



An Axiometrix Solutions Brand

# imc STUDIO Monitor 2023

Getting Started

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imc Test & Measurement GmbH • Voltastr. 5 • 13355 Berlin • Germany

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## Disclaimer of liability

The contents of this documentation have been carefully checked for consistency with the hardware and software systems described. Nevertheless, it is impossible to completely rule out inconsistencies, so that we decline to offer any guarantee of total conformity.

We reserve the right to make technical modifications of the systems.

## Copyright

© 2024 imc Test & Measurement GmbH, Germany

This documentation is the intellectual property of imc Test & Measurement GmbH. imc Test & Measurement GmbH reserves all rights to this documentation. The applicable provisions are stipulated in the "imc Software License Agreement".

The software described in this document may only be used in accordance with the provisions of the "imc Software License Agreement".

## Open Source Software Licenses


Some components of imc products use software which is licensed under the GNU General Public License (GPL). Details are available in the About dialog.

A list of the open source software licenses for the imc measurement devices is located on the imc STUDIO/imc WAVE/imc STUDIO Monitor installation medium in the folder "*Products\imc DEVICES\OSS*" or "*Products\imc DEVICEcore\OSS*" or "*Products\imc STUDIO\OSS*". If you wish to receive a copy of the GPL sources used, please contact our tech support.

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## Notes regarding this document

This document is an excerpt from the manual of imc STUDIO Monitor.

The manual for imc STUDIO Monitor is available both as an e-book and in PDF format. In the menu bar, click on the symbol  to open the help.

The program "*imc Help and Documentation*" provides you with access to all formats and other documents such as the **device documentation** or the **technical data sheet**.

## What is the best way to read the imc STUDIO Monitor documents?

### Getting Started

Before installing the software, start by reading the document "*Getting Started*". This contains important tips for achieving problem-free installation, for updating the software, as well as for operation and integration of devices in measurement setups.

All information presented in the document "*Getting Started*" is also presented in the imc STUDIO Monitor manual.

### Manual - complete documentation

The manual serves as reference material. This document describes how to operate the software and how to configure parameters for the devices. In some case, individual device groups have special functions. The documentation for these usually appear exclusively in the device manuals.

## Training programs for introduction to the systems, and advanced workshops

We recommend that before you begin working with imc STUDIO Monitor you participate in an extensive training session. Such training will enable you to get started working efficiently much faster. Additionally, you will obtain valuable tips and information on how to use the software more effectively. More information is available on our homepage under "*Service & Training*" > "*imc ACADEMY*".

## Special notes

### Warning

Warnings contain information that must be observed to protect the user from harm or to prevent damage to property.

### Note

Notes denote useful additional information on a particular topic.

### Reference

A reference in this document is a reference in the text to another text passage.

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# 1 General introduction

## 1.1 Before you start

Dear user.

1. The software you have obtained, as well as the associated manual are directed toward competent and instructed users. If you notice any discrepancies, we request that you contact our [tech support](#)<sup>5</sup>.
2. Updates during software development can cause portions of the manual to become outdated. If you notice any discrepancies, we request that you contact our tech support.
3. Please contact our tech support if you find descriptions in the manual which you believe could be misunderstood and thereby lead to personal injury.
4. Read the enclosed [license agreement](#)<sup>7</sup>. By using the software, you agree to the terms and conditions of the license agreement.



### Note

### Notes on the descriptions and the screenshots

- The help may also contain parts **shared imc software components**. These parts may differ from the rest of the help in terms of style and structure. All help files are equipped with a full text search functionality and have an index.
- The screen shots appearing in this documentation were created with a **variety of Windows versions** and their appearance may thus differ from that of your installed program.
- imc STUDIO works with user groups and access rights. The **user group** has wide-reaching influence on the visibility and/or operability of menus, icons, etc. Note that in all imc STUDIO documents the administrator roll is assumed to be filled. All descriptions are therefore related to the full utilization of the user interface.
- The following descriptions and screenshots always pertain to the **view with the full scope of functions** (*Complete*). Many of these functions are also found in the minimized view at another location.

## 1.2 Tech support

If you have problems or questions, please contact our tech support:


Phone: (Germany): **+49 30 467090-26**

E-Mail: [hotline@imc-tm.de](mailto:hotline@imc-tm.de)

Internet: <https://www.imc-tm.com/service-training/>

### Tip for ensuring quick processing of your questions:

If you contact us **you would help us**, if you know the **serial number of your devices** and the **version info of the software**. This documentation should also be on hand.

- The device's serial number appears on the nameplate.
- The program version designation is available in the About-Dialog (click on the symbol  in the menu bar).

## Product Improvement and change requests

Please help us to improve our documentation and products:

- Have you found any errors in the software, or would you suggest any changes?
- Would any change to the mechanical structure improve the operation of the device?
- Are there any terms or explanations in the manual or the technical data which are confusing?
- What amendments or enhancements would you suggest?

Our [tech support](#) will be happy to receive your feedback.

## 1.3 Service and maintenance

Our service team is at your disposal for service and maintenance inquiries:

E-Mail: [service@imc-tm.de](mailto:service@imc-tm.de)

Internet: <https://www.imc-tm.com/service>

Service and maintenance activities include, for example calibration and adjustment, service check, repairs.

## 1.4 Legal notices

### Quality Management



Management System  
ISO 9001:2015  
ISO 14001:2015  
  
www.tuv.com  
ID 0910085152

imc Test & Measurement GmbH holds DIN EN ISO 9001 certification since May 1995 and DIN EN ISO 14001 certification since November 2023. You can download the CE Certification, current certificates and information about the imc quality system on our website:

<https://www.imc-tm.com/quality-assurance/>.

### imc Warranty

Subject to the general terms and conditions of imc Test & Measurement GmbH.

### Liability restrictions

All specifications and notes in this document are subject to applicable standards and regulations, and reflect the state of the art well as accumulated years of knowledge and experience. The contents of this document have been carefully checked for consistency with the hardware and the software systems described. Nevertheless, it is impossible to completely rule out inconsistencies, so that we decline to offer any guarantee of total conformity. We reserve the right to make technical modifications of the systems.

The manufacturer declines any liability for damage arising from:

- failure to comply with the provided documentation,
- inappropriate use of the equipment.

## 1.5 imc Software License Agreement

imc Test & Measurement GmbH  
Voltastr. 5  
13355 Berlin, Germany  
Trade register: Berlin-Charlottenburg HRB 28778  
Managing directors: Michael John Flaherty, Frank Mayer

**imc Test & Measurement GmbH**  
**Terms and Conditions**  
**Governing the Use of imc Test & Measurement GmbH Software**  
**As of: January 18, 2024**

### § 1 Objects of the Agreement

- (1) In addition to the "General Terms and Conditions Governing imc Test & Measurement GmbH Deliveries and Services to Customers", these terms and conditions apply to all contracts concluded with imc Test & Measurement GmbH (hereinafter referred to as "imc") which involve the transfer of rights of use to any software developed by imc (standard software, software created or adjusted specifically for the Customer, which is recorded on the machine-decodable data carriers such as data files, databases and database material, updates, upgrades, releases, etc., including corresponding documentation, information and materials, hereinafter referred to as "Software").
- (2) The Software is provided to the Customer as an executable object program on machine-decodable data carriers specified in the "Objects of the Agreement". The Software's product documentation is also supplied to the Customer either in print or on a machine-decodable data carrier. Unless otherwise expressly agreed in writing, the Customer is not issued the source code of the Software.

### § 2 Rights of Use, Scope

With regard to any transfer of rights of use to Software created by imc, the following provisions apply:

#### (1) Basic provisions

- a) The Customer is granted a non-exclusive and – subject to the terms and conditions governing the use of Software by third parties, resale and leasing – non-transferrable right of use to the Software for its own purposes. "Use" signifies running the programs and editing the data records.
- b) Until each due fee is paid in full, the Customer is entitled to use the Software solely on a revocable basis. If the Customer is in default with regard to the payment of fees, imc is entitled to revoke the use of the respective services for the duration of the default. The Customer is granted the permanent right to use copyright protected services, in particular the Software, only upon full payment of the agreed fee.
- c) The Customer agrees to undertake appropriate precautionary measures to prevent unauthorized access by third parties to the Software. The original data carriers and the data carriers used to make copies as per the agreement, as well as the documentation, are to be stored in a secure location. Employees are to be notified that the production of copies beyond the scope of the agreement is not permitted.
- d) If the right of use is revoked or expires due to another reason, the Customer is obligated to return to imc the Software, the copies made by the Customer and the documentation. Provided that a physical return of the Software and the copies is not possible due to technical reasons, the Customer is obligated to delete such and confirm deletion to imc in writing.

#### (2) Reproduction

- a) The Customer is entitled to make copies of the Software only if copies are necessary to use the Software in accordance with the contract. The following are considered cases in which reproduction is necessary: installation of the Software from the original data carrier onto the hard disk drive of the hardware used, as well as loading the Software into the computer memory.
- b) The Customer is entitled to create a backup copy if such is necessary to safeguard future use. Copies may only be made for other purposes after prior written consent has been issued by imc.
- c) The Customer is not allowed to make any reproductions other than those expressly permitted under the provisions of this agreement.



### (3) Use of the Software by Third Parties, Resale and Leasing

- a) The Software may be used for the purposes stipulated in this contract, in particular for the Customer's business operations. Access to the Software may also be provided to parties which rely on using the Software as instructed by the Customer. In particular, the Customer is entitled to operate the Software or allow the Software to be operated on data processing devices, which are located on the premises of and are directly owned by a third party company (outsourcing). The prohibition against multiple use remains unaffected.
- b) The Customer may permanently sell or give the Software to third parties provided that the Customer is granted permanent use of the Software. In the context of its period of use, the Customer may temporarily transfer the Software to third parties for a fee or free of charge. The prohibition against multiple use remains unaffected. The Customer is expressly notified that transfer to third parties is not permitted and use by third parties is technically not possible if an individual license must be acquired or an individual activation is required for third party usage, such as in the case of runtime licenses.
- c) With regard to the valid use of Software by a third party, the Customer is obliged to ensure that the third party acknowledges the provisions of this agreement governing the rights of use as binding for such third party. The Customer may not transfer Software and documentation to third parties if there are grounds to suspect that the third party may infringe upon the provisions of this agreement governing the rights of use, in particular with regard to the unauthorized production of copies.
- d) Subject to the provisions stipulated in § 4 Paragraphs 1 and 2 or a deviating express agreement in writing, the Customer may not use the Software while the Software is being used by a third party (prohibition against multiple use); in the event that the Software is transferred to the third party, the customer is obliged to surrender to imc all Software copies including, if applicable, all existing backup copies, or to destroy copies not surrendered.

### (4) Decompilation

The reverse translation of the provided program code into other code forms (decompilation), disassembling and other forms of reverse engineering of the various production phases of the Software is not permitted. If interface information is required to achieve the interoperability of a separately created computer program, such may be requested from imc, or a third party to be named by imc, for a minor fee. Section 69 e of the German Copyright Act ("UrHG") remains unaffected by this provision.

### (5) Changes by imc

If imc conducts adjustments, changes or enhances the Software on behalf and on account of the Customer, the Customer thus acquires the corresponding rights of use to the changes or enhancements of the Software to which he is entitled according to the stipulations of this agreement.

### (6) Exceptional Usage Requests by the Customer

If the Customer requests to use the Software according to terms which deviate from the requirements stipulated in Paragraphs 2 through 5, this exceptional use of the Software must be agreed in writing by imc. In such an instance, the Customer agrees to provide imc with information about the desired scope of use, the pertinent field of application, etc. If imc subsequently grants a license covering the Customer's special intended use, the parties agree that a new license fee is owed by the Customer, which is independent of payments made by the Customer for the previously existing license.

## § 3 Copyright, Protection of the Software

- (1) The intellectual property, in particular the copyright as well as all industrial property rights and trade secrets, are retained by imc and are not transferred to the Customer. The Customer's ownership of the machine-decodable data carriers and data processing units remains unaffected.
- (2) Copyright notices, serial numbers as well as designations and reservations of rights which serve as program identification or a protective right may not be removed or changed. The Customer is obliged to transfer the existing protective right notices to all copies. In particular, backup copies of the Software must be expressly designated as such.

## § 4 License Types, Multiple Use

- (1) In the case of a Single-User License, the Software may be activated and run on only one data processing unit. "Activation" refers to the process of transferring the license to the data processing unit.

If the technical specifications for the Software permit a second activation, then the Customer may additionally activate the Software on a second data processing unit. However, the Software may only run on one data processing unit at any one time, not on both simultaneously.



- (2) With a Network License, the Software may be run on as many data processing units as the amount of licenses obtained. In this case a central data processing unit acts as the license server for which the activation process is performed.  
If the technical specifications for the Software permit a second activation, then the Customer may additionally activate and run the Software on as many data processing units as the amount of licenses obtained. However, these additional data processing units must be used by the same users who operate the Software via the license server.
- (3) Subject to the provisions in Paragraphs 1 and 2 or a deviating express agreement in writing regarding network use, multiple use of the Software is not permitted.
- (4) If the data processing unit is changed, the Customer is obliged to delete the Software from the hard disk drive of the previously used hardware.

### **§ 5 Software-Subscription**

If the Software used is a software-subscription, the following additional restrictions apply:

- (1) The right of use is valid for a limited time period. The start and end of the time period are specified. After the end of the time period, the right of use is expired.
- (2) If the Customer wishes to continue using the Software after elapse of the specified time period, the subscription must be renewed.

### **§ 6 Trial Version**

If the Software used is a free trial version, then the following additional limitations apply:

- (1) The trial version only entitles the user to test the Software. In particular, commercially productive utilization is not permitted.
- (2) The rights of use granted expire after the elapse of a period stated in the product description.

### **§ 7 License Key**

- (1) Upon delivery of the Software the Customer receives a License Key. Using this License Key, the Customer is able to activate the Software purchased. By means of this License Key the Customer can also view his license status and order updates and upgrades.
- (2) The License Key is to be protected against access by third parties in order to prevent misuse. If, however, a third party gains unlawful access to the Key, the Customer is obliged to notify imc immediately via telephone, as well as in writing, so that the previous License Key may be suspended and a new one issued.

### **§ 8 Conclusion**

- (1) The law of the Federal Republic of Germany shall apply under exclusion of private international law. The provisions of the UN Convention on Contracts for the International Sale of Goods (CISG) do not apply.
- (2) The place of performance for all obligations arising from this agreement is imc's registered seat. Insofar as the Customer is a merchant as defined by the German Commercial Code (HGB), a legal entity under public law, or a special asset under public law, the exclusive place of jurisdiction for all disputes directly or indirectly arising from the contractual relationship is agreed as imc's registered seat. The same applies to persons who have no general place of jurisdiction in Germany, as well as to persons who have moved their place of residence or usual whereabouts abroad since conclusion of the contract, or whose place of residence or usual whereabouts is unknown at the time the action is filed. In addition, imc is entitled to file suit at the statutory venue.
- (3) Oral side-agreements are not valid. Deviating or supplementary conditions as well as modifications of this contract, including this written requirement clause, are only valid if agreed in writing and expressly marked as a modification or supplement.
- (4) If certain provisions of this contract are inoperative or unfeasible, this does not prejudice other provisions of the contract. The contracting parties agree to contractually substitute an operable provision which approximates the commercial intention of the contract as closely as possible for any inoperable one.

## 2 Overview

This document describes the **first steps in operating imc STUDIO Monitor** and the installation of additional imc products. This document uses textual references to the product documentation.

imc STUDIO Monitor is an application which is constructed upon imc STUDIO. Many components of imc STUDIO are used. For this reason, some of the descriptions may make reference to imc STUDIO.

Which components are available depends on the product installation (order).

### Chapter overview

Synopsis	Section
<b>Startup operations</b> for imc STUDIO Monitor - <b>installation</b> and <b>product configuration</b> prior to first use	<ul style="list-style-type: none"> <li>• <a href="#">System requirements</a> <sup>11</sup></li> <li>• <a href="#">Installation / Uninstall</a> <sup>12</sup></li> <li>• <a href="#">Product Configuration / Licensing</a> <sup>25</sup></li> <li>• <a href="#">The first start</a> <sup>25</sup></li> <li>• <a href="#">Device connection / Network / Firewall</a> <sup>27</sup></li> </ul>
The <b>first run</b> - What steps are necessary in order to obtain measured data?	<ul style="list-style-type: none"> <li>• <a href="#">Monitor - First steps</a> <sup>32</sup></li> </ul>
Data storage: How are <b>data stored</b> and loaded	<ul style="list-style-type: none"> <li>• <a href="#">Experiments, Projects and the Database</a> <sup>35</sup></li> <li>• <a href="#">Ribbon "Project": Open / Save experiments</a> <sup>42</sup></li> </ul>
<b>Navigation through</b> the entire <b>software</b>	<ul style="list-style-type: none"> <li>• <a href="#">Navigation Pane</a> <sup>44</sup></li> </ul>
The <b>software user's interface</b> is flexible. Saving and restoring of views	<ul style="list-style-type: none"> <li>• <a href="#">Saving / Loading views</a> <sup>48</sup></li> </ul>

### Tech support

If you have any open questions about our products, please contact our tech support.

Questions or problems? Contact our [Tech support](#) <sup>5</sup>.

## 3 Setting Up - Software

### 3.1 System requirements

#### Supported operating systems

Windows 10\*/11\* (64 bit)

\*released in conformance with the version of Windows 10/11 applicable at build date of imc software

#### Minimum requirements for the PC

4-core CPU 2 GHz <sup>1</sup>

8 GB RAM (recommended: 16 GB RAM) <sup>1</sup>

10 GB free hard disk space (recommended: SSD) <sup>2</sup>

Display resolution: 1366 x 768 (recommended: 1920x1080)

1 Requirements and recommended minimum configurations for the applied PC will rise with increasing number of connected devices and the resulting overall system data rate. Another crucial factor will be the extend of used live analysis and visualization functions on the PC (in particular Data Processing, imc Inline FAMOS and active curve windows).

A smooth operation will also heavily rely on sufficient RAM memory resources on the PC: It must ensure to satisfy all vital functions without any outsourcing to slow external swap file (HDD/SSD) in order to guarantee sustainable performance.

2 The hard drive memory requirement increases if measured data are saved to the PC.

#### Other operating system components

The following components are installed with the imc STUDIO Monitor setup if they are not already present:

Component	Version	Folder in "System" directory
Microsoft .NET Framework	4.8	DotNetFx4.8
Microsoft VC 2015-2019	14.28.29910	Microsoft Visual C++ Redistributable\2019
Microsoft VC 2010	10.0.402219.1	Microsoft Visual C++ Redistributable\2010
Microsoft VC 2005	6.0.3790.0	Microsoft Visual C++ Redistributable\2005
Microsoft Build Tools 2015	14.0.23107.10	MSBuildTools2015

#### Supported Measurement Devices

Which devices you can use in imc STUDIO Monitor is described in the documentation on the "*Setup*" > "*Device Overview*", as well as in the "*Technical Data Sheet*".

## 3.2 Installation - Preparation

### Software requires a license

This means that the program may only be started **upon obtaining a license** (see [Product Configuration / Licensing](#) <sup>15</sup>).

### Administrator rights required

For the purposes of installation and uninstallation, a user account with **administrator privileges for the PC is required**.

If you are logged on to the PC **without administrator rights, log yourself out** and log back on with an administration-level user account. If you don't possess the appropriate account type, you will need the support of your system administrator or IT department.

See also [Notes on Windows User Account Control](#) <sup>15</sup>.

### Restarting the computer in the process of installation

During the installation process, the installation program will prompt you to restart the PC.



#### Note

#### Restarting

After the restart, login to **the same user account** with which you had previously begun the installation.

### Coexisting applications: imc STUDIO, imc STUDIO Monitor, imc WAVE, ...

Some imc programs are installed as an independent and specially adapted instance of imc STUDIO. They are based on imc STUDIO.

Unless otherwise stated, these programs are installed and used in parallel. As long as these instances are based on the same version of imc STUDIO (e.g. 2022 R1), they are all subordinated to the same program installation, which means they share resources.

For this reason, installation of the instances in this case must be performed in one single shared Setup procedure. Any attempt to perform installation in succession or subsequently will cause the already existing instances to be deleted.

This applies particularly to the joint and parallel installation of imc STUDIO Monitor, imc WAVE and imc STUDIO, which must be performed in a single step.

Do not install imc STUDIO, imc WAVE and imc STUDIO Monitor in succession, but always at the same time.

### Update or parallel installation

The Setup utility checks whether any version of imc STUDIO (imc STUDIO Monitor) is currently installed on the computer. If so, it can be uninstalled by means of the Setup. An associated confirmation prompt is posted in that case. All user data such as the database remain intact.

The **two versions** can be **installed in parallel** provided that they have differing version numbers (e.g. 5.2 and 2023). The new version can be installed in the same folder (default case: "C:\Program Files\imc"). In this folder, a new subfolder with the new version number is created for imc STUDIO.

In both cases, you are able to **adopt** a variety of **settings** from the old versions. These include the project settings and views. By contrast, other settings such as the product configuration and the database path need to be set up from the beginning.

### Adopting the settings with the help of the existing database (recommended)

When an existing database continues in use, any settings which can be retained will be retained. For a parallel installation, two data bases are needed. Create a copy so that the old imc STUDIO Monitor version can continue to work with the existing database. A confirmation prompt about making a copy is posted.


See: [Update with the help of the existing database](#) 

### Adopting the settings without using the existing database

Some settings, e.g the views, can also be retained without the database. To do this, save and import the appropriate settings.

See: [Update without using the existing database](#) 

## The subsequent procedure - an overview

Follow the installation program instructions (see: "[Installation step by step](#)" ).

- The installation process first checks whether the **required system software** is installed. If ones is missing, it will be installed automatically.
- After restarting the system, the selected products are installed.
- After the installation is concluded, it is possible to start imc LICENSE Manager directly to activate your license.
- Once the license has been activated, imc STUDIO Monitor is ready for use.



## Uninstalling

Un-installation is performed via the menu item "*Windows-Settings*" > "*Apps & features*".



### Reference

### See also

- [Recommended Virus Scanner Settings](#) 
- [Changing Languages and Installing Additional Languages](#) 

### 3.2.1 Update with the help of the existing database

When an existing database continues in use, any settings which can be retained will be retained. This includes Views, any Setup-columns created by the user, the user administration and all experiments.

If you wish to run multiple versions of imc STUDIO Monitor or maybe restore an older version at a later time, create a copy of the database.

#### Note

#### The database

**It is impossible to use the imc STUDIO Monitor database by both versions in parallel.**

- If the same path is selected in the new imc STUDIO Monitor version, the database is used automatically. When loading old experiments, a note is posted in the logbook that the **experiments belong to an older version. Once saved, they can no longer be loaded** with the old version.
- If the database structure has been altered, you will be notified of this. A **dialog for performing conversion** appears. This dialog can be used to convert the database and, if desired, copy it first. After the conversion, the entire **database can no longer be used with the old version.**

#### Note

#### Using new views

- Be aware that the new version provides new functions, such as new or enhanced Setup pages and new menu items.
- **Use of the new Views is recommended, in order for these new functions to be accessible! Please look under "What's new" whether there have been any changes in this regard.**
- User-made columns such as meta data columns are not automatically inserted into the pages. The configurations of these columns, however, is adopted from the old View. You can re-insert these columns at the desired position (by means of the Column Chooser).
- Multiple views are provided. Select a view and add whatever Setup pages are required or saved, and save the view under a new name.
- How to save Views is explained in the section "[Views](#)<sup>48</sup>".

### 3.2.2 Update without using the existing database

In imc STUDIO, various settings were saved with the respective **project** and apply to all the experiments it contains. Among other things, these include the view settings: user-defined views, column configurations (e.g. metacolumns).

In order to **retain these settings** in the new version after having **performed the update** without using the existing database, export of the settings are necessary.

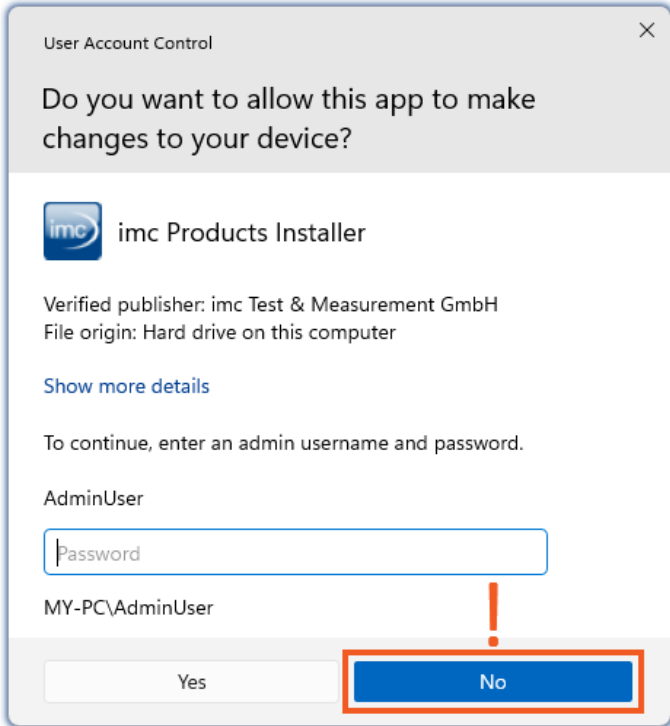
Please first check which settings you will need.

- If you wish to reuse **all of the project's settings**, export the project settings (by means of the Projects-dialog: Menu ribbon: "*Project*" > "*Manage Project*").
- If you wish to reuse **only the viewing settings**, [export the views](#)<sup>50</sup>.

### 3.2.3 Notes and troubleshooting

#### Notes on Windows User Account Control

##### Do not change the user account

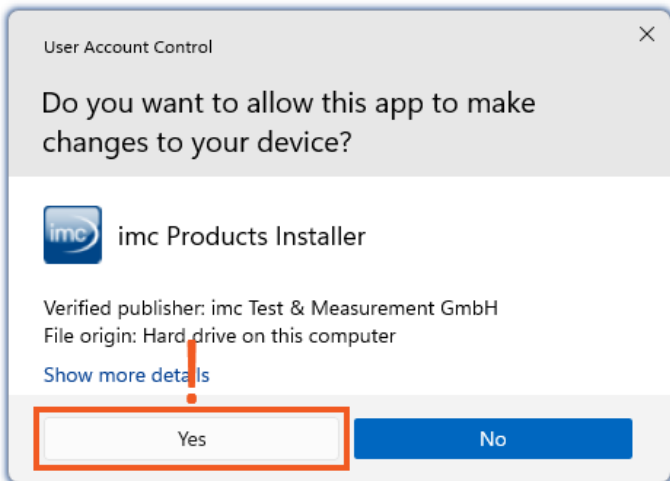


Example of a password request.  
Select "No".

With Windows, installation can be started without administrator rights. In this case, the operating system requires selection of a user account and associated password, as shown in the example.

**Do NOT continue with the installation** in this way, otherwise it will be incorrect. **Select "No"**.

##### Confirm the prompt by the user account control



Select "Yes", to start the installation.

When you are logged in to a user account possessing administrator rights, you may receive a prompt by the Windows User Account Control (UAC) to allow changes. Select "**Yes**".




## Notes on the security software

Some virus scanners **prevent correct installation** of imc programs. We are currently aware of this affecting products from the companies McAfee and ESET. In principle, almost any virus scanner can have settings possibilities which prohibit necessary functions during installation.

For installation purposes, certain steps are necessary, such as:

- registration of programs for Autorun
- registration of programs as a service
- running of scripts from the TEMP-folder
- ...

The error profile may include various messages during installation. Or installed programs failing to launch.

In such cases, please contact your administrator to find out whether certain rules can be suspended for the duration of the installation. For any further questions, please contact our [tech support](#) .



Reference

See also

[Recommended Virus Scanner Settings](#) 

## 3.3 Installation - Step by step

Actual texts appearing in the user interface may differ from those shown in the screen shots, depending on the product configuration (path/version name).



Note

The following installation descriptions deal with several products and components. Not everything which you can activate can actually be used in imc STUDIO Monitor. For an exact listing of all of imc STUDIO Monitor's functions, see the Technical Specs sheet.

If you activate components which are not available in imc STUDIO Monitor, there won't be any negative effects on your program. They may even have some purpose if you use multiple products in parallel.

### Download and Installation

The most up-to-date version can be downloaded from the imc website under "*Downloads*" > "*imc STUDIO*". Both a complete and a reduced installation package are offered. The reduced installation package is sufficient if you have only purchased imc STUDIO Monitor. Which products are included is indicated next to the Download button.

Start the download first, and next the file (e.g. "*Installer\_imc\_STUDIO\_2023\_R4.exe*").

The Installer unpacks the installation files. Subsequently, it independently starts the actual installation. Select an appropriate folder into which to unpack the files. The system's default suggestion is the Desktop.

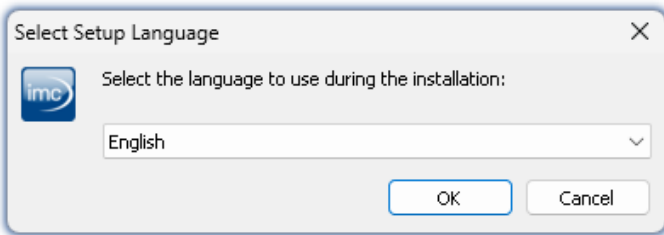


Hinweis

Installation files

The unpacked files can be deleted or saved once installation is completed. You can also use the unpacked files for installation at a later time. You do not necessarily need the Installations-exe file.

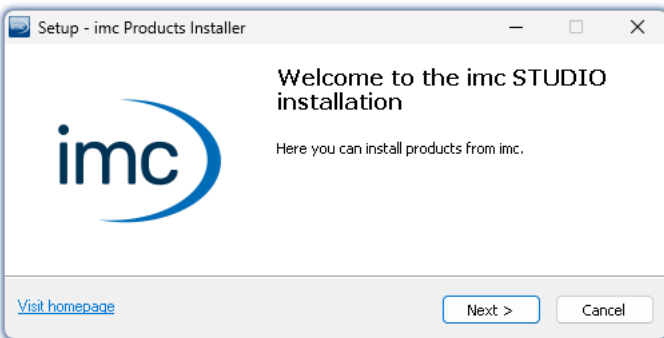
## Installation language settings



Selecting the language during installation

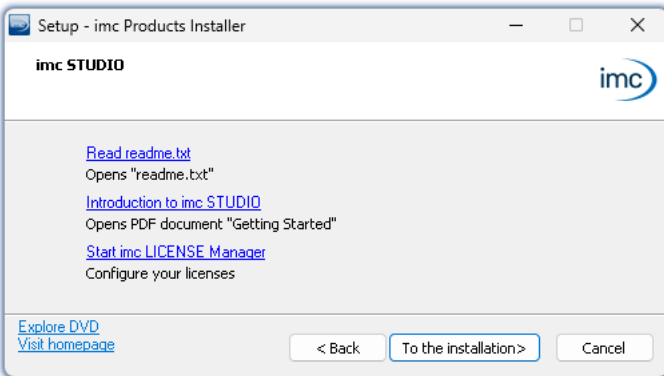
After starting installation, a window appears in which to select the installation language.

## Performing installation



Installation setup welcome page

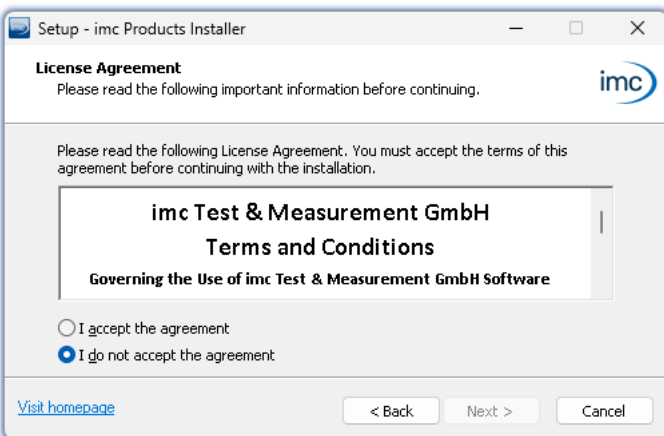
The installation setup then starts in the language selected.



Before starting installation

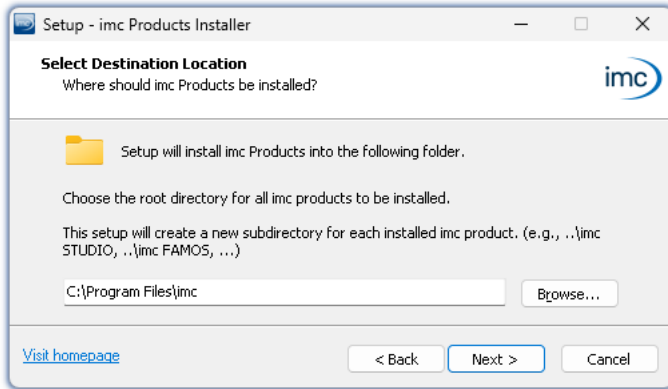
On the installation setup's next page, you are offered the following choices:

- open the "Readme"-file,
- open the "Getting Started"-document,
- separate installation of imc LICENSE Manager and
- display of the installation medium contents.



License agreement

You must accept the license agreement to continue the installation.



*Entering the installation path*

The next step is to select the installation folder. Under this folder, a separate subfolder will be created for each imc product (e.g. imc STUDIO 2023). It is recommended to end the associated pathname with "*imc*".

### 3.3.1 Select the products / Installation type


Now you can select which components should be installed. There are three types available:

- "Full functionality for 30-day demo" : hereafter called "Demo"
- "Typical functionality incl. imc STUDIO Professional" : hereafter called "Typical"
- "[User-defined](#)<sup>21</sup>"


"User-defined" gives you the ability to affect all installation settings.

For the "Demo" and "Typical" installation types the installation settings are already configured. If you need further settings choose the "[user-defined](#)<sup>21</sup>" installation type.

Installation type	Beschreibung
Demo	Use the installation type "Demo" in order to test the full scope of <b>imc STUDIO</b> and/or <b>imc WAVE</b> for 30 days. No other products which require a password will be installed.  imc STUDIO Monitor <b>is not</b> installed.
Typical	Use the installation type "Typical" in order to install the <b>Professional edition</b> of <b>imc STUDIO</b> including all necessary components. No other products which require a password will be installed.  imc WAVE and imc STUDIO Monitor <b>are not</b> installed.
User-defined	Use the installation type " <i>User-defined</i> " if you wish to <b>configure the individual products</b> . With this type, it is possible to install <b>password-protected components</b> . Further, you can install and configure additional imc products such as <b>imc FAMOS</b> .  Note that some components can require a separate license.

 **Note**

In order to install imc STUDIO Monitor, you must choose the installation type: "[User-defined](#)<sup>21</sup>" or "Demo"!

 **Note**

#### imc STUDIO Monitor reconfigure afterwards

Regardless of which variant of the installation is selected, when imc STUDIO Monitor is installed, all components are included. This way, after successful installation it is possible to adapt the imc STUDIO Monitor configuration at any time by means of the "[product configuration](#)<sup>25</sup>".

Products	Demo	Typical	User-defined	Description
				● : included      ○ : optional
imc LICENSE Manager	●	●	●	Managing the licensing (internal functions, does not appear in the list)
imc Shared Components	●	●	●	Providing common components of the imc products, such as the curve window (internal functions, does not appear in the list)
Required system components	●	●	●	System components require using of imc products.
imc SENSORS (1)			○	imc SENSORS is a database application for administering and editing sensor information. Applicable with devices of the firmware group A (imc DEVICES).
imc STUDIO Developer (Demo) (2)	●		○	imc STUDIO is modular software platform handling all aspects of modern measurement technology from simple data acquisition to sophisticated test configurations.
imc STUDIO Professional (3)		●	○	
imc STUDIO any edition (3)			○	
imc STUDIO Monitor (3)			○	imc STUDIO Monitor makes it possible to connect with one or more measurement devices, particularly for the purpose of monitoring the instantaneous readings. Data can be viewed and edited live on multiple workstations. It is based on imc STUDIO and is installed as a separate instance of imc STUDIO.
imc WAVE (Demo) (2)	●		○	imc WAVE is a software package for NVH (Noise Vibration and Harshness) analysis. It is based on imc STUDIO and is installed as a separate instance of imc STUDIO. It can be equipped with multiple, separately licensed analyzers.
imc WAVE (3)			○	
Firmware and driver package imc DEVICES	●	●	○	Package of device drivers and firmware required by imc STUDIO and imc WAVE for devices of the firmware group A (imc DEVICES - e.g. CRONOS family, C-SERIES, SPARTAN, BUSDAQ).
Firmware and driver package imc DEVICEcore	●	●	○	Package of device drivers and firmware required by imc STUDIO and imc WAVE for devices of the firmware group B (imc DEVICEcore - e.g. ARGUSfit, EOS).
imc FAMOS Enterprise (Demo) (2)	●		○	imc FAMOS is a program for analyzing, evaluating and documenting measurement results.
imc FAMOS Reader (3)	●	●	○	
imc FAMOS any edition (3)			○	
imc Format Converter	●	●	○	Converts imc measurement data to other formats such as EXCEL and ASCII.
imc Documentation	●	●	○	Installs the documentation on the selected products. If the checkmark is removed, it is not possible to open the documentation via the software.

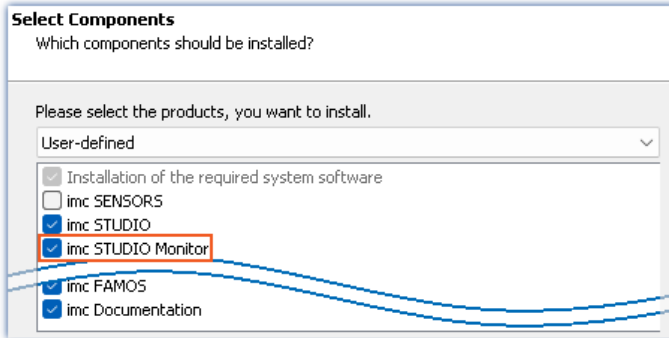
- 1: imc SENSORS requires a password for installation.
- 2: The associated Demo license must be activated after concluding installation by means of imc LICENSE Manager, otherwise it is not possible to start the product. Once the demo trial period has elapsed, use the [product configuration](#) <sup>[25]</sup> to convert the product to the license you have purchased.
- 3: The associated license must be activated after concluding installation by means of imc LICENSE Manager, otherwise it is not possible to start the product.

When you select "Demo" or "Typical", the start of the installation follows immediately (see: "[Starting the installation](#)" <sup>[24]</sup>). By contrast, if you select "User-defined", the installation is first [configured](#) <sup>[21]</sup>.

### 3.3.2 User-defined

The installation variant can be configured in detail. Based on your selection of components desired, different installation steps are displayed.

#### Selecting components



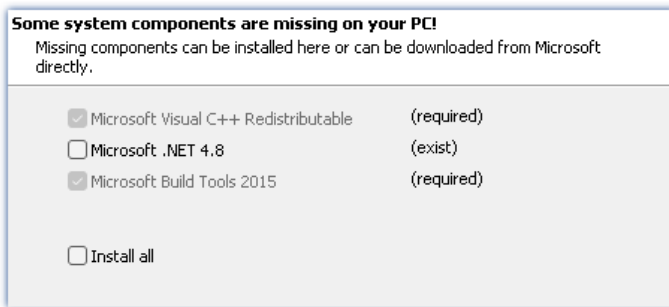
Selecting User-defined installation

Once you have selected the installation type "User-defined", it is possible to select/de-select the desired products in the box at the bottom.

#### Activate imc STUDIO Monitor here!

imc STUDIO and imc WAVE, as well as imc SENSORS are not required for the purpose of operating imc STUDIO Monitor.

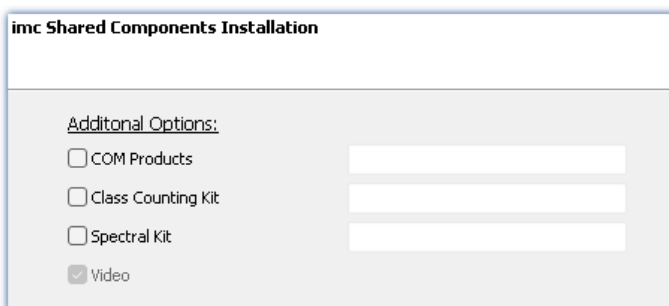
#### Required system components



Required system components (example)

In the next step, the system components which the products selected require are displayed, along with a note about which are already installed on your system. It is also possible to re-install any already installed components. Which components are missing/present depends on the system and its update status, so that the illustrations are intended as an example only.

#### Configuring imc Shared Components

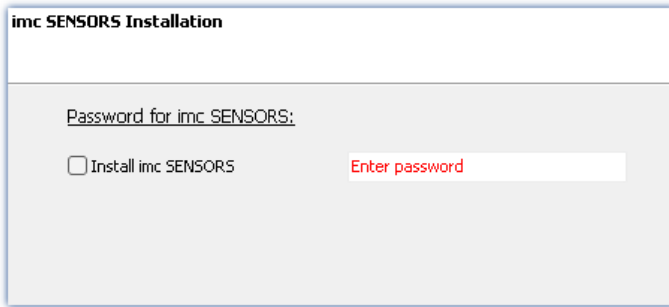


Configuring imc Shared Components

In this installation step, it is possible to install password-protected components of imc Shared Components.

Option/Component	Description
COM Products	The imc COM programming interface is a system integration tool
Class Counting Kit	Function library for imc COM products
Spectral Kit	Function library for imc COM products

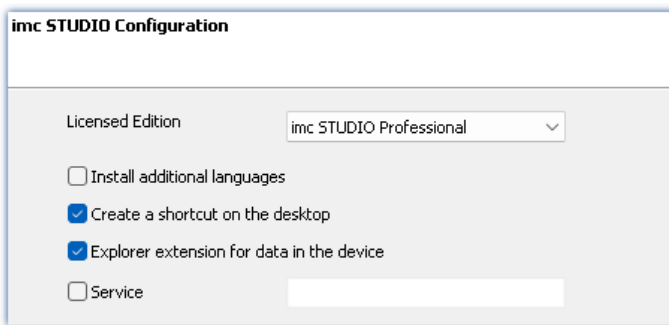
## Password for imc SENSORS



Password prompt for imc SENSORS

If you have selected imc SENSORS, you are prompted to enter the password prior to installation. But if you do not wish to install imc SENSORS, de-select it here.

## Configuring imc STUDIO



Configuring imc STUDIO

It is possible to make settings for your licensed product edition here. In consequence, later [product configuration](#) <sup>25</sup> can be omitted.

Option/Component	Description
Licensed edition	<b>Information on the editions</b> is provided in the " <i>Technical data sheet</i> " for imc STUDIO.
Install additional languages	With this option, imc STUDIO Monitor is installed in all available languages. (This will substantially prolong the installation procedure).  Please be aware that some functions may require the other languages. For instance, foreign-language parameter sets can only be imported if the associated language is installed.  If this option is deactivated, English language is installed plus the language of the operating system, if available. If needed, all other available languages can be installed at a later time (see the section " <a href="#">Installing additional languages</a> " <sup>31</sup> ).
Create a shortcut on the desktop	Program starting links can be created on the Desktop.
Explorer extension for data in the device	Access to the device hard drive via the Windows-Explorer. for devices of the firmware group A (imc DEVICES)
Service	Service support. Install this component only if requested by our tech support. for devices of the firmware group A (imc DEVICES) and group B (imc DEVICEcore)



## Configuring imc FAMOS

**imc FAMOS Edition**  
Which function scope do you wish to install?

Please select here which FAMOS edition you wish to install. Please select the edition purchased.

- Trial version (30 days for free)
- Reader (for free)
- FAMOS Standard
- FAMOS Professional
- FAMOS Enterprise
- FAMOS Runtime

*Configuration of the imc FAMOS installation*

In this step, you configure the imc FAMOS installation. Select the editions you wish to install. Note that all editions except the *Reader*-edition require a license.

Follow the Assistant's instructions and select your preferred language for the help files and example files like projects, sequences and dialogs. Select any optional components which you wish to install along with imc FAMOS. Additionally, a folder for sample files is needed.



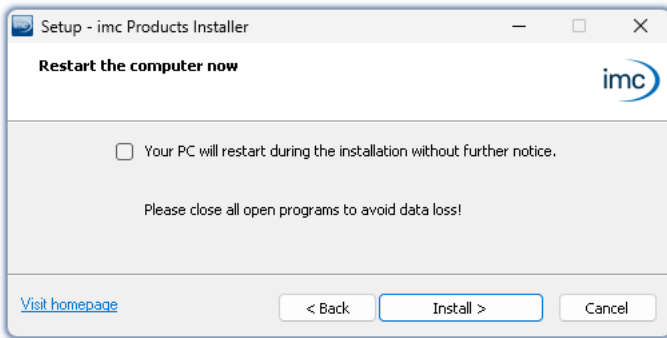
Reference

[imc FAMOS editions](#)

More detailed information on the imc FAMOS editions is provided in the imc FAMOS manual.

Once all products have been configured, the installation can start.

### 3.3.3 Starting the installation



Concluding the installation setup and starting installation

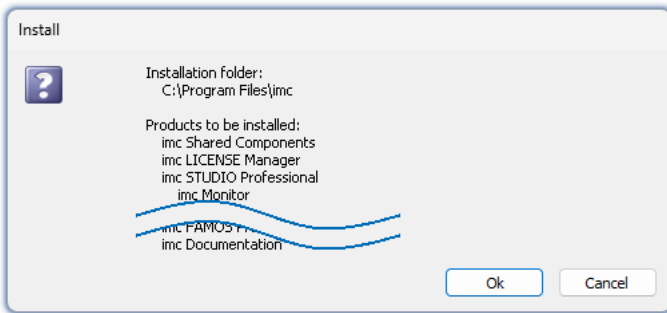
Before the installation, a **system reboot** is performed. For this reason, first **close any running programs** before continuing!

Confirm the reboot by means of the checkbox and then continue (button: "*Install*"). Initially, the required system components are installed. Subsequently, the PC reboots automatically.

#### Warning

#### Windows user account

After restarting, **be certain to log in with the same user account** with which you started the installation process. Using a different user account can cause failure of correct installation of the components.



List of components to install, following restart (example)

After logging in, the actual installation of the products begins. You are presented with a list of which components are to be installed, which you can confirm by clicking on "*OK*".

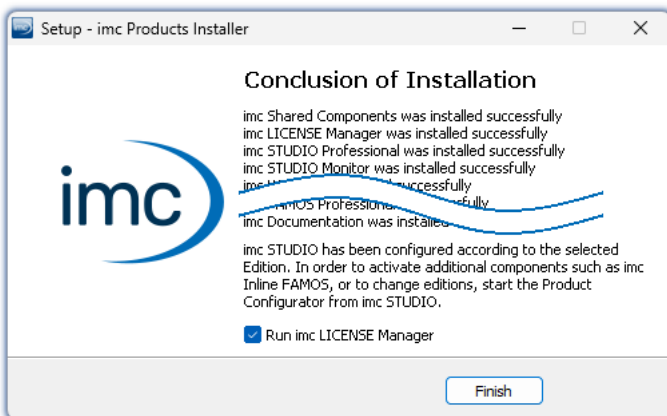
The figure shows an example; the actual dialog may appear differently depending on your respective previous selections.

Next, installation of the individual imc products begins.

#### Note

#### Disabling the system start

While installation is running, the operating system is disabled from starting again, meaning that no other programs can be started.



Concluding installation

When installation is finished, the following message is posted.

Next, you can start imc LICENSE Manager in order to activate your license. It is also possible to start the imc LICENSE Manager later via the Start menu.


## 3.4 Product configuration / Licensing

### Licensing (imc LICENSE Manager)

The software licenses are managed with "*imc LICENSE Manager*". After concluding installation, you can start imc LICENSE Manager directly in order to configure your license (e.g. by means of the Windows Start menu: group "*imc*" > "*imc LICENSE Manager*"). If imc STUDIO Monitor is started without an appropriate license having been configured, the product configuration program opens, from where it is also possible to start imc LICENSE Manager.

Follow the instructions of the imc LICENSE Manager. imc LICENSE Manager offers a separate documentation. Start imc LICENSE Manager and click on "*Help*".


### Changing the product configuration

imc STUDIO Monitor is a preconfigured product. You can change the product configuration in order to adapt it to the license purchased. For instance, if you have purchased optional components. To do this, start imc STUDIO Monitor and click in the menu bar (top right) on the symbol . The product configuration assistant now opens. You can change the configuration to correspond to the licenses you have purchased. Follow the instructions and close the assistant.

After completing the configuration, you must close and restart imc STUDIO Monitor to apply the new settings.

## 3.5 Start

**Start the software** by means of the associated desktop icon or via the Start menu.

 Further, as part of installation an **icon is set up on your desktop** - depending on your choice during [installation](#) <sup>16</sup>.

 If no icon was set up, then open the Windows Start menu. There you find the group "*imc*" and in it a link to start the product.

If [product configuration / licensing](#) <sup>25</sup> is missing, the Product configuration starts automatic.

### Splash screen

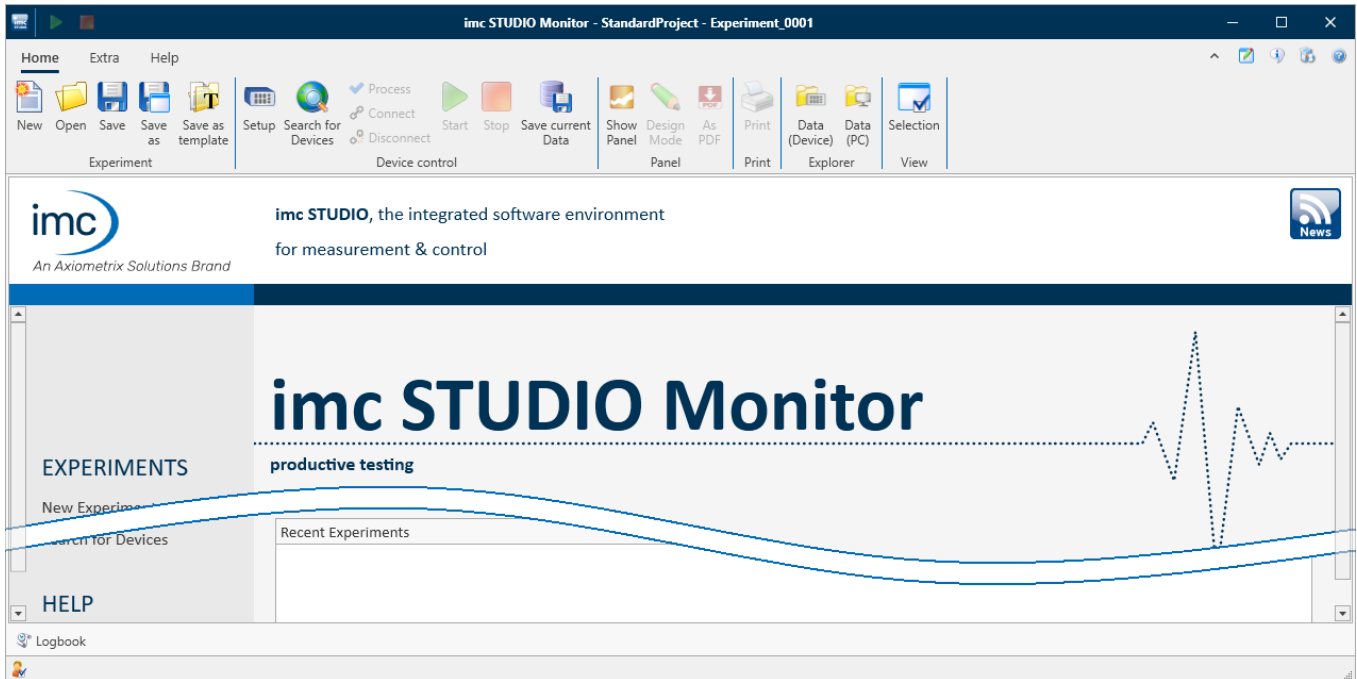


Next, a splash screen appears, indicating that software components are being loaded. Depending on the installation and the PC capacity, this could take some time.

*Loading the software components after start*

## Homepage - Start page

By default the Homepage is shown when the software is started. The Homepage shows certain functions, depending on the particular product, as buttons. Click on the corresponding buttons, to select your desired functions. After the first installation, the "**Homepage**" may appear as shown in the example below:



Start page (example)

## imc STUDIO starts with a simplified view

Along with installation of imc STUDIO Monitor, a number of **Views** are provided. Views in this sense are defined designs for the user interface's appearance.

imc STUDIO Monitor offers a wide variety of possibilities and functions, but the entire scope of these is not always needed for a single simple measurement.

### Note

#### imc STUDIO Monitor starts with a simplified view

In order to make it easier to get familiar with the software, the program starts with a **simplified view** with limited choices: "**Standard**". All important functions for measurement and visualization of measured data are available. The menu ribbon is structured in such a way that proceeding from left to right accesses all of the [Main windows](#)<sup>27</sup>.

### Changing from the simplified view to View: Complete

You can switch to a different view at any time, in order to obtain access to all of the existing functions. To do this, go first to the menu item "**Extra**" and in the drop-down list of views, select: "**Complete**".

### Note

#### Notes on the descriptions and the screenshots

The following descriptions and screenshots always pertain to the view with the full scope of functions. Many of these functions are also found in the minimized view at another location.

## 3.5.1 Device Connection / Network / Firewall

To use an imc measurement device, imc STUDIO Monitor must set up a **connection via a network**. Details on the network settings are presented in the manual for the device software in the chapter "*Setting Up - Connect the device*". At this point in the instructions, it is assumed that the PC on which imc STUDIO Monitor is running has already been appropriately set up.

### Firewall

The firewall used might **prevent** establishment of a **connection** between the operating software and the measurement device. If the software is unfamiliar to the firewall, then a corresponding prompt usually appears upon **accessing the network**. This happens, for example, after starting the software and upon first accessing the device (e.g. in a device search). Some firewall programs can also block access to system and hardware-components.

In all cases, **correct operation** is only possible if the **connection is not blocked**. The following programs are usually affected:

Program	Default path
imc STUDIO: imc.Studio.exe	C:\Program Files\imc\imc STUDIO...
imc DEVICES: imcDevices.exe	C:\Program Files (x86)\imc\imc DEVICES...
imc DEVICES Service: imcDevicesService.exe	C:\Program Files (x86)\imc\Shared

For operation on LAN, it is sufficient to **enable "Private networks"**. Enable this access type. You may wish to read the operating instructions for your firewall, and / or ask your administrator / IT-department.

**Windows Defender Firewall:** Unblocking is performed automatically upon installation.

## 3.5.2 Main Windows / Components



imc STUDIO provides the framework for various **components**. Components appear within imc STUDIO Monitor as **main windows**. A component can have one or more main windows.

The main windows appear in the Navigation pane.

On the left you see an example of the Navigation pane with the main windows **Homepage, Setup, Panel** (**Panel** is selected).

To jump to one of the main windows, click on the corresponding button in the Navigation pane.

[Navigation pane](#)<sup>44</sup>: Select this link to go to further information on operation of the Navigation pane.

**Note****Notes on the use of the simplified view**

- When you use the [simplified view](#)<sup>[26]</sup>, the Navigation pane is hidden. In this case, in order to go to the main windows Setup and Panel, use the menu ribbon.
- The other main windows can only be reached via the Navigation pane.
- If you need it, you can [show the Navigation pane](#)<sup>[46]</sup>, or change the [view](#)<sup>[48]</sup>.

## Tool window

Most components have their own tool window (e.g. the Panel with the tool windows: Widgets and Data Browser). The tool windows are described in their respective sections.

**Reference****See also**

[Tool window](#)<sup>[45]</sup>: Select this link to go to further information on operating the tool windows and for a description of the tool windows belonging to the imc STUDIO Monitor frame.

## 3.5.3 Important settings


### User and User groups

imc STUDIO Monitor has the ability to administer various **users** which are permitted to use the program in various ways. For details see the section "*User administration*".

### Options

Before beginning to work with imc STUDIO Monitor, you can change essential settings, such as the **folder path where the experiments are saved**.

You can change the folder path in the options (under "*Project Management*" > "*HDD settings*"):

Ribbon	View
Extra > Options 	all


**Note****Reading and writing access rights are required**

Please note that this setting will apply for every user of imc STUDIO Monitor. Each user must possess reading and writing access rights for the specified folder path.


## 3.5.4 Error causes upon starting

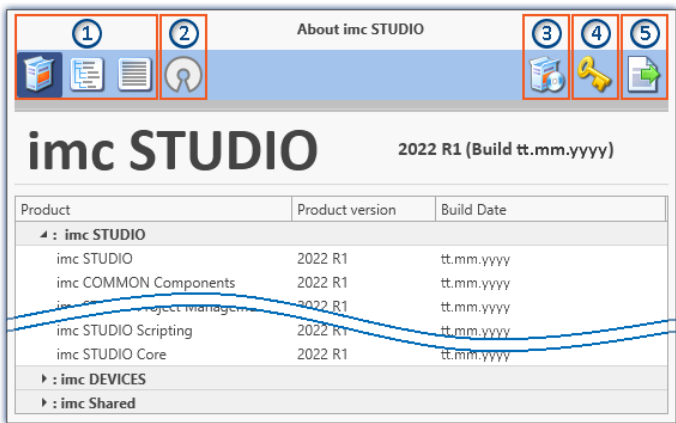
Corrective actions for when the logbook opens with error messages directly upon starting imc STUDIO Monitor.

Message	Corrective action
Error while initializing the plug-in "imcDevices V2.x Adapter" ...	<p>In the product configuration, the <b>firmware imc DEVICES</b> is activated. However, no appropriate firmware has been found or installed.</p> <p>By default all firmware products are activated. You can take the following corrective actions:</p> <ul style="list-style-type: none"> <li>• install the appropriate imc DEVICES-firmware. This is only necessary if you wish to use a device belonging to this firmware group.</li> <li>• deactivate the component "<i>imc DEVICES V2.x Adapter</i>" in the <a href="#">product configurator</a><sup>[25]</sup>.</li> </ul>



Message	Corrective action
The loaded Project-settings are from an older imc STUDIO version. If you save these settings, an older imc STUDIO version would not be able to read them correctly.	<p>With every Version/Revision, new enhancements and other changes are introduced. In consequence of these changes, some saved projects may become no longer compatible with older versions.</p> <p>Make sure that no older version of imc STUDIO Monitor needs to access the database.</p>
Could not connect to the Guardian process. Some functions (e.g. delete measurements) will not work.	<p>The Guardian process is not running. Please start either the Guardian- or WatchDog-service.</p> <p> For more info, see the section "<i>Guardian</i>"</p>




### 3.6 Info / Version information


imc STUDIO Monitor is an application for imc STUDIO. imc STUDIO is used as a base and consist of multiple components. In order to see which components are included in your package, click in the menu bar on the symbol . Then a pop-up window appears displaying the product names and details on the components:



Version information (example)

With the buttons on the left side , you can change the list's depth of detail and how it is sorted. Additionally, you will receive all copyright notes regarding "Open source software" ().

With the buttons on the right side, you can start the assistant for the [product configuration](#) , start the [imc LICENSE Manager](#)  or export the product selection .

While performing the export, you can save the contents as a file in XML format. For inquiries to our tech support, it may be necessary to send it as an e-mail (see also chapter "[Tech support](#)" ).



## 3.7 Information and tips

### 3.7.1 Changing languages and installing additional languages

Following installation, imc STUDIO Monitor is available in **English** and, if applicable, in the **language of the operating system**. Additional languages can be installed by selecting the option "**Install additional languages**" in the installation variant "[User-defined](#)".



#### Note

#### Observe operation system settings

- Please ensure that your operating system is set correctly to the display language. Some languages require modifications to be made accordingly. In particular, the "**System locale**" must be set correctly to correspond with the display language. Otherwise, with some languages there can be problems with the characters. Languages affected include Japanese, Chinese, Russian, ...

### Changing the language

By default, the imc software will start in the same language as the Windows version installed. If this language is not supported, then the English program version appears.

The language can be changed, irrespective of the Windows version. Use the program "*imc Language Selector*". The program is found in the Start menu under the group "*imc*".



#### Note

#### Constraints

Only the imc software's texts are converted. Components which depend on the operating system's language setting are not affected.

Please only use one of the following two languages:

- Default: the operating system's language
- English

Any other selection may cause malfunctioning if the operating system and the imc programs use different languages.

## Installing additional languages

If desired, all other supported languages can be installed later (no installation medium is required).



### Note

### Which languages are be installed subsequently

In subsequent installation of languages, **all languages supported** are installed. There is **no selection** possibilities.

### Step by step

- Administrator rights are required.
- Open the **installation folder** of imc STUDIO (e.g. "C:\Program Files\imc\imc STUDIO..."), e.g. with Windows Explorer or by means of the command line.
- There, open the folder "**Languages**".
- Run the file "**InstallLanguages.bat**".
- Wait until the script stops and posts the message "**Failures: 0**". This indicates that the installation has completed successfully.



### Note

### Instruction notes

If installation was unsuccessful, the necessary user rights may be missing:

- If "**InstallLanguages.bat**" is called via the **command line**, run the **command line as Administrator** (context menu: "Run as Administrator")
- If "**InstallLanguages.bat**" is called via the **Windows Explorer**, run the **call as Administrator** (context menu: "Run as Administrator")

## 3.7.2 Recommended virus scanner settings

The presence of many channels can **burden the PC** if a virus protection program scans the data captured. This may cause a **jiggling display** and high demands on the processor.

We strongly recommend **removing imc STUDIO from the virus scan**. Most virus protection programs are able to classify individual programs as low-risk. To do this, please refer to the instructions for your virus scanner.

Low-risk	Default path
Add the programs <b>imc.Studio.exe</b> , <b>imc.Monitor.exe</b> and <b>imc.WAVE.exe</b> to the list of low-risk programs	C:\Program Files\imc\imc STUDIO...
Add the program <b>imcDevices.exe</b> to the list of low-risk programs	C:\Program Files (x86)\imc\imc DEVICES...
Add the <b>database</b> path along with all subfolders to the list of low-risk folders	C:\Users\Public\Documents\DB

Ensure that its data are not searched for viruses during reading or writing.



### Reference

### Installation

See also the installation note: "[Notes on the security software](#)" 

## 4 Monitor - First steps

imc STUDIO Monitor makes it possible for teams to monitor the live data on multiple PCs. In doing so, each separate work station can create its own views and thus focus on particular monitoring tasks. During a running measurement, imc STUDIO Monitor can connect with one or more measurement devices, especially for the purposes of monitoring streaming measurement data, processing and saving them.

Configuration of the devices and start of the measurement are performed by separate device software: imc STUDIO or imc WAVE. imc STUDIO Monitor is exclusively for the purpose of configuring the device monitoring mechanism.

### System requirements and limitations

#### Measurement device requirements

Configuration of multi-client monitoring of imc devices belonging to the groups:

- firmware group A via firmware imc DEVICES

Accessing the device: at most, four imc STUDIO Monitor PCs can be directly connected with one device.

### Selecting a device

imc STUDIO Monitor can connect with imc devices as soon they were **prepared** or a **measurement is running**.

Selection of the measurement device is the first step.

- Open the **device configuration page**: "Setup".
- Go to the **tab**: "Devices" .

Here, all available devices are presented.

#### Note

#### Connecting with the device

The same conditions for a successful search apply as for imc STUDIO. If a device is not found, there are a variety of possible causes.

For more information on correct configuration of all network settings, see the imc STUDIO/imc WAVE manual: **Setting Up - Connect the device**.

Select your device:

- Click on the Checkbox-symbol () in order **to select the device**.

#### Note

#### Firmware

In order to be able to connect with a device, the firmware version (imc DEVICES) must be installed which matches the device.

The firmware must not only be present on the imc STUDIO computer for configuring the device, but also on the imc STUDIO Monitor computer, in order for it to read from the device.

### Configuring channels

Next, the channels to be used are configured:

- Go to the **tab**, e.g. "Analog channels"  (or "Digital channels"/"Variables").

Here, all available channels/variables are presented.

Most of the parameters shown here pertain only to the device control and in imc STUDIO Monitor they appear in gray font.

Relevant parameters appear under the tabs: "*Data transfer*" and "*Curve properties*" -> So here, configure:

- the "*transfer*" of data to the monitor PC,
- as well as the data storage,
- the "*Circular buffer time*" for the display, and
- the range specifications for the Widgets

## Transfer to PC

Transfer of the channels to imc STUDIO Monitor can be activated on a per-channel basis. Thus it is possible to view individual channels without overburdening the network with all the channels.

For this purpose, imc STUDIO Monitor uses the channel-parameter: "*Transfer to PC*".

Name	Current value	Transfer to PC	Save (PC)
▼ Channel type: Analog inputs (Count=8)			
Channel_001	1014.2 mV	<input type="checkbox"/>	<input type="checkbox"/>
▶ Channel_002	-26.552 mV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Channel_003	1.3734 mV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Channel_004	10.834 mV	<input type="checkbox"/>	<input type="checkbox"/>
Channel_005	4.8831 mV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Channel_006	3.9675 mV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Channel_007	9.1558 mV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Channel_008	-2.8993 mV	<input type="checkbox"/>	<input type="checkbox"/>

The diagram illustrates the data flow process. It shows a signal path starting from RAM, passing through a Device, and then to a PC. A checkbox labeled 'Transfer to PC' is checked, indicating that data is being transferred to the PC. Below this, it notes 'Display, calculations of measured data' and 'Available events'.

### Transfer to PC

In the example, channel\_001 is not transferred while channel\_002 records measurement data.



Note

### Single value variables

Single value variables are always transferred.

## Circular buffer time

All incoming data are kept in a circular buffer memory. The volume of this buffer memory can be set for each channel separately in the column "*Circular buffer time*".





Note

### Circular buffer time

The circular buffer memory only applies to the display in the curve widow and does not affect storage of the measured data!

## Beginning/concluding data recording

Start data recording by means of the Start-button ()

Stop data recording by means of the Stop-button ()

Recording of the data runs independently of the actual measurement. If the measurement is running on the device while recording of the data is running in imc STUDIO Monitor, the measured data are recorded. If, at a later time, measurement (on the device) is stopped, then consequently no measured data appear in imc STUDIO Monitor. Upon the next start of measurement, measured data immediately appear in imc STUDIO Monitor, as long as data recording continues there. In this case, the data of the last measurement are discarded.

## Configuring display of measured data

You can observe the channels in the curve window, or use the other Widgets on the Panel.

## Analysis and processing of measured data

Various tools for subsequent processing and analysis of the measured data are available in conjunction with associated licenses.

## Activating data storage

By default, data storage is activated.

## 5 Experiments, projects and the database

This chapter describes the interdependencies among the "database", "projects", "experiment templates" and "experiments".

### Experiment

The experiment includes a record of all settings needed for generating the measurement data as well as viewing and evaluating them. The actual measured data are saved with the "experiment" to which they belong.

You can create a variety of experiments to accomplish a corresponding variety of measurement tasks.

imc STUDIO Monitor always works with exactly one experiment and all changes are saved to it.

Among others, the following settings are saved:

- the experiment file (filename extension: ".imcStudio"),
- measurement files and metadata,
- various backup files and administration files

Among other things, the experiment file contains all the settings configured in the main windows and in the Setup-Assistants.

Each experiment has a unique name which is set when it is [saved](#)<sup>40</sup>.

### Measurement data

By default, the measured data are saved in the Experiment folder. They belong to the experiment. You specify the data structure in the Device-settings under "Storage" (Setup page: "Devices" > "Storage").

### Project

A project is primarily a collection of various experiments. The factory settings of imc STUDIO Monitor are configured in such a way that only one project is present and that you are aware of it to the minimum extent possible.

All of your experiments are saved in this project ("StandardProject").

Some options and configurations are not saved along with the experiment. For instance, they might be saved along with the project and apply to all experiments belonging to the project. In some cases, you can define what has to be saved where. E.g. when generating variables, you can change the validity scope and, for instance, save it not just for that experiment but for all experiments in the project.

Whatever is saved at the Project level (and thus not with the specific experiment) is correspondingly denoted at the locations affected. A project can include:

- one or more experiments
- one or more [experiment templates](#)<sup>40</sup>
- project settings (e.g. views, user administration and project-events)

After the first start of imc STUDIO, a standard project is set up in which your experiments are saved.

## Project view - working with multiple projects

When you activate "Project view", there is a project-based tree diagram in the [Open- and Save-dialogs](#)<sup>[39]</sup>. Here, you can create additional projects and load experiments from other projects.


### Note

#### Creating a project resets variables


When you create a new project, the status of the experiment currently open is saved temporarily and reloaded later after the new project has been set up. In consequence, the values of the variables are reset to the condition they would have if the experiment were re-loaded.

In the process, the event "Experiment\_Loaded" is not triggered. If you need this to happen for your experiment, please re-load it manually. If you save your experiment with the new project ("Save As"), something similar happens. Here, too, the variables are reset, but additionally the event "Experiment\_Loaded" is triggered.

You can activate the "Project view" in the options (under "Project Management" > "General options"):

Ribbon	View
Extra > Options (  )	All


  

Option	Description
Project view activated	<p>To create more projects, you must activate the <b>Project view</b>. This option is deactivated by default. (Information on <a href="#">Projects</a><sup>[35]</sup>).</p> <p>There is an extended view available of some <a href="#">dialogs</a><sup>[38]</sup>. Multiple projects can be created and used.</p> <hr/> <p>Only activate the <b>Project view</b> if you wish to use and manage multiple experiments in separate projects.</p> <p> If this function is deactivated, some dialogs are displayed in <b>simplified form</b> (e.g. "Save experiment" and "Open experiment" are <b>missing Project selection</b>, for instance).</p>


## Database

The database is the data repository for imc STUDIO Monitor. Here, the projects and their associated experiments are saved. The database does not have its own settings and configurations.

The folder path for the **database can be freely selected** (in the Options under: "Project Management" > "HDD Settings").

Ribbon	View
Extra > Options (  )	All

Option	Description
Database folder	<p>Here you set where the "<b>Database</b>" is to be saved. (Information on "<a href="#">Data management</a>")</p> <hr/> <p> The database is not user-dependent. Note that every user who is set up in the system has writing and reading rights for this path.</p>

## Database conversion


If the database structure has been changed, you are subsequently notified. One way this can happen is as a result of updating to a new version.

A **conversion-dialog** appears. You can convert the database or have it copied beforehand. After the conversion, the entire **database can no longer be used with the older version**.

Databases are not downward compatible.

In the upper region, the reason why the database does not fit with the current version is noted. E.g., the database may be too new or too old. In the list below, all databases found in the folder selected are listed. The "Status"-bar contains information on the database.

The following approaches are available:

Approach	Description
Select an existing database	<p>Select the appropriate database and click on the button "Apply".</p> <p>If it is necessary to <b>convert the database</b>, an additional dialog appears. Here, the user is prompted to decide whether to <b>use the database under a new name</b>. If you choose:</p> <ul style="list-style-type: none"> <li>• <b>no</b>: the existing database is converted. It can no longer be used with the older version.</li> <li>• <b>yes (recommended)</b>: the database is copied. Enter a name for the new database. Now you have two databases. You will have a backup copy and can continue to use the old database with the old version.</li> </ul>
Create a new database	Click on "Create new". Enter an appropriate name for the database. It will be created in the folder selected (parallel to any already existing databases).
Change the database's folder	<p>Click on the button "..." next to where the folder is indicated. Select an appropriate folder.</p> <p> Here, select a folder where the database folder is to be created later. Not the database itself. E.g. the default folder: "C:\Users\Public\Documents". The database will be created in this folder, e.g. "DB".</p>

## Experiment Template

See: "[Experiment Templates](#)" 

## Creating one's own files on an experiment - in the folder "Meta"

You can **create your own files on the experiment**, such as metadata, imc FAMOS-sequences, info-files. To do this, use the **folder: "Meta"** in the experiment path. If you save or export the experiment under a different name, all files from the folder "Meta" come along with it.

The folder "Meta" is now ignored in all components.

- The content is not recognized as a measurement although containing measured data. This means that there is no entry in the Data Browser.
- Interval saving does not delete the folder. When the number of intervals is limited, the folders of measured data are deleted in succession once the specified count has been reached. The folder "Meta" is ignored, even when the folder contains measured data.



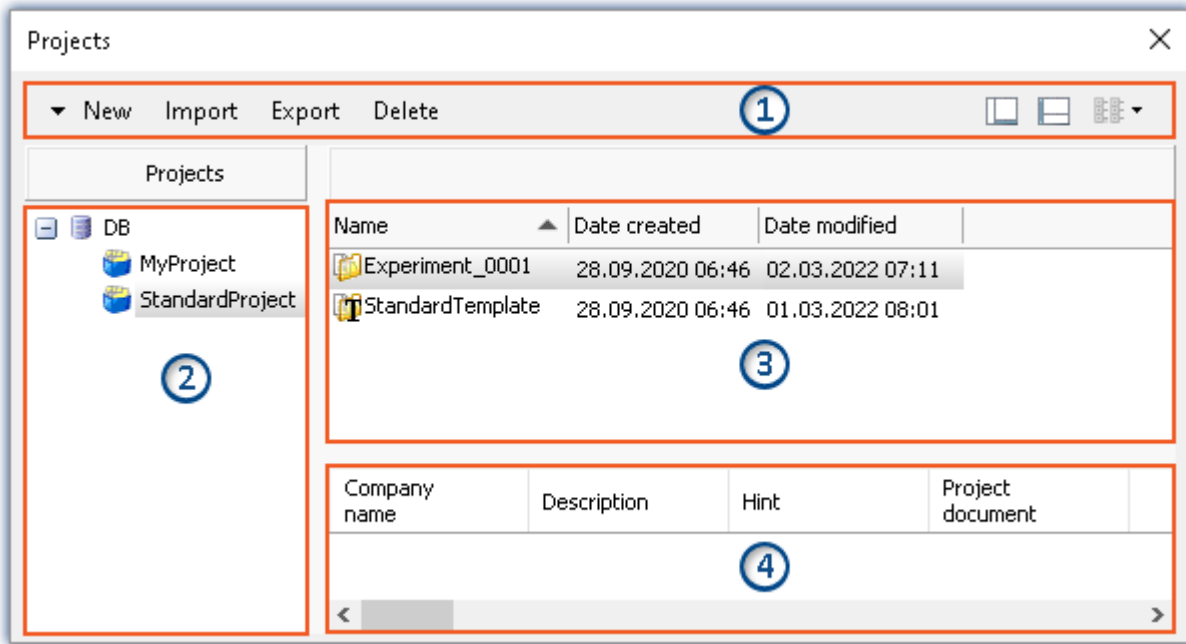
## 5.1 Dialogs: Project and Experiment

The Project Management dialogs are described below:

- with "Project view" and
- with "Experiment templates".

By default, these options are deactivated, in consequence of which not all functions are available. Options-dependent functions are mentioned explicitly below.

The dialogs following the functions "Manage Project", "New Experiment", "Save As" and "Open" are structured similarly. The dialog is described below on the basis of "Project Management" as an example. Not all dialogs feature the complete scope of functionality.



Example: Manage project




The dialog is subdivided into four regions (from top to bottom):

1. Menu bar
2. List of all projects
3. List of all experiments and experiment templates in the selected project
4. Linked metadata information belonging to the selected experiment

By default, the regions 1 and 3 are displayed; the others can be activated if desired.


### Region 1: Menu bar

Function	Description
New	<b>Create new project:</b> Creates a new project in the selected database (a database must be selected).
	<b>Create new experiment template:</b> Creates a new <a href="#">experiment template</a> <sup>40</sup> (a project must be selected).

Function	Description
Import	<p>Imports elements (projects, experiments and or experiment templates) from a file in the selected entry.</p> <p>The file can contain multiple elements. You can select either all or individual elements for import. Additionally, the target name can be changed.</p> <p>Be sure to first select the target correctly. You can only import a project if the database is selected. You can only import experiments and experiment templates if a project is selected.</p> <p>You can only import projects if the Project view is activated.</p>
Export	<p>Exports the selected entries to a file.</p> <p>Whole projects and individual/multiple experiments and experiment templates can be exported to a file.</p> <p> Manually created folders are not included with the export. The exception is a folder in the experiment path named: "<a href="#">Meta<sub>37</sub></a>".</p>
Delete	<p>Deletes the selected entries.</p> <p>Complete projects and individual experiments/experiment templates can be deleted. If you select delete an experiment with saved measurement data, a prompt appears for confirmation that you wish to delete the data.</p>
	Show/Hide Region 2 (list of all projects)
	Show/Hide Region 4 (metadata information)

## Regions 2 and 3: List of all projects / experiments / experiment templates


In these two regions, the projects/the experiment and experiment templates are listed. When you select a project, all elements of the project selected are displayed in the region at right.

Region 2 is only displayed if the project view is activated and the region is shown (via the menu button: .

Region 2 only shows the experiment templates if these are activated.

## Region 4: Linked metadata information

The metadata saved with the selected experiment are displayed in this region. When an experiment is saved, the metadata can be saved automatically along with it. In the Options "*Metadata*" > "*Experiment - Metadata*" > "*Setup page*", you can select which source to use for the metadata.

Only shown if the region is shown (via the menu button: .

## 5.2 Creating/Saving/Copying an experiment

Each experiment has an identifying name which is specified when it is created/saved. Each name may be used only once per project.

When you create an experiment (ribbon menu item: "Home" or "Project" > "New"), or when you save an experiment under a new name, you are asked for a name. In this case, enter a unique name.

If the "Project view" is activated, you can additionally select the **target project**.

Action	Description
New Experiment	<p>When you create a <b>new experiment</b>, it is generated from an experiment template (see "<a href="#">Experiment template</a>"<sup>[40]</sup>).</p> <ul style="list-style-type: none"> <li>• If <a href="#">experiment templates are displayed</a><sup>[40]</sup>, select an experiment template.</li> <li>• If they are not displayed, the <a href="#">preferred experiment template</a><sup>[41]</sup> is used automatically (at default: "<b>StandardTemplate</b>").</li> </ul> <p>All changes since the last save are discarded if a new experiment is created.</p>
Save experiment as	<p>When you save an experiment under a new name, a new experiment having the current settings is created.</p> <ul style="list-style-type: none"> <li>• Measurement data from the existing experiment are not transferred along to the new experiment (exception: if the experiment was previously never saved; in that case a prompt appears to ask whether to include these measured data).</li> <li>• <a href="#">Files from the folder "Meta"</a><sup>[37]</sup> are copied and are available in the new experiment.</li> </ul>
Copying an experiment to a different project	<p>You can copy experiments to a different project by means either of Drag&amp;Drop or of the context menu. This means that all files located in the Experiment-folder are included: Measured data, saved measurement settings, parameter set files or user-made folders of metadata.</p>

## 5.3 Experiment templates

When you create a new experiment, it is generated from an experiment template. The new experiment contains all properties of the selected template. In templates, all settings which are saved will be saved also in an experiment.


After the first installation or after creating a new project, the project contains an "empty" experiment template.

## Making experiment templates visible

You can activate the "Experiment templates" in the options (under "Project Management" > "General options"):

Ribbon	View
Extra > Options (🔧)	All

Option	Description
Show experiment template	<p>In order to be able to use experiment templates, you must previously make the <b>experiment templates visible</b>. This option is deactivated by default. (Information on <a href="#">Experiment templates</a> <sup>35</sup>)</p> <p>An extended view of certain <a href="#">dialogs</a> <sup>38</sup> is available. Experiment templates can be created and used.</p> <hr/> <p>Only activate this function if you wish to create multiple similar experiments.</p> <p> If this function is deactivated, some dialogs are displayed in <b>simplified form</b> (e.g. "New experiment" and "Edit project" appear <b>without experiment template selection</b>).</p>

## Creating experiment templates

Ensure that experiment templates are visible. You can generate experiment templates from a variety of sources:

Source	Description
From present settings	The configuration currently set is used for the template. (see also " <a href="#">Save as template</a> " <sup>42</sup> )
From existing experiment	Select an experiment from which to generate the template.
From default settings	An empty template is created.

- Click on the button: "Manage Projects"

Menu ribbon	View
Project > Manage Project (🔧)	Complete

- Select the project (if the projects are not displayed, click on the white background, in order to avoid selecting an experiment)
- In the dialog, click on the menu item: "New" > "Add experiment template"
- Select a source

The experiment template is created from the source and is available when [creating an experiment](#) <sup>40</sup>.

## Preferred experiment template

You can **mark** an experiment template as **preferred** (template context menu > "Set as preferred experiment template"). If the experiment templates are no longer displayed, the new preferred experiment template is automatically used when a new experiment is created.



## 6 Ribbon

### 6.1 Project menu






The "Project" menu is available in every plug-in.

Some of the dialogs offer an extended view. By default, the dialogs are displayed without "project view" and "experiment templates".


#### Project

Menu item	Description
 <a href="#">Manage Projects</a> <sup>[38]</sup>	Managing projects and experiment templates
 Save Project	Saves the current project



#### Experiment

Menu item	Description
 <a href="#">New</a> <sup>[40]</sup>	Creates a new experiment
 Open	Opens an existing experiment
 Save	Saves the current experiment
 <a href="#">Save as</a> <sup>[40]</sup>	Saves the current experiment under a new name. Additionally, the experiment is reset. The variables are assigned the respective initial value (e.g. device variables = "0", or user-defined variables are assigned the respective initial value specified). The event "Experiment_Loaded" is triggered.
 Save as template	When you click on the button, a new <a href="#">template</a> <sup>[40]</sup> is generated which the system then uses automatically (keyword " <a href="#">Preferred experiment template</a> " <sup>[41]</sup> ). (from the edition "imc STUDIO Professional")

#### Im-/Export

Menu item	Description
 Import / Export	In this dialog you can import and export various components.

#### Current Measurement

Menu item	Description
 Save current Data	In addition to the optional automatic data saving, you can also perform targeted saving of the data currently in the PC (Current measurement) either during or subsequent to the measurement.
 Export current Data	See also Setup pages - Configuring device: "Storage options and directory structure" > "Controlling Data Storage" > "Targeted Data Saving, or Saving Subsequent to Measurement"

 Note

## Without imc STUDIO Project Management

In the product configuration, the component "**imc STUDIO Project Management**" can be deactivated. If "**imc STUDIO Project Management**" is deactivated, a number of limitations apply.


Among others, there is no longer any database. The dialogs for saving and opening experiments match the standardized "Save As"- or "Open"-dialogs. Experiments can be saved at any desired location. The saved measurement data are stored in the designated experiment folder.

The functions of the Project Management are listed in the technical data sheet.





The description of the Project- and Experiment-dialogs in the following pages pertain to imc STUDIO with activated Project Management.

## Changes in the menu without imc STUDIO Project Management:

### Project - without Project Management

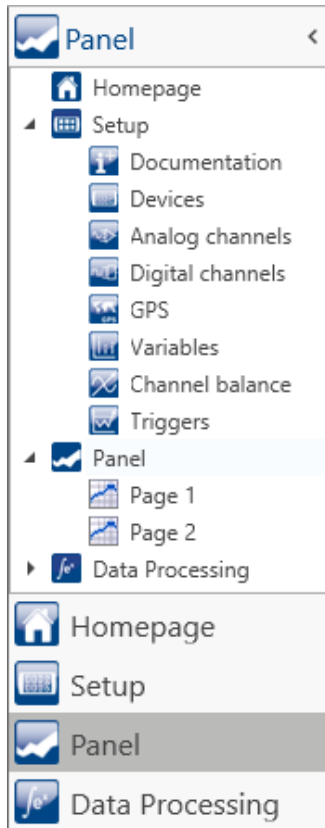
Menu item	Description
 Save Project	Saves the current project. In this case, all "Project"-settings are saved as "Application"-settings and apply for all experiments.

### Experiment - without Project Management

Menu item	Description
 New experiment	Creates a new experiment. The storage location is first determined by means of " <i>Save experiment/Save experiment as</i> ". The device currently selected remains selected. However, the device's configuration will be reset.
 Open experiment	Opens an existing experiment. The experiment can be saved anywhere in the file system.
 Save experiment	Saves the current experiment at the storage location previously set using " <i>Save experiment as</i> "; if no storage location had been determined yet, " <i>Save experiment as</i> " is run automatically.
 Save experiment as	Saves the current experiment under an arbitrary name at any location in the file system

## 7 Navigation pane and Quick access toolbar

### Navigations pane



Maximized Navigation Pane  
(example)

In the **Navigation pane**, the main windows of the installed plug-ins are displayed as a tree diagram. To open/change the main window, click on its corresponding entry.

The Navigation pane can be opened or closed, maximized and minimized.



- To **maximize/minimize** the Navigation pane, click in its top bar on the arrow symbol.
- To **open/close** the Navigation pane, click on the upper region of it below the arrow.

If the Navigation pane is maximized or opened, the main windows are additionally displayed as a tree diagram (see example shown).

Via the tree diagram, it is possible to jump to different main windows or directly to the pages containing the main windows.

#### You can hide the Navigation pane.

If you hide the Navigation pane, please note that your ability to navigate between the main windows. For this case, you should add the command: "*Browse workspace*" at suitable locations, for instance in the ribbon menu ("*User-defined buttons*").

To show or hide the Navigation pane use the dialog: "[Tool windows chooser](#)".

### Quick access toolbar

The "Quick access toolbar" can be supplemented with various menu items. Which actions are available for this purpose doesn't depend on what tab is currently displayed in the menu ribbon.

Using the context menu, you can either add or remove menu actions.

- Adding: context menu of the menu item in the menu ribbon (note: the menu ribbon may not be minimized)
- Removing: context menu of the menu item in the toolbar

You may place the toolbar either above or below the menu ribbon.



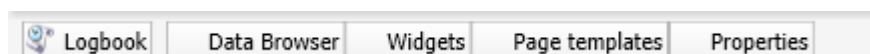
Note

Saving the configuration

The **configuration of the "Quick access toolbar"** is saved with the respective **view**.  
The configuration is **only saved** whenever the **project is saved**.

## 8 Tool windows

Tool windows contain special elements for operating/viewing a main window. (For information on operating the tool window: "[Operation](#)"<sup>45</sup>)



*Five tool windows*

*- The imc STUDIO frame's log book*

*- Four additional windows from the main window imc STUDIO Panel*

One tool window belongs to the imc STUDIO frame and is always available:

- [Logbook](#)<sup>47</sup>

The *Logbook* is always displayed and can be minimized. The other main windows' tool windows (e.g. for the Panel) are displayed as soon as the respective main window is opened.



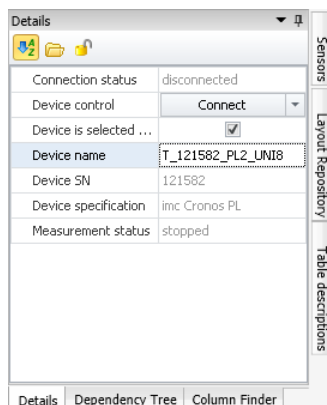
**Note**

**Not all tool windows are visible**

By default, all necessary tool windows are displayed. All others can be [displayed](#)<sup>45</sup>, if you need them.

### 8.1 Operation

Tool windows contain special elements for operating and editing a main window.



*Tool window (example)*

Each main window has its own tool window, which is described in the documentation of the respective component. Tool windows can be moved and deleted.

By default, the tool windows are pinned to the main window (e.g. at the bottom or right margin).

The picture shows an opened tool window ("**Details**"). It is pinned and contains two additional tabs. If you click on one of these tabs, the corresponding tool window opens ("**Dependency Tree**" and "**Column Finder**").

Three other collapsed tool windows are seen at the right margin ("**Sensors**", "**Layout Repository**" and "**Table descriptions**").



A tool window is opened when the mouse is swiped over it.

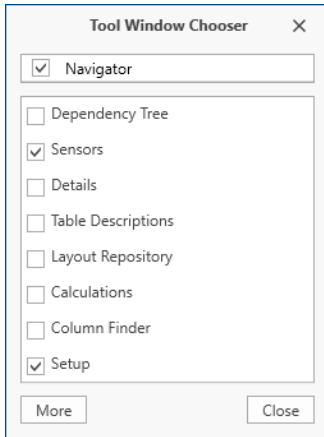
As long as a tool window is selected, or if the mouse is located over the tool window, the tool window remains open. Otherwise, it collapses to the side.



## Showing/hiding the tool window

You can either show or hide tool windows. To do this, open the dialog: "*Tool Window Chooser*".

Ribbon	View
View > Choose Tool Windows (  )	Complete
Extra > Choose Tool Windows (  )	Standard




Dialog: Tool windows chooser

The dialog: "*Tool Window Chooser*" opens.

Set a checkmark in front of the tool windows which you wish to have displayed.

Selecting "*More*" provides you with comprehensive layouting capabilities for the view. You are able to place any tool window belonging to other components on the current page. For instance, you can display the Data Browser in the window of the Automation. Or you can show the Panel in the Setup.

## Other actions

Action	Description
Pinning the tool window	Tool windows can be pinned. Pinned tool windows remain open even when no longer selected.  In order to pin a tool window, click on the thumbtack-button (  ).
Freely positioning the tool window	In order to freely position the pinned tool window, move the tool window's title bar using drag&drop to the desired position.
Docking the tool window	In order to dock the tool window, use the drag&drop technique by grabbing the tool window's by its title bar and moving it to the desired position. A Dock-symbol will appear at the locations which are possible.



In the center of the targeted window (main window or tool window), a cross appears. To dock the tool window, release the mouse button with the mouse over the desired position.



Dock at the top/bottom margin



Dock at the left/right margin



Insert as a tab in a different window (see example)

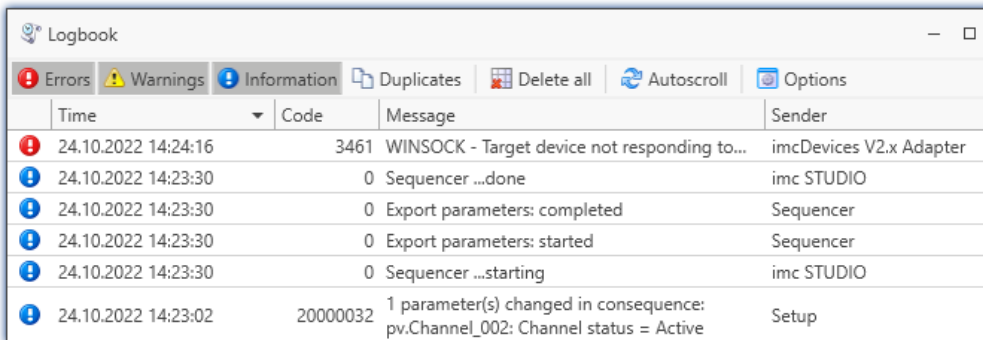
## 8.2 Logbook

In the tool window "Logbook", **messages of the categories: "Fatal" (☹), "Error" (❗), "Warning" (⚠) and "Information" (ℹ) are entered.** The logbook entries **indicate what problems and errors exist** and provide hints on where to find them and how to remedy them. Some actions performed are documented.

E.g., a note is entered in the logbook for every command performed:

- performed successfully ("Information") or
- otherwise "Error" or "Warning"

By default, the Logbook is opened when an entry any of the categories "Fatal", "Error" or "Warning" occurs. By default "Information" category notes are entered into the logbook without any further effect.



Time	Code	Message	Sender
24.10.2022 14:24:16	3461	WINSOCK - Target device not responding to...	imcDevices V2.x Adapter
24.10.2022 14:23:30	0	Sequencer ...done	imc STUDIO
24.10.2022 14:23:30	0	Export parameters: completed	Sequencer
24.10.2022 14:23:30	0	Export parameters: started	Sequencer
24.10.2022 14:23:30	0	Sequencer ...starting	imc STUDIO
24.10.2022 14:23:02	20000032	1 parameter(s) changed in consequence: pv.Channel_002: Channel status = Active	Setup

Example of logbook entries

Each logbook entry consists of:


Parameter	Description
Symbol for the category	Fatal (☹), Error (❗), Warning (⚠) and Information (ℹ)
Time	Time the logbook entry occurred
Code	Logbook entry's error code
Message	Exact description of the logbook entry
Sender	The origin of the logbook entry

After a new imc STUDIO Monitor start, the logbook is empty. The logbook itself only displays messages which occurred since the last start. Older messages can be opened with the "Logbook-Viewer".

## 9 Views

The program's GUI is adaptable, so that for example the windows and columns can be positioned and displayed according to the user's desires. **The layout of the GUI is saved** in so-called "Views". It is possible to create separate views for various requirements.

The following settings are saved along with a view:

Region	Description
Window arrangement	The imc STUDIO Monitor window's and the tool window's <b>position and size</b>
Menus	Layout of the <b>menu ribbon</b> and the <a href="#">Quick access toolbar</a> 
Layout	<ul style="list-style-type: none"> <li>• The last main window opened</li> <li>• The tool window's layout (e.g. what metadata columns are displayed in the Data Browser)</li> <li>• The arrangement and configuration of the Setup pages (e.g. arrangement of columns, such as metadata columns)</li> </ul>



Note

### Views and projects

#### The relationship between saving the view and saving the project

The views are saved with their respective project. When a view is saved, it is necessary for the project to be saved. The system will notify the user accordingly.

Conversely, when a project is saved, the view is not automatically saved. Views are only saved whenever the action "Save View (as)" is intentionally selected. In order to avoid every little change to a view being saved whenever the project settings are saved, the views are ignored when specifically the project is saved.

#### Settings which apply globally to all views are saved with the Project

Please note that only the positions of individual elements is saved along with the views. The existence and configuration, for instance, of the Setup-columns (tables- and column descriptions) is saved along with the respective project. (see also "What is saved where?")

Since the project is always saved whenever the view is saved, the current configuration of the columns is also included when saving.

#### Overview of settings saved with the project, which affect the views

- Setup table descriptions and column descriptions (these include, for example, additional columns, such as metadata-columns, parameter set columns, ...) (tool window: Table Descriptions)
- saved Setup complete layouts (tool window: Layout Repository)



Note





### Detecting changes to a view

If any major changes (columns added, menu changed, etc.) are made, the system explicitly recognizes this as a change to the view. When you exit the project by switching to a different project or by closing imc STUDIO Monitor, you are prompted to select whether to save the changes.

Minor changes, such as changed size of tool windows, are ignored.

## Saving views

In order to save the current view, select the menu item "*Save View (as)*":

Ribbon	View
View > Save View / Save View as (  /  )	Complete
Extra > Save View / Save View as (  /  )	Standard

All settings belonging to the current view are saved. These include the items named above.



### Note

### The views are saved with the project

The views are saved with their respective project. When a view is saved, it is necessary for the project to be saved. The system will notify the user accordingly.

## Loading views



In order to load a saved view, select the menu item "*View*" in the drop-down list of the respective view. Here, all views available to the project are displayed.

After the selection the view is loaded.

The record of an experiment includes the view in which the experiment was saved. When the experiment is loaded, the view also loads automatically.

## Deleting views

To delete a saved view, select the menu item "*Delete View*".



Ribbon	View
View > Delete View (  )	Complete
Extra > Delete View (  )	Standard

In the dialog which then opens, select the view to delete from the drop-down list. Confirm your selection by clicking on "*Save project*".

## Restoring views

Views are not write-protected. They can be restored to their original state. The factory settings come with a copy of all views created as part of the program installation.


To restore a view from the factory settings, select the menu item "*Restore*".

Ribbon	View
View > Restore (  )	Complete
Extra > Restore (  )	Standard

In the dialog which then opens, select the desired views. They are imported from the factory settings. Conform your selection by clicking on "*OK*".



## 9.1 Exporting/importing views

When you export the view settings, a variety of project settings are stored in the export file.

Settings	Description
<a href="#">Saved views</a> 	<ul style="list-style-type: none"> <li>table descriptions and column descriptions (these include, for example, additional columns, such as "metadata columns", "parameter set columns", ...) (tool window: "Table Descriptions")</li> <li>saved complete layouts (tool window: "Layout Repository")</li> </ul>
Sensors	<ul style="list-style-type: none"> <li>user-defined characteristic curves/sensors (tool window: "Sensors")</li> </ul>

### Export of views, metadata columns, sensors, ...

By means of the menu item "Import/Export", you can export the view settings:


Ribbon	View
Project > Import/Export 	Complete
Extra > Import/Export 	Standard

- Choose option "Export" and then the list item "**Export views, meta data columns, sensors, ...**"
- Choose an appropriate file name and path for the view settings file





Note

Save the view beforehand

Save the view beforehand if you have made any changes (see "[Views](#)" ).

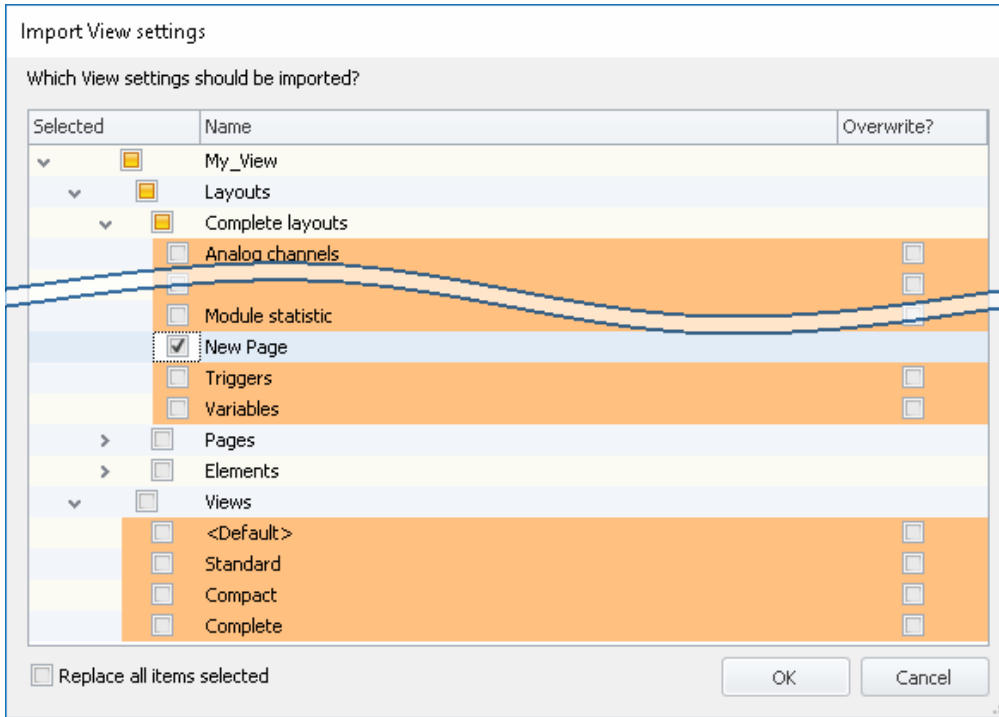
### Import of views, metadata columns, ...

Using the menu item "Import/Export", you can **import the view settings to the current project**:

Ribbon	View
Project > Import/Export 	Complete
Extra > Import/Export 	Standard

- Choose option "Import" and then the list item "**Import views, meta data columns, ...**"
- In the file selection dialog, selected the saved view settings file

Thereafter you will see a dialog allowing you to import either all or individual view settings.



Entries having **colored shading already exist** in the current project. In this example, the complete layout "New Page" is not yet present there.

Checkbox	Description
Selected (left)	Check this box if you wish to <b>import the element</b> .
Overwrite? (right)	Check this box if the element in the project is to be <b>overwritten without any confirmation prompt</b> . If the box is not check-marked, a prompt appears to inquire the name for the element to be imported. (Unless "Replace all items selected" is check-marked.)
Replace all items selected	Corresponds to "Overwrite?" for all entries: Check this box if you want to <b>replace all elements without any confirmation prompt</b> .

**You can select the following elements:**

Element	Description
Layouts	All these elements belong to the Setup pages. Saved pages and saved designs, which can be displayed on the pages. For more information on the complete layouts, see the chapter: "Table Description and Complete Layout".
Views	Here you find the imc STUDIO-views. The <a href="#">views</a> <sup>48</sup> apply for all components of imc STUDIO.

**Note**

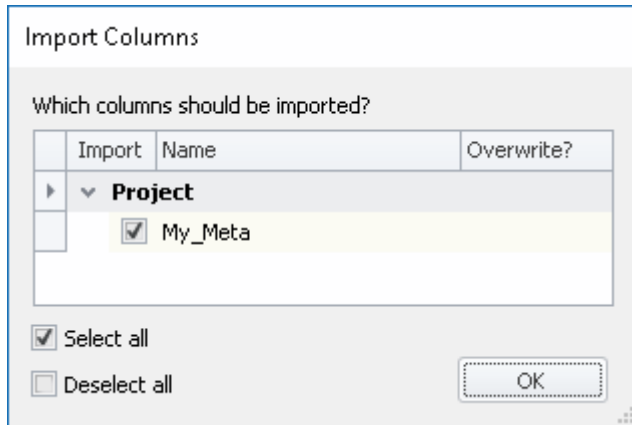
### New functions can be overwritten

Be aware that when making replacements, new functions may be lost if you import old views/columns.

## Importing defined additional columns

An additional prompt appears if

- discrepancies between existing **Setup columns** were detected or
- the file contains **additional columns**.



Select which columns to import and/or any to replace.

If the **column already exists**, a checkbox appears under "Overwrite?". If the box is not check-marked, the **column is automatically renamed**. You can edit the name afterward. For more information, see the chapter: "*Creating and configuring additional columns*".

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