S32 DESIGN STUDIO INTRODUCTION

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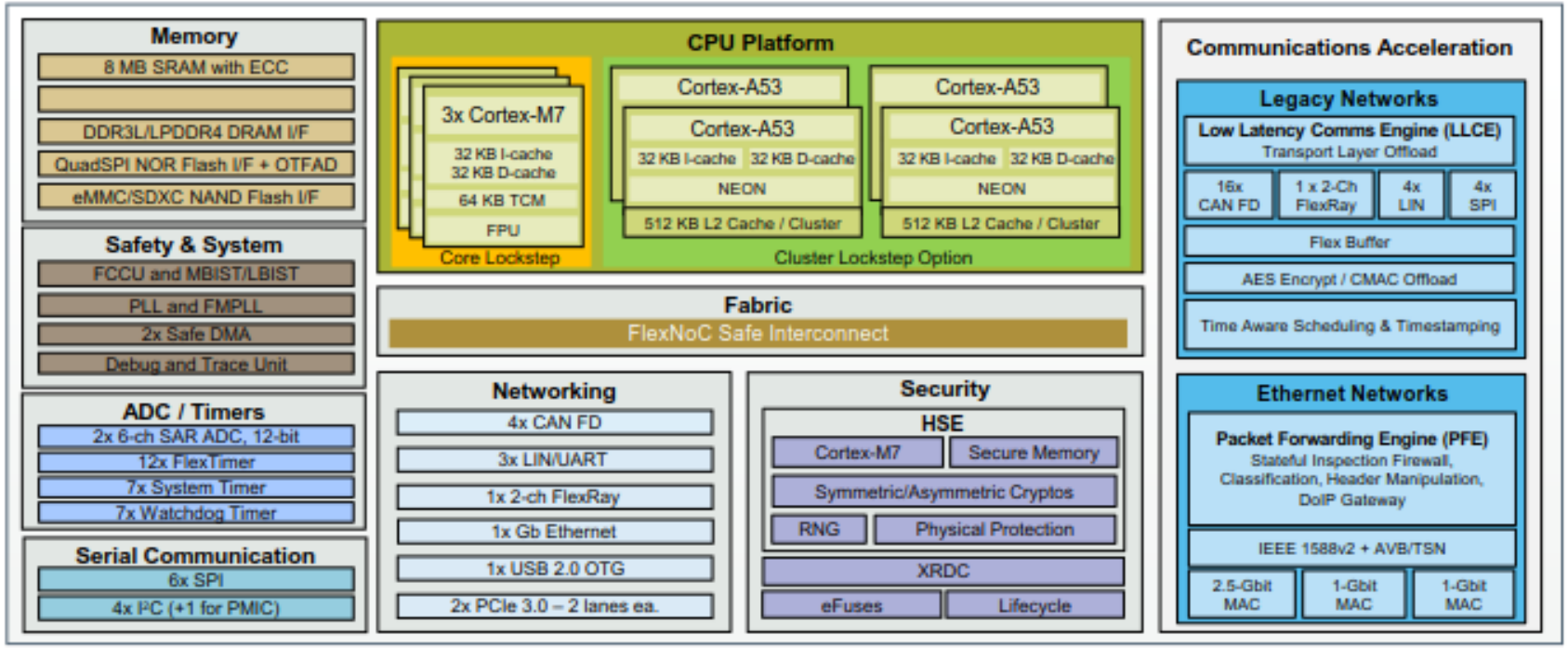
JAN. 2022

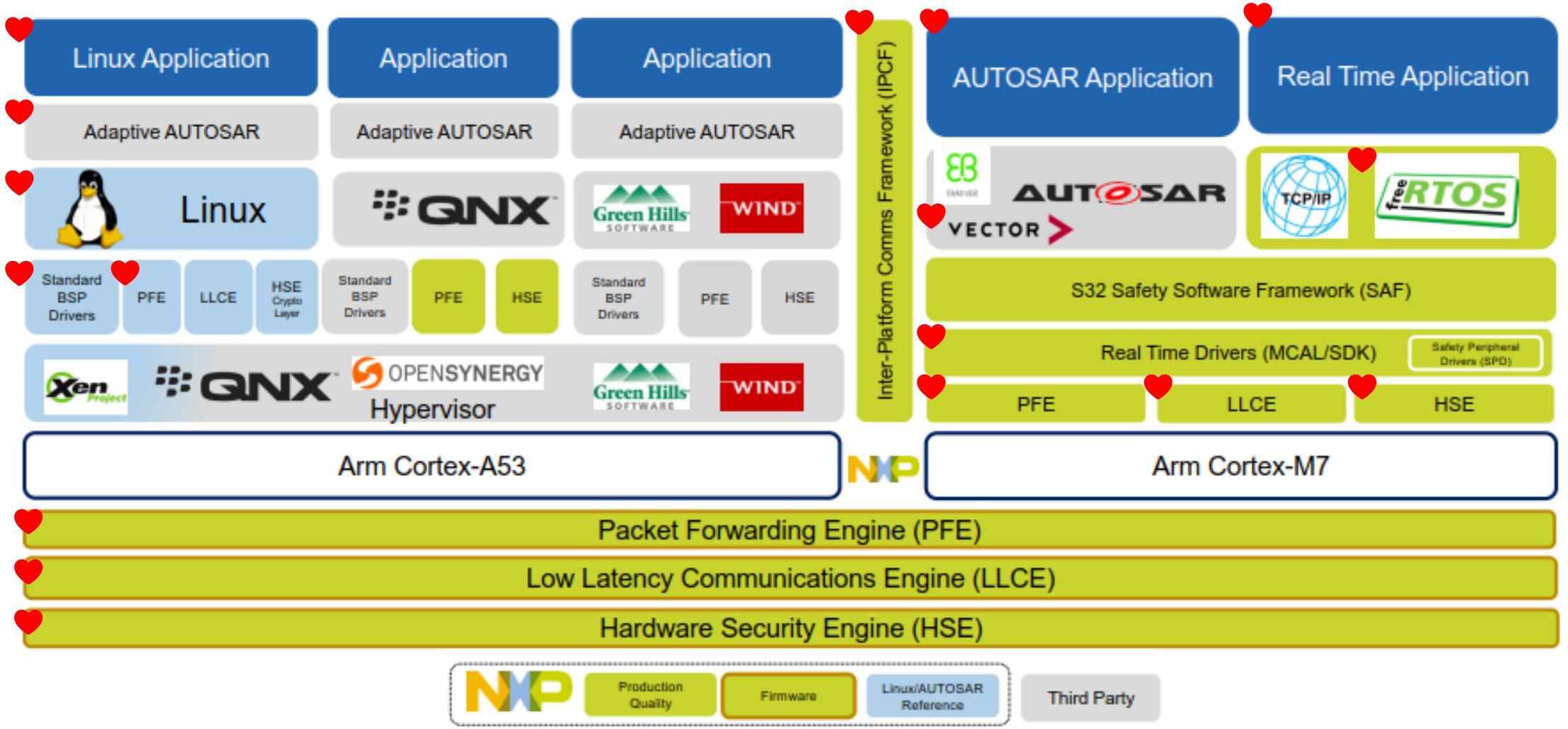
S32G Overview



	S32G234M	S32G233A	S32G254A	S32G274A
CPU	N/A	Cluster0: Signal Cortex-A53		Cluster0: Dual Cortex-A53
	N/A	Cluster1: Signal Cortex-A53		Cluster1: Dual Cortex-A53
CPU (Real Time)	3x Arm Cortex-M7 (lockstep)	1x Arm Cortex-M7 (lockstep)	3x Arm Cortex-M7 (lockstep)	
Internal RAM	8MB	6MB	8MB	

Software

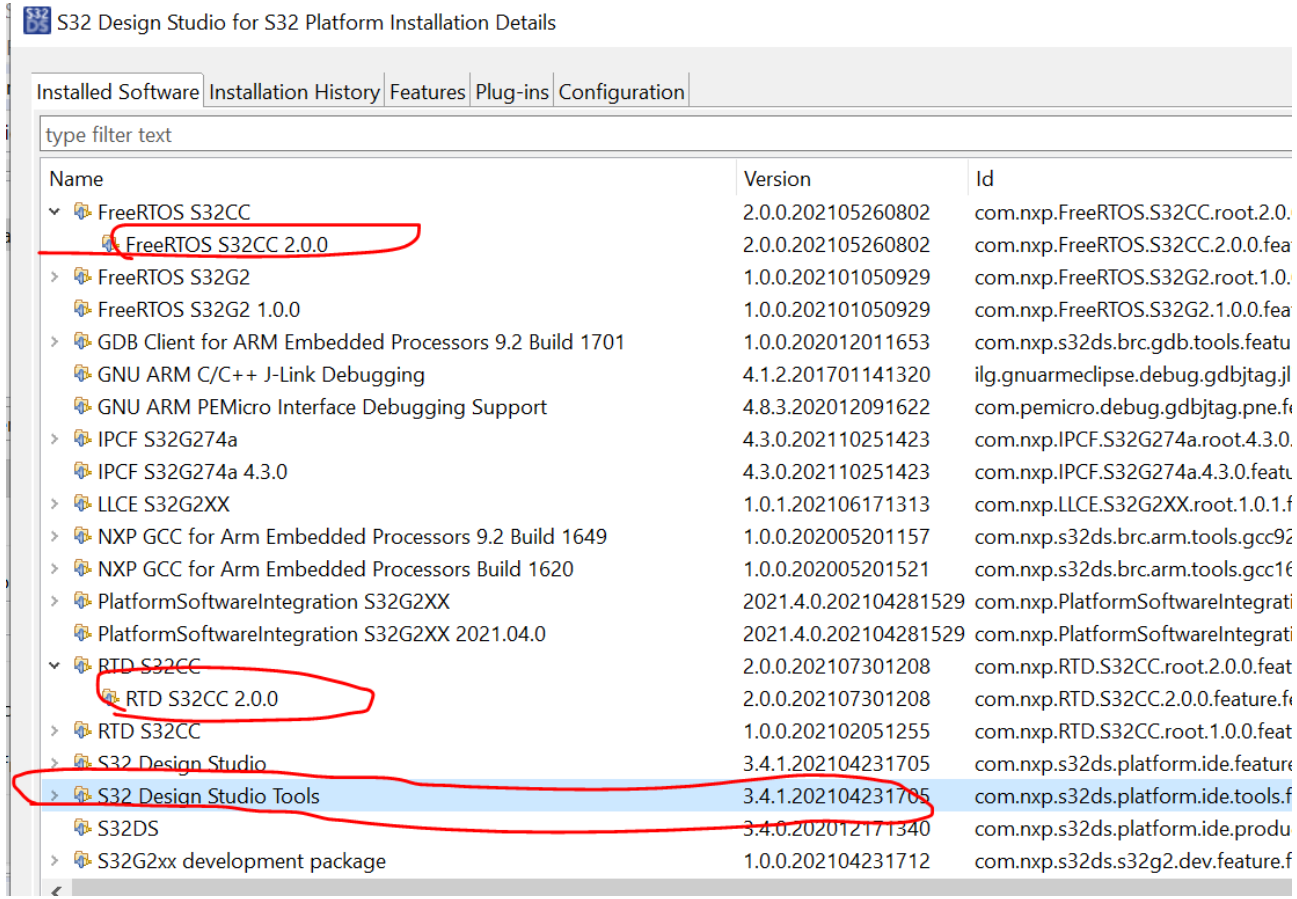
Source: pr469773 - S32G Software Offering v7.3 (7.3).pdf

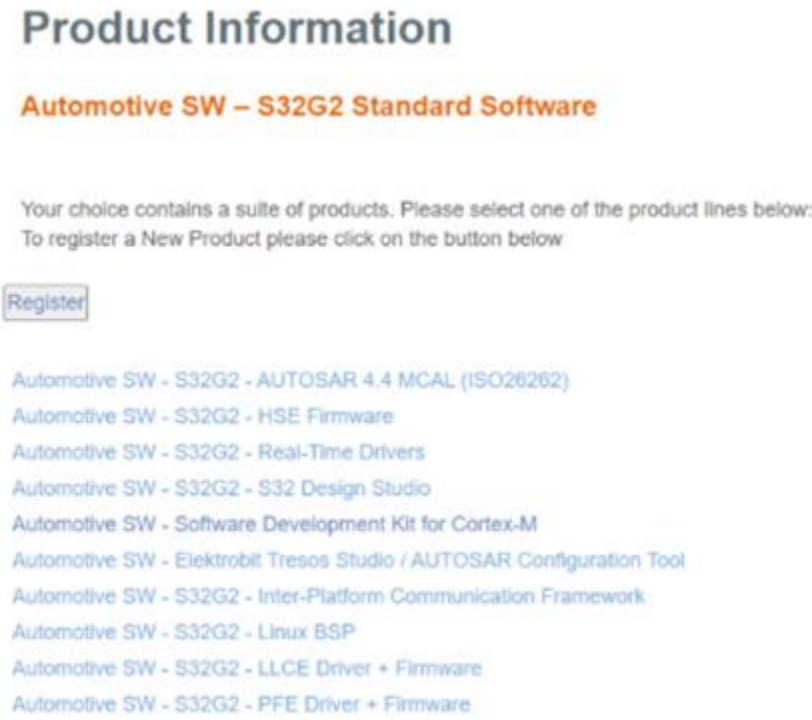


♥ Most GC customers‘ use case

Development Tool --- S32 Design Studio 3.4

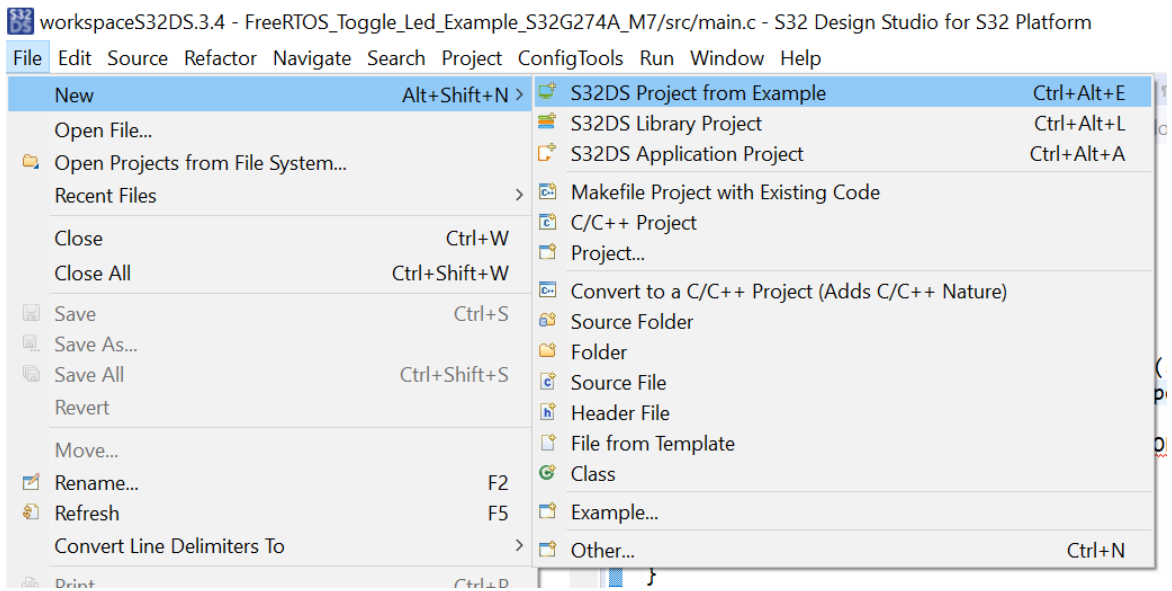
- Get installation package and license from NXP website.
- Packages list in S32DS as following

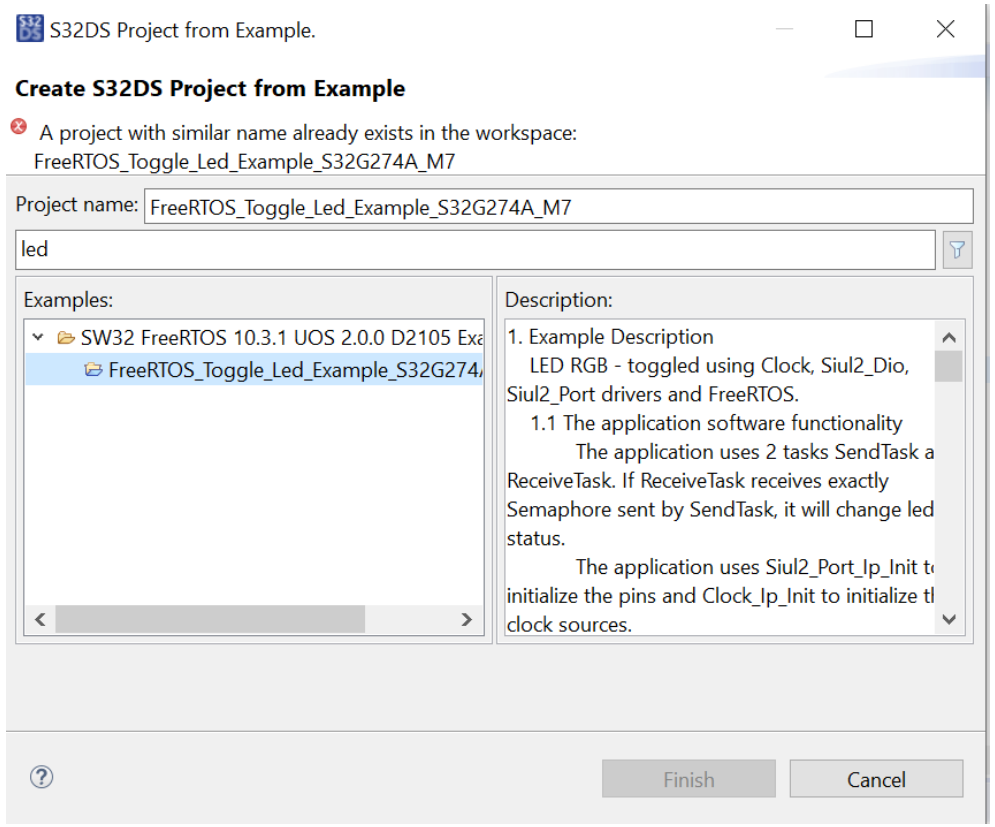




Project in S32DS

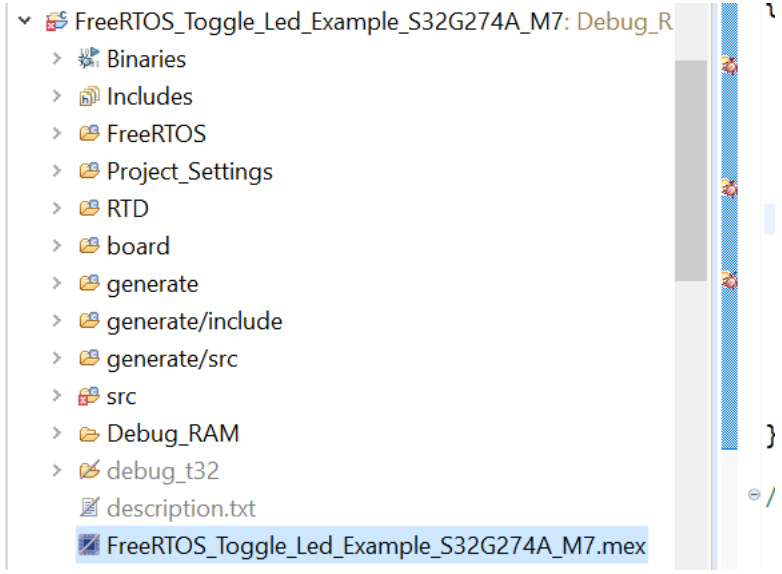
- Create a project from examples
- Such as FreeRTOS_Toggle_Led_Example_S32G274A_M7





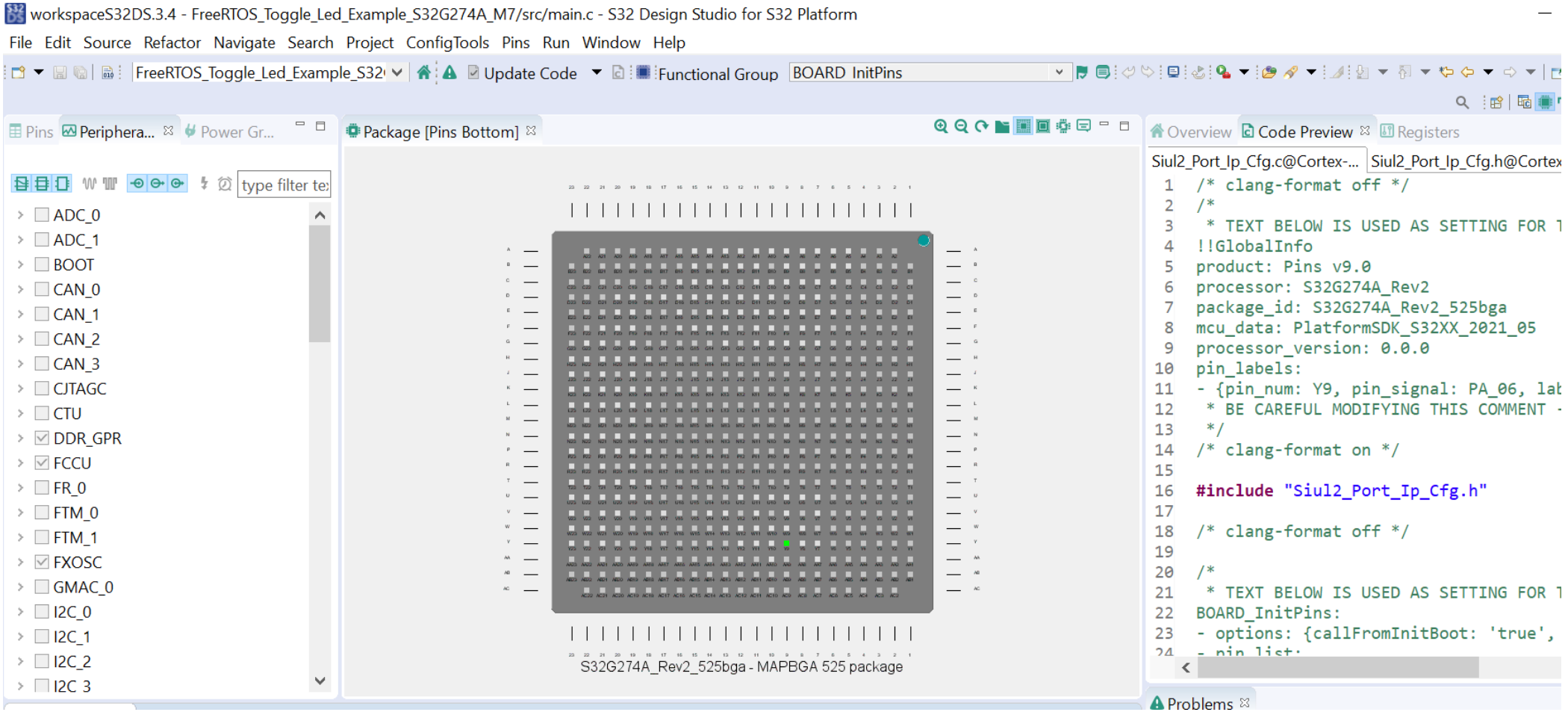
Project in S32DS

- Double click mex file to do configurations



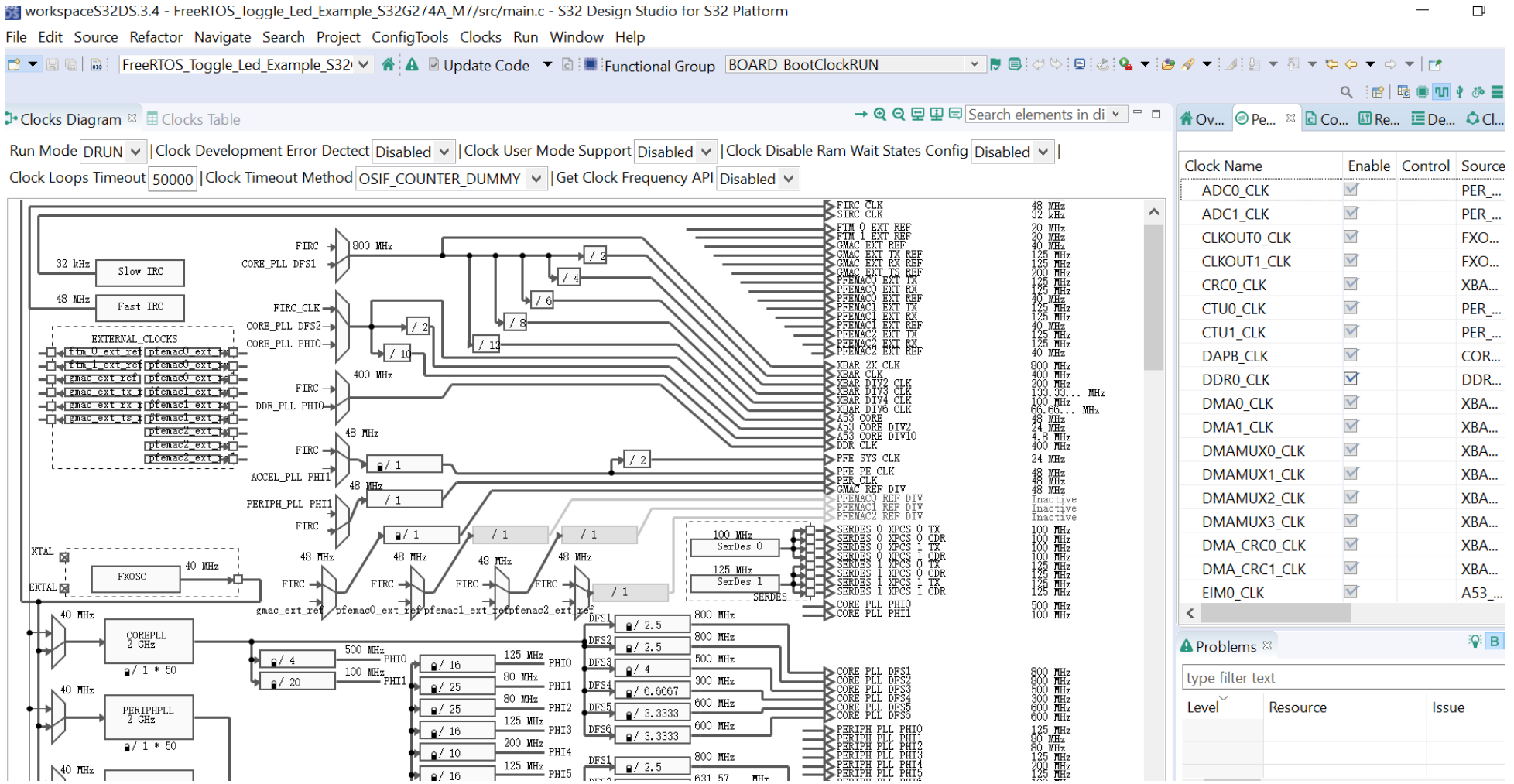
Project in S32DS

- Pins configuration for PINMUX based on IOMUX excel in RM attachments.



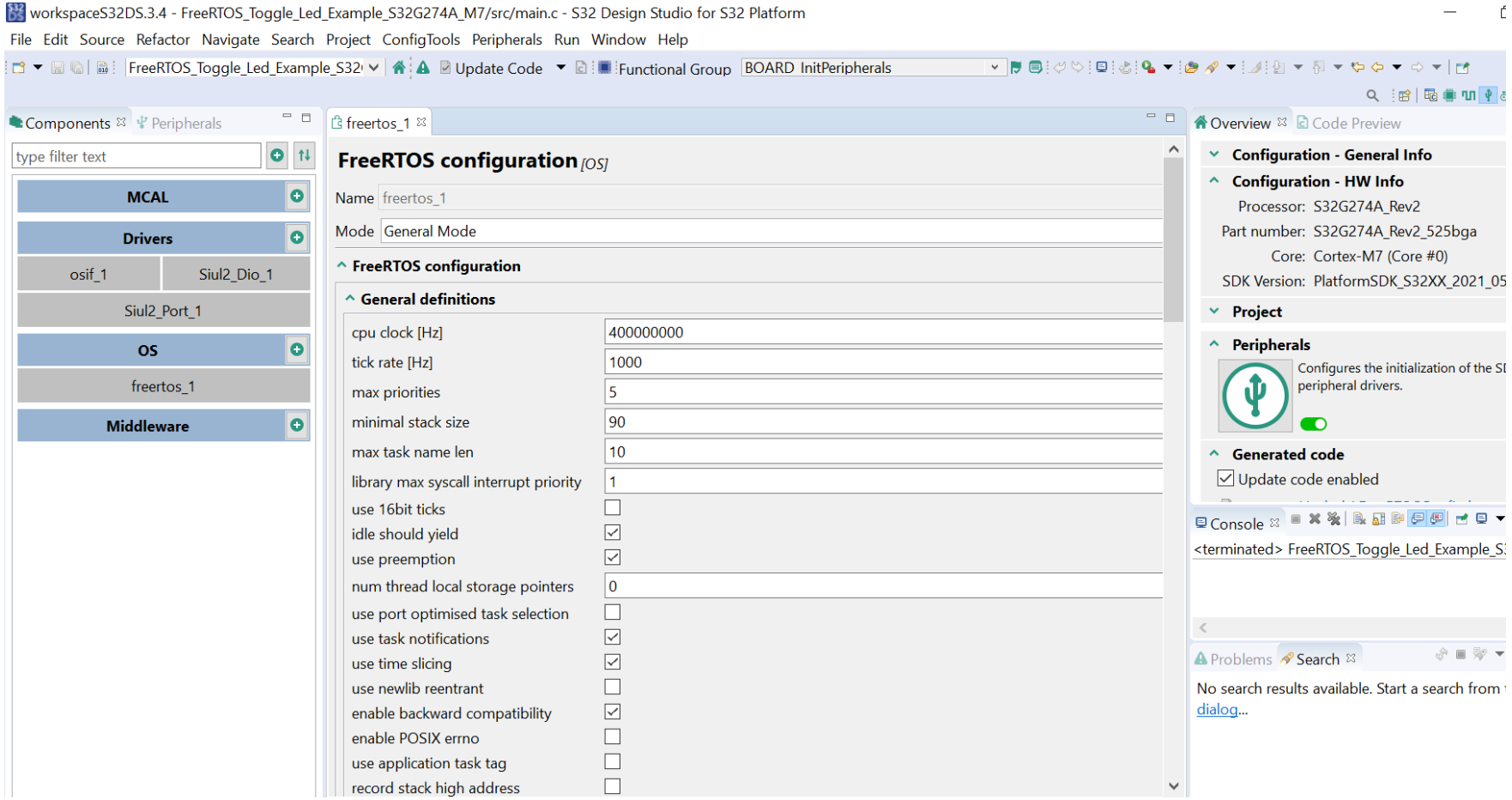
Project in S32DS

- Clocks configuration (Be careful of conflicts for different cores and apps)



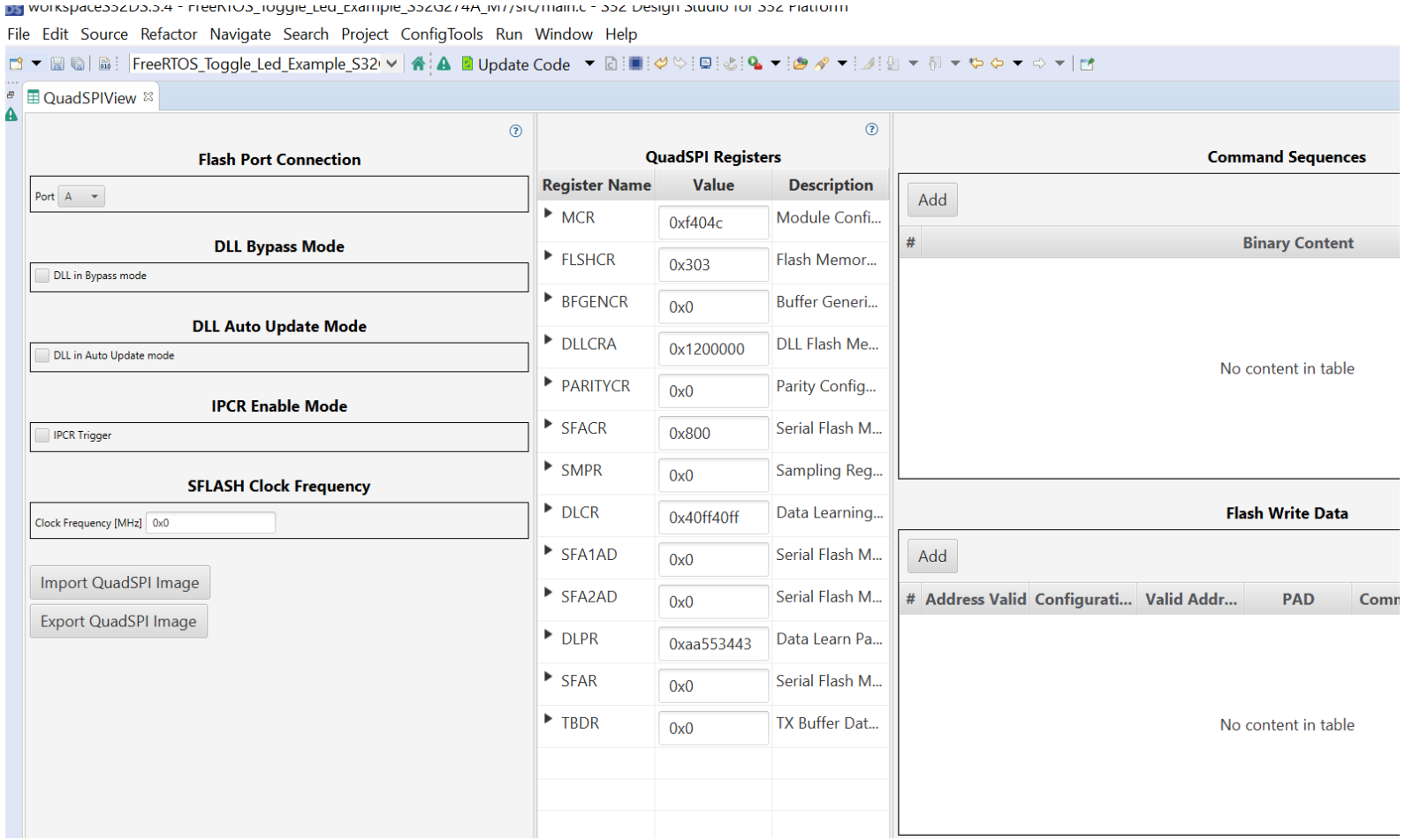
Project in S32DS

- Components configuration (Related guides in NXP\S32DS.3.4\S32DS\software\PlatformSDK_S32XX_xxxx)



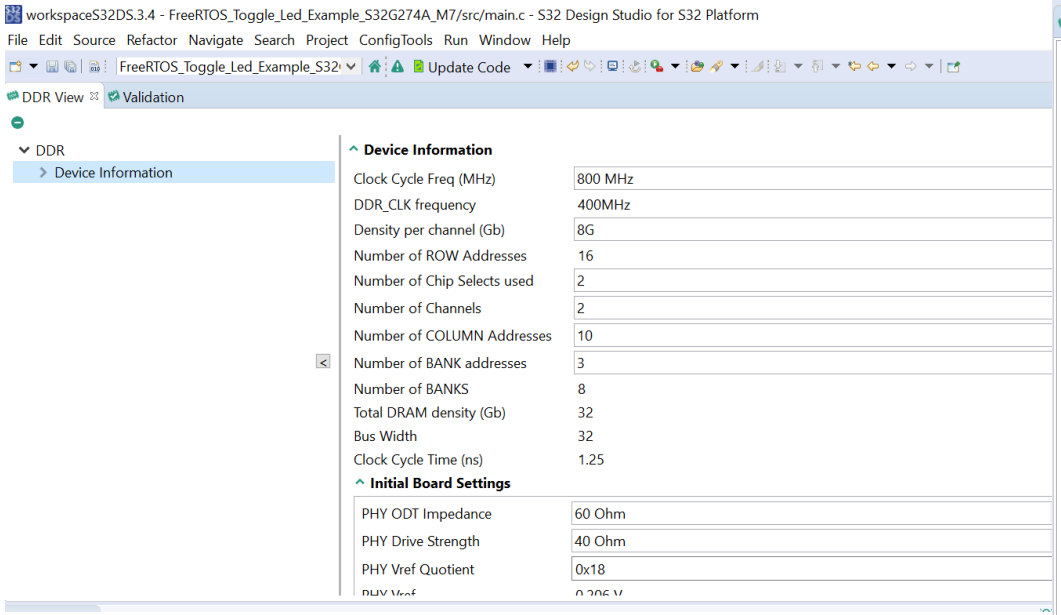
Project in S32DS

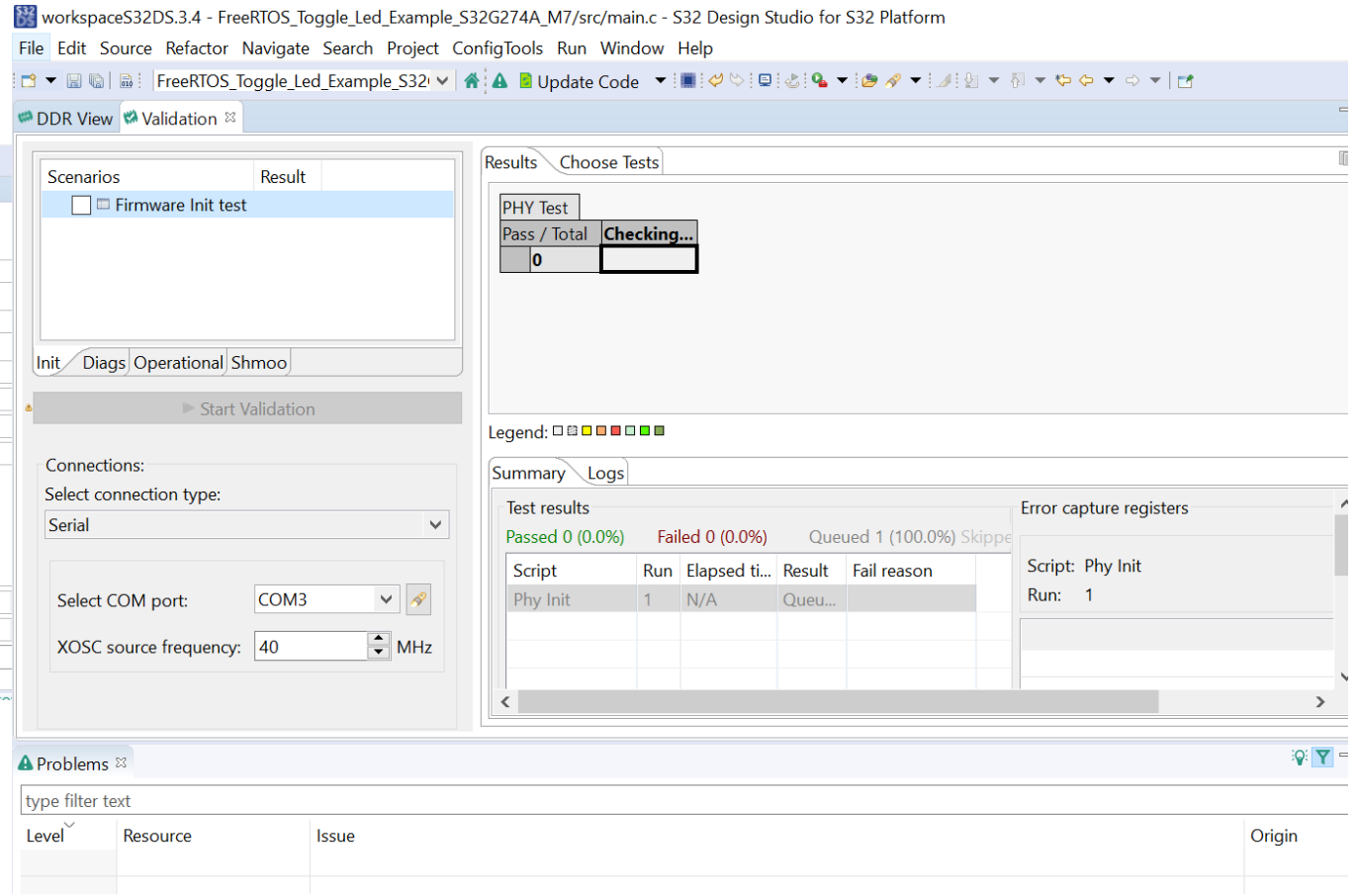
- QSPI configuration for boot progress



Project in S32DS

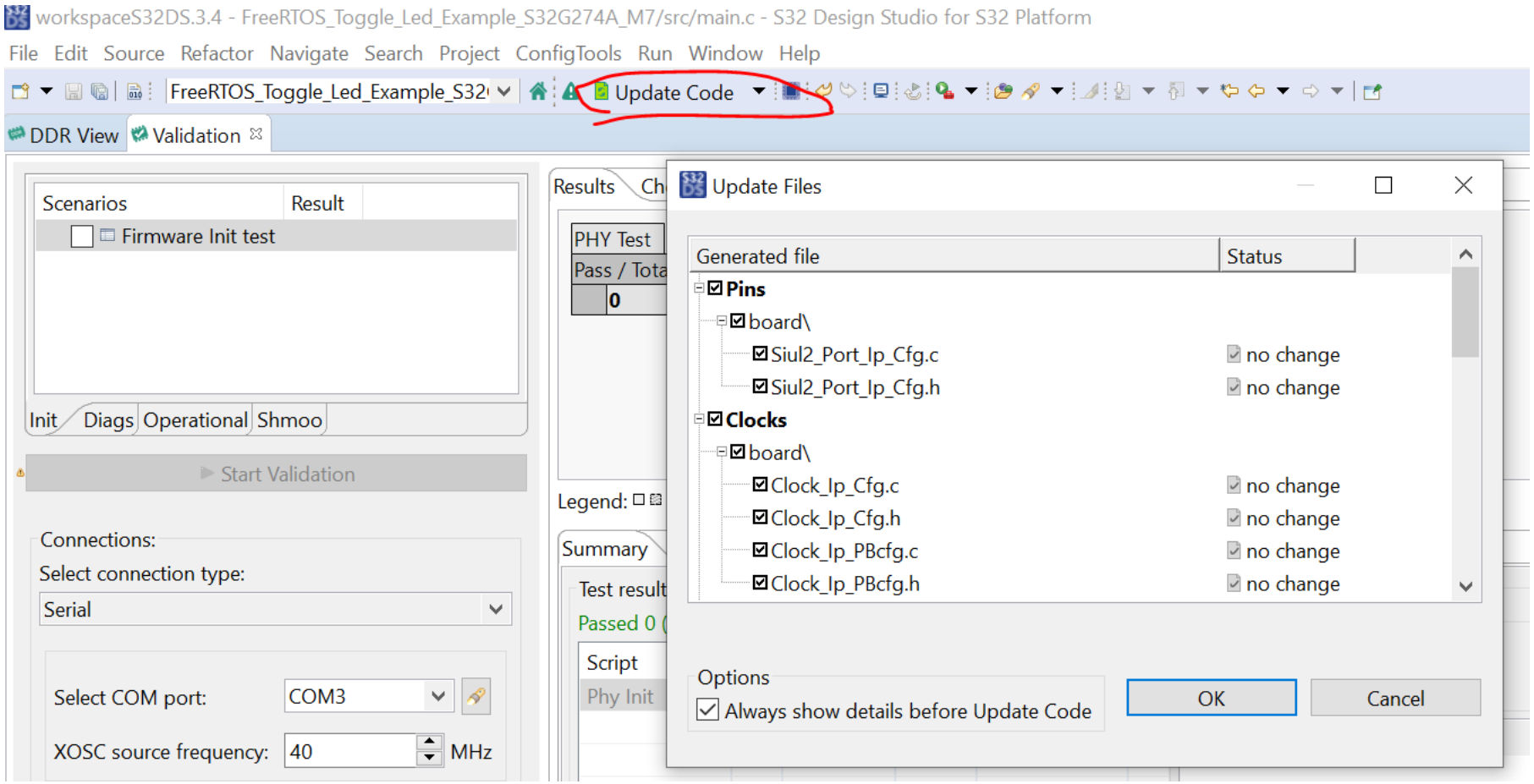
- DDR configuration and validation
- DDR code is from validation of Init





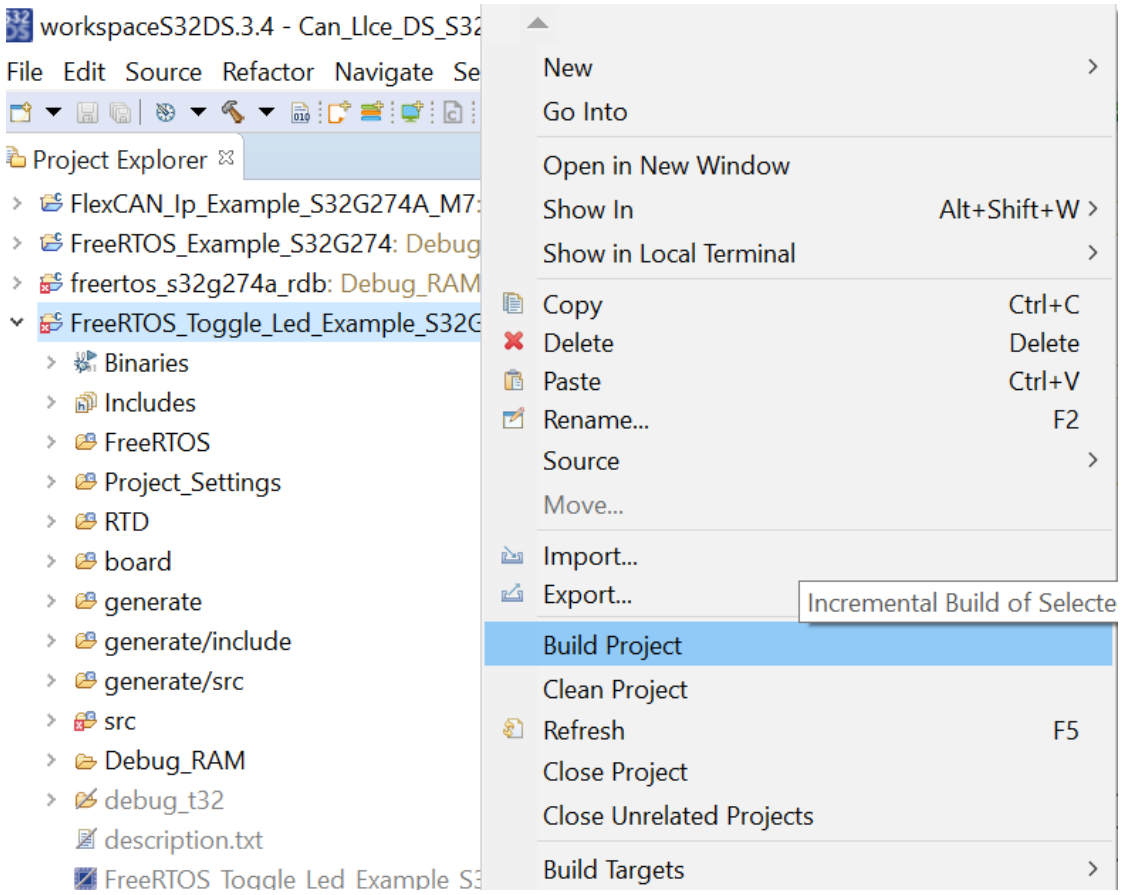
Project in S32DS

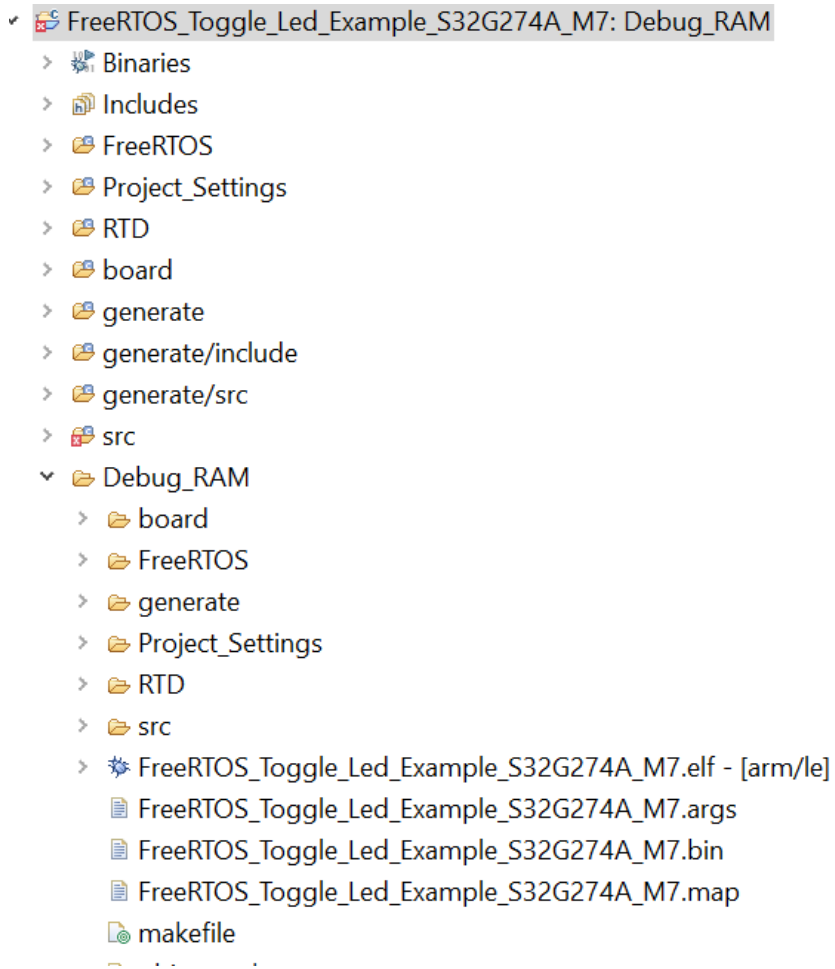
- Update code based on all configurations



Project in S32DS

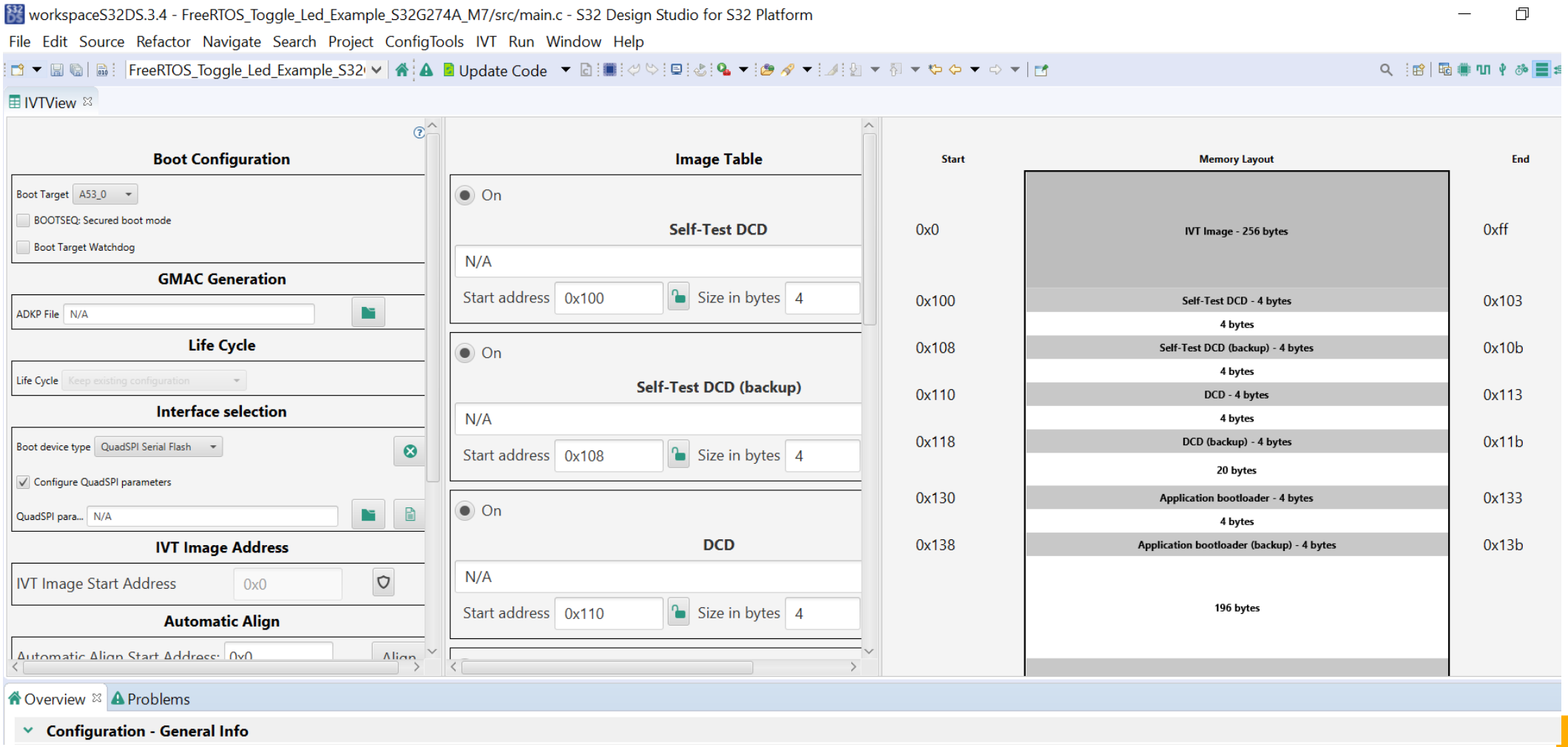
- Build project and generate elf/binary image





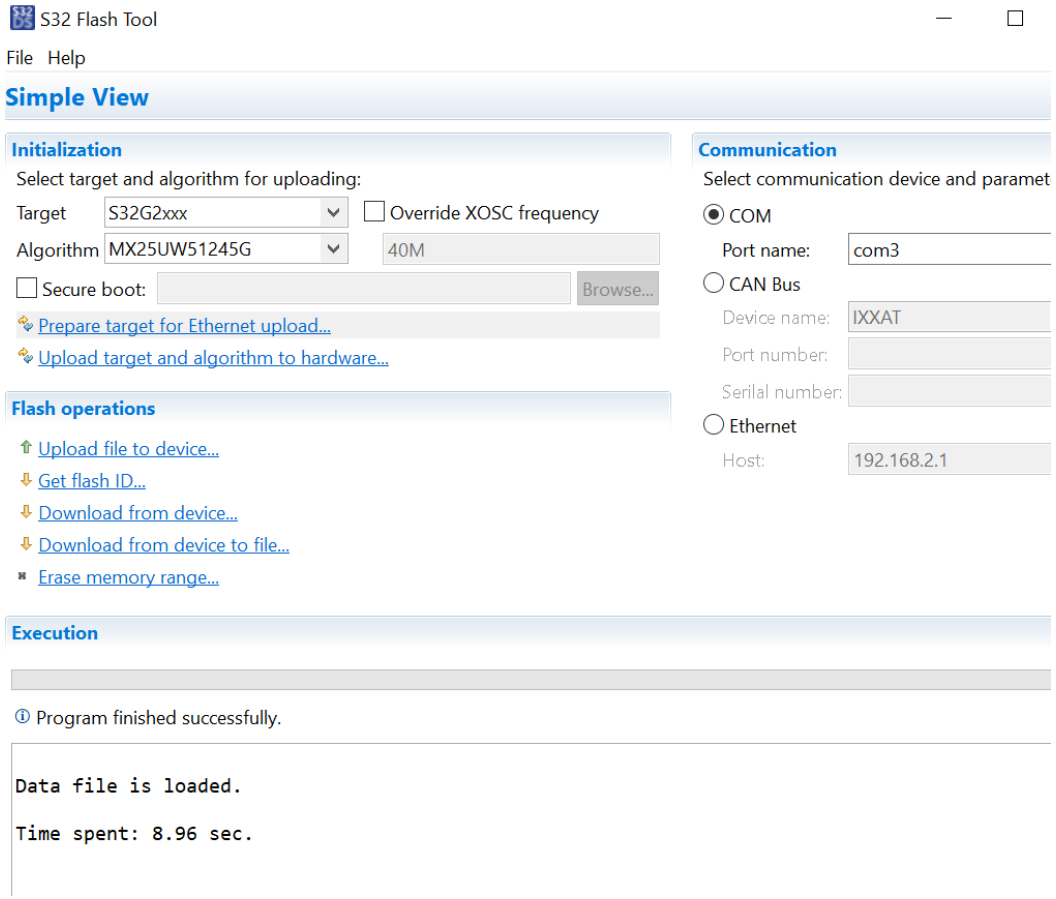
Project in S32DS

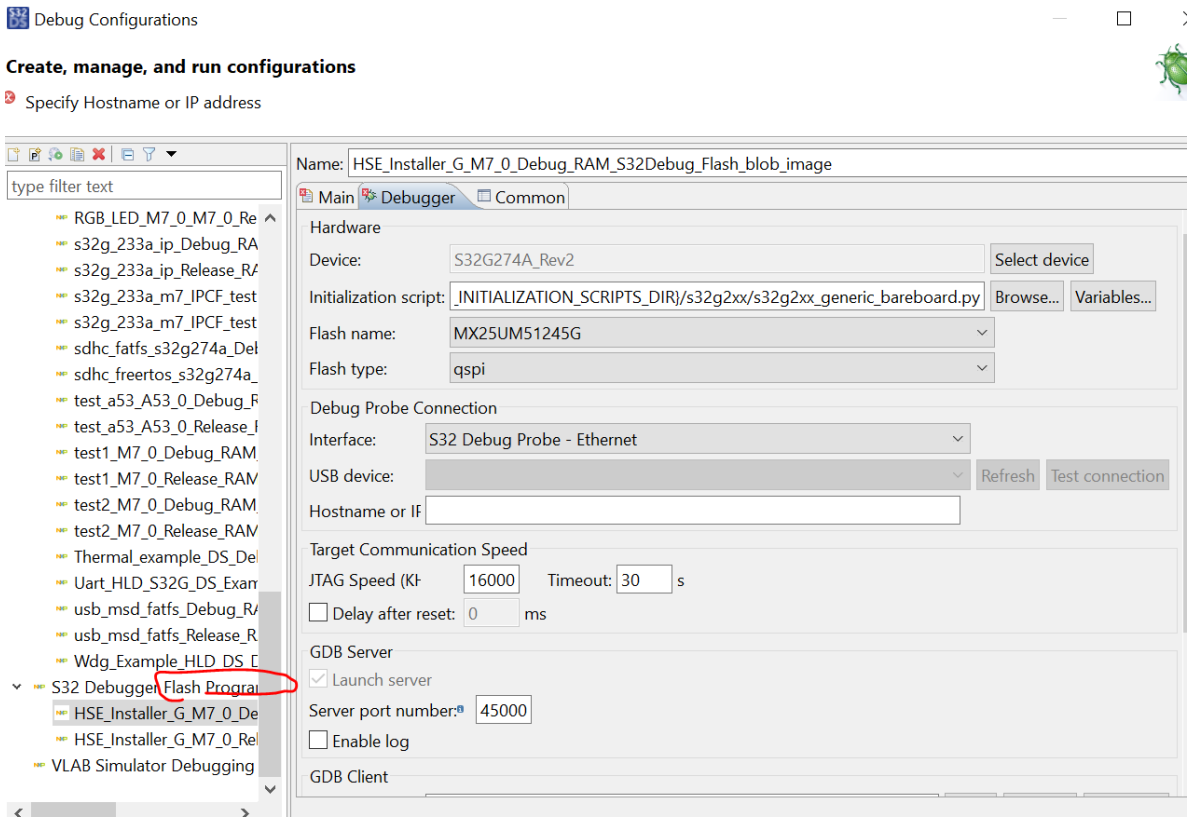
- IVT configuration for boot



Project in S32DS

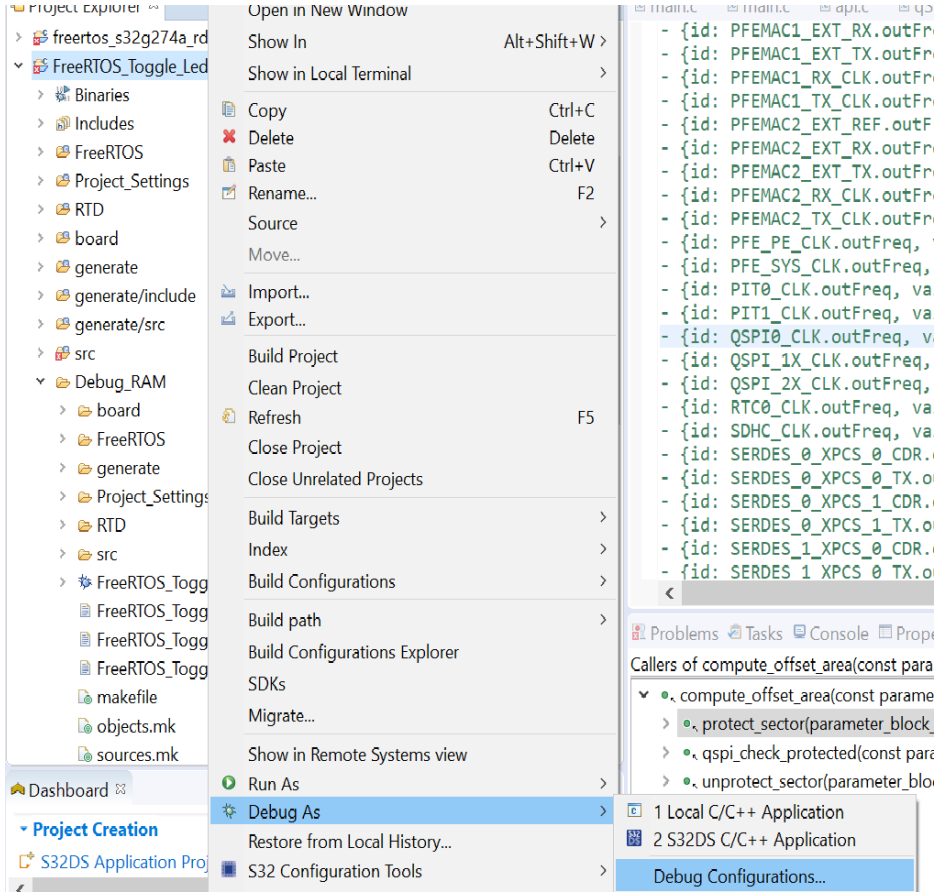
- Program image to qspi flash or SD/EMMC by COM port or Debugger tool
- Ethernet port cannot be supported anymore

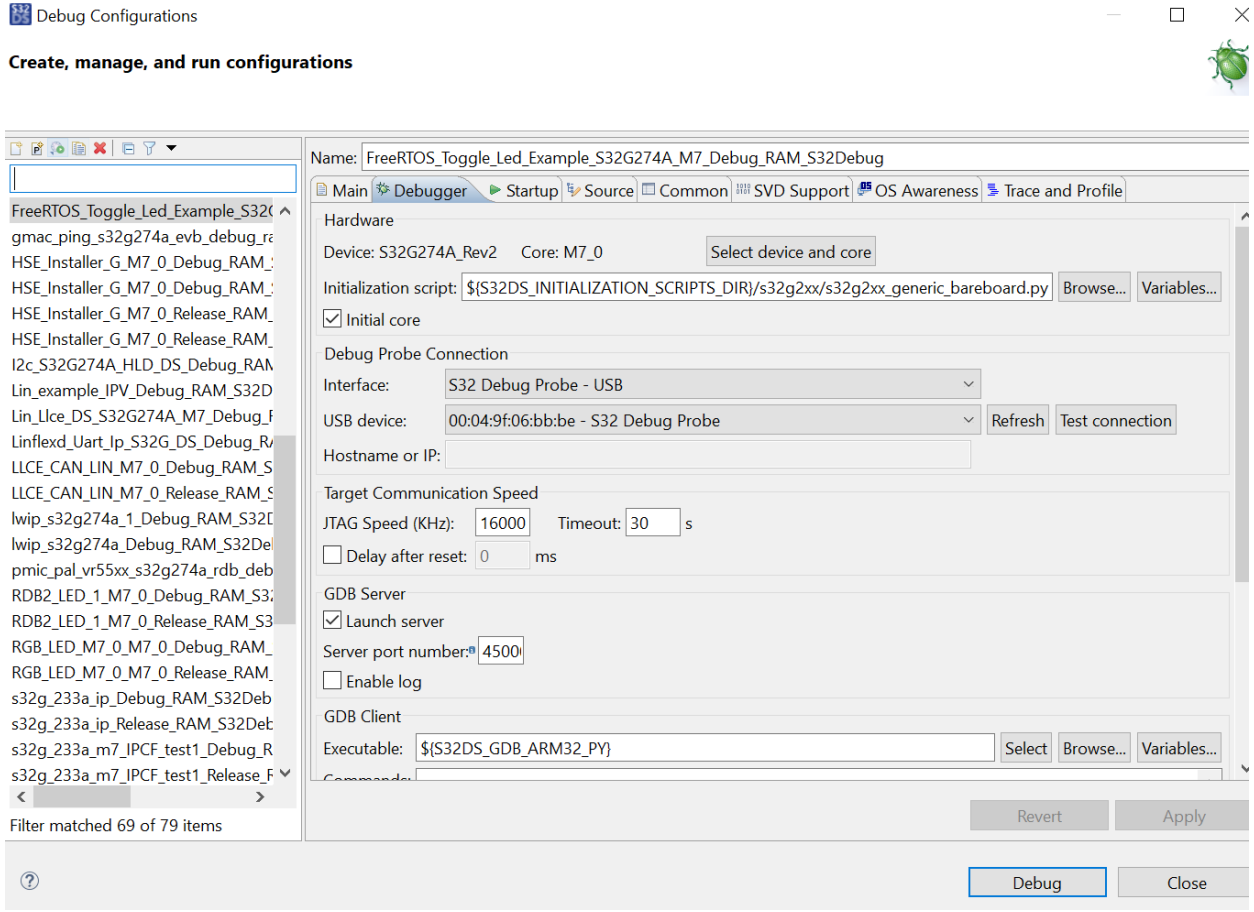


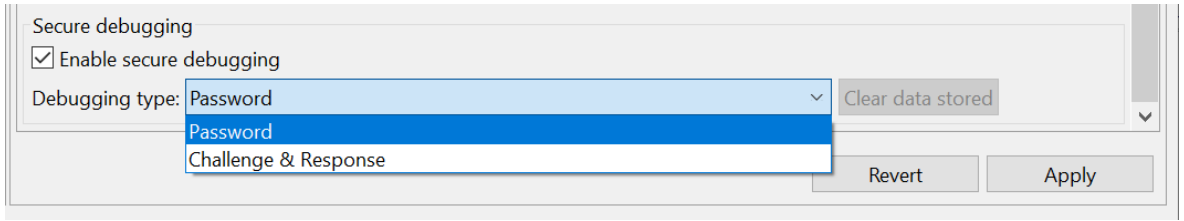


Debug in S32DS

- Debug configurations

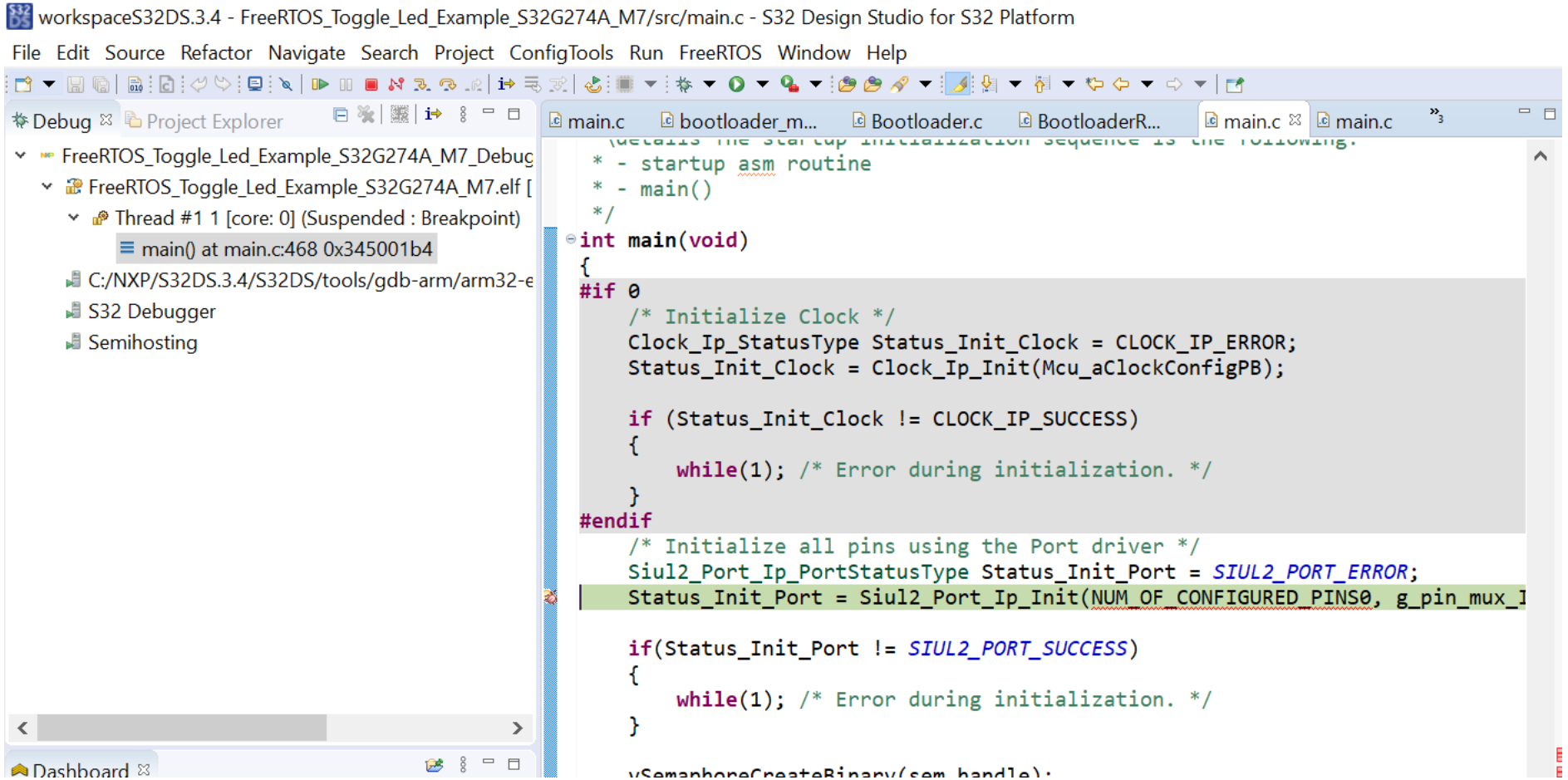






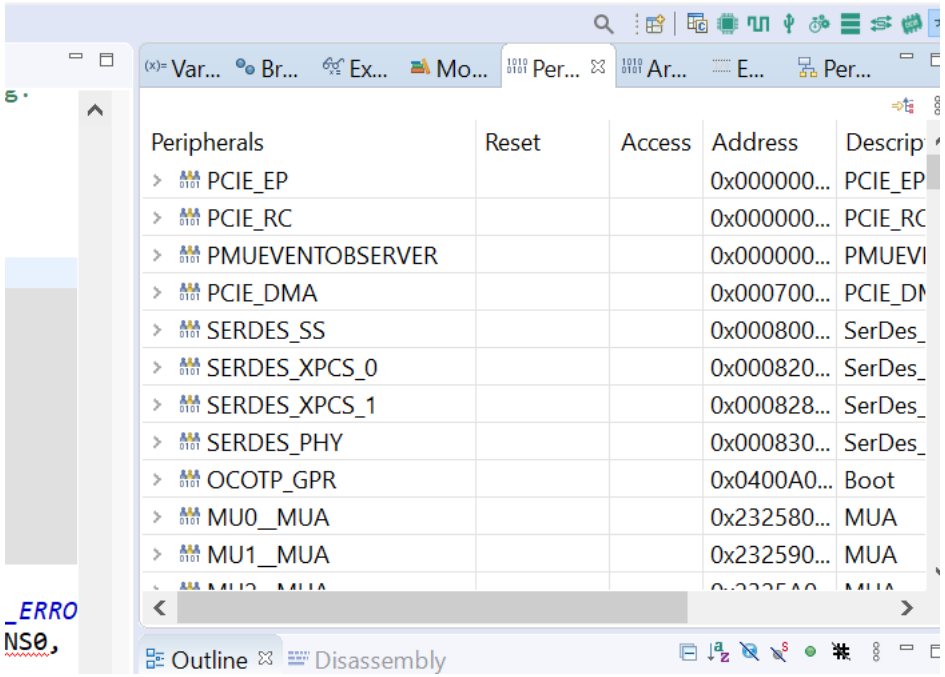
Debug in S32DS

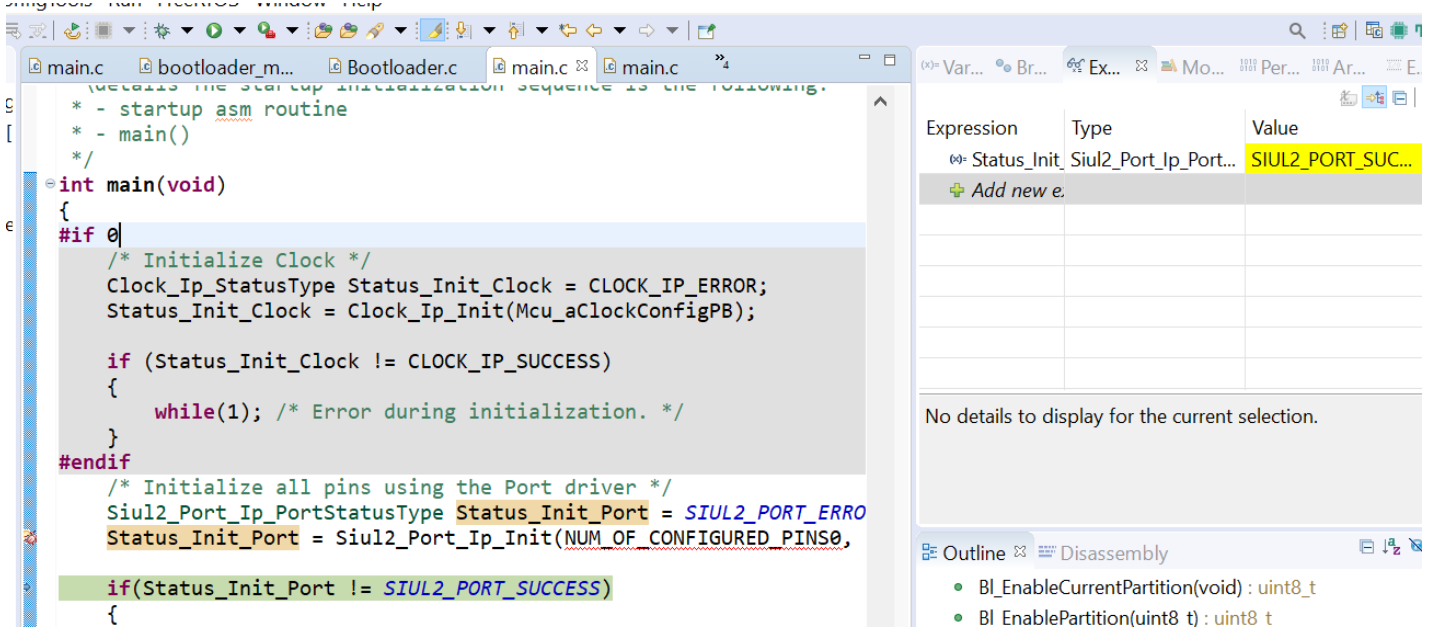
- Launch Debug session



Debug in S32DS

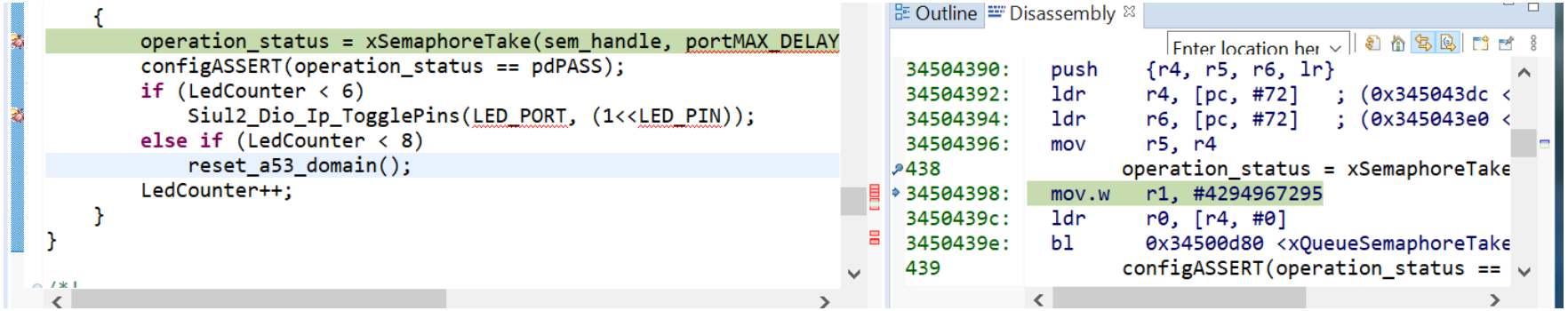
- Registers and Expressions

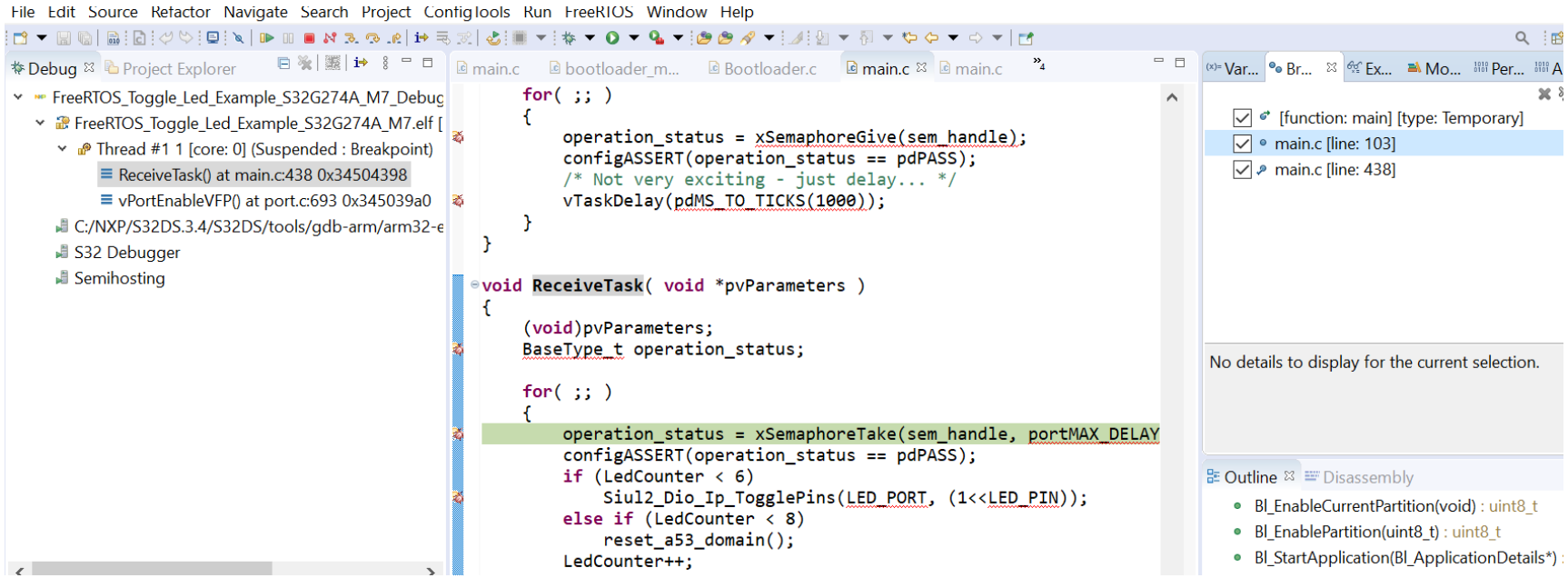




Debug in S32DS

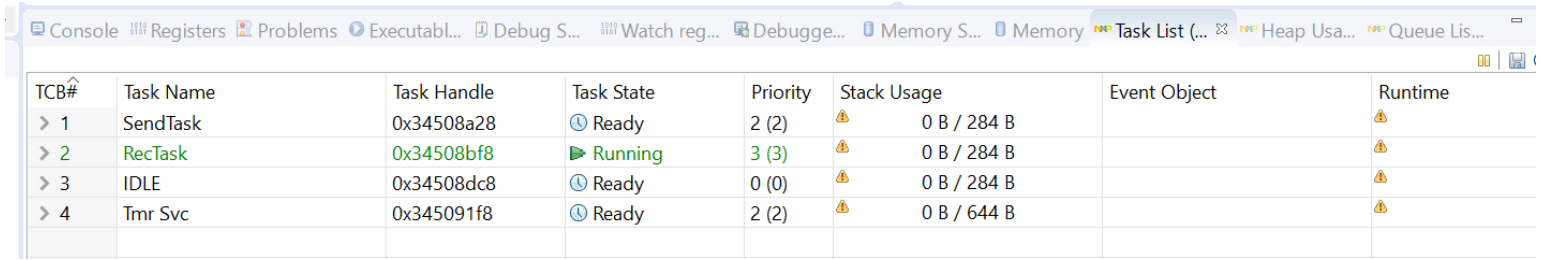
- Breakpoints and Disassembly

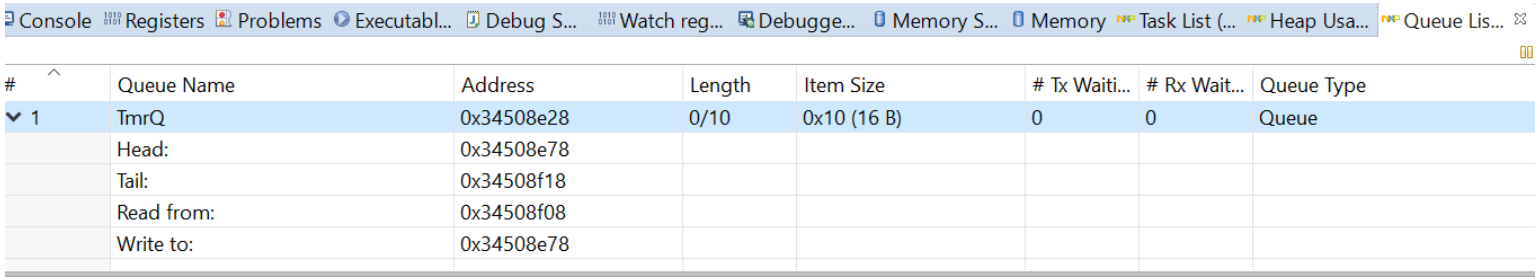


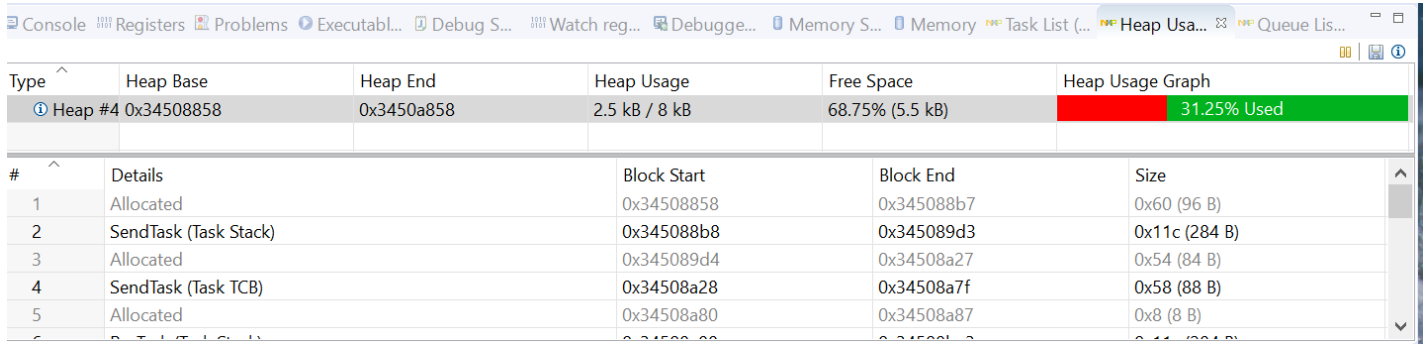


Debug in S32DS

- OS (Free RTOS) awareness







Other Resources

- DS basic guide in C:\NXP\S32DS.3.4\S32DS\help\pdf
- DS howto guide in C:\NXP\S32DS.3.4\S32DS\help\resources\howto
- DS video guide in C:\NXP\S32DS.3.4\S32DS\help\resources\video

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