

A 3D CAD model of a helmet is shown in a blue and orange color scheme. The helmet is semi-transparent, revealing internal components. Several red HyperMILL tooling pieces are attached to the helmet's surface. The background is a dark blue gradient with a grid pattern.

hyperMILL[®]

Installation Guide

OPEN MIND Software

© The helmet was programmed and produced by PMSHIN

This document is intended for users and administrators. It applies to *hyperMILL*®, *hyperMILL*® SHOP Viewer, CAD Viewer, *hyperMILL*® for SOLIDWORKS and *hyperMILL*® for Autodesk® Inventor®.

It serves as a reference document for installing and configuring *hyperMILL*®.

The document is installed in the `...\OPEN MIND\doc\[version number]\PDF...` directory.

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1. Installing and configuring

Requirements for ensuring a smooth *hyperMILL*® installation

Windows 10 and Windows 11

1. Your hard drive should have at least 7 GB of free storage space.
2. Is your operating system and CAD platform supported by *hyperMILL*®? Please check this in the [release notes](#) in the **Supported software** section.
3. Log in as a local administrator.
4. Stop the scanning process of your antivirus software.

OPEN MIND also recommends excluding the following directories, file types, processes and services from the virus scan:

Directories	
NC file	Specified by the user
Post processor	Specified by the user
CAD file	Specified by the user
hyperMILL installation	Default path: C:\Programs\OPEN MIND\
General workspace	hyperMILL® settings -> Application -> Default paths
Project	hyperMILL® settings -> Document -> Directories
Licensing software	C:\Program Files (x86)\CodeMeter
OPEN MIND Roaming	C:\Users\User Name\AppData\Roaming\OPEN MIND
OPEN MIND temp	C:\Users\User Name\AppData\Local\Temp\OPEN MIND
<i>hyperMILL</i> ® tmp	C:\Users\Public\ Documents\OPEN MIND\tmp\
OM ProgramData	C:\ProgramData\OPEN MIND

File types			
*.3df	*.nc	*.ovz	*.tmpof



File types			
*.comp	*.nclist	*.pcf	*.tool
*.def	*.ncmap	*.pof	*.vis
*.h	*.oma	*.ppcfg	*.vmm
*.hmc	*.omx	*.pprpt	*.vnc
*.hmrep	*.omgcfg	*.settings	
*.hvz	*.origin	*.so	

These file types are trusted as they are generated exclusively by *hyperMILL*®.

Processes		
CodeMeter.exe	GetHS.exe	omCheck_x64.exe
cyrunx64.exe	hmc.exe	omHV.exe
	LicenseManager.exe	omHV64.exe
		omToolDBW32.exe
		omToolDBX64.exe

Services
Service of CodeMeter.exe

Please have your IT set the antivirus software according to these specifications.

Overview of the installation process

The installation is always local.

For the CAD-integrated products *hyperMILL*® for Autodesk® Inventor® and *hyperMILL*® for SOLIDWORKS, a working version of the respective CAD software must have been installed and already started once.



The installation requires administrator rights.

1. The installation starts automatically. Follow the installation instructions.
2. In the second step, configure the software that has been installed using the *hyperMILL*®CONFIGURATION Center. For more information, see section *hyperMILL*®CONFIGURATION Center.

Installing OPEN MIND software

Install the *hyperMILL*®, *hyperMILL*® SHOP Viewer and the License Manager programs:

1. Start installation: Call the installation under **Products**.
2. Select language for the installation: Select the language for the installation.
3. License agreement: Read and accept the terms and conditions of the license agreement and click **Next**.
4. Select target folder: Click **Next** to confirm the directory in which the components are to be installed. You will be shown a default path (C:\Program files\OPENMIND) that you can change using the **Change** button.
5. Select and install programs: Select the programs to be installed.

The OPEN MIND license manager must always be installed, however, it can also be installed separately for use as a license server, for example.



We regularly update our license management software with the latest security updates and new functionality. The components required for licensing must therefore always be kept up to date, including on the license server. Check regularly whether your license management is still up to date.



A simultaneous installation of *hyperMILL*® and *hyperMILL*® SHOP Viewer is not possible. At the time of installation, you can choose whether to use your computer as a CAD/CAM work station or as a *hyperMILL*® SHOP Viewer work station. Subsequent selection is possible in the license manager.

Apply settings from previous version

During the installation, the *hyperMILL*®CONFIGURATION Center is started automatically and a check is performed to see whether another version of *hyperMILL*® has already been installed on the PC. If this is the case, you can apply the settings of this version. To do this, activate the function:



Apply User Settings from previous versions.

This function must be activated by each additional user who wants to transfer the personal settings of a previous version.

During installation, define the following basic settings in the *hyperMILL*[®]CONFIGURATION Center dialog.



You can also apply the settings from an earlier version later at any time using the *hyperMILL*[®]CONFIGURATION Center. Likewise, you can change the basic settings later with the *hyperMILL*[®]CONFIGURATION Center. To start the *hyperMILL*[®]CONFIGURATION Center manually, go to the Windows Start menu:

hyperMILL[®] [version] → *hyperMILL*[®]CONFIGURATION Center.

hyperMILL[®] system settings

Global working space: Specify where the files generated by *hyperMILL*[®] are to be saved. By default, the location is

C:\Users\Public\Documents\OPEN MIND.

MDF path: Directory for saving the machine definition files. By default, the location is

C:\Users\Public\Documents\OPEN MIND\mdf.

Project paths: If you work with project directories, the data generated will be stored here. By default, the location is

C:\Users\Public\Documents\OPEN MIND\Projects.

To change the default directory, use the **Change** button and select the required directory.

Use project paths: The files generated by *hyperMILL*[®] are saved at the previously specified **Project path**.

Language: Set the language for the CAM system.

Measurement system: Specify the measurement system (**Metric/Inch**) for *hyperMILL*[®].

Platform: The platforms identified during the installation are displayed. Select the required platform and click **Next**. The **Setup application database project** dialog opens.

Setup application database project

In this dialog, you create the databases according to your requirements. The following functions are available:

Import databases from an earlier version: This creates a database project on the basis of an application tool database and application macro database from an earlier version of *hyperMILL*[®].

Empty database project: This creates a database project with an empty tool and/or macro database.

Demo database project: This creates a database project using the available demo databases, see:

<Installation directory>/Tool Database/<version>/template database/<language>/demo.db.



Please note that the demo data in these tool databases is provided to illustrate the various functions and is not intended for production purposes. OPEN MIND disclaims any liability for damages resulting from the use of demo data in a production environment.



New database project: This creates a database project on the basis of any existing databases in the .mdb and .db formats.

You can combine databases from different areas. For example, you can combine an empty macro database and a tool database from an earlier version of *hyperMILL*[®] into one database project. You can change the name of the database project as you wish. Click **Next** when you have completed all the settings.



You can change the database directories later at any time in the *hyperMILL*[®] **Settings**. Start the dialog via the menu **CAM** → **Setup** → **Settings** → **Database**.

You will be informed that the settings have been applied. The installation and initial configuration of *hyperMILL*[®] are complete. Click **Close** to close the dialog.



Parallel installations

If several versions of *hyperMILL* are installed, it is possible to switch between versions using **hyperMILL Switch**. To do this:

1. Run **SwitchUi.exe** from the `C:\Program Files\OPEN MIND\Settings Wizard` directory.
2. Select the required *hyperMILL* version, the CAD system and the language. Afterwards, click **Switch**. Please close the software first!

Compatibility between versions



As an update not only fixes errors but also provides new functions, backward compatibility between the release version and an update or hotfix is no longer supported. This applies from version 2020.1 and means that files saved with version 2023.1 Update 1, for example, can no longer be opened with version 2023.



Configuring the OPEN MIND software

The *hyperMILL*®CONFIGURATION Center starts automatically after an installation has been carried out. To start the *hyperMILL*®CONFIGURATION Center manually, go to the Windows Start menu: *hyperMILL*® [version] → *hyperMILL*®CONFIGURATION Center.

hyperMILL®CONFIGURATION Center

The user interface is divided into the following functional areas.

Set basic settings

If required, you can subsequently adapt the basic settings that you defined during the installation here, see [hyperMILL® system settings \(page 7\)](#).

Apply user settings from previous versions

Must be run separately by each additional user to obtain personal settings.

Connect applications

Click the **Connect applications** entry to start the **OPEN MIND Application Settings** dialog. The following functions are available:

Area of application

For: Shows the area of application for the application settings.

<System>: The settings apply to **all users** of the system. They can only be changed when the *hyperMILL*®CONFIGURATION Center is run as administrator.

[User name]: The settings apply to the **current user**.

Language

Shows all languages registered for this program version. Selecting the relevant language switches the language for *hyperMILL* and auxiliary programs (*hyperVIEW*, OPEN MIND Tool Database etc.).

[Language]: Displays the language set for the current user.

[Language] <System>: Shows the language set for all users of the system. After this option is selected, the active user returns to using the currently active system language. When the system language is changed, the language is also changed again for this user.

Registered applications

List of registered applications.

Programs that are registered for all users are displayed in grey. Unless the **Application Settings** program is started with administrator privileges, it will not be possible to edit or delete these entries.

Programs that are registered for the currently active user are displayed in black and can be edited and/or deleted by the currently active user.

New: Add new application to the applications list.

Edit / Delete: Edit or remove the existing application from list of registered applications.

Key: Name used by OPEN MIND programs to start the application or function.

Name: User-defined application name.

Program: Complete path name under which the application is installed.

Arguments: Users can enter additional parameters.

Export and import settings

You can use the *hyperMILL*®CONFIGURATION Center to transfer data and settings from one PC to another. This may be necessary



1. if a PC was replaced or
2. *hyperMILL*® should have the same settings on several PCs.

Export settings

Proceed as follows to export data and settings:

1. Click the **Export Settings** entry to open the **Export Requirements** dialog page. This dialog asks you to close all OPEN MIND applications. Please note that you must be logged in with the same Windows user account with which you also use *hyperMILL*®. Click **Next**.
2. The export directory is displayed on this dialog page. To change the default directory, use the **Change** button. If an export file (default = `mySettings.omSettings`) with the same name has already been created in the selected directory, it will be overwritten when exporting if you activate the **Overwrite existing export file?** function. Click **Next**.
3. The next dialog page shows an overview of the exported data and settings in the *hyperMILL*® **Directories, Admin Settings, Databases, Postprocessors** and **License** sections. Click **Next** to start the export.
4. Close the dialog once the export has finished.

Import settings

Proceed as follows to import data and settings:

1. Click the **Import Settings** entry to open the **Import Requirements** dialog page. This dialog asks you to close all OPEN MIND applications. Please note that you must be logged in with the same Windows user account with which you also use *hyperMILL*®. In addition, the user account requires administrator rights during the import. Click **Next**.
2. On the **Import Settings** dialog page, click **Select omSettings file** and select the previously exported `*.omSettings` file. Then click **Next**.
3. The next dialog page shows an overview of the data and settings to be imported in the *hyperMILL*® **Directories, Admin Settings, Databases, Postprocessors** and **License** sections. Click **Next** to start the import.
4. If data with the same name are already present on the target PC, you will be informed of the import details on the last dialog page. Click **Close** to close the dialog.

How does data export/import take place?

- Before the import process, all settings and data are stored in a backup file in the following directory:
`C:\Users\Public\Documents\OPEN MIND\backup\backup.omSettings`.
- Existing data with the same name on the target PC will **not** be overwritten during the import process. The data will either be saved as a copy (example: databases) or the import will **not** take place at all (example: postprocessors). Information on the import will be summarised (each section separately) in a text file and saved in the following directory:
`C:\Users\Public\Documents\OPEN MIND\tmp\Settings Wizard`.
- Local, network and mixed environments are supported.
- Missing directories are created.
- No user decisions are required.

Perform a system check

Click the **Check System** entry to start the **System check tool** in order to check whether the PC is suitable for *hyperMILL*®.

System check tool



Determine and evaluate system information.

Help → **System check tool**

Determine system information that could prevent stable operation and gather the information to send to OPEN MIND support. For this purpose, the separate software `systemtoolcheck.exe` can also be called in the root directory of *hyperMILL*®CAD.

System information and test results

The software checks, for example, the operating system, CPU type, graphics card as well as the display driver, graphics settings, current resolution and the OpenGL settings (content and version). Exactly the same settings as required for *hyperMILL*® are used here.

The information that is found is compared to the system requirements set by OPEN MIND, evaluated and listed in a clear summary under **Check** and in a detailed report under **Details**.

Check

Displays a summary overview of the test results for the user. The evaluation provides the following results:

		The analysis is still running or is not possible.
	Error	Tested attributes need to be changed. The software cannot function properly.
	Warning	Tested attributes need to be checked again. It may be possible to optimize a attribute, for example, if a non-tested display driver is found.
	Info	Tested attributes are correct.

Details

Displays a detailed report of all tested attributes with the test results to be evaluated by OPEN MIND support. The detailed evaluation provides the following results:

	Error	Tested attribute needs to be changed. The software cannot function properly. Errors are colored red.
	Warning	Tested attribute needs to be checked again. It may be possible to optimize the attribute, for example, if a non-tested display driver is found. Warnings are colored orange.
	Info	Tested attribute is correct. Info is colored green.
-	Attributes	Determined software and hardware attributes, plus further information and messages.

Right-click to open a context menu with the following commands:



Table 1. Commands on the context menu:

Command	Explanation
Copy	Copy the selected text to the clipboard.
Copy link address	Copy link address to the clipboard. To do this, right-click the link beforehand.
Select all	Select all text.

Tips

Tips on dealing with the warnings and errors from the results of the test. Check whether the compatibility required to use the OPEN MIND software can be established by implementing obvious measures:

Operating system	The supported operating systems can be found in the installation guide for OPEN MIND products. Information is also provided on the OPEN MIND website under Useful information . Use a computer with an operating system that is supported.
Desktop composition	Configure the operating system so that it complies with the recommendations for the graphics card and monitor. Also see Graphics card and monitor (page 15) .
Free space on system disk	There must be enough storage space on the hard disk for storing temporary data (according to the size of the CAD/CAM data that is processed). Clean up the hard disk so that there is enough free storage space to allow the software to operate safely, swiftly and smoothly.
Total memory (RAM)	A large total memory (RAM) is recommended to ensure that the OPEN MIND software runs safely, swiftly and smoothly. Information is also provided on the OPEN MIND website under Useful information . Check whether the computer's total memory can be increased.
Free memory (RAM)	Close other software programs that are not required, for example, disable any start-up software programs that run automatically when the computer starts but are not needed permanently. Close any other instances of OPEN MIND software that are not required.
Other	Check whether the operating system date is set correctly. Temporary data on a computer can mount up. Check whether the amount of temporary data can be reduced. Reports when an anti-aliasing command is not available. The multi-threading tessellation is disabled by an environment variable. Check whether all the 'Microsoft Visual C++ Redistributable Packages', which are required to operate the software, are installed correctly.
OpenGL version	The graphics card does not support any version of the OpenGL programming library that is required for OPEN MIND software. Use a driver recommended by OPEN MIND or install the latest driver offered by the manufacturer. Information is also provided on the OPEN MIND website under Useful information .
OpenGL rendering context	An OpenGL rendering context is a port via which all OpenGL commands are directed. Each thread that makes calls for OpenGL must have a current rendering context. Rendering contexts link OpenGL to the Windows windowing systems.



	<p>Use a driver recommended by OPEN MIND or install the latest driver offered by the manufacturer. Information is also provided on the OPEN MIND website under Useful information. Check whether the graphics card that is in use needs to be replaced by a graphics card recommended by OPEN MIND.</p>
GPU memory	<p>Increase the memory on the graphics card or replace with another graphics card that is recommended by OPEN MIND and has more GPU memory.</p>
Profile settings	<p>The use of NVIDIA GPU is recommended. Select as the preferred GPU in the NVIDIA control panel or set using global default settings such as 'Workstation App - Dynamic Streaming' or '3D App - Visual Simulation'. Or, switch off the 'NVIDIA Optimus (TM) - technology' in the BIOS setup of the computer.</p>
Display driver	<p>No display driver recommended by OPEN MIND is found for the graphics card. Use a recommended driver or install the latest driver offered by the manufacturer. Information is also provided on the OPEN MIND website under Useful information.</p>
Status to run <i>hyperMILL</i> ®	<p>Change the requirements for running OPEN MIND software, which are flagged as incorrect, so that they comply with the required conditions.</p>

Overview of commands

The following commands are provided on the menu bar and toolbar:

File



Save as

Save the detailed system information and detailed test results as a *.txt text file or an *.htm HTML file.



Send e-mail

Compose an e-mail with the detailed information that has been found and send to OPEN MIND support at <support@openmind-tech.com>. An e-mail program is required for this on the computer along with an Internet connection.



Print

Print a report with the detailed information that has been found.



Exit

Exit the current application.

Edit



Copy

Copy the detailed information that has been found to the clipboard.

Help

About ...: Show the software version.

Graphics card and monitor

A graphics card with a latest-generation GPU and an OpenGL accelerated graphics card driver supporting OpenGL Version 4.0 or higher is recommended for *hyperMILL*® .

Windows does not automatically support OpenGL accelerated drivers. As a user, you must install a manufacturer or OEM driver to be able to directly use hardware-accelerated OpenGL. These drivers are made available on the websites of most graphics hardware manufacturers.

Reference drivers can also be installed for notebook graphics cards. Please note that your notebook manufacturer may offer OEM drivers for your notebook on their website. Please check the website to see if there are any recommended software updates for your notebook.

If you have a computer with two graphics cards, select the accelerated graphics card (AMD / NVIDIA) instead of the integrated graphics card in the screen's Control Panel. In the case of NVIDIA Quadro graphics cards, we recommend that you set the 'Workstation app - dynamic streaming' or '3D App - Visual Simulation' profile in the NVIDIA Control Panel.



Select the accelerated GPU (AMD / NVIDIA) instead of the integrated GPU in the graphic card settings of a computer with two graphics cards.

Please visit the OPEN MIND website and refer to the overview of graphics cards and graphics card drivers recommended for use with *hyperMILL*®. Update your graphics card drivers regularly.

The recommended graphics card drivers do not take into account the connection of additional peripheral devices. Connected devices may affect the quality and performance of the graphics card. OPEN MIND Technologies therefore recommends contacting the manufacturer of the hardware in these cases.



Windows updates can modify the graphics card drivers and settings without prior notification. We recommend that you check the system after a Windows update. The `... \hyperCAD-S\<Version>\systemchecktool.exe` application can help to identify problems.

The hardware listed there has been tested automatically for use or is used in daily operations. This does not mean that *hyperMILL*® will only run on the recommended hardware. *hyperMILL*® should work on any graphics platform with full implementation of OpenGL.

All information is provided without guarantee of being complete, correct and up-to-date.

Related topics. [Graphics card and monitor \(page 15\)](#)

Hi-DPI system / 4K-Ultra-HD - support for high-resolution monitors

High-resolution 4K monitors may display objects as very small. Therefore, *hyperMILL*® sets environment variables to adjust the display and thus automatically determines the scaling behavior. This gives the user the benefit of not having to define these environment variables, and it also carries the benefit that Qt-based software programmes are not affected. It is possible to override this behavior by making manual adjustments. To do this, the following options are available:



- Enlarge the text display. To do this, change the setting in **Windows Settings** → **System** → **Display** → **Change the size of texts, apps and other items**.


For monitors ranging from 27" to 32" (medium sized screens), it is recommended to adjust the font size to 150% first. For very large monitors, the font size can be increased further, for example, to 200%. Please note that if the font size is scaled by more than 150%, the size of the dialogs is doubled.

With a large font size, some texts in the user interface dialogs may appear cut off.

- In this case, the software can be configured to run in Full HD resolution compatibility mode by setting the **Overwrite high DPI scaling** option for the `hmc.exe` to **System**. To do this, right-click the `hmc.exe` and open **Properties** in the context menu. In the **Compatibility** tab, select the **Change High DPI Settings** button. Select the **Overwrite high DPI scaling** option and select the **System** setting from the drop-down menu.
- In order to be able to work with a 4K monitor while maintaining ultra HD resolution and large font size, the Qt 5 framework has introduced a scaling behavior with the environment variable `QT_AUTO_SCREEN_SCALE_FACTOR = 1`. This option scales the Qt-UI objects, such as dialogs, buttons and icons, on high-resolution monitors. The Qt scaling behavior does not affect the 3D rendering window (the graphics area). It retains its resolution. Some elements may then appear too small.
The environment variable `OMSL_GRAPHICS_ENABLE_PIXEL_RATIO = 1` extends the scaling behavior to the 3D rendering window as well (for manipulators, snap points, workplanes, for example) using the same ratio that Qt calculates for invariant zoom objects.
- Reduce the 4K Ultra HD resolution from 3840x2160 pixels to the Full HD resolution of 1920x1080 pixels. To do this, change the setting in **Windows Settings** → **System** → **Display** → **Screen Resolution**. This makes all software programs appear twice as large on the monitor. The space on the screen is reduced accordingly.

hyperMILL® User-defined job defaults

There are two ways to save the current settings of a job as user-defined defaults:

1. Right-click the title bar of the job definition and select the **Save as default** command on the context menu.
2. Click the  icon at the bottom of the job definition (only available in **Modal** mode (see **hyperMILL settings** dialog page **Application**)).



The defaults are saved on a user-specific basis in the global working space:

In the menu under **CAM** → **Setup** → **Settings** → **Application** → **Default paths** → **Global working space**. In a standard installation, the directory path is:

```
C:\Users\Public\Documents\OPEN MIND\USERS\[User name].
```

This folder contains the two subfolders `metric.cfg` and `inch.cfg` in which the defaults of the jobs are stored in the **inch** and **metric** measurement system.

To transfer the defaults to another user or PC, proceed as follows:

1. Open the user path, for example,
`C:\Users\Public\Documents\OPEN MIND\USERS\[User name1]`,
and copy the entire content of the folder.
2. Then open the path for the target user, for example,
`C:\Users\Public\Documents\OPEN MIND\USERS\[User name2]`,
and paste the copied content.

User-defined job defaults are also transferred from one PC to another PC when importing and exporting data with the *hyperMILL*® CONFIGURATION Center. For more information, see section *hyperMILL*® CONFIGURATION Center – **Export and import settings**.



SAVING USER VARIABLES

User variables are saved by default in the `uservars.vst` file, for metric job lists in the folder `metric.cfg` and for inch job lists in the folder `inch.cfg` if the **User variables** → **Save as default** command is executed.

For information on further basic settings and default paths, see the **Set basic settings** section of the *hyperMILL*® product documentation.

Information on the company-wide management of user-defined job defaults is provided in section **Administrator manual**.

2. Activating and managing products

Requesting license data

Software copy protection

OPEN MIND software and CAD interfaces are copy-protected using Codemeter dongles from WIBU Systems. For local licensing, each computer requires a separate dongle. It must be plugged into a USB interface.

Activation code for license

The license management can be implemented independently of the production environment. The range of licensed products per dongle can be tailored with the OPEN MIND Licence Manager according to your requirements, for example, by porting 5X functionality to another editor or to the product extension. In such a case, it is not necessary to replace the dongle.

A license is the right to use OPEN MIND software such as *hyperMILL*[®] or components.


An activation code allows for one or several licenses to be activated or deactivated on a dongle and is not tied to any specific dongle. Activated products on a (randomly selected) dongle are always tied to their activation codes. The activation code is supplied by e-mail.

The purpose of a return is to modify the scope of the OPEN MIND software in use on a dongle, for example, when changing the software package from 'Classic' to 'Expert'. The software package is returned to the activation code and can then be adjusted by OPEN MIND.

The use of a license server requires a network license.

License Manager – Typical processes during activation

Overview of typical processes during the activation of products:

<p>1. Initial situation: Separate activation on a computer connected to the Internet for <i>hyperMILL</i>[®]</p>
<p>Licensing process</p>
<p> Computer connected to the Internet</p> <ol style="list-style-type: none">1. Install the License Manager2. Attach dongle to USB3. Start the License Manager4. Select local dongle5. Input activation code6. Select and activate products7. Close the License Manager8. Remove the dongle

**hyperMILL® computer**

1. Install OPEN MIND software
2. Attach dongle to USB
3. Start OPEN MIND software


2. Initial situation: Network licensing on a hyperMILL® computer with a network license, without Internet access


Licensing process**Computer connected to the Internet**

1. Install the License Manager
2. Attach dongle to USB
3. Start the License Manager
4. Select local dongle
5. Input activation code
6. Select and activate products with a network license
7. Close the License Manager
8. Remove the dongle

**License server**

1. Install the License Manager
2. Attach dongle to USB
3. Start the License Manager
4. Select local dongle
5. Turn on network server
6. Close the License Manager



**hyperMILL® computer (client)**

1. Install OPEN MIND software
2. Start the License Manager
3. Select the license server
4. Turn on and use license server
5. Close the License Manager
6. Start OPEN MIND software

Checking requirements

- Prior to the , please check the following points:
- Is there Internet access?
- Has the OPEN MIND License Manager been installed?
- Has a Codemeter dongle been supplied and plugged into a USB interface of the computer?
- Is there an activation code (5x5-digit string of characters)?

When the License Manager is installed, the dongle driver is installed automatically.



The activation and return of licenses or OPEN MIND software products requires an active Internet connection. After the activation, the dongle can be used without an Internet connection.

Process

Start the OPEN MIND License Manager. The software can be found on the Start menu under OPEN MIND. Finally, close the License Manager and start the OPEN MIND software.



The License Manager is installed in `C:\Program Files\OPEN MIND\License Manager` and can be launched using `LicenseManager.exe`.

Search for and select dongle

The License Manager looks for all local dongles and all license servers on the network. On the **Dongle / Licence server** tab, all **Available Dongles / Servers** are displayed. Select a local dongle or license server (display of server name and dongle number).



The list shows all products allocated to the selected dongle or server with the following information.

Product name: Display of the products available on the dongle and/or license server as well as, as a branch view, the users of the products. Click on the product name to display the licensed users.

Expires: Expiry date - after this date, the product can no longer be used.

Maintenance: Expiry date - after this date, updates are no longer possible.

Notes: Display of information on postprocessor and machine model licensing.

When a license server is used, the following is additionally displayed:

Count: Display of number of products licensed

Used:: Display of the currently used number of product licenses. If not all licenses available are in use, the display will be highlighted in green. If all licenses available are in use, the display will be highlighted in red.

If the search does not yield any results, the message 'No active licenses found' appears. In this case, plug a dongle into the USB interface or set up a license server.

If the message 'No active licenses found' is displayed or if existing licenses are to be managed, switch to the Activation code tab:

Select activation codes

Already existing activation codes are validated automatically and displayed for selection under **Available activation codes** in the Activation code tab. Use **Add activation code** to add a new activation code.



The complete activation code can be copied to the fields in one process via the clipboard. For this purpose, place the cursor in the first field.

Keep your activation codes in a safe place. The codes will also be required to return products, for example, as part of software maintenance.

Please do not interrupt the activation process as this could damage the dongle.

Once the fields have been filled in, a connection to OPEN MIND is established automatically and the activation code is checked.

✔ Activation code is recognized.

✘ Error, activation code could not be recognized. Check that it has been entered correctly and that you are connected to the Internet. Also check the firewall settings and contact your network administrator if necessary. Click **OK** to confirm the successful operation.

Select the required activation code under **Available activation codes**:

✘ Remove an entry from the activation codes.

★ Make an activation code a favourite that is always displayed at the top.

🔄 Reload the activation codes.

On the **Activation code** dialog page under **Targets**, choose the dongle, whose scope of licensing needs to be changed.

The list displays all allocated products and test licenses with status (Not activated) or the dongles activated through them.

Activate or return

Select the required products from the list and click **Activate license** and/or **Return license**.



- Ensure that the relevant dongle is available locally.
- Ensure that the software has been closed before you use Return.

Activate license allocates the product to the selected local dongle.

Return license deactivates the product on the selected dongle and returns it to the activation code.

If products are to be returned to OPEN MIND, for example, when changing from local licensing to network licensing, proceed as follows:

1. On the **Activation code** tab, select the activation code from **Available activation codes**.
2. The List displays only the products that must be returned.
3. Click **Return license**.



While products still need to be returned to OPEN MIND, the further management of products belonging to the activation code is blocked.

This requires an active Internet connection! A connection to OPEN MIND is established automatically and the changes are implemented.

✔ Change successful

✘ Error, change not possible. Check whether an Internet connection is established. Switch to the **Dongle / License server** tab and

🔄 Click the button to reload the activation codes.

If the error persists, please contact your Support.

Select the required activation code under **Available activation codes**.

✘ Removes an entry from the activation codes.

★ Makes an activation code a favourite that is always displayed at the top.

🔄 Reloads the activation codes.

Under **Targets**, select the dongle, whose scope of licensing needs to be changed.



A dongle for a license server can be managed locally using any OPEN MIND Licence Manager. For this purpose, plug the dongle into the local USB interface.

Network license and license server

On the **Options** tab, select the **Use this computer as a license server** option if the computer is to be used as a license server on the local network.

To select this option, you must have administrator rights.

Use the **Use licenses from a server** option if you want to access a network license. An available license server is accessed automatically via **Locate license server automatically**. Enter a server with its IP address or name manually in **Server name** if the **Use a specific license server** option is to be used.

To configure these settings, you must have administrator rights.



You must start the License Manager with administrator rights, for example, using the Windows Run as administrator function. For this purpose, select LicenseManager.exe in the program directory and right-click to open the Windows shortcut menu.

If you are working with network licenses, specify a product that is to be started regularly on the computer on the **Start tab under Select base product**. Otherwise, where available and permitted, the local dongle will be evaluated or the most extensive product package available on the network will be started (**Automatic selection**).

You can use **Additional client info** to store a note (for example, phone number and e-mail address) that is displayed for every user when a license server is used.

Reload on the **Dongle/License server** tab starts a new search for available dongles and license servers. **Group list by users** sorts the list of products in such a way that the products currently in use are shown as being allocated to the users. The status bar displays information on the settings of the local computer.

Proxy authentication

If you use an Internet proxy with authentication in your company, on the **Options** tab you must enter the **User name** and **Password** for the proxy in order to activate the licenses.

Afterwards, you can log in using the **Logon to proxy** button. On successful login, the **user name** and **password** are locked for editing and the **Activation code** tab of the License Manager is unlocked.

When an Internet proxy with authentication is used, the activation codes are not stored on the system and are also not loaded when the **License Manager** is started. They must be entered separately each time a license is changed.

Specify warning period

On the **Options** tab, you can use the **Warning period** option to specify how many days in advance you wish to be notified of licenses that are going to expire. By default, you will receive a warning 14 days before a license expires.

To change this setting, you must have administrator rights.

Specify start options

Here, you can configure the standard start behavior of *hyperMILL*®.

If you do not make a selection, *hyperMILL*® will always start with the maximum available scope of licensing and provide the maximum available product functionality.

For example, if you want to restrict the use of licenses in a network environment, you can select the base products and options here that are used on start-up.



If you choose an option, for which you do not have a license, this option will not be loaded on start-up.

An error message, indicating that this option is not available, will also not appear.

3. Administrator manual

Introduction

This manual covers unattended installation and administrative tasks. Installation with user interface is described in the installation guide.

Silent installation

Unattended installation can be performed using two methods. It can either be implemented with the `setup.exe` or with the individual MSI packages. We recommend using the `setup.exe`.

In both cases, the product must be configured following installation. The product cannot be started following installation without firstly being configured.

Prior to installing *hyperMILL*[®], any CAD systems, into which *hyperMILL*[®] should be integrated, are to be installed.

There is no unattended installation for the *hyperMILL* license server. This must be installed manually.

Installation with `setup.exe`

Property	Value	Description
INSTALLDIR	Path	The target path of the installation. The default value is <code><Programs>\OPEN MIND</code> . Subfolders are created automatically.
IS_CAMOBSERVER	0..1	Default: 0. A parameter controlling recognition of the SHOP Viewer. This can be set for initial installation.
/language:LCID	LCID: 1028; 1029; 1031; 1033; 1034; 1036; 1040; 1041; 1042; 1043; 1045; 1046; 1049; 1055; 1060; 2052	Sets a system language for the installation process. Determines the language of the installed help. Additional auxiliary languages must be installed separately.

LCID	ISO	HMLANG
1028	CN_TW	chinese_trad
1029	CZ	czech
1031	DE	german
1033	EN	english
1034	ES	spanish



LCID	ISO	HMLANG
1036	FR	french
1040	IT	italian
1041	JA	japanese
1042	KO	korean
1043	NL	dutch
1045	PL	polish
1046	PT	portuguese
1049	RU	russian
1055	TR	turkish
1060	SL	slovenian
2052	CN_ZH	chinese

Example:

```
setup /silent INSTALLDIR="c:\open mind\cam" /language:1031
```

Installs the license manager and *hyperMILL*® in German in the folder `c:\open mind\cam` without user interaction.

Further command line options for the `setup.exe` can be found online at:

<https://docs.reverera.com/installshield25helplib/helplibrary/SteSetupexeParam.htm>

Installation without `setup.exe`

In the case of installation without the `setup.exe`, the system components must be provided manually. *hyperMILL*® and *hyperMILL*®CAD use the following system components.

System component	Version	License Manager	<i>hyperMILL</i> ®	<i>hyperMILL</i> ®CAD
VC-Redist 2013 Update 1 x86	12.0.21005.1		x	
VC-Redist 2013 Update 1 x64	12.0.21005.1		x	
VC-Redist 2019 x64	14.29.30038.00		x	x



System component	Version	License Manager	<i>hyperMILL</i> ®	<i>hyperMILL</i> ®CAD
Microsoft .NET Framework 4.8		x	x	x
CodeMeterRuntime	7.60.c	x	x	x
HeidenhainDNC x64	1.7.2		x	x

The product is installed following installation of the system components.

- License Manager
- *hyperMILL*®
 - Language pack for *hyperMILL*®

The MSI packages support their own properties here.

Property	Value	Description
INSTALLDIR	Path	The target path of the installation. The default value is <Programs>\OPEN MIND. Subfolders are created automatically.
HMLANG	Language	English, German, French, Sets the product language. The product starts in this language following installation.
SUITE_UI	0..1	Indicates whether automatic product configuration should be started. The default value for this property is 0, whereby automatic configuration is not started. Automatic configuration is guided by a user interface and should not be called in an unattended installation.
TRANSFORMS	LCID.mst Example: TRANSFORMS=1033.mst	Transformations (*.mst files) are available for <i>hyperMILL</i> ® and License Manager, which provide language-specific text for start menu entries. The product is offered in these languages.

LCID	ISO	HMLANG
1028	CN_TW	chinese_trad
1029	CZ	czech
1031	DE	german



LCID	ISO	HMLANG
1033	EN	english
1034	ES	spanish
1036	FR	french
1040	IT	italian
1041	JA	japanese
1042	KO	korean
1043	NL	dutch
1045	PL	polish
1046	PT	portuguese
1049	RU	russian
1055	TR	turkish
1060	SL	slovenian
2052	CN_ZH	chinese

The configuration must be performed once installation is complete.

Configuration

For the configuration of *hyperMILL*[®], the *SettingsService* is provided. The *SettingsService* is able to transmit the typical configurations from one system to the next. In special cases, manual intervention is required.

The SettingsService

The configuration of the product can be largely automated by means of the *SettingsService*. For this purpose, the *SettingsService* recognizes a series of command line options with which the required operations are started.

```
SettingsService.exe [-allswitch|-cadswitch|-import] [<version>|-disable]  
[-disable|-update] [-defaultdb] [filepath]
```

-allswitch	Activates/deactivates <i>hyperMILL</i> in all found and supported CAD platforms.	The version number of the version to be activated is required or -disable. (Specialisations: -tdswitch, -swswitch, -invswitch, -hcs switch available for <i>hyperMILL</i> [®] CAD, ,).
------------	--	--



-cadswitch	Activates the COM interfaces of the <i>hyperMILL</i> ®CAD specified under <version>.	
-import	Imports the settings from the specified .omsettings file and activates <i>hyperMILL</i> in all found, supported CAD platforms.	Only .omsettings files exported with the SettingsWizard of the same version are supported.
-init	Configures <i>hyperMILL</i> with the default settings and activates it in all supported CAD platforms.	

Example

Initialises the system for the use of *hyperMILL*® xx.x in all supported CAD platforms and makes the standard databases for tools and macros plus the standard color tables available.

<i>hyperMILL</i> ® product version	xx.x (internal version)
2022.1	29.0
2022.2	30.0
2023	31.0
2023 Update X	32.0
2024	33.0

```
SettingsService.exe -allswitch xx.x -defaulttdb
```

Example

Removes all *hyperMILL*® versions from all supported CAD platforms

```
SettingsService.exe -allswitch -disable
```

Example

Removes *hyperMILL*® xx.x from the supported thinkdesign installations.

```
SettingsService.exe -tdswitch xx.x -disable
```

Example

Registers the thumbnail display in Windows Explorer via *hyperMILL*®CAD xx.x.

```
SettingsService.exe -cadswitch xx.x
```

Example

Imports the settings from the specified .omsettings file and activates *hyperMILL* in all supported CAD platforms.

```
SettingsService.exe -import  
"C:\Users\MyUsername\Documents\MyDocuments\mySettings.omSettings"
```

Registry

There are registry keys that affect the behavior of *hyperMILL*® during installation or the first application start.

Registry keys

- HKEY_LOCAL_MACHINE\SOFTWARE\OPEN MIND
 - common\Configuration\
 - GlobalWorkingSpace (REG_SZ) refers to the global working space.
 - ProjectDirectories (REG_SZ) refers to the project directories.
 - OMConfig (REG_SZ) refers to the CFG files that are required for licensing.
 - Language (REG_SZ) defines the default language of *hyperMILL*®.
 - TemplateToolDB (REG_SZ) refers to the tool database that is loaded if the document and application databases failed to load (emergency database).
 - common\<Product Version>\Languages
 - Contains the lists of languages that you can select for *hyperMILL*®.

All further registry keys are user-specific and cannot be used during the installation.

Security settings

hyperMILL® was developed to allow users to work with power user rights. If it becomes necessary to run *hyperMILL*® with limited rights, some security settings will have to be adjusted.

Important information about license mode

To ensure that all unused network licenses are available, they are automatically released after two hours of software inactivity. Please make sure that your data is backed up automatically (**File** → **Options** → **Options/Properties** → **Program**).

The time for automatic release of a license can be set as follows:

The **LicenseCleanupTime** can be controlled on the server by the registry value:

```
HKEY_LOCAL_MACHINE\SOFTWARE\WIBU-SYSTEMS\CodeMeter\Server\CurrentVersion\CleanUpTimeOut
```

in which the time in minutes is entered after an inactive license is automatically released. The default value is 120 minutes.



The time cannot be reduced below 60 minutes.



If the value is changed, the CodeMeter service must be restarted on the server. Restarting the service terminates all current license sessions and ends all current sessions of the product



Managing user-defined job defaults across the company

To manage job definition defaults in the network across the company, proceed as follows.

1. Via the menu **CAM** → **Setup** → **Settings** → **Application** → **Default paths** dialog to adjust the path for the configuration files (default: `C:\Users\Public\Documents\OPENMIND`). Double-click the path to be able to edit it.
2. Place the path in the required network directory and confirm the change by clicking the ✓ icon.

If all users are to work with the same defaults, proceed as follows:

1. Open the `USERS` folder in the configuration files path. If the folder does not exist, create it again.
2. Create the subfolder `_COMPANY` here.
3. Copy all required defaults from a reference user to the `_COMPANY` folder. The defaults in the `_COMPANY` folder are valid for all *hyperMILL*® users if they access the same configuration file path.



As soon as a *hyperMILL*® user saves new job defaults, they are valid for that user. The defaults from the `_COMPANY` folder are no longer taken into account. If this is not desired, the `USERS` folder must be made read-only for the affected user.

For more information on saving user-defined job defaults and user variables, see section **Configuring the OPEN MIND software**.

4. Hardware / software requirements

OPEN MIND Technologies AG (Documentation produced on Mon, Jul 15, 2024)

Minimum requirements and minimum recommendations

The following minimum requirements apply to all computers on which the OPEN MIND software products are installed. These represent the minimum computer configuration required for **installing** the software.

They are listed in the table in the **Minimum** column.

The following minimum recommendations go beyond the minimum requirements and represent the computer configuration recommended by OPEN MIND. These minimum recommendations apply to the use of the hardware under real **production conditions** and can vary greatly depending on the working method, parts to be manufactured and many other factors.

They are listed in the table in the **Recommended** column.



All notes are recommendations for computer configuration.

OPEN MIND does not provide support for the configuration and maintenance of the system.

Automatic check

The installation checks automatically whether a 64-bit program version of the software products can be installed and whether all requirements for the respective variant on your computer have been met. If necessary, any missing but necessary components or programs will be installed automatically.



If Microsoft .NET Framework is installed, your system may have to be restarted afterwards.

General notes on hardware recommendations

The following hardware components influence the performance of a computer's toolpath calculation.

Number of cores of the CPU

The higher the number of cores of the CPU, the faster a calculation is performed if parallel processing is possible. Please note that not all *hyperMILL*[®] machining strategies can use the maximum number of available cores simultaneously for the calculation.

Clock rate and computing performance

Core speed describes the clock rate and computing performance of each core. More cores at the same core speed increases performance for parallelizable tasks, as more threads can be executed simultaneously. A higher core speed with the same number of cores increases performance for single threads or non-parallelizable tasks. A combination of more cores and higher core speed typically offers the best overall performance, as both parallelizable and non-parallelizable tasks benefit from the improvements.



In current processors, a distinction is made between performance cores ("big cores") with maximum computing power and higher clock speeds, and energy-efficient cores ("eco cores") with high energy efficiency, low power consumption, and lower clock speeds. Current performance cores typically support two logical processors (i.e. virtual CPU units) generated through technologies like Hyper-Threading.



For the toolpath calculation in *hyperMILL*® the **speed of the performance cores** is crucial. Therefore, it can be beneficial in some cases to restrict the calculation to the performance cores or to prioritize them for the calculation.

Main memory (RAM)

The memory requirements of *hyperMILL*® depend on the complexity of the parts to be machined. The more processor cores are used and the more parallel threads are executed during the toolpath calculation, the larger the computer's main memory (RAM) must be.

The RAM used by Windows must also be subtracted from the total size of the installed RAM. For a computer with **Windows 11**, Microsoft currently recommends at least **8 GB**, preferably **12 GB** of main memory.



The following rule of thumb applies to *hyperMILL*®:

Free main memory (RAM) before the calculation > (1 gigabyte * number of logical processors).

Example:

On a current i7 computer with Windows 11 and *hyperMILL*® in productive mode with 20 cores (8 Performance and 12 Eco), *hyperMILL*® therefore requires 28 cores * 1 GB = 28 GB free main memory.

This results in a total memory requirement of at least 40 GB main memory (RAM) (28 GB for *hyperMILL*® + 12 GB for Windows) for the computer.

Hardware component	Minimum	Recommended
Number of cores of the CPU	4 performance cores with hyper-threading (= 8 logical processors)	8 or more performance cores with hyper-threading (= 16 or more logical processors)
Clock frequency and computing power	greater than 2GHz	4 GHz for the performance cores
Main memory (RAM)	16 GB	Number of logical processors * 1 GB + 12 GB for Windows
Free hard disc space ⁽¹⁾	10 GB ⁽¹⁾	-
OpenGL-compatible graphics card ⁽²⁾	-	x

Hardware component	Minimum	Recommended
USB connection (min. 2.0)	x	-

Possible operating systems	
Windows 10	x
Windows 11	x



(1) Minimum memory space for use of the respective product; with increasing complexity of the machined parts, more memory is required.

(2) Graphics card suitable for CAD/CAM workstation. Recommendation: NVIDIA Quadro with at least 4 GB.

The recommendations of the respective CAD manufacturer apply for *hyperMILL*® for Autodesk® Inventor® and *hyperMILL*® for SOLIDWORKS

The following applies to *hyperMILL*®: Correct functioning cannot be guaranteed when using AMD-ATI graphics cards.

Further information on graphics cards can be found in the CAD product documentation in the section **Appendix → Information for administrators → Graphics card and monitor**.



The hardware listed there has been automatically tested for use and is being used in day-to-day work. This does not mean that *hyperMILL*® can be run only with the hardware recommended. It should run on any graphic platform with a full implementation of OpenGL.

A graphics card with an OpenGL-accelerated graphics card driver from OpenGL version 4 is recommended. Please refer to the overview of graphics cards and graphics card drivers recommended for the use of the CAD system on the OPEN MIND website.

Windows does not support any OpenGL-accelerated drivers. As a user, you must install a manufacturer's or OEM driver for the direct use of hardware-accelerated OpenGL. These drivers are available from the websites of most graphic hardware manufacturers.

Network and licence server

If your computers are connected to a network, please note that the **maximum transfer rate of the network card** itself is a crucial factor for network speed, as are the **read and write speeds of the data storage devices** (HDD oder SSD). Both factors therefore determine the performance when calculating and creating toolpath data and when starting a Virtual Machine.



To ensure efficient licence management with minimum delay on your OPEN MIND network licence server, the data should be transferred with a latency of less than 50 ms.

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