AURIX™ DRIVECORE AUTOSAR [Infineon, Elektrobit, TASKING]

Getting Started Guide

About this document

Scope and purpose

DRIVECORE is a scalable software bundle portfolio that streamlines and accelerates software development. It simplifies processes, reduces migration efforts, and minimizes commercial complexities. DRIVECORE offers a seamless user experience throughout the R&D journey for Infineon's automotive microcontrollers: AURIX™, TRAVEO™, and PSOC™.

This document is created in a collaboration between Infineon and the partners of the specific bundle, to support you in the installation and set-up phase of the software, show code examples, and provide answers to common issues in this phase.

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1 Introduction

1.1 Bundle overview

AURIX™ DRIVECORE AUTOSAR [Infineon, Elektrobit, TASKING] accelerates and simplifies the development of ECU software projects (AUTOSAR-based) and targets development of domain and zonal ECUs. With focus on performance and optimization, it combines high-performance hardware with pre-integrated software to deliver a fast, efficient, and scalable development experience.

This bundle integrates Infineon's MCAL drivers, EB zoneo drivers for hardware acceleration, and EB tresos AutoCore, a mature Classic AUTOSAR Basic Software (BSW) stack. A key highlight of this bundle is the AUTOSAR gateway demo application, which shows optimized zonal ECU communication by leveraging hardware acceleration and software integration.

Combination of Infineon's AURIX™ microcontroller, Elektrobit's software and TASKING's certified SmartCode C/C++ Compiler Toolchain for TriCore™ and PPU provides a powerful solution which includes all components necessary for fast development and efficient ECU performance.

Figure 1 Bundle overview

1.2 Software components

The purpose of this bundle is to show how the special Hardware accelerators for communication introduced in 32-bit TriCore™ AURIX™ TC4x microcontrollers can be configured within and work with Elektrobit's basic Software and configuration tools for Classic AUTOSAR environment.

This bundle contains following software components:

Table 1 Software components

Tool	Version	Description
EB tresos 9 AutoCore OS	6.1.275	EB tresos 9 AutoCore OS is an AUTOSAR-compliant embedded multi-core real-time operating system. It is compatible with the OSEK/VDX operating system standard and supports all OSEK/VDX conformance classes. EB tresos AutoCore OS 6.1 is based on AUTOSAR 19-11 and Elektrobit-specific enhancements implemented compatible to the AUTOSAR standard.
EB tresos 9 Autocore Base Package	9.3.2	AutoCore Generic Base Package provided by Elektrobit is based on the ICC3-compliant AUTOSAR layered architecture and contains hardware-independent basic software modules and the Runtime Environment (RTE). ACG version 9 (ACG9) is based on AUTOSAR R20-11. The features and interfaces of the basic software modules are implemented according to different AUTOSAR versions, with AUTOSAR R20-11 as baseline.
EB tresos AutoCore Generic Ethernet Package	9.3.2	The EB tresos AutoCore Generic Ethernet Package product provides an Ethernet/IP stack for in-vehicular communication and diagnostic communication use cases including hardware-independent AUTOSAR basic software modules and the TCP/IP protocol family based on the Internet Protocol version 4 (IPv4) and version 6 (IPv6).
EB zoneo ACM8 Eth	1.0.0	EB zoneo ACM8 Eth is a hardware-dependent basic software module that is implemented according to the AUTOSAR Specification of Ethernet Driver (Eth).
EB zoneo GatewayCore	1.0.0	EB zoneo GatewayCore is a particular Elektrobit product that is developed to use, configure and integrate special communication hardware accelerators into the AUTOSAR Classic Platform. EB zoneo GatewayCore is a hardware-dependent module implemented as an AUTOSAR Classic complex device driver (CDD). It is designed to be integrated with the EB tresos product line.

Table 2 Tools components

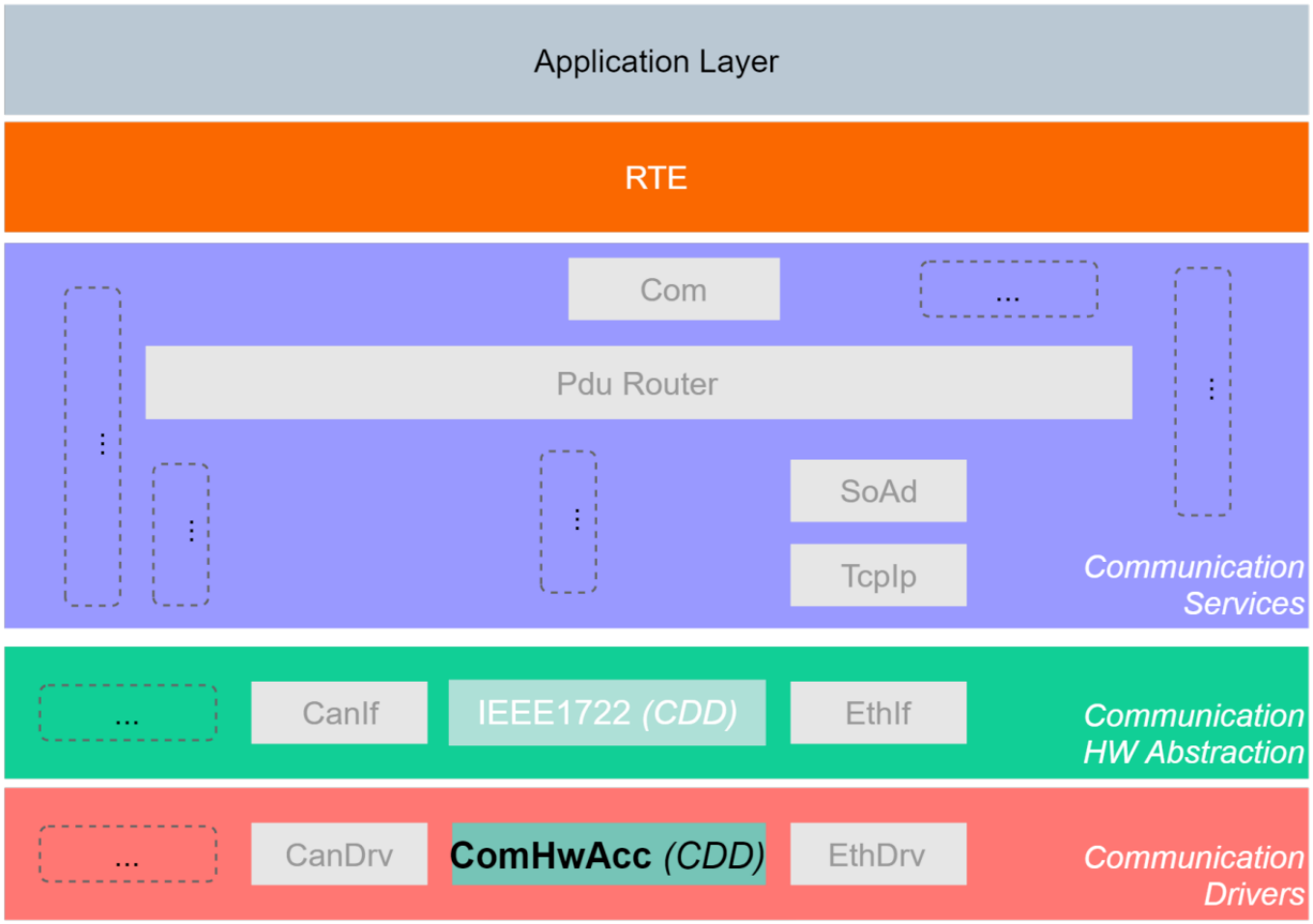
Tool	Version	Description
EB tresos Studio for ACG 9	32.1.1	EB tresos Studio is part of the EB tresos product line. The EB tresos product line offers efficient and scalable AUTOSAR-compliant and OSEK/VDX-compliant products for ECU development. EB tresos encompasses ECU basic software (BSW), single-/multi-core operating systems, functional safety and security solutions, and tools for configuration.
TASKING SmartCode	v10.2.r1p1	TASKING SmartCode is a TÜV NORD safety- and cybersecurity-certified C/C++ compiler toolchain for TriCore and PPU that supports ISO 26262 up to ASIL D, IEC 61508 up to SIL3, and ISO/SAE 21434:2021. It is qualified with Infineon MCAL packages and delivers best-in-class code execution performance.

1.2.1 EB zoneo GatewayCore

EB zoneo GatewayCore is developed as a hardware-dependent CDD to support various hardware features and software interfaces on several layers of the AUTOSAR Classic Platform. EB zoneo GatewayCore consists of two main parts:

- ComHWAcc
- IEEE1722

Figure 2 ComHwAcc



The main goal of the ComHwAcc module is to enable acceleration features for data processing available in the target hardware for the AUTOSAR Classic compatible COM stack of the EB tresos product line. The ComHwAcc can be considered as a communication driver (MCAL layer) designed to support TC4 hardware platform. For more information, please check the related documentation.

1.2.2 EB zoneo ACM8 Eth

ACM Eth is a hardware-dependent basic software module that is implemented according to the AUTOSAR Specification of Ethernet Driver (Eth). The module abstracts the hardware-related implementation details of specific Ethernet communication controllers and provides a uniform interface to the upper layer module via the Eth API. Thus, the AUTOSAR Ethernet Interface (EthIf) module as the user of the Eth module is independent of the underlying Ethernet communication controller hardware.

ACM Eth is compatible with the product EB tresos AutoCore Generic IP Stack. It requires EB tresos Studio for configuration and carrying out the code generation process. The product ACM Eth QoS Support can be requested optionally as add-on to ACM Eth.

1.3 Workflow

1.3.1 Introduction

This configuration work flow introduces the end-to-end work flow for generating ECU software using EB tresos Studio.

1. Provide Your Input Files. EB tresos Studio supports several standard file formats relevant for managing ECU configuration projects
   - EB tresos Studio supports AUTOSAR XML files containing:
     - System Description
     - LDF (Lin Description Format)
     - DBC
2. Import and Configure. GatewayCore Demo includes preconfigured files required by the ComHwAcc. 3
3. Generate Output Artifacts. After validation, EB tresos Studio produces all required build assets:
   - Code Generation for the configured AUTOSAR stack
4. Flash
   - See section 3.7

1.4 Files in Bundles

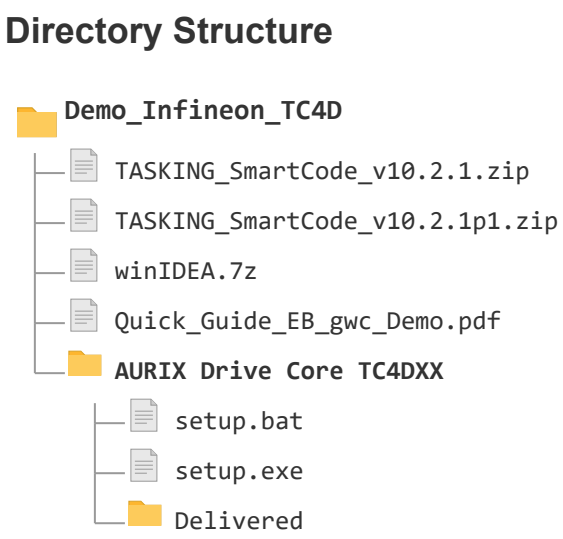


Table 3 Files

File name	Short description
TASKING_SmartCode_10.2.1.zip	TASKING SmartCode Installer 2.2.1
TASKING_SmartCode_10.2.1p1.zip	TASKING SmartCode Patch Installer 2.2.2
winIDEA.7z	Preconfigured TASKING winIDEA workspace
setup.bat	Helper script to install tresos, unzips module files automatically
setup.exe	tresos installer
Delivered	Contains software components and tools to be installed by setup

1.5 Prerequisites

Before you start, make sure you have all the following files and applications with valid licenses available, as well as the target hardware.

Files:

- EB-zoneo_GatewayCore_ComHwAcc_Userguide_Infineon_TRICORE_TC4DXX.pdf
- Tresos.zip
  - setup.exe (EB tresos)
  - setup.bat (Installation script for EB tresos)
  - Delivered (Folder containing all necessary plugins)
- Compiler: TASKING SmartCode v10.2r1p1

License keys:

- EB tresos key
- TASKING compiler key

Devices:

- Evaluation board TriBoard TC4D9 Zone Gateway Board

2 Installation

2.1 Installation of EB tresos Studio

For introductory guidance on EB tresos Studio workflows, refer to the following resources:

- Tutorials available under the Tutorials tab on the Working with EB tresos Studio – Elektrobit web page
- It is recommended to use the setup.bat It will automatically recursively unzip the files ensuring that the installer finds all the modules. Setup.exe looks only the top level module files meaning the user has to extract zipped module files themselves
- The Getting Started materials on the same web page
- The Work flows view chapter in the EB tresos Studio User Guide, available at: $TRESOS_BASE/doc/2.-0_EB_tresos_Studio/2.1_Studio_documentation_users_guide.pdf
- Install EB tresos Studio license
- Install the workspace: the AutoCore OEM Extension Start-up Package Application workspace is delivered as an uip package and is installed with the EB tresos Studio installer
- The license key for the tool is given in your Infineon Developer Center (IDC) portal https://softwaretools.infineon.com/my/software (Ensure to login to IDC using registered credentials)

2.2 Installation of TASKING SmartCode compiler

TASKING SmartCode v10.2r1p1 is used to build the GatewayCore example.

It's required to install the baseline software first (TASKING SmartCode v10.2r1) and to install the patch (TASKING SmartCode v10.2r1p1) as second step.

2.2.1 Installation of the baseline software TASKING SmartCode v10.2r1

The installation program is part of the Drive Core package and can be found in the zip file .\TASKING_SmartCode_v10.2r1\.

1. Unzip the TASKING_SmartCode_v10.2r1and open the unzipped directory
2. Run the installation program (setup.exe). The TASKING Setup dialog box appears

3. Select the product and click on the Install button. If there is only one product, you can directly click on the Install button
4. Follow the instructions that appear on your screen. During the installation you need to enter the license key you've received as part of the Drive Core package

***Note**: Make sure to specify an installation directory without any spaces, preferably one matching the default expected location for tresos toolchain*

***Note**: A node-locked server based license is used. The TASKING Remote License Server will bind the node-locked license to the computer that first uses the license.*

For more details, please also check Getting Started with TASKING SmartCode (https://www.tasking.com/support/smartcode/smartcode_getting_started_v10.2r1.pdf).

2.2.2 Installation of the patch

The installation program is part of the Drive Core package and can be found in the zip file .\TASKING_SmartCode_v10.2r1p1\.

1. Unzip the FILENAME and open the unzipped directory
2. Run the installation program (setup.exe). The TASKING Setup dialog box appears
3. Select the product and click on the Install button. If there is only one product, you can directly click on the Install button
4. Follow the instructions that appear on your screen

2.3 HW setup

This chapter describes the required components for the hardware setup, how they are connected and the physical interfaces which are used.

2.3.1 Overview

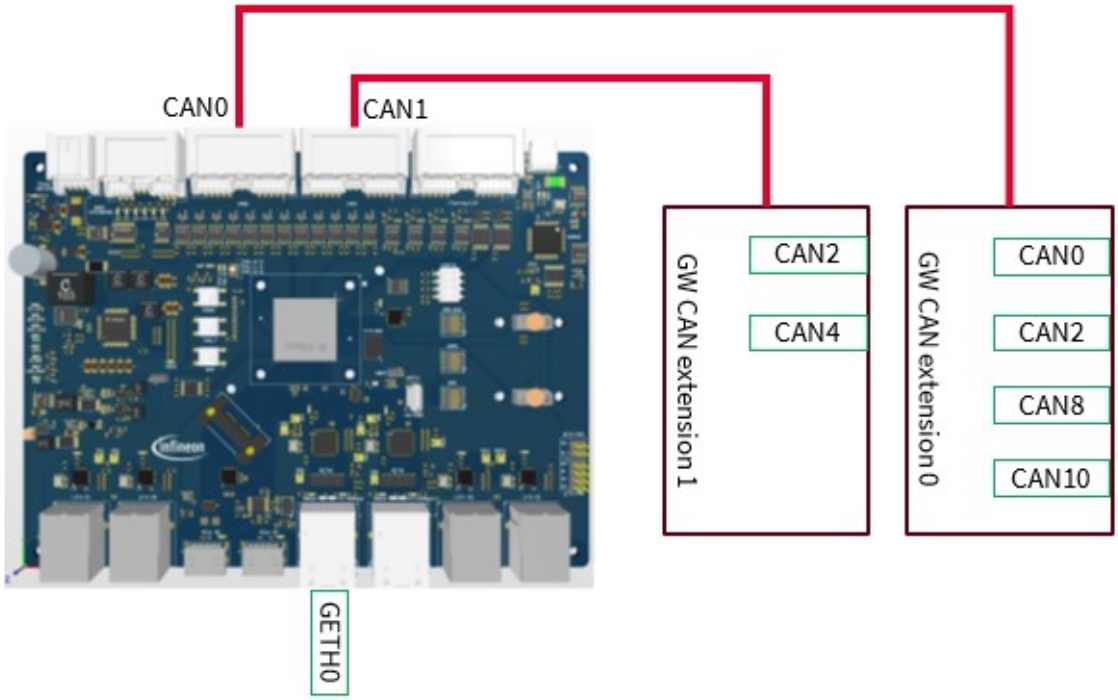
The setup consists of following components:

- 1x KIT_TC4D_ZONE_GW_BTX_APP 2.0
- 2x GW CAN extension (https://www.ehitex.de/en/evaluation-boards/infineon/2708/kit-a2g-gwext-can)

2.3.2 Wiring diagram

shows the complete setup. The CAN GW extension boards are connected to the CAN0 and CAN1 connectors of the TC4D board. All used interfaces are shown in green, those are 6x CAN and 1x Ethernet.CDO:/content/authoring/xao1773405992291.image

Figure 3 Block diagram of hardware setup



The following table shows how the physical interfaces are mapped to the sources and destinations, which are configured in tresos Studio.

Table 4 Hardware setup

CAN Connector	Tresos Configuration
GW CAN extension 0 – CAN2	CAN_Ctrl_0
GW CAN extension 0 – CAN4	CAN_Ctrl_1
GW CAN extension 1 – CAN0	CAN_Ctrl_2
GW CAN extension 1 – CAN2	CAN_Ctrl_3
GW CAN extension 1 – CAN8	CAN_Ctrl_4
GW CAN extension 1 – CAN10	CAN_Ctrl_5
TC4D board – GETH0	GETH0

3 Demo

3.1 Introduction

The demo project contains example configurations for different hardware accelerated routings and software based pdur routings.

- Hardware accelerated:
  - CAN-to-CAN
  - CAN-to-MEM

  - ETH.IEEE1722-to-CAN
  - CAN-to-ETH.IEEE1722
- Software pdur:
  - CAN-to-CAN
  - ETH-to-ETH
  - CAN-to-ETH
  - ETH-to-CAN

The naming schema of the routing entries follows the pattern:
Route_[CANID]_[SourceType]To[DestinationType][Unicast/Multicast].
CAN-to-ETH.IEEE1722 and ETH.IEEE1722-to-CAN require Eth/General/EthQoSSupport enabled (disabled by default in Tresos gui) which requires additional license.
The following subsections explain the individual Hardware accelerated routing entries in detail.

Table 5 CAN to CAN routing

Name	Unicast/ Multicast	Src / Dst Address	CAN Type	SrcCanCtrl	DstCanCtrl
Route_1005_CanToCanU	Unicast	1005 / 1005	CAN2.0	CAN_Ctrl_0	CAN_Ctrl_1
Route_1008_CanToCanU	Unicast	1008 / 1008	CANFD	CAN_Ctrl_3	CAN_Ctrl_4
Route_1012_CanToCanM	Multicast	1012 / 1012	CAN2.0	CAN_Ctrl_0	CAN_Ctrl_1 CAN_Ctrl_3 CAN_Ctrl_4

The CAN controllers are configured with following settings:

Table 6 CAN controllers settings

Name	HW Unit	Controller	CANFD active	Baud rate in kbps
CAN_Ctrl_0	0	0	false	1000
CAN_Ctrl_1	0	1	true	1000 / 2000
CAN_Ctrl_2	0	3	true	1000 / 2000
CAN_Ctrl_3	1	0	true	1000 / 2000
CAN_Ctrl_4	1	1	true	1000 / 2000

Table 7 CAN to MEM routing

Name	Unicast/ Multicast	Src / Dst Address	CAN Type	SrcCanCtrl	DstCanCtrl
Route_1001_CanToMemU	Unicast	1003 / 1003	CANFD	CAN_Ctrl_3	CAN_Ctrl_4

Table 8 CAN to ETH.IEEE1722 routing

Name	Unicast/ Multicast	StreamId	CAN Address	CAN Type	SrcCtrl	DstCtrl
Routing_1105_CanToEthU	Unicast	103001	1005	CAN2.0	CAN_Ctrl_0	GETH0

Table 9 ETH.IEEE1722 to CAN routing

Name	Unicast/ Multicast	StreamId	CAN Address	CAN Type	SrcCtrl	DstCtrl
Routing_1108_EthToCanU	Unicast	103001	1108	CANFD	GETH0	CAN_Ctrl_4

(table continues...)

Table 9 (continued) ETH.IEEE1722 to CAN routing

Name	Unicast/ Multicast	StreamId	CAN Address	CAN Type	SrcCtrl	DstCtrl
Routing_1111_EthToCanM	Multicast	103004	1111	CAN2.0	GETH0	CAN_Ctrl_1 CAN_Ctrl_3 CAN_Ctrl_4

The following subsections explain the individual Software pdur routing entries in detail.

Table 10 CAN to CAN PDUR routing

Name	Unicast/ Multicast	Src / Dst Address	CAN Type	SrcCanCtrl	DstCanCtrl
Route_100	Unicast	100 / 100	CAN2.0	CAN_Ctrl_0	CAN_Ctrl_1
Route_101	Unicast	101 / 101	CAN2.0 → CANFD	CAN_Ctrl_0	CAN_Ctrl_1
Route_102	Unicast	102 / 102	CANFD → CAN2.0	CAN_Ctrl_1	CAN_Ctrl_0
Route_103	Unicast	103 / 103	CANFD	CAN_Ctrl_2	CAN_Ctrl_3
Route_104	Multicast	104 / 104	CAN2.0	CAN_Ctrl_0	CAN_Ctrl_1 CAN_Ctrl_2
Route_105	Multicast	105 / 105	CAN2.0	CAN_Ctrl_0	CAN_Ctrl_1 CAN_Ctrl_2 CAN_Ctrl_3
Route_106	Multicast	106 / 106	CANFD	CAN_Ctrl_1	CAN_Ctrl_2 CAN_Ctrl_3

Table 11 CAN to ETH PDUR routing. All routings use GETH0 and SRC port 1000, DST port 2000

Name	Unicast/ Multicast	VLANID	CAN Address	CAN Type	SrcCtrl	SrcIP/ DstIP	SOAD ID
Route_200	Unicast	4001	200	CAN2.0	CAN_Ctrl_0	192.168.1.11 192.168.1.22	200
Route_201	Unicast	4002	201	CANFD	CAN_Ctrl_1	192.168.2.11 192.168.2.22	201
Route_202	Multicast	4001 / 4002	202	CAN2.0	CAN_Ctrl_0	192.168.1.11 192.168.1.22 / 192.168.2.11 192.168.2.22	202

(table continues...)

Table 11 **(continued) CAN to ETH PDUR routing. All routings use GETH0 and SRC port 1000, DST port 2000**

Name	Unicast/ Multicast	VLANID	CAN Address	CAN Type	SrcCtrl	SrcIP/ DstIP	SOAD ID
Route_203	Multicast	4001/4002/4003	203	CANFD	CAN_Ctrl_1	192.168.1.11 192.168.1.22 / 192.168.2.11 192.168.2.22 / 192.168.3.11 192.168.3.22	203

Table 12 **ETH to CAN PDUR routing. All routings use GETH0. SRC Port 2000, DST Port 1000**

Name	Unicast/ Multicast	VLANID	CAN Address	CAN Type	SrcIP/ DstIP	DstCtrl	SOAD ID
Route_204	Unicast	4001	204	CAN2.0	192.168.1.22 192.168.1.11	CAN_Ctrl_0	204
Route_205	Unicast	4002	205	CANFD	192.168.2.22 192.168.2.11	CAN_Ctrl_1	205
Route_206	Multicast	4003	206	CAN2.0	192.168.3.22 192.168.3.11	CAN_Ctrl_0 CAN_Ctrl_1	206
Route_207	Multicast	4004	207	CANFD	192.168.4.22 192.168.4.11	CAN_Ctrl_1 CAN_Ctrl_2 CAN_Ctrl_3	207

Table 13 **ETH to ETH PDUR routing. All routings use GETH0. Transmit SRC port 2000, DST port 1000. Receive SRC port 1000, DST port 2000**

Name	Unicast/ Multicast	Source VLANID	Destination VLANID	Transmit SrcIP/ DstIP	Receive SrcIP/ DstIP	SOAD ID
Route_400	Unicast	4001	4002	192.168.1.22 192.168.1.11	192.168.2.11 192.168.2.22	400
Route_401	Multicast	4001	4002/4003	192.168.1.22 192.168.1.11	192.168.2.11 192.168.2.22 / 192.168.3.11 192.168.3.22	401

(table continues...)

Table 13 (continued) ETH to ETH PDUR routing. All routings use GETH0. Transmit SRC port 2000, DST port 1000. Receive SRC port 1000, DST port 2000

Name	Unicast/ Multicast	Source VLANID	Destination VLANID	Transmit SrcIP/ DstIP	Receive SrcIP/ DstIP	SOAD ID
Route_402	Multicast	4001	4002/4003/ 4004	192.168.1.22 192.168.1.11	192.168.2.11 192.168.2.22 / 192.168.3.11 192.168.3.22 / 192.168.4.11 192.168.4.22	402

3.2 Setup

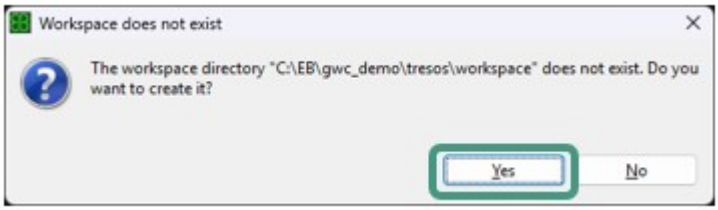
This chapter describes how to import the EB tresos and EB zoneo GatewayCore example, prepare environment variables, and finally, how to build the project.

3.3 Setup example project

This section describes how to import the demo project.

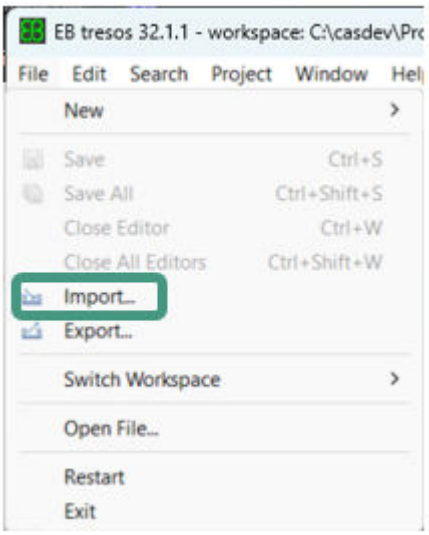
3.3.1 Load EB tresos

1. Launch C:\EB\gwc_demo\tresos\tresos_gui.exe
2. Confirm creation of workspace directory

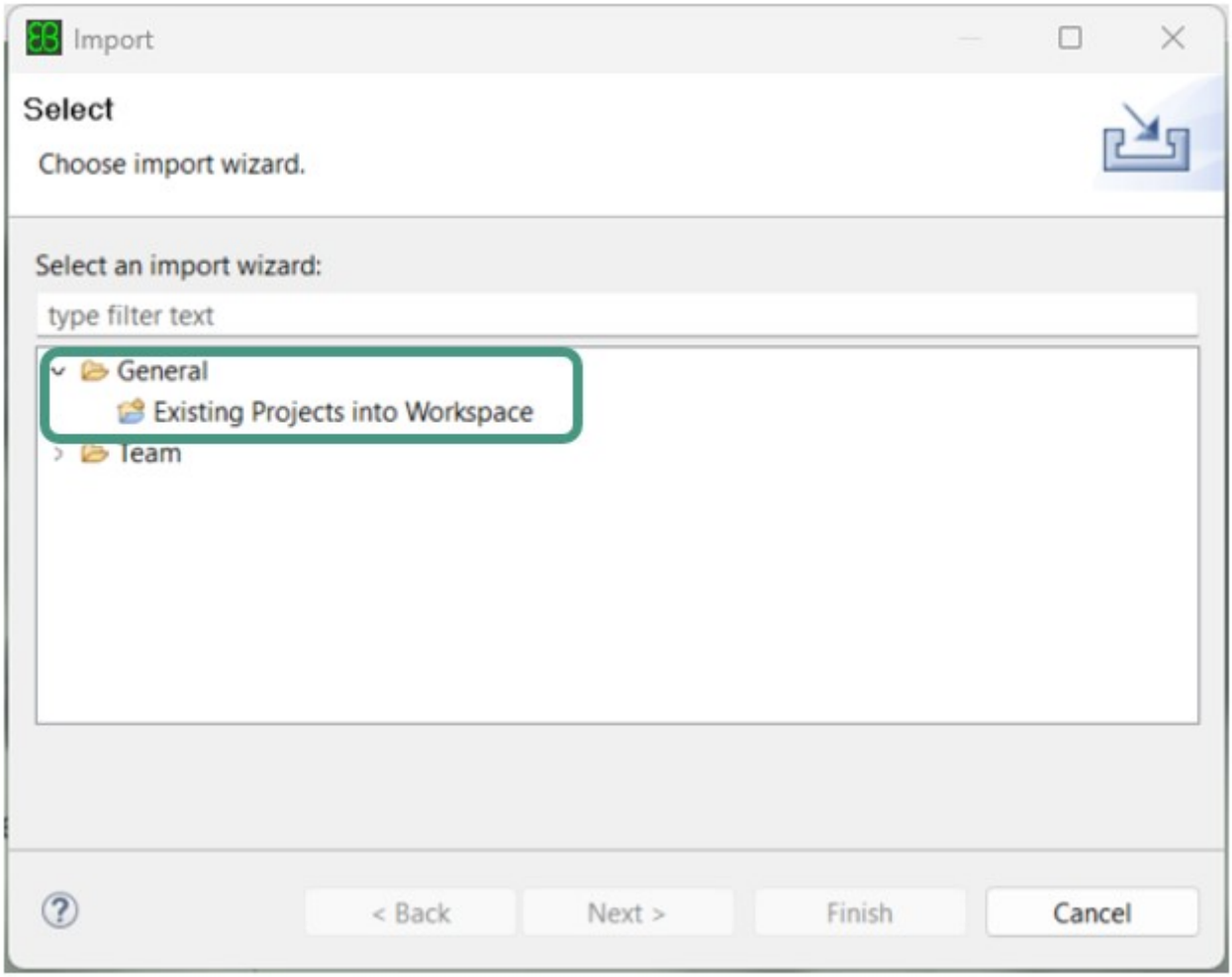


3. Select workspace directory to C:\EB\gwc_demo\tresos\workspace\
4. Once initialized, open the menu and select **File** → **Import...**

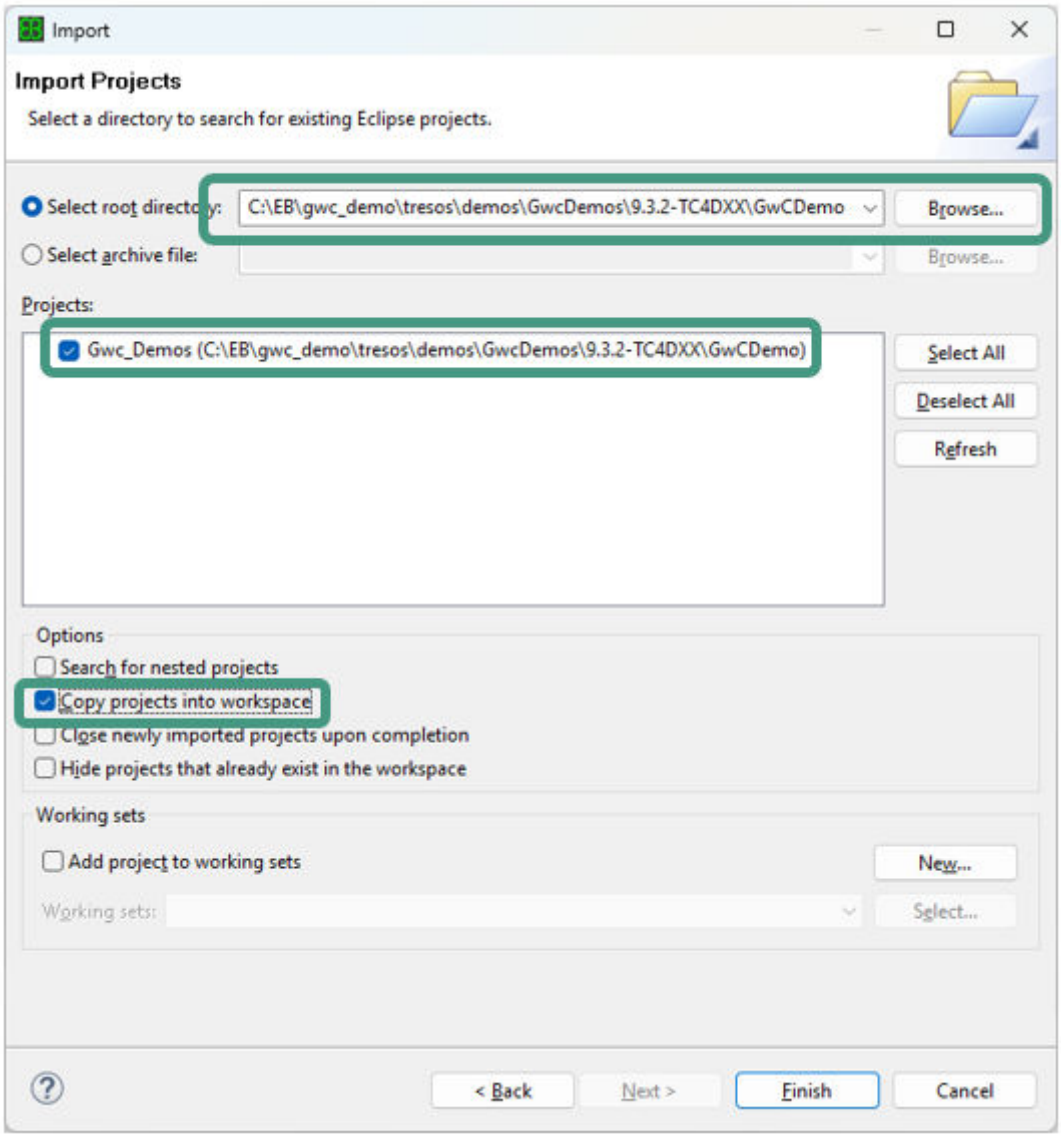
3 Demo



5. In the Import dialog, choose **General** → **Existing Project into Workspace**, then click on **Next**. Click on **Browse…** and navigate to the desired project folder.

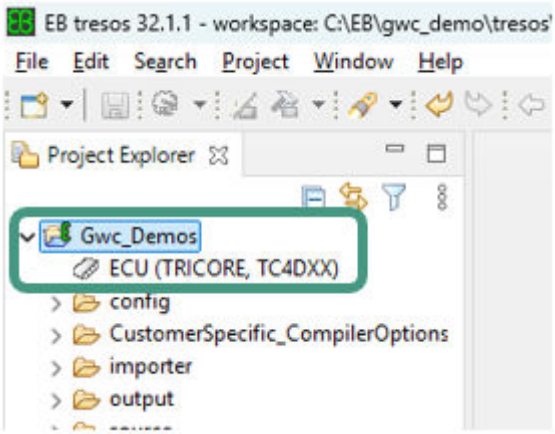


- **1.** Make sure the GwCDemo Project is checked
  2. Check Copy projects into workspace
  3. Click on **Finish** to close the Import wizard and load the project

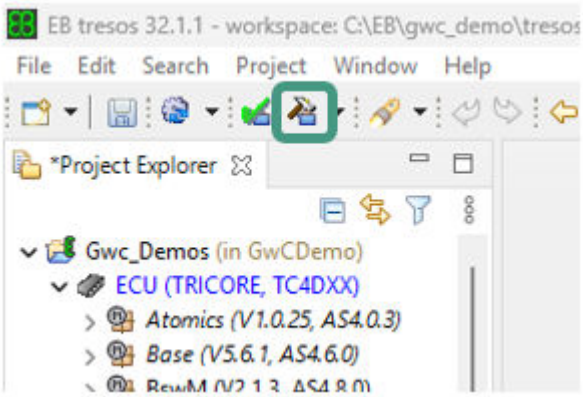


3.4 Generate

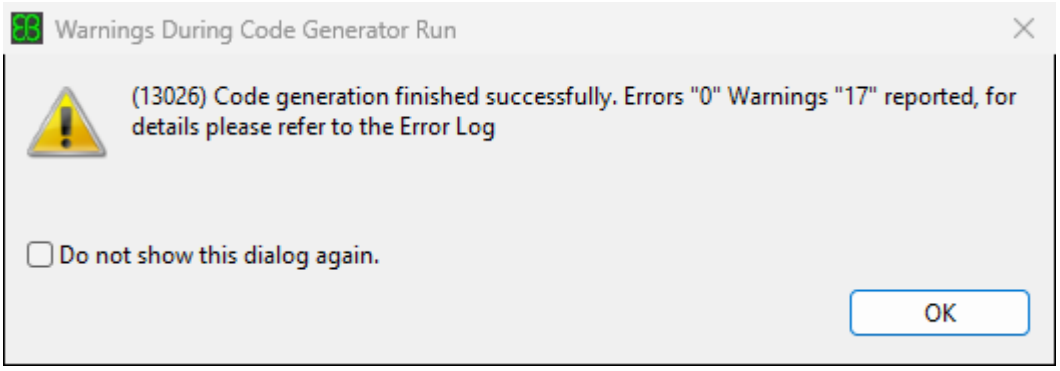
1. Expand **Gwc_Demos**
2. Double-click **ECU (TRICORE, TC4DXX)** to load the project



3. Click **Generate** to generate the code for the project



4. Confirm code generation finished successfully dialog



5. If the user wants to modify the pre-set routings, they need to save the changes and run the generate again. In case of using only the pre-set routings, EB tresos can be closed now

3.5 Configuration

The general setup for compiler paths and settings is configured by modifying the following file:
C:\EB\gwc_demo\tresos\demos\GwcDemos\9.3.2-TC4DXX\GwCDemo\util\launch_cfg.bat
This file is used to set the environment variables for the build system. If you use different paths than those listed specified in the launch_cfg.bat, they need to be adjusted accordingly:

- **TOOLPATH_COMPILER needs to point to \bin folder of the TASKING compiler toolchain**
- WORK_BASE needs to point to the working directory that contains EB tresos folder

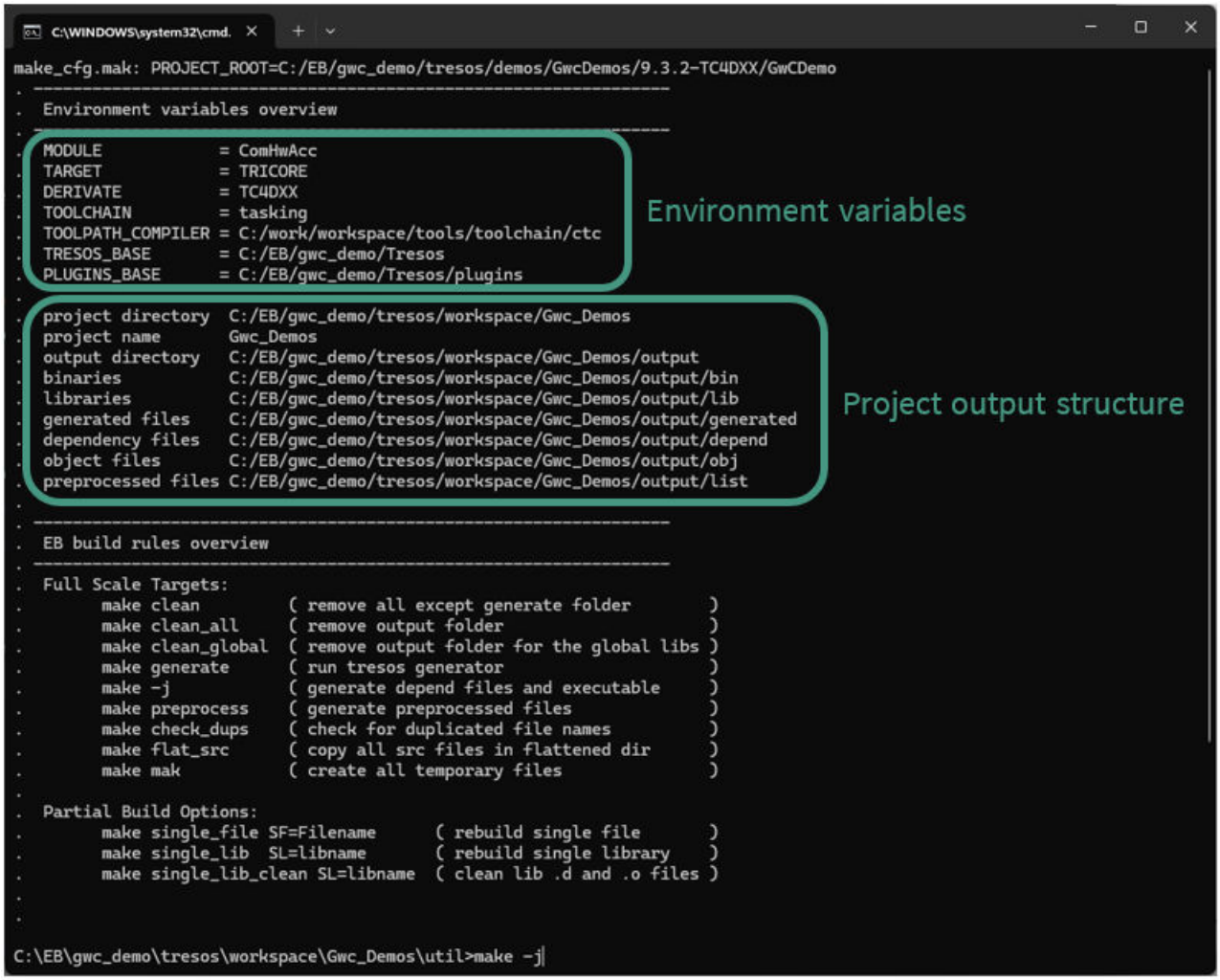
Example:
SET TOOLPATH_COMPILER = C:/work/workspace/tools/toolchain/ctc
SET WORK_BASE = C:/EB/gwc_demo

3.6 Running the demo or build

To compile the application, following steps shall be taken:

1. Run \util\launch.bat
2. The configuration from the launch_cfg.bat is displayed
3. Run **make -j** to start the compilation

***Note**: Successful generation of the code is required before compilation, either by tresos gui or **make generate** command. This also applies after calling make clean.*



4. After successful compilation the binary can be found in the following folder:

C:\EB\gwc_demo\tresos\demos\GwcDemos\9.3.2-TC4DXX\GwCDemo\output\bin\

Finally, the actual flashing shall be performed. The TC4D Zone Gateway board supports different channels for programming and debugging.

- On-board miniWiggler via the USB-C connector
- 10-pin DAP connector
- 10-pin DAPE connector
- 10 pin DAP_SCR connector
- 24-pin HSTCU connector

Please refer to the user manual of the TriBoard TC4D9 Zone Gateway Board , **2.12. Program and Debug Interface** for further details about the interfaces.

***Note**: The Drive Core package is debugger-agnostic and compatible with any debugger supporting the TC4 architecture. One option is the TASKING winIDEA.*

3.7 TASKING winIDEA (optional)

The DRIVECORE package includes a preconfigured TASKING winIDEA workspace to simplify the initial setup and provide a smooth start into flashing and debugging the GatewayCore example.

3.7.1 Installation of winIDEA

1. Download the latest version of TASKING winIDEA https://www.tasking.com/downloads/winidea/
2. Follow the official Installation Guide (https://www.isystem.com/downloads/winIDEA/help/winidea-installation-guide.html)

***Note**:* *winIDEA requires a license which is not contained in the Drive Core package. If you want to use or evaluate winIDEA, please contact TASKING (https://www.tasking.com/contact/).*

3.7.2 Debugging with winIDEA

The preconfigured TASKING winIDEA workspace is located under
`.\<installDir>\workspace\Gwc_Demos\winIDEA\`.

Please start winIDEA and load this winIDEA workspace.

The provided winIDEA workspace is configured for Symmetric Multi-Processing (SMP), enabling efficient debugging in a multi-core environment.

For more details about winIDEA, refer to (https://www.isystem.com/downloads/winIDEA/help/index.html) or contact TASKING.

Please refer to https://www.infineon.com/partners/design-partner/tasking for more information about the TASKING toolchain for flashing and debugging.

4 Development resources

4.1 ComHwAcc Configuration

GwCDemo contains ComHwAcc Userguide under the following folder after Tresos studio and modules are installed:

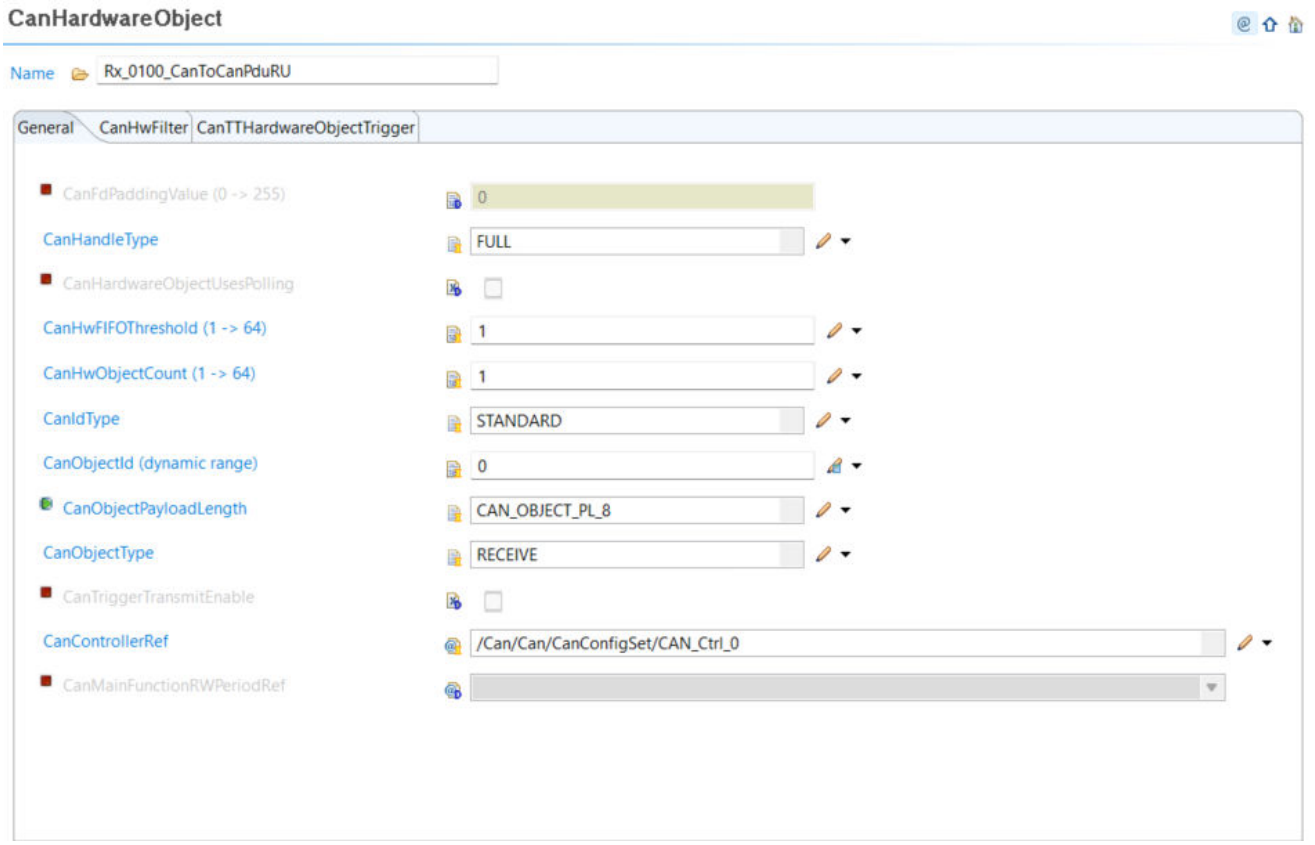
.\Tresos\demos\GwcDemos\9.3.2-TC4DXX\GwCDemo\doc\

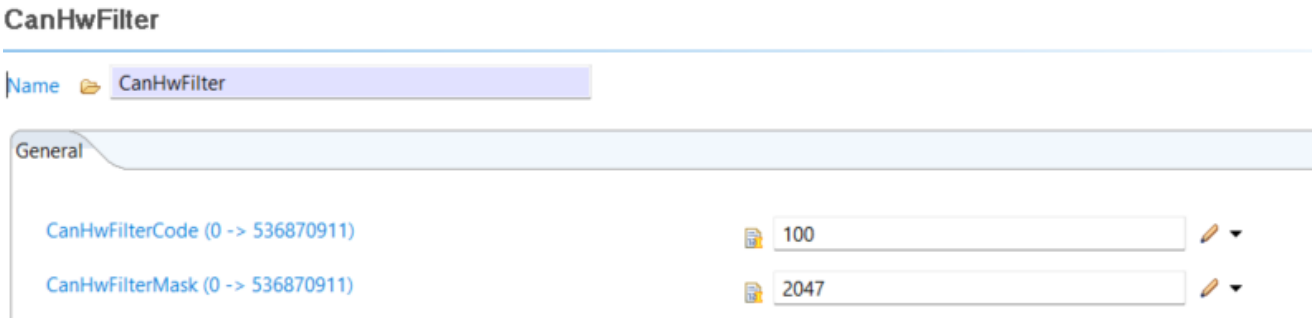
4.2 PDUR routing configuration

Following section gives a short guide how to add/adjust pdur configurations in Tresos, it relies on already existing configurations set in the Demo project. If the user is not familiar with the underlying mechanisms, it is recommended to use the existing configurations.

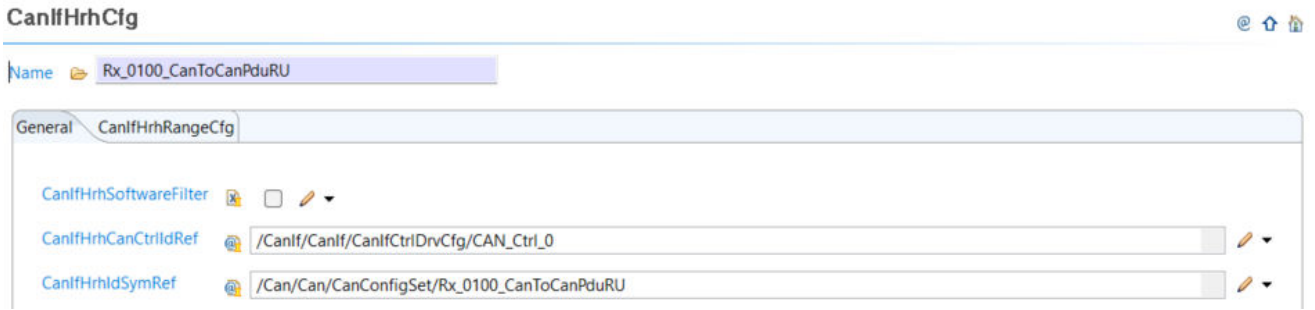
4.3 CAN receive

- Configure Can/CanHardwareObject with a filter using the CAN ID as CanHwFilterCode

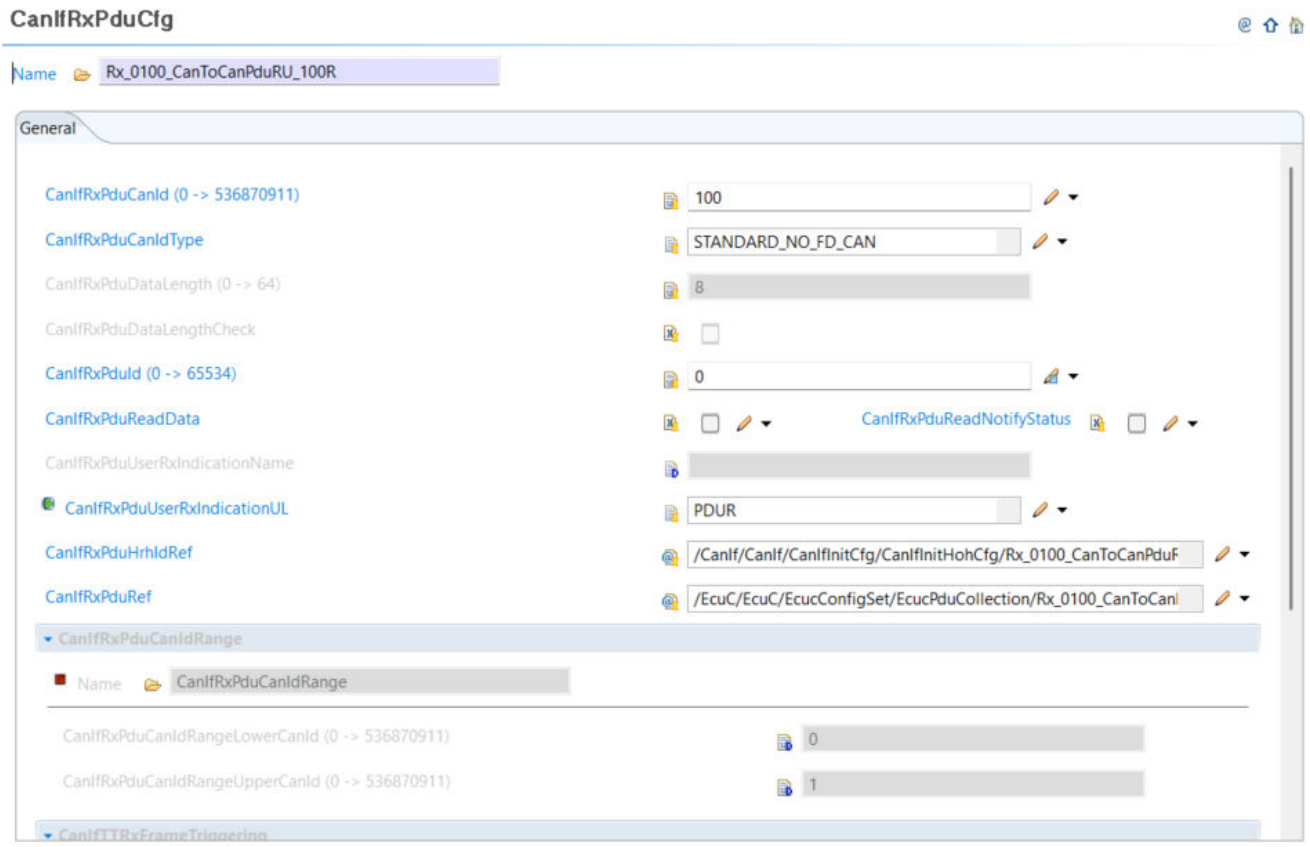




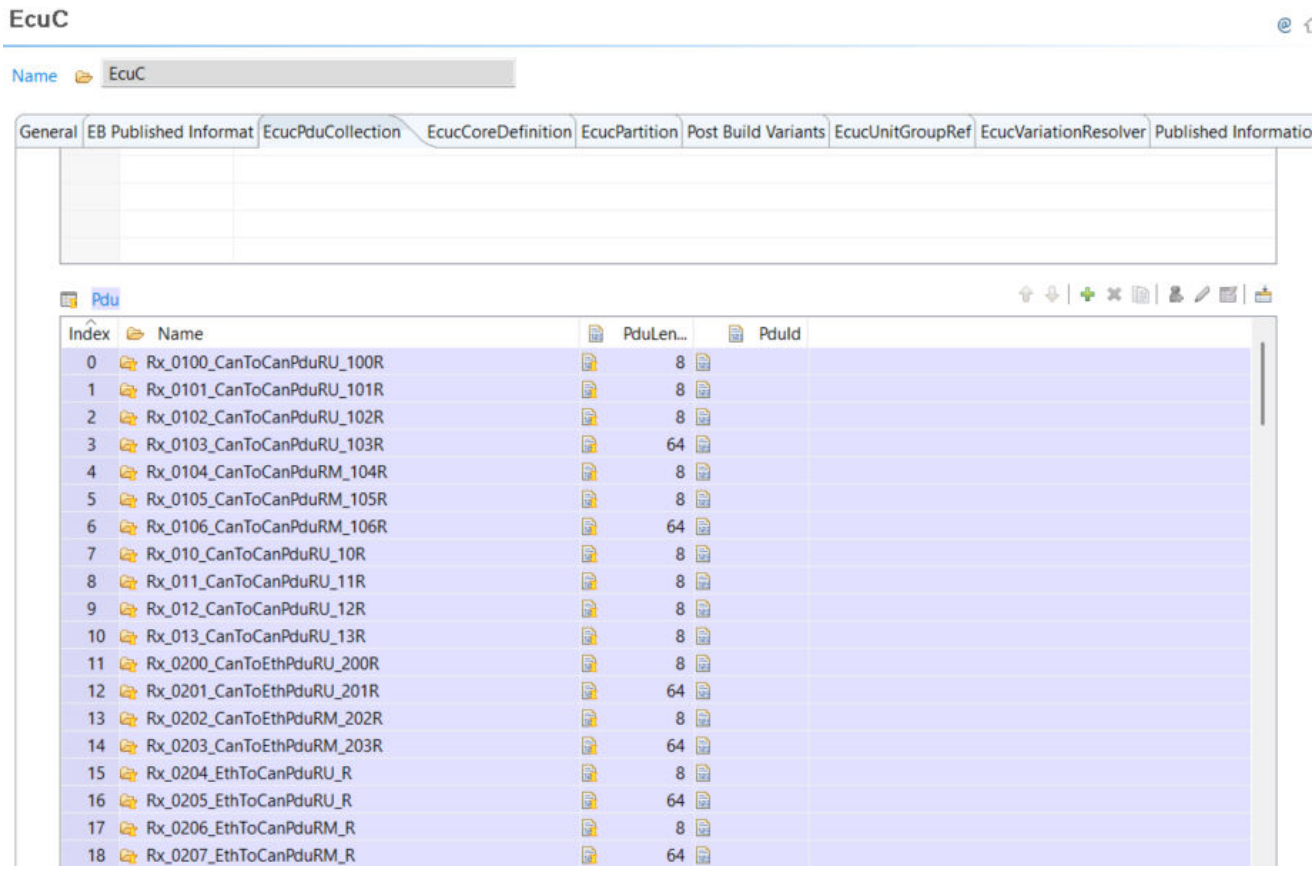
- Configure CanIfI/CanIfInitHohCfg/CanIfHrhCfg/CanIfInitHohCfg

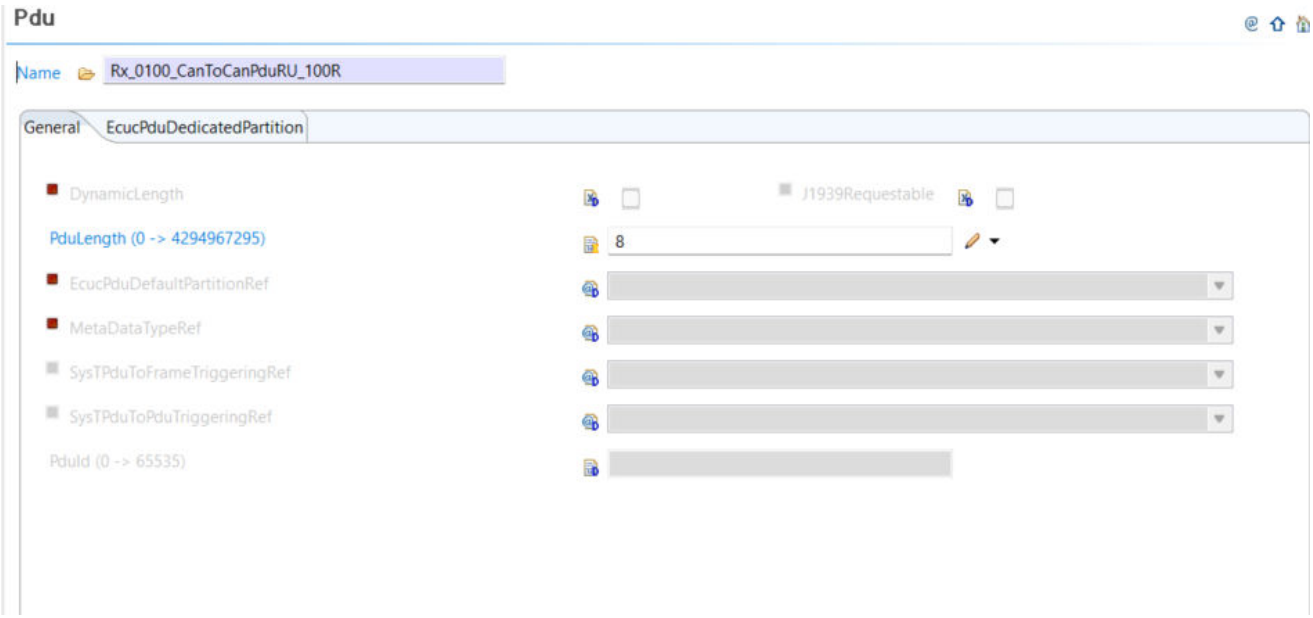


- Configure CanIf/CanIfRxPduCfg

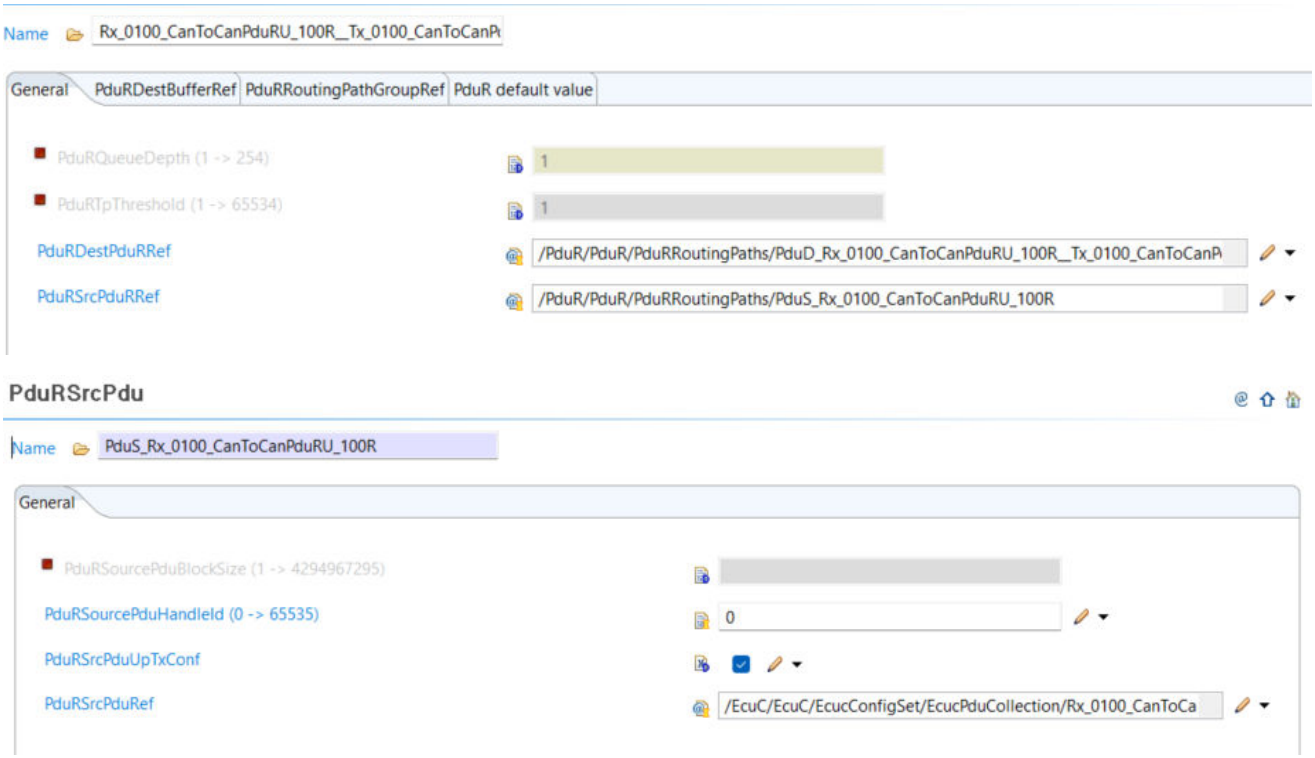


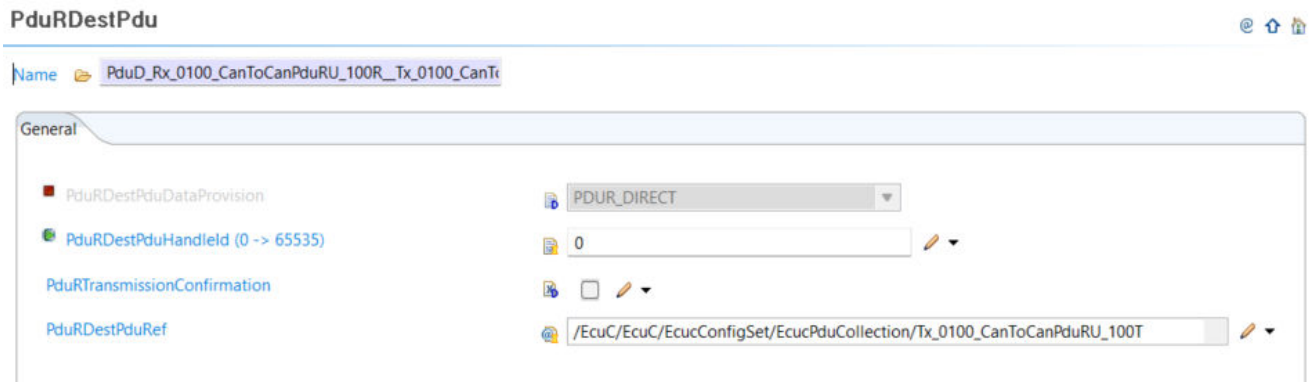
- Configure EcuC/EcucPduCollection Pdu for receive





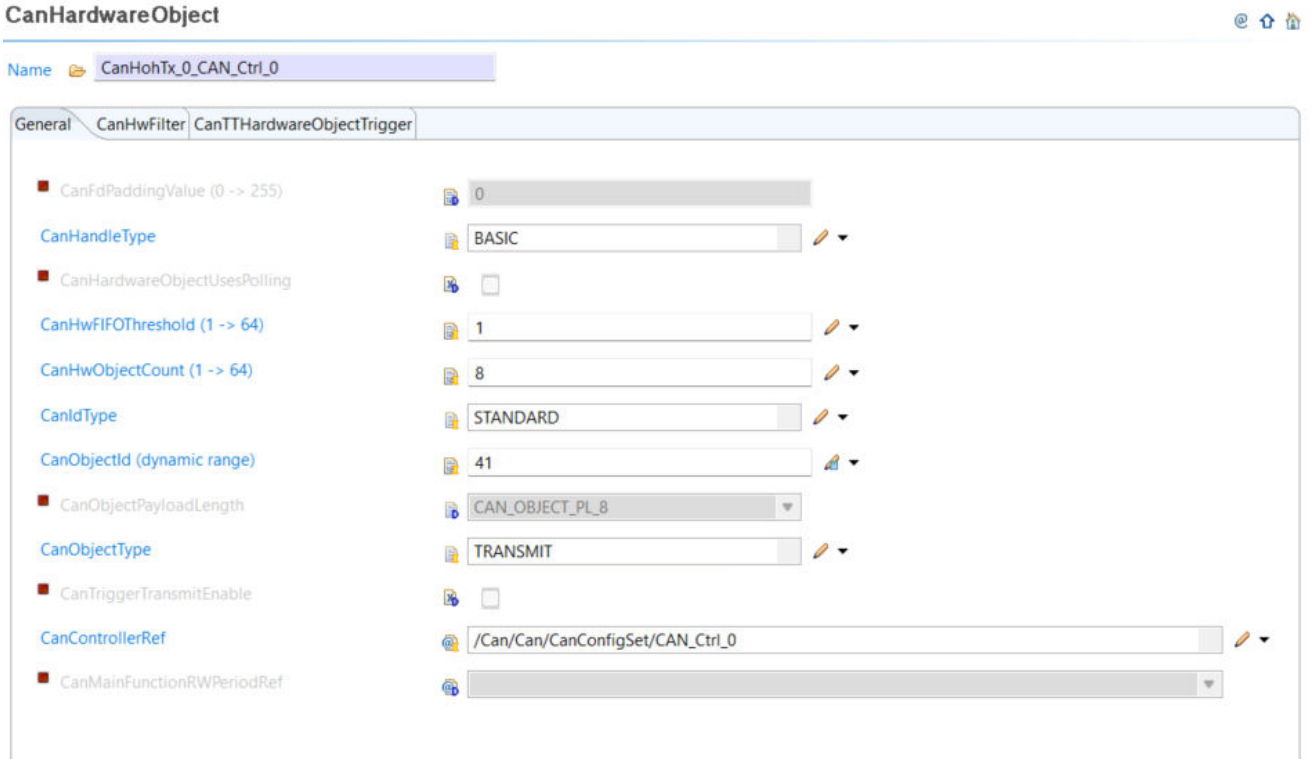
- Configure Pdur/PdurRRoutingPath with PdurSrcPdu and PdurDestPdu where the latter matches ETH or CAN transmit routing



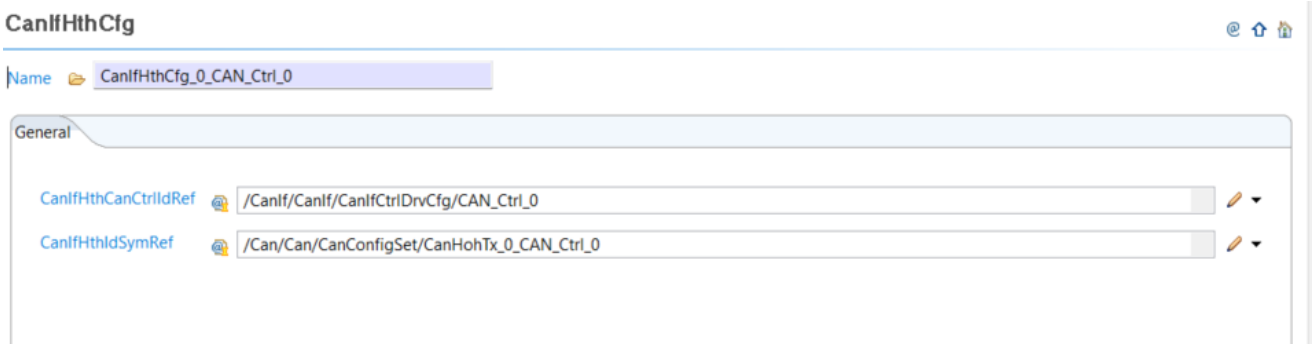


4.3.1 CAN transmit

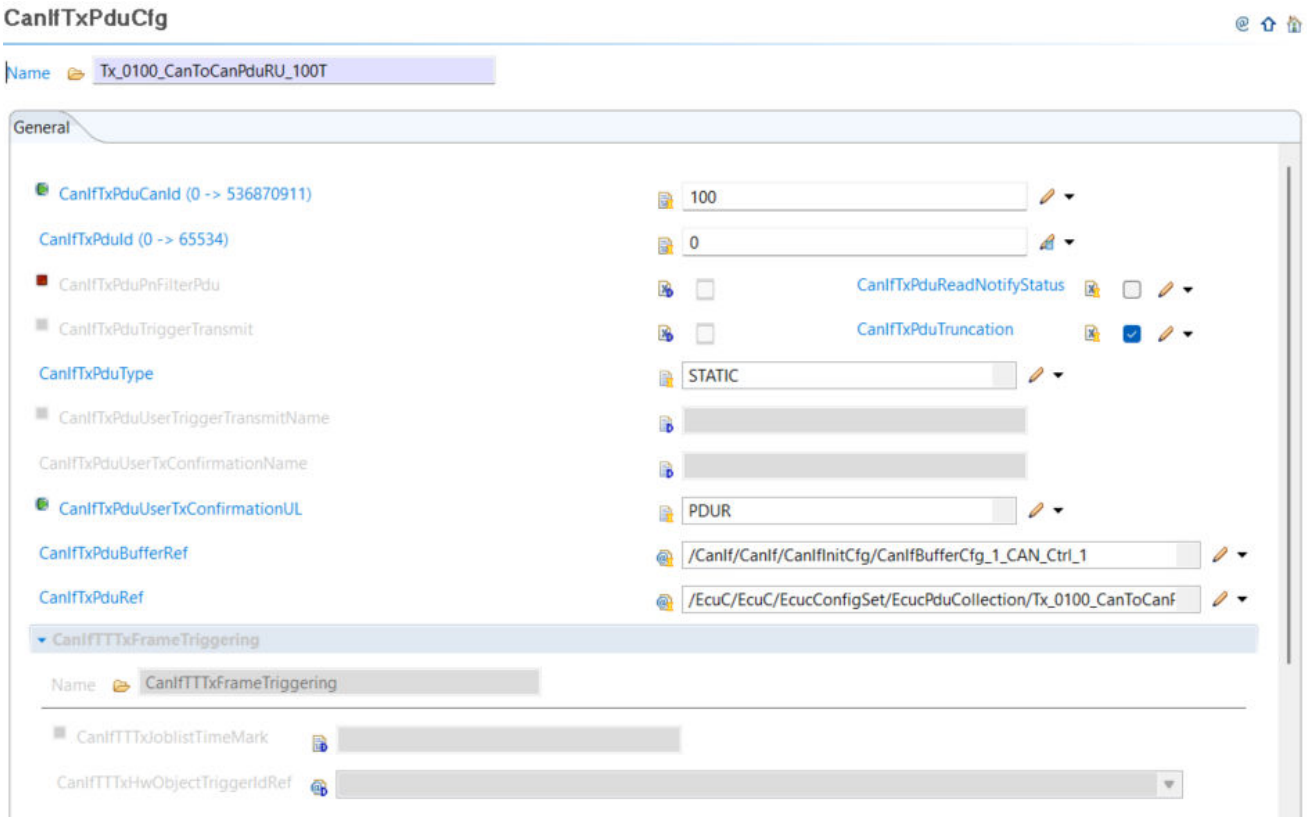
- Similar to the receive side
- Configure Can/CanHardWareObject (of use existing one) without CanHwFilter



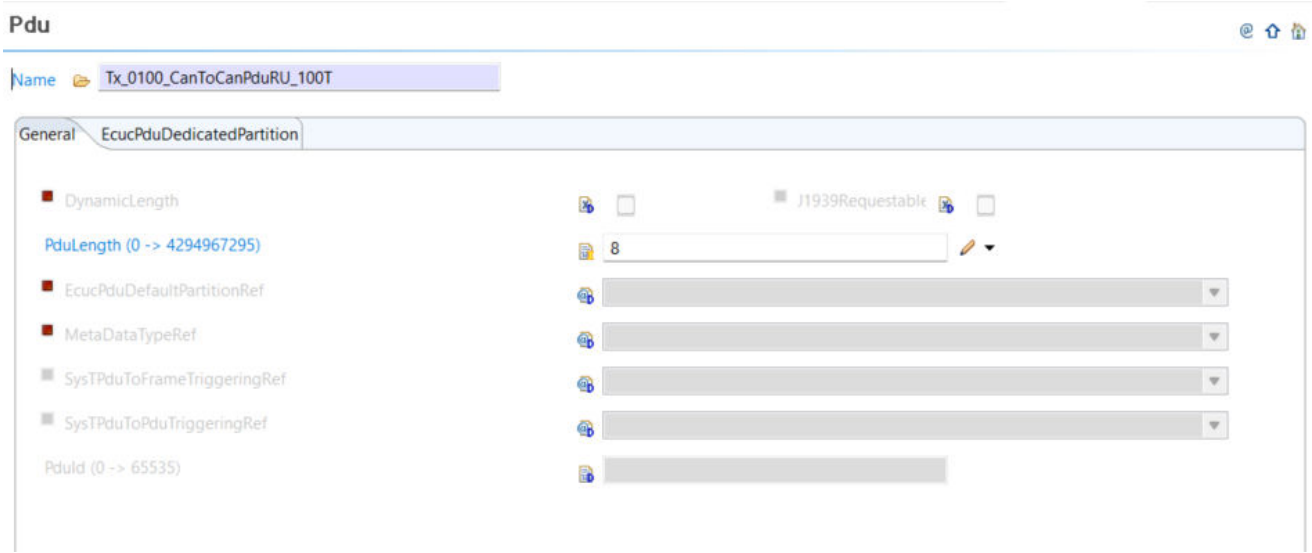
- Configure CanIf/CanIfInitHohCfg/CanIfHthCfg (or use existing one)



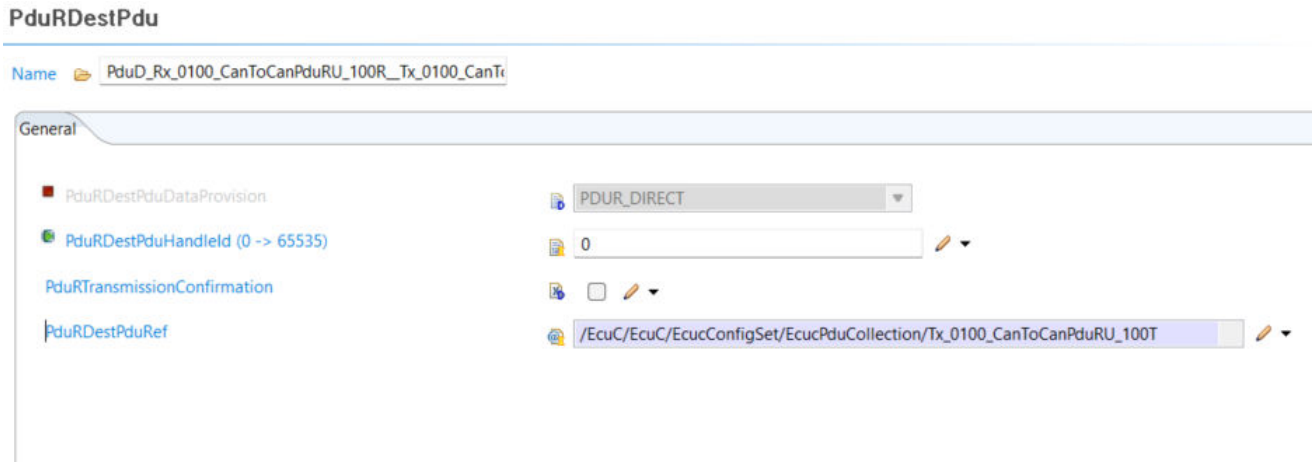
- Configure CanIf/CanIfTxPduCfg



- Configure EcuC/EcuCPduCollection Pdu for transmit

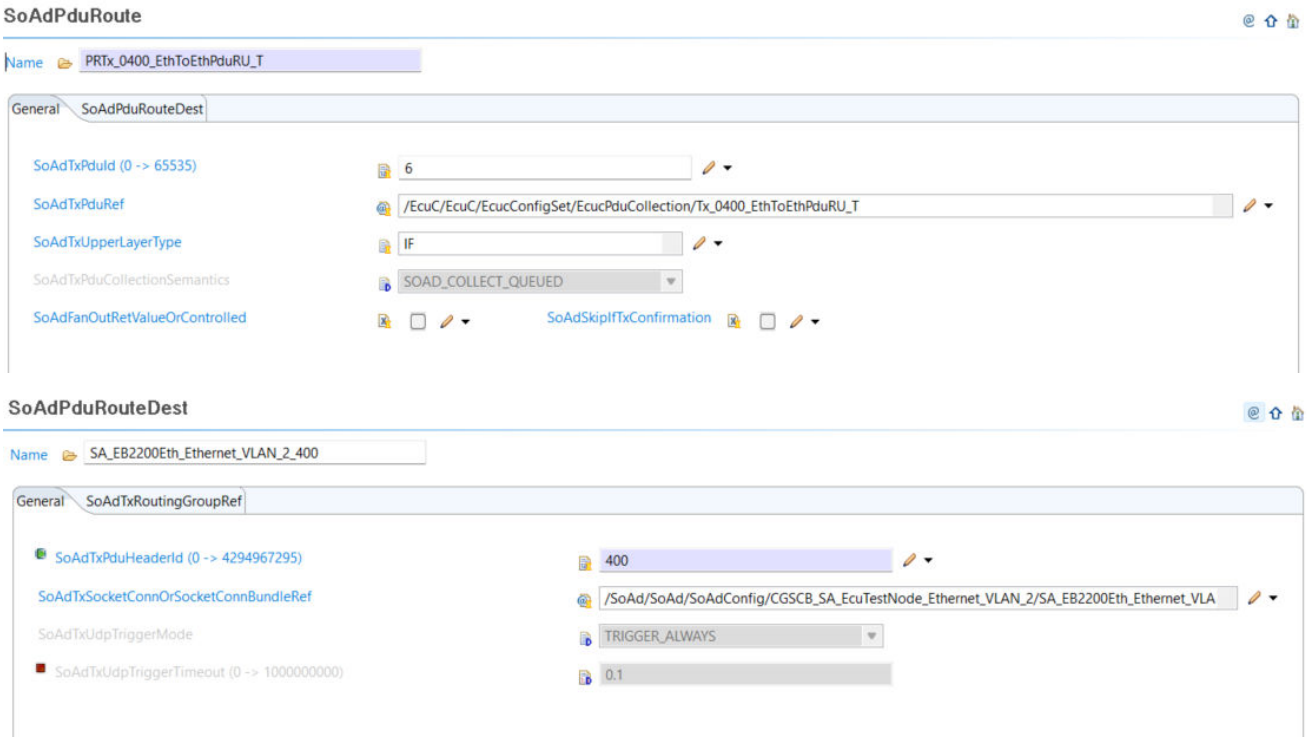


- Configure PduR/PdurRDestPdu and attach it to the the PdurRoutingPath. See Can receive section PDUR part

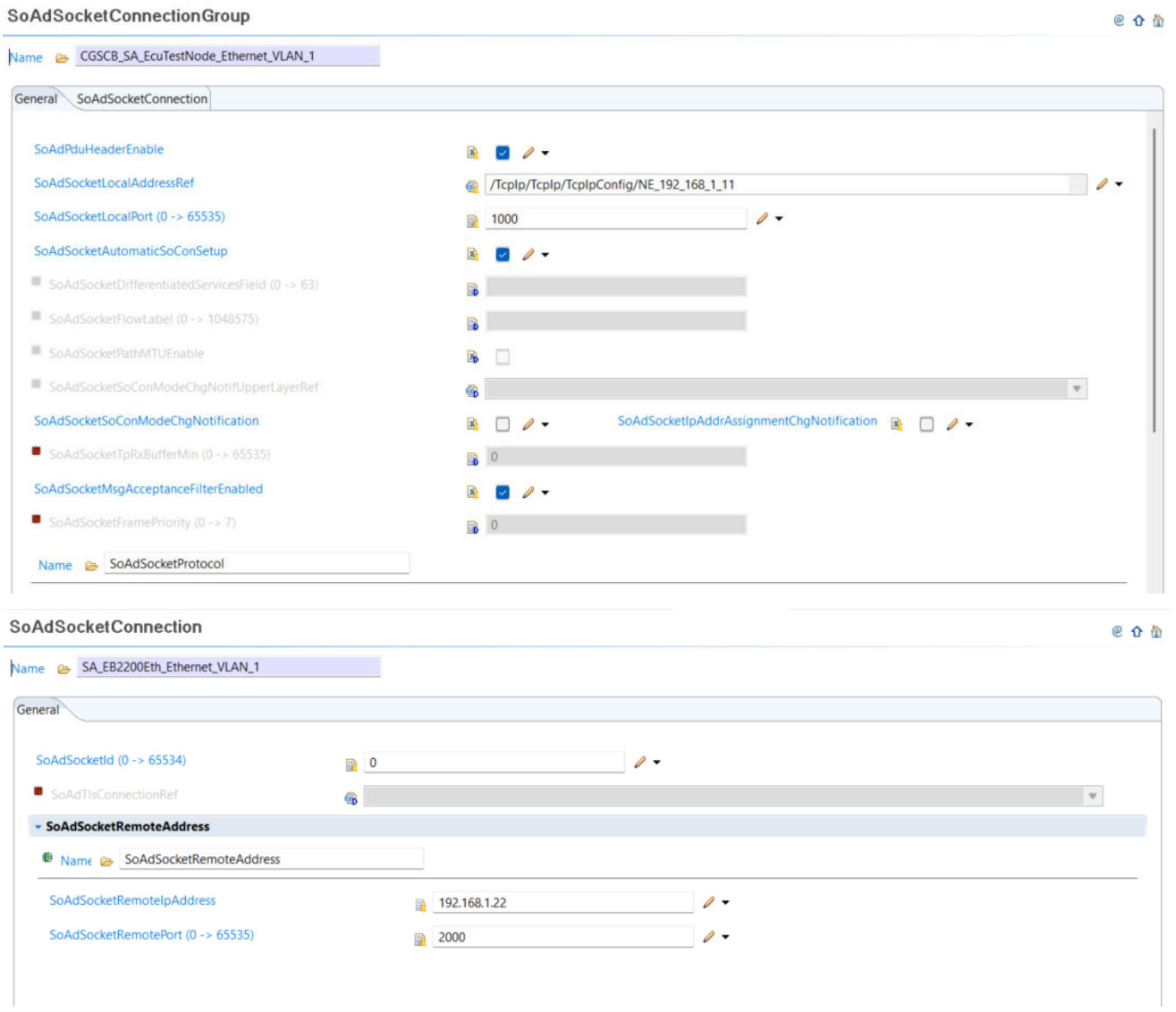


4.3.2 ETH transmit

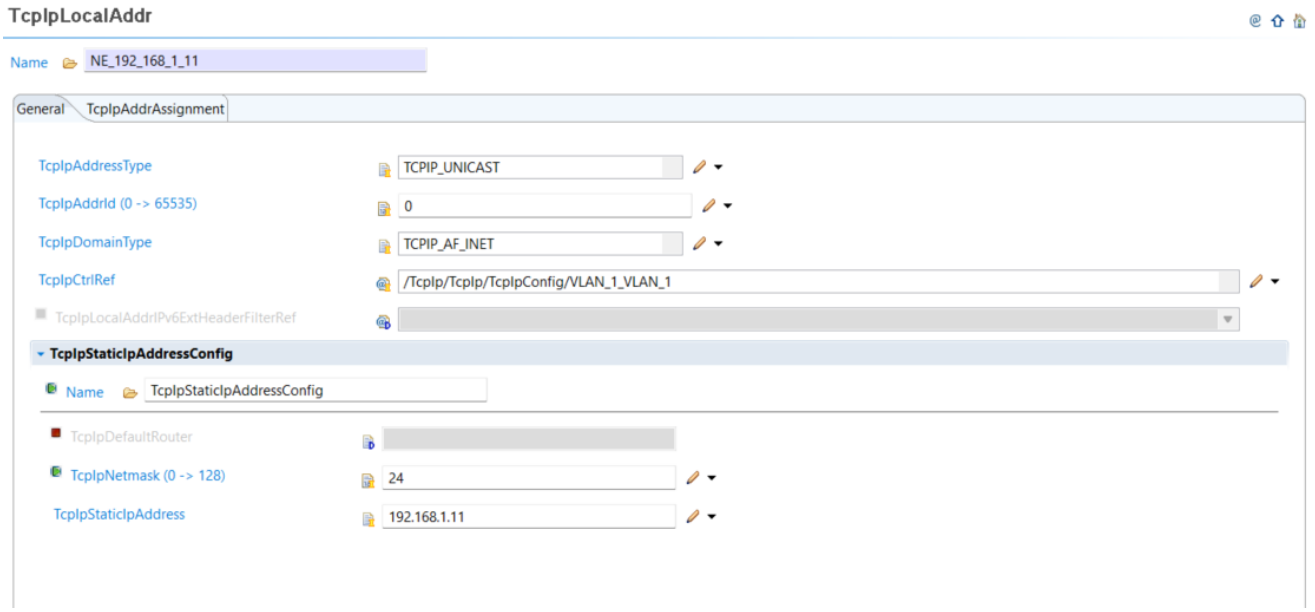
- Configure SoAd/SoAdPduRoute with SoAdPduRouteDest



- If not using existing one, add and configure SoAd/SoAdSocketConnectionGroup with SoAdSocketConnection

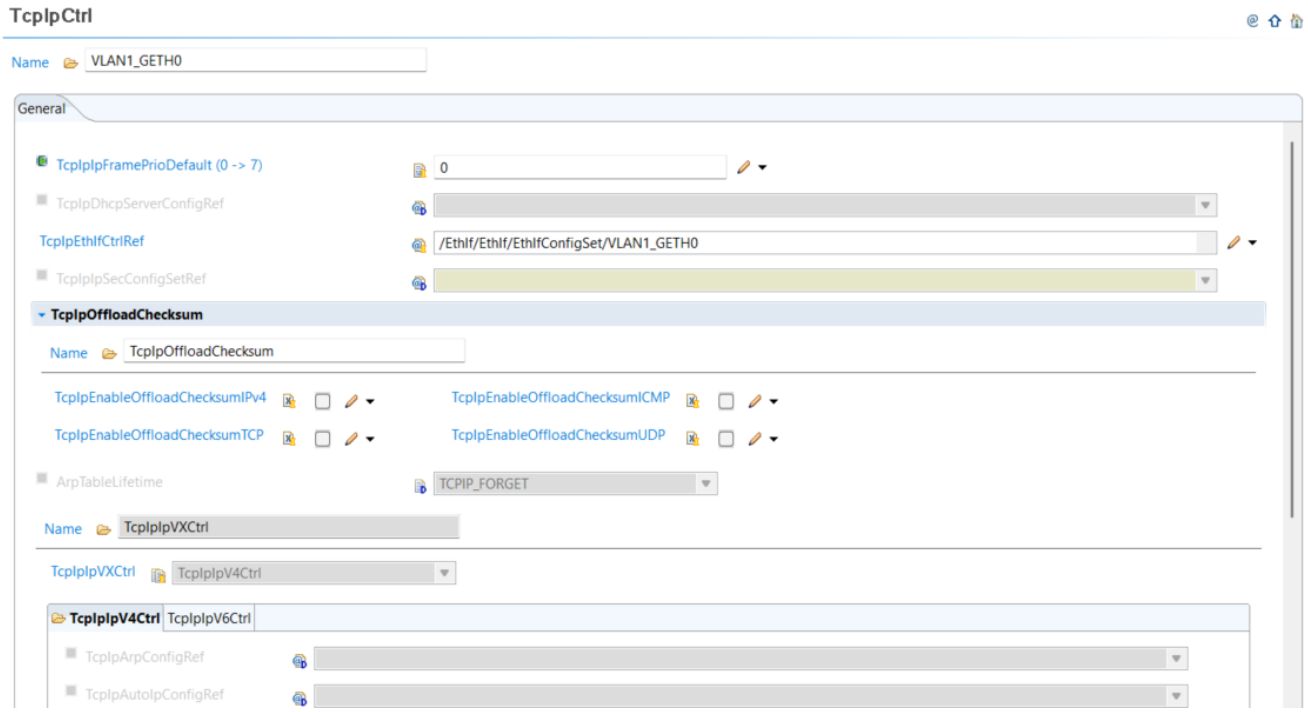


- Configure TcpIp/TcpIpLocalAddr configs

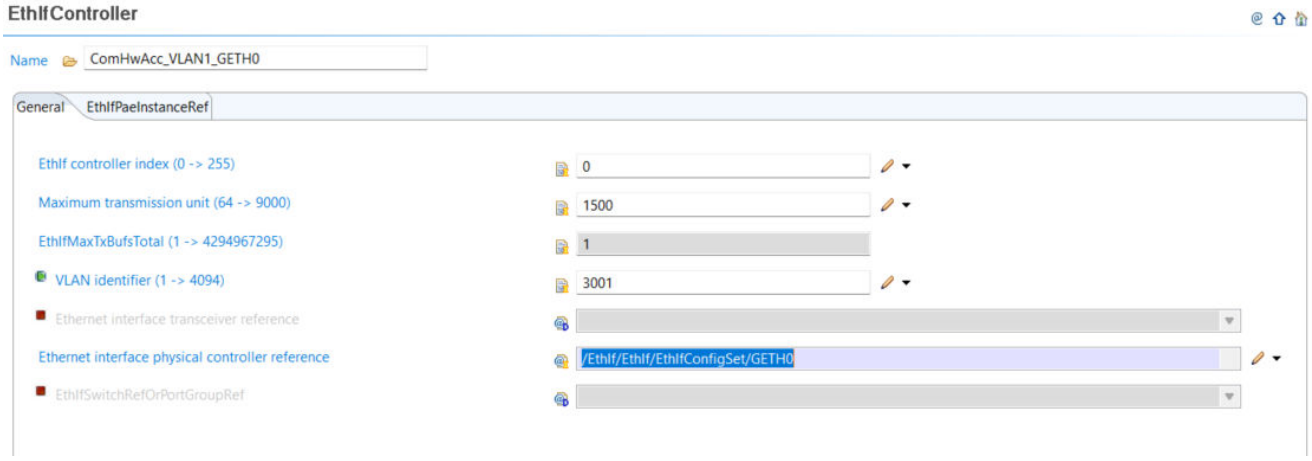


- Configure TcpIp/TcpIpCtrl, this will be linked to the EthIfCtrl

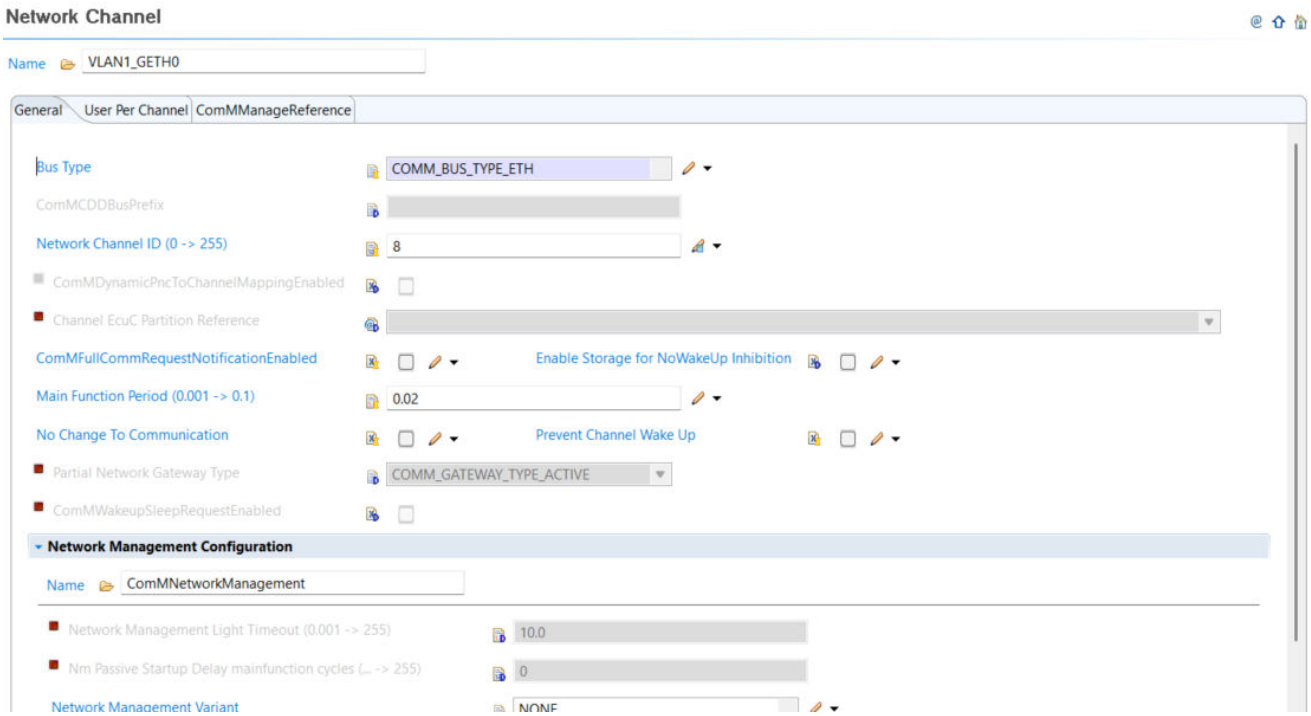
4 Development resources



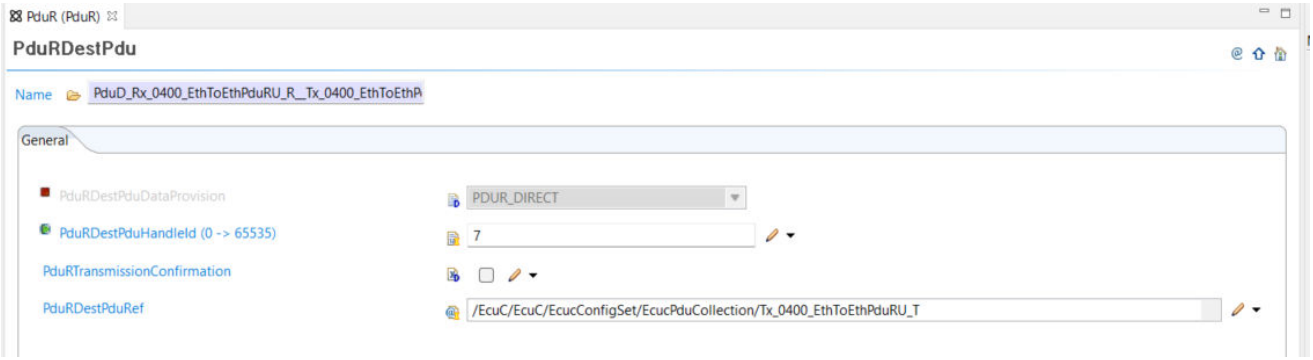
- Configure EthIf/EthIfController



- Configure ComM/ComMConfigSet/NetworkChannel and add a user to the channel (User Per channel, pointing to Configure ComM/ComMConfigSet/Users)

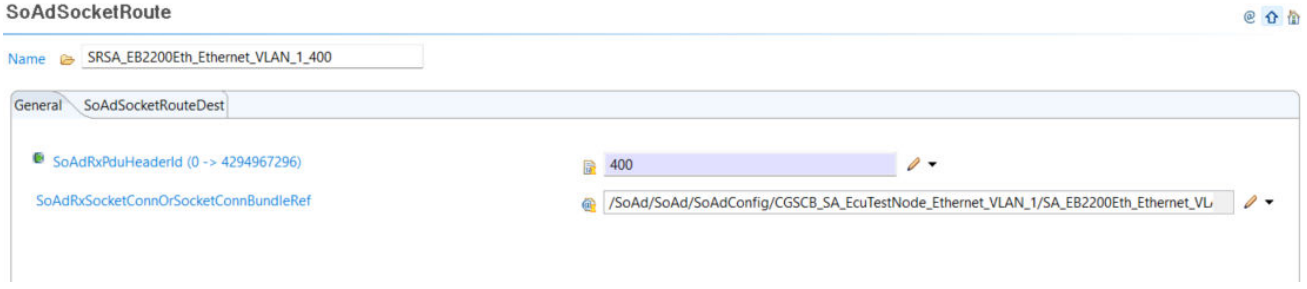


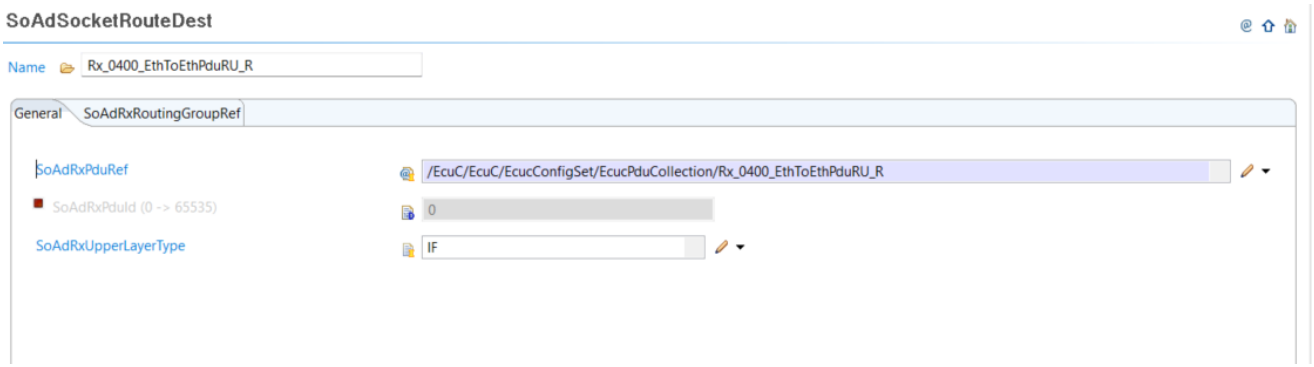
- If user opts to create a new channel it is required to run the multitask wizard to make the newly created COMM channel visible for Event/Task mapping and then to switch to the RTE editor EVENT mapping and map the newly created Event to mode handling task
- Configure PduR/PduRDestPdu



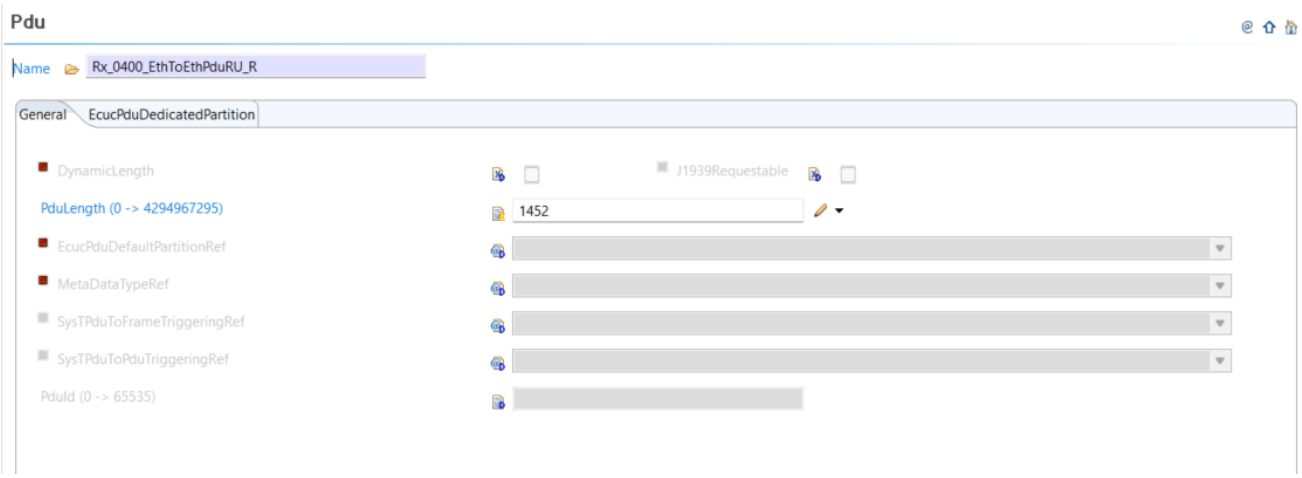
4.3.3 ETH receive

- Configure SoAd/SoAdSocketRoute alongside its destination

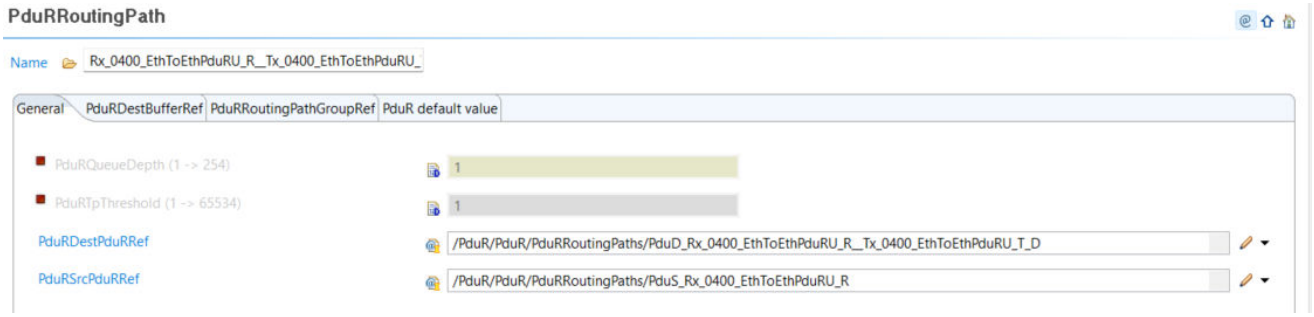




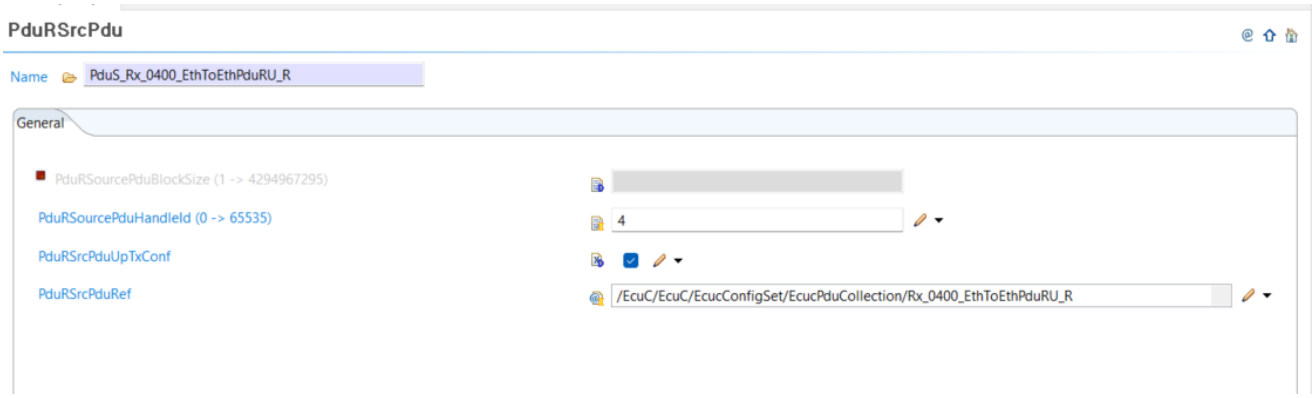
- Configure EcuC/EcuCPduCollection receive PDU



- Configure PduR/PduRRoutingPath and link the destination to CAN transmit or ETH transmit configuration



- Configure PduR/PduRSrcPdu



5 Support

5.1 Contact support

MyCases

In the event of any problems, issues, or questions, please do not hesitate to reach out to your designated Infineon contact or Field Application Engineer (FAE) for assistance. Alternatively, you can also submit a request through our ticketing system https://mycases.infineon.com/. For more information on how to use the myCases portal, please refer to this document.

Partners

By contacting support, you agree that your request and contact details are shared between Elektrobit Automotive GmbH, TASKING, and Infineon.

5.2 Troubleshooting

5.2.1 Compiler not found

<INSTALL_DIR>.\tresos\demos\GwcDemos\9.3.2-TC4DXX\GwCDemo\util>make -j

<INSTALL_DIR>./tresos/plugins/Compiler_TS_TxDxM1I0R0/make/TRICORE/tasking/Compiler_defs.mak:56: *** FILE DOES NOT EXIST CPP "C:/Program Files/TASKING/SmartCode v10.2r1/ctc"/bin/cptc.exe . Stop.

Do not enclose TOOLPATH_COMPILER in quotation marks, as quotation marks interfere with automatic path-suffix appending.

Compiler install directory should not have white spaces in it (e.g. C:\Program Files\Tasking\). This can break the make file path resolution.

5.2.2 CAN to ETH.IEEE1722 or ETH.IEEE1722 to CAN frame forwarding issues

Can to Eth in hardware and vice-versa requires EthQoSSupport enabled. Make sure config changes are saved (ctrl+s) after enabling the setting and before generating the code and running make -j.

5.2.3 No rule to make target

If running make -j command and getting error “No rule to make target <INSTALL_PATH>//Tresos/demos/GwcDemos/9.3.2-TC4DXX/GwCDemo/output/<output or generated file>, needed by …” ensure that make generate was successfully executed either via tresos gui or launch.bat make generate call. Deleting output directory and re-running make generate is recommended if the problem persists.

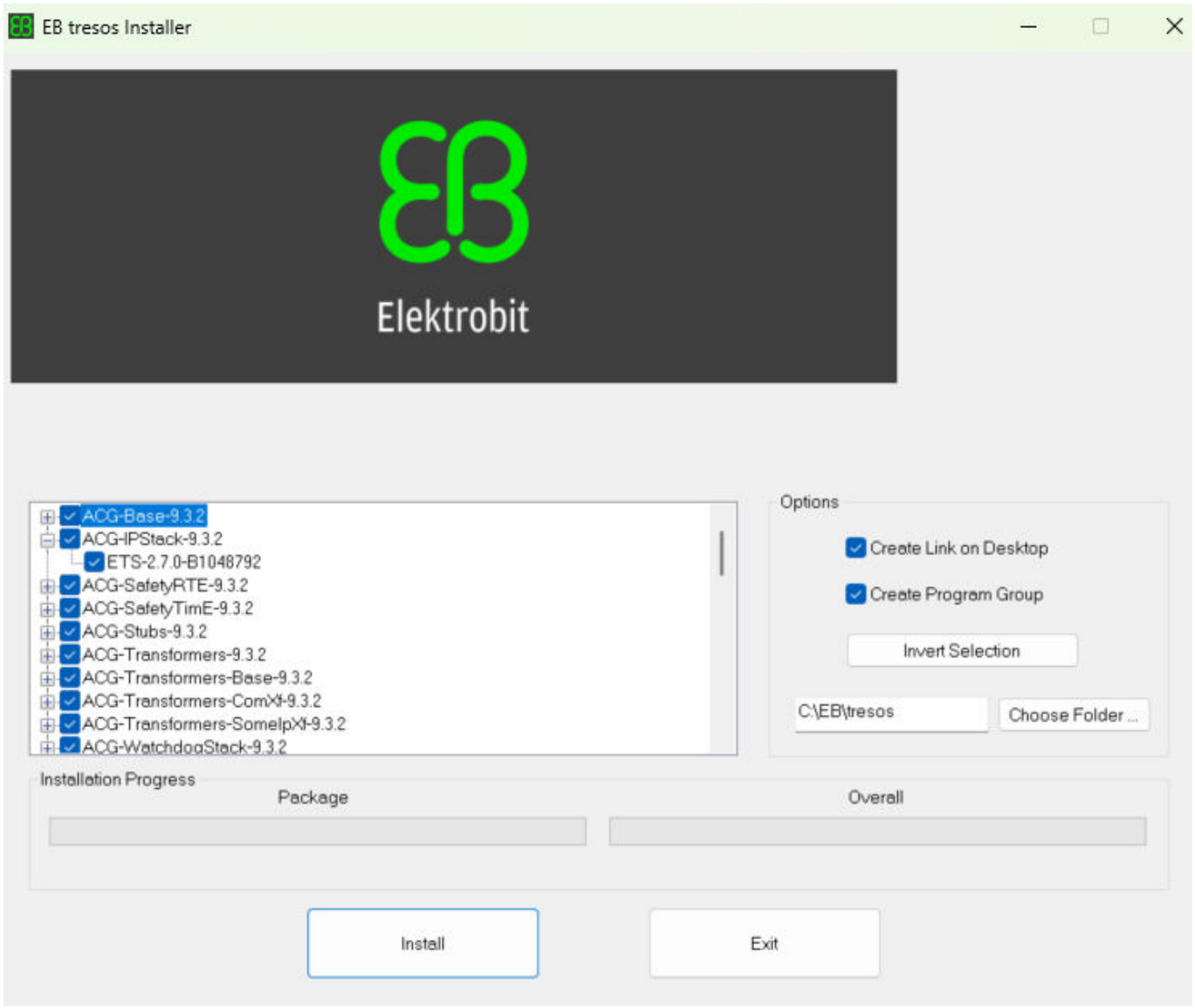
5.2.4 Missing modules

- If modules are missing/unavailable during the importing of the Gwc_Demos (Upgrade/Remove Module Configuration), user should confirm that modules are installed within the plugins folder.
  - .\tresos\plugins\<PluginName>_TS_VERSION. For example .\tresos\plugins\Compiler_TS_TxDxM1I0R0

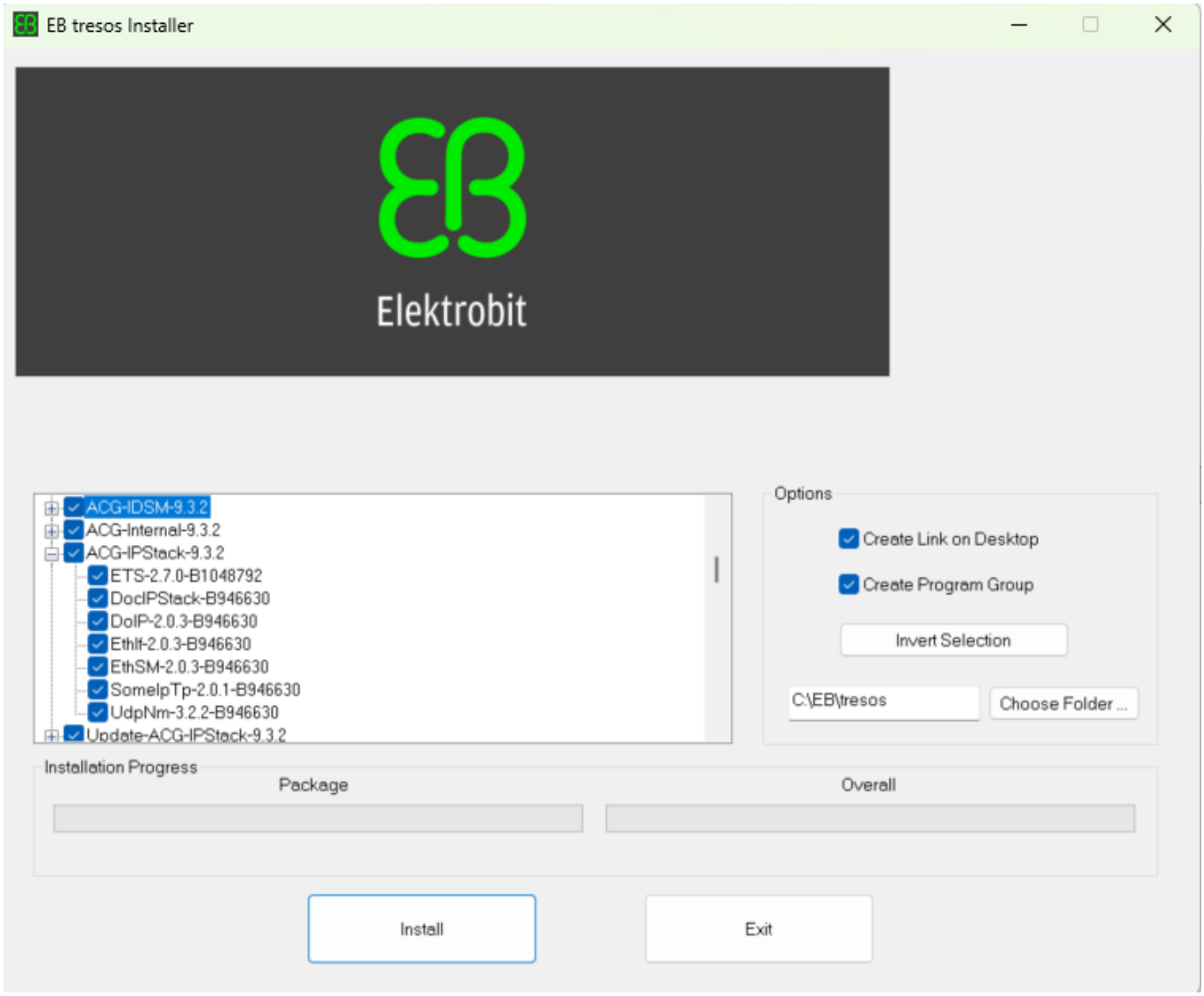
This can occur if user tries to install Tresos studio with setup.exe without unzipping software component zip packages or without installing modules afterwards (rerunning installer after unzipping archives)

Recommended to use the setup.bat that extracts all the modules.

5 Support


EB tresos Installer
Elektrobit
ACG-Base-9.3.2
ACG-IPStack-9.3.2
ETS-2.7.0-B1048792
ACG-SafetyRTE-9.3.2
ACG-SafetyTimE-9.3.2
ACG-Stubs-9.3.2
ACG-Transformers-9.3.2
ACG-Transformers-Base-9.3.2
ACG-Transformers-ComXf-9.3.2
ACG-Transformers-SomeIpXf-9.3.2
ACG-WatchdogStack-9.3.2
Options
Create Link on Desktop
Create Program Group
Invert Selection
C:\EB\tresos
Choose Folder ...
Installation Progress
Package
Overall
Install
Exit

5 Support



1. setup.bat with modules found

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