# 2-Level PV Boost Early Access Pack

## Getting started guide

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# 1 Introduction

The 2-Level Photovoltaic (PV) Boost Early Access Pack (EAP) provides the source code of the control software for implementing Infineon's power conversion reference design of 2-level PV boost converter stages. This package is available only to a select set of customers prior to wide availability. Customers with access to the package can download the 2-Level PV Boost EAP from Infineon Developer Center (IDC).

The 2-Level PV Boost Early Access Pack is based on the ModusToolbox™ pack. It contains:

- Prerelease of the new board support packages (BSP: KIT_REF_CLBXMC7PEC), code examples, and new middleware
- Manifest files that enable new BSPs, code examples, and middleware

Please note that only one early access pack can be installed at a time. A given version of an early access pack is only applicable for a specific version of the ModusToolbox™ pack. If a new version of the ModusToolbox™ is released while there is an active early access pack available, the early access pack may need to be updated based on its contents.

# 2 Installing the early access pack (EAP)

## 2.1 Prerequisite

ModusToolbox™ v3.4 or later

## 2.2 Download the EAP

Download the latest version from Infineon Developer Centre (IDC).




Figure 1 **Download the required EAP version**

## 2.3 Install the EAP

After downloading the installer, double-click the .exe file to start the installation process and follow the steps in the Setup wizard.

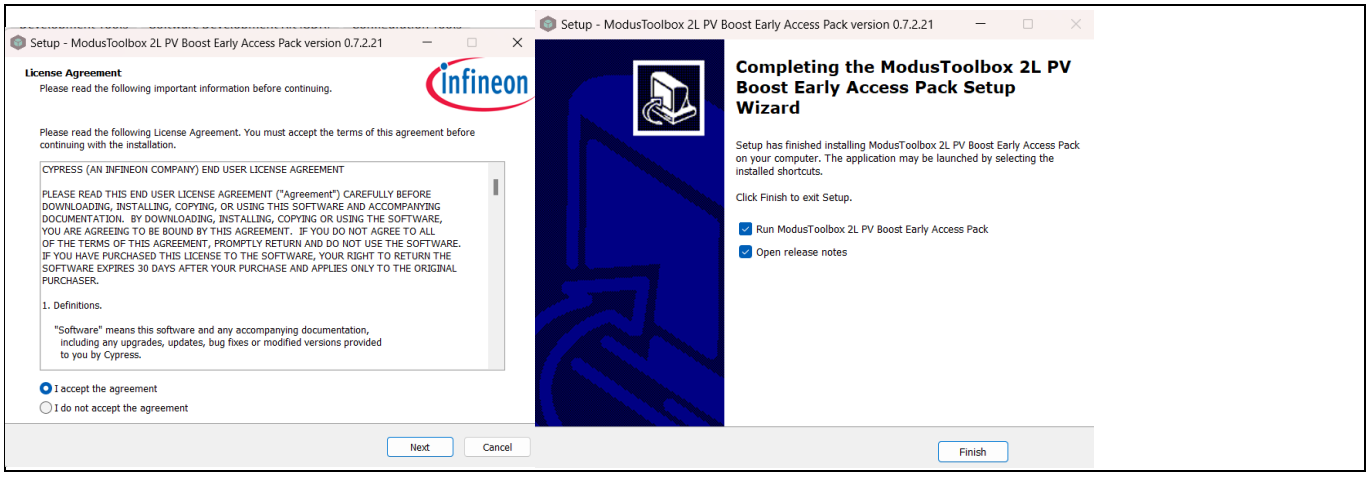



Figure 2 **Setup wizard**

After installing the EAP, add the following environment variable in your system:

```
MTB_ENABLE_EARLY_ACCESS=com.ifx.tb.tool.modustoolboxpack2lpvboost
```

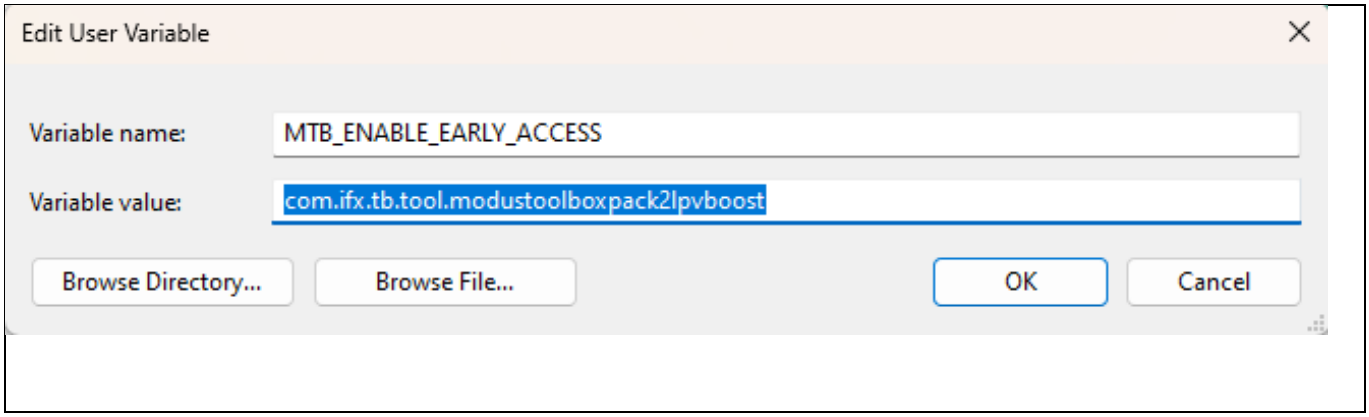



Figure 3 **Edit the user variable**

# 3 Creating the application

The ModusToolbox™ tools package provides Project Creator as both a GUI tool and a command-line tool.

## 3.1 Use the Project Creator GUI

1. Open the Project Creator GUI tool. There are several ways to do this, including launching it from the dashboard or from inside the Eclipse IDE. For more details, see the Project Creator user guide (locally available at *{ModusToolbox™ install directory}/tools_{version}/project-creator/docs/project-creator.pdf*).
2. Select **KIT_REF_CLBXMC7PEC** from the **XMC™ BSPs** section and click **Next**.

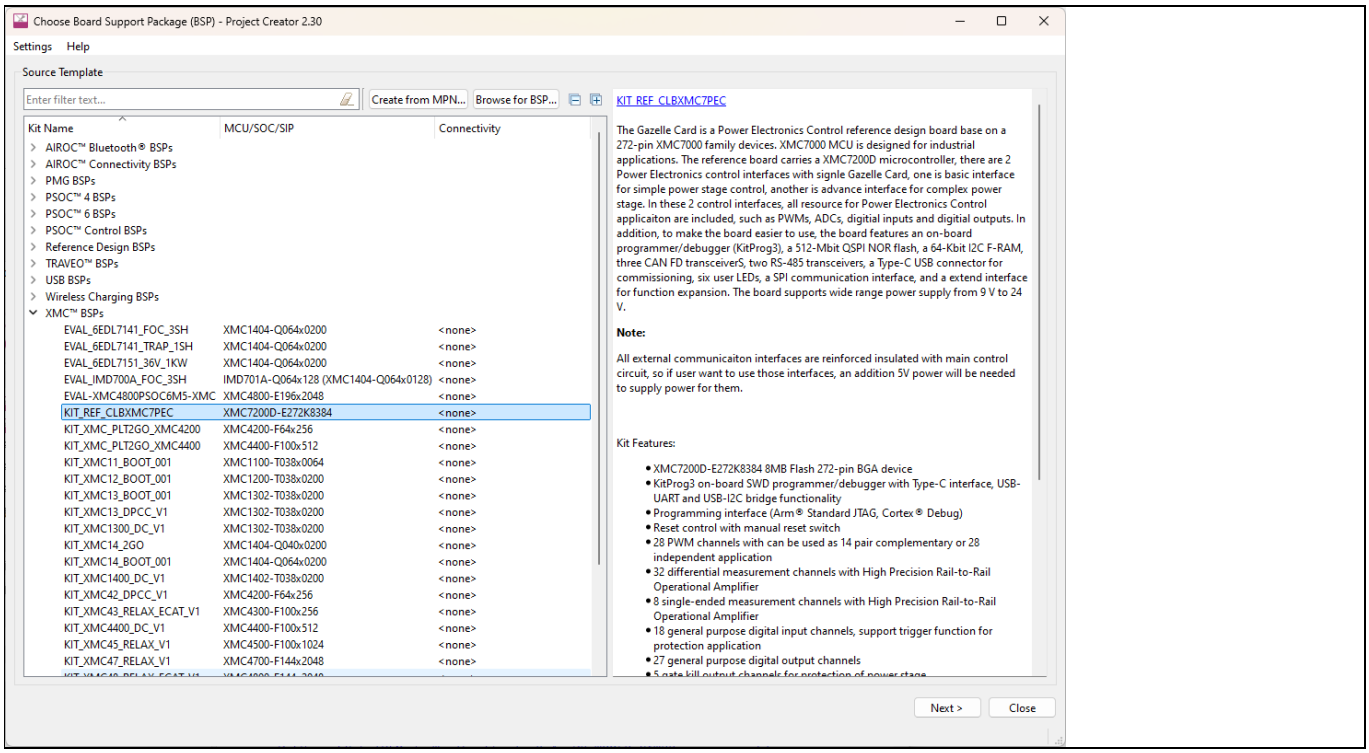



**Figure 1 Select the BSP**

3. The Select Application box opens. Select 2L PV Boost Control under Power Conversion and click **Create**.

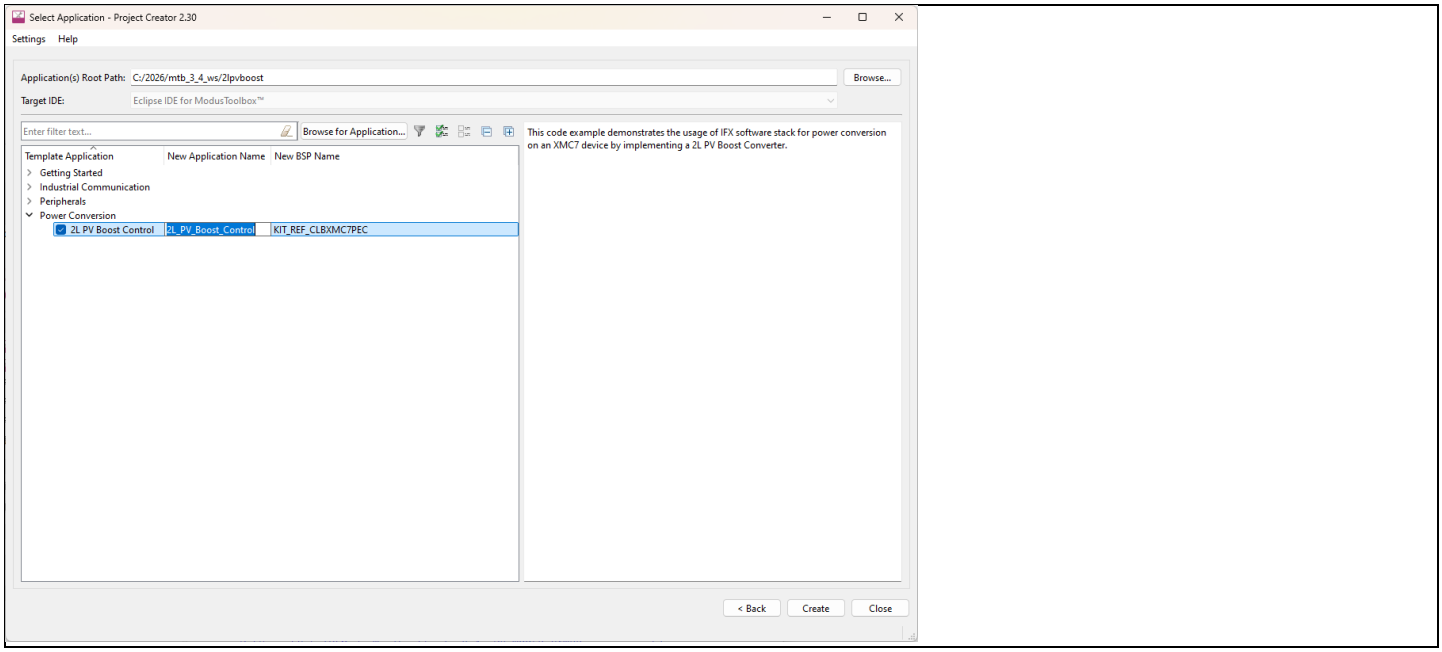



**Figure 2 Select the application**

4. The **2L PV Boost Converter** application is created successfully (shows as 2L_PV_Boost_Control) and is bundled with mtb-shared.

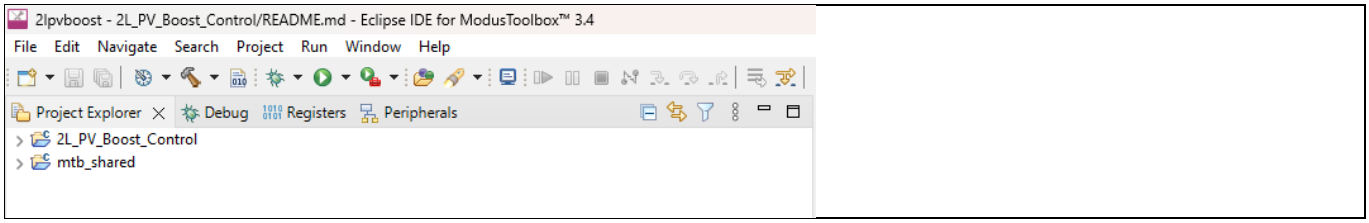



Figure 4 **Newly created 2L PV Boost Converter in the ModusToolbox™ project**

## 3.2 Use the project-creator-cli tool

The project-creator-cli tool can be used to create applications from a CLI terminal, from within batch files, or via shell scripts. This tool is available in the *{ModusToolbox™ install directory}/tools_{version}/project-creator/* directory.

1. Use a CLI terminal to invoke the project-creator-cli tool. In Microsoft Windows, use the command-line modus-shell program provided in the ModusToolbox™ installation kit instead of the standard Windows command-line application.
2. This shell provides access to all the ModusToolbox™ tools. To access it:
    a. In Windows, type **modus-shell** in the search box in the Windows menu.
    b. In Linux and macOS, you can use any terminal application.
3. Type the following command to clone the ***2lpv boost converter*** application configured for the **KIT_REF_CLBXMC7PEC** BSP into the specified working directory: *C:/Users/<your-user-name>*

```
./project-creator-cli.exe --board-id KIT_REF_CLBXMC7PEC --app-id mtb-example-pecs-2lpvboost --user-app-name "2lpvboost" --target-dir "C:/Users/<your user name>
```

The arguments for the project-creator-cli tool are listed in Table 1.

**Table 1 Arguments**

| Argument | Description | |
|---|---|---|
| --board-id | Defined in the field of the BSP manifest: **KIT_REF_CLBXMC7PEC** for the **2lpvboost EAP** package | Required |
| --app-id | Defined in the field of the CE manifest: **mtb-example-pecs-2lpvboost** or **2lpvboost EAP** package | Required |
| --target-dir | Used to specify the directory in which the application is to be created if you prefer not to use the default or current working directory | Optional |
| --user-app-name | Specify the name of the application if you prefer a name other than the example's default: **2lpvboost** | Optional |

*Note: The project-creator-cli tool uses the **git clone** and **make getlibs** commands to fetch the repository and import the required libraries. For details, see the "Project creator tools" section of the ModusToolbox™ tools package user guide (locally available at {ModusToolbox™ install directory}/docs_{version}/mtb_user_guide.pdf).*

4. After the project is created, you can open it in your preferred development environment.

   - Eclipse IDE: If you opened the Project Creator tool from the included Eclipse IDE, the project will open in Eclipse automatically. For more details, see the Eclipse IDE for ModusToolbox™ user guide (locally available at *{ModusToolbox™ install directory}/docs_{version}/mt_ide_user_guide.pdf*)
   - Visual Studio (VS) code: You have to launch the VS Code manually, and then open the generated *{project-name}.code-workspace* file located in the project directory. For more details, see the Visual Studio Code for ModusToolbox™ user guide (locally available at *{ModusToolbox™ install directory}/docs_{version}/mt_vscode_user_guide.pdf*).
   - Command line: If you prefer to use the CLI, open the appropriate terminal, and navigate to the project directory.
     - In Windows, use the command-line 'modus-shell' program
     - In Linux and macOS, you can use any terminal application. From there, you can run various make commands

     For more details, see the ModusToolbox™ tools package user guide (locally available at *{ModusToolbox™ install directory}/docs_{version}/mtb_user_guide.pdf*).

# 4 Uninstalling the EAP

There are two options to remove or uninstall the EAP:

- **unins000.exe** file is available in the installation path. The default is: <ModusToolBox-Path>/ModusToolbox/packs/ModusToolbox-2lpvboost-Early-Access-Pack

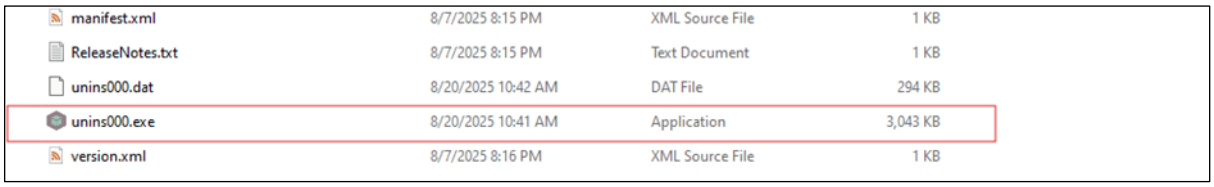



Figure 5 **Uninstall the EAP**

- The ModusToolbox™ Setup tool provides an overview of the additional packages for the ModusToolbox™ tool, including the easy access packs. To remove the EAP, deselect the check box next to it.

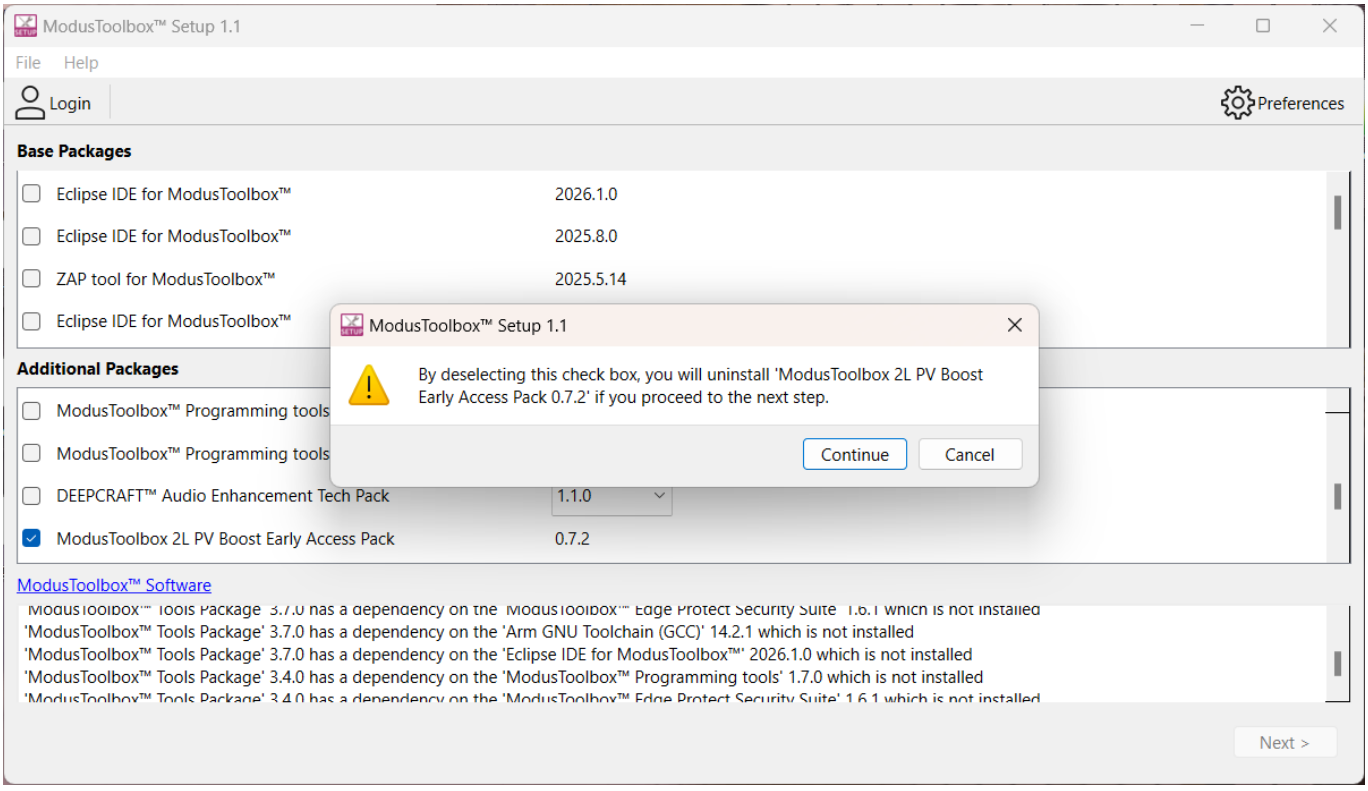



Figure 6 **Uninstall the EAP using the ModusToolBox™ Setup tool**

## Revision history

| Document revision | Date | Description of changes |
|---|---|---|
| Version 1 | 2026-01-29 | Initial version |
| Version 1.1 | 2026-02-16 | Updated the document with required images |
| Version 1.2 | 2026-03-24 | Improved formatting |

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