S32 Configuration Tools Supporting the Next-Generation of S32 Products

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October 2019 | Session #AMF-AUT-T3842

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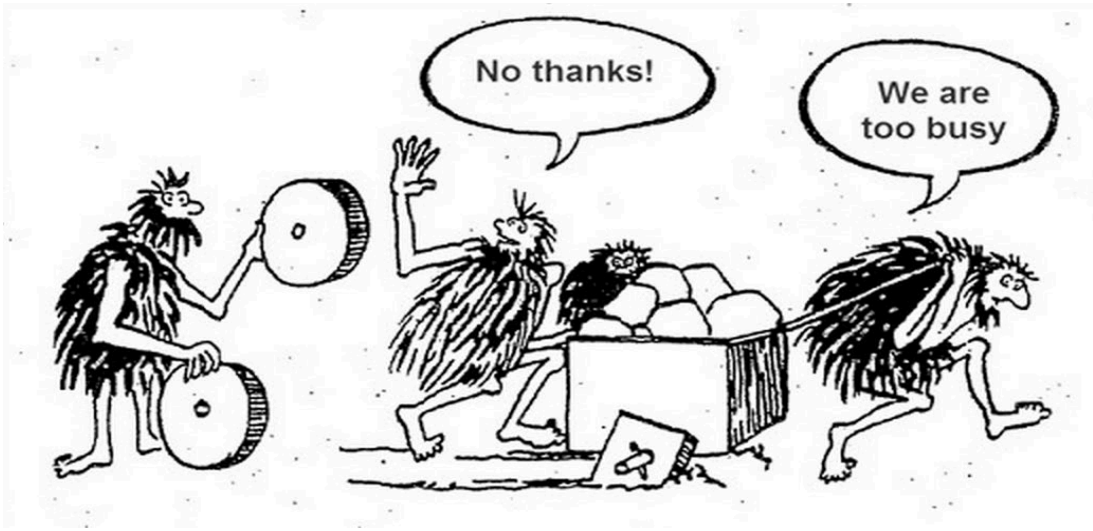
Agenda

- Short Description of S32 Configuration Tools Suite
- Pins Tool – Correct and Fast Pins Routing
- Clocks Tool – Friendly Visual Clock Tree Configuration
- Peripherals Tool – Simple SDK Configuration
- Device Configuration Data Tool – Quick Peripheral Configuration
- Image Vector Tool – Intuitive Image Vector Table Definition

WITH



WITHOUT

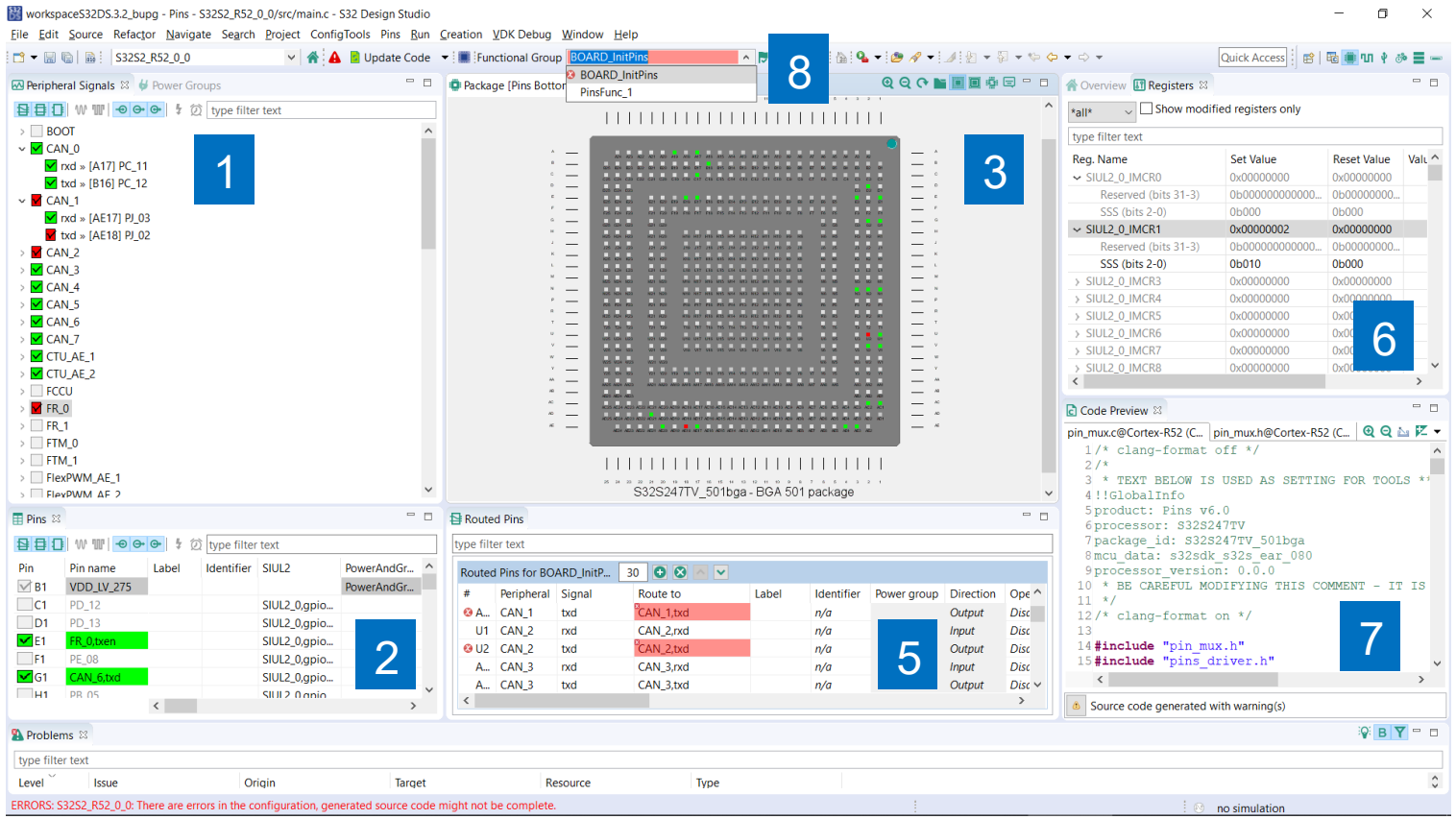
S32 Configuration Tool

Quick GUI based Configuration and Code Generation for AMP parts/platforms.

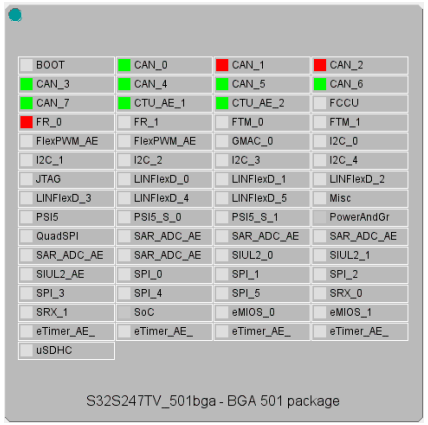
- ✓ Read and digest documentation to understand part capabilities: RM, DS, Schematics, SDK API
- ✓ Figure out correct types & values for all parameters used
- ✓ Manual integration of SDK drivers in S32DS projects

Pins Tool Features Summary

Caption showing Pins Tool for S32xxx – BGA501 package

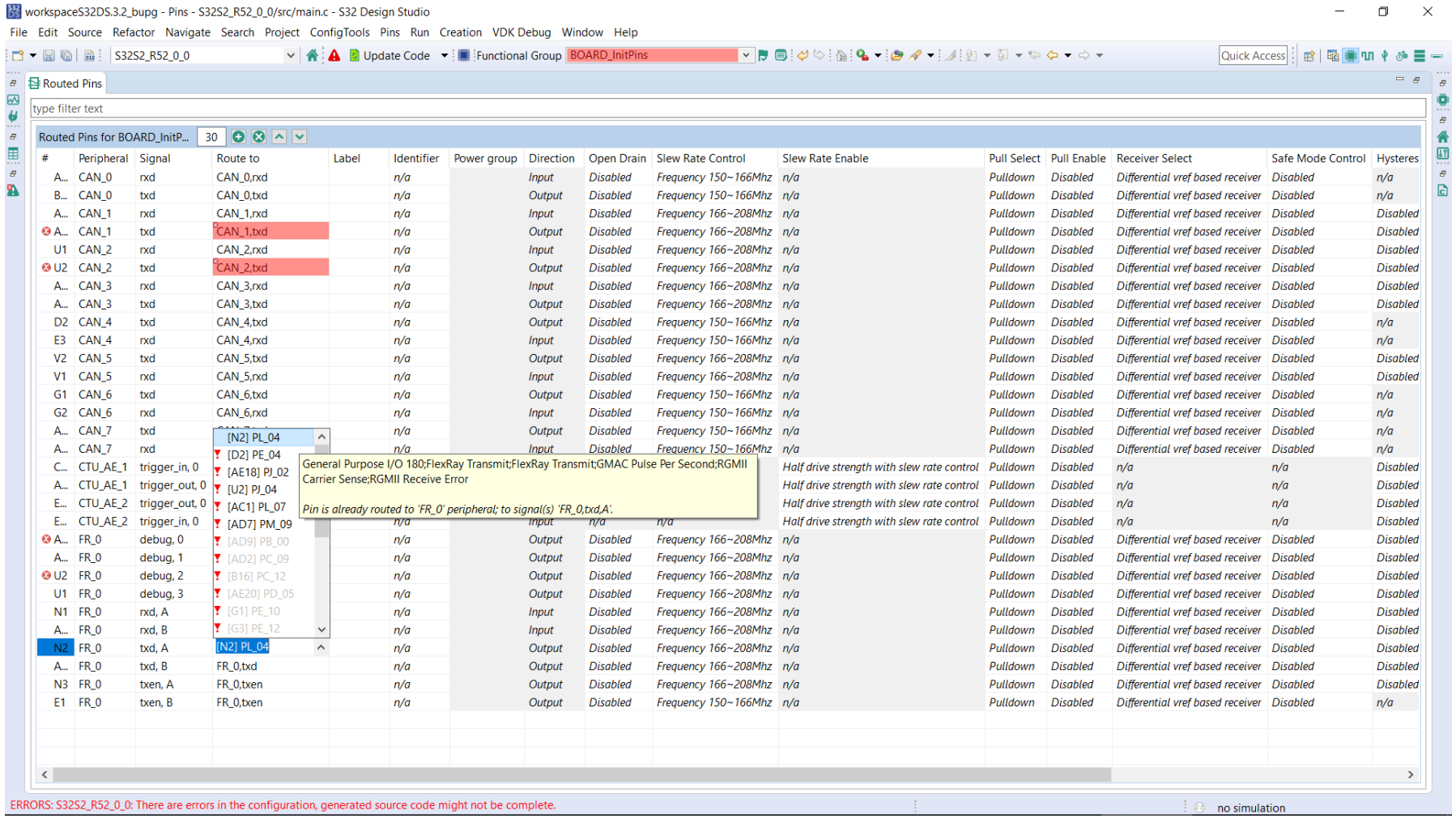


- Quick configuration of pins from:
  1. Peripherals View
  2. Pins View
  3. Package View
  4. Resource View



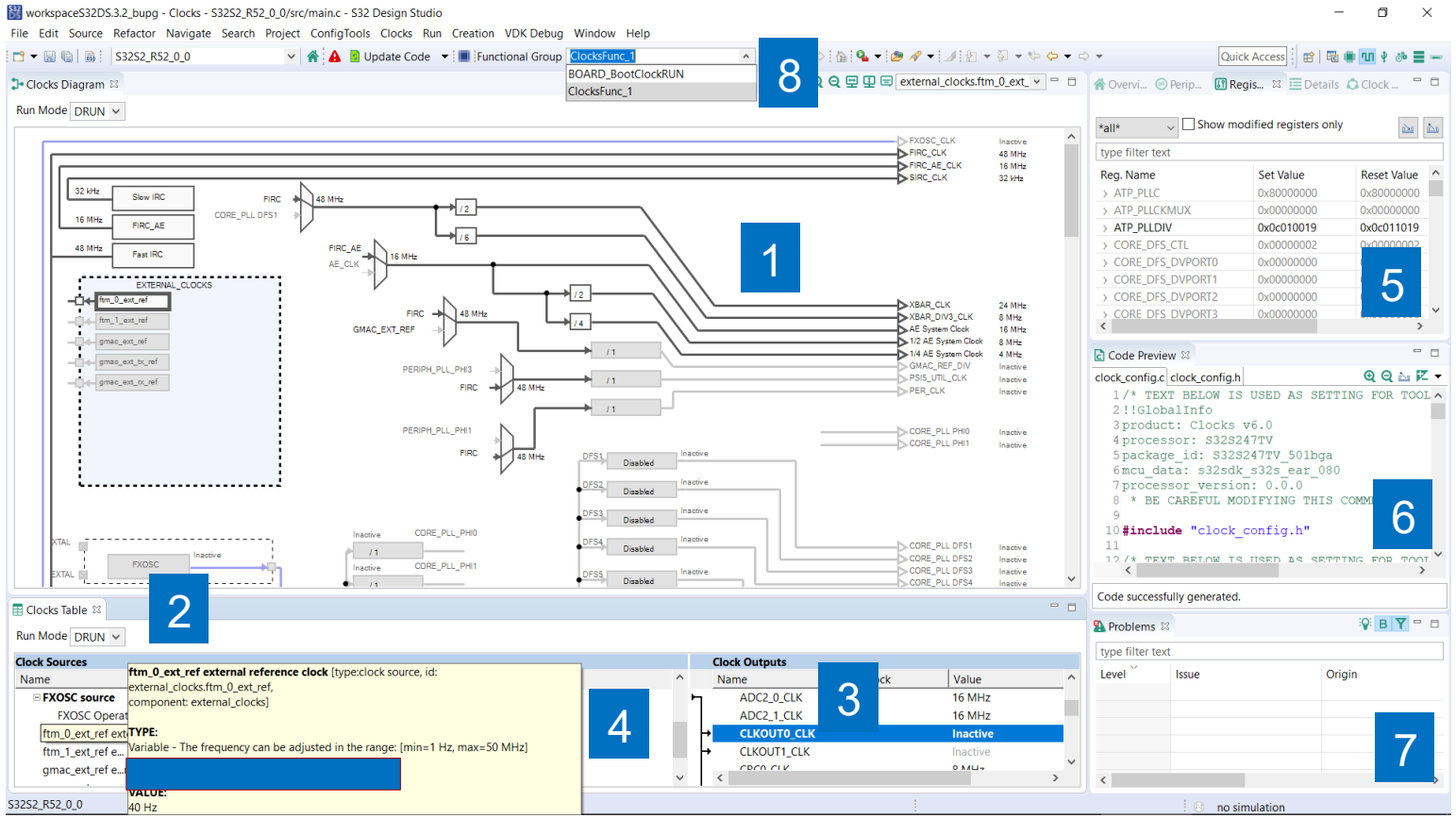
- Setting allowed properties for each pin (5)
- Validation of pins selection (5)
- Support & help for managing conflicts (5)
- Registers modified information (6)
- Configuration C - Code Generation (7)
- Multiple Configuration Support (8)
- Predefined board configurations
- Power Groups Highlight

Setting Pin Electrical Characteristics



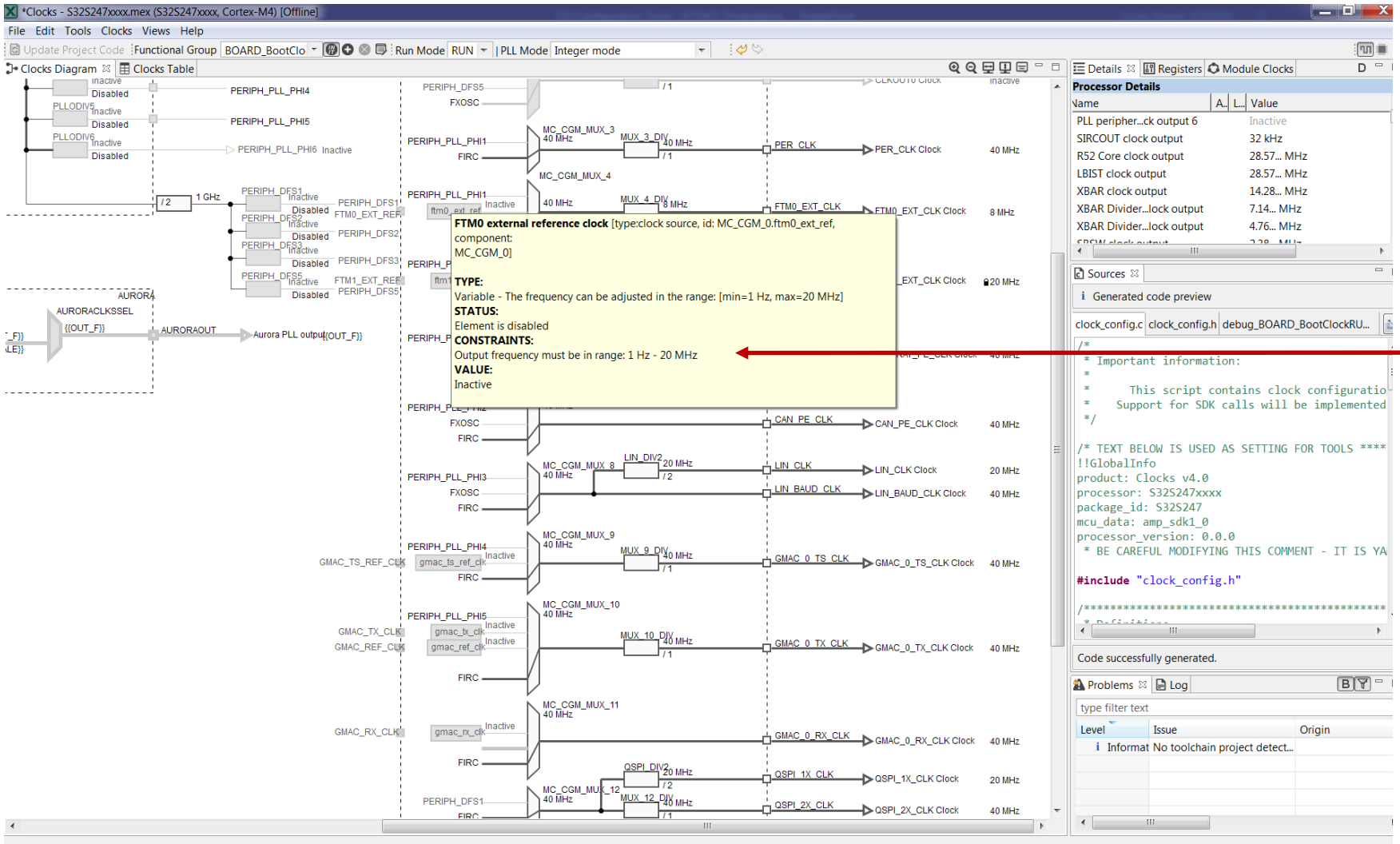
- Note default availability of information regarding the Power Group domain for a pin.
- All fields are configurable and settings will be reflected into the generated configuration code.

S32 Configuration Tools – Clock Tool Features Summary



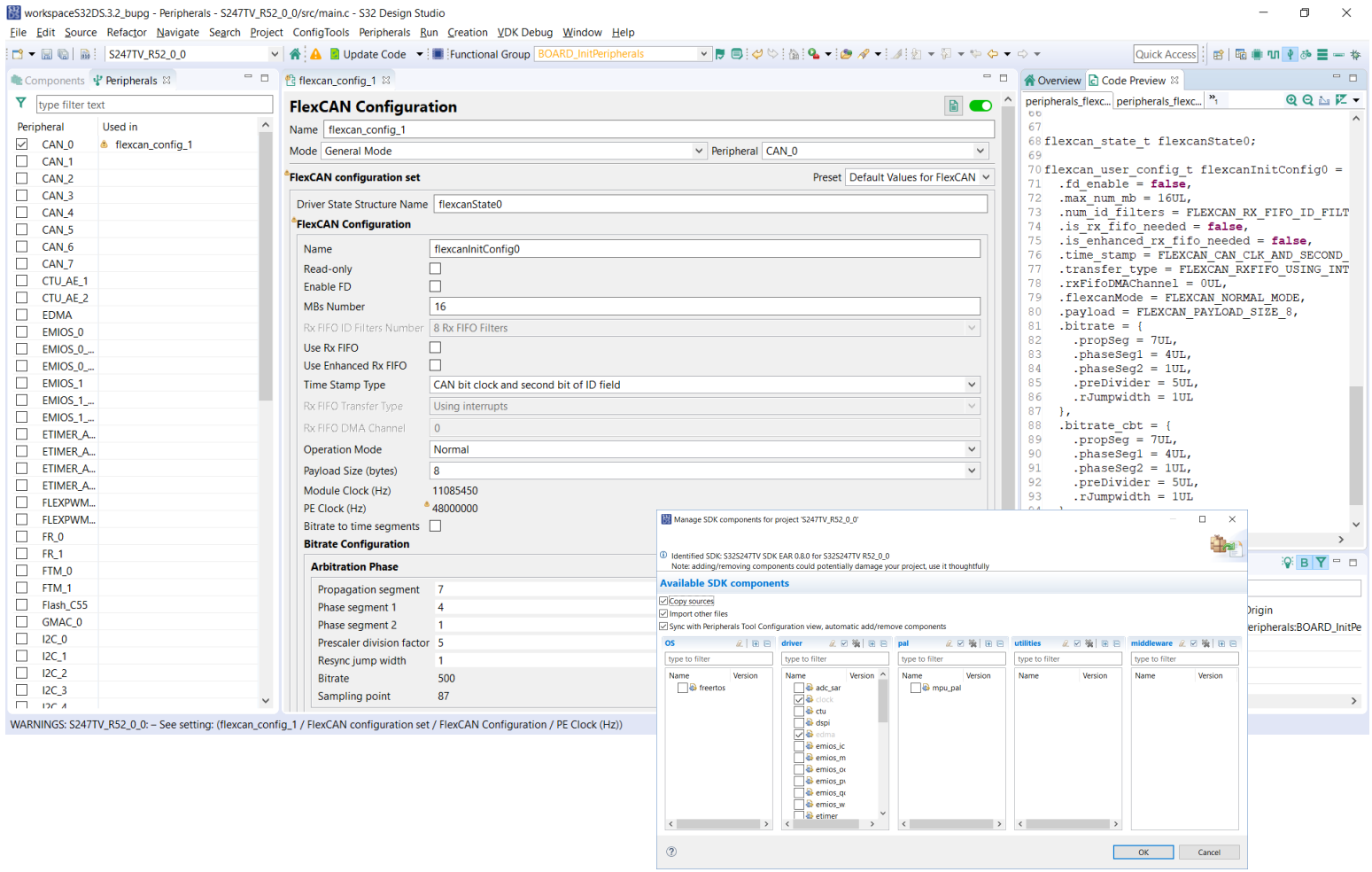
- Quick configuration of clock from:
  1. Clock Diagram View (1)
  2. Clock Summary Table
     - Sources (2)
     - Outputs (3)
- Setting values for clock tree elements
  - PLLs
  - DFS
  - Dividers
  - Selectors
- Validation of selected choices (7)
- Support & help for managing conflicts (4)
- Registers modified information (5)
- Configuration C - Code Generation (6)
- Multiple Configurations Support (8)
  - Various power modes for example

S32 Configuration Tools – Clock Tool Help & Support



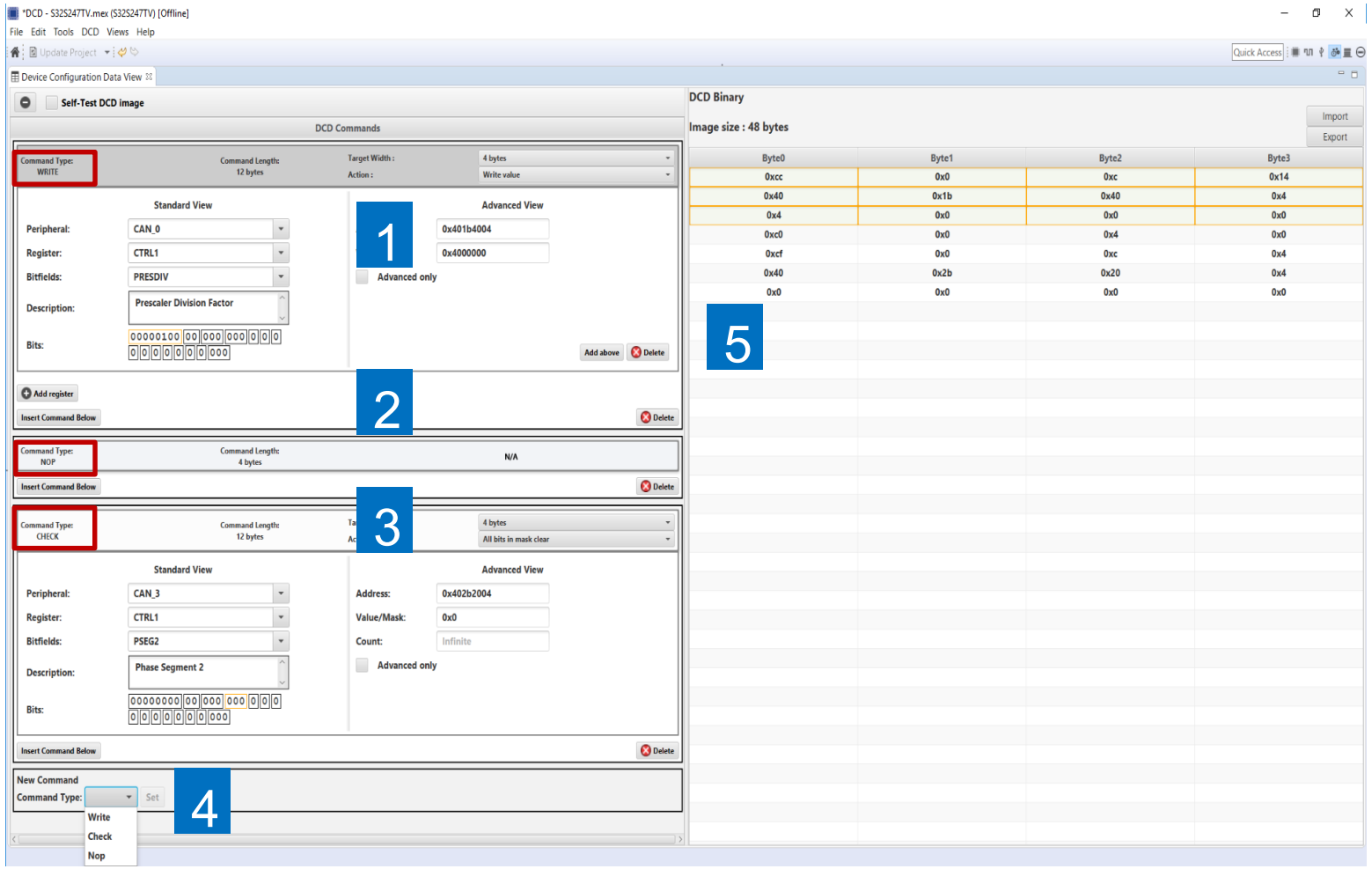
- Based on Silicon Datasheet and/or Silicon User Manual a suite of constrains are defined in the tool.
- Constrains are taken into account both to offer user's suggestion regarding ranges of values allowed for a certain configuration and for making the background checks once a selection is done.

S32 Configuration Tools – Peripheral Tool Features Summary



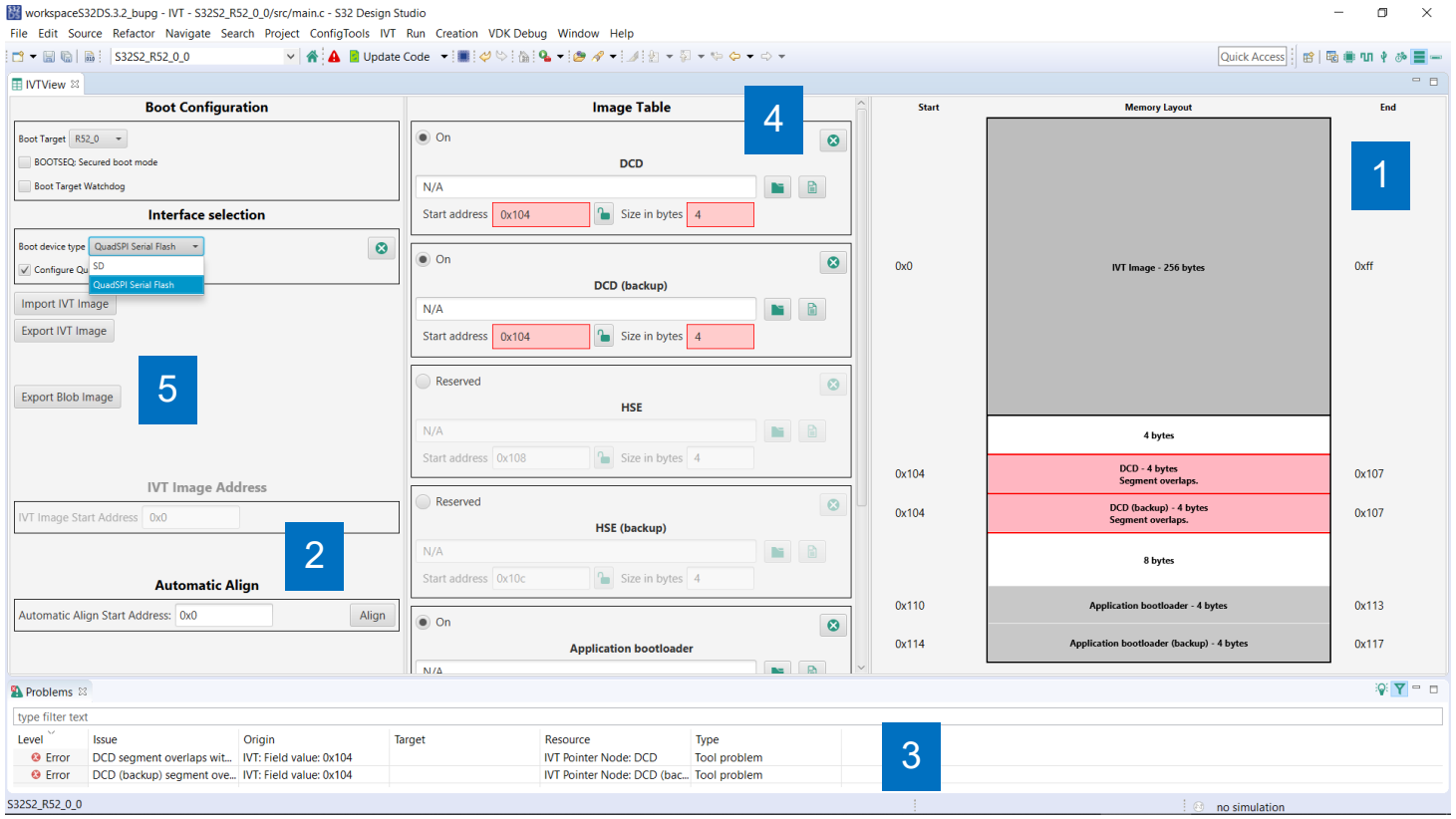
- Quick settings for all drivers
- Input and dependency verification engine
- Integration with S32 IDE Projects
- SDK Driver management
- Support for multiple configurations and driver versions.
- Integrated documentation for each driver
- C code generation
- Automatic mechanism to add/remove drivers

S32 Configuration Tools – DCD Tool Features Summary



- DCD Tool used mainly to define SoC IP configurations prior to HSE Firmware boot-up or Application Boot Code execution.
- DCD Tool Supports following commands:
  - 1.WRITE – writes a memory area
  - 3.CHECK – checks a memory area
  - 2.NOP – introduces a wait
- DCD Tool generates a binary (5) which incorporates all the settings done.
- Main scenario flow:
  - Import an existing DCD binary image
  - Update it with graphical view
  - Save it and export it in binary or C format.

S32 Configuration Tools – IVT Tool Features Summary



- Memory layout overview and segment overlapping detection. (1)
- Automatic memory segments alignment. Using a starting alignment address the tool will generate start address for all images. (2)
- Export in binary and C format.
- Validation of selected choices. (3)
- Table with the list of images. Size of the image can be automatically determine if the user provides full path of the file. (4)
- Generate Boot Blob image – complete image with all IVT nodes. (5)

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