ModusToolbox™ tools package installation guide

ModusToolbox™ tools package version 3.2.0

A newer version of this document may be available on the web here.

About this document

Scope and purpose

This guide provides instructions for installing the ModusToolbox™ tools package, version 3.2.0. 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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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), 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	10, 11	11
macOS	Monterey, Ventura, and Sonoma (Intel processors and Arm processors via Rosetta)	Ventura
Linux	Ubuntu 20.04 LTS and 22.04 LTS	22.04 LTS

*Note: ModusToolboxTM software is **not** supported on 32-bit operating systems.*

1.2 Uninstall Beta versions

If you installed any Beta release of the ModusToolbox™ 3.2 tools package, you need to uninstall it before installing this release. To uninstall a Beta release:

- **Windows**: The current release installer will uninstall a previous version 3.2 installation. You can also use the Windows Control Panel.
- **macOS/Linux**: Go to the directory where you installed the tools package. Delete the *docs_3.2*, *tools_3.2*, and *ide_3.2* , and *resources_3.2* directories, as well as the EULA 3.2 text file from the "ModusToolbox" directory.

2 Step 1: Download the software

In order to install the ModusToolbox™ tools package, you will need access to the Infineon website to download the appropriate software. If you do not have access, work with your IT department to download on your machine or have the software placed on a local server or a thumb drive. See also Installing with firewall or lack of web access later in this document.

2.1 Setup program

You can use the ModusToolbox™ Setup program from https://softwaretools.infineon.com/tools/com.ifx.tb.tool.modustoolboxsetup to install the tools package, as well as many other packages such as early access packs, Programming tools, etc. Refer to the Setup program user guide for more details.

2.2 Tools package offline installation

The ModusToolbox™ tools package is also available from the Infineon website for offline installation (https://softwaretools.infineon.com/tools/com.ifx.tb.tool.modustoolbox). Use the appropriate package for your operating system:

- **Windows**: *ModusToolbox_3.2.0.<build>-windows-install.exe*
- **Linux**: *ModusToolbox_3.2.0.<build>-linux-install.deb*
- **macOS**: *ModusToolbox_3.2.0.<build>-macos-install.pkg*

2.3 Python

Several types of ModusToolbox™ applications require Python such as those including MCUBoot, CySecureTools, and OPTIGA™ Trust M. Python is not included in the ModusToolbox™ tools package. Refer to KBA239118 for information about downloading and installing Python.

2.4 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>*

3 Step 2: Install ModusToolbox™ tools package

3.1 Installing using the Setup program

Refer to the Setup program user guide for more details.

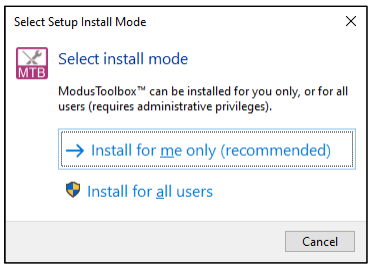
3.2 Installing without the Setup program

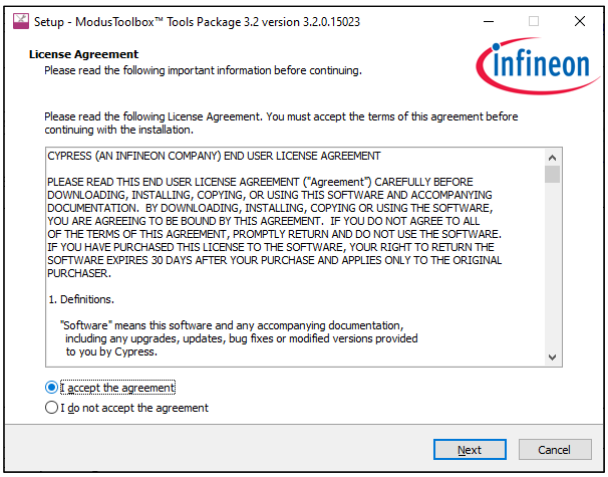
If you are not using the Setup program, then follow these steps to install the tools package:

Note: *If your user home directory contains spaces or illegal characters, or if you want to install the ModusToolbox™ tools package in a non-default location, see Installing with spaces in user home directory.*

3.2.1 Windows

Run the *ModusToolbox_3.2.0.<build>-windows-install.exe* installer program and follow the prompts to install for the current user only and then accept the license agreement.





The 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 the ModusToolbox™ installation. 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****.*

On the next screen select **Quick Installation** and click Install. 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.*

For more information about installing for all users or custom installation, see the Custom Windows installation section later in this document.

Step 2: Install ModusToolbox™ tools package

3.2.2 Linux

Navigate to the location of the **.deb* file and type the following command:

```
$ sudo apt install ./ModusToolbox_3.2.0.<build>-linux-install.deb
```

Then run the following to initialize the `CY_TOOLS_PATHS` environment variable defined in the */etc/profile.d/modustoolbox_3.2.sh* file:

```
$ bash --login
```

Note: *Use the apt tool instead of dpkg to resolve dependencies and avoid installation errors of installing the IDC Launcher Service as a nested package.*

3.2.3 macOS

Double-click the downloaded *ModusToolbox_3.2.0.<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.*

3.2.3.1 Xcode for macOS

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:

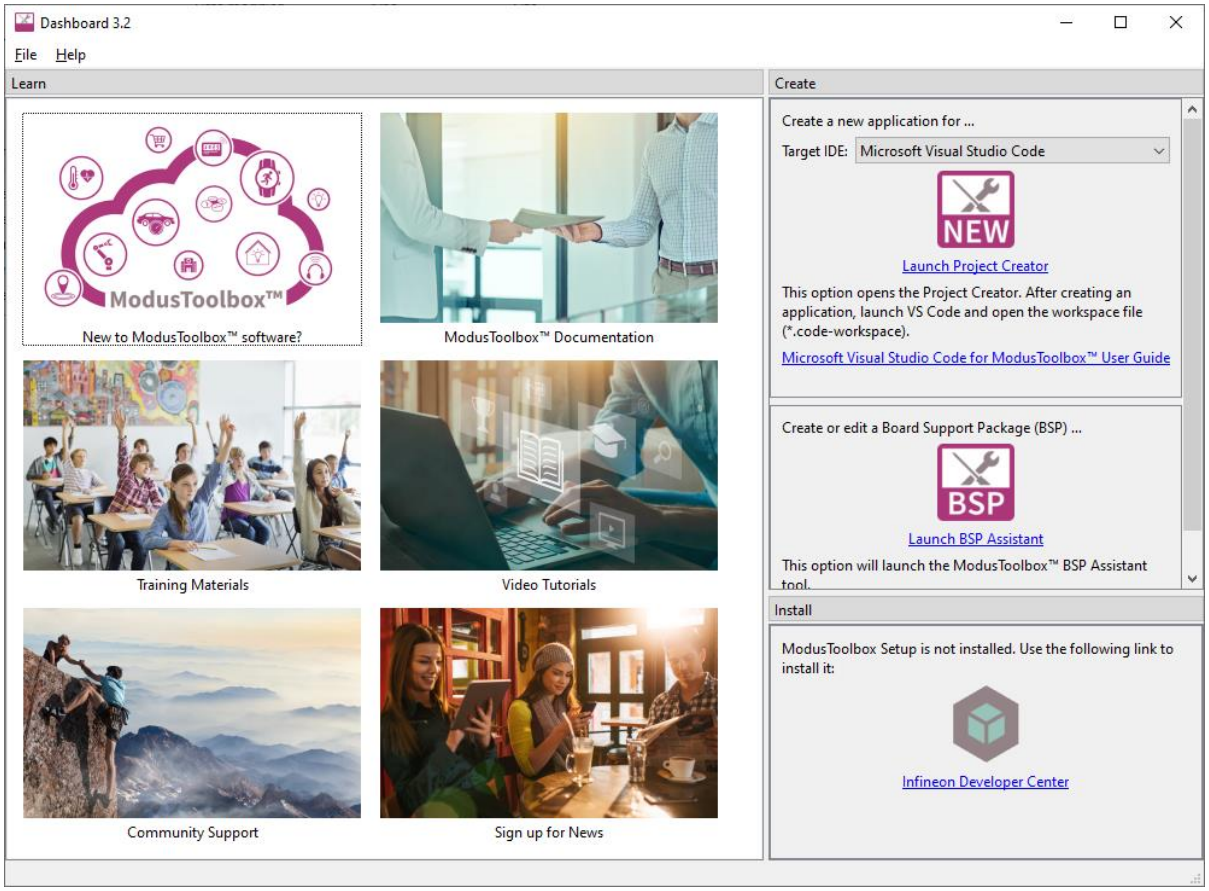
```
xcode-select --install
```

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

4 Step 3: Run the Dashboard (optional)

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

- **Windows**: The tools package 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 */<install-path>/ModusToolbox/tools_3.2/dashboard* and run the executable.
- **macOS**: Run the "dashboard" app.



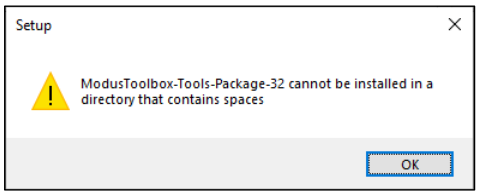
The Dashboard provides links to various sources of documentation and training materials. It also contains starting points: create a new application, create/edit a BSP, install or launch the ModusToolbox™ Setup program. For more details, refer to the ModusToolbox™ Dashboard user guide.

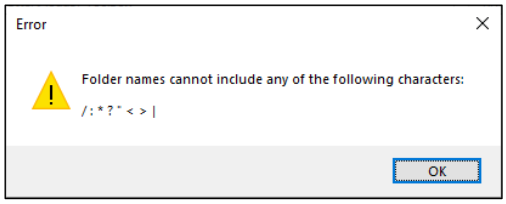
5 Advanced installation instructions

These sections contain additional instructions for various cases.

5.1 Installing with spaces in user home directory

If your default user home directory contains spaces or illegal characters, ModusToolbox™ installer prevents you from installing into that directory. For example:





If possible, create a new user account and user home directory that doesn't contain spaces or illegal characters. If you cannot create a new user home directory, 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.*

5.1.1 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*

5.1.2 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_3.2
```

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

5.1.3 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.*

5.1.4 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
```

5.1.5 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
```

5.2 Installing with previous versions

The ModusToolbox™ tools package version 3.2 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 3.2 and 3.1 installed, and if you launch the Project Creator from the Eclipse IDE for version 3.1, it will open the version from the "tools_3.2" 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.

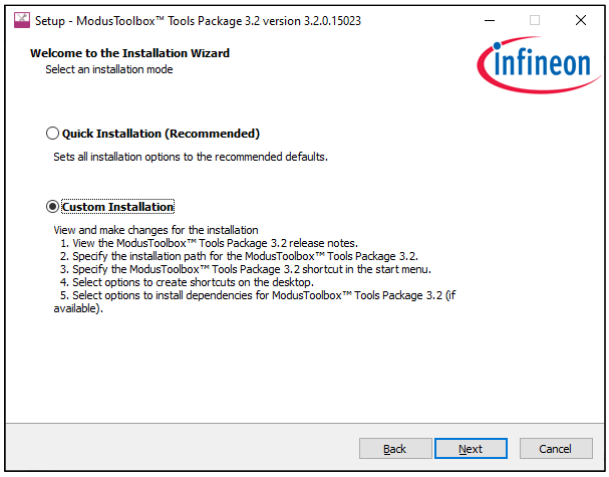
5.3 Installing with firewall or lack of web access

After the ModusToolbox™ tools package is installed, you will need access to the web to create applications, which download libraries from GitHub.com. If your site is behind a firewall, you can set up proxy information using the Project Creator tool. Refer to the Project Creator user guide for more information.

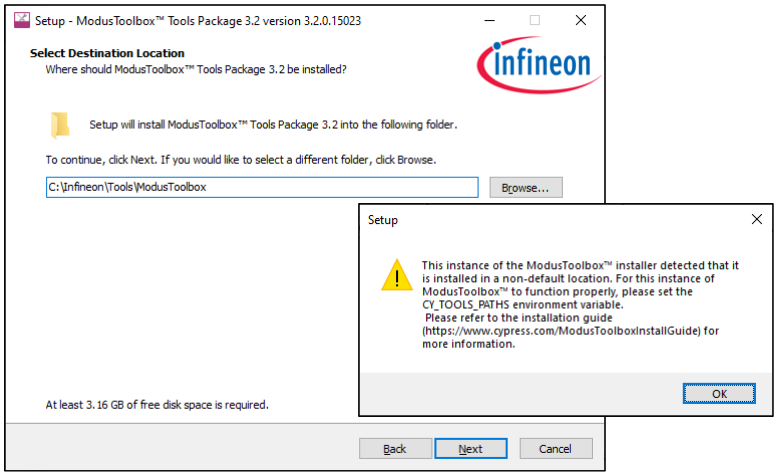
If you have no access to the web at all, you can use the Local Content Storage (LCS) Manager feature to create a copy of the database on your system. You will need one-time web access to set it up. Refer to the LCS Storage CLI user guide for more information.

5.4 Custom Windows installation

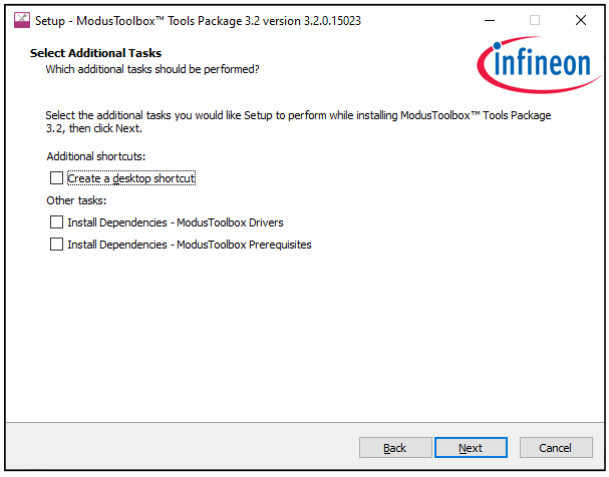
The Custom Installation setup provides several options to control your installation, including specifying the location, creating a shortcut, and whether to install dependencies.



If you specify a non-default installation directory , a message displays as a reminder to set the `CY_TOOLS_PATHS` environment variable.



Then, you can choose to create a desktop shortcut and install dependencies.



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	2023-05-18	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.
*S	2023-07-12	Added note about final release to support Windows 7, macOS Big Sur, and Ubuntu 18.04.
*T	2024-01-29	Updated for version 3.2. Updated Linux instructions for .deb file. Added mention of the Setup program. Addde instructions for firewall or no web access.

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