

ibaOfficeline SAS

iba Industrial Computer



Manual

Issue 1.4

Measurement and Automation Systems



Manufacturer

iba AG
Königswarterstr. 44
90762 Fürth
Germany

Contacts

Main office	+49 911 97282-0
Fax	+49 911 97282-33
Support	+49 911 97282-14
Engineering	+49 911 97282-13

E-Mail: iba@iba-ag.com

Web: www.iba-ag.com

This manual must not be circulated or copied, or its contents utilized and disseminated, without our express written permission. Any breach or infringement of this provision will result in liability for damages.

©iba AG 2012, All Rights Reserved

The content of this publication has been checked for compliance with the described hardware and software. Nevertheless, deviations cannot be excluded completely so that the full compliance is not guaranteed. However, the information in this publication is updated regularly. Required corrections are contained in the following regulations or can be downloaded on the Internet.

The current version is available for download on our web site <http://www.iba-ag.com>.

Protection note

Windows® is a label and registered trademark of the Microsoft Corporation. Other product and company names mentioned in this manual can be labels or registered trademarks of the corresponding owners.

Certification

The device is certified according to the European standards and directives. This device corresponds to the general safety and health requirements. Further international customary standards and directives have been observed.



Table of contents

1	About this manual	5
1.1	Target group.....	5
1.2	Designations.....	5
1.3	Symbols used.....	6
2	Scope of delivery	7
3	Safety instructions	8
4	Description	9
4.1	Front view.....	9
4.2	Side view.....	10
4.3	Rear view.....	10
4.4	Internal view.....	11
5	Setup	12
5.1	Installation.....	12
5.2	Connection.....	13
5.3	Installation of measuring or additional boards.....	13
5.3.1	Safety instructions.....	13
5.3.2	Notes.....	14
5.3.3	Basic procedure.....	14
5.3.4	Installing special graphic card.....	14
6	Installing operating system and iba software	16
6.1	Installing Windows XP with the Recovery DVD.....	16
6.1.1	First Steps.....	16
6.1.2	Selecting drive.....	16
6.1.3	Selecting partitions.....	17
6.1.4	Specifying settings.....	18
6.1.5	Activating Windows operating system.....	18
6.2	Installing Windows 7 or Windows 2008 Server with the Recovery DVD.....	18
6.2.1	General.....	18
6.2.2	Select the language.....	19
6.2.3	Enter the product key.....	19
6.2.4	Partitioning.....	20
6.2.5	Completing installation.....	24
6.3	Installing ibaSoftware.....	24
7	Device and installation dimensions	25
8	Technical data	26
8.1	Main data.....	26
8.2	Order numbers.....	27

9 Support and contact28

1 About this manual

This manual describes operation of the industrial PC ibaOfficeline SAS.

1.1 Target group

This manual addresses in particular the qualified professionals who are familiar with handling electrical and electronic modules as well as communication and measurement technology. A person is regarded to as professional if he/she is capable of assessing safety and recognizing possible consequences and risks on the basis of his/her specialist training, knowledge and experience and knowledge of the standard regulations.

1.2 Designations

The following designations are used in this manual:

Action	Designations
Menu command	Menu „Logic diagram“
Call of menu command	„Step 1 – Step 2 – Step 3 – Step x“ Example: Select menu „Logic diagram – Add – New logic diagram ”
Keys	<Key name> Example: <Alt>; <F1>
Press keys simultaneously	<Key name> + <Key name> Example: <Alt> + <Ctrl>
Buttons	<Button name> Example: <OK>; <Cancel>
File names, Paths	„File name“, „Path“ Example: „Test.doc“

1.3 Symbols used

If safety instructions or other information are used in this manual, they mean:

 DANGER

The non-observance of this safety information may result in an imminent risk of death or severe injury:

- By an electric shock!
- Due to the improper handling of iba software products which are coupled to input and output procedures with control function!

If you do not observe the safety instructions regarding the process and the system or machine to be controlled, there is a risk of death or severe injury!

 WARNING

The non-observance of this safety information may result in a potential risk of death or severe injury!

 CAUTION

The non-observance of this safety information may result in a potential risk of injury or material damage!

**Note**

An information indicates special requirements or actions to be observed.

**Important Note**

Information that a special indication has to be observed, e.g. exceptions from the general rule.

**Tip**

Tip or example which serves as helpful information or a trick to facilitate the work.

**Other documentation**

Reference to supplementary documentation or further literature.

2 Scope of delivery

After unpacking check the completeness and intactness of the delivery.

The scope of delivery includes:

- Industrial PC ibaOfficeline SAS
- PS2 keyboard
- Mouse (USB/PS2), optical
- Mains cable
- Documentation
- For installed special graphic card there is an additional DVI/VGA adapter cable
- ibaSoftware license key

The documentation contains:

- Manual
- Subcontractors' documentation
- Software (Operating system Windows XP or Windows 7 or Windows 2008 Server)
- Recovery DVD (for the ordered Windows version and all associated operating system parameters)
- ibaSoftware, optional order
- Hardware driver (motherboard, VGA card)
- 1 key is inserted in the device lock or fastened on the enclosure
- 1 ibaSoftware license key (dongle), optional with ibaSoftware product and inserted on request of the client
- Serial number (iba-S/N)

3 Safety instructions

Designated use

The device may be used only for the following applications:

- Machine test and commissioning of industrial systems
- Measurement data logging and analysis
- Applications of ibaSoftware products (ibaPDA, ibaLogic etc.)

Proper installation

The device can be installed only according to manufacturer's specifications:

- Stationary
- Shock-free
- In the protected room, for example switch cabinet
- Dust-free and dry environment

DANGER

Electric Shock!

Before opening the device disconnect it from the mains and pull out the mains plug from the socket equipped with earthing contact!

Never use the device with a damaged mains cable!

WARNING

Before opening the device disconnect it from the mains by unplugging the cable from the socket equipped with an earthing contact and wait for several minutes until the components have cooled down! Thus you will avoid injuries due to electric shock or burns!

Connect the device to one supply voltage only according to specifications on the built-in power supply unit!

Always use a socket equipped with earthing contact! Use a terminal strip with over-voltage protection or an uninterruptible power supply (UPS)!

Connect the device only to earthed power networks (TN-networks according to VDE 0100 Part 300 or IEC 60364-3)! The operation via ungrounded networks or networks (IT networks) earthed via impedance is not permitted!

In case of fault, a defective device or a possible defect pull out the mains plug from the socket equipped with earthing contact!

Never put a damaged device into operation!

Pay attention to sharp edges in the housing!

Never switch off the device at the mains switch without previous shutdown of the device.



Electrostatic discharge!

Touch the components only in electrostatically discharged state!

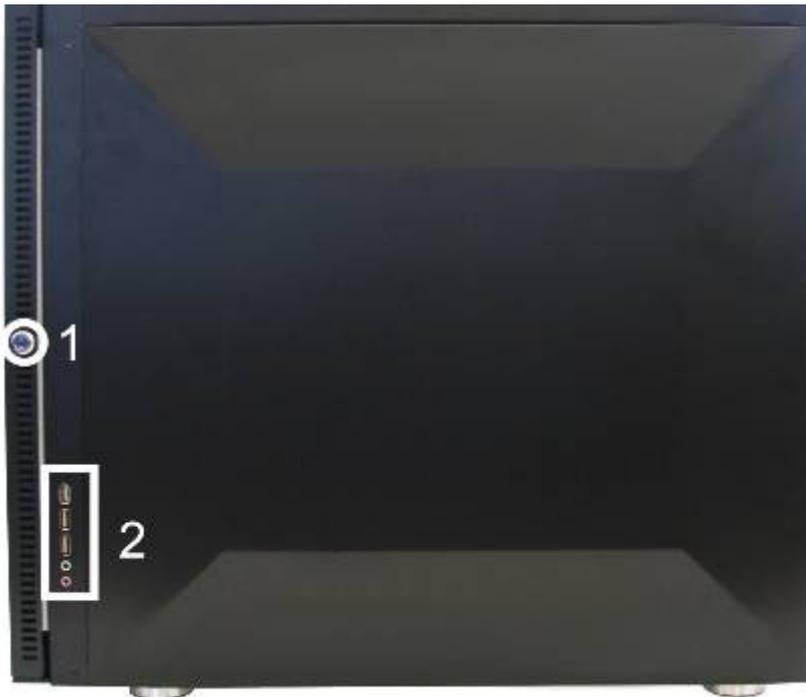
4 Description

4.1 Front view



- 1 Optical drive with integrated writing function
- 2 Plug-in slots for hard disks
- 3 Indication of hard disk access/ready for operation (LEDs)
- 4 Multi-card reader with USB interface
- 5 Power button
- 6 Reset button
- 7 Fan unit (2 x Ø 12 cm fan)

4.2 Side view



1 Door lock

2 Connections, external devices



Note

The FireWire connection is not assigned.

4.3 Rear view



1 Power supply

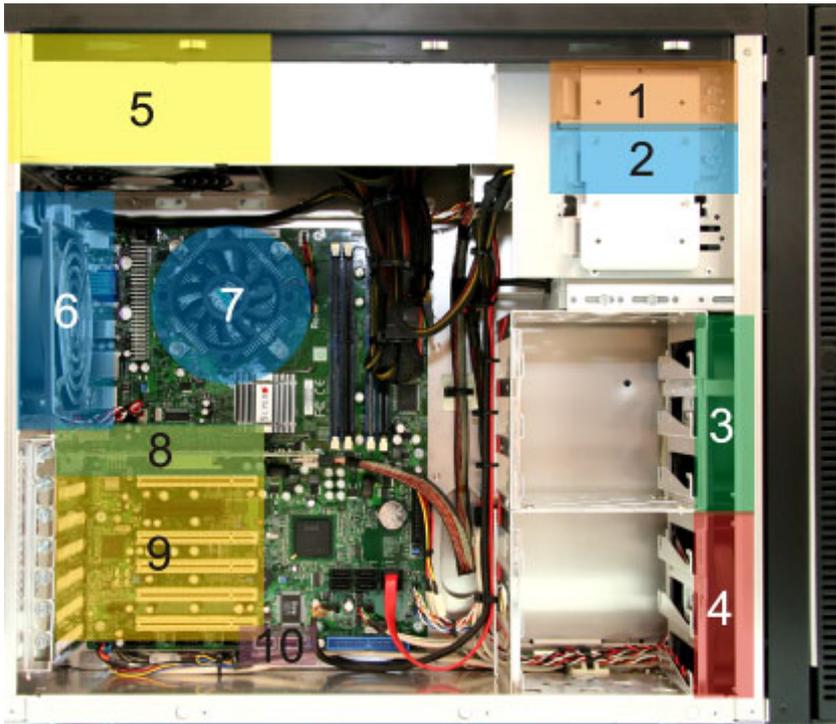
2 Connections, external devices

3 Fan Ø 12 cm

4 Hard disk controller

5 Slots for cards

4.4 Internal view



- 1 Optical drive with integrated writing function
- 2 Plug-in slots for hard disks
- 3 Fan Ø 12 cm
- 4 Fan Ø 12 cm
- 5 Power supply
- 6 Fan Ø 12 cm
- 7 Fan /CPU fan
- 8 Hard disk controller SAS
- 9 Slots for cards
- 10 USB connection for ibaSoftware license key (dongle) etc.



Note

On delivery of the device the ibaSoftware license key is in the documentation or on client's request plugged-in in the device.

5 Setup

5.1 Installation

⚠ WARNING

Place the device only in the location which has the following properties:

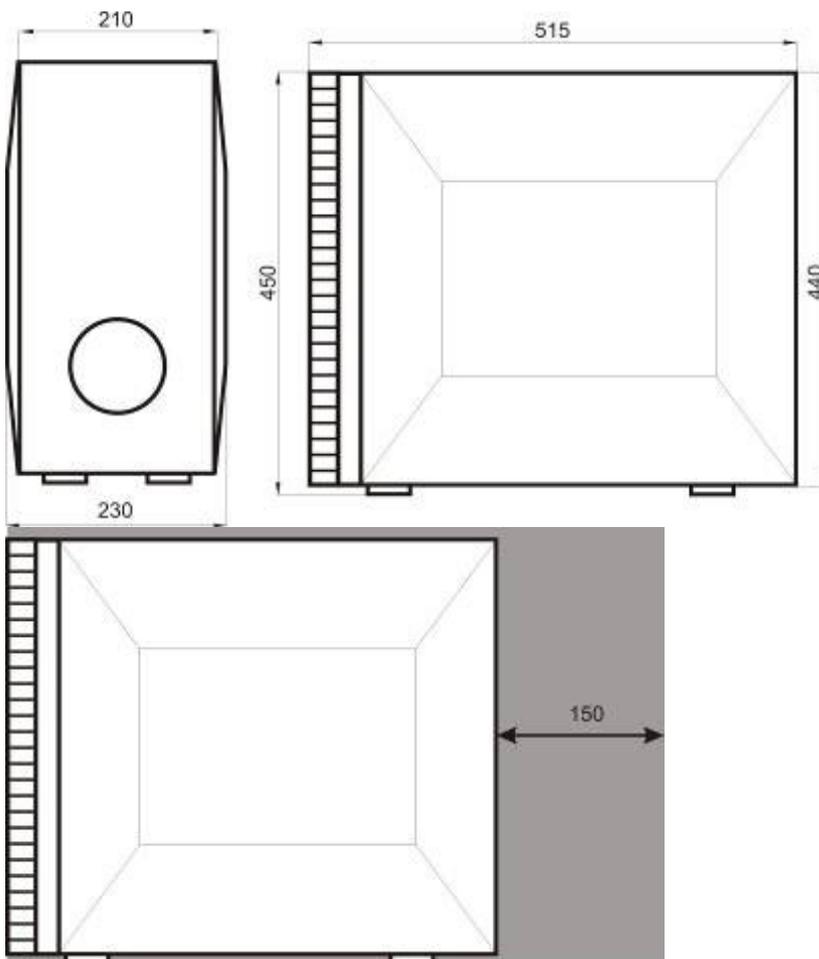
- Stationary
- Shock-free
- In the protected room, for example switch cabinet
- Dust-free and dry environment
- Even and non-slip support



Note

If you embed the device, observe the minimum bending radii of the cables and lines. The mounting clearance must be at least 150 mm from the rear wall.

Do not cover the lateral ventilation slots in the door, ensure sufficient air circulation.



5.2 Connection

 DANGER**Electric Shock!**

Never use the device with a damaged mains cable!

 WARNING

Connect the device to one supply voltage only according to specifications on the built-in power supply unit!

Always use a socket equipped with earthing contact! Use a terminal strip with over-voltage protection or an uninterruptible power supply (UPS)!

Connect the device only to earthed power networks (TN-networks according to VDE 0100 Part 300 or IEC 60364-3)!

The operation via ungrounded networks or networks (IT networks) earthed via impedance is not permitted!

Never put a damaged device into operation!

Protect the device and the connected devices and data lines against overvoltage! Connect the device to an overvoltage protection device!

5.3 Installation of measuring or additional boards

5.3.1 Safety instructions

 DANGER**Electric Shock!**

Shut down the device! Before opening the device disconnect it from the mains and pull out the mains plug from the socket equipped with earthing contact!

 WARNING

Before opening the device disconnect it from the mains by unplugging the cable from the socket equipped with an earthing contact and wait for several minutes until the components have cooled down! Thus you will avoid injuries due to electric shock or burns!

Pay attention to sharp edges in the housing!

**Electrostatic discharge!**

Touch the components only in electrostatically discharged state!

5.3.2 Notes



Note

If you upgrade the device, observe the instructions in the subcontractors' documentation.

Back up all data on an external storage medium.

5.3.3 Basic procedure

If you carry out any work at the device, always proceed in the following way:

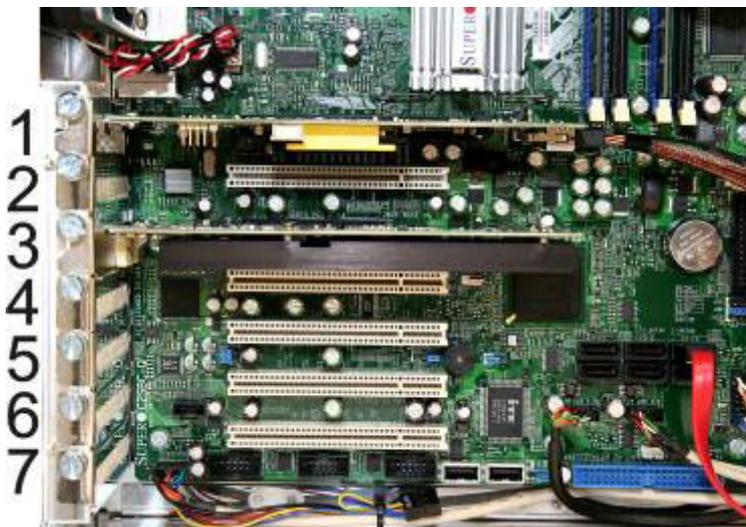
1. Remove all mobile data carriers (DVD, memory cards and so on).
2. Shut down the device.
3. Switch off the device.
4. Unplug the mains cable from the socket equipped with earthing contact.
5. Remove the side cover.
6. Carry out upgrade operations.
7. Finally, attach the side cover.
8. Put the device into operation again.

5.3.4 Installing special graphic card



Note

If you want to use the 2nd monitor, it is necessary to install an additional special graphic card. The special graphic card has the iba order number 43.900.511. The DVI/VGA adapter cable is included into the graphic card scope of delivery. For installation observe the instructions of the graphic card manufacturer. For the special graphic card there is a slot with PCI Express x4-plug reserved (slot 3).



- 1 Hard disk controller, installed permanently
- 2 PCI slot
- 3 PCI Express x4, optional special graphic card
- 4 PCI slot
- 5 PCI slot
- 6 PCI slot
- 7 PCI slot

Special graphic card



Chip set: NVIDIA Quadro NVS 290 x1

nView Enabled: Yes

Bus Interface: PCI Express x1

Max Displays/Board: 2

Power: 21 W

Monitor port: DMS-59

DVI adapter cable



VGA adapter cable



6 Installing operating system and iba software

The delivery includes the Recovery DVD for the operating system stated in your order. If you want to install Windows XP continue with chapter 6.1, if you want to install Windows 7 or Windows 2008 Server continue with chapter 6.2.



Note

If you install the operating system using the Recovery DVD, all settings and configurations of the device hardware (e.g. drivers) will be installed.

Do not change the basic configuration of the device components (e.g. motherboard)!

If you modify the device components, it can make installation using the Recovery DVD impossible.

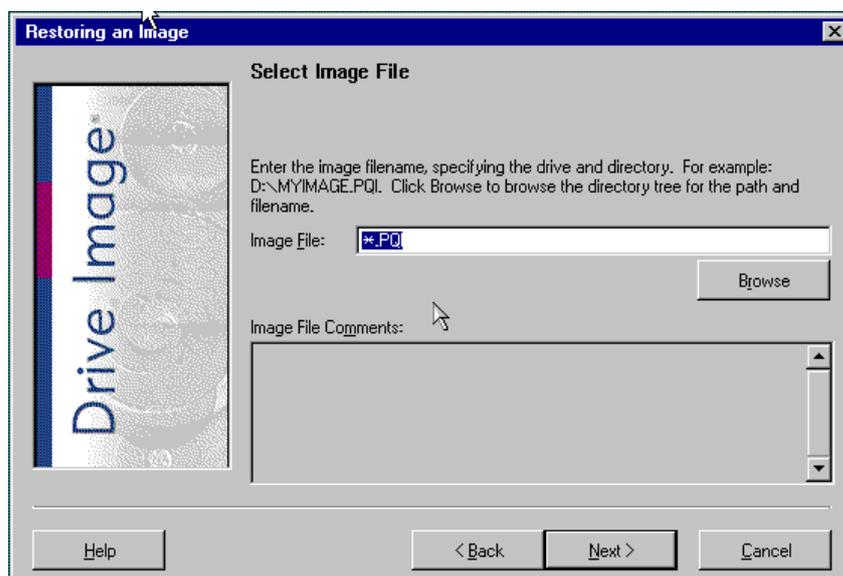
6.1 Installing Windows XP with the Recovery DVD

6.1.1 First Steps

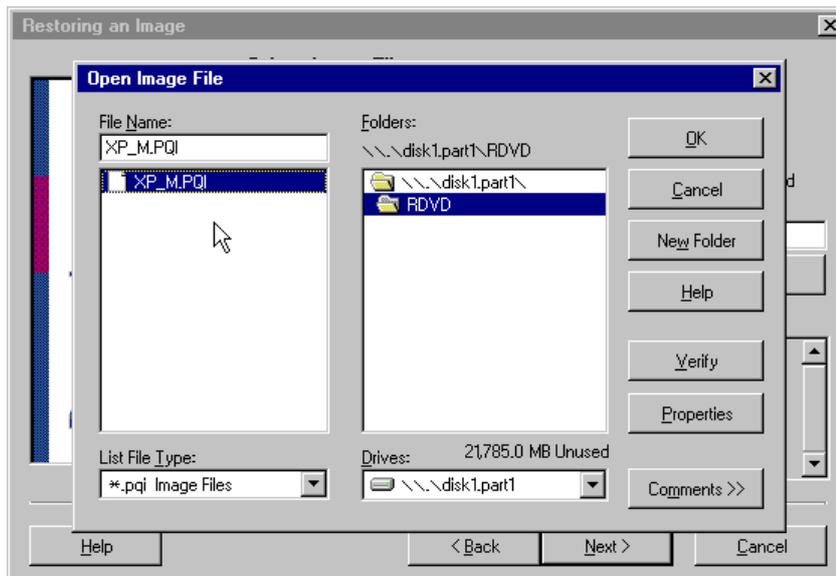
1. Switch on the device.
2. Boot the BIOS setup.
3. Insert the Recovery-DVD into the DVD-Drive.
4. Make sure the AHCI-Mode is disabled (Supermicro C2SBC-Q Main-Screen).
5. Make sure the DVD-Drive is in the Boot-Order before the RAID-Controller (Supermicro C2SBC-Q Boot-Screen).
6. Save the settings.
7. Finish the BIOS setup.

6.1.2 Selecting drive

The "Select Image File" dialog is activated automatically.



1. To select the installed image files click <Browse>. The "Open Image File" window appears.



2. Select the drive where the image file is saved from the "Drives" selection list. The image (PQI file) is delivered with the Recovery DVD.
3. If the PQI file is not on the Recovery DVD, specify the directory in which the PQI file (image) is saved.
4. Select the directory. The PQI files are listed in the "File Name" list.
5. Click the PQI file you would like to use. Save the settings with <OK>. The window is closed. In the "Image File" input field the selected image is entered with the designation of the drive and directory.
6. If after saving a dialog box is displayed prompting you to insert the last medium of the image set, confirm the dialog with <OK>.
7. Close the dialog. Click <Next>.

6.1.3 Selecting partitions

1. Select in the "Select Destination Partition or Unallocated Space" dialog the partition which you would like to recover.
2. Select in the "Select Image File Partition" dialog the partitions that should be loaded to the hard disk.
2 partitions are possible:
 System: system partition with Windows
 Data Files: empty data partition
 To distinguish the system data from the measurement data logically, iba recommends you to select both partitions.
3. Close the dialog using <Next>.
4. Select in the „Selection Destination Partition or Unallocated Space“ dialog the destination partition or the hard disk.
5. Click the corresponding disk with the mouse.

6. If you have installed a new unformatted hard disk, select it and click <Next>. If the hard disk is larger than the partition which you want to recover, the "Resize Option" dialog will be displayed.
7. Select the "Leave remaining unused space" option.
8. Finally click <OK>.
9. If you want to recover an existing system, first of all delete the defective partition.
10. Click „Delete Disk Partitions...“.
11. Select in the "Delete partitions" dialog the partition you want to delete.
12. Click <Delete>.
13. Confirm in the following dialog using <OK>.
14. Finally confirm using <Close>.
The „Selection Destination Partition or Unallocated Space“ dialog is displayed.
15. Select the free memory location and confirm by means of <NEXT>.

6.1.4 Specifying settings

1. Select in the "Select Disc Write Mode" dialog the option "Fast Mode" and confirm using <Next>.
The dialog "Ready to Restore Image File" displays an overview of settings for installation of the Windows XP operating system.
2. Check the settings and then click <Finish>. The recovery process is started automatically.

6.1.5 Activating Windows operating system

1. Restart the PC.
2. Activate Windows operating system after the restart again.
Follow the instructions of the dialog boxes. For further information refer to the short instruction of Windows XP.

6.2 Installing Windows 7 or Windows 2008 Server with the Recovery DVD

6.2.1 General

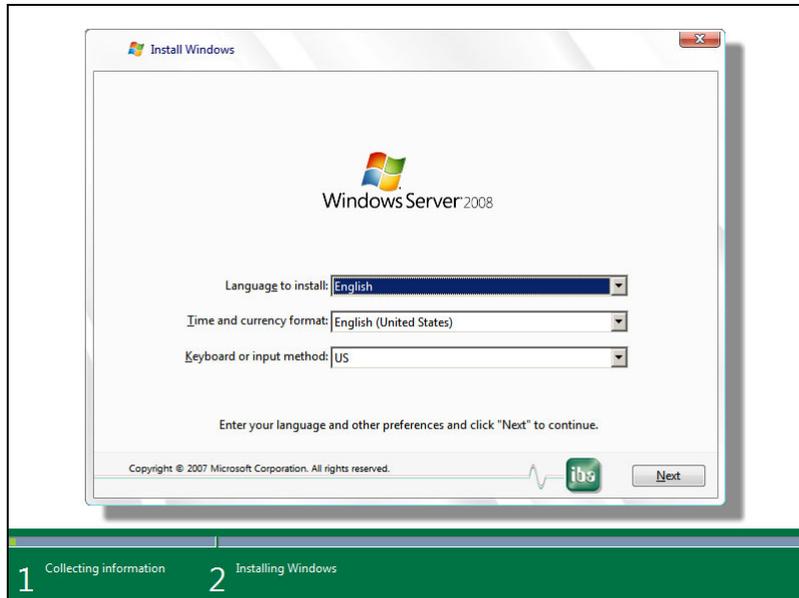
- If you install the operating system from the Recovery DVD, the computer must be started from the DVD. Make sure, that the required settings in the BIOS are correct. When „PRESS ANY KEY TO BOOT FROM DVD“ appears on the screen, press any key.
- The recovery procedure is only available in English.
- The setup routine of Microsoft is used.
- When the recovery procedure is finished, update your Windows version to have the latest safety related version.
- 6 pre-installed languages can be chosen as system language: English, French, German, Italian, Spanish, Russian (additional languages optionally).



Note

No liability is assumed for the loss of data due to incorrect handling. Always make sure, that you select the correct drives and partitions.

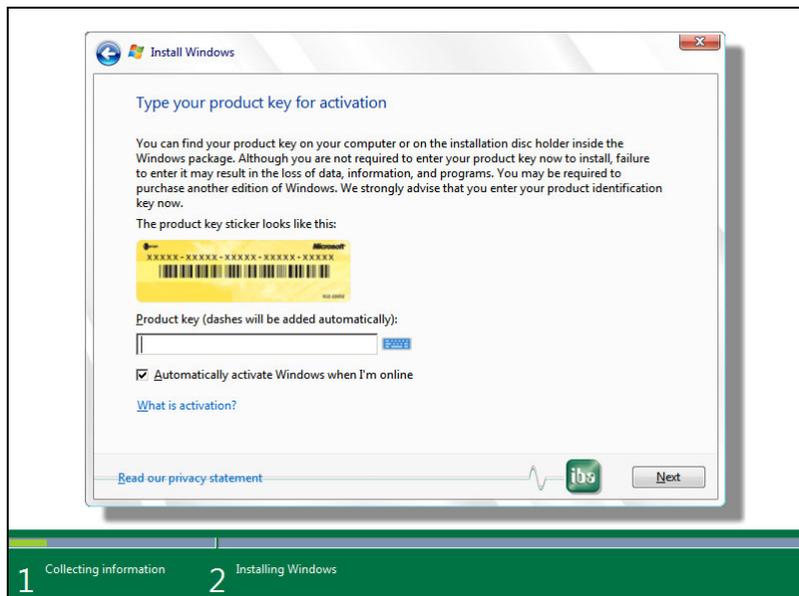
6.2.2 Select the language



When the installation has started, you can select the system language to be installed. When using Windows 7 or Windows 2008 Server the language can be changed subsequently.

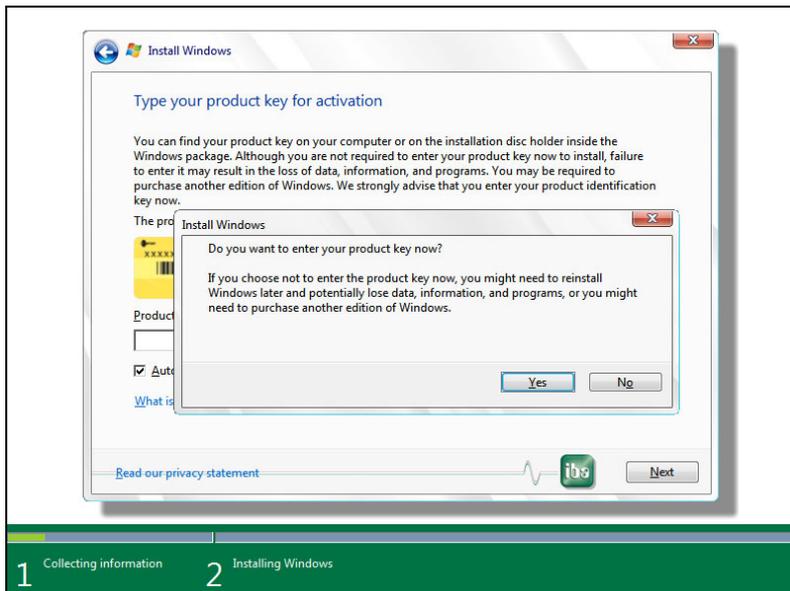
6.2.3 Enter the product key

(only with Windows 2008 Server)



Here you can enter optionally the product key. The product key can be changed subsequently.

If you do not enter the product key, you will be asked to confirm.



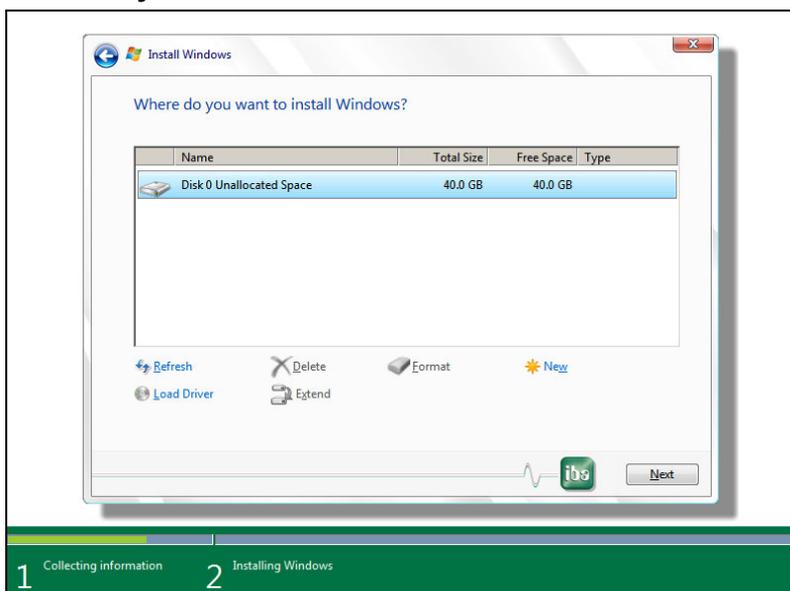
Confirm with <No>.

6.2.4 Partitioning

There are several possibilities to set up partitions:

- Set up a new drive completely as system drive
- Set up partitions on a new drive
- Install an operating system on a drive already used (Windows 7 or Windows 2008 Server)
- Substitute the operating system on a drive already used (substitute Windows 7 with Windows 2008 Server or vice versa)

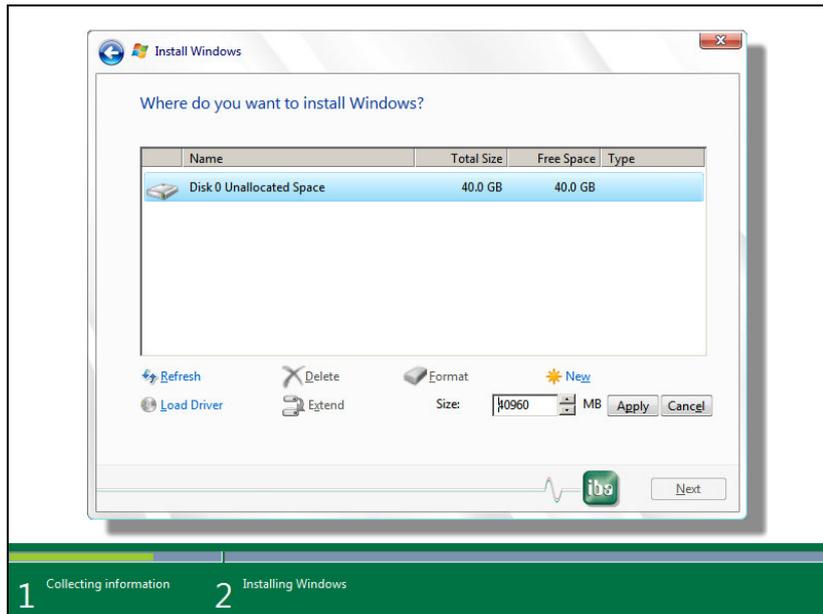
Possibility 1: New drive



You use a new drive and want to use it completely as system drive.

Click <Next> and continue with chapter 6.2.5 „Completing installation“.

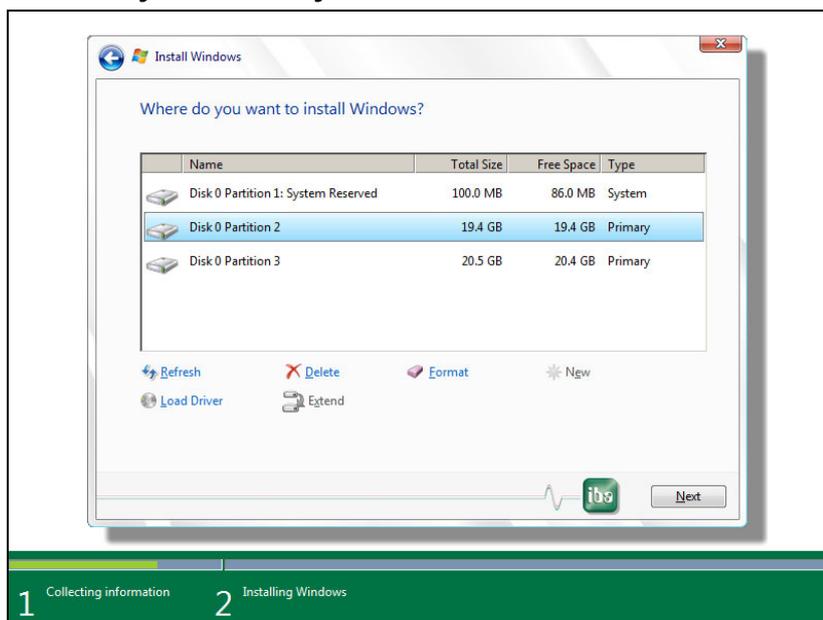
Possibility 2: Partitioning the new drive



You use a new drive and want to set up partitions.

1. Click <Drive Options (advanced)>
2. Click <New>
3. Enter the partition size
4. Confirm with <Apply>
5. Mark the partition, where the operating system should be installed
6. Click <Next> and continue with chapter 6.2.5 „Completing installation“.

Possibility 3: Recovery Windows 7

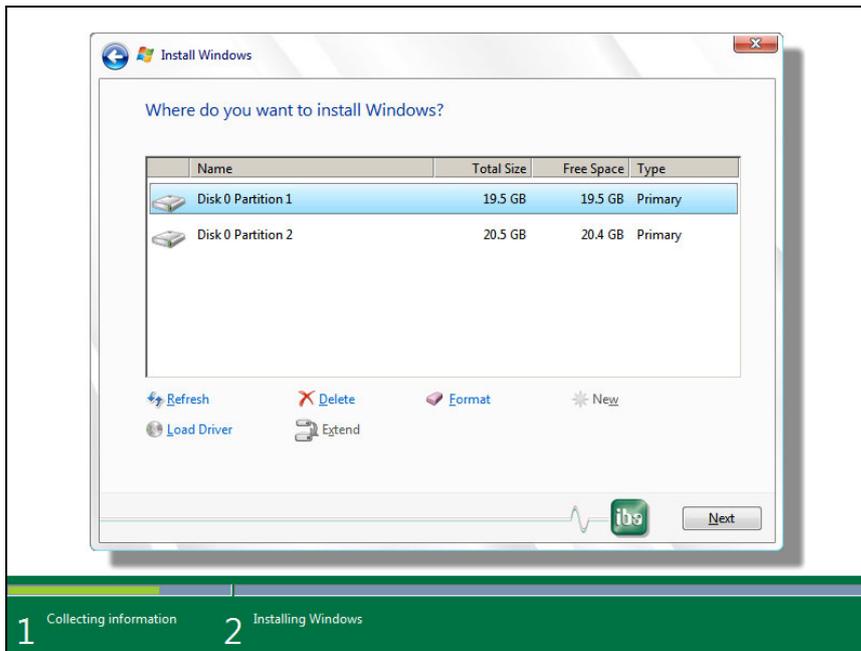


The drive is already in use and you want to install the operating system.

1. Click <Drive Options (advanced)>
2. Mark the system partition

3. Click <Format>
4. Confirm with <OK>
5. Mark the primary partition (normally the smaller one)
6. Click <Format>
7. Confirm with <OK>
8. Click <Next> and continue with chapter 6.2.5 „Completing installation“.

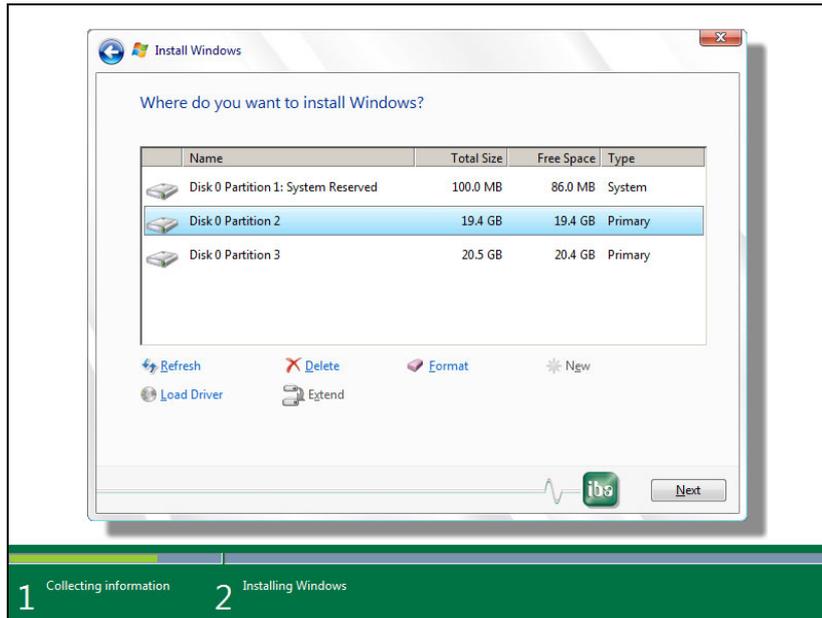
Possibility 4: Recovery Windows 2008 Server



The drive is already in use and you want to install the operating system.

1. Click <Drive Options (advanced)>
2. Mark the primary partition (normally the smaller one)
3. Click <Format>
4. Confirm with <OK>
5. Click <Next> and continue with chapter 6.2.5 „Completing installation“.

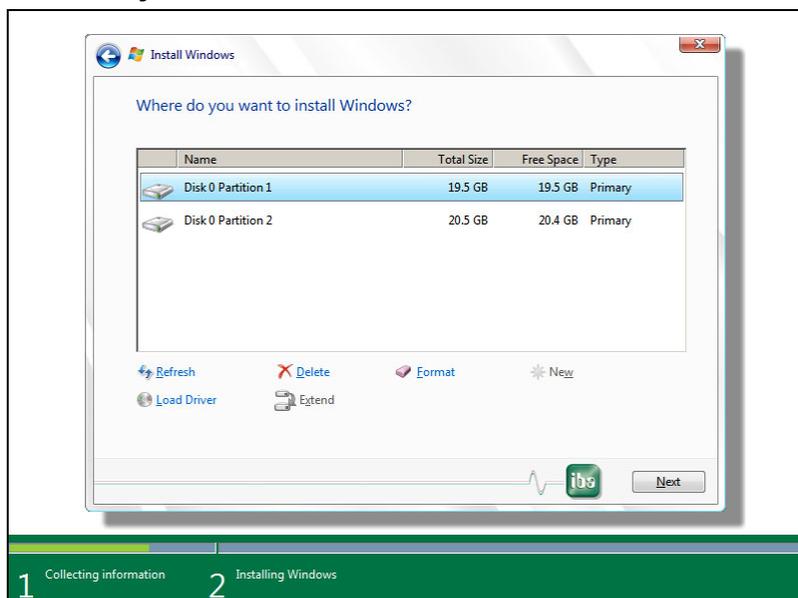
Possibility 5: Substitute Windows 7 with Windows 2008



The drive is already in use and you want to replace the operating system.

1. Click <Drive Options (advanced)>
2. Mark the system partition
3. Click <Delete>
4. Confirm with <OK>
5. Mark the primary partition (normally the smaller one)
6. Click <Delete>
7. Confirm with <OK>
8. Mark the unpartitioned space
9. Click <Next> and continue with chapter 6.2.5 „Completing installation“.

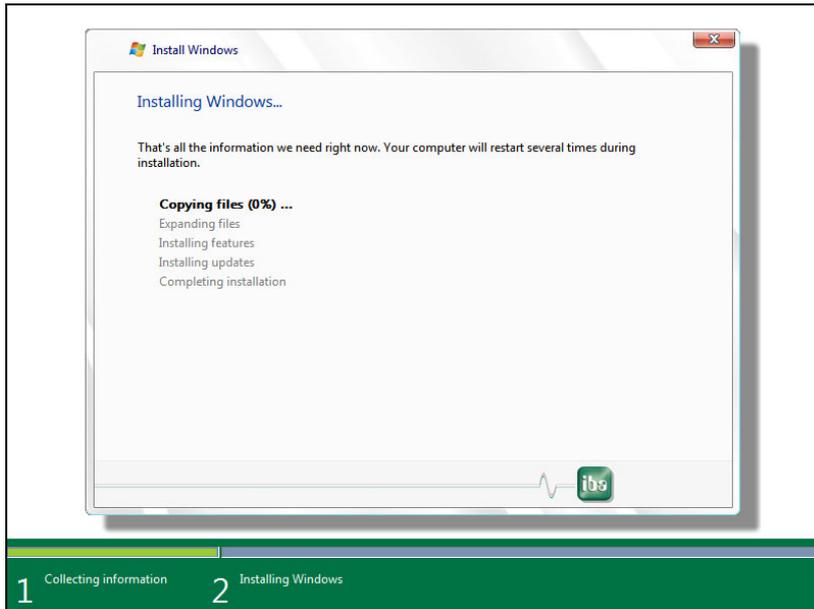
Possibility 6: Substitute Windows 2008 with Windows 7



The drive is already in use and you want to replace the operating system.

1. Click <Drive Options (advanced)>
2. Mark the primary partition (normally the smaller one)
3. Click <Delete>
4. Confirm with <OK>
5. Mark the unpartitioned space
6. Click <Next> and continue with chapter 6.2.5 „Completing installation“.

6.2.5 Completing installation



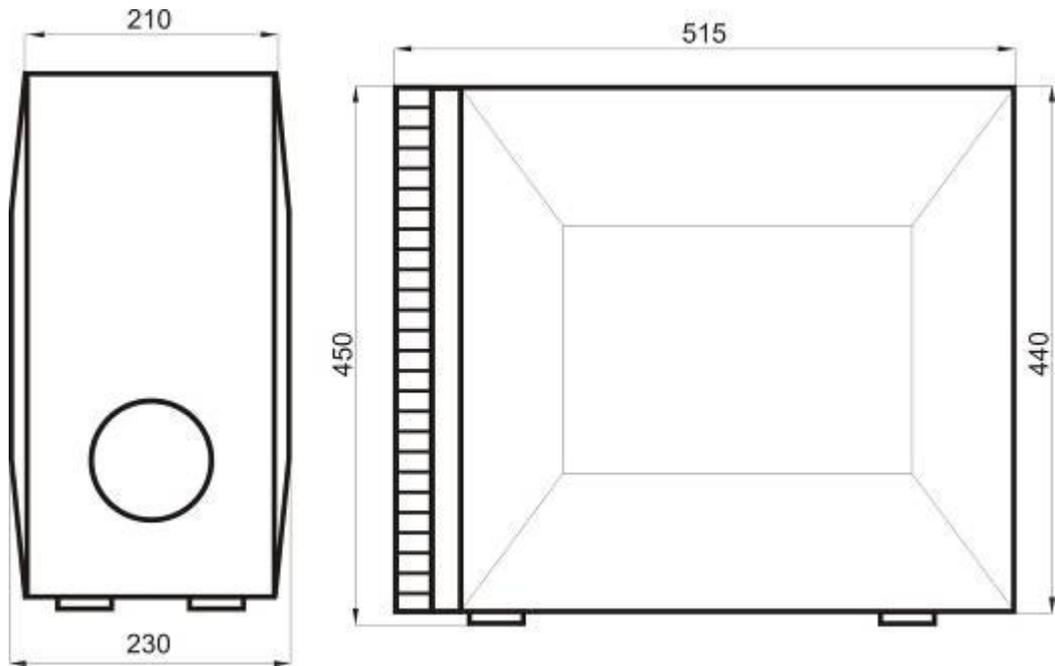
The system files are copied to the drive and additional software is installed. The computer will restart twice. The procedure takes 30-40 min., depending on the hardware.

6.3 Installing ibaSoftware

The installation of ibaSoftware is described in the manuals included in the delivery.

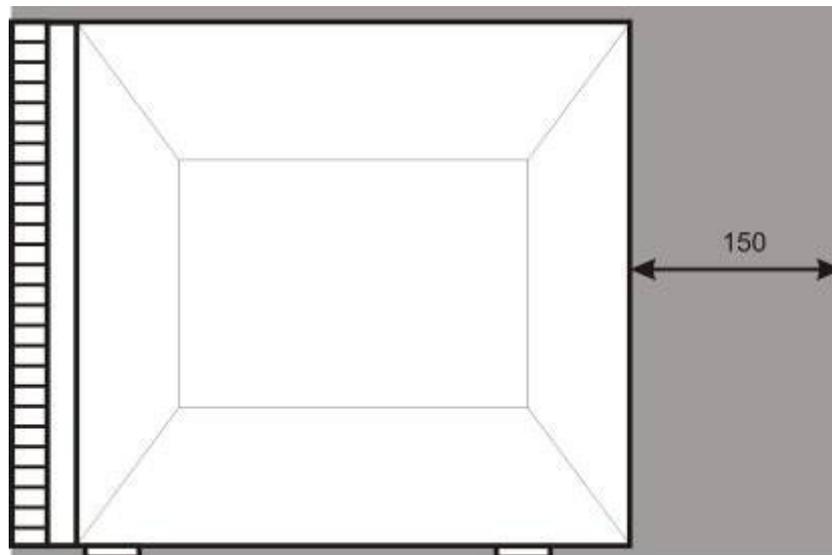
7 Device and installation dimensions

Device dimensions



(Dimensions in mm)

Installation dimensions



(Dimensions in mm)

8 Technical data

8.1 Main data

Manufacturer	iba AG, Germany
Working temperature range	0 °C to 55 °C
Storage temperature range	-25 °C to 70 °C
Transport temperature range	-25 °C to 70 °C
Cooling	Fan cooling
Fan current	40 mA to 400 mA
Installation	Table unit
Humidity class	F, no condensation
Protection class	IP20
Power supply	See Technical data on the power supply unit
Current consumption	Max. 10 A
Power output	Max. 500 W
Current consumption	Max. 4 A/8 A
Dimensions in mm (W x H x D)	210 mm x 450 mm x 515 mm
Weight (incl. packaging and documentation)	Approx. 12 kg
Interfaces	
USB 2.0	6 x rear side; 2 x front side; 2 x lateral 1 x internal
Ethernet 10 Mbps /100 Mbps /1000 Mbps	2 x rear side
Serial RS232C	1 x rear side
HD Audio	1 x rear side
PS2	2 x rear side
VGA	1 x rear side
Slots	
PCI	5 x PCI
PCI Express x16	1 x hard disk controller SAS, stationary
PCI Express x4	1 x for special graphic card PCIe x1
Internal devices	
DVD burner S-ATA	1 x front side

8.2 Order numbers

ibaOfficeline SAS industrial PC	Order number
ibaOfficeline SAS, Core 2 Quad 3 GHz	40.004101

9 Support and contact

Support

Phone: +49 911 97282-14
Fax: +49 911 97282-33
E-Mail: support@iba-ag.com



Note

If you require support, specify the serial number (iba-S/N) of the device. It is located.

Contact

Headquarters

iba AG
Koenigswarterstr. 44
90762 Fuerth
Germany
Phone: +49 911 97282-0
Fax: +49 911 97282-33
E-Mail: iba@iba-ag.com
Contact: Mr. Harald Opel

Regional and Worldwide

For contact data of your regional iba office or representative please refer to our web site www.iba-ag.com.