



CORTEX

Medizin · Sport · Fitness

Installation manual

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MetaSoft® Studio

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The supplied software may only be copied for security purposes. Please also observe the operating instructions of the respective third-party device manufacturers.

All evaluations of the software are only recommendations and must be reviewed by a medical doctor.

Dear User




We would like to thank you for putting your trust in us by purchasing our product. The CORTEX CPET system (device and software) may only be used according to its intended use. Please read all manuals and safety instructions carefully before using your system.

CORTEX Biophysik GmbH assumes no liability for damages caused by improper use or non-observance of the instructions.

- **User manual METASOFT® Studio** | describes the structure and principle of the METASOFT® Studio software, explains the integration of devices and guides you step-by-step through the handling of the software.
- **User manual (device)** | contains all information regarding your device (METAMAX®, METALYZER® etc.) and explains how to use it.
- **Calibration manual** | guides you step-by-step through the calibration process to ensure the accuracy of your system.

This installation manual guides you step-by-step through the installation of the METASOFT® Studio software.

We hope you enjoy using your system and your new software! If you have any questions or problems, please contact your local CORTEX-sales/service partner or directly:

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Conventions of depiction

Symbol	Explanation	Examples
NOTICE	„NOTICE“ – indicates important information to avoid damage to the product and to simplify operation (advice, tip).	Note the following important information!
▣ Note!	denotes a tip or an explanation of the previous text	▣ Note! Note the following...
➔	denotes a reference to a figure, table or text passage	(➔Fig. 01) (➔Tab. 01) (➔Chap. 1.21)
PATH	identifies paths	TOOLBOX/SPECIAL SETTINGS
[BUTTON]	denotes a button in the software	Now click [SAVE]!

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1 System requirements

Tab. 01:
System requirements

Hardware	
Processor	at least Intel Core 2 Duo/ 2 GHz, AMD Athlon 64 X2/2 GHz or higher
RAM	≥ 2 GB
Hard drive space	≥ 20 GB
Graphics card	DX9 compatible with 128 MB RAM or higher
Monitor	
Resolution	1280 * 1024 (4:3), 1280 * 800 (16:9)
Operating System	
Windows®	Windows 10 (32 and 64 bit) Windows 8 (32 and 64 bit) Windows 7 (32 and 64 bit) Windows Server 2008 (64 bit) Windows Server 2012 (64 bit)
Optional requirements	
Sound card / speakers	for output of acoustic signals and messages
CD-/DVD-burner	for saving data
Required interfaces	
COM connections	1 CORTEX system (e.g. METALYZER® 3B) 1 connectible bicycle ergometers
USB connections	1 dongle 1 printer

- ▣ **Note!** These specifications refer only to the default configuration and can be changed by adding external devices. Please refer to the technical specifications of the third-party device manufacturer.

If your computer does not have the required ports, the following products can be purchased from CORTEX directly or your regional CORTEX sales representative:

Description	Order no.
USB hub, 4-way, active	000-40-003
USB/serial port cable (Multi-1/USB), 1-way	820-40-010

Tab. 02:
Interface accessories

2 Software licenses

NOTICE	After the installation of METASOFT® Studio you have to activate both the master license and your purchased licenses! Please also read the chapter ACTIVATE SOFTWARE LICENSES (➔Chap. 5)!
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The following license types of METASOFT® Studio are available:

Licenses type	Order no.
Single user license	721-09-010
Network license (incl. 3 workstations)	721-09-011
Network license (Expansion sites)	721-09-012

Tab. 03:
Licence type

The following licenses are available:

Licenses	Description	Order no.
Master License	to unlock METASOFT® Studio	721-09-002
Performance Assessment and Heart Rate Exercise Zones	Performance Assessment and Heart Rate Exercise Zones	721-09-020

Tab. 04:
METASOFT® Studio-Licenses

Licenses	Description	Order no.
Exercise Scheduler	<p>Creation of an individual training plan based on spiroergometric test results.</p> <p><input type="checkbox"/> Note! The Exercise Scheduler requires the Performance Assessment and Heart Rate Exercise Zones license!</p>	721-09-021
MetaControl 3000	Complete cardiopulmonary performance diagnostics with 12-variable ECG from customized.	721-09-013
Interface to 12-Channel ECG	Interface for performing cardiopulmonary performance diagnostics with 12-Channel ECG from ECG devices of third-party manufacturers.	721-09-014
Interface to 3-Channel ECG (for devices with 9-digit serial number)	Interface for performing cardiopulmonary performance diagnostics with the 3-Channel ECG from of custo-med.	721-09-018
Pre-Operative Assessment	Special execution and analysis of spiroergometry tests for the assessment of the postoperative risk of a patient before abdominal surgery.	721-09-025
Energy metabolism for CPET	Provision of additional variables for determining the energy metabolism for CPET.	721-09-022

Licenses	Description	Order no.
Flowchart approach to Interpretation by Wasserman et. al.	Special option for evaluating a CPET test using the flowchart approach by Wasserman et. al.	721-09-024
Export to Exercise Manager Software	Special option to transfer test data to the exercise manager software atleta or mesics.	721-09-016
Basal and Resting Metabolic Rate	Special performance and analysis of baseline and resting metabolic rate tests.	721-09-023
Spirometry	Performance and analysis of spirometry tests, special, VC, FVC, MVV tests.	721-09-028
Interface to Pulmonary Function Testing	Interface for performance and analysis of a Lung function test with the spirometry system „smart PFT body“ (of Medical-Equipment-Europe).	721-09-015
Interface to HL7	Adoption of Patient Data from and return of test data to HL7 for transmission from/to a hospital information system.	721-09-029

3 Supported equipment

In addition to the CORTEX cardiopulmonary exercise testing devices supported METASOFT® Studio, a large number of stationary bikes and treadmills as well as blood pressure gauges and oxygen saturation meters (SpO₂) (➔User manual CORTEX CPET Systems, Chap. 11).

4 Installation

NOTICE

To avoid the loss of data, please close other applications before the installation, check you computer for viruses, and be aware of error messages.

- ▣ **Note!** You will need administrator rights for the installation on your computer!

Put the delivered USB stick into a free USB port. Start the installation program by clicking the file **InstallMSStudio.cmd** in the root path of the USB stick.

You can select among:

1. **Single PC** (standard): METASOFT® Studio is only installed on one workstation (no network connection).
2. **Network-Server** (server installation): The server is prepared for the use of METASOFT® Studio on the network and the METASOFT® Studio database is installed on the network.
3. **Network-Workstation** (client installation): METASOFT® Studio is installed on a workstation with access to the METASOFT® Studio database installed on the network.

NOTICE

The Network-Workstation installation can only be performed once you have already performed the Network-Server installation on the server!

4. **Network Server & Client:** METASOFT® Studio is installed on the server and the server can also be used as a workstation at the same time.

Additional METASOFT® Studio network licenses can then be installed on other workstations connected to the network. In this case, you may need to procure the “Expansion sites” network license!

Start of installation

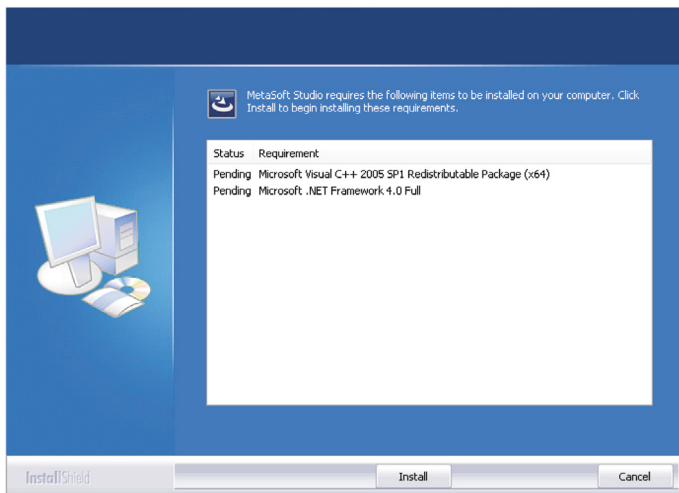


Fig. 1:
Start of installation

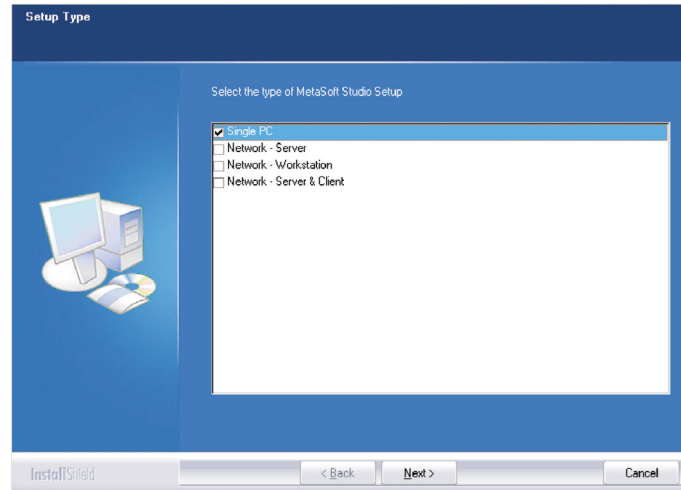
The INSTALLSHIELD WIZARD opens for the installation of METASOFT® Studio. Follow the instructions issued on the monitor.

Click on [\[INSTALL\]](#).

4.1 Single user installation

Selection of installation option

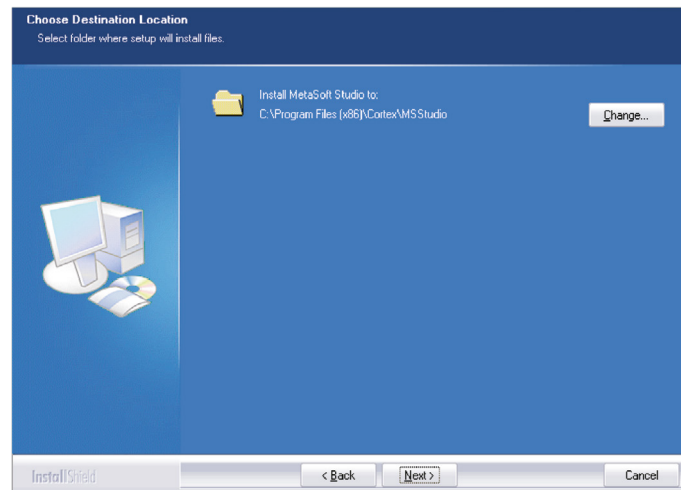
Fig. 2:
Selection of
installation option



During the installation process you can choose between 4 options. Select **Single PC** for the single-user installation and click on [\[NEXT\]](#).

Select the directory for METASOFT® Studio

Fig. 3:
Selection of the directory of
METASOFT® Studio



Select the directory for METASOFT® Studio.

Click on [\[NEXT\]](#).

Select directory for the database

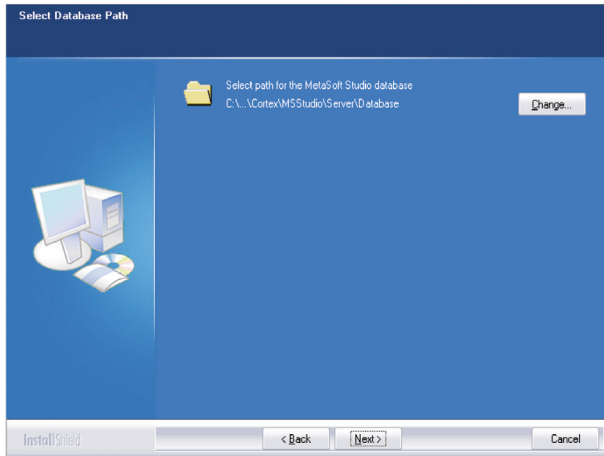


Fig. 4:
Selection of the directory
for the database

Select the directory for the database for METASOFT® Studio.
Click on [\[NEXT\]](#).

Selection of the features

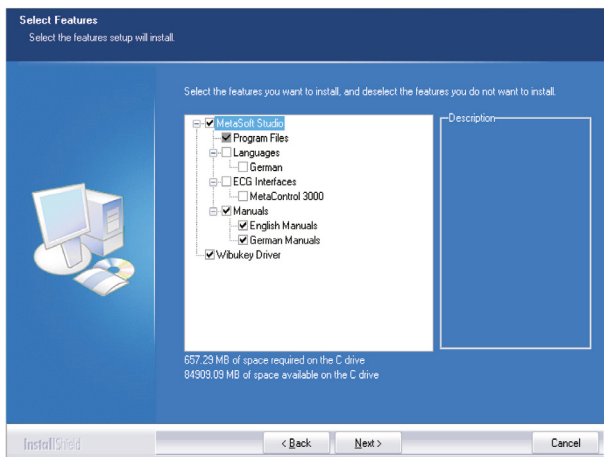


Fig. 5:
Selection of the features

Select the features you want to install:

- Language
- ECG-linkage of MC 3000
- Manuals
- WibuKey-driver

Click on [\[NEXT\]](#).

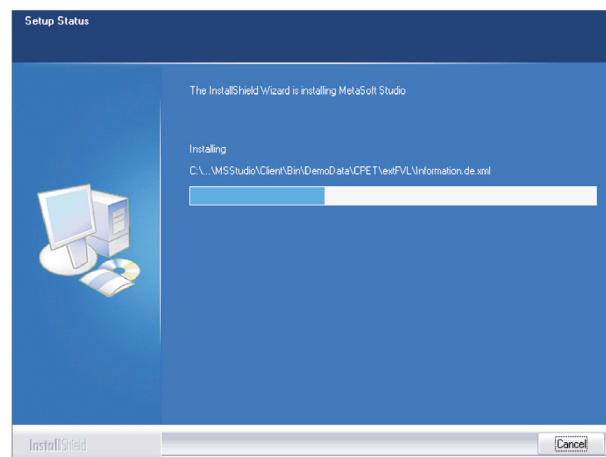
NOTICE

You must have installed the **WibuKey-driver** on your computer for using the supplied dongle for licensing your software.

If you do not have the WibuKey-driver software installed on your system, leave the default checkmark selected for the WibuKey-driver. If the WibuKey-driver is already installed, no selection appears in the menu.

Continue Installation of METASOFT® Studio

Fig. 6:
Continue Installation



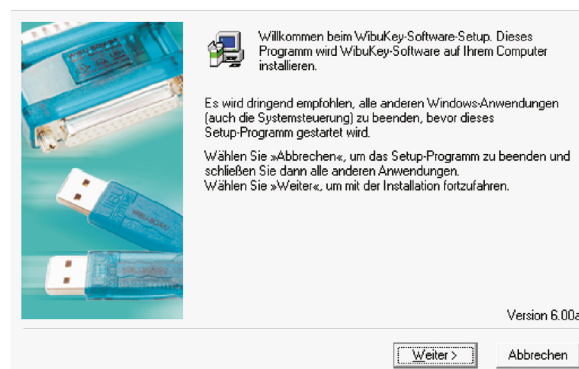
Click on **[INSTALL]** to install METASOFT® Studio.

A window opens that displays the installation progress.

Installing the WibuKey software

If you have not yet installed the WibuKey-driver, you will be prompted to install it.

Fig. 7:
Install the WibuKey-driver



Click on **[NEXT]**.

Select the language for the WibuKey software

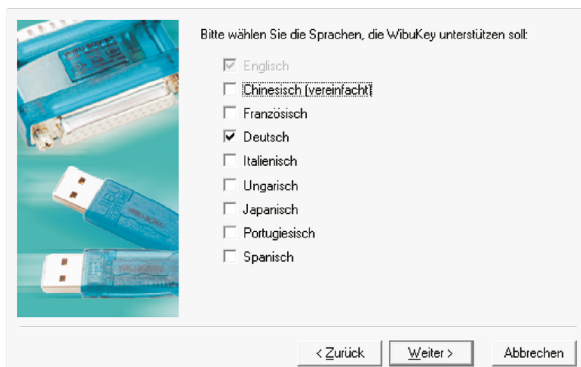


Fig. 8:
Select the language for the WibuKey-driver software

Select the language the WibuKey-driver software should provide. Click on [\[NEXT\]](#).

Select the directory for the WibuKey software

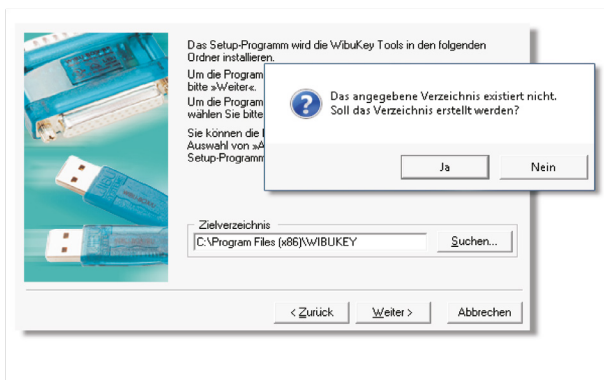


Fig. 9:
Select the directory for the WibuKey-driver

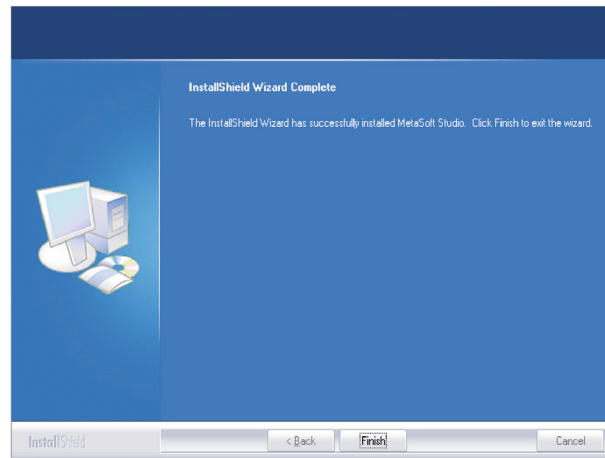
Select the directory where you would like to install the WibuKey-driver software. Click on [\[NEXT\]](#). Then click on [\[YES\]](#) if the indicated directory still has to be created, and then click on [\[NEXT\]](#).

The files are copied to the indicated directories. Afterwards, you will be notified that the installation of the WibuKey-driver software is completed.

Click on [\[EXIT\]](#) to finish the installation process.

Finishing the installation of METASOFT® Studio

Fig. 10:
Finishing the Installation



To complete the installation of METASOFT® Studio, click on **[FINISH]**. Start METASOFT® Studio or the MSS toolbox via the icons on your desktop.

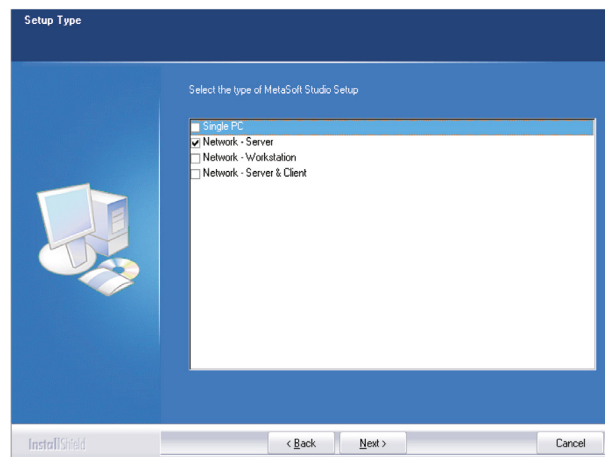
4.2 Network-installation

NOTICE	In case of a network installation, you must first complete the server installation before you can start the client installation on the respective workstations! During the server installation, the files that you need for the successive client installation are stored (server)!
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4.2.1 Server installation

Selection of the installation option

Fig. 11:
Installation option



During the installation you can choose between 4 options. Select **Network Server** for the server installation, and then click on [\[NEXT\]](#).

Select the directory for the server program files.

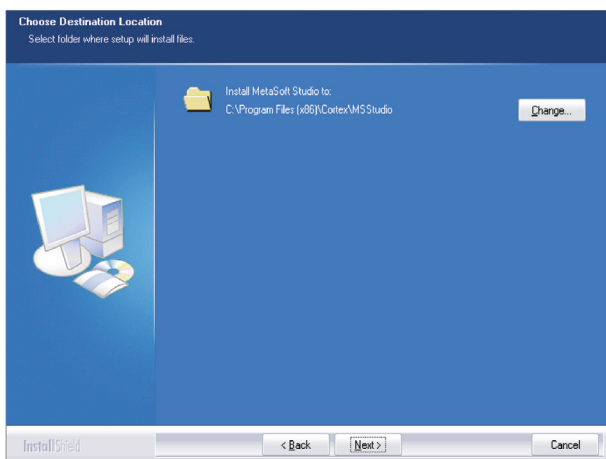


Fig. 12:
Select the directory for the server program files

Select the directory for the server program files and click [\[NEXT\]](#).

Select the directory for the database

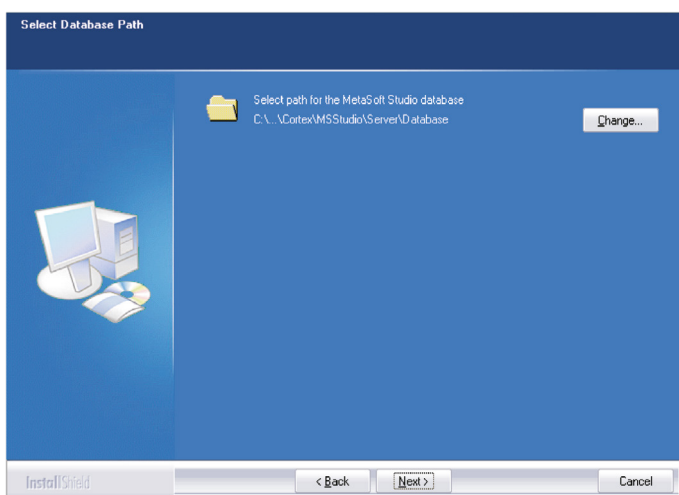


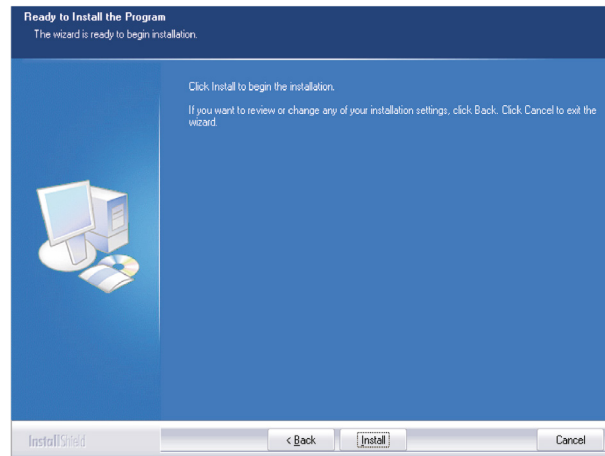
Fig. 13:
Select the directory for the database

Select the directory for the METASOFT® Studio network database. Click on [\[NEXT\]](#).

NOTICE	This directory must be located on a local drive of the server, but does not have to be visible to the workstations. Linked and mobile drives are not allowed.
---------------	---

Select the directory for the client installation

Fig. 14:
Select the directory for the
client installation



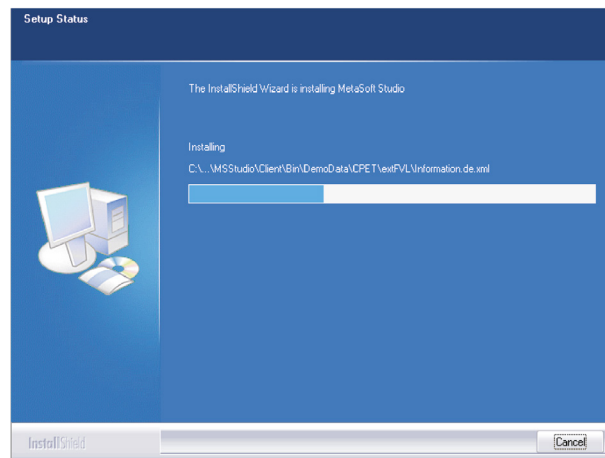
Select the directory for the client installation files.

Note! This directory has to be available for all workstations in the network.

Click on **[NEXT]**.

Continue Installation of METASOFT® Studio

Fig. 15:
Continue installation



Click on **[INSTALL]**.

A window will open that indicates the installation progress.

NOTICE	<p>You must have installed the WibuKey-driver software on your computer in order to use the supplied dongle for licensing your software!</p>
---------------	---

If you have not yet installed the WibuKey-driver software on your system, proceed as described under Single User Installation (➔Fig. 07 – fig. 09).

Complete the METASOFT® Studio installation

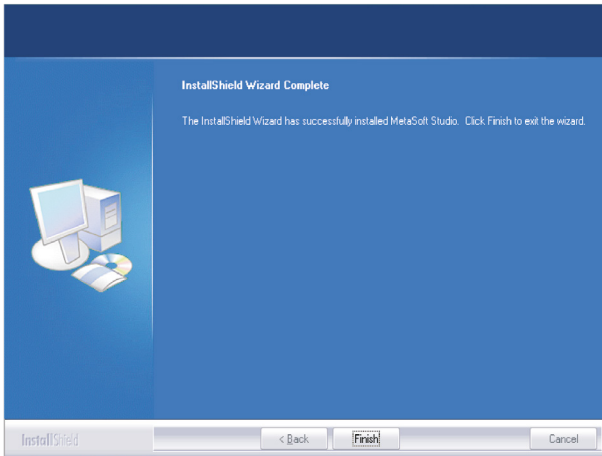


Fig. 16:
Complete Installation

Click **[FINISH]** to complete the installation process of METASOFT® Studio. Continue the network installation with the client installation on the respective workstations.

4.2.2 Client installation

NOTICE	<p>Before starting the client installation, you must have completed the server installation! Do not start the client installation from the USB stick, otherwise METASOFT® Studio <i>will not work</i> properly!</p>
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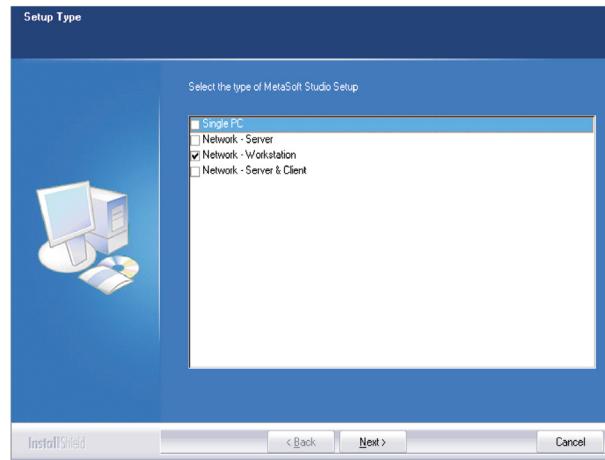
After completing the server installation, perform the client installation on the individual workstations in the network. Use the following procedure on each workstation:

Open the Windows®-Explorer. Select the directory on the server where you installed METASOFT® Studio.
(e. g. \\server\public\MSSclientsetup).

Open the Client-Setup folder. Start the appropriate client installation file: MSStudio(version)Install.exe (e. g. "MSStudio432Install.exe").

Selection of the installation option

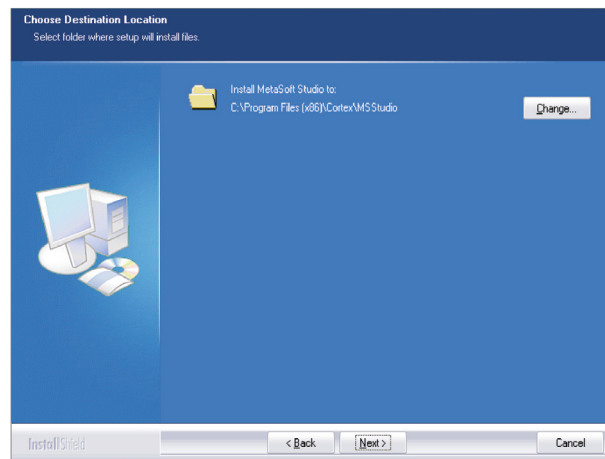
Fig. 17:
Selection of the
installation option



Select the option **Network workstation** for the client installation and then click on [\[NEXT\]](#).

Select the directory for METASOFT® Studio

Fig. 18:
Select the directory for
METASOFT® Studio



Select the directory for METASOFT® Studio. Click on [\[NEXT\]](#).

Select the directory for the database

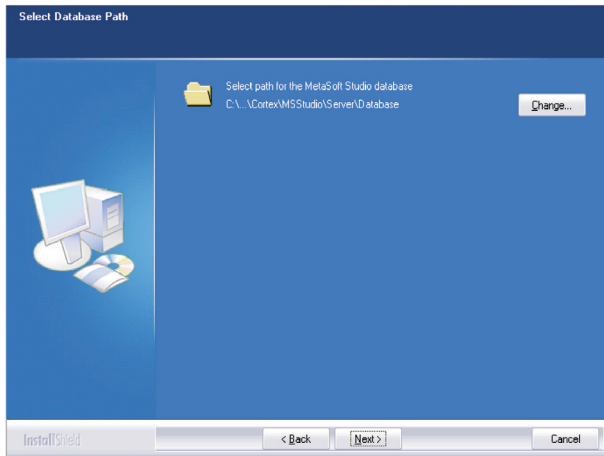


Fig. 19:
Select the directory for the database

Select the directory for the METASOFT® Studio database.
Click on [\[NEXT\]](#).

Selection of the features

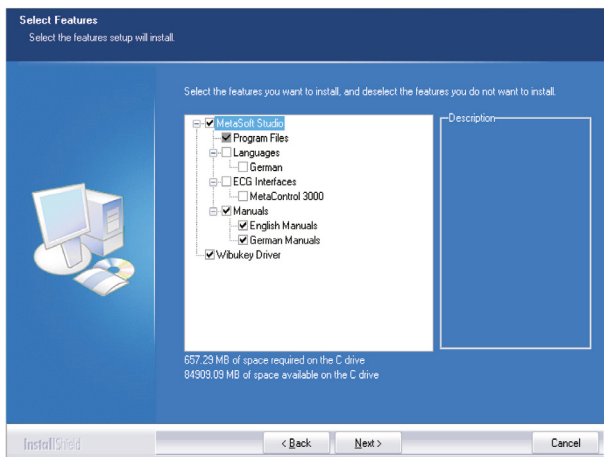


Fig. 20:
Selection of the features

Select the features you want to install:

- Language
- ECG-linkage of MetaControl 3000
- WibuKey-driver (recommended choice)
- Manuals

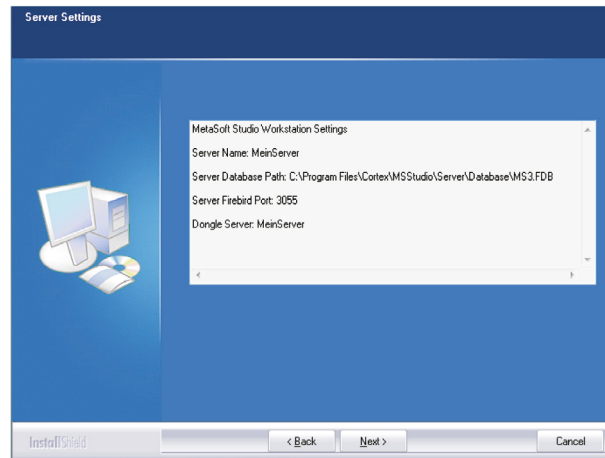
Click on [\[NEXT\]](#).

NOTICE

You must have installed the **WibuKey**-driver software on your computer in order to use the supplied dongle for licensing your software!

Selection of the server settings

Fig. 21:
Information about the
server settings

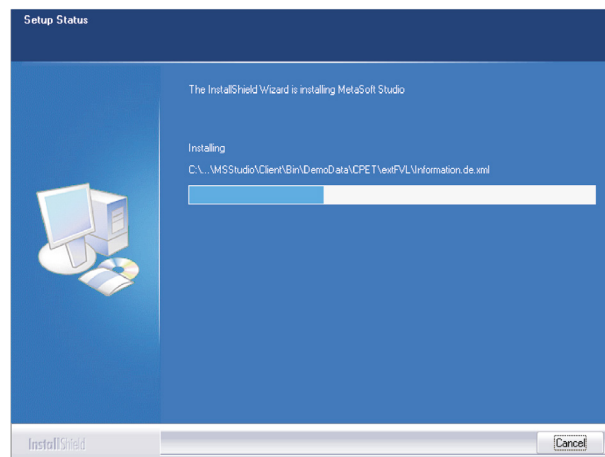


The system will provide you with information about the server settings.

Click on **[NEXT]**.

Continue Installation of METASOFT® Studio.

Fig. 22:
Continue Installation



Click on **[INSTALL]**.

A window will open that indicates the installation progress.

If you have not yet installed the WibuKey-driver software on your system, proceed as described under Single User Installation (➔Fig. 07 – fig. 09).

Complete the installation of METASOFT® Studio

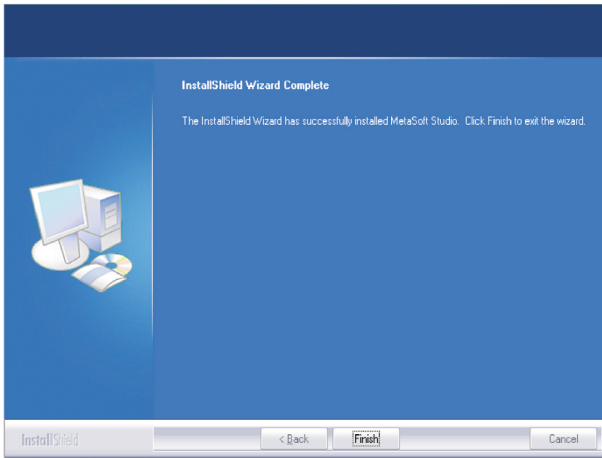


Fig. 23:
Complete the installation

To complete the installation of METASOFT® Studio, click on **[FINISH]**. Start METASOFT® Studio or the MSS toolbox via the icons on your desktop.

4.3 Server & Client installation

Selection of the installation option

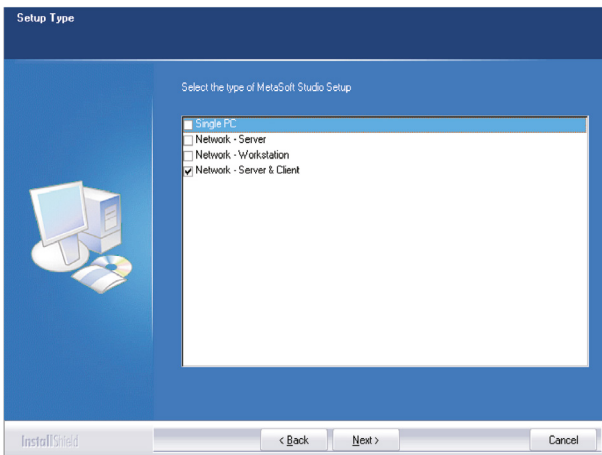
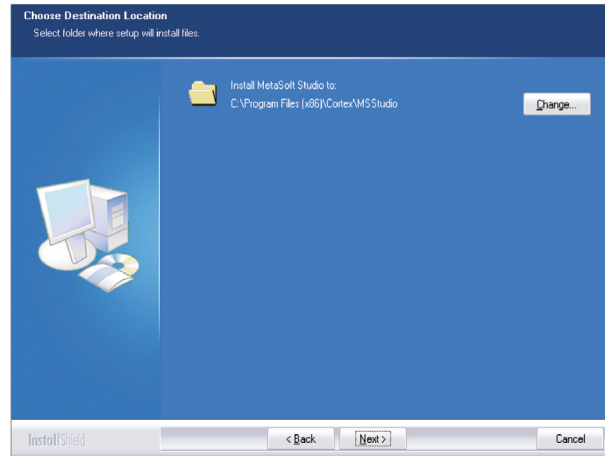


Fig. 24:
Select the installation option

Select the installation option **Network Server & Client** and then click on **[NEXT]**.

Select the directory for METASOFT® Studio

Fig. 25:
Select the directory for
METASOFT® Studio

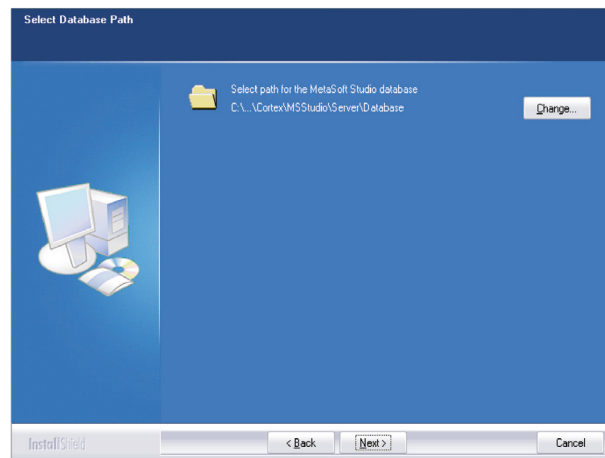


Select the directory for Server program files.

Click on **[NEXT]**.

Select the directory for the database

Fig. 26:
Select the directory
for the database



Select the directory for the METASOFT® Studio network database.

Click on **[NEXT]**.

NOTICE

This directory must be located on a local drive of the server, but does not have to be visible to the workstations. Linked and mobile drives are not allowed.

Select the directory for the client installation

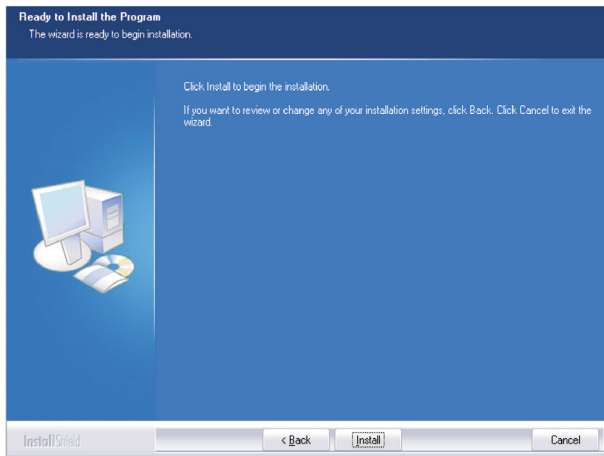


Fig. 27:
Select the directory for the client installation

Select the directory for the client installation files.

Note! This directory has to be available for all workstations in the network.

Click on [\[NEXT\]](#).

Selection of the features

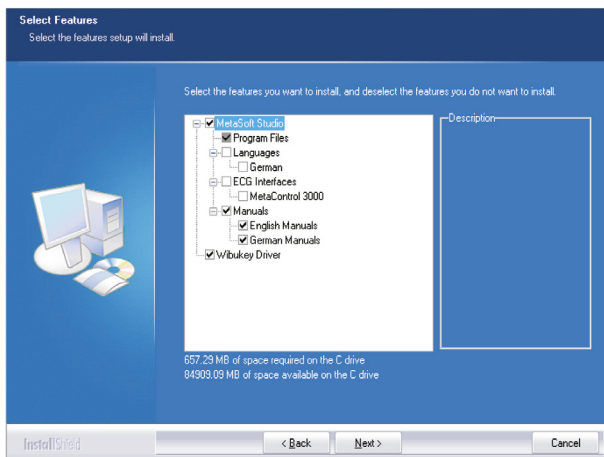


Fig. 28:
Selection of the features

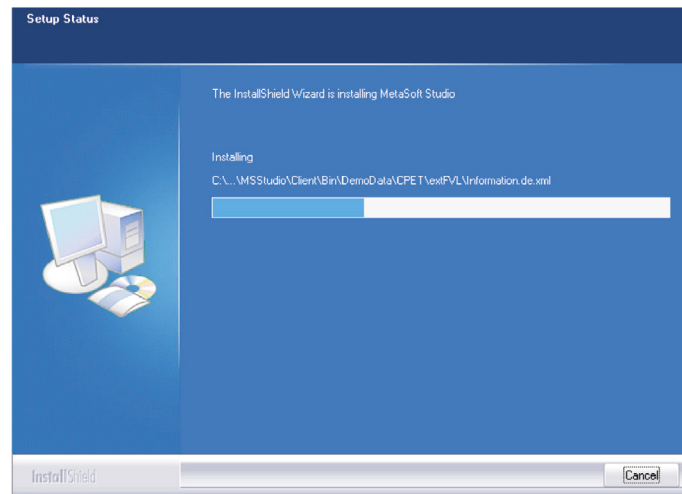
Select the features you want to install:

- Language
- ECG-linkage of MC 3000
- WibuKey-driver (recommended choice)
- Manuals

Click on [\[NEXT\]](#).

Continue Installation of METASOFT® Studio

Fig. 29:
Continue the Installation



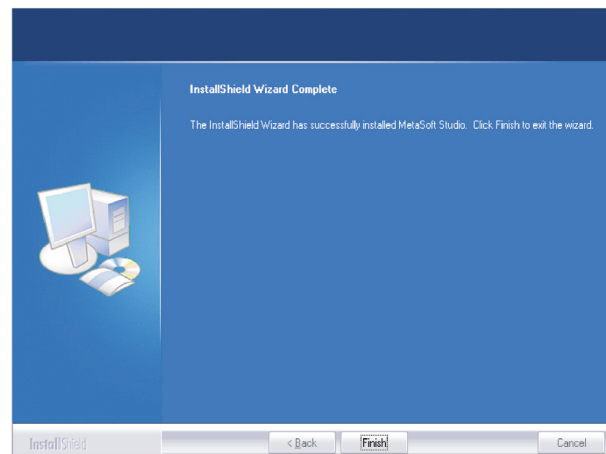
Click on **[INSTALL]**.

A window will open that indicates the installation progress.

If you have not yet installed the WibuKey-driver software on your system, proceed as described under Single User Installation (➔Fig. 07 – fig. 09).

Complete the installation of METASOFT® Studio

Fig. 30:
Complete the installation



To complete the installation of METASOFT® Studio, click on **[FINISH]**. Start METASOFT® Studio or the MSS toolbox via the icons on your desktop.

4.4 Install further features

If you want to install certain features (e. g. languages, ECG interfaces etc.), you can change the installation via the Windows® control panel:

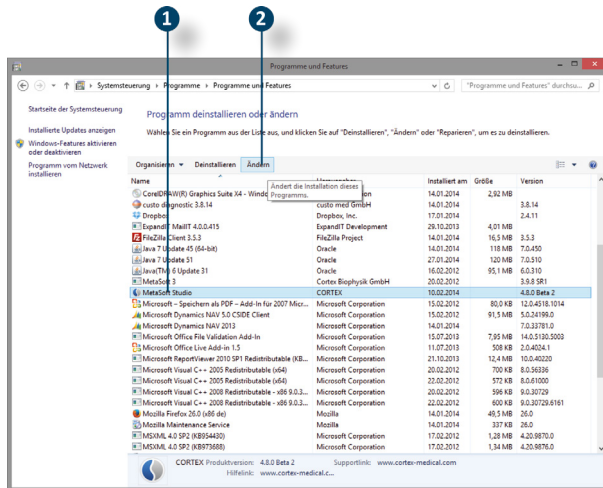


Fig. 31:
Install further features for
METASOFT® Studio

Open the directory via the Window® Explorer: CONTROL PANEL/
PROGRAMS AND FEATURES.

Select the program METASOFT® Studio ① (➔Fig. 31) and click on
[\[CHANGE\]](#) ②.

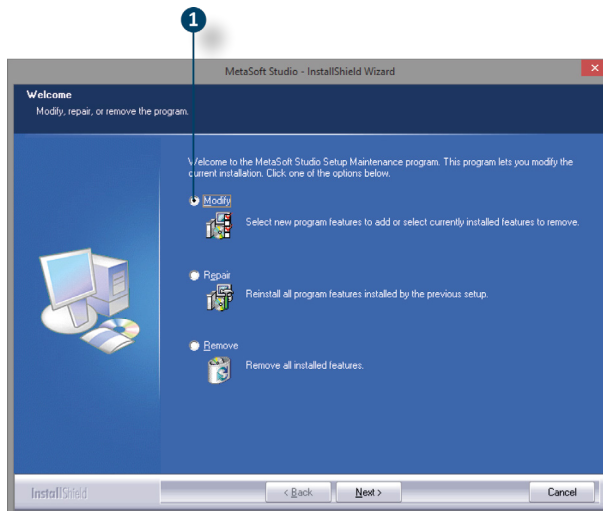
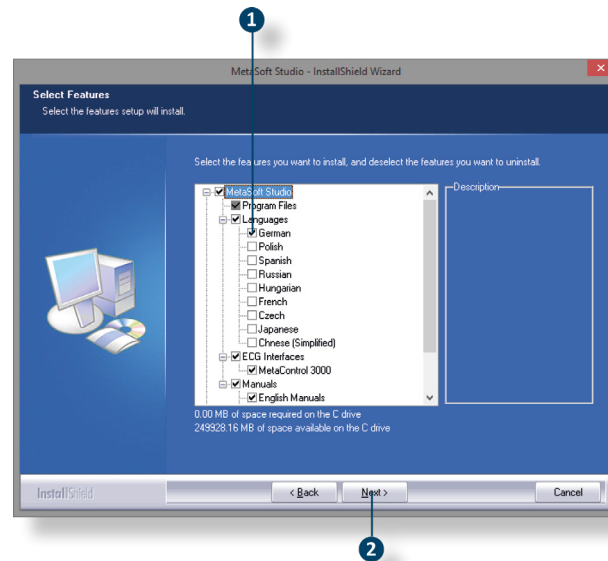


Fig. 32:
Change the installation
options

Click on [\[MODIFY\]](#) ① (➔Fig. 32) to install further program features.

Fig. 33:
Select features and
continue installation



Select the desired features (e.g. English) ❶ (→Fig. 33) and click on [NEXT] ❷. Follow the instructions on the screen.

The features are installed.

5 Activate software license(s)

The included USB dongle works as a key for your software license(s). After the installation is complete, plug the dongle to an available USB port on your PC or notebook. The drivers for the USB dongle were automatically added during the installation of METASOFT® Studio. Before you can use your software with the purchased licenses, you must unlock your license number(s).

NOTICE

With the purchase of METASOFT® Studio you automatically acquire a master license. The master license number must be entered and activated in the METASOFT® Studio Toolbox after installation! This enables METASOFT® Studio for general use. Once you have done this you will activate the license keys for your purchased individual licenses.

If you do not activate the master license, your software will not work!

Open the MSS toolbox. Under USER DATA/LICENSES you will find a list to activate your software license(s). Enter the respective activation code and click [\[ACTIVATE\]](#).

6 General instructions

6.1 Adjust antivirus scanner program

For many antivirus scanner programs, the on-access scanner (or monitor) is set to scan all files on the hard disk for malware at system startup.

This means that the METASOFT® (studio) databases, the log files and the emergency data are checked during each access, which can reduce the system speed.

To avoid these performance problems, you should configure the settings on your antivirus scanner program (if installed) to exclude the above files from system scanning.

Use the scanner's interface to enter the following exceptions:

- *.log (log files)
- *.fdb (databases)
- *.msstdf (METASOFT® Studio emergency data)

If you have any questions, please contact your appropriate regional CORTEX sales/service partner or contact CORTEX Biophysik GmbH directly.

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