



HITEX SAFETPAL SUITE: SAFE AND SECURE SYSTEM DESIGN WITH MODEL BASED SOFTWARE DEVELOPMENT

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Agenda



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What is Hitex SafeTpal?

SafeTpal = Safety and Security ~~Easy-of-Use~~:
Your trusted companion for safe and secure
applications with AURIX TC3xx microcontrollers

Ready for Infineon RISC-V automotive controllers



Hitex SafeTpal: A complete solution



Ease-of-use

SafeTpal is a complete Ease-of-Use solution for the **AURIX TC3xx** microcontroller family for high performance applications which use **Non-AUTOSAR** or AUTOSAR as a runtime environment



Standards

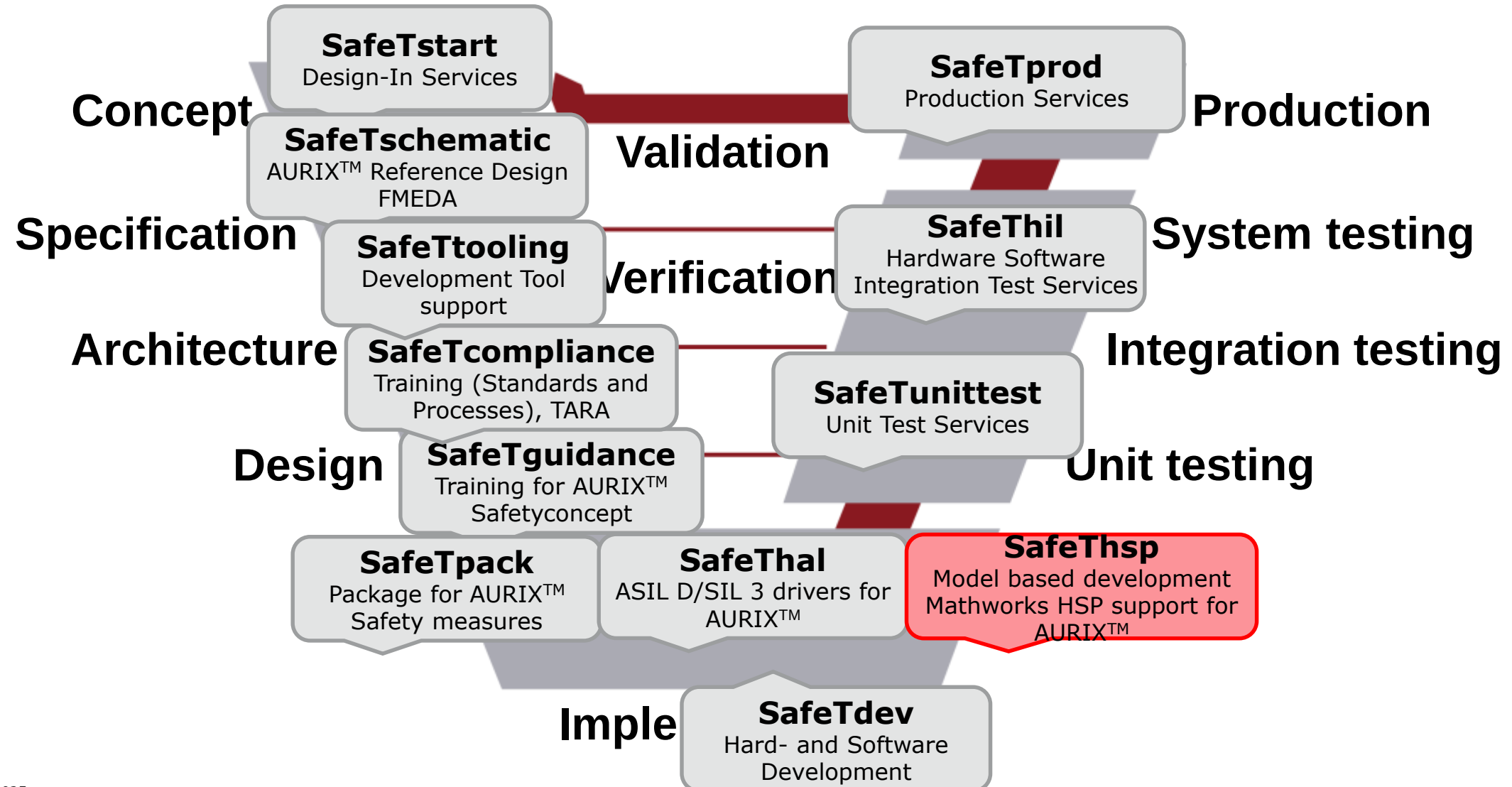
SafeTpal is designed for all applications up to safety standards **ISO 26262 ASIL-D** and **IEC 61508 SIL-3** and security standards **ISO 21434 / CERT-C / MISRA-C**



Complete

SafeTpal is a **complete package** consisting of software, reference design, services and trainings

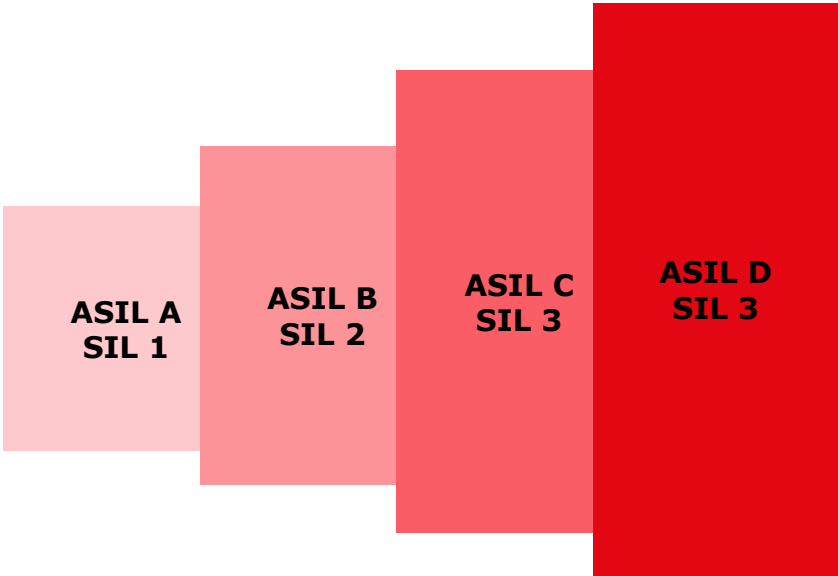
Companion in the "V"-development process



Designing a safety-critical application?



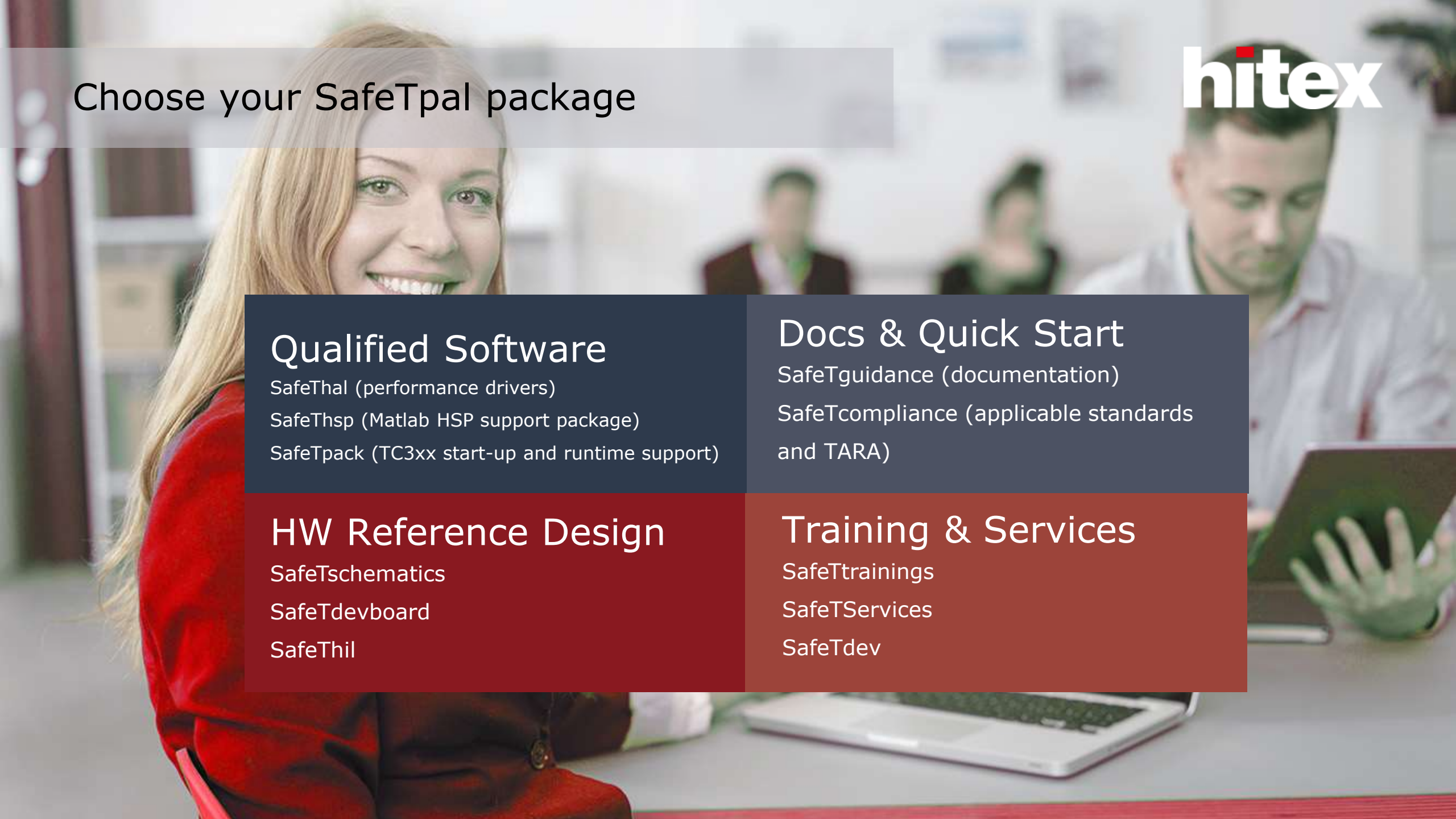
You have two options:



*Write all the software
inclusive drivers for
yourself*



**Save time and money
with SafeTpal!**



Choose your SafeTpal package

hitek

Qualified Software

SafeThal (performance drivers)

SafeThsp (Matlab HSP support package)

SafeTpack (TC3xx start-up and runtime support)

Docs & Quick Start

SafeTguidance (documentation)

SafeTcompliance (applicable standards and TARA)

HW Reference Design

SafeTschematics

SafeTdevboard

SafeThil

Training & Services

SafeTtrainings

SafeTservices

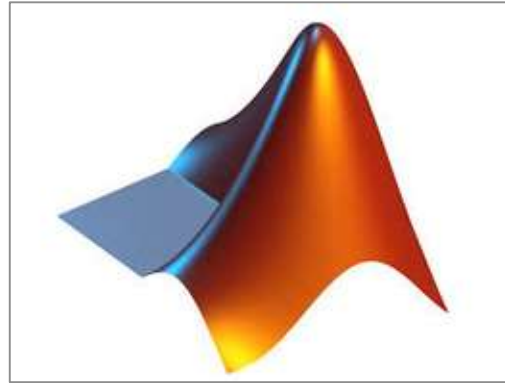
SafeTdev

Software for AURIX™ TC3xx ... and RISC-V ready



SafeThal

Closes the gap between iLLD (demo drivers) and MCAL (AUTOSAR drivers)



SafeThsp

Design from PoC (Proof of Concept) to productive and safe applications with model based SW-development with Matlab/Simulink



SafeTpack

Fast implementation of AURIX safety measures. Infineon ProSIL™-ready!



SafeTboot / SafeTsota

Secure bootloader with over-the-air updates are planned as part of the package

Hardware Abstraction Layer / Qualified drivers

Designed for non-AUTOSAR applications but can be used as CDD in AUTOSAR context.

API compatible with Infineon **iLLD**

Certified **for IEC 61508 SIL 3**

Qualified for **ISO 26262 ASIL D**

Cyber security according

ISO 21434 / CERT-C / MISRA-C

Compiler: HighTec LLVM Based C/C++ Compiler Suite

Drivers for:

Infrastructure:

Clock, Common, DMA, Interrupts

Input/Output:

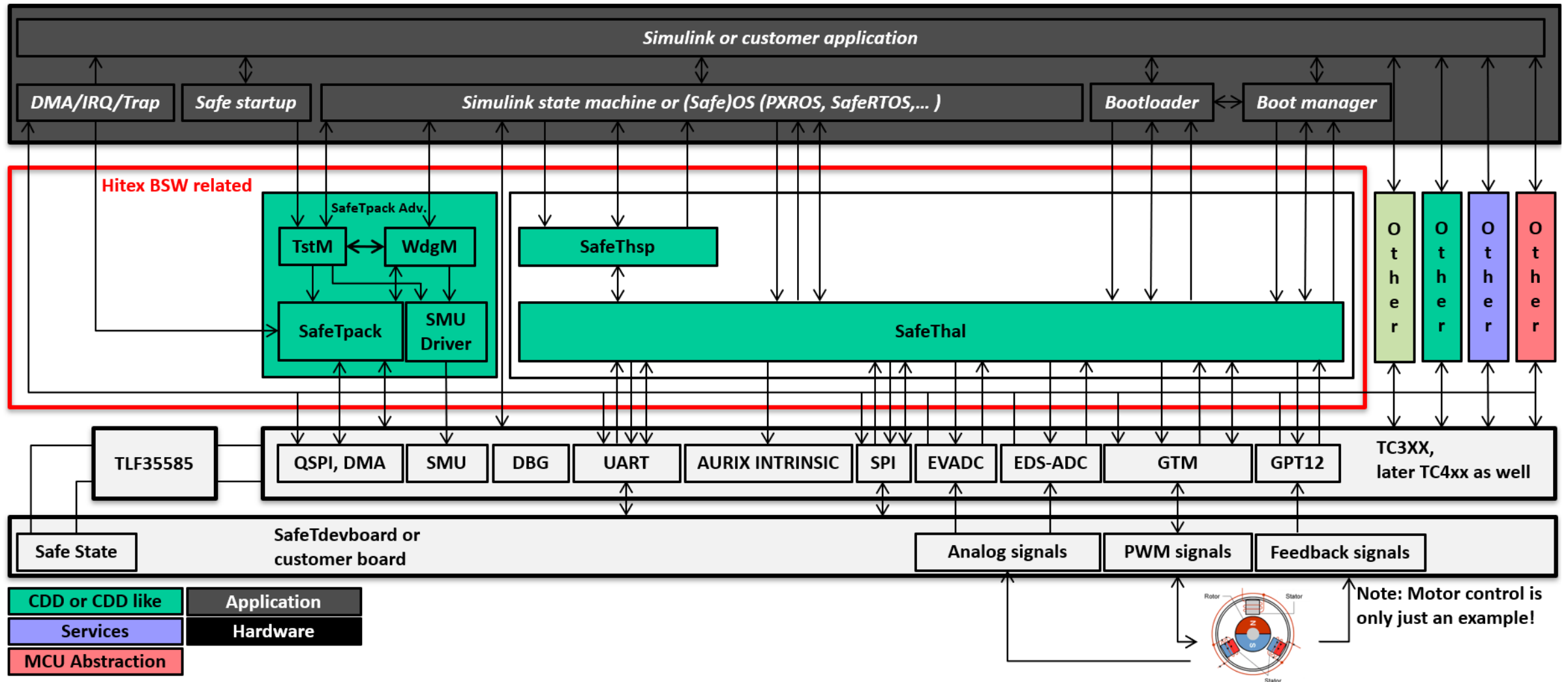
Port, ADC (EVADC, ConvCtrl, EDSADC),
PWM, Encoder

Communication:

UART, SPI

Delivered in **source code** with **all documentation**

A deeper view in SafeThal: schematic view



A deeper view in SafeThal: schematic view

SafeThal is an alternative to Infineon MCAL for efficient applications for automotive & industry

Without AUTOSAR ...

Closes the gap between iECU (demo driver) and MCAL (AUTOSAR driver)

Optimized performance for dynamic control algorithms

Both for ISO 26262 ASIL D (qualified) and IEC 61508 SIL 3 (certified)

A real budget friendly alternative to MCAL

With SafeThal, qualified/certified drivers are thus available for Mathworks HSP (see next slide)

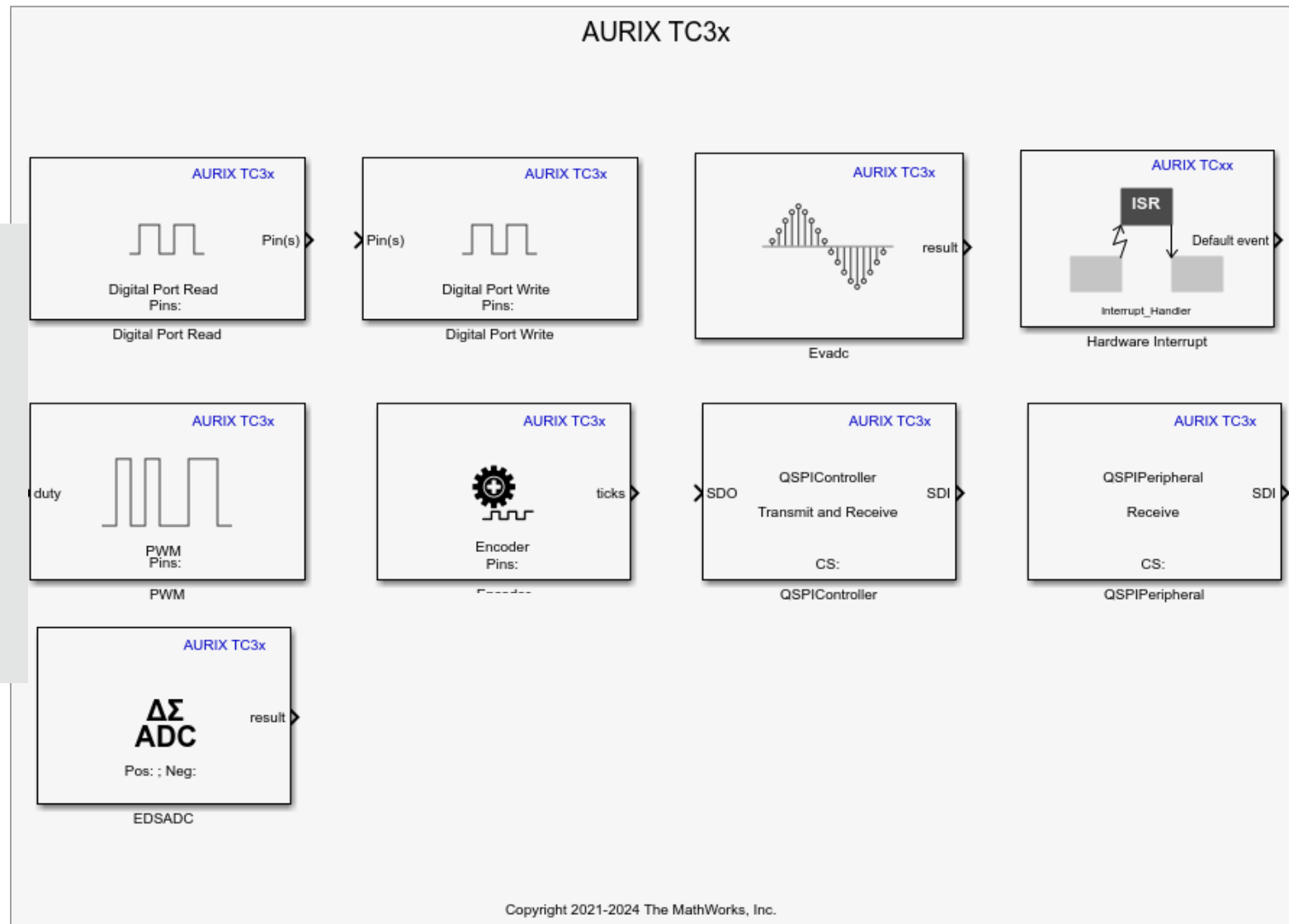
A deeper view in SafeThsp – model based development for AURIX™



SafeThsp

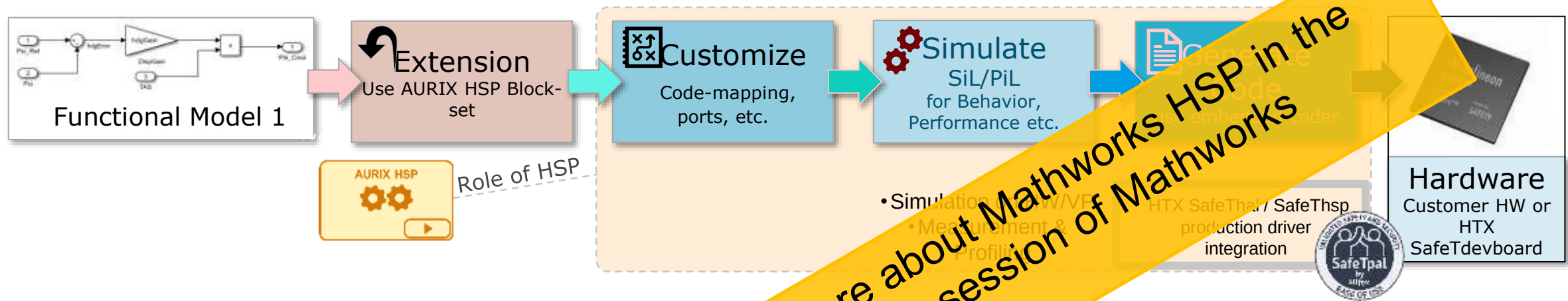
**Qualified drivers for the Mathworks
Hardware Support Package (HSP) for
Infineon AURIX TC3xx.**

**Use model based development to
easy setup and flash your AURIX.**



Model Based Development (MBD) flow with HTX SafeTpal

Optimize MATLAB code generation by including production released drivers



Boost your development cycle and reduce effort

Incorporating production released drivers into production code generation reduce efforts / cost and enables fast development cycle

You do not need to integrate manually own or 3rd party drivers

As an example: Power conversion or motor control requires performance optimized drivers

SafeTschematics: The fast way to your hardware

SafeTschematics:

Reference design for safe and secure applications with AURIX for ISO 26262 ASIL D and IEC 61508 SIL3

FMEDA support

Safety Analysis Package

Schematic review as a service

TC3xx / TC4xx SO_DIMM Board

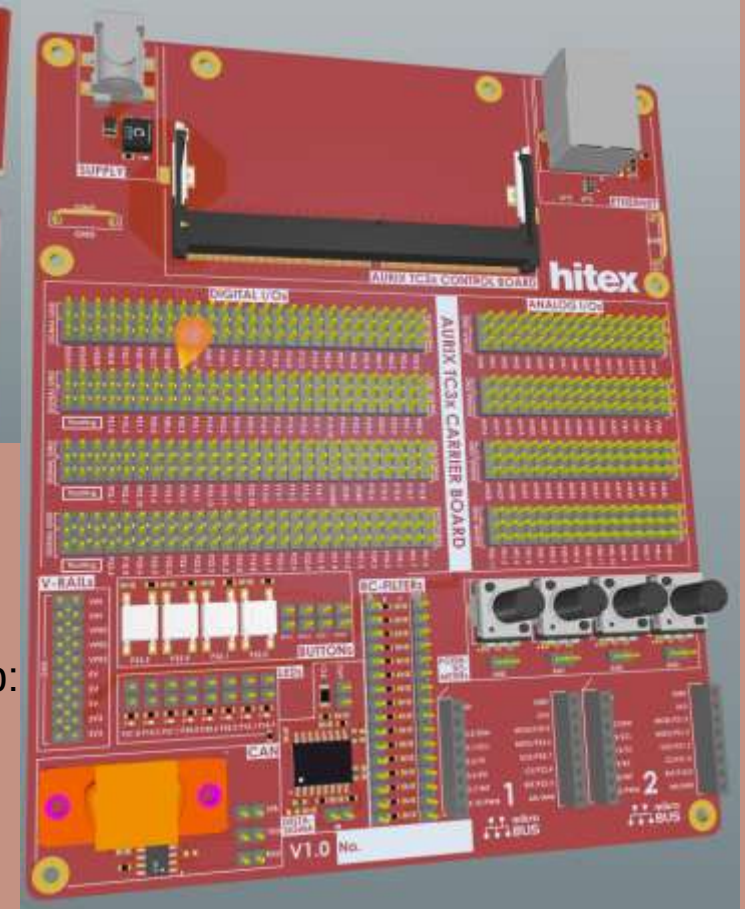
SO-DIMM Board for TC3xx and TC4xx

With Carrier Board to access all pins of AURIX



Infineon Evaluation Boards and Application Kits:

All available in Hitex Webshop:
<https://www.ehitex.de/>



Trainings for a quick start with AURIX



SafeTtooling

Our free-of-charge training as a service for your success



SafeTguidance

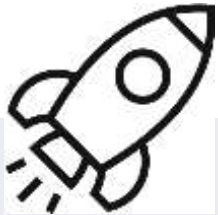
Save time and money.
Learn what's really relevant in practice



SafeTcompliance

Speed up your knowledge about relevant standards

Services, customization & know-how



SafeTstart

Design-In service
Safety & Security
Consulting
Consulting package at
the start of your
project



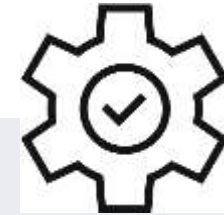
SafeTdev

Soft- & Hardware
development for
AURIX™
Development services
based on TÜV certified
development process
Customization of our
products based on
your requirements



SafeTunittest

Unit Test Services
According to safety
standards ISO 26262 /
IEC 61508 ...
As a full package service
Project-accompanying
unit tests during
development



SafeThil/remote

Hardware-in-the-Loop
Tests as a service
Hardware-Software
Integration Test based
on your requirements
Remote access to HIL-
platform on request

Conclusion and summary



Standards

With SafeTpal all relevant Safety and Security Standards are supported



Time-to-market

Use your resources best as possible.
Benefit from our experience



Budget

Save time and money with SafeTpal package

Real budget friendly alternative to todays offerings

Curious for more details ... Save the date ...

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Summer June – July



12. June 2025: SafeTdev
3. July 2025: SafeTguidance & SafeTcompliance
17. July 2025: Mathworks HSP

Watch the recordings

SafeTpal Live ...



ESE congress, Sindelfingen

28. November 2025, 15:00 SafeTpal @ ESE Preconf
03. December 2025 SafeThil SIL4 Live
@ESE Kongress

Mathlab Expo 2025, Munic

21. October 2025 @Infineon booth

Autumn September – November

18. September 2025, 11:00	SafeTschematic (Today)
16. October 2025, 11:00	SafeThal
30. October 2025, 11:00	SafeTdev (special)
13. November 2025, 11:00	SafeThsp
20. November 2025, 11:00	SafeThil / SafeTremotehil

Winter December

11. December 2025, 11:00	SafeTpal
	SafeThal & SafeThsp in real life.

More information about SafeTpal Webinars: <https://www2.hitex.com/safetpal-webinars-2025>

THANK YOU VERY MUCH FOR YOUR
ATTENTION AND PARTICIPATION

Hitex GmbH

More information: www.Hitex.com