

MERLIC Installation and Licenses:

How to get MERLIC running

Version 5.4.0





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1 System Requirements and Supported Platforms

To use MERLIC 5.4.0, the following system requirements must be fulfilled:

- Windows 10 (64-bit operating system) or newer.
- x64 processor
- MERLIC works best with at least OpenGL 3.0 (alternatively OpenGL 2.x with the framebuffer_object extension) or OpenGL ES 2.0. If this requirement is not met, software-only OpenGL is automatically used as fallback. The fallback technology will be slower and/or the display might not always work correctly. If needed, the autodetection of OpenGL can be disabled by explicitly setting the environment variable QT_OPENGL=desktop (uses OpenGL) or QT_OPENGL=software (uses software-only OpenGL) before launching MERLIC.

MERLIC actively makes use of multi-core processing platforms and AVX for highest performance.

1.1 Image Acquisition Interfaces

MERLIC offers hardware independence by supporting IA interfaces of the latest industry standards GigEVision2, GenICam GenTL, and USB3 Vision.

1.2 Recommended Configuration

To exploit the full potential of MERLIC, we recommend to use MERLIC on a system with at least the following configuration:

Component	Specification
CPU	x64 quad-core (2.50 GHz)
Memory	at least 4 GB
Graphics	1920x1080, 32-bit color, OpenGL 3.0
Hard disk	6GB (Full installation; during the installation process more space is needed)





2 MERLIC Packages and MERLIC Trial

2.1 MERLIC Packages

MERLIC is available for purchase in different packages with different feature sets. Depending on the required number of camera devices and features ("add-ons"), the packages "Small", "Medium", "Large", and "X-Large" are available. You can find more detailed information on the available packages on the overview page MERLIC Packages of the MVTec website. The installation of MERLIC is independent of the selected MERLIC package. Thus, the installed file structure is always the same. However, depending on the selected MERLIC package only the respective features will be available for use.

Package Wizard

If you are not sure which package fits best for the scope of your application, you can try out our package wizard on the MVTec website. Simply answer the questions provided by our wizard to find the right MERLIC license package for your needs.

2.2 MERLIC Trial

The MERLIC trial version allows you to test the full functionality of MERLIC, i.e., it corresponds to the MERLIC "X-Large" version, with the following limitations:

- The trial license is only valid for a limited period of 45 days. This time period begins with the day of the first usage of MERLIC in the trial version, i.e., the day when MERLIC is started for the first time without a license dongle. If the time period is exceeded, it is not possible to evaluate MERLIC for another trial period on this computer again. Ask your local distributor if you need to extend the evaluation period.
- The execution mode of the trial version is limited in time. You can run a MERLIC Vision App continuously
 for up to 30 minutes. If this time is exceeded, MERLIC will stop the execution of the MERLIC Vision App.
 The time limit of 30 minutes also applies for the execution of MERLIC RTE (Runtime Environment). If the
 time limit is exceeded, MERLIC RTE is automatically closed.
- The trial version only supports tools provided by MERLIC. It is not possible to use your own tools (i.e. custom tools) in the trial version.
- It is only possible to run one MERLIC instance at a time.
- The trial version cannot be used on a virtual machine.

To test MERLIC in the trial version, no explicit trial license is required. You can download MERLIC from the MVTec website for free and install it on your computer. MERLIC can be started directly after the installation. If no license dongle is connected to your computer, MERLIC is automatically started in the trial version.

The license of the trial version is bound to your computer hardware because no license dongle or license file is used. Therefore, you can test the trial version only on the computer on which MERLIC is installed.





3 MERLIC Installation

MERLIC can be installed online via the MVTec Software Manager (SOM), an installation manager for software packages. It starts a local web server and provides access to a remote catalog of products, among others, the SOM package for MERLIC 5.4.0. Basically, you can start SOM, select the desired MERLIC version and components, and SOM takes over the installation process. Thus, SOM allows you to install MERLIC without downloading the executable file of MERLIC.

If a new maintenance release is available for your MERLIC installation, SOM enables you to update your current installation. SOM also detects MVTec products that have been installed by other means. However, these installations cannot be updated or uninstalled via SOM.

You need at least SOM 1.4 to install MERLIC 5.4.0. If you are using an older SOM version, MERLIC 5.4.0 will not be available for download.

3.1 Downloading SOM

SOM is a self-contained application and requires no installation at all. However, you first have to download SOM to access its executable file. For this, you will have to log in with your MVTec account to access the download page. In case you have no MVTec account yet, please register and proceed with your new account.

- 1. Log in to the MVTec download area for the MVTec Software Manager on the following website: www.mvtec.com/downloads/software-manager.
- 2. Choose the desired product version, operating system, and, if applicable, the architecture.
- 3. Click on "MVTec Software Manager" in the "Downloads" section to download the SOM package and then extract the zip file to access the executable file of SOM.

MVTec Software Manager 1.4.0 Windows x64-win64

Release Notes

Downloads:

MVTec Software Manager

9 MB Package-based online installer for MVTec products – Use this lightweight, browser-based tool to efficiently download, install, and manage MVTec software like HALCON, MERLIC, and the Deep Learning Tool.

3.2 Starting SOM and Installing MERLIC

SOM operates in two modes: user mode and system mode. On the bottom left of the MVTec Software Manager website that opens in your browser when you start SOM you can check which of the two modes you are using.

User Mode

In the user mode, SOM will be running without administrator rights. Therefore, you will be asked to enter administration credentials if you want to perform any actions that require administrator rights.





These actions are marked with the icon **Q**.

To use SOM in user mode, double-click the executable file "som.exe" that has been extracted from the downloaded zip file of SOM. Alternatively, double-click on the desktop shortcut or the start menu entry "MVTec Software Manager".

System Mode

In the system mode, SOM will be running with elevated rights and you will be able to perform all actions that require administrator rights without having to enter your credentials again.

To use the system mode, you have to start SOM with administrator rights:

- 1. Right-click on the executable file "som.exe" that has been extracted from the downloaded zip file of SOM. If SOM is already installed on your system, you can right-click on the desktop shortcut or the start menu entry "MVTec Software Manager" instead.
- 2. Select "Run as administrator" and enter your credentials.

If you are using SOM in system mode, a red ribbon at the top of the MVTec Software Manager start page will alert you that SOM is running with elevated rights.

We recommend to install MERLIC with administrator rights. This will make sure that it is installed with all required components and firewall settings. In case you want to use SOM without administrator rights, please also refer to the information in the section Consequence of Installing MERLIC without Administrator Rights.

3.2.1 Installation Steps

- 1. Start SOM using one of the following options:
 - If SOM is not installed, use the executable "som.exe" to start it.
 - If SOM is already installed on your system, you can use the desktop shortcut or the start menu entry "MVTec Software Manager".

Your default browser automatically opens the start page of the MVTec Software Manager website.

If your browser does not come up and you have an installation of SOM, start "MVTec Software Manager CLI" and enter "som". You can then use the displayed address in any HTML5-compliant browser on your system.

- Upon startup of SOM, a "Welcome" dialog is displayed. If SOM is not installed, you can optionally install SOM from the "Welcome" dialog. For more information about the installation of SOM, see the section Optionally Installing SOM.
- 3. Close the "Welcome" dialog.
- 4. On the start page of SOM, switch to the page "AVAILABLE" on the top. You will see a list of all software packages that are available for download.



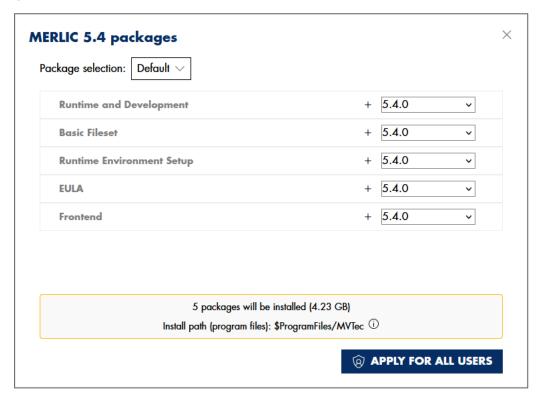


- 5. Look for the desired MERLIC version and start the installation choosing one of the following options:
 - · Installing MERLIC only for the current user
 - · Click on the button "INSTALL".
 - Only the current user will be able to use the MERLIC installation.
 - · Installing MERLIC for all users
 - . Click on the button " INSTALL FOR ALL USERS".
 - All users will be able to use the MERLIC installation on the system. However, administrator rights are required for this option.



After clicking the installation button, a new dialog is opened. It shows the list of available SOM packages for the respective MERLIC version.

6. Select the MERLIC packages to be installed. By default, all packages are selected as well as the newest MERLIC version. However, you can deselect packages you do not want to install. For example, you can install the MERLIC package for the MERLIC RTE Setup or the MERLIC Frontend separately without the package including the components for the runtime and development such as MERLIC RTE and MERLIC Creator.







At the bottom of the dialog, you can see the path of the directory in which MERLIC will be installed. We recommend to use the default installation directory. However, if you want to install MERLIC in a different directory anyway, you can change the directory in the SOM settings.

For more information about the default installation directories and how to change them, see the sections Default Installation Directory of MERLIC and Changing the MERLIC Installation Directory.

- 7. Click on the "APPLY" button to perform the installation of the selected packages. If you are not yet logged in with your MVTec account, you will now have to log in to your account to start the installation process.
- 8. After the installation of MERLIC 5.4.0, change to the "INSTALLED" page. It now shows the new MERLIC version with the installed MERLIC components. SOM allows you to start the MERLIC components directly via the respective "LAUNCH" button. In addition, you can access the "Readme" and the documentation of the new MERLIC version on the right.



9. The new MERLIC installation is automatically associated to all MERLIC files such as MERLIC Vision Apps (.mvapp). This means that all MVApp files will be automatically opened with the new MERLIC installation when double-clicking the MVApps in the file explorer. If multiple MERLIC version are installed, you can also associate a different version. For more information, see the section Association of MVApp Files.

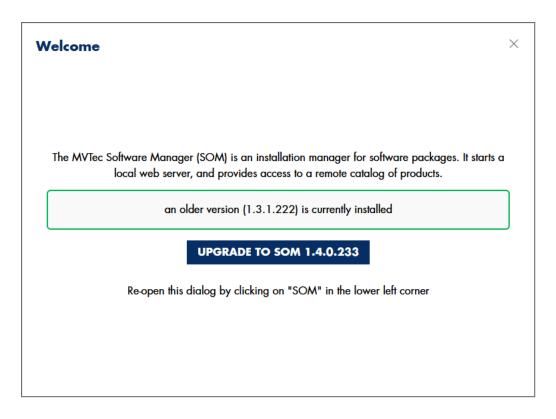
Keep in mind to activate your MERLIC license to use the full functionality of MERLIC without the restrictions of a trial version. For more information about the license activation, see the topic How to Activate a MERLIC License.

3.2.2 Optionally Installing SOM

Although SOM can be used without any installation, it will offer you the installation via the "Welcome" dialog that appears on the first startup of SOM.







If you want to install SOM, click on the "INSTALL" button. If you want to install SOM at a later time, but this dialog no longer appears when you start SOM, you can reopen the dialog from the MVTec Software Manager website by clicking on "SOM 1.4" at the bottom left of the browser window.

3.2.2.0.1 SOM Installation for the Current User

If you choose to perform the installation of SOM for the current user, it will be installed into the directory "som" and add both a desktop icon and a start menu entry for SOM. You may then delete the original executable file of SOM once the current session is exited.

3.2.2.0.2 SOM Installation for All Users

If you choose to install SOM for all users, it will be installed into the directory

"%PROGRAMFILES%\MVTec\SoftwareManager". If another version of SOM is already installed, that version will be upgraded. Once installed, SOM can manage itself from the page "INSTALLED" on the MVTec Software Manager start page, i.e., you can see your SOM installation in the list of installed products and you can update SOM directly from this page.

3.2.3 Default Installation Directory of MERLIC

All files, including example applications and images, will be installed in the same installation directory. The default installation directory depends on whether you are installing MERLIC just for the current user or for all users.

If you install MERLIC for the current user it is installed by default to the directory "%LOCALAPPDATA%\Programs\MVTec\MERLIC-5.4".

If you install MERLIC for all users it is installed by default to the directory "%PROGRAMFILES%\MVTec\MERLIC-5.4".

3.2.3.1 Opening the MERLIC Installation Directory

You can open the directory in which your MERLIC installation has been installed via SOM:





- 1. Go to the "INSTALLED" page of SOM on the MVTec Software Manager start page.
- 2. Click on the menu icon of the respective MERLIC installation and select "Open installation directory".
 The installation directory of your MERLIC installation will now open in your file explorer.

3.2.3.2 Changing the MERLIC Installation Directory

If you want to install MERLIC in a different directory, you can change the installation directory as follows:

- 1. Open the SOM settings in the menu on the top right of the SOM start page. You will see several settings. However, only the installation path "Install path (programs)" can be changed for the MERLIC installation. All other settings have no effect on your installation.
- 2. Specify the directory for the installation at the entry "Install path (programs)" either via the browse button or manually in the text field.

MERLIC must not be installed in directories that contain mixed character sets. Also on Windows systems the characters \ / : * ? " < > | are not allowed. Keep in mind that you require read and write permissions for the specified directory and make sure that you have started SOM in the mode (either user or system mode) in which you have the required rights for the directory.

- 3. Save your changes.
- 4. Start the installation of MERLIC.

3.2.4 Consequences of Installing MERLIC without Administrator Rights

If you start SOM in user mode, i.e., without administrator rights, some differences or restrictions may apply depending on various factors.

When starting the MERLIC installation process in the user mode of SOM, you will be asked to provide the administrator credentials. If you enter them, the MERLIC installation will proceed and all settings, e.g., firewall settings, will be set accordingly. However, the installation directory of MERLIC still differs from the one that is used by default when the installation was started in the system mode of SOM. See also the section Default Installation Directory of MERLIC.

If you do not enter your administrator credentials and close the dialog, the MERLIC installation will also proceed. However, in this case, some of the MERLIC settings, e.g., firewall rules, will not be set. In addition, the CodeMeter software that is required for licensing will not be installed. This may have some serious consequences, which are described in the following sections.

If CodeMeter is not yet installed on your system

- You cannot activate your MERLIC license because CodeMeter is required to active the license on the respective system.
- MERLIC will not start because the licensing failed. Even the MERLIC trial version cannot be started because it also requires CodeMeter to install the trial license on the system.
- No firewall rules have been set. Thus, some configurations will not work, e.g., configuration on remote systems.

Possible solutions:

• In this case, you can install CodeMeter separately and then activate your license. However, it is still not possible to use the trial version of MERLIC.





- Regarding the firewall settings, you can manually enter your administrator credentials for the firewall rule
 when you are asked again while working with MERLIC. The respective firewall rule will be set for the
 respective MERLIC executable file but only for the current port that is used.
- Re-install MERLIC with administrator rights. Then, CodeMeter will be part of the MERLIC installation, all firewall rules will be set, and you can immediately activate your license and use MERLIC.

If CodeMeter is still available on your system (e.g., from a previous installation)

- · You can activate your license and start MERLIC.
- No firewall rules have been set. Thus, some configurations will not work, e.g., configuration on remote systems.

Possible solutions:

- You can manually enter your administrator credentials for the firewall rules when you are asked again
 while working with MERLIC. The respective firewall rule will be set for the respective MERLIC executable
 file but only for the current port that is being used.
- Re-install MERLIC with administrator rights. Then, all firewall rules will be set and you do not have to set any firewall rules manually.

3.3 Further Information on the Installation

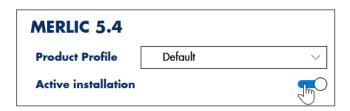
3.3.1 Installation of the MVTec GigE Vision Streaming Filter

During the installation of MERLIC, the MVTec GigE Vision Streaming Filter will be automatically installed. The filter driver improves the performance and robustness when using GigE Vision compliant cameras in MERLIC.

3.3.2 Association of MVApp Files

When opening MERLIC Vision Apps (MVApps) by double-clicking the respective .mvapp files, they will be opened automatically in the associated MERLIC installation. If there is only one MERLIC installation on your system, it is automatically associated to the .mvapp files. If there are multiple MERLIC installations on your system, for example, of different MERLIC versions, you can define which MERLIC installation is associated to the .mvapp files by registering the desired installation. By default, the MERLIC installation that was installed last will be registered automatically.

To associate a different MERLIC installation to MVApp files, you have to activate the respective MERLIC version in SOM.



3.3.3 Environment Variables

When installing MERLIC via SOM, no environment variables will be set.

3.3.4 Multiple MERLIC Versions

You can install multiple versions of MERLIC on your system. When installing a new MERLIC version, it will be automatically activated. This means, the new version is associated to files with file ending .mvapp and MVApps





will be opened in the newest installation when double-clicking on .mvapp files in the file explorer. You can activate a previous MERLIC version in SOM if you want to open MVApps in a different MERLIC version by default. However, if you only want to open an MVApp once in a different version, you can use the context menu:

- 1. Right-click on the respective .mvapp file to open the context menu.
- 2. Click on "Open with" and select the desired MERLIC version. The MVApp will be opened in the selected version.

Alternatively, you can first open the desired MERLIC version via the Windows start menu and then open the MVApp from the MERLIC Creator. The Windows start menu provides entries for all MERLIC versions that are installed.





4 How to Activate a MERLIC License

All MERLIC packages except the trial version of MERLIC require a license dongle with an activated MERLIC license. If you have ordered a license for a MERLIC package, you will receive the dongle and an activation ticket for the license activation from your local distributor. If you have not received an activation ticket, please contact your local distributor in any case.



MERLIC licenses are always issued for a major version, e.g., for MERLIC 5. They are not bound to any computer hardware. Thus you can use the dongle on any computer with an installed MERLIC. It is not possible to use any dongle as license dongle for MERLIC. Only those supplied by MVTec via your local distributor can be used. Currently, MERLIC supports USB dongles.

A license dongle for MERLIC can contain only one license. However, you may run two MERLIC instances with one license. If you want to use MERLIC on multiple computers simultaneously, you need a license dongle for each of them. However, you have to activate your license to use MERLIC as described below.

The activation of the license requires that MERLIC is already installed on your computer. Please make sure that MERLIC is already installed before proceeding with the license activation as described below.

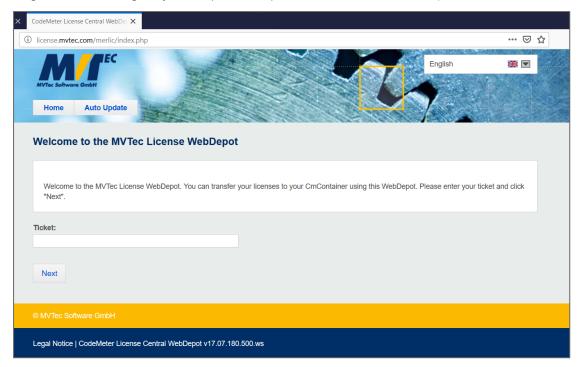




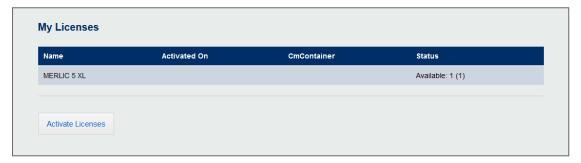
4.1 Activating a License for a MERLIC Package

The MERLIC license can be activated with just a few clicks:

1. Plug in the license dongle to your computer and open the MVTec License WebDepot in a web browser.



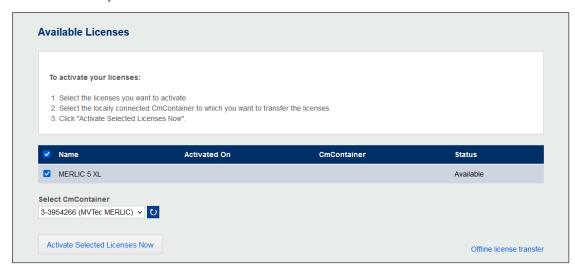
2. Enter your activation ticket and click "Next" to see the license which is connected to your ticket. If more than one license is connected to your ticket, a list of these licenses is displayed.



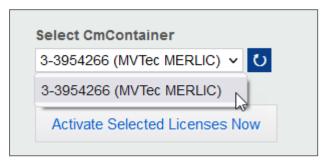




3. Select the license you want to activate.



4. The CmContainer of your dongle is automatically selected. If the default selection does not work you can choose another dongle.



If your activation was successful, the license of your MERLIC installation will be activated and you can immediately start using MERLIC.

Make sure that your anti virus protection does not interfere with your license.

4.2 Activating a MERLIC Add-On

If you purchased an additional add-on for your MERLIC package, you also have to activate the license for the addon. Your local distributor will send you an activation ticket for the license after the purchase.

The activation of the license is the same as the activation of a MERLIC package with the difference that you have to select the add-on instead of the MERLIC package.







5 Troubleshooting

Many common problems during the installation, activation, and execution of MERLIC can be solved without external help. Please consider the following advice for troubleshooting:

5.1 General Advice for Troubleshooting

- Try using a different browser. The installation and license activation was tested using Firefox.
- Make sure that your dongle is securely plugged in to your computer and is recognized by your operating system.
- · Make sure that hibernation is disabled on your computer.
- Make sure that the system date of your computer is not changed after the installation.
- Check your anti virus and anti malware software. Include the CmAct folder and CodeMeter.exe in the list of authorized elements.
- Check your local firewall. If necessary, deactivate it or change the configuration.
- · Check if your company firewall prevents the proper execution of MERLIC or any of its components.
- · Make sure that the automatic container selection during the license activation is not changed.
- For trial versions: Check whether there is a trial license active already on your computer and whether this trial license is out of date.
 - 1. Open the CodeMeter Control Center and click "WebAdmin".
 - 2. In the browser window in "content" choose "licenses".
 - 3. In the drop down menu "CmContainer" inspect all entries for MERLIC trial version to get information about the license.

5.2 Known Issues

This section provides information about known issues and tips on how to collect information for troubleshooting. MVTec has a dense, worldwide distribution network. This enables us to offer you qualified partners in your region, regardless of location. You can find the closest partner on the local MERLIC distributors page.

Trial License Does Not Work After the System Time Was Changed

Description:

If you had to change the system time on your computer, the MERLIC trial license will not work.

Possible solution:

You have to re-install your operating system in order to remove the MERLIC license container. After that you can re-install the MERLIC license container. It is not sufficient to reset your system to a system recovery point. If reinstalling your operating system is not a viable option, please contact your local distributor.

Error Code 0x18080001 - Upgrade License

Description:

During a MERLIC upgrade, the error 0x18080001 may occur if the necessary conditions for the upgrade are not met.





Possible solution:

Make sure the necessary condition is met. For example, to activate an upgrade license from MERLIC 4 to MERLIC 5, you must already have a license for MERLIC 4 on your dongle.

Error Code 0x18088006 - CodeMeter Does Not Start

Description:

Some drivers and other software can be interpreted by CodeMeter as a reverse engineering attempt.

Possible solutions:

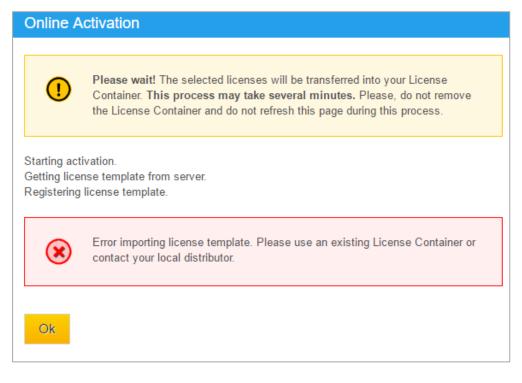
- Uninstall and reinstall CodeMeter. Contact WIBU-SYSTEMS AG if you need help.
- Check the "LicenseLock-*.log" file. This log file is written on Windows into the directory

 "C:\ProgramData\CodeMeter\Logs". The name follows the pattern: LicenseLock-YYYY-MM-DD
 hhmmss-TimeStampYYYY-MM-DD year-month-day specification. The file is partly plaintext partly
 encrypted. Wibu-Systems analyzes the encrypted information and let you know how to proceed.
- · Remove the suspicious drivers or software products.

Error Code 0x18080001 in Internet Explorer and "Error importing license template" in Firefox

Description:

During the activation of a license in Internet Explorer, the error code 0x18080001 is shown. In Firefox the following error message appears:



Possible solution:

Collect information for troubleshooting and contact your local MERLIC distributor.

Missing License

Description:

You get the error message "No MERLIC license was found".





Possible solution:

Collect information for troubleshooting and contact your local MERLIC distributor.

CodeMeterAct Error 263_ License Has to Be Activated Again

Description:

MERLIC shows a license error when starting:

"The machine is changed.

CodeMeterAct: It is needed to activate the license again.

the error no. is 263."

The log file shows an invalid license. This means that not all data of the license can be read. This error may happen if a cleanup tool, an anti virus software, or a firewall suppresses or deletes license data.

Possible solutions:

- Include the CmAct folder and CodeMeter.exe in the list of authorized elements in your anti virus software or firewall
- Make sure that no other application is accessing your license file and folder.

Dongle Errors

Description:

MERLIC is running but the connection to the dongle fails and a license error is displayed.

Possible solutions:

- To check the MERLIC dongle, you can compare the number printed on the dongle with the number in the property "Parent" (string starts with "USB\..." and ends with the number of the HID-compliant device). You can find it in "Hardware and Sound" → "Devices and Printers" → "CodeMeter-Stick". Right-click on the device and choose "Properties" → "Hardware" → "Properties" → "Details" → "Parent". The same number should be shown in the CodeMeter Control Center.
- Use the CodeMeter Control Center to update the firmware of the dongle. Contact WIBU-SYSTEMS AG if
 you need help.

Hibernation Errors

Description:

After waking up the computer from hibernation, MERLIC displays a license error message or is no longer running.

Possible solution:

Make sure that MERLIC runs on a machine that does not go into hibernation mode. Especially during a date change. If an error message is shown, it may take several minutes until the next license check is successful.

5.3 Collecting Information for Troubleshooting

If the problem persists, please do not hesitate to contact your local MERLIC distributor. The following data will be helpful for analyzing the problem and to provide a solution. Collect log data from the time right after the activation failed.





"CmDust" Log File

- 1. Create the log file by starting the program "CmDust" via the Windows start menu "Start → CodeMeter → CmDust"
- 2. The file "CmDust-Result.log" is created automatically and the folder in which the file is created is also opened automatically.

"CmAct" Log File

 Open the folder in which the "CmAct" log files can be found via the Window start menu "Start → CodeMeter → Logs"

Additional Information

Please prepare a detailed description where you encountered the error and how it can be reproduced. If possible, include screenshots.

