



*Version 1.0.162.0*

# **Installation Manual**



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## 1. Introduction

This document describes the installation process for OpenMind.

## 2. Requirements

OpenMind requires the following dependency packages be installed before it can be properly used:

<b>Requirement</b>	<b>More details</b>
Windows Operating System 10 or higher	OpenMind is a Windows-based application
A minimum of 100 MB disk space dedicated to the installation folder	For the application packages and related artefacts
<i>.NET 8.X runtimes*</i>	The application is built on top of recent .NET versions, and will be upgraded to run over the newer versions eventually
<i>ASP.NET Core Runtime 8.X*</i>	ASP.NET Core Runtime is used for the integration OpenMind has against Python
<i>Microsoft Visual C++ Redistributable</i>	For the support of ZGY seismic format
<i>Python 3.10.X, tensorflow and tf2onnx packages*</i>	Used by some of the AI-based horizon interpretation engines

*Table 1: Dependency requirements for running OpenMind.*

*\*These dependencies are also installed by the OpenMind installer, if necessary and by following the installer's instructions.*

### 2.1 .NET 8.X Runtimes

OpenMind is built on top of .NET 8.X technology. As a consequence, a runtime environment for .NET 8 may be installed, in case it's not already installed.

The official .NET 8 runtime packages can be downloaded from:

<https://dotnet.microsoft.com/en-us/download/dotnet/8.0>



Run apps - Runtime ⓘ

## ASP.NET Core Runtime 8.0.1

The ASP.NET Core Runtime enables you to run existing web/server applications. **On Windows, we recommend installing the Hosting Bundle, which includes the .NET Runtime and IIS support.**

### IIS runtime support (ASP.NET Core Module v2)

18.0.23334.1

OS	Installers	Binaries
Linux	<a href="#">Package manager instructions</a>	<a href="#">Arm32</a>   <a href="#">Arm32 Alpine</a>   <a href="#">Arm64</a>   <a href="#">Arm64 Alpine</a>   <a href="#">x64</a>   <a href="#">x64 Alpine</a>
macOS		<a href="#">Arm64</a>   <a href="#">x64</a>
Windows	<a href="#">Hosting Bundle</a>   <a href="#">x64</a>   <a href="#">x86</a>   <a href="#">winget instructions</a>	<a href="#">Arm64</a>   <a href="#">x64</a>   <a href="#">x86</a>

## .NET Desktop Runtime 8.0.1

The .NET Desktop Runtime enables you to run existing Windows desktop applications. **This release includes the .NET Runtime; you don't need to install it separately.**

OS	Installers	Binaries
Windows	<a href="#">Arm64</a>   <a href="#">x64</a>   <a href="#">x86</a>   <a href="#">winget instructions</a>	

Figure 1: Both **ASP.NET Core Runtime - Hosting Bundle** and **.NET Desktop Runtime x64** are installed by the OpenMind installer, if not previously installed.

## 2.2 C++ Redistributable

The seismic ZGY importer in OpenMind is dependent on the **Microsoft Visual C++ Redistributable** package. In many occasions, this is already installed locally on the machine, due to its need by other applications. If that is not the case, a manual download and installation will be required.

Searching online can take one to the latest C++ Redistributable installer. Currently, it can be downloaded from the link below:

<https://docs.microsoft.com/en-us/cpp/windows/latest-supported-vc-redist?view=msvc-170>



## Visual Studio 2015, 2017, 2019, and 2022

This table lists the latest supported English (en-US) Microsoft Visual C++ Redistributable packages for Visual Studio 2015, 2017, 2019, and 2022. The latest supported version has the most recent implemented C++ features, security, reliability, and performance improvements. It also includes the latest C++ standard language and library standards conformance updates. We recommend you install this version for all applications created using Visual Studio 2015, 2017, 2019, or 2022.

Architecture	Link	Notes
ARM64	<a href="https://aka.ms/vs/17/release/vc_redist.arm64.exe">https://aka.ms/vs/17/release/vc_redist.arm64.exe</a>	Permalink for latest supported ARM64 version
X86	<a href="https://aka.ms/vs/17/release/vc_redist.x86.exe">https://aka.ms/vs/17/release/vc_redist.x86.exe</a>	Permalink for latest supported x86 version
X64	<a href="https://aka.ms/vs/17/release/vc_redist.x64.exe">https://aka.ms/vs/17/release/vc_redist.x64.exe</a>	Permalink for latest supported x64 version. The X64 Redistributable package contains both ARM64 and X64 binaries. This package makes it easy to install required Visual C++ ARM64 binaries when the X64 Redistributable is installed on an ARM64 device.

Figure 2: Link to download of the **vc\_redist\_x64.exe** installer, which is required to be installed in case the machine does not have the **Visual C++ Redistributable** already installed from before.

### 2.3 Hardware Specification

OpenMind in principle does not require any specific extra hardware than what is already described in the previous subsections. However, when used against large seismic datasets, it may be beneficial to use more powerful machines in order to obtain better performance.

Although hardware specification is dependent on several factors, not least where the data is located (locally or remotely), here are some points to serve as an initial guide:

- RAM memory: the more RAM memory available, the faster any software application will run. This can be even more relevant when multiple processing-intensive applications are running simultaneously. The recommendation is at least 16GB in RAM memory. If possible, 32GB or 64GB of RAM is preferable.
- Hard disk: at least 1TB in SSD disk is recommended. In the case of working with large datasets, it can be important to have extra disk capacity.
- Processor: Intel 7 or higher. OpenMind makes extensive use of parallelizing, so that the more available CPU processing cores, the better for overall performance.
- Graphic Card: a dedicated CUDA GPU can speed up significantly the Machine Learning models execution in OpenMind. A model like NVidia RTX A4500, or higher, would be beneficial not only for OpenMind, but also to other applications that may make use of GPU multi-core processing.



### 3. Installation steps

After downloading the .exe installation file, double click to start the installation.

Depending on your local security settings, you may need to accept running the downloaded file before starting the installation process.

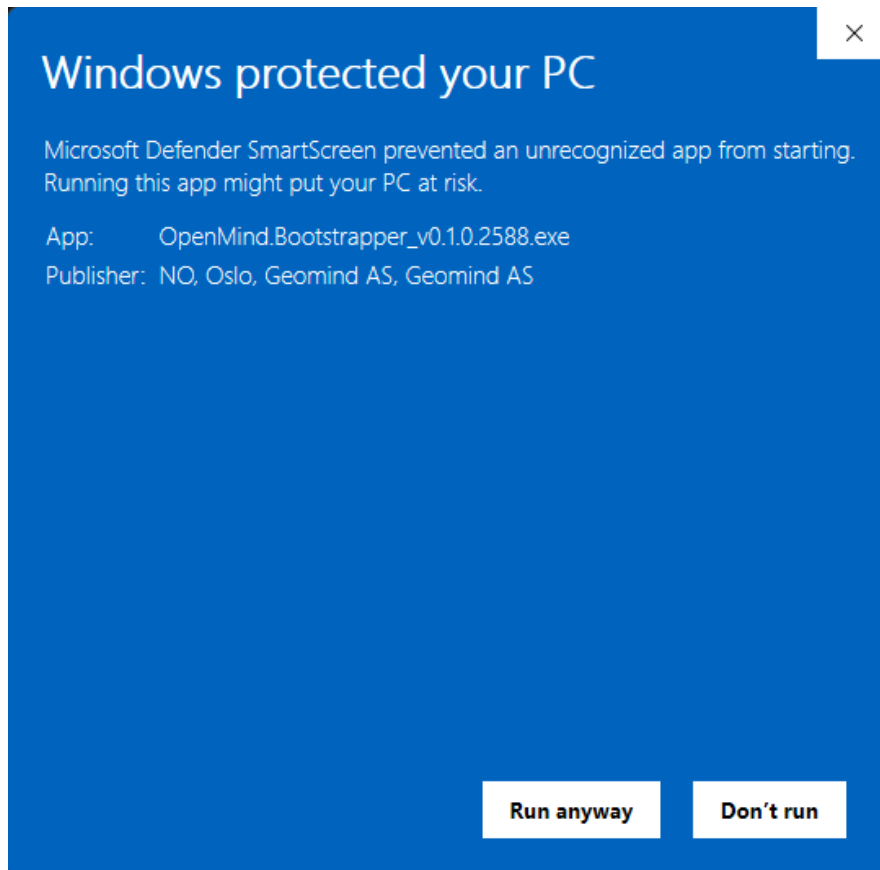


Figure 3: Click on **Run anyway**, if the Windows protection pop-up is raised.

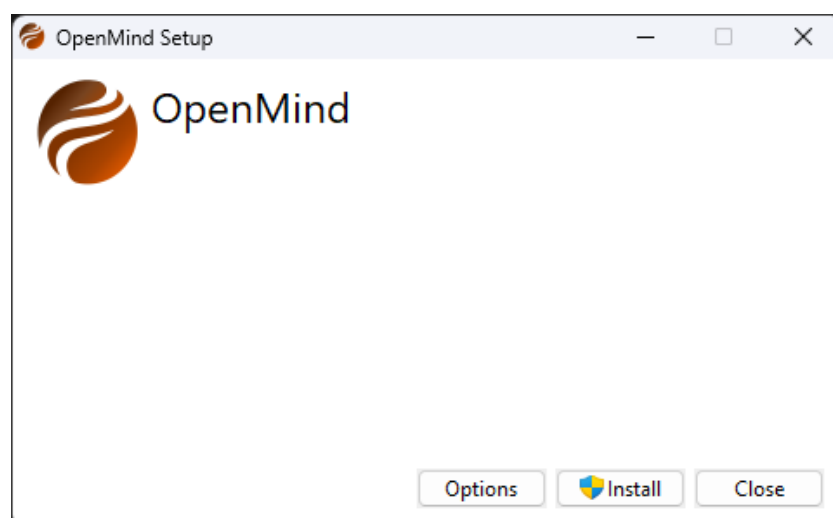


Figure 4: Click on **Install**.



A check will then be run on the system, to verify if some of the dependencies are installed already. If not, accept all further instructions to install for example .NET, ASP.NET, or Python locally.

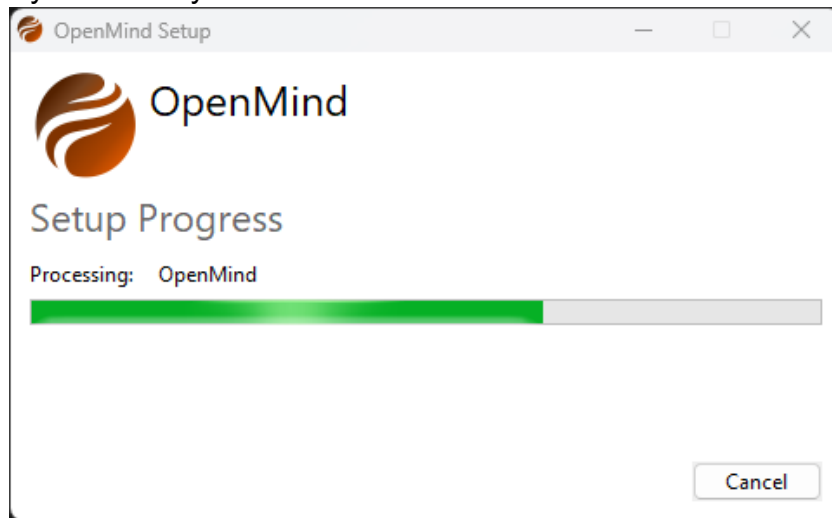


Figure 5: The installer first checks for dependencies already installed. Follow instructions if some extra packages are prompted for installation.

After dependencies are verified and installed, the installation can proceed.

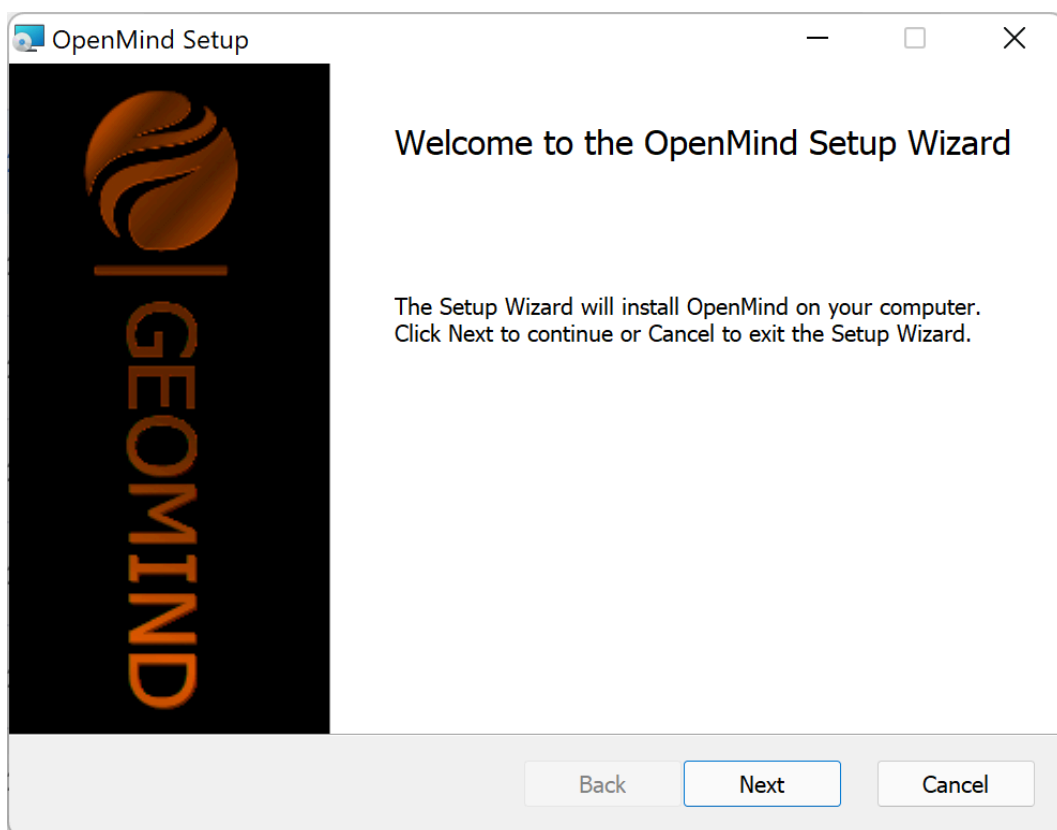


Figure 6: Welcome page: click on Next to proceed

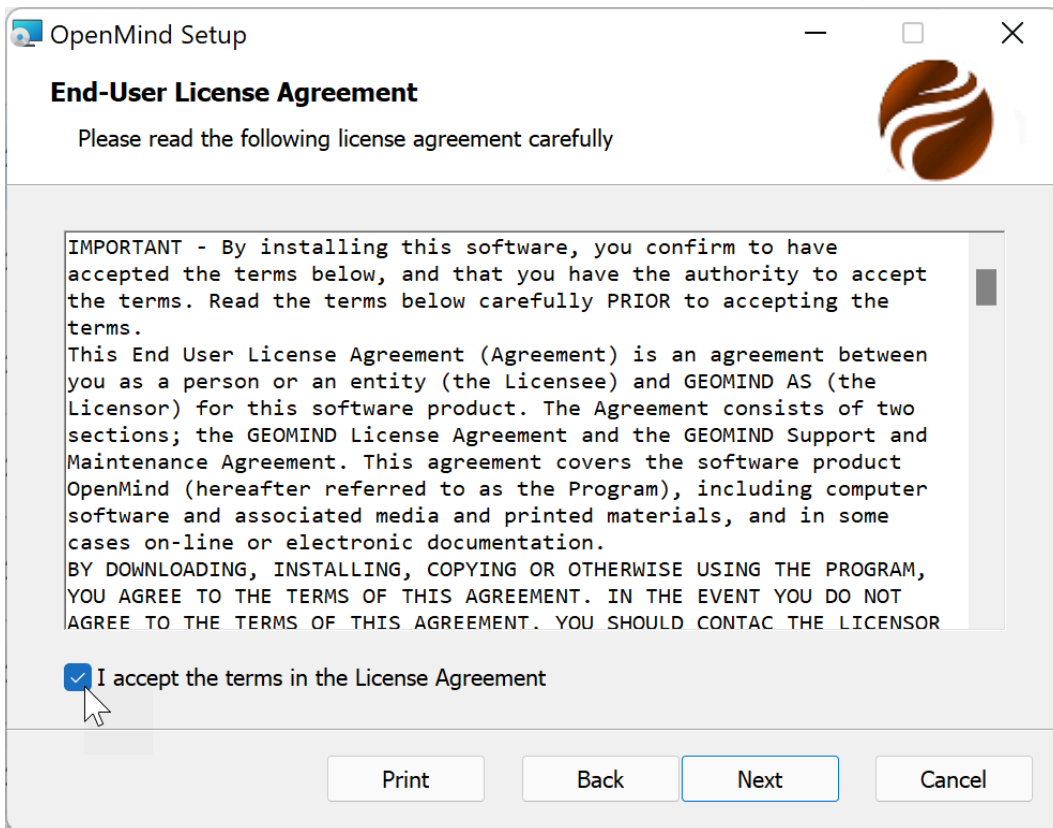


Figure 7: EULA acceptance required. Next to proceed with installation.

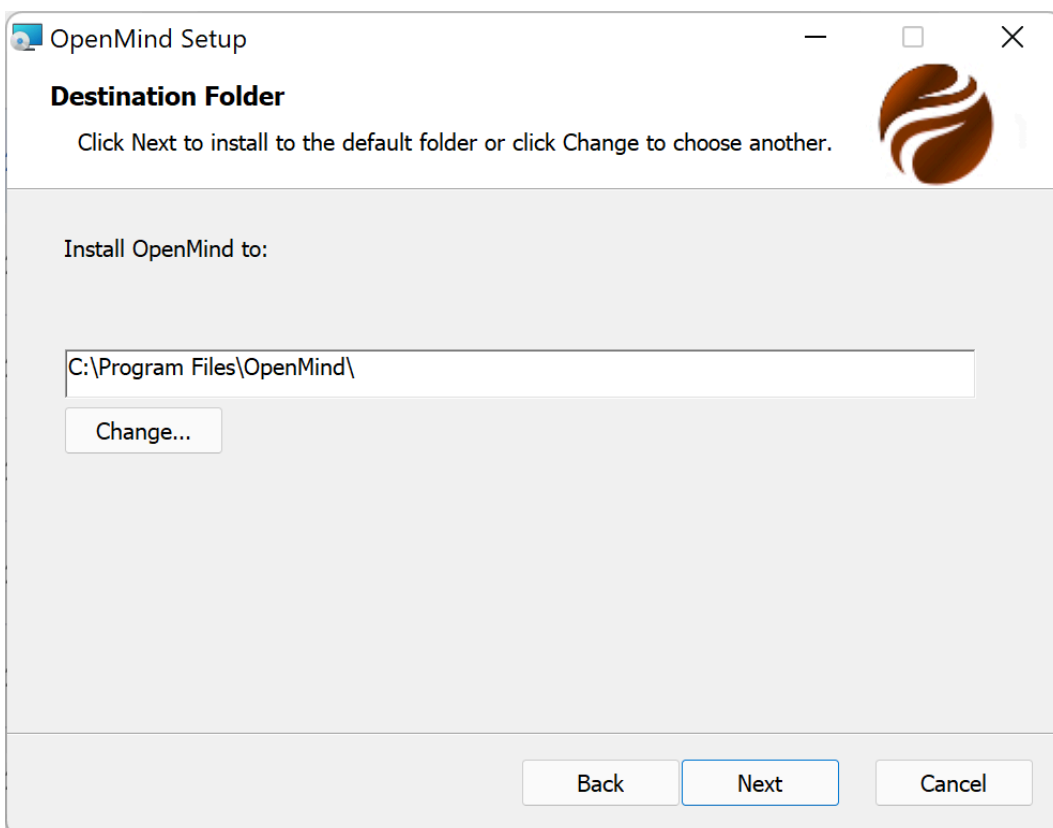


Figure 8: Selection of Installation folder: click on Next to proceed.



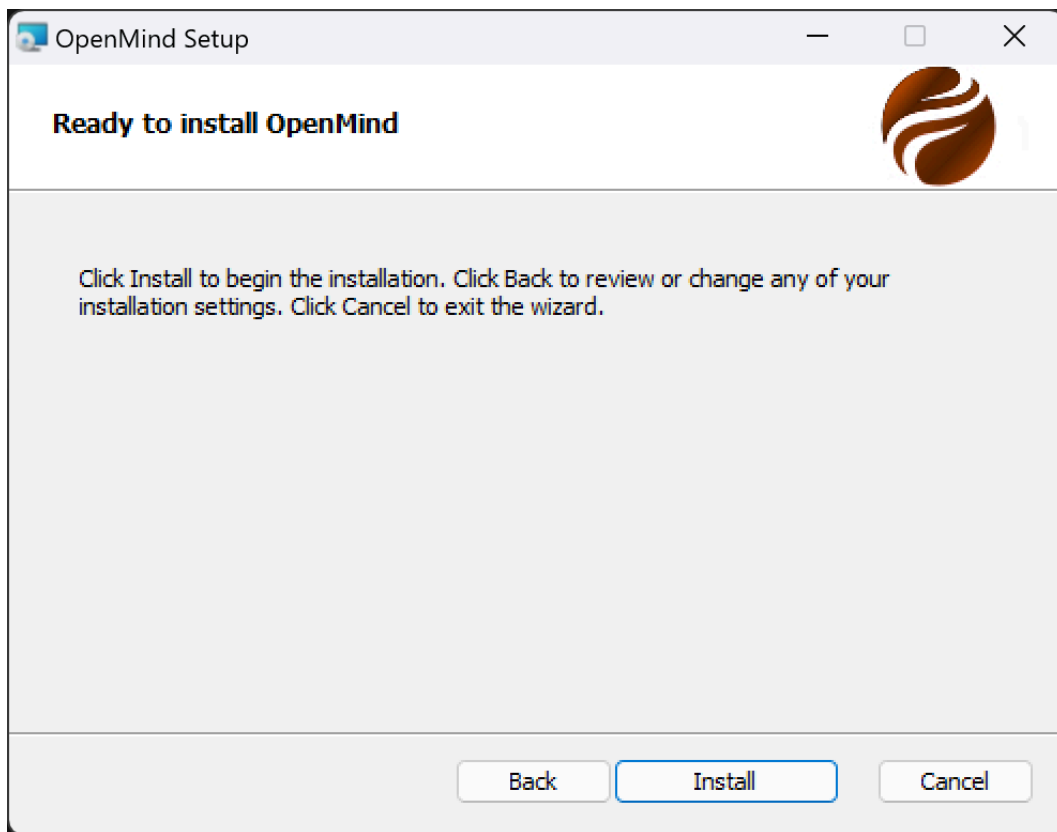


Figure 9: Install button is the next step.

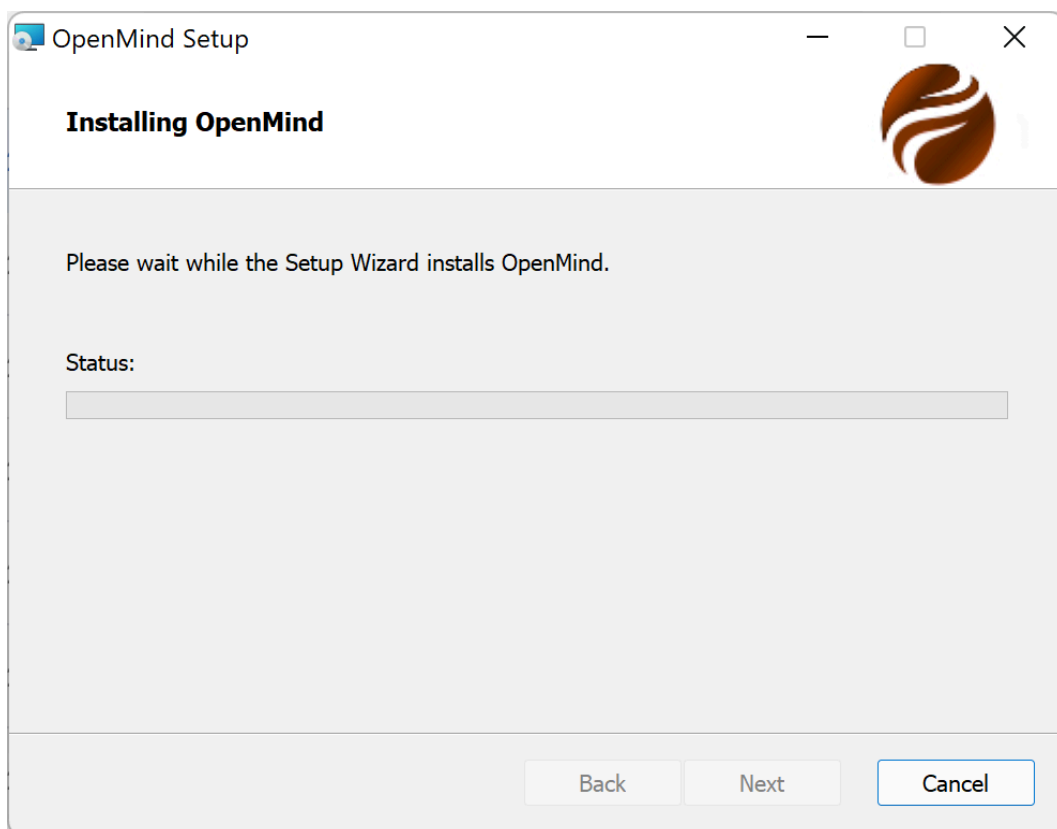


Figure 10: A Status bar indicates the progress of installation.

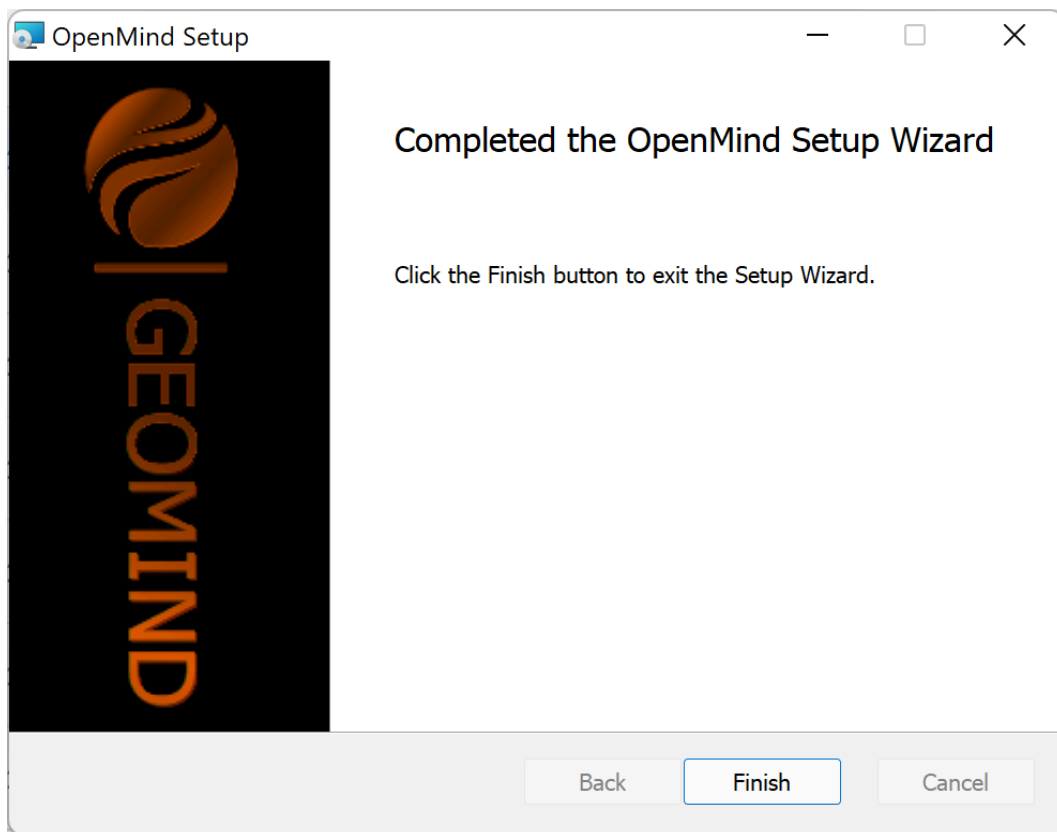


Figure 11: Click on Finish to conclude the installation.

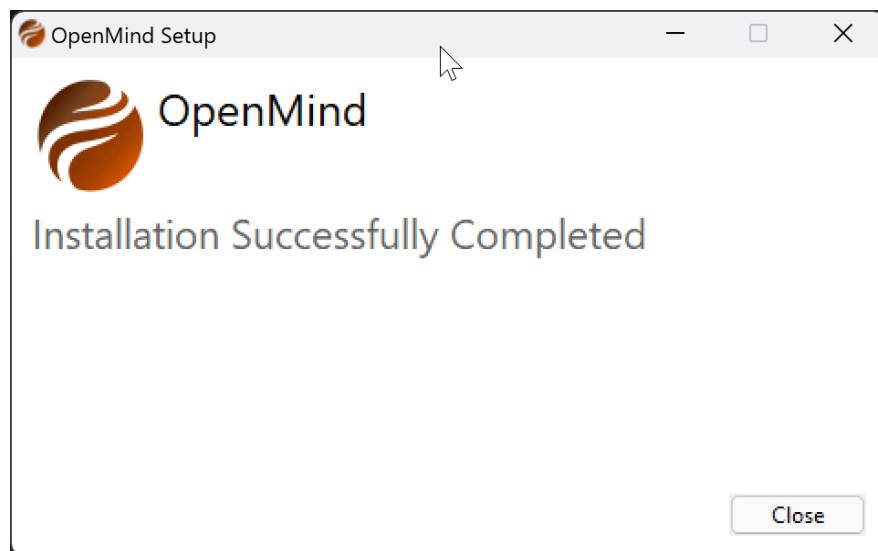


Figure 12: Installation is completed.



## 4. Licensing

Licenses for OpenMind are provided per user.

The program, however, can be used without licenses, with a limited set of functionalities made available. For example, loading seismic files and visualizing them on the 3D Window is allowed without a license.

In order to enable all OpenMind features, just one license module is required. The license will be provided by Geomind AS personnel, in the form of a **License ID** and an **Activation Password**.

Access to the internet is required, when activating the license. Note that only license information is transferred to the online license server, in an encrypted way. No personal data is ever transmitted.

### 4.1 License activation

When OpenMind is started without a valid license, a License Management window pop-up will be presented to the user.

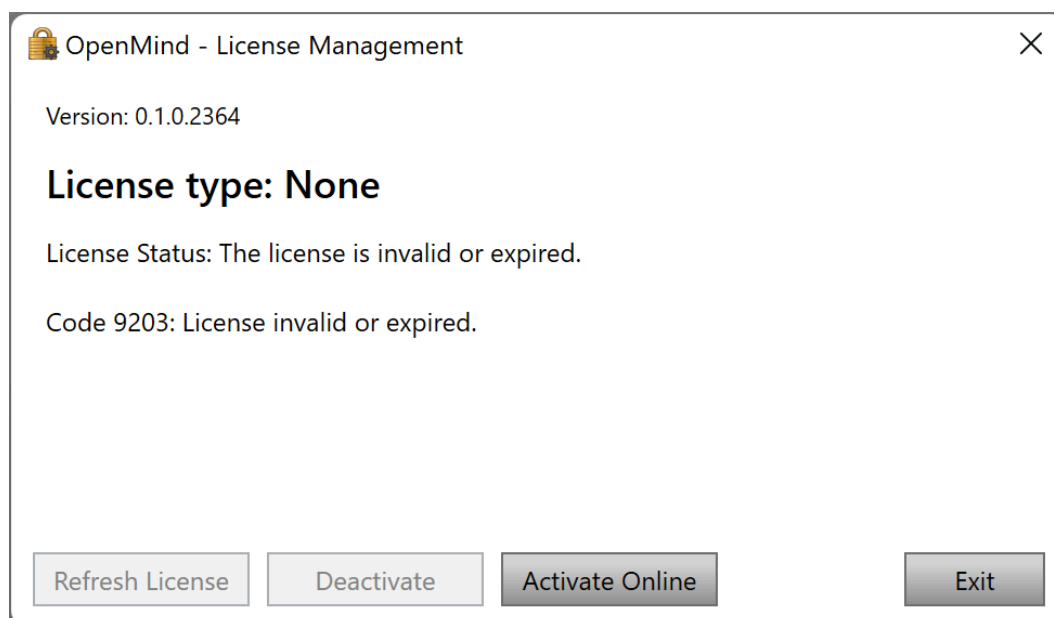


Figure 13: License Management pop-up, presented to the user when starting OpenMind without a valid license.

Click on the Activate Online button, in order to proceed with the activation.

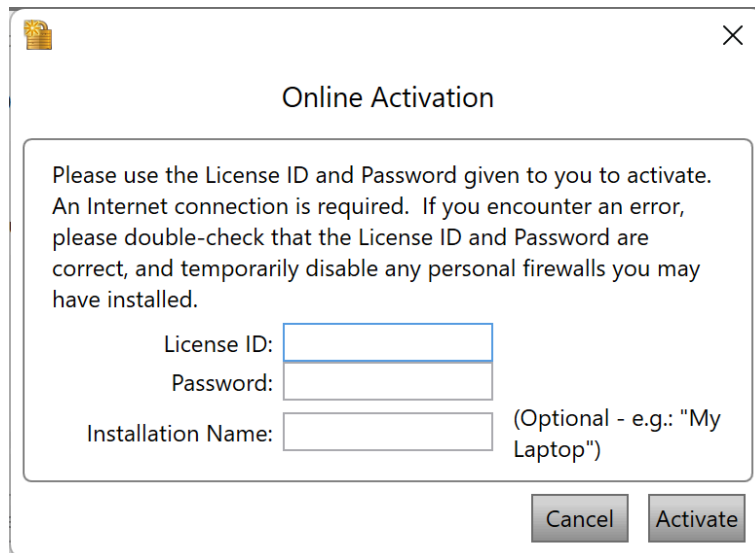


Figure 14: The Online Activation pop-up window.

Use the **License ID** and **Password** provided by Geomind AS, in order to activate the license. Please contact at [support@geomind.tech](mailto:support@geomind.tech), in case you need license details.

Notice that the **Installation Name** field is optional. When used, it simply will add one extra string tag into the license file.

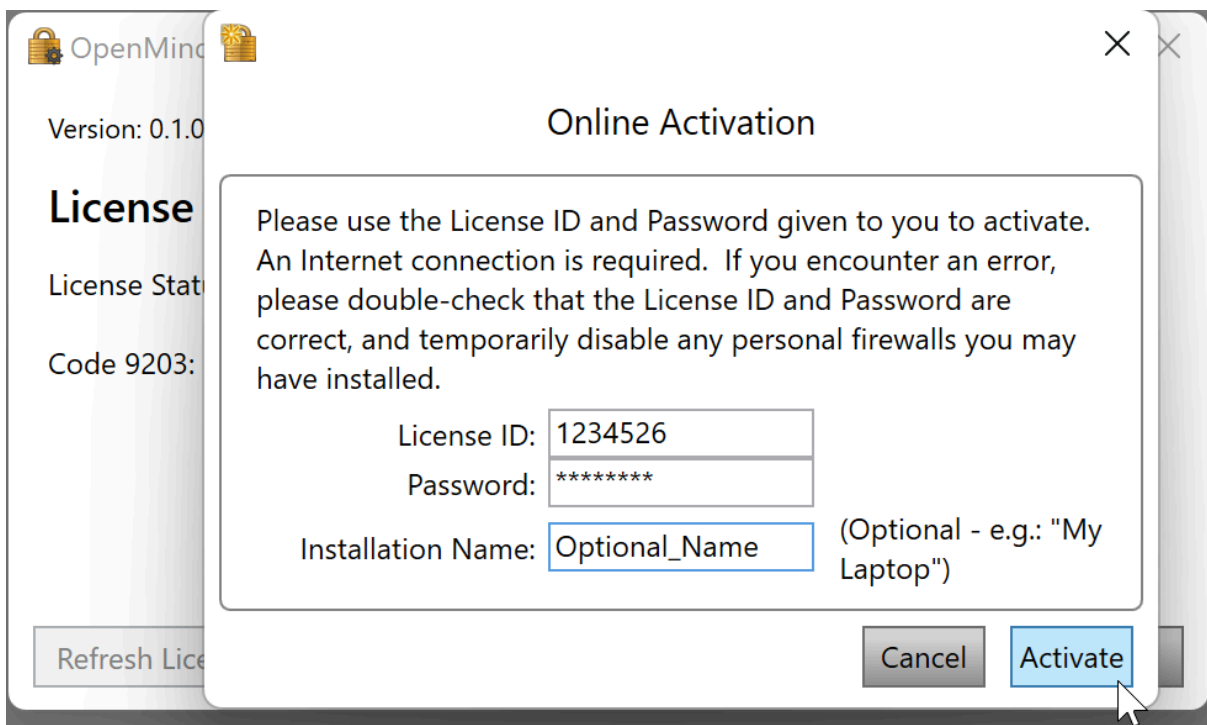


Figure 15: Entering with license details.

After clicking on the Activate button, and upon a check on the validity of the license details, a confirmation pop-up window will appear.

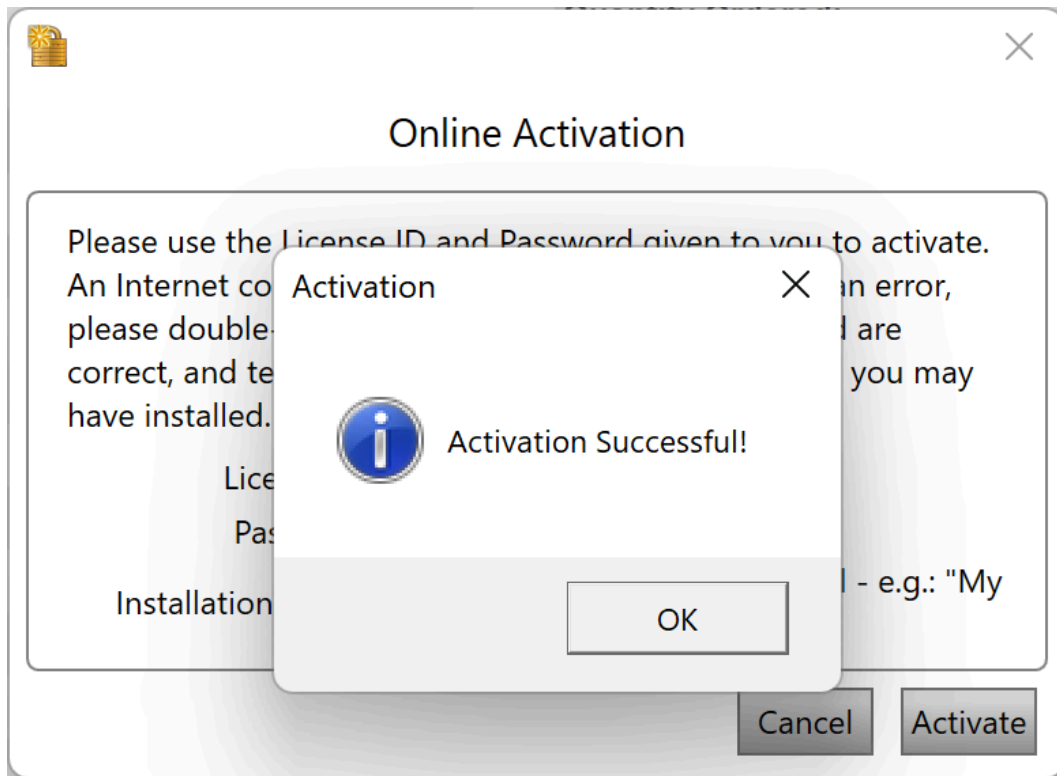


Figure 16: Successful activation pop-up window.



## 5. Document history

<b>Date</b>	<b>Details</b>	<b>Editor - Title</b>
2022-06-22	Initiated document	Flávio Ivan - CTO
2022-06-22	Added details for installer for version 0.1.0.2364 with Python v0.0.5.dev1	Flávio Ivan - CTO
2022-08-16	Added details for installer for version 0.1.0.2418 with Python v0.0.5.dev2 Added information about C++ Redistributable system requirement, as it is required when not previously installed by other applications.	Flávio Ivan - CTO
2022-08-23	Added details for installer for version 0.1.0.2422 with Python v0.0.5.dev2	Flávio Ivan - CTO
2022-09-30	Added details for installer for version 0.1.0.2465 with Python v0.0.5.dev2	Flávio Ivan - CTO
2022-11-09	Added details for installer for version 0.1.0.2503 with Python v0.0.5.dev5	Flávio Ivan - CTO
2023-02-01	Added details for installer for version 0.1.0.2588	Flávio Ivan - CTO
2023-03-23	Updated details for version 0.1.0.2637	Flávio Ivan - CTO
2023-03-30	Updated details for version 0.1.2645.0	Flávio Ivan - CTO
2023-09-28	Updated details for version 0.1.2822.0, including updated to .NET 7 version, instead of .NET 6	Flávio Ivan - CTO
2023-10-12	Updated details for version 1.0.0.0	Flávio Ivan - CTO
2023-12-16	Hardware recommendations session added	Flávio Ivan - CTO
2024-02-08	Updated to version 1.0.116.0	Flávio Ivan - CTO
2024-03-06	Updated to version 1.0.139.0	Flávio Ivan - CTO
2024-04-03	Updated to version 1.0.162.0	Flávio Ivan - CTO