BIFACES Base Projects for AURIX™ 2nd Generation Microcontrollers

Release Notes

Product name: BIFACES Base Projects for AURIX™ 2nd Generation Microcontrollers
Release number and version: V1.20.0
Type of release: Demo
Release method: MyInfineon Colaboration Platform
AUTOSAR specification: Not Applicable
Compiler support: Please refer to the section 2, Tool information
Processor platform: TriCore™
Date: 2025-05-29
Previous release number and version: V1.19.2

About this document

Scope and purpose

This document details the release contents, all known issues in the release, and the changes from the last release, together with information on tools, compiler options, and support packages.

New issues identified since the last release of this document are detailed first, followed by all issues identified in previous versions of this release.

Note: This release is not intended for production use.

Note: This release, BIFACES Base Projects for AURIX™ 2nd Generation V1.20.0, is tested on compilers which are listed at section 2, Tool information.

***Attention:* Refer to the Limitations and deviations chapter before using the software for integration.**

Intended audience

This document is intended for anyone using the AURIX™ 2nd generation microcontrollers.

Reference documents

- *None*

Table of contents

1 Release contents

1.1 Release overview

This release is for demonstration purposes only. The software can be used as reference software along with microcontroller hardware documentation

1.2 Released items

The release contains the BaseProjects_TC3xx_V1_20_0.exe file.

The contents of this file include Source code for BIFACES Base projects, User manual for the Base projects.

Table 1 ***Release zip contents***

Package content	Description
BaseProjects_TC3xx_V1_20_0.exe	**Installer for BIFACES Base projects** This is a self-extractor tool to extract following: • ***.metadata****: Folder for the eclipse workspace metadata* • ***BaseFramework_<derivate>****: Folders for Base Projects for the microcontroller derivate, where <derivate> refers to the microcontroller derivates listed at section 2.2, Supported sub-derivates below.* • ***Libraries****: Folder for the superset source code for TC3xx* • ***_Examples_TC3xx****: Folder for example files. These are source files that are to be merged by user to the applicable base project to create executable example* **BaseTemplateProjects.pdf**: User manual for base template projects

1.3 Safety

This product is collection of source file. The source files are subset of iLLD and application files. These files are with not for productive use.

Attention: **These files are not developed with ISO26262 development requirements, and no safety relevant documentation is provided with this product.**

1.4 Compatibility

This product is tested with tools and their versions which are listed with the section 2 Tool information below.

Note: It is not backward compatible.

2 Tool information

The tool information is provided in the following table.

Table 2 *Tool details*

Tool description	Version details
BIFACES (Build Environment)	V1.0.2
Hightec GNUC (Compiler)	V4.9.3.0
Tasking (Compiler)	v6.3r1
Diab (Compiler)	V5.9.8.4
Green Hills (Compiler)	2018.5.5
Keil (Compiler)	V5
GNUC GCC	TriCore_GCC_11_3_mingw
Hightec LLVM	V9.1.2

2.1 Compiler options

Please refer to the document BaseTemplateProjects.pdf, which is part of the installation, section "Used Compiler Tool-chain Options"

2.2 Supported sub-derivates

This product supports following listed derivates of AURIX™ 2nd generation microcontrollers:

- *TC33A*
- *TC33AED*
- *TC36A*
- *TC38A*
- *TC39B*
- *TC37xA*
- *TC37xAED*
- *TC35xA*

The template project is provided for the superset device of each derivative as mentioned in Table 3. User shall do the necessary adaptations required to use it for the respective devices.

Table 3

Supported superset derivative	User to do adaptations for derivative
TC38xA	TC3E
TC39xB	-
TC35xA	-

3 Summary of changes

This chapter describes the fixes for issues from previous version(s).

3.1 Issues fixed in release V1_20_0

Please refer to the iLLD release note for V1.20.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environment

Table 4

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.20.0	Updated

3.2 Issues fixed in release V1_19_2

Please refer to the iLLD release note for V1.19.2 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environment

Table 5

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.19.2	Updated

3.3 Issues fixed in release V1_19_1

Please refer to the iLLD release note for V1.19.1 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environment

Table 6

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.19.1	Updated

3.4 Issues fixed in release V1_19_0

Please refer to the iLLD release note for V1.19.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environment

Table 7

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.19.0	Updated
Tools Environment	Config xml modified	The installer will add new folder named “Libraries” in workspace, which contains the superset code for TC3xx. The BaseSw folder is

Module	Issue description	Fix
		removed from Basetemplate project of all the devices and will now pick the drivers from the external “Libraries” folder. The config xml is modified by adding link to this external “Libraries” folder.

3.5 Issues fixed in release V1_0_1_18_0

Please refer to the iLLD release note for V1.0.1.18.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environment

Table 8

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.0.1.18.0	Updated
Tools Environment	Support for Hightec LLVM compiler	Hightec LLVM compiler is added to toolchains

3.6 Issues fixed in release V1_0_1_17_0

Please refer to the iLLD release note for V1.0.1.17.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environment

Table 9

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.0.1.17.0	Updated
Tools Environment	Support for Gnuc Gcc compiler	New Gnuc Gcc compiler is added to toolchains

3.7 Issues fixed in release V1_0_1_16_0

Please refer to the iLLD release note for V1.0.1.16.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environmnet

Table 10

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.0.1.16.0	Updated

3.8 Issues fixed in release V1_0_1_13_0

Please refer to the iLLD release note for V1.0.1.13.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environmnet

Table 11

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.0.1.12.0	Updated
Template Project	Template project for TC37xA Added	Fixed

3.9 Issues fixed in release V1_0_1_12_0

Please refer to the iLLD release note for V1.0.1.12.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environmnet

Table 12

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.0.1.12.0	Updated
Eclipse CDT workspace	Added default templates for C source, C header and MarkDown files	Updated
Linker files	Fixed an aligment bug in the individual elf per core linker files for HIGHTEC	Updated

3.10 Issues fixed in release V1_0_1_11_0

Please refer to the iLLD release note for V1.0.1.11.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environmnet

Table 13

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.0.1.11.0	Updated
Linker files	Updates to linker files to support new version of TASKING	Updated
Config_< Compiler>.mk files	Updates to GHS and DCC compiler. mk files and Config.xml files	Updated
SCR example	Support for keil compiler for SCR	Updated

Module	Issue description	Fix
	example	

3.11 Issues fixed in release V1_0_1_10_0

Please refer to the iLLD release note for V1.0.1.10.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environmnet

Table 14

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.0.1.10.0	Updated
Linker files	Updates to linker files to fix minor bugs	Updated
Application startup config files	Updates to Ifx_Cfg_Ssw and Ifx_Cfg_SswBhmd files to fix minor mismatches	Updated
Application files	Updates to Cpu0_main file to fix alignment issue	Updated

3.12 Issues fixed in release V1_0_1_9_0

Please refer to the iLLD release note for V1.0.1.10.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environmnet

Table 15

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.0.1.10.0	Updated
Linker files	Updates to linker files to fix minor bugs	Updated
Config_<Compiler>.mk files	Updates to GHS and DCC compiler. mk files and Config.xml files to be indentical across all compilers	Updated
Default Directory	The Default installation directory changed to Aurix2G_Workspace_<release_version>	Updated

3.13 Issues fixed in release V1_0_1_8_0

Please refer to the iLLD release note for V1.0.1.8.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environmnet

Table 16

Module	Issue description	Fix

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.0.1.8.0	Updated

3.14 Issues fixed in release V1_0_1_7_0

Please refer to the iLLD release note for V1.0.1.7.0 for the issues that are fixed particularly with infrastructure driver.

Below table provides the details of changes in the BIFACES template projects towards the project environmnet

Table 17

Module	Issue description	Fix
Infrastructure Drivers	Update to iLLD version V1.0.1.7.0	Updated
Eclipse CDT workspace	Update required for the eclipse oxygen release version	The updates are done for the project workspace and the project metadata
Linker files	Updates to the linker files to fix minor bugs and indentation	Updated
Linker files	Updates to the linker files to support individual elf files creation	Updated

4 Known issues

There are no known issues concerning to the Bifaces Template projects. Towards the known issues for infrastructure files which are taken from iLLD, please refer to the iLLD release note for the version V1.20.0

5 Limitations and deviations

This chapter describes the limitations and deviations due to software/hardware design constraints.

5.1 Limitations

There are no limitations towards the established usage of the project environment for the purpose of demonstrating AURIX™ 2nd generation microcontroller hardware and software products.

5.2 Deviations

There are no deviations towards the established usage of the project environment for the purpose of demonstrating AURIX™ 2nd generation microcontroller hardware and software products.

5.2.1 HIS-MISRA violations

Not applicable for the product

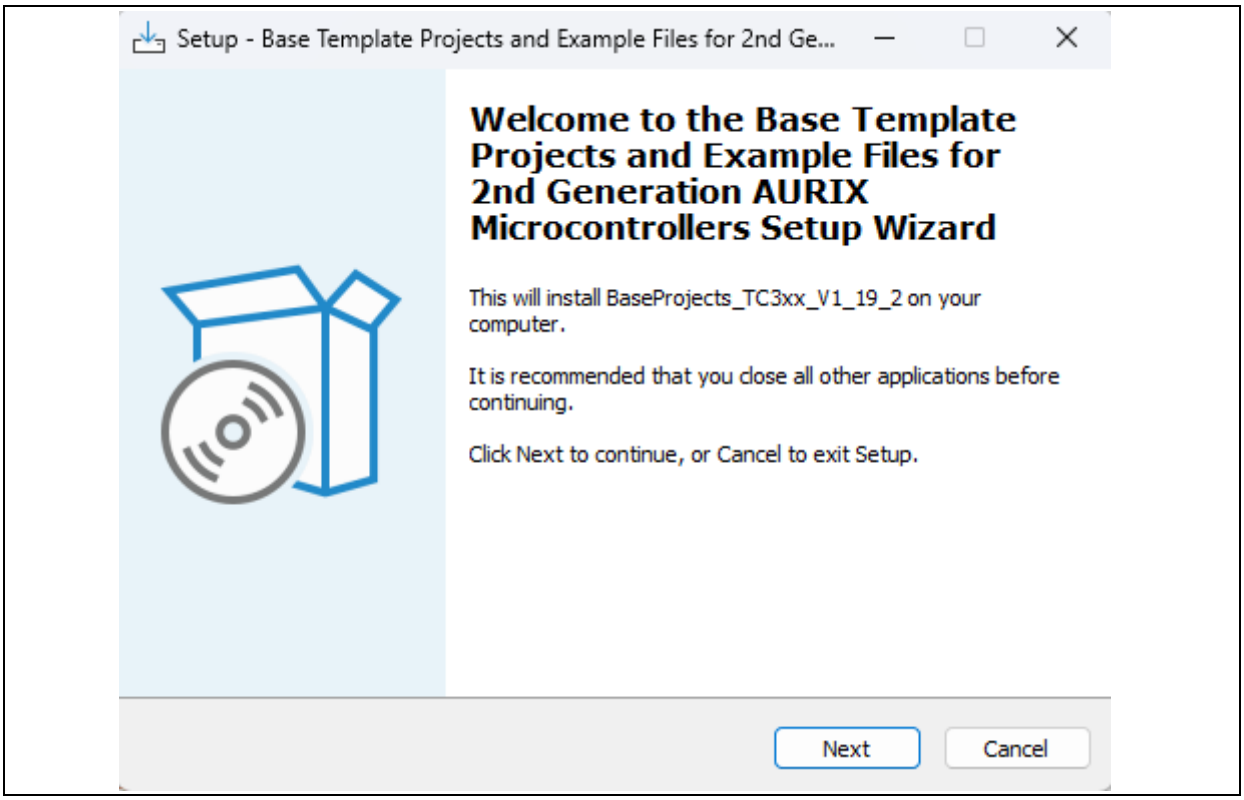
6 Installation

Following are the installation steps:

1. Run the installer executable:

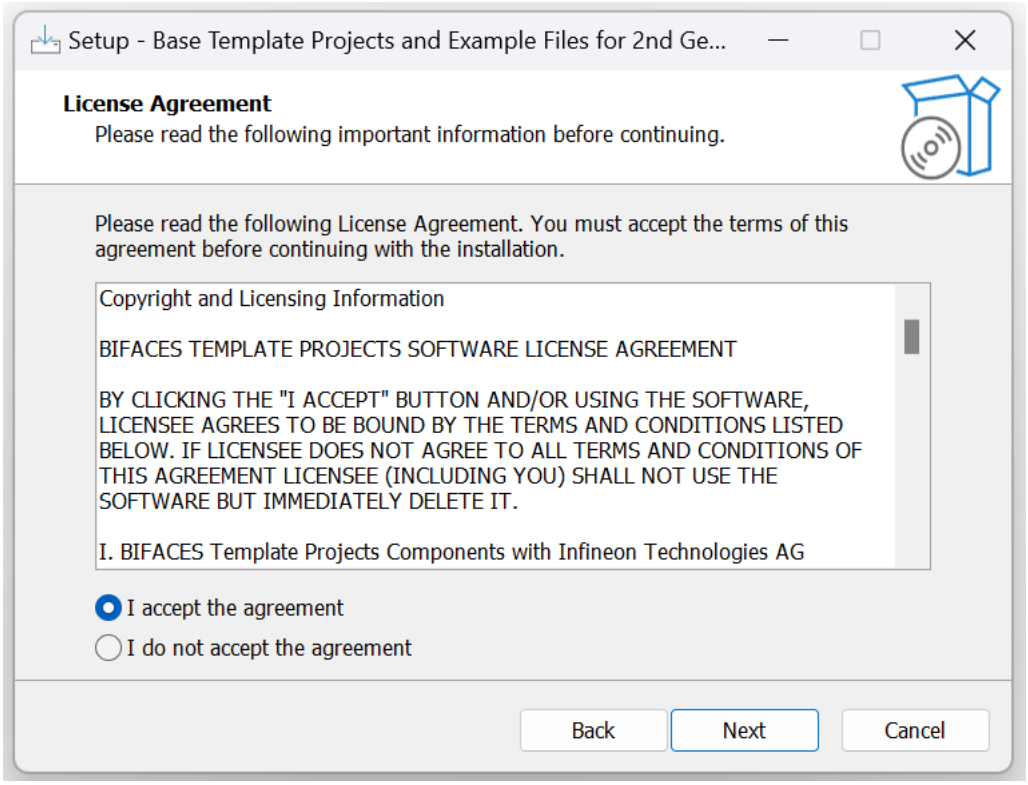
Run the executable to which leads to the Setup Wizard as below:

Figure 1 ***Setup Wizard***



Click the button "Next >", that leads to the License Agreement page as below:

Figure 2 ***Setup- License Agreement***

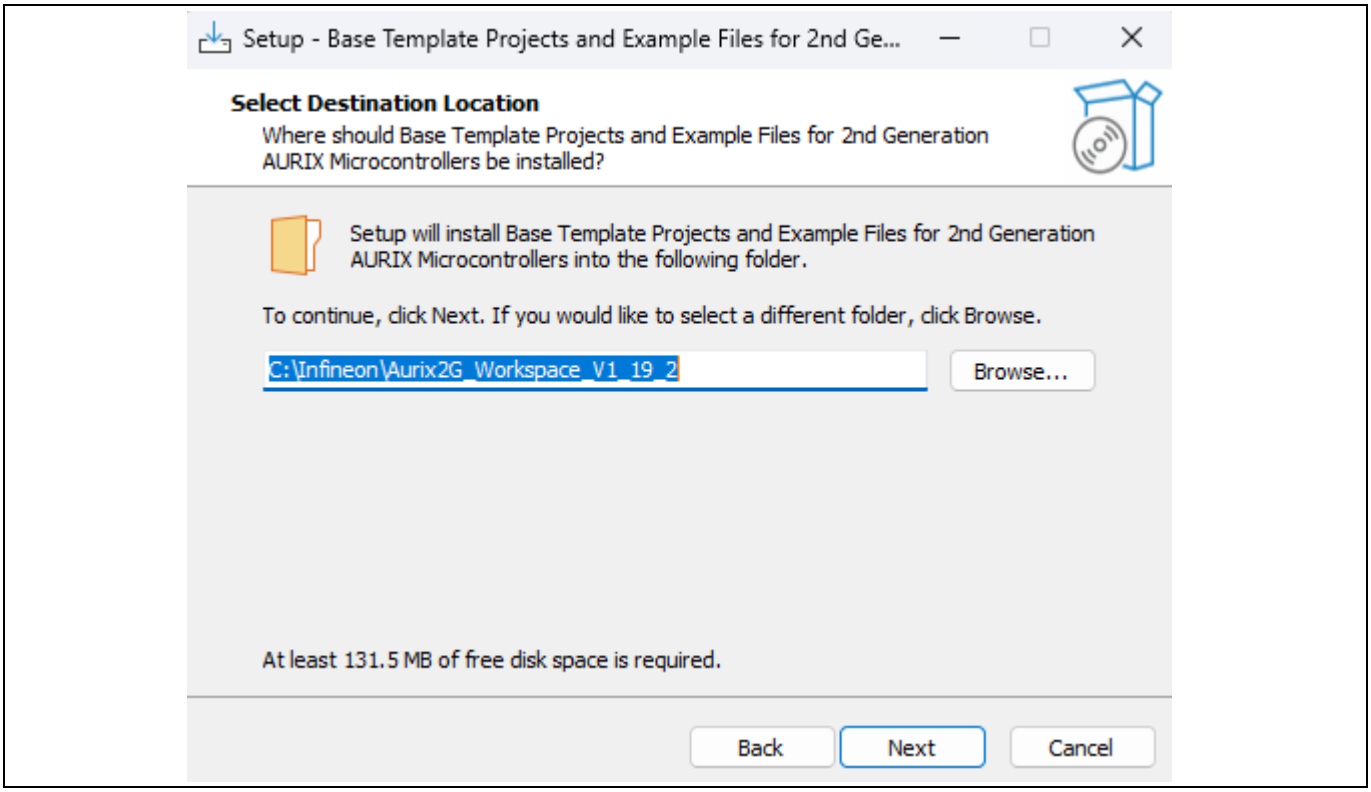


Please read the License terms by scrolling down.

*Once the license terms are found acceptable, please select the radio-button against "**I accept the agreement**". Only then the "**Next**" button is enabled.*

*Click button "**Next**" to go to the page Select Destination Location as below:*

Figure 3 *Setup- Select Destination*

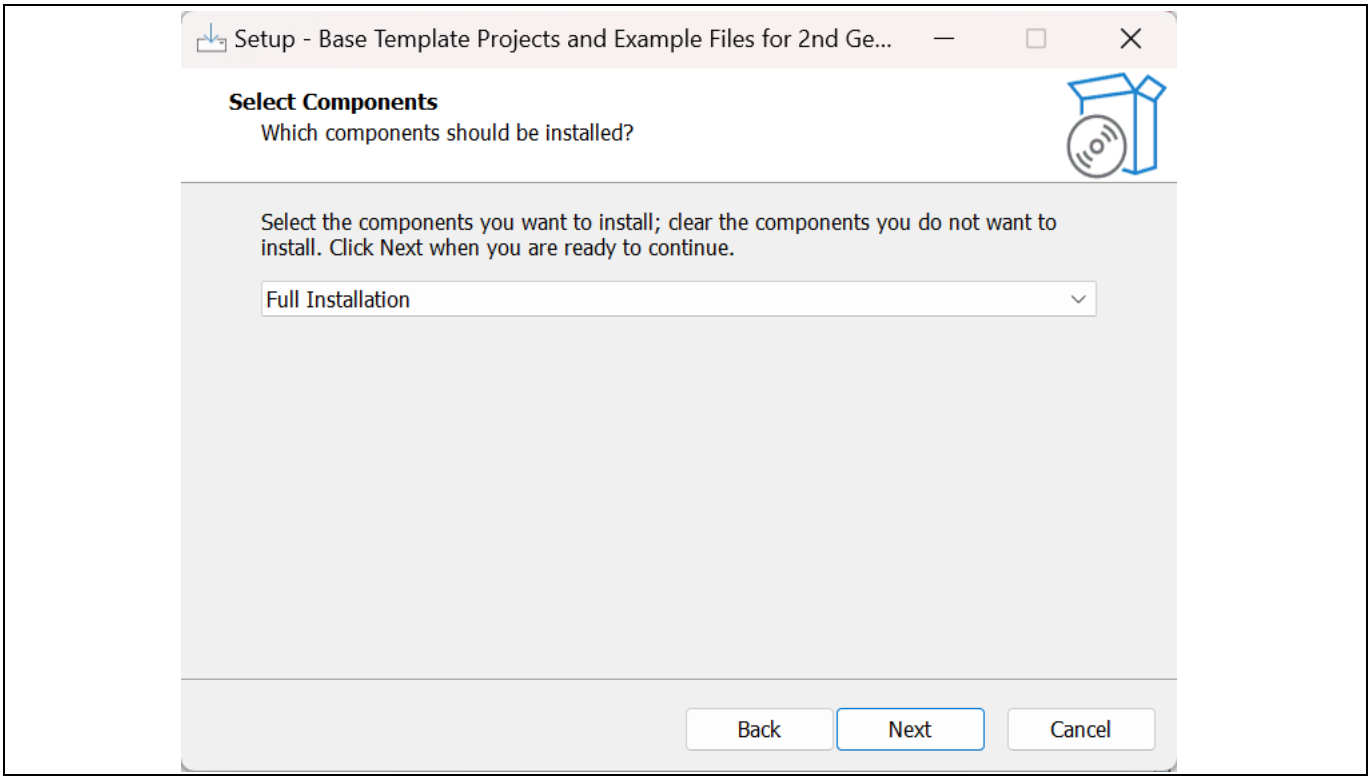


*This allows you to select the installation folder, where BIFACES template projects are copied. By default, the destination folder is selected as "C:\Infineon\Aurix2G_Workspace_<version>". User could click "**Browse**" button to install to different installation folder.*

Note: If you have the destination folder already, content will be overwritten.

*Click "**Next**" to go to the **Select Components** page as below:*

Figure 4 *Setup Full Installation*

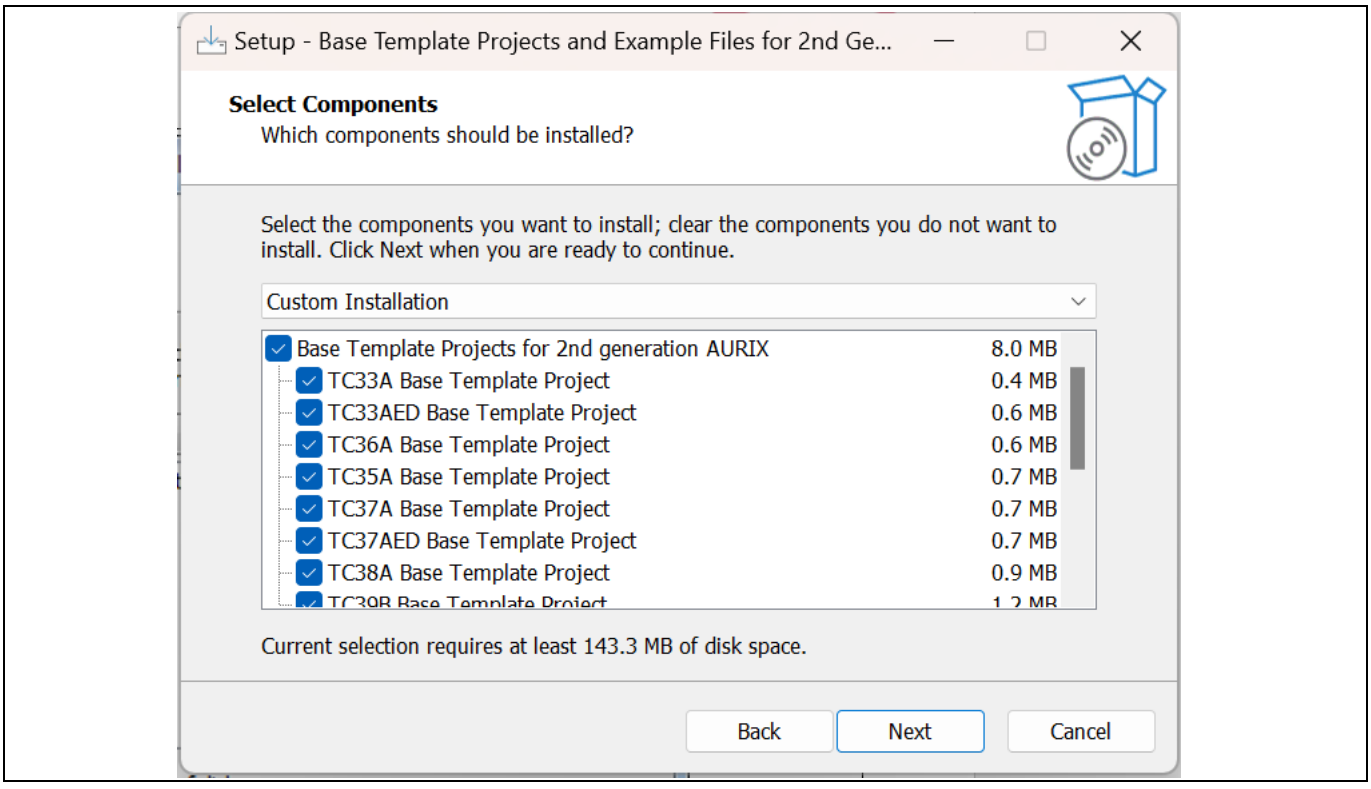


Select full installation if you want to select all the components.

Else select only the Custom Installation to select the components you would like to install. You have selection possibility for individual derivate specific base projects and selection possibility for each example.

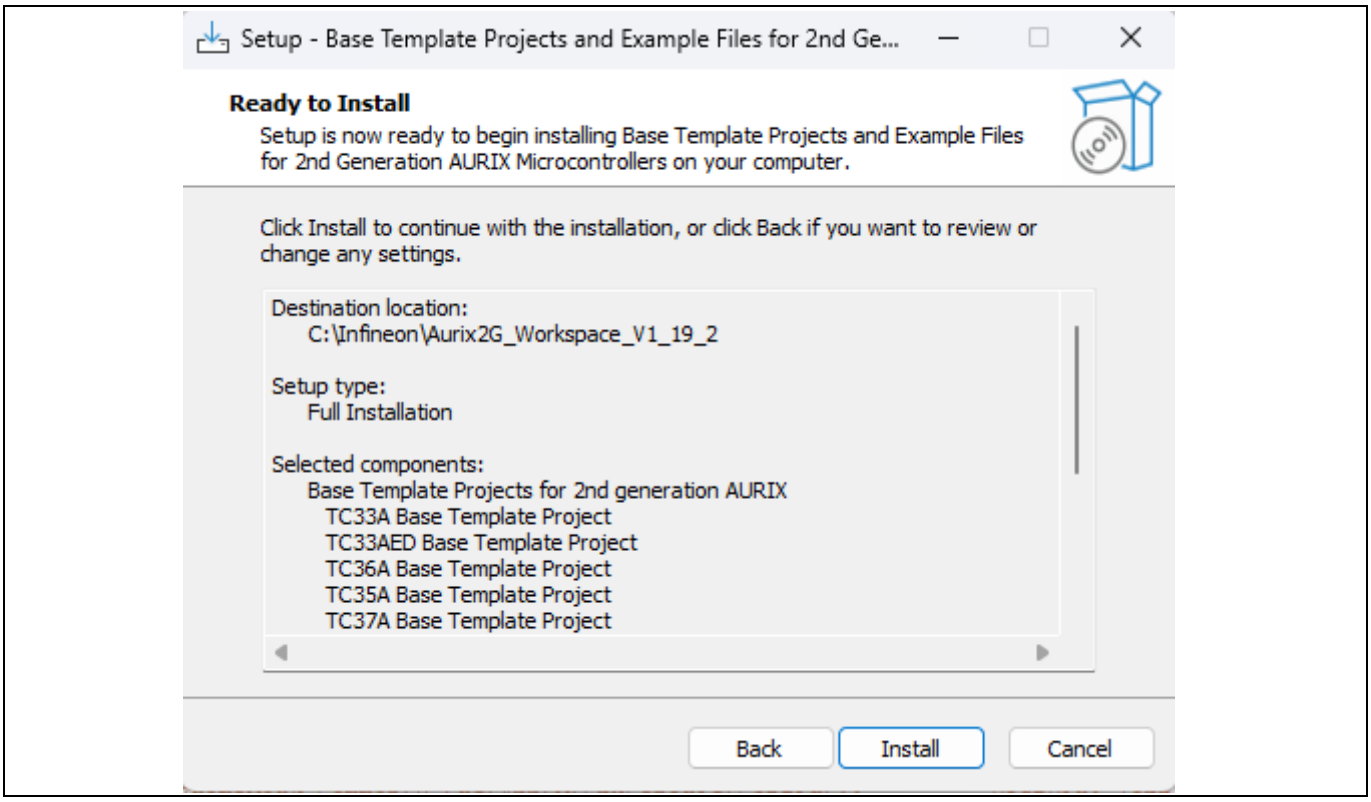
This page looks as shown below:

Figure 5 *Setup- Component Selection*



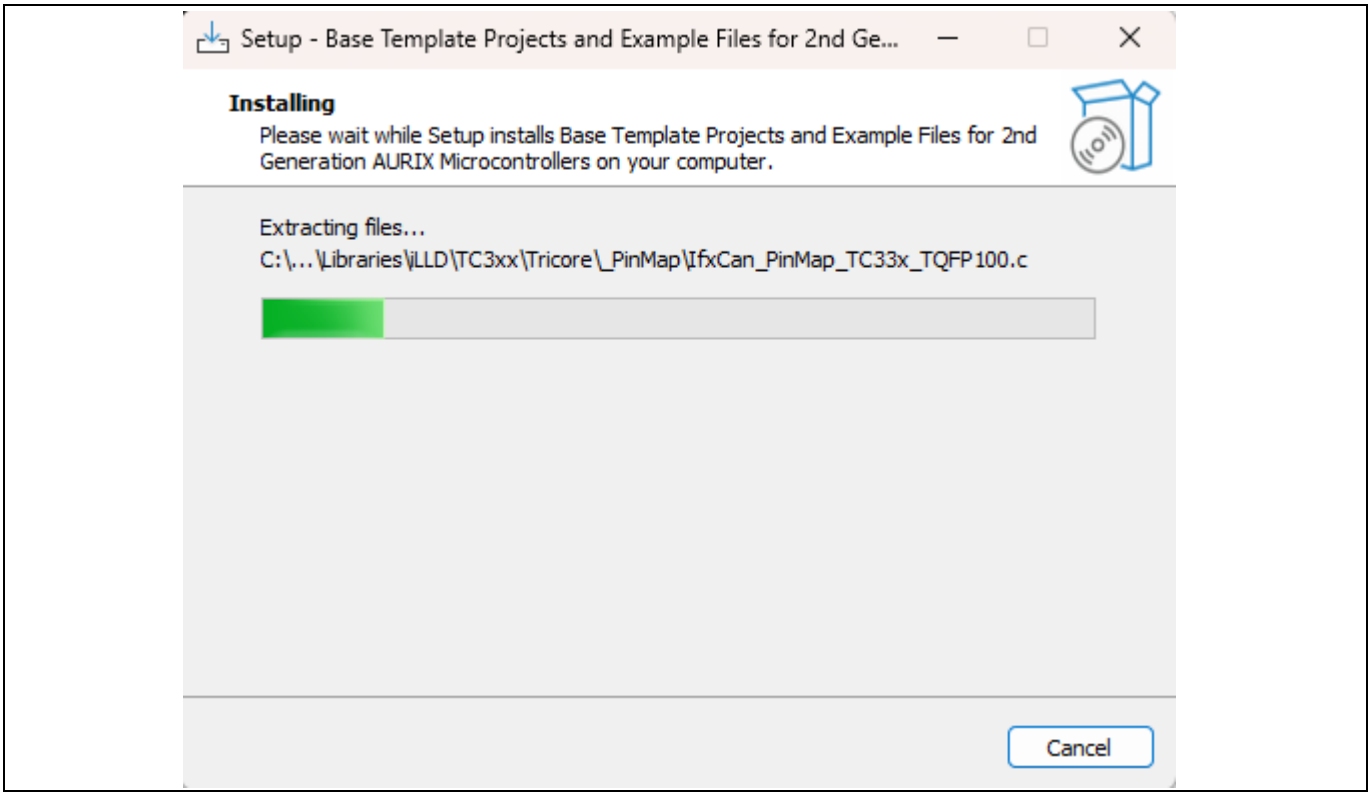
*Click the button "**Next**" to go to the **Ready to Install** page as below:*

Figure 6 ***Setup- Ready to Install***



*Click the button "**Install**" to start copy process. This results in the following page:*

Figure 7 ***Setup- Installing***

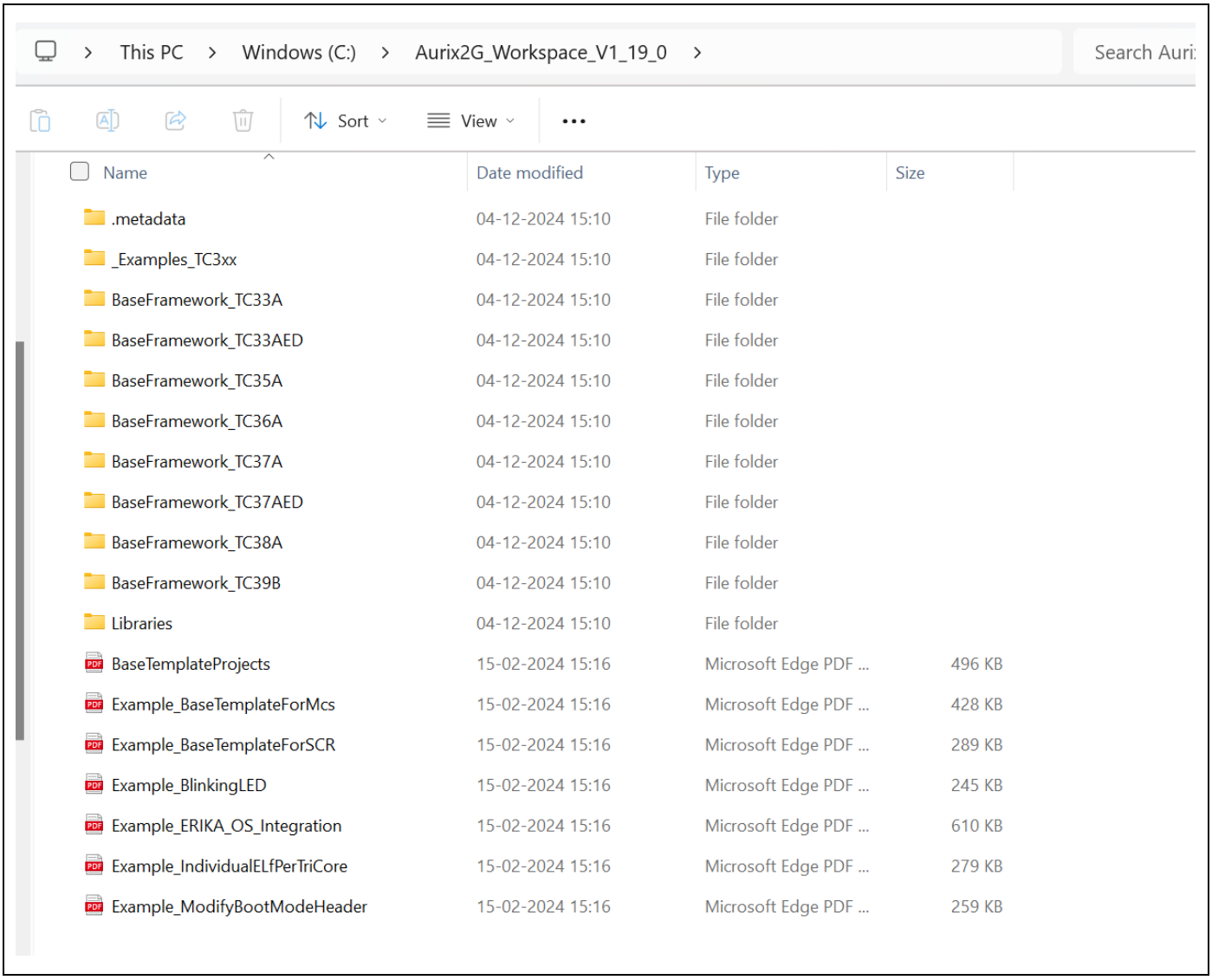


This activity should result in the destination folder as selected, created and files are stored as eclipse workspace.

*Now you are ready to use the template projects. You could proceed to read the user manual for the base template projects that is available at the root folder as **BaseTemplateProjects.pdf**.*

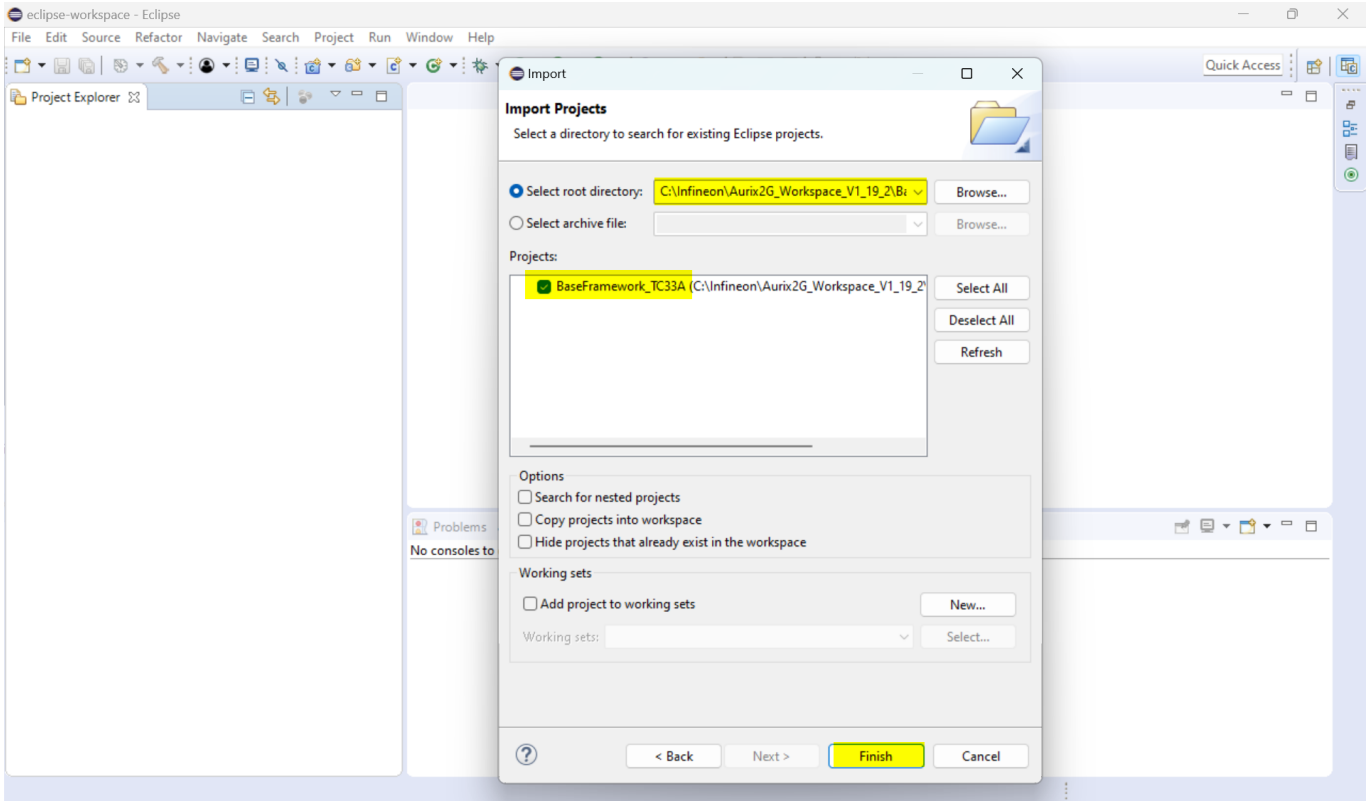
6.1 Integration

After installation of the base projects, the destination directory will have the basetemplate and example project for TC3xx

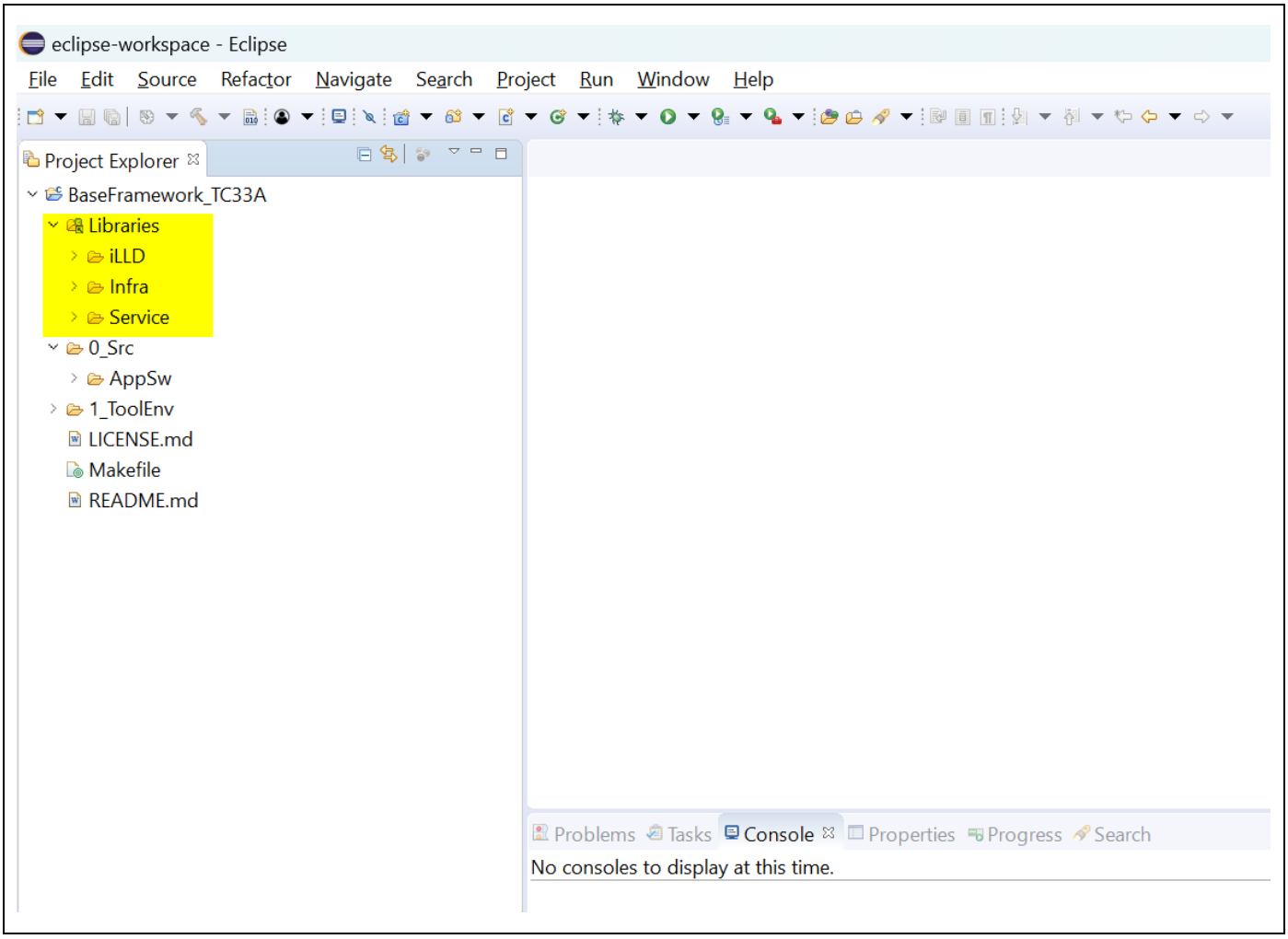


Follow the below steps to compile the template project

1. *Import the template project from the installation directory to bifaces*

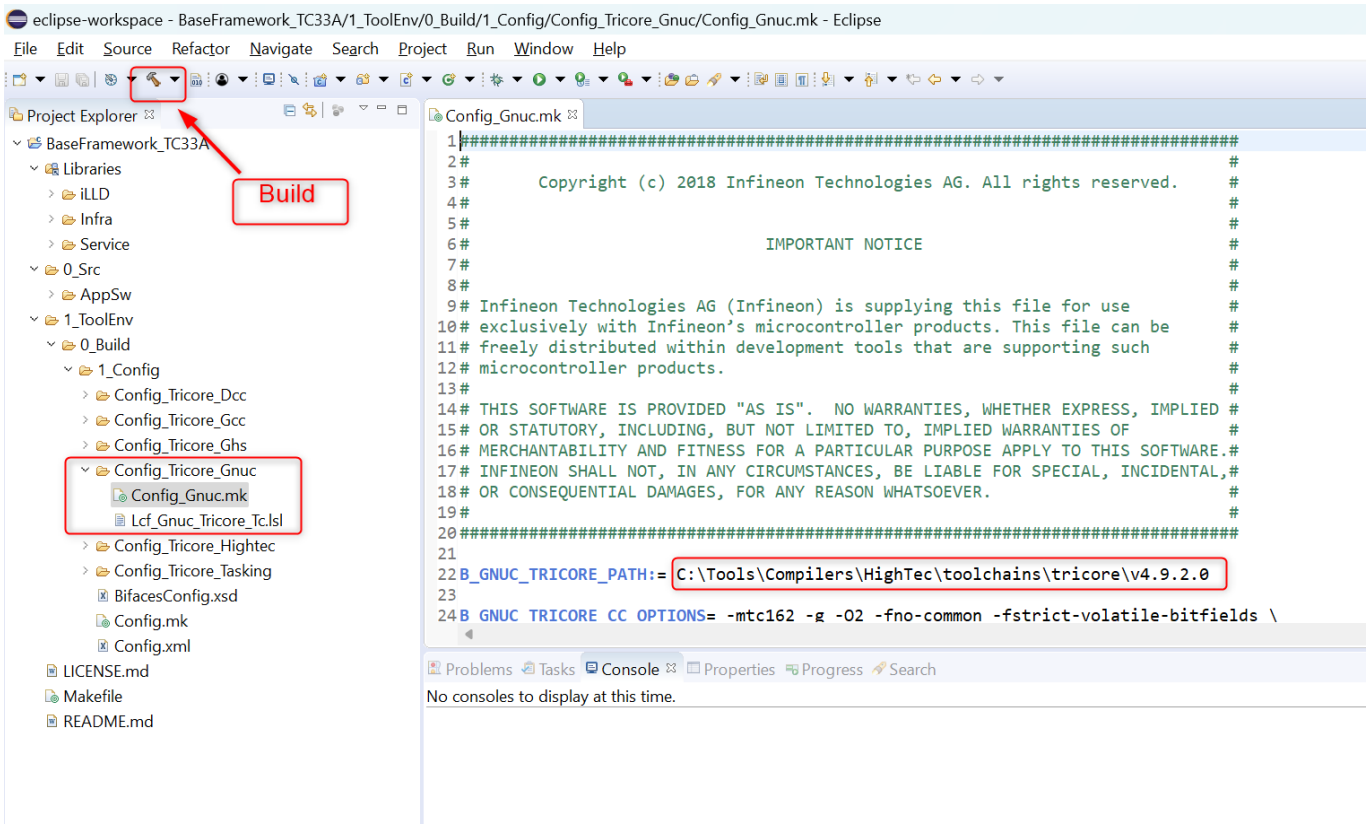


The BaseSw is removed from the template project and link is created to the superset source code folder within the workspace (installation directory) named “Libraries”

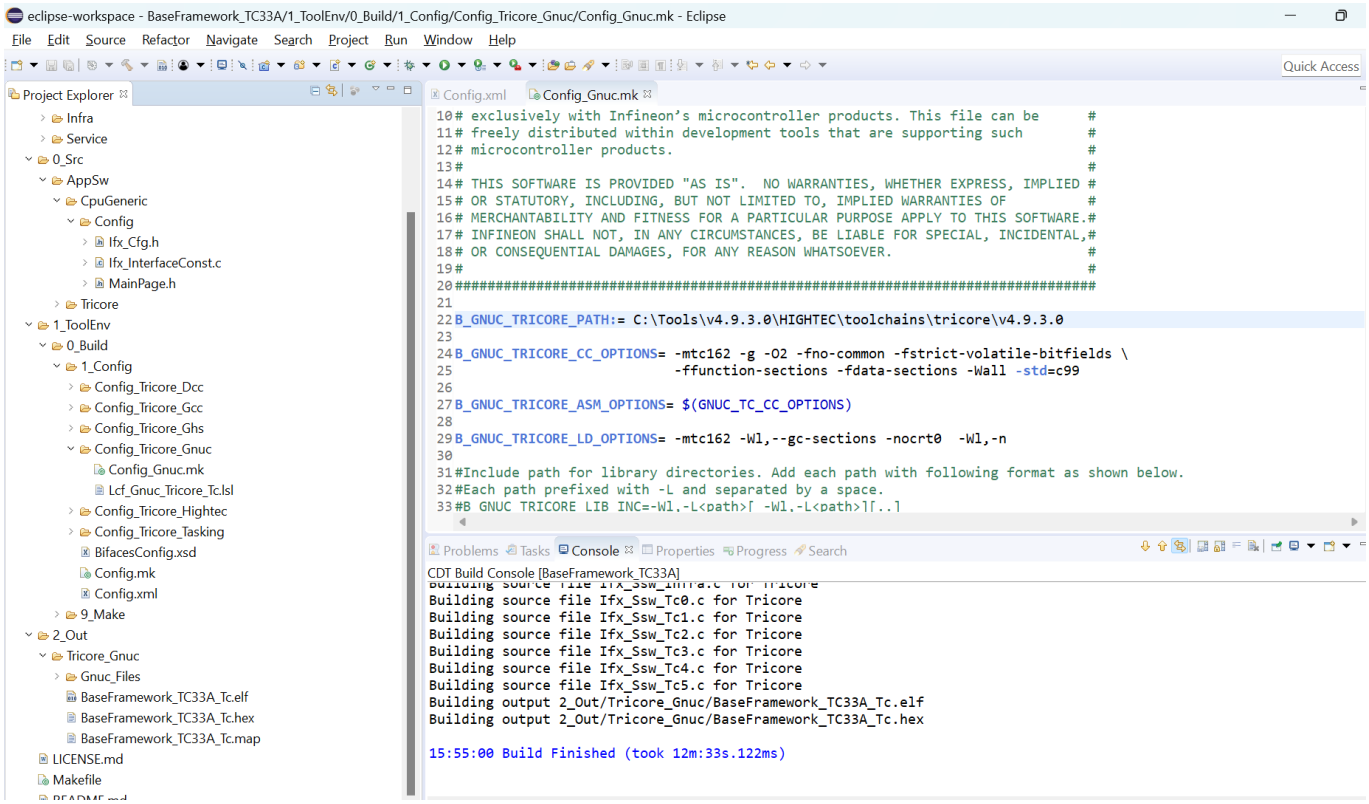


Update the compiler path in the make file and compile the project

Note: Default primary toolchain is set to Gnuc in config.xml. To use different compiler, update the primary toolchain to desired compiler in config xml.



Upon successful completion of build, the elf file will be generated in 2_Out folder



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