

# ModusToolbox™ tools package installation guide

ModusToolbox™ tools package version 3.1.0

## About this document

### Scope and purpose

This guide provides instructions for installing the ModusToolbox™ tools package, version 3.1.0. This is a set of tools that enable you to integrate our devices into your existing development methodology. Refer to the [tools package release notes](#) for details about what is included. Refer to earlier revisions of this guide for instructions to install previous versions of ModusToolbox™ tools packages.

### Reference documents

- Refer to the [ModusToolbox™ tools package quick start guide](#) for brief instructions to start working with the tools.
- You can also refer to the [ModusToolbox™ training available on GitHub](#).
- Refer to the [ModusToolbox™ tools package user guide](#) for detailed descriptions and instructions.
- Refer to the [ModusToolbox™ Dashboard user guide](#) for instructions for using that tool.

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## General information

# 1 General information

## 1.1 System requirements

The ModusToolbox™ tools package consumes approximately 2 GB of disk space. Like most modern software, it requires both free disk space and memory to run effectively. We recommend a system configuration with a PassMark CPU score > 2000 ([cpubenchmark.net](http://cpubenchmark.net)), at least 25 GB of free disk space, and 8 GB of RAM. The product will operate with fewer resources; however, performance may be degraded.

ModusToolbox™ software is supported on the following 64-bit operating systems:

Host OS	Supported	Recommended
Windows	7 SP1, 10, 11	11
macOS	Big Sur, Monterey and Ventura (Intel processors)	Monterey
Linux	Ubuntu 18.04 LTS, 20.04 LTS, 22.04 LTS	22.04 LTS

*Note: On macOS, Arm processors are supported via Rosetta.*

*ModusToolbox™ software is **not** supported on 32-bit operating systems.*

## 1.2 Uninstall Beta versions

If you installed any Beta release of the ModusToolbox™ 3.1 tools package, you need to uninstall it before installing this release. To uninstall a Beta release:

- **Windows:** The current release installer will prompt you to uninstall a previous version 3.1 installation. You can also use the Windows Control Panel.
- **Linux:** Go to the directory where you extracted the tar.gz file. Delete the *docs\_3.1*, *tools\_3.1*, and *ide\_3.1* directories, as well as the EULA 3.1 text file from the "ModusToolbox" directory.
- **macOS:** The current release installer contains a check box to uninstall a previous version 3.1 installation.

## Step 1: Download the software

## 2 Step 1: Download the software

The ModusToolbox™ tools package is available from the Infineon Developer Center website (<https://softwaretools.infineon.com/tools/com.ifx.tb.tool.modustoolbox>) to download and/or install. Select the appropriate package for your operating system:

- **Windows:** `ModusToolbox_3.1.0.<build>-windows-install.exe`
- **Linux:** `ModusToolbox_3.1.0.<build>-linux-install.tar.gz`
- **macOS:** `ModusToolbox_3.1.0.<build>-macos-install.pkg`

You can then click **Download** or **Install**:

- If you click **Download**, the selected package will be downloaded to your computer. Refer to [Step 2](#) to install the tools package.
- If you click **Install**, the launcher tool will be used to run the installer program or extract the tar.gz file.
- If you have not used the website before, and if you click **Install**, a message will display asking you to install the launcher tool. Follow the instructions on the website to install that tool.

*Note:* For a Linux install, we recommend using the **Download** option. See [Linux](#) instructions for more details.

### 2.1.1 cysecuretools

If you intend to use "secure" devices, refer to this [README.md file on GitHub](#) for more details. This package is installed by default for Windows, but not on macOS or Linux. For macOS, you may need to add the module location to the `PATH` variable, if not already present.

## 2.2 SEGGER J-Link

If you plan to use the SEGGER J-link debugger, you must download and install the appropriate software pack for your OS. It is not included with the ModusToolbox™ tools package. Use version 6.98 or later. For Linux, if you install this using the tar.gz file, make sure you install J-Link in a common location. Otherwise, you must configure the Eclipse IDE to specify the location, as follows:

### **Window > Preferences > MCU > Global SEGGER J-Link Path**

- **Executable:** `JLinkGDBServerCLEXe`
- **Folder:** `<J-Link_extracted_location>`

## Step 2: Install ModusToolbox™ tools package

### 3 Step 2: Install ModusToolbox™ tools package

*Note:* Do not use spaces in the installation directory name. Various tools, such as Make, do not support spaces. Also, do not use common illegal characters, such as:  
/ : \* ? " < > |

*Note:* If your user home directory contains spaces, see [Installing with spaces in user home directory](#).

#### 3.1 Installing in non-default location

If you install the ModusToolbox™ tools package in a non-default location, you will need to set the environment variable `CY_TOOLS_PATHS` to point to the `<install_path>/ModusToolbox/tools_3.1` directory, or set that variable in each *Makefile*.

You must use forward slashes in the variable's path, even in Windows. Refer to the "Product versioning" section in the [ModusToolbox™ tools package user guide](#).

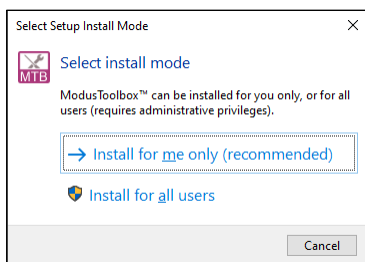
#### 3.2 Installing with previous versions

The ModusToolbox™ tools package version 3.1 installs alongside previous versions of the software (version 3.0, 2.4, 2.3, etc.); therefore, all versions can be used independently. However, be aware that various programs including the Eclipse IDE and the build system will detect and use the most current version of the "tools" directory by default. For example, if you have both versions 3.1 and 3.0 installed, and if you launch the Project Creator from the Eclipse IDE for version 3.0, it will open the version from the "tools\_3.1" directory instead of the "tools\_3.0" directory.

To control this behavior, use the environment variable `CY_TOOLS_PATHS` as described in the "Product Versioning" section in the [ModusToolbox™ tools package user guide](#). This variable applies to all versions of the ModusToolbox™ tools package, so you will have to update it as you work with different versions.

#### 3.3 Windows

Run the `ModusToolbox_3.1.0.<build>-windows-install.exe` installer program and follow the prompts to install for the current user only or for all users of the same machine. For more information, see the [Default versus advanced Windows installation](#) section later in this document.



By default, the ModusToolbox™ tools package is installed here:

`C:\Users\<user_name>\ModusToolbox`

*Note:* If you have not installed the ModusToolbox™ tools package previously, you may be prompted to restart your computer due to installation of Microsoft Visual C++ redistributable files.

## Step 2: Install ModusToolbox™ tools package

### 3.4 Linux

#### 3.4.1 Prerequisites

ModusToolbox™ software requires the following programs to work properly. Many of these programs may not be installed on your Ubuntu system:

- diffutils
- git
- make
- coreutils
- perl
- python3
- libxcb-xinerama0

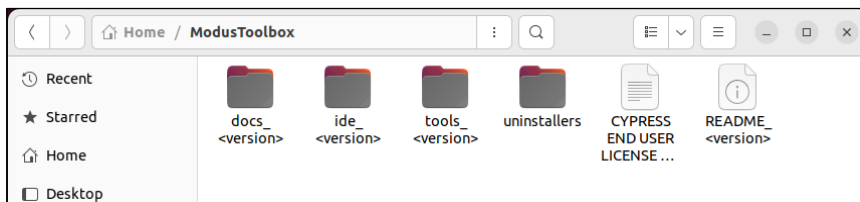
Run the following command to install these packages, as applicable:

```
sudo apt install diffutils git make coreutils perl python3 libxcb-xinerama0
```

#### 3.4.2 Extraction

There are several ways to extract the *ModusToolbox\_3.1.0.<build>-linux-install.tar.gz* file; ensure that the end result looks like this:

*/home/<user>/ModusToolbox/*



If the files/folders were extracted into a different location, move them to */home/<user>/ModusToolbox*.

*Note: The Launcher tool currently extracts the files into /home/<user>/local/share/Infineon\_Technologies\_AG/Infineon-Toolbox/Tools/ModusToolbox\_<version>-linux-install/ModusToolbox/.*

#### 3.4.3 Post-install scripts

After extracting, you must run the following scripts before running ModusToolbox™ software on your machine:

- OpenOCD: */home/<user>/ModusToolbox/tools\_3.1/openocd/udev\_rules/install\_rules.sh*
- AIROC™ Bluetooth® Boards: */home/<user>/ModusToolbox/tools\_3.1/driver\_media/install\_rules.sh*
- Firmware Loader: */home/<user>/ModusToolbox/tools\_3.1/fw-loader/udev\_rules/install\_rules.sh*
- Post-Install Script: */home/<user>/ModusToolbox/tools\_3.1/modus-shell/postinstall*
- IDC Registration Script: */home/<user>/ModusToolbox/tools\_3.1/idc\_registration-3.1.0.bash*

## Step 2: Install ModusToolbox™ tools package

### 3.5 macOS

Double-click the downloaded *ModusToolbox\_3.1.0.<build>-osx-install.pkg* file and follow the wizard.

The ModusToolbox™ tools package will be installed under the **Applications** folder in the volume you select in the wizard.

*Note: The ModusToolbox™ tools package installer also installs a custom USB driver for use with ModusToolbox™ software on macOS versions prior to Catalina. It may pop up a "System Extension Blocked" dialog. In this case, go to **Security Preference** and click **Allow** for the driver to be installed.*

#### 3.5.1 Xcode

In order for ModusToolbox™ software to work correctly on macOS, you must also install an additional Xcode package if you don't already have it installed. We recommend you install Xcode using the following command in a terminal window:

```
xcode-select --install
```

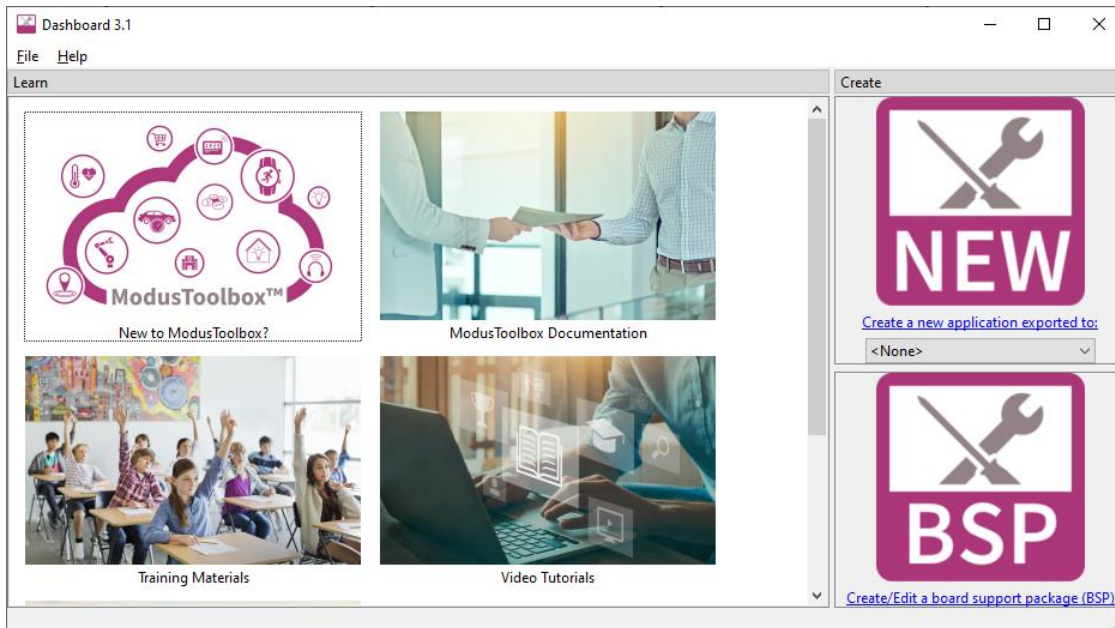
*Note: You may install Xcode from the App Store, but it will likely consume much more disk space than using the above command.*

## Step 3: Run the Dashboard (optional)

### 4 Step 3: Run the Dashboard (optional)

The ModusToolbox™ tools package includes an optional Dashboard tool. To run the Dashboard:

- **Windows:** The installer provides an option to run the Dashboard on the final step. You can also select the "dashboard" item from the Windows **Start** menu.
- **Linux:** Navigate to `/home/<user>/ModusToolbox/tools_3.1/dashboard` and run the executable.
- **macOS:** Run the "dashboard" app.



The Dashboard provides links to documentation and training material, and it allows you to launch the Project Creator and BSP Assistant tools. For more details, refer to the [ModusToolbox™ Dashboard user guide](#).



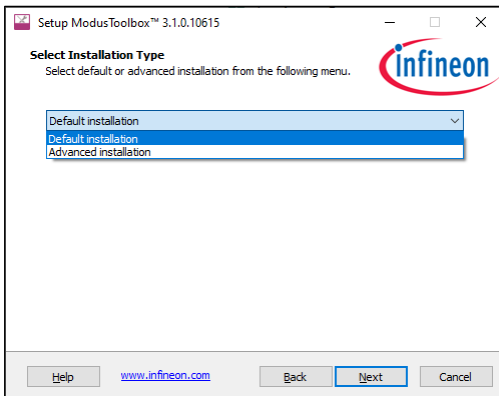
## Default versus advanced Windows installation

### 5 Default versus advanced Windows installation

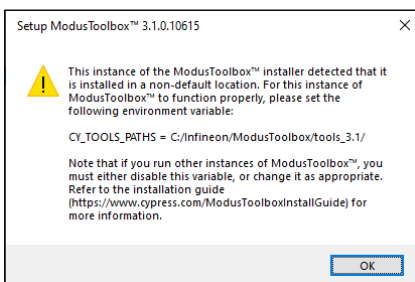
The ModusToolbox™ installer for Windows provides options to install for the current user or for all users of the same computer. Depending on if you have administration privileges or not, you may be asked to enter a password.

*Note: If you select "Install for all users" and then later select install for the current user, the Windows "Apps & features" setting will list only one instance of ModusToolbox™ 3.0. Use the uninstaller to point to the type of installation (All Users or Current User), depending on the order they were installed. To see all installations, navigate to **Control Panel > Programs and Features**.*

1. After selecting the installation type, follow the prompts to accept the license agreement and select the installation path.
2. On the Select Installation Type, choose "Default Installation" or "Advanced Installation."



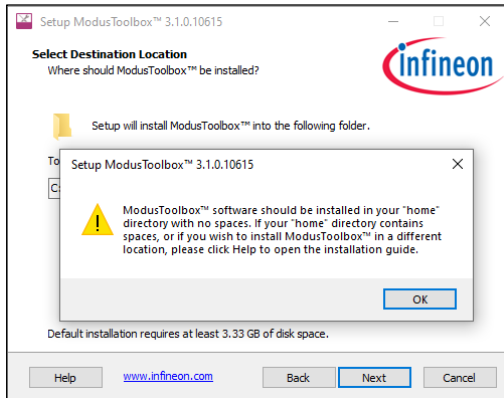
- The default option installs the tools and drivers needed by ModusToolbox.
  - The advanced option allows you to deselect pre-requisite software and drivers that are already installed.
3. After continuing with the installation steps and the post-installation process, the following dialog will display if you specified a [non-default installation directory](#) as a reminder to set an environment variable.



## Installing with spaces in user home directory

### 6 Installing with spaces in user home directory

The ModusToolbox™ installer tries to install in your user home directory by default. However, it prevents you from installing into a directory that contains spaces.



If possible, create a new user account and user home directory that doesn't contain spaces. If you cannot create a new user home directory without spaces, then you must perform some extra manual installation steps.

*Note: Even though this process is shown for Windows, these steps apply in general to macOS and Linux as well.*

#### 6.1 Step 1: Install at a custom path.

1. Select an alternate installation path that does not include spaces. For example:

`C:\MyPath\ModusToolbox`

Any path without spaces will work.

2. After installation is complete, create a directory to store your workspaces. For example:

`C:\MyPath\mtb-projects`

You can choose any path as long as it doesn't contain spaces.

3. Also, create a hidden "dot" directory named ".modustoolbox" for content described later in this section. For example:

`C:\MyPath\modustoolbox`

#### 6.2 Step 2: Create a variable to specify the path to Tools.

Because you are installing ModusToolbox™ into a non-default location, you need to specify the path to your "tools" directory using an Environment Variable. Open the Environment Variables dialog, and create a new System or User Variable, depending on your installation type (current user or all users). For example:

```
CY_TOOLS_PATHS = C:/MyPath/ModusToolbox/tools_3.1
```

*Note: Use a Windows-style path (not Cygwin-style, like /cygdrive/c/). Also, use forward slashes.*

## Installing with spaces in user home directory

### 6.3 Step 3: Create a variable to specify the global path.

Because you are installing ModusToolbox™ into a non-default location, you need to specify the global path using an Environment Variable. Open the Environment Variables dialog, and create a new System or User Variable, depending on your installation type (current user or all users). For example:

```
CY_GETLIBS_GLOBAL_PATH = C:/MyPath/.modustoolbox/global
```

*Note:* Use a Windows-style path (not Cygwin-style, like /cygdrive/c/). Also, use forward slashes.

### 6.4 Step 4: Specify the custom path to use for manifest.loc.

Although you may not use this feature, dependencies require that you create an Environment Variable to specify the non-default location of the *manifest.loc* file. For example:

```
CyManifestLocOverride = C:/MyPath/.modustoolbox/manifest.loc
```

### 6.5 Step 4: Specify the custom path to use for Local Content Storage.

If you use Local Content Storage (LCS) to enable work without access to the Internet, set this variable to specify where the content will be stored. For example:

```
MTB_LOCAL_CONTENT_PATH = C:/MyPath/.modustoolbox/lcs
```

## Revision history

### Revision history

Revision	Date	Description
**	2017-12-29	New document.
*A	2018-09-18	Complete update for production release.
*B	2018-11-21	Updated the system requirements section. Added information about uninstalling issues. Updated to clarify macOS instructions.
*C	2019-02-27	Updated for version 1.1. Added custom drivers information. Updated linux instructions.
*D	2019-09-26	Added information to clarify usage with multiple versions and workspaces.
*E	2019-10-17	Updated for version 2.0. Added a note for macOS Catalina.
*F	2019-10-21	Added git as a prerequisite.
*G	2020-10-14	Added a link to KBA229345.
*H	2020-02-13	Added a comment about using forward slashes for the CY_TOOLS_PATHS variable.
*I	2020-03-26	Updated for version 2.1.
*J	2020-02-04	Corrected macOS executable name.
*K	2020-04-14	Corrected "optional" step for installing with spaces in user home directory.
*L	2020-09-01	Updated for version 2.2. Updated to include Python 3.7 requirement. Removed macOS Catalina notarization warning.
*M	2021-03-25	Updated for version 2.3. Added installer instructions for Windows and multiple users. Added Linux instruction for libncurses5. Updated for macOS Big Sur.
*N	2021-09-10	Updated for version 2.4.
*O	2022-09-22	Updated for version 3.0. Added instructions for CY_GETLIBS_GLOBAL_PATH. Updated formatting for version 3.0.
*P	2022-10-20	Updated the name of the Eclipse executable.
*Q	2023-01-17	Updated link for cysecuretools.
*R	2023-05-16	Updated for version 3.1. Updated Linux installation instructions. Added Dashboard instructions and removed Eclipse instructions. Removed caching variable and offline content. Added local content instructions.

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**Edition 2023-05-18**

**Published by**

**Infineon Technologies AG**

**81726 Munich, Germany**

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**Document reference**

**002-22556 Rev. \*R**

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