



Installation and operating instructions for

C6670-0020

Control cabinet industrial server

Version: 1.0

Date: 12.06.2024

BECKHOFF

Table of contents

1	Foreword	3
1.1	Notes on the documentation	3
1.1.1	Disclaimer	3
1.1.2	Trademarks	3
1.1.3	Patents	3
1.1.4	Copyright	3
1.2	Description of safety symbols	4
1.3	Basic safety measures	5
1.4	Operator's obligation to exercise diligence	6
1.4.1	National regulations	6
1.4.2	Procedure in the event of a fault	6
1.4.3	Operator requirements	6
1.5	Notes on information security	7
2	Product description	8
2.1	Product overview	8
2.2	Intended use	10
2.3	Opening the housing	10
2.4	Access to the battery	12
2.5	Access to the fans	13
2.5.1	Changing the fans in the area of the connections	13
2.5.2	Replace the fan cartridge	14
2.6	Interfaces	15
2.6.1	Network connection (X112, X113)	15
2.6.2	USB interfaces USB1, USB2 (X110, X111)	15
2.6.3	VGA (Video Interface) (X114)	15
2.6.4	UID button with LED (Unit Identification Purpose)	15
2.6.5	DVI-I (Digital Visual Interface) (PCIe Slot4)	15
2.6.6	DVI-D (Digital Visual Interface) (PCIe Slot4)	15
2.6.7	Additional plug-in cards (optional)	16
2.6.8	Ground connection	16
3	Installation	17
3.1	Transport and unpacking	17
3.1.1	Transport	17
3.1.2	Unpacking	17
3.2	Installation of the server in the control cabinet	18
3.2.1	Preparation of the control cabinet	18

3.2.2	Grounding measures	18
3.3	Power supply of the industrial server	19
3.3.1	Current carrying capacity of the 100-240 V _{AC} power supply unit	19
3.3.2	Connection socket	19
3.3.3	Mains cable Europe	19
3.3.4	Mains cable USA/ Canada	20
3.4	Connecting the industrial server	20
3.4.1	Connecting cables	20
4	Operation	21
4.1	Switching the industrial server on and off	21
4.1.1	Switching on	21
4.1.2	Shutting down and switching off	21
4.1.3	First switching on and driver installation	21
4.2	Maintenance	22
4.2.1	Cleaning the industrial server	22
4.2.2	Maintenance	22
4.2.3	Replacing the motherboard battery	22
4.3	Emergency procedures	22
4.4	Decommissioning	23
4.4.1	Disposal	23
5	Troubleshooting	24
6	Dimensions	25
7	Technical data	27
8	Appendix	28
8.1	Service and support	28
8.1.1	Beckhoff Service	28
8.1.2	Beckhoff Support	28
8.1.3	Headquarters	28
8.2	Approvals for USA and Canada	29
8.3	FCC approvals for the United States of America	29
8.4	FCC approvals for Canada	29

1 Foreword

1.1 Notes on the documentation

This description is only intended for the use of trained specialists in control and automation engineering who are familiar with the applicable national standards.

The following instructions and explanations must be followed during installation and commissioning of the components. The responsible staff must ensure that the application or use of the products described satisfy all safety requirements, including all the relevant laws, regulations, guidelines, and standards.

1.1.1 Disclaimer

The documentation has been prepared with care. The products described are, however, constantly under development. For that reason the documentation is not in every case checked for consistency with performance data, standards or other characteristics. In the event that it contains technical or editorial errors, we retain the right to make alterations at any time and without warning. No claims for the modification of products that have already been supplied may be made on the basis of the data, diagrams, and descriptions in this documentation.

1.1.2 Trademarks

Beckhoff®, TwinCAT®, TwinCAT/BSD®, TC/BSD®, EtherCAT®, EtherCAT G®, EtherCAT G10®, EtherCAT P®, EtherCAT G10®, Safety over EtherCAT®, TwinSAFE®, XFC®, XTS®, and XPlanar® are registered trademarks of, and licensed by, Beckhoff Automation GmbH.

Other designations used in this documentation may be trademarks, the use of which by third parties for their own purposes could violate the rights of the owners.

1.1.3 Patents

The EtherCAT Technology is covered by the following patent applications and patents: EP1590927, EP1789857, EP1456722, EP2137893, DE102015105702 and similar applications and registrations in several other countries.



EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.






1.1.4 Copyright

© Beckhoff Automation GmbH & Co. KG.

The reproduction, distribution, and utilization of this document as well as the communication of its contents to others without express authorization are prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event that a patent, utility model, or design are registered.


1.2 Description of safety symbols

The following safety symbols are used in these operating instructions. They are intended to alert the reader to the associated safety instructions.

 <p>DANGER</p>	<p>Serious risk of injury!</p> <p>Failure to follow the safety instructions associated with this symbol directly endangers human life and health.</p>
 <p>WARNING</p>	<p>Caution - Risk of injury!</p> <p>Failure to follow the safety instructions associated with this symbol endangers human life and health.</p>
 <p>CAUTION</p>	<p>Personal injuries!</p> <p>Failure to follow the safety instructions associated with this symbol can lead to injuries to persons.</p>
 <p>Attention</p>	<p>Damage to the environment or devices</p> <p>Failure to follow the instructions associated with this symbol can lead to damage to the environment or equipment.</p>
 <p>Note</p>	<p>Tip or pointer</p> <p>This symbol indicates information that contributes to better understanding.</p>


1.3 Basic safety measures


Before the industrial server can be switched off, the running software must be properly stopped. Otherwise data can get lost. Please read the section [Switching the industrial server on and off](#).

 Attention	<p>Switch off all parts of the equipment, then uncouple the fieldbus</p> <p>Before opening the server housing and whenever the server is not being used for control purposes, such as during a functional test after a repair, all system components must first be switched off and then the industrial server must be decoupled from the system.</p>
---	--

Decoupling is done by disconnecting the plugs of the field bus connection (optional). System components that have been switched off must be secured against being switched on again.

The power supply unit of the industrial server is supplied with a voltage of 100 V_{AC} - 240 V_{AC}.

 DANGER	<p>Do not open the power supply unit while voltage is applied!</p> <p>The supply voltage must be switched off before the power supply unit housing is opened.</p>
--	--


 Attention	<p>Do not exchange any parts when live</p> <p>When components are being fitted or removed, the supply voltage must be switched off.</p> <p>Installation work in the industrial server can cause damage:</p> <ul style="list-style-type: none">• if metal objects such as screws or tools fall onto operating circuit boards• if connecting cables internal to the server are unplugged or plugged during operation• if plug-in cards are removed or installed while the server is switched on
---	--

1.4 Operator's obligation to exercise diligence

The operator must ensure that

- the products are only used as intended (see chapter [Product description](#))
- the products are only operated in sound condition and functioning properly
- the products are operated only by suitably qualified and authorized personnel
- the personnel is instructed regularly about relevant occupational safety and environmental protection aspects, and is familiar with the operating instructions and in particular the safety instructions contained herein
- the operating instructions are in good condition and complete, and always available for reference at the location where the products are used.

The device has been developed for an IP20 working environment. This involves finger protection and protection against solid foreign objects up to 12.5 mm. There is no protection against water. Operation of the devices in wet and dusty environments is not permitted.

	Only trained persons may open the industrial server housing
Attention	The operator is responsible for ensuring that only trained electrical staff opens the housing of the industrial server.

1.4.1 National regulations

Depending on the type of machine and plant in which the industrial server is being used, there will be national regulations for the control systems of such machines and plant that the operator must observe. These regulations cover, amongst other things, the intervals between inspections of the control system. The operator must initiate such inspections in good time.

1.4.2 Procedure in the event of a fault

In the event of a fault in the industrial server, appropriate measures can be determined with the aid of the list in the section [Troubleshooting](#).

1.4.3 Operator requirements

Every user of the industrial server must have read these operating instructions and be familiar with all the functions of the software installed on the server that are accessible to them.

1.5 Notes on information security

The products of Beckhoff Automation GmbH & Co. KG (Beckhoff), insofar as they can be accessed online, are equipped with security functions that support the secure operation of plants, systems, machines and networks. Despite the security functions, the creation, implementation and constant updating of a holistic security concept for the operation are necessary to protect the respective plant, system, machine and networks against cyber threats. The products sold by Beckhoff are only part of the overall security concept. The customer is responsible for preventing unauthorized access by third parties to its equipment, systems, machines and networks. The latter should be connected to the corporate network or the Internet only if appropriate protective measures have been set up.

In addition, the recommendations from Beckhoff regarding appropriate protective measures should be observed. Further information regarding information security and industrial security can be found in our <https://www.beckhoff.de/secguide>.

Beckhoff products and solutions undergo continuous further development. This also applies to security functions. In light of this continuous further development, Beckhoff expressly recommends that the products are kept up to date at all times and that updates are installed for the products once they have been made available. Using outdated or unsupported product versions can increase the risk of cyber threats.

To stay informed about information security for Beckhoff products, subscribe to the RSS feed at <https://www.beckhoff.de/secinfo>.

2 Product description

2.1 Product overview



C6670-0020 | Control cabinet industrial server

The C6670-0020 industrial server is designed for installation in control cabinets. The C6670-0020 and a Beckhoff Control Panel with DVI and USB connection make an ideal combination, representing a powerful control platform for machine and system engineering applications with the TwinCAT automation software.

In combination with TwinCAT 3, two Intel® Xeon® processors, each with 12, 16, 24 or 32 cores on one motherboard with two 10 Gigabit Ethernet controllers and a graphics card produce a machine or plant controller that offers computing power for completely new ideas. In addition to the enormous performance, up to 1024 GB DDR5 RAM memory, five PCIe-Gen3-x16 and one PCIe-Gen3-x8 plug-in card slots for several camera interface cards, Ethernet or EtherCAT cards are also available for video evaluation.

All connections of the industrial server face upwards, so that the connection cables can directly be fed into a wiring duct. The side panels are completely passive and allow the industrial servers to be fitted directly next to other control cabinet devices.

The C6670-0020 contains an M.2 NVMe SSD on the motherboard. A second M.2 NVMe SSD is offered as a plug-in card. For large amounts of data, the server includes two hard drive caddies for hard disks. The on-board SATA RAID controller can be used to create a RAID 1 system with two mirrored hard disks. This ensures a high level of data security. Hard disks which failed can easily be exchanged during operation. To replace an M.2 NVMe SSD, the industrial server must be switched off.

A multi-DVD drive can be installed. Holders for the plug-in cards generate insensitivity to impacts and vibrations. Drives and plug-in cards are easily accessible. The C6670-0020 is supplied with a 100 to 240 V AC full-range power supply unit.


There is a name plate on the top of the front cover which provides detailed information about the configuration of the server.

The industrial server has the following features:

- 6-slot SSI EEB industrial server for control cabinet installation
- all slots for full-length plug-in cards
- M.2 NVMe SSD
- 2 hard drive caddies
- drives and plug-in cards are easily accessible
- all connections on the top
- detailed server configuration information on the top of the front cover
- protection rating IP20
- operating temperature range 0...50 °C.

2.2 Intended use

The C6670-0020 industrial server is designed for mounting in control cabinets in machine and system engineering applications.

 <p>DANGER</p>	<p>Risk of explosion!</p> <p>The industrial server must not be used in hazardous areas.</p>
--	--

2.3 Opening the housing

View of the C6670-0020
from the front



The housing cover is locked with a latch. After pressing the release button (1), the front cover can be pulled forward slightly in the area of the connections.

Opening the housing



After the housing cover has been pulled forwards at the top, it can be lowered out of the guides in the direction of the arrow.

Removing the housing cover



The housing cover can now be completely removed, allowing access to the components.

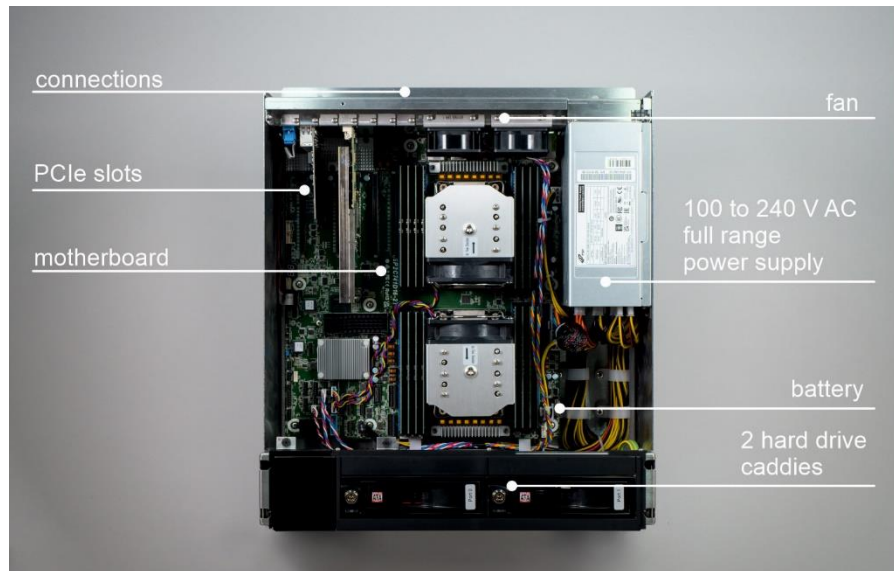
The cover is installed in reverse order. Ensure that the housing cover engages in the guides **(2)** when fitting.

Removing the card locating holder



After loosening the knurled screw, the card locating holder can be removed upwards.

Server components




The motherboard with two Intel® Xeon® processors, each with 12, 16, 24 or 32 cores, is located under the housing cover.

All connections of the industrial server are located on the top of the housing.


2.4 Access to the battery

Removing the housing cover allows access to the battery.

 CAUTION	<p>Risk of explosion!</p> <p>Use a CR2032 battery (nominal voltage 3.0 V), e.g. Renata or Panasonic. The battery may only be replaced with the same type CR2032 or a replacement type recommended by the manufacturer. Pay attention to correct polarity!</p>
---	--

Polarity of the battery:





 CAUTION	<p>Handling lithium metal batteries</p> <p>Do not recharge lithium metal batteries, do not throw them into fire, do not open them and protect them from direct sunlight and moisture.</p>
---	--

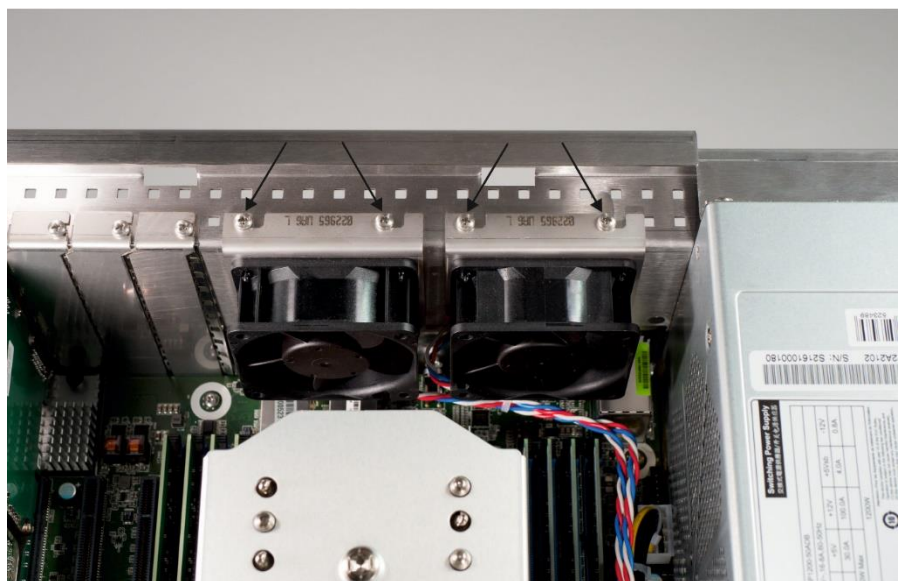
2.5 Access to the fans

For optimal cooling, the industrial server has 2 fans in the area of the connections and a cartridge with a fan on the underside. The fans can be replaced.

2.5.1 Changing the fans in the area of the connections

 Attention	Fan type The fans may only be replaced with the identical type or a replacement type approved by Beckhoff.
 Note	Remove the housing cover To replace the fans, it is necessary to remove the housing cover.

Removing the fans



After removing the Phillips screws, the fans can be replaced. Disconnect the supply cable of the fans from the motherboard.

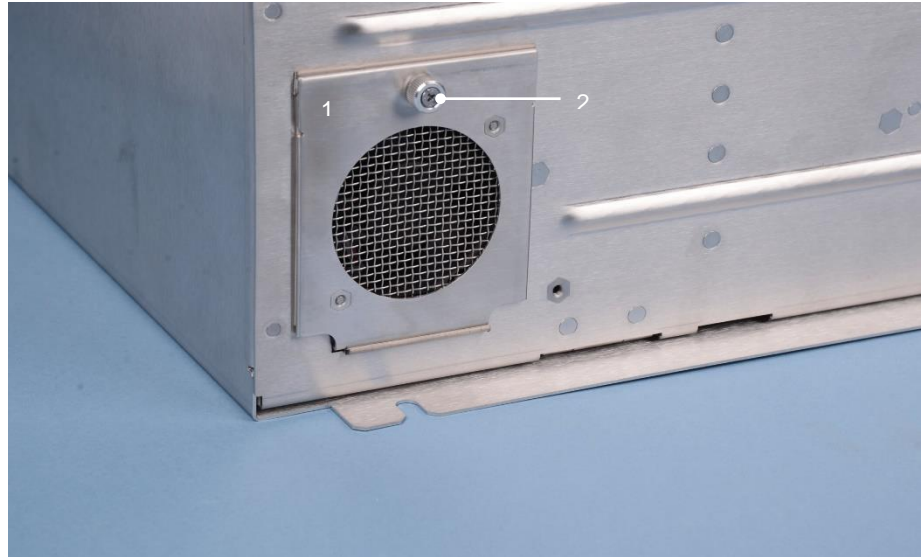
2.5.2 Replace the fan cartridge

**Attention****Fan type**

The fans may only be replaced with the identical type or a replacement type approved by Beckhoff.

To change the fan cartridge (1), first loosen the knurled screw (2):

Opening the fan cartridge



The cartridge can then be flipped down and removed.

Replacing the fan



Disconnect the supply cable of the fan from the motherboard. The housing cover must be removed for this.

After replacing the fan unit, installation is carried out in reverse order.

2.6 Interfaces



2.6.1 Network connection (X112, X113)

The RJ-45 sockets (X112, X113) allow the industrial server to be connected to a 10GBASE-T network. The interfaces are **not** EtherCAT-capable.

2.6.2 USB interfaces USB1, USB2 (X110, X111)

The two USB interfaces (X110, X111) are used to connect peripheral devices with USB connections. The USB 2.0 standard is supported. The current output is limited to 500 mA in each case.

2.6.3 VGA (Video Interface) (X114)

The VGA connection (X114) is used to transmit the video signal.

2.6.4 UID button with LED (Unit Identification Purpose)

With the UID button, the user can check whether the server is in operation or switched off. When the UID button is pressed, the blue UID LED indicator lights up while the server is running. Press the UID button again to disable the display.

2.6.5 DVI-I (Digital Visual Interface) (PCIe Slot4)



The DVI connection is used to transmit the video signal. The DVI-I standard is supported. The current output is limited to 1000 mA.

2.6.6 DVI-D (Digital Visual Interface) (PCIe Slot4)



The DVD connection is used to transmit the video signal. The DVI-D standard is supported. The current output is limited to 1000 mA.

2.6.7 Additional plug-in cards (optional)

There is a name plate on the top of the front cover of the industrial server, which provides information about the equipment as delivered.

2.6.8 Ground connection



Ground connections divert interference that is transmitted to peripheral devices via external power supply cables, signal cables or other cables. See chapter [Grounding measures](#).


3 Installation

3.1 Transport and unpacking

The specified storage conditions must be observed (see chapter [Technical data](#)).

3.1.1 Transport

Despite the robust design of the unit, the components are sensitive to strong vibrations and impacts. During transport the device must therefore be protected from mechanical stress. Therefore, please use the original packaging.

 Attention	Risk of damage to the device If the device is transported in cold weather or is exposed to extreme variations in temperature, make sure that moisture (condensation) does not form on or inside the device.
---	---

The device should be left to adapt to room temperature slowly before it is commissioned. Should condensation occur, a delay time of approximately 12 hours must be allowed before the unit is switched on.

3.1.2 Unpacking

Proceed as follows to unpack the device:

1. Remove packaging.
2. Do not discard the original packaging. Keep it for future relocation.
3. Check the delivery for completeness by comparing it with your order.
4. Please keep the associated paperwork. It contains important information for handling the unit.
5. Check the contents for visible shipping damage.
6. If you notice any shipping damage or inconsistencies between the contents and your order, you should notify Beckhoff Service.

3.2 Installation of the server in the control cabinet


The C6670-0020 industrial server is designed for mounting in control cabinets in machine and system engineering applications.


The environmental conditions specified for operation must be observed (see chapter [Technical data](#)).

3.2.1 Preparation of the control cabinet

Four holes for the fixing bolts have to be provided in the control cabinet according to the dimensions of the server (see chapter [Dimensions](#)).

A free space of 5 cm is required underneath the server in order to be able to remove the front cover.

 Note	<p>Air circulation</p> <p>When the unit is installed in an enclosure, adequate space for ventilation and for opening the server must be provided.</p>
--	--

 Attention	<p>Avoid extreme environmental conditions</p> <p>Extreme environmental conditions should be avoided as far as possible. Protect the server against dust, moisture and heat.</p> <p>The ventilation slots of the server must not be covered.</p>
---	--

3.2.2 Grounding measures



Ground connections divert interference that is transmitted to peripheral devices via external power supply cables, signal cables or other cables.

Establish a low-resistance connection from the grounding point on the server housing to the central grounding point on the control cabinet wall, in which the computer is being installed. The ground connection is located on the top of the housing in the area of the connections of the industrial server .

3.3 Power supply of the industrial server

The industrial server is equipped with a 100-240 V_{AC}, 50-60 Hz full-range power supply unit.

3.3.1 Current carrying capacity of the 100-240 V_{AC} power supply unit

Output voltages from the 100-240 V power supply unit	Maximum current load
+3.3 V	24 A
+5 V stand by	3 A
+5 V	24 A
+12 V	80 A
-12 V	0.7 A

The total load of +5 V and +3.3 V must not exceed 135 W!

3.3.2 Connection socket

An IEC C20 socket is located on the top of the server housing next to the main switch for connecting the power supply. The connection cable supplied has an IEC C19 coupling.

Connection socket and main switch on the server housing



3.3.3 Mains cable Europe

In Europe, use the supplied IEC power cable to connect the industrial server to the power supply.

IEC C19 connector plug



3.3.4 Mains cable USA/ Canada

In the USA/Canada area, the connection cable must comply with the following specifications depending on the supply voltage:

- Separable supply cable with a maximum length of 4.5 m (14.76 ft.) of type SJT or SVT (min. 125 V, 16 A), plug with ground connection according to NEMA 5-15P/-20P and IEC C19 connector at the other end. The operating temperature range of the supply cables should be at least 80 °C.

or

- Separable supply cable with a maximum length of 4.5 m (14.76 ft.) of type SJT or SVT (min. 250 V, 16 A), plug with ground connection according to NEMA 6-15P/-20P and IEC C19 connector at the other end. The operating temperature range of the supply cables should be at least 80 °C.

3.4 Connecting the industrial server



Attention

The power supply plug must be disconnected

The power supply plug must be disconnected!

Please read the documentation for the external devices prior to connecting them.

Do not connect or disconnect the cables during a thunderstorm!

Always grasp the plug when disconnecting a cable. Do not pull the cable!

3.4.1 Connecting cables

The connections are located on the top of the industrial server and are documented in chapter [Product description](#).

Follow the sequence described below when connecting cables to the industrial server:

- switch off all the devices that are to be connected
- disconnect all the devices that are to be connected from the power supply
- connect all the cables between the industrial server and to the devices that are to be connected
- make sure that you first carry out the functional earthing on the grounding bolt and then plug in all data transmission cables
- reconnect all devices to the power supply

4 Operation

4.1 Switching the industrial server on and off



4.1.1 Switching on

The industrial server has its own mains switch. The industrial server is started when the main switch is switched on.

4.1.2 Shutting down and switching off

When the system is switched off or disconnected from its own power supply, the industrial server is also switched off.

Control software such as is typically used on industrial servers permits various users to be given different rights. A user who may not close software may also not switch the industrial server off, since data can be lost from the hard disk by switching off while software is running.

 <p>Attention</p>	<p>First shut down, then switch off!</p> <p>If the industrial server is switched off while the software is writing a file to the data storage device, this file will be destroyed. Control software usually writes data to the data storage device automatically at intervals of a few seconds, for which reason there is a very high probability of causing damage by switching off while software is running.</p>
 <p>Attention</p>	<p>Switching off the industrial server</p> <p>Once you have shut down the industrial server, you must switch it off for at least 10 seconds in order to be able to restart it! After switching on the power supply again the industrial server starts automatically.</p>


4.1.3 First switching on and driver installation

When you switch on the industrial server for the first time, the pre-installed operating system (optional) will be started. In this case, all the required drivers for any additional, optional hardware components ordered with the server will already have been installed.

If the server was ordered without operating system, you have to install the operating system and the driver software for any auxiliary hardware yourself. Please follow the instructions in the documentation for the operating system and the additional devices.

4.2 Maintenance

4.2.1 Cleaning the industrial server

 DANGER	<p>Disconnecting the power supply</p> <p>Switch off the industrial server and all connected devices, and disconnect the industrial server from the power supply.</p>
--	---


The device can be cleaned with a damp, soft cloth. Do not use any aggressive cleaning materials, thinners, scouring material or hard objects that could cause scratches.

4.2.2 Maintenance


The industrial server is maintenance-free.

4.2.3 Replacing the motherboard battery

A used battery on the motherboard must be replaced. See also Chapter [Access to the battery](#).

 CAUTION	<p>Risk of explosion!</p> <p>Use a CR2032 battery (nominal voltage 3.0 V), e.g. Renata or Panasonic. The battery may only be replaced with the same type CR2032 or a replacement type recommended by the manufacturer. Pay attention to correct polarity!</p>
---	--



 CAUTION	<p>Handling lithium metal batteries</p> <p>Do not recharge lithium metal batteries, do not throw them into fire, do not open them and protect them from direct sunlight and moisture.</p>
---	--

The spent battery must be disposed of in accordance with the national electronic waste regulations.

4.3 Emergency procedures

In the event of a fire, the industrial server must be extinguished with powder or nitrogen.

4.4 Decommissioning

4.4.1 Disposal



Note

Observe national electronics scrap regulations

When disposing of the device follow the national electronic scrap regulations.

In order to dispose of the device, it must be removed and fully dismantled.


- send plastic parts (polycarbonate, polyamide (PA6.6)) for plastics recycling
- metal parts can be sent for metal recycling
- electronic parts such as disk drives and circuit boards must be disposed of in accordance with national electronics scrap regulations

5 Troubleshooting

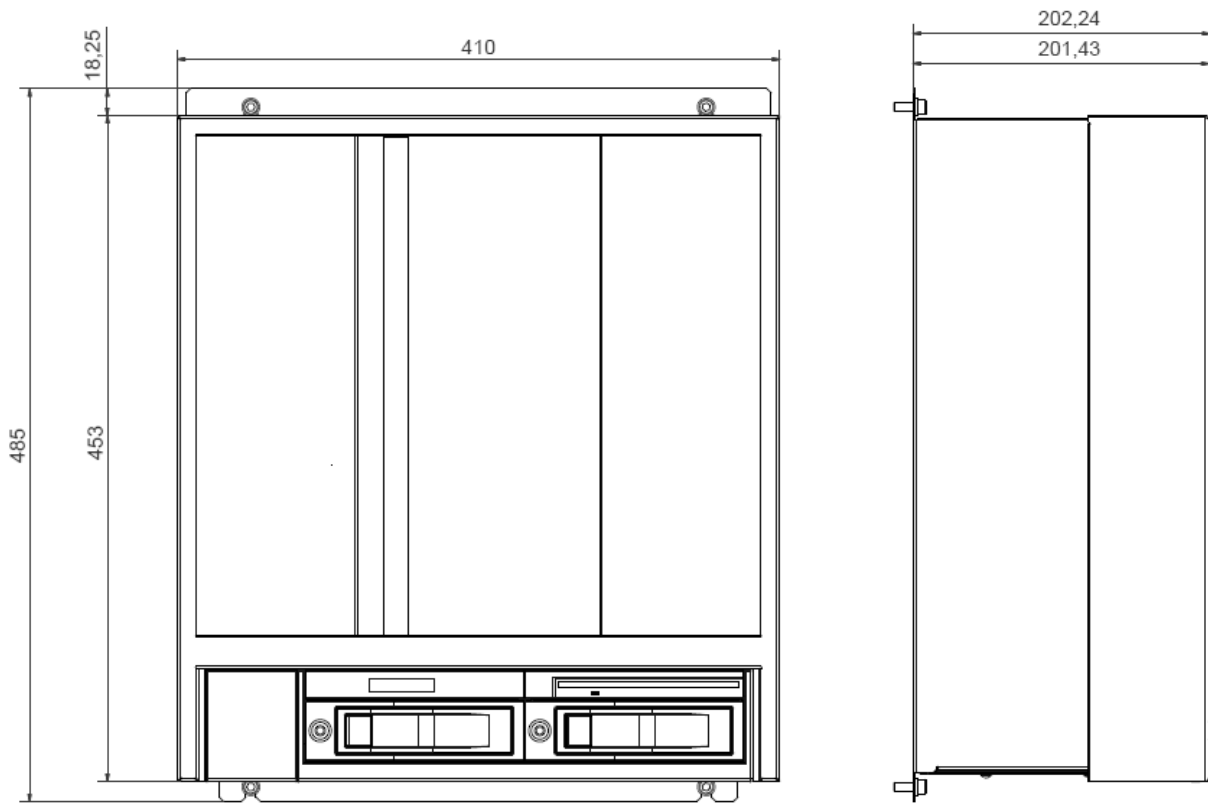
Fault	Cause	Measures
Nothing happens after the industrial server has been switched on	No power supply to the industrial server Other causes	Check the cable for the power supply Call Beckhoff Service
The industrial server does not boot fully	Setup settings are incorrect Other causes	Check the setup settings Call Beckhoff Service
Computer boots, software starts, but control does not operate correctly	Cause of the fault is either in the software or in parts of the plant outside the industrial server	Call the manufacturer of the machine or the software.
Error while accessing the drive	Faulty drive	Call Beckhoff Service
The industrial server works only partially or temporarily, e.g. dark picture or none at all, but the drive responds when switching on	Defective components in the industrial server	Call Beckhoff Service

6 Dimensions

Industrial server C6670-0020

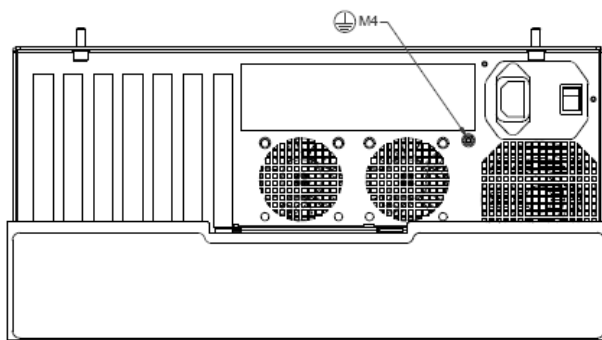
 <p>Attention</p>	<p>Pay attention to the installation position</p> <p>The device must be mounted with the orientation shown here.</p>
---	---

All dimensions in mm.



View from the front

View from left

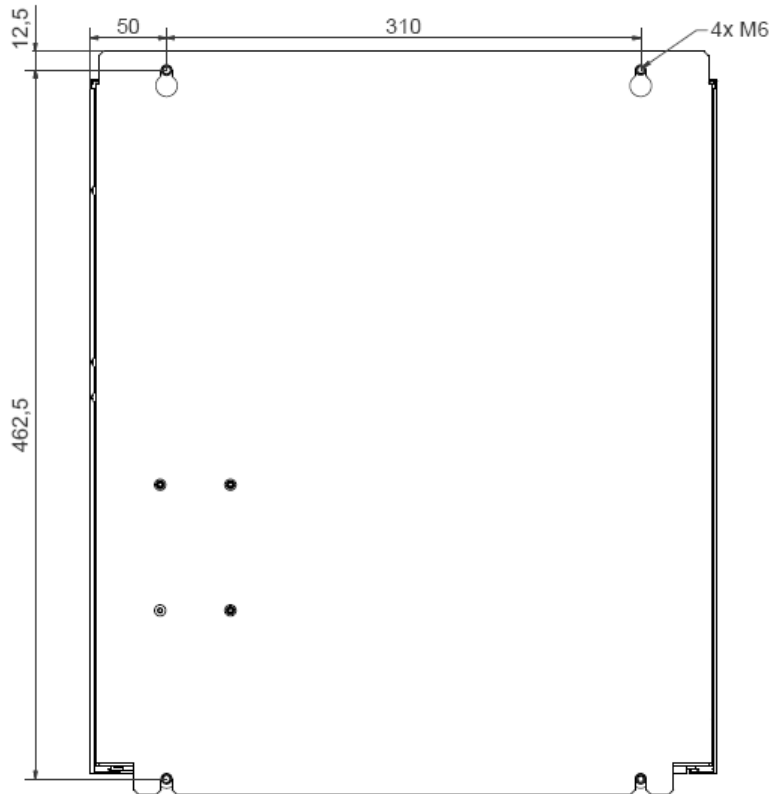


View from above

**Attention****Pay attention to the installation position**


The device must be mounted with the orientation shown here.

All dimensions in mm.



View from behind

7 Technical data

 DANGER	Risk of explosion! The industrial server must not be used in hazardous areas!
--	---

Product designation	C6670-0020		
Dimensions (W x H x D)	See chapter Dimensions		
Weight	16 kg		
Supply voltage	100 V _{AC} - 240 V _{AC} , max. 16 A		
Power consumption	Up to 1500 W		
Interfaces	1 x DVI-I 1 x DVI-D 2 x RJ-45 Ethernet 10GBASE-T 2 x USB 2.0		
Protection rating	IP 20		
Operating altitude	Max. 2000 m		
Degree of pollution	2		
Vibration resistance (sinusoidal vibration)	EN 60068-2-6:	10 ... 58 Hz:	0.035 mm 58 ... 500 Hz: 0.5 G (~ 5 m/s ²)
Shock resistance (shock)	EN 60068-2-27:	5 G (~ 50 m/s ²), duration: 30 ms	
EMC interference immunity	Conforms to EN 61000-6-2		
EMC interference emission	Conforms to EN 61000-6-4		
Permissible ambient temperature	0 ... +50 °C (operation) -25 ... +65 °C (transport/storage)		
Permissible relative air humidity	Maximum 95%, no condensation		
Transport and storage	The same values for air humidity and shock resistance are to be observed during transport and storage as in operation. The shock resistance during transport can be improved by means of suitably packing the industrial server.		
Certifications	CE		

8 Appendix

8.1 Service and support

Beckhoff and their partners around the world offer comprehensive service and support, making available fast and competent assistance with all questions related to Beckhoff products and system solutions.

8.1.1 Beckhoff Service

The Beckhoff Service Center supports you in all matters of after-sales service:

- on-site service
- repair service
- spare parts service
- hotline service

Hotline: + 49 (0) 5246/963-460

Mail: service@beckhoff.com

If servicing is required, please quote the **project number** of your industrial server, which can be found on the name plate.

8.1.2 Beckhoff Support

Support offers you comprehensive technical assistance, helping you not only with the application of individual Beckhoff products, but also with other, wide-ranging services:

- world-wide support
- design, programming and commissioning of sophisticated automation systems
- and extensive training program for Beckhoff system components

Hotline: + 49 (0) 5246/963-157

Mail: support@beckhoff.com

8.1.3 Headquarters

Beckhoff Automation GmbH & Co. KG
Hülshorstweg 20
33415 Verl
Germany

Phone: + 49 (0) 5246/963-0

Mail: info@beckhoff.de

The addresses of Beckhoff's branches and representatives round the world can be found on the internet pages <http://www.beckhoff.com/>.

There you will also find more [Documentation](#) about Beckhoff components.

8.2 Approvals for USA and Canada

8.3 FCC approvals for the United States of America

FCC: Federal Communications Commission Radio Frequency Interference Statement

This device was tested and complies with the limits for a digital device of class A, according part 15 of the FCC regulations. These limits are designed to provide adequate protection against adverse interference, if the device is used in a commercial environment. This device generates, uses and may emit radio frequency energy and may cause adverse interference with radio communications, if it is not installed and used in accordance with the operating instructions. If this device is used in a residential area it is likely to cause adverse interference, in which case the user must take appropriate countermeasures in order to eliminate the interference at his own expense.

**Note****Technical modifications**

Technical modifications of the device may void the FCC approval.

8.4 FCC approvals for Canada

FCC: Canadian Notice

This device does not exceed the class A limits for radiation, as specified by the Radio Interference Regulations of the Canadian Department of Communications.