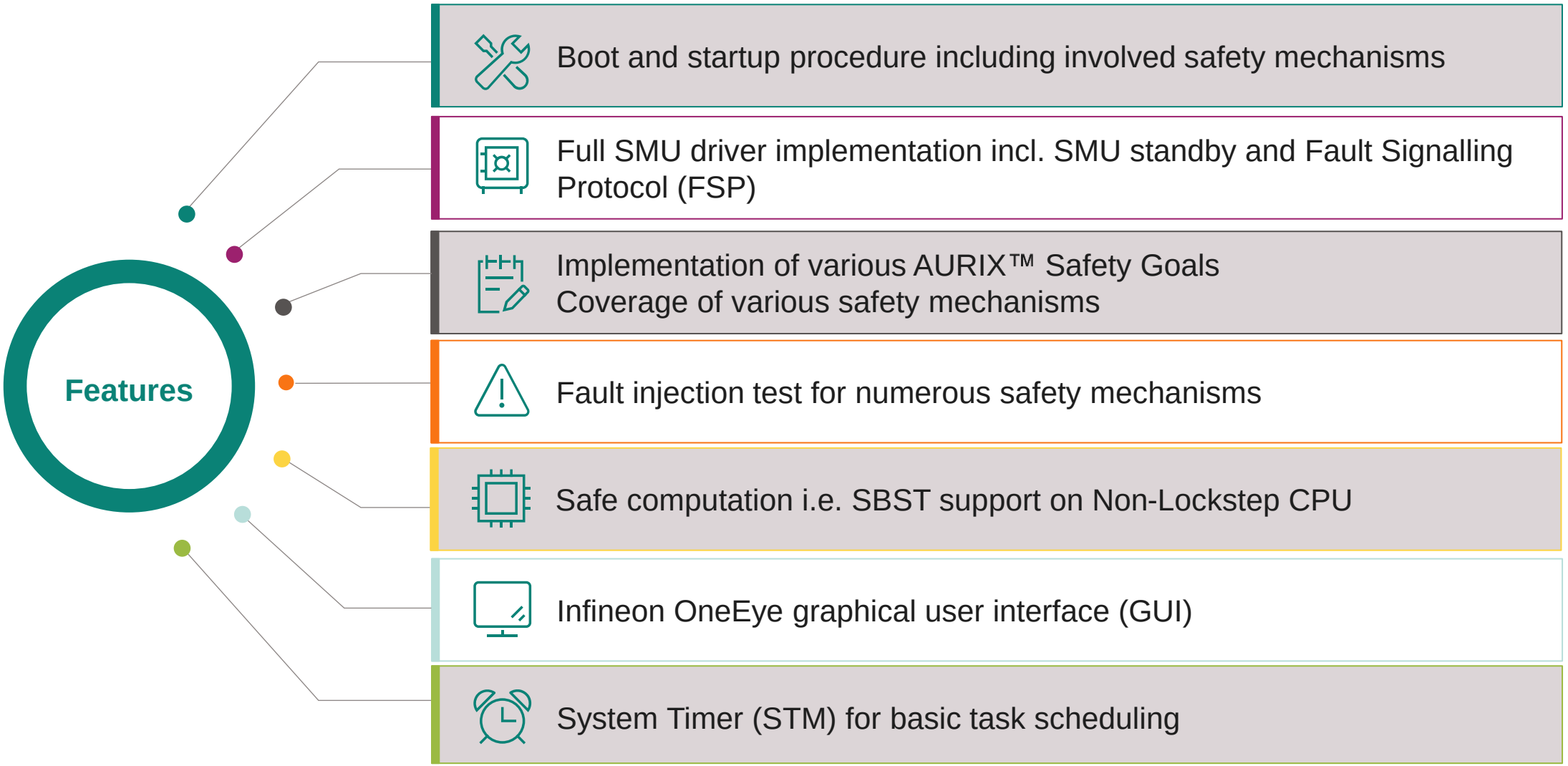
AURIX™ TC375 Safety Lite Kit



- Combination of
  - AURIX™ TC375 Lite Kit + Safety software project
- Safety Related function
  - Analog Acquisition
  - Digital Acquisition
  - Digital Actuation
  - Safe Computation
  - Safe State Support
  - Safe Startup
  - Avoidance and Detection of CCF
  - Coexistence of HW/SW elements
  - Register Monitor Test
  - External Communication

Copyright © Infineon Technologies AG 2025. All rights reserved.

Key features



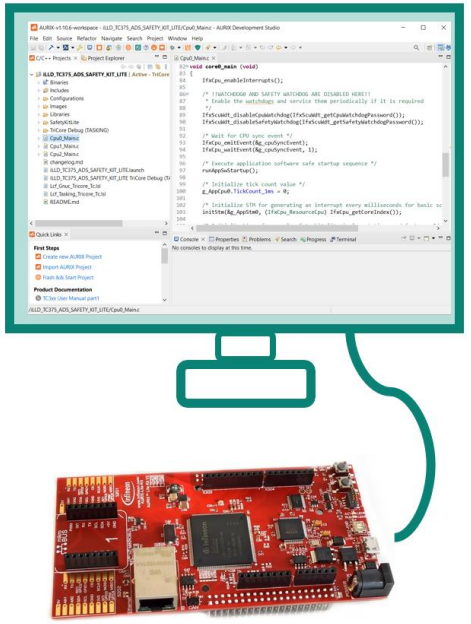
Copyright © Infineon Technologies AG 2025. All rights reserved.

Check out

- Users need to order the already existing AURIX™ TC375 Lite Kit (sale name: KIT_A2G_TC375_LITE)
- The user will get following accessories
  - Free safety software project
  - OneEye graphical user interface
  - Quick Start Guide
  - Introduction to AURIX™ TC375 Safety Lite Kit presentation (this document)

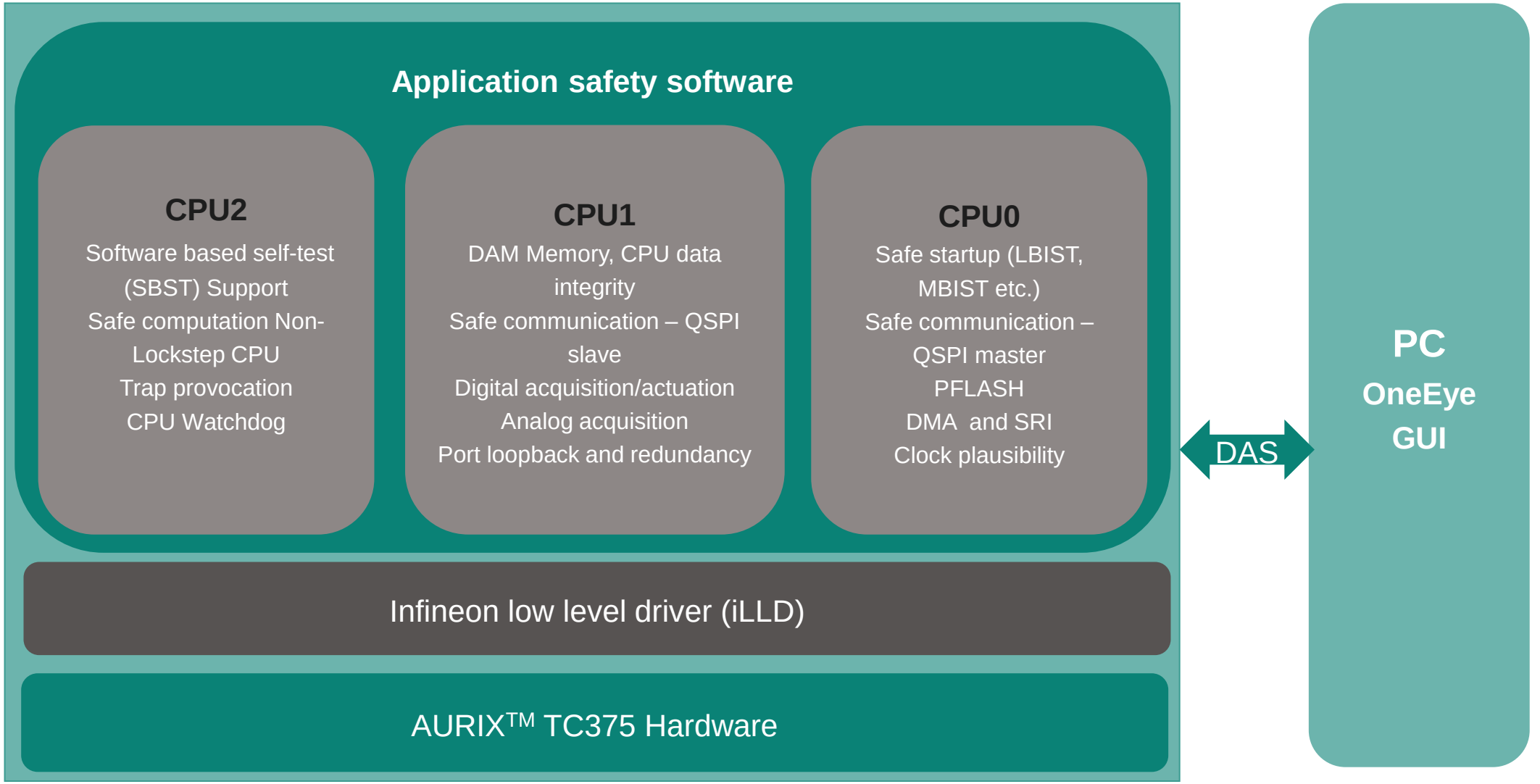


- www.infineon.com/aurixtc3xsafetylite
- Application Note „AN0029 Safe application development for AURIX™ TC375 safety lite kit“
- Functional safety demonstration code
- Free software available on Infineon GitHub and via ADS
- Further functional safety training materials



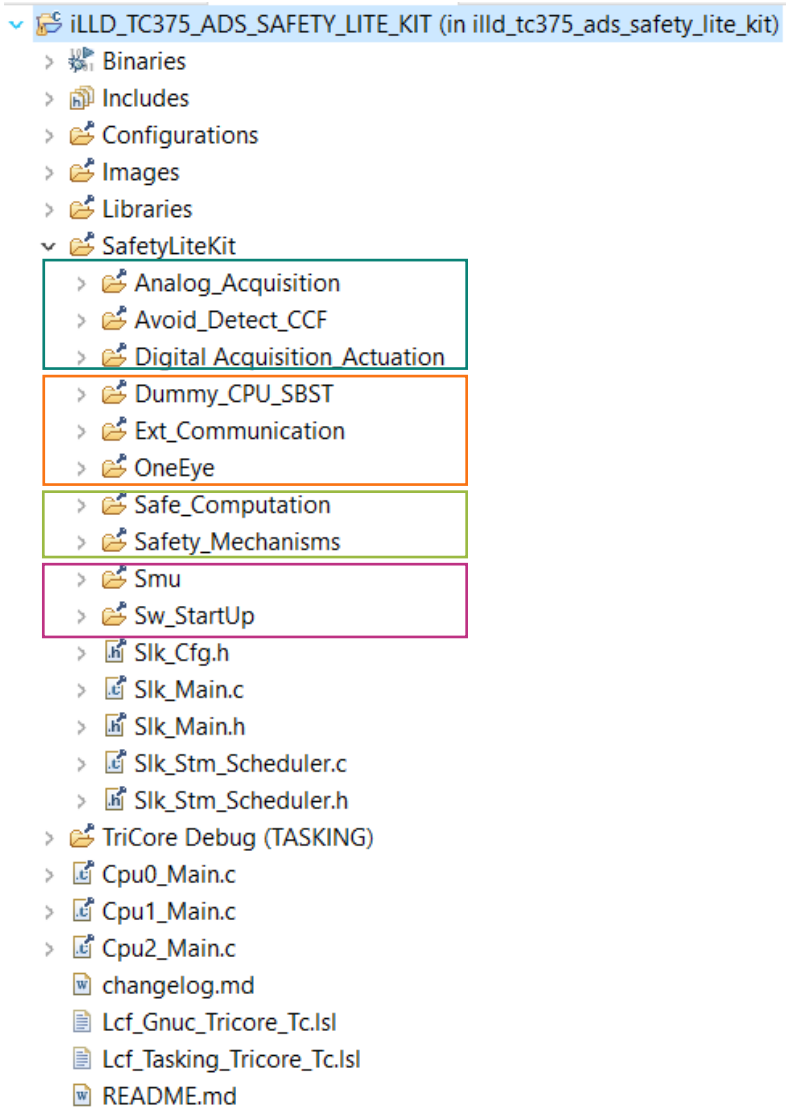
Copyright © Infineon Technologies AG 2025. All rights reserved.

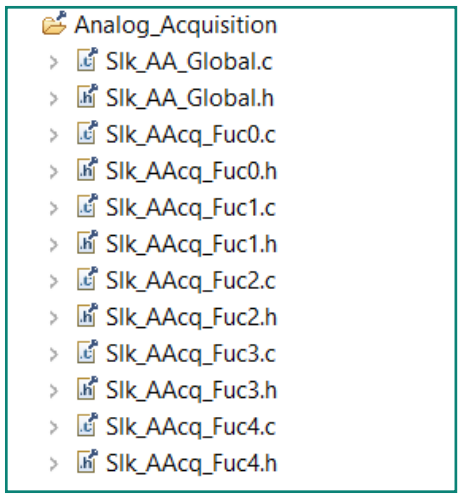
Software overview

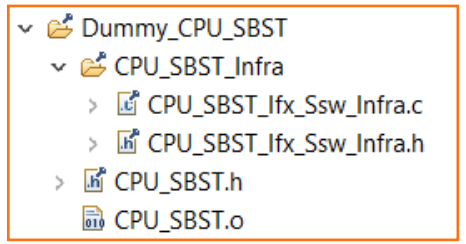


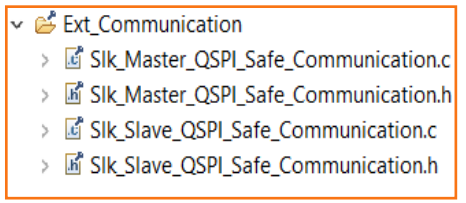
Copyright © Infineon Technologies AG 2025. All rights reserved.

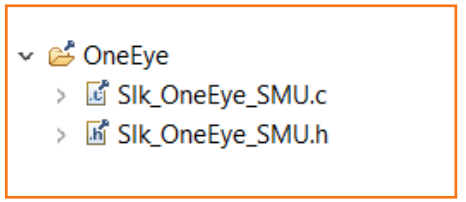
Software project

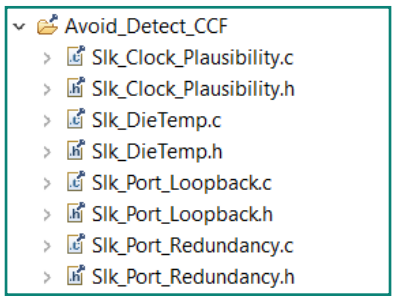


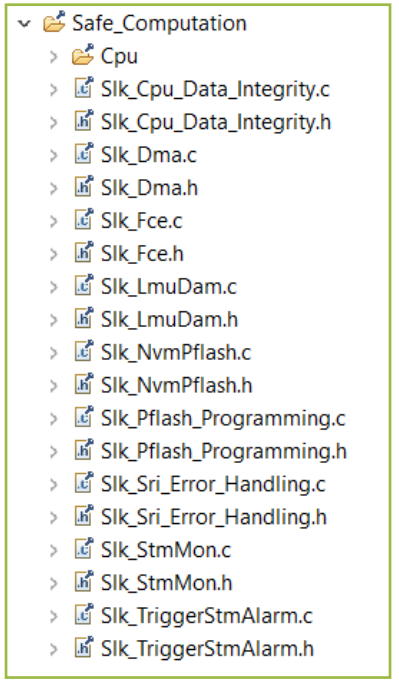




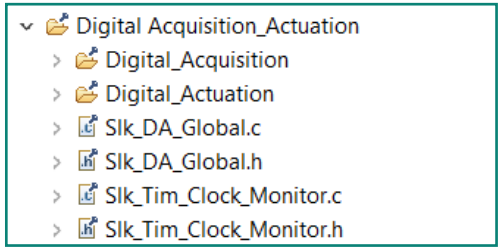


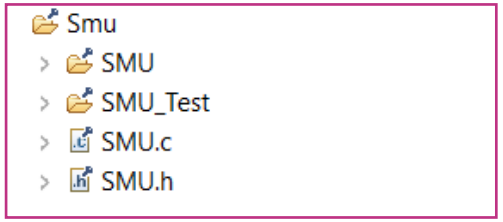


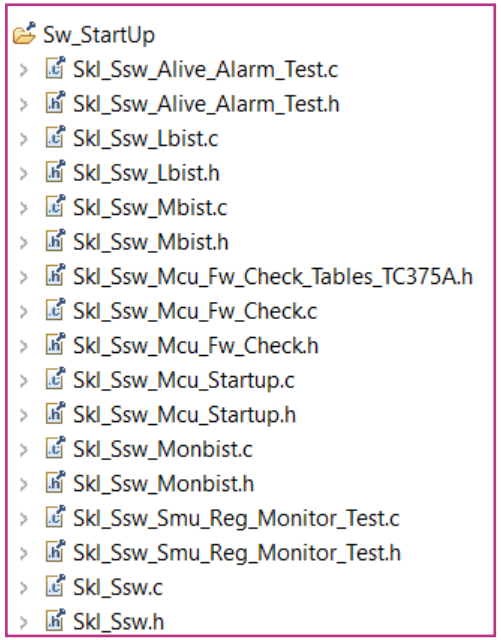












Copyright © Infineon Technologies AG 2025. All rights reserved.

Infineon OneEye - GUI

OneEye GUI general

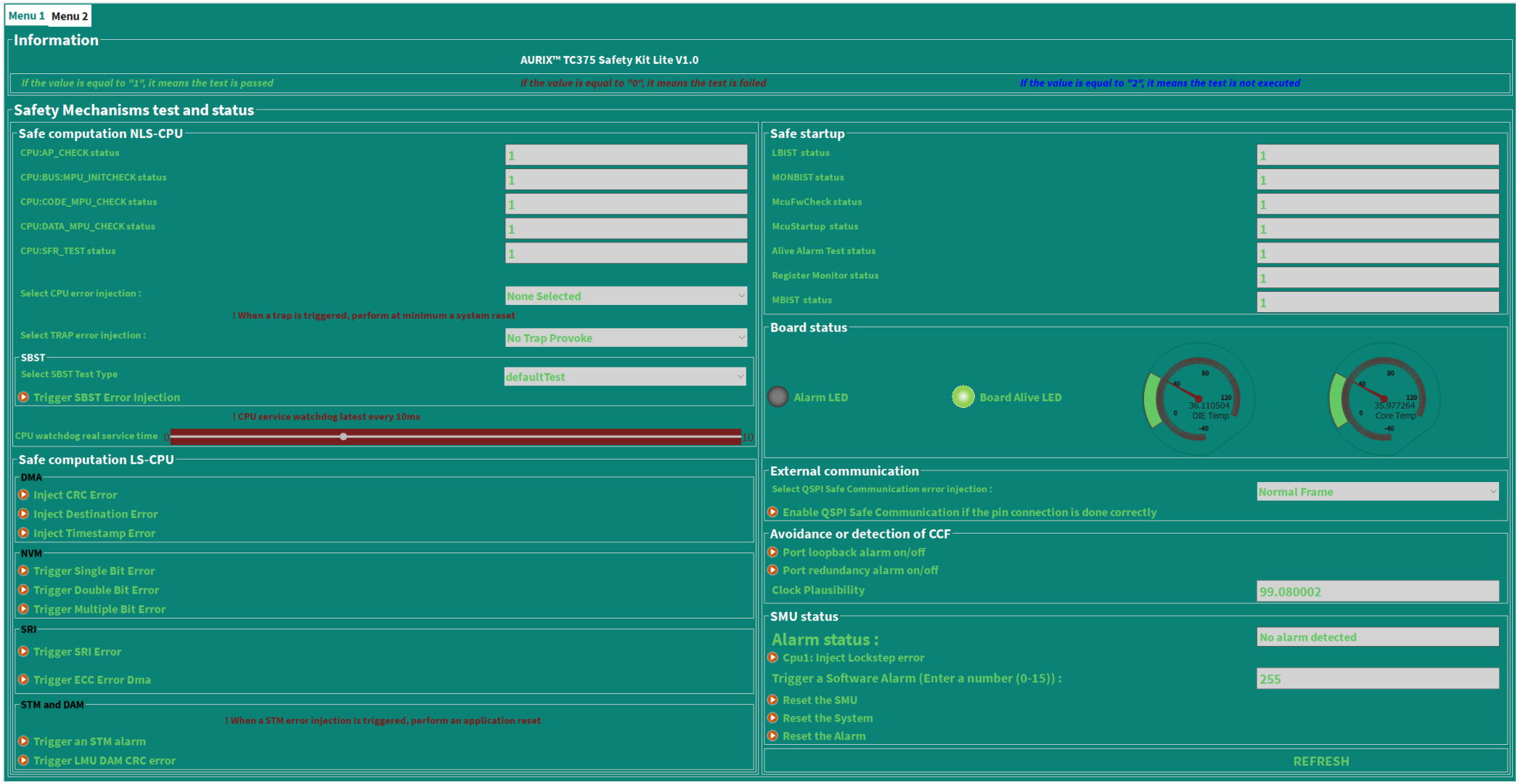
- Infineon OneEye is used as graphical interface
  - Framework for the creation of custom GUI
  - No programming required (customizable widgets)
- Communication interface
  - UART
  - Ethernet
  - CAN
  - DAS
- Two mode Option
  - Edit mode on
  - Edit mode off
- Basic tutorials list in help section of the OneEye GUI

AURIX™ TC375 Safety Lite Kit GUI

- DAS (device access server) is used with Infineon microcontroller to access MCU resources
- Two menu available
  - Menu 1
  - Menu 2
- Interaction
  - Error injection
  - Realtime status of the board
  - Realtime test result of various safety mechanism
  - Selection of different available option
  - Text color change according to status of different safety mechanism

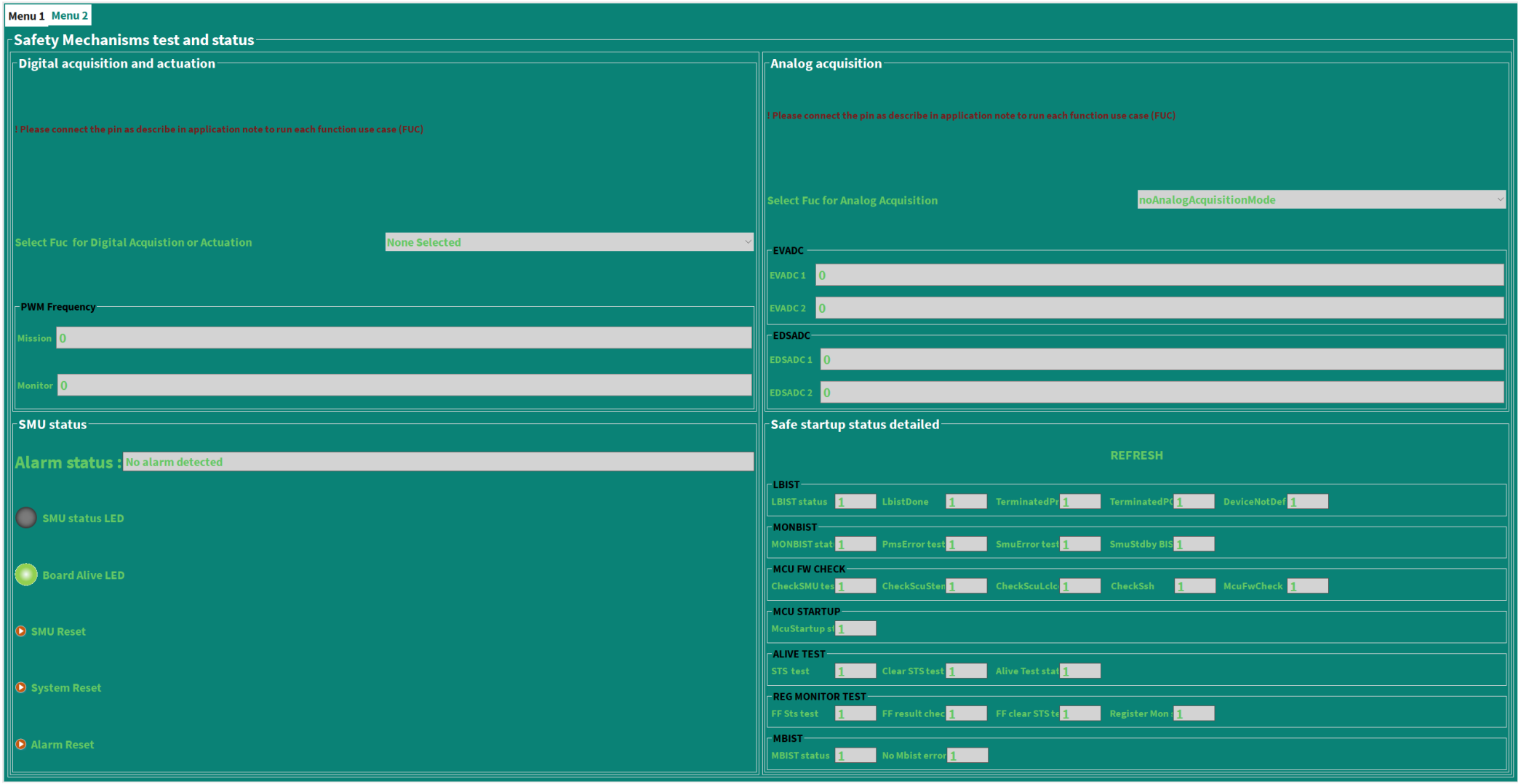
Copyright © Infineon Technologies AG 2025. All rights reserved.

Menu 1



Copyright © Infineon Technologies AG 2025. All rights reserved.

Menu 2



Copyright © Infineon Technologies AG 2025. All rights reserved.

References

- AURIX™ TC375 Safety Lite Kit
  - https://www.infineon.com/aurixtc3xsafetylite
- AURIX™ Application Kit -TC3xx Safety
  - https://www.infineon.com/aurixsafetykit
- Application Kit – AURIX™ TC397 TFT Kit
  - https://www.infineon.com/cms/en/product/evaluation-boards/kit_a2g_tc397_5v_tft/
- AURIX™ Development Studio (ADS)
  - https://www.infineon.com/cms/en/product/promopages/aurix-development-studio/
- AURIX™ TC3xx Microcontroller
  - https://www.infineon.com/cms/en/product/microcontroller/32-bit-tricore-microcontroller

Copyright © Infineon Technologies AG 2025. All rights reserved.


infineon