MICRO-EPSILON

Operating Instructions

thermoIMAGER TIM NetPCQ

Mini Industrial PC for TIM series

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Contents

1. Safety

System operation assumes knowledge of the operating instructions.

1.1 Symbols Used

The following symbols are used in these operating instructions:

⚠ CAUTION	Indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.
NOTICE	Indicates a situation which, if not avoided, may lead to property damage
➪	Indicates a user action.
i	Indicates a tip for users.
`Measure`	Indicates hardware or a software button/menu.

1.2 Warnings

⚠ CAUTION

Connect the power supply and the display/output device according to the safety regulations for electrical equipment.
> Risk of injury

> Damage to or destruction of the PC

NOTICE

Avoid shocks and impacts to the PC.
> Damage to or destruction of the PC

The supply voltage must not exceed the specified limits.
> Damage to or destruction of the PC

Avoid static electricity and keep away from very strong EMF (electromagnetic fields) e.g. arc welders or induction heaters.
> Damage to or destruction of the PC

1.3 Notes on CE Marking

The following apply to the thermoIMAGER NetPCQ:

- EU Directive 2014/30/EU
- EU Directive 2014/35/EU
- EU Directive 2011/65/EU, “RoHS” category 11

Products which carry the CE mark satisfy the requirements of the EU directives cited and the relevant applicable harmonized standards (EN). The measuring system is designed for use in industrial and laboratory applications.

The EU Declaration of Conformity is available to the responsible authorities according to EU Directive, article 10.

1.4 Intended Use

- The thermoIMAGER NetPCQ is designed for use in industrial and laboratory applications and is a fanless, passively cooled, industrial PC.
- The system must only be operated within the limits specified in the technical data, see 2.
- The system must be used in such a way that no persons are endangered or machines and other material goods are damaged in the event of malfunction or total failure of the system.
- Take additional precautions for safety and damage prevention in case of safety-related applications.

1.5 Proper Environment

- Protection class: IP30
- Ambient temperature: 0 ... +50 °C (+32 ... +122 °F)
- Storage temperature: -20 ... +75 °C (-4 ... +167 °F)
- Humidity: 10 ... 95 %, non-condensing

2. Technical Data

2.1 Functional Principle

The thermoIMAGER TIM NetPCQ is a miniaturized industry PC which expands the TIM series to a stand-alone solution or which works as a USB to Ethernet converter. This mode enables larger possible distances between process (IR camera) and process control (PC).

The thermoIMAGER NetPCQ includes a Windows 10 operating system that allows the user to install additional software. The housing of the thermoIMAGER NetPC is made of anodized aluminum.

2.2 General Specifications

Model	**NetPC**
Storage temperature	-20 ... +75 °C (-4 ... +167 °F)
Ambient temperature	0 ... +50 °C (+32 ... +122 °F)
Relative humidity	10 ... 95 %, non-condensing
Material (housing)	Anodized aluminum
Dimensions	117.5 mm x 165 mm x 64.5 mm (L x B x H)
Weight	1000 g
Vibration	IEC 68-2-6: 3 G, 11 - 200 Hz, any axis
Shock	IEC 68-2-27: 50 G, 11 ms, any axis
Operating system	Windows 10

2.3 Electrical Specifications

Model	NetPCQ
Power supply	12 ... 24 VDC
Power consumption	10 W (+additional 2.5 W for IR camera)
Cooling	passive
Processor	Intel Atrom J1900 Quad Core CPU, 2 GHz
Hard disc	64 GB SSD
RAM	2 GB (DDR2, 533 MHz)
Ports	3 x USB 2.0
	1 x USB 3.0
	2 x RS232
	VGA
	Ethernet (Gigabit Ethernet)
Additional functions	Status LED

3. Delivery

3.1 Unpacking, Included in Delivery

1 TIM NetPCQ inclusive SSD (64 GB)

1 USB Recovery stick including operating manual

- Carefully remove the components of the measuring system from the packaging and ensure that the goods are forwarded in such a way that no damage can occur.
- Check the delivery for completeness and shipping damage immediately after unpacking.
- If there is damage or parts are missing, immediately contact the manufacturer or supplier.

3.2 Storage

- Storage temperature: -20 ... +75 °C (-4 ... +167 °F)
- Humidity: 10 ... 95 %, non-condensing

4. Mounting and Installation

The thermoIMAGER TIM NetPCQ can be mounted easily on a DIN rail (TS35) according EN50022 using the rail mount adapter on the backside of the box.

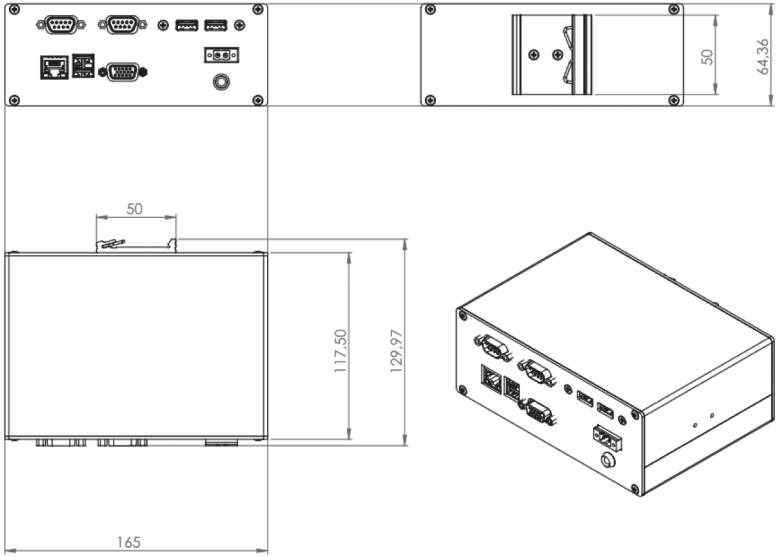
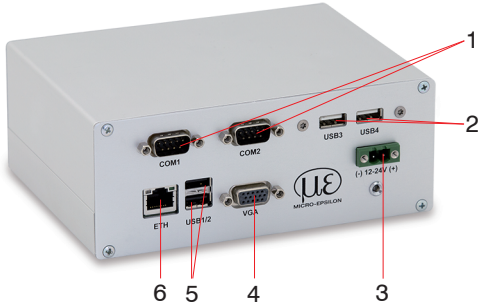


Fig. 1 Dimensional drawing thermoIMAGER TIM NetPCQ, dimensions in mm, not to scale

5. Control Elements and Connections



1 RS 232 Interface connections (two)

2 USB 2.0 connections (two)

3 DC power supply with power LED

4 VGA connection

5 1 x USB 3.0 and 1 x USB 2.0 connections

6 Ethernet connection

6. Operation

6.1 Operation Modes

The thermoIMAGER NetPCQ can be used in three different operation modes:

1. Converter USB – Ethernet with direct connection to a PC (point-to-point connection)
2. Converter USB – Ethernet with connection of a PC via a network or via the internet
3. Stand-alone operation with an IR camera

For powering the thermoIMAGER NetPCQ you can use any suitable industrial power supply with a voltage output between 12 VDC and 24 VDC, see 2.3.

6.2 Remote Access to the thermoIMAGER TIM NetPCQ

For settings on the thermoIMAGER TIM NetPCQ you can connect a keyboard and a mouse to the available USB sockets as well as a monitor to the VGA socket, see 6.8.

Another very simple option is remote control software, for example Remote Desktop (RDP) from Windows or Ultra VNC with NetBox Utility, which is already included on the TIM Connect software CD provided with thermoIMAGER TIM.

After installation you can have access to the thermoIMAGER TIM NetPCQ either from a PC directly connected over an Ethernet cable or from a PC which is located anywhere and connected to the same network. Also remote connection via the internet is possible.

➥ To install NetBox Utility on your PC, please start `install.bat` in the `/NetBox Utility` directory on the thermoIMAGER TIM Connect USB flash drive.

In addition to the utility software, the UltraVNC viewer will also be installed.

This program is available `Start/Programs/NetBox-UltraVNC`.

➥ Before starting the NetBox Utility on your PC, please follow the instructions for specifying a fixed IP address, see 6.6.

➡ Next, please start the `NetBox Utility` program:

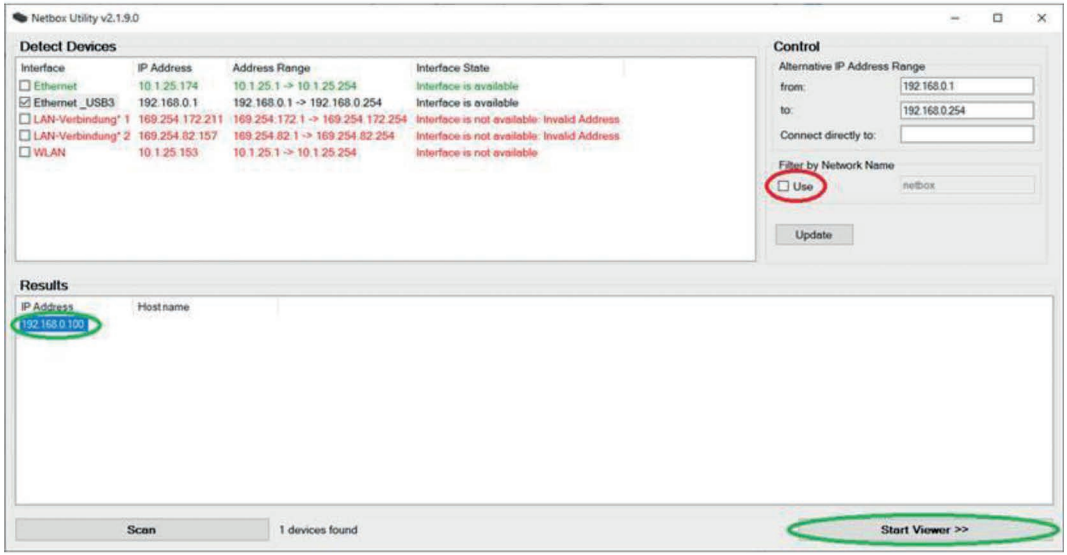


Fig. 2 View: Netbox Utility program start screen

➡ Select the desired network adapter.

➡ Remove the check mark from `Filter by Network Name` and click the `Scan` button.

The utility program now searches for NetPCQs that are in the network or are directly connected to your PC.

The devices found are shown in the `Results` window.

➡ Mark the desired address in the `Results` window and click the `Start Viewer > >` button.

You should now see the thermoIMAGER TIM NetPCQ screen.

Fig. 3 View: thermoIMAGER TIM NetPCQ start screen

6.3 Applications and Start Options

On the Desktop of the thermoIMAGER TIM NetPCQ you will find the following short cuts:

- TIM Connect
- Netbox Control Center

Fig. 4 Netbox Control Center shortcut

The Netbox Control Center allows for easy configuration of the NetPCQ.

6.3.1 NetBox Control Center

6.3.1.1 Select Tab

The `Select` tab lets you select programs that start automatically after powering on the NetPCQ.

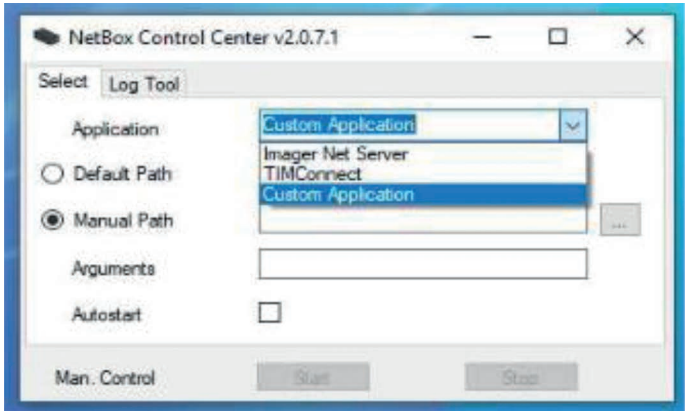


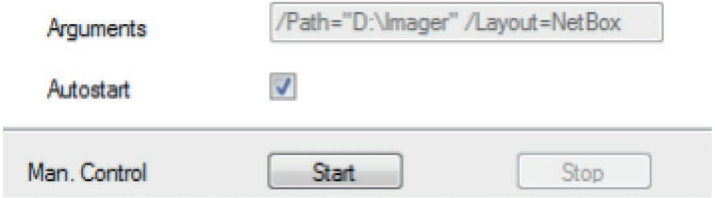
Fig. 5 Netbox Control Center - `Select` selection

Under `Application`, you can select `TIM Connect`, `Imager Net Server` or `Custom Application`.

Application	**NetPC operating mode**
TIM Connect	Stand alone operation
Imager Net Server	Converter operation USB-Ethernet
Custom Application	Using the NetPCQ with another software

The start options set in the Control Center are automatically saved on the NetPCQ and are also available after restarting.

Under `Arguments`, you can specify command line parameters (e.g., a special layout with which the `TIM Connect Software` starts automatically).



➡ Enable `Autostart` to have the selected application start automatically after the NetPCQ is started.

If for some reason the application no longer works properly (e.g., if the software has crashed), the Netbox Control Center automatically restarts it, if `Autostart` has been set (software watchdog).

6.3.1.2 Log Tool Tab

The `Log Tool` tab provides the following information:

Application	NetPC operating mode
Software Restarts	Number of software restarts performed
Reason for last hardware restart	Reason for the most recent restart of the NetPCQ
Software is not responding for	Timer, which starts when the software does not respond and triggers a restart of the selected application.
Actual runtime	Current runtime of the software
Previous runtime	Previous runtime of the software
Device Frequency	Camera image frequency
Process Frequency	Displayed image frequency
Net Transfer Frequency	Image frequency transferred via the network (for Imager Net Server)

Fig. 6 Netbox Control Center - `Log Tool` selection

If an thermoIMAGER TIM is connected to the thermoIMAGER TIM NetPCQ, you should see two active applications: `Log Tool` and `Imager Net Server`, see Fig. 7, similarly `Log Tool` and `TIM Connect`, see Fig. 8.

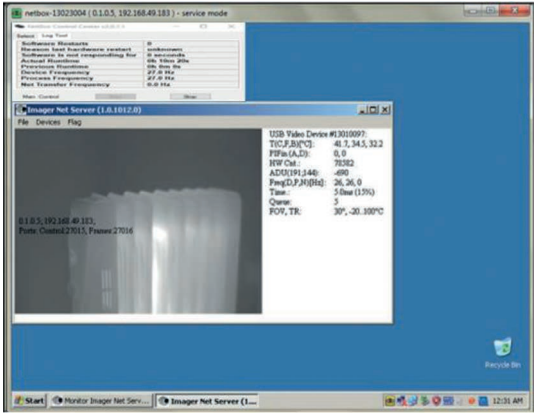


Fig. 7 View NetPCQ - Log Tool and Imager Net Server

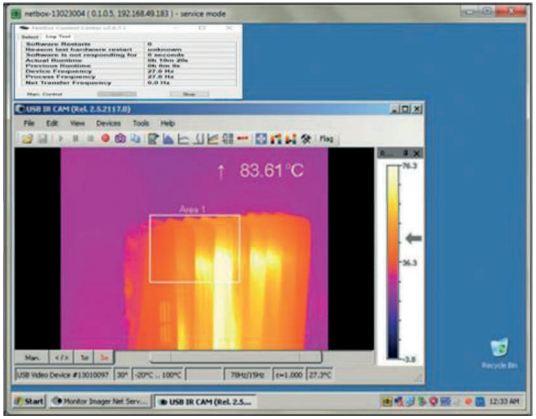


Fig. 8 View NetPCQ - Log Tool and TIM Connect

6.3.1.3 Imager Net Server

Imager Net Server, see Fig. 7			
Menu	File	Exit of the program	
	Devices	Shows the connected thermoIMAGERS TIM	
	Flag	Manual operation of the camera flag	
USB video device		Serial number of the connected imager device	
T (C, F, B)		Device temperatures (*C)	C: FPA-Chip
			F: Flag temperature
			B: Housing temperature
PIFin (A, D)		Status of the PIF input	A: Analog IN (AI)
			D: Digital IN (DI)
HW Cnt.		Hardware-Counter (frame counter)	
ADU (192, 144)		ADU value of the center TIMxel (e.g. 192, 144 at TIM4xx)	
Freq (D, P, N)		Frequency (Hz):	D: Device/ P: Processing/ N: Network
Time		Time per single frame	
Queue		Number of frames in network queue	
FOV, TR		Field of view (horizontal) of the imager lens, temperature range	

Fig. 9 Information in the `Imager Net Server` - application window

6.4 File Transfer between thermoIMAGER TIM NetPCQ and PC

- To exchange files between the thermoIMAGER TIM NetPCQ and a directly connected or in the network located PC please move the cursor to the title bar of the UltraVNC Viewer window and press the right mouse button.
- Start `File Transfer`.
- Alternatively you can also press the following button in the tool bar:

In the following explorer window, see Fig. 10, you see on the left side your local PC (`LOCAL MACHINE`) and on the right side the thermoIMAGER TIM NetPCQ (`REMOTE MACHINE`).

- Now you can copy files between both computers via the network link by marking them and pressing `Send` or `Receive`.

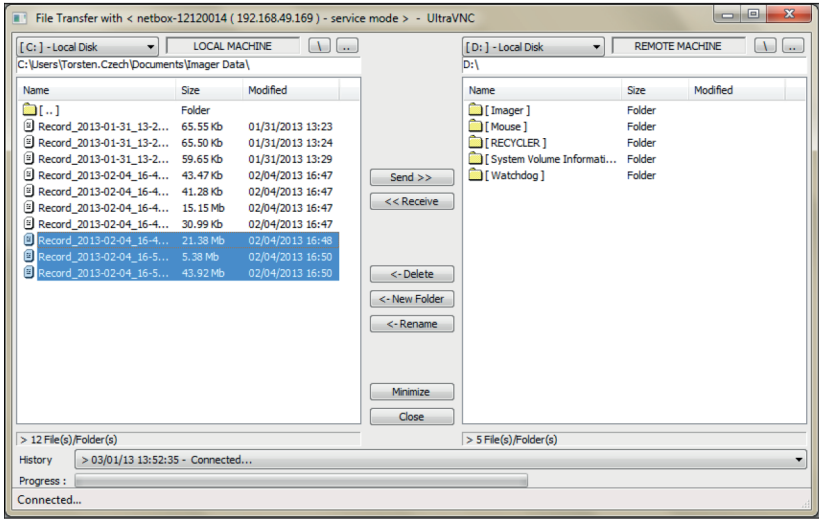


Fig. 10 `File transfer` view

6.5 Direct Ethernet Communication

- Please connect the thermoIMAGER TIM with the supplied USB connection cable with the thermoIMAGER TIM NetPCQ.
- Please connect your PC with an Ethernet cable with the thermoIMAGER NetPCQ.
- Now connect the power supply cable to the thermoIMAGER NetPCQ and to the mains supply.

The thermoIMAGER NetPCQ will start to boot the system and should be ready to use after 2 - 3 minutes.

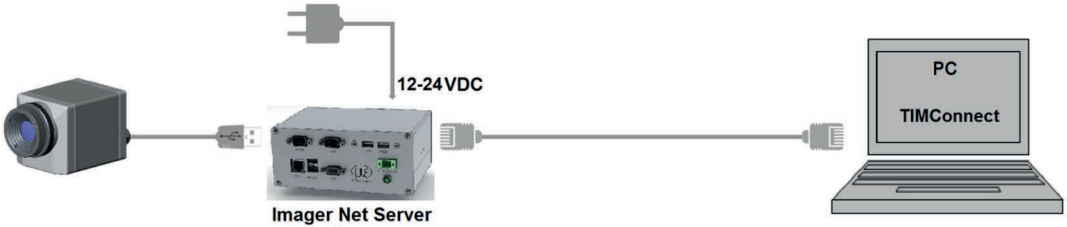


Fig. 11 Ethernet direct connection (point-to-point connection)/ thermoIMAGER TIM NetPCQ powered via power supply

i The used Ethernet cables should be at least category 5 cables (Cat-5 according ISO/IEC 11801).

6.6 Connection to the thermoIMAGER TIM NetPC

The communication with the TIM NetPCQ is done via the TCP/ IP protocol (Transmission Control Protocol/ Internet Protocol). The TIM NetPCQ can get its IP address (Internet Protocol address) either from a DHCP server or it can work with a fixed IP address.

➡ First switch on the thermoIMAGER NetPCQ, see 6.

On a direct connection to a PC both, the thermoIMAGER TIM NetPCQ as well as the PC must use a fixed IP address because no DHCP server is available here. The thermoIMAGER TIM NetPCQ is using in this case the IP address 192.168.0.100.

On your PC you have to do the following settings once (depending on the operating system the procedure can differ from the here shown – the following description refers to a Windows 10 system).

➡ 1. Go to `System controls > Network > Internet` and open `Network and Sharing Center`.

➡ 2. If you have an existing connection to a network (company network e.g.) you should see the following information:

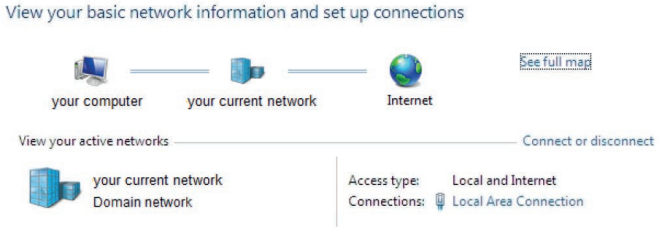


Fig. 12 Network center

➡ If your PC is not connected to any network, please go to `Change adapter settings` after you opened the `Network and Sharing Center`. Now go to `Local Area Connection` and right mouse button: `Properties`, continue at item 4.

➡ 3. Go to `Local Area Connection` - a status view according, see Fig. 13, will be shown. Then go to `Properties`.

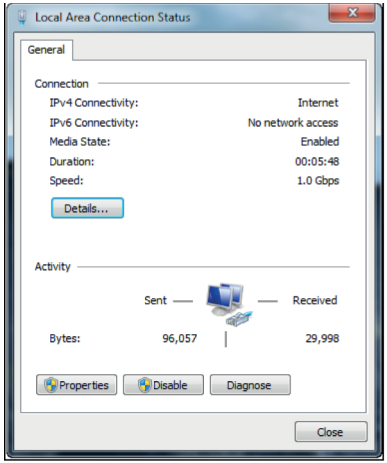


Fig. 13 Local Area Connection Status

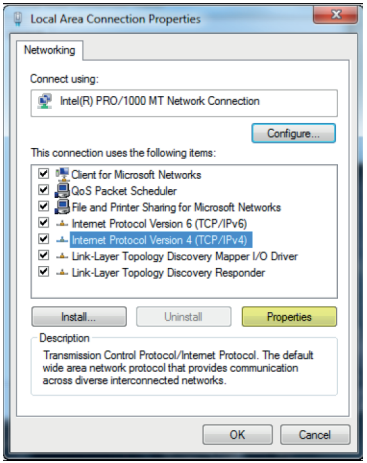


Fig. 14 Local Area Connection Properties

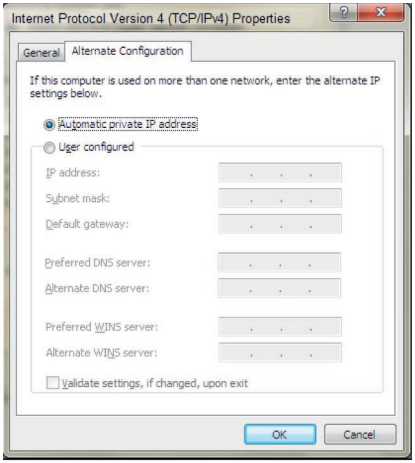


Fig. 15 Internet Protocol Version 4 (TCP/IPv4) Properties

4. In the `Local Area Connection Properties` window, see Fig. 14, mark `Internet Protocol Version 4 (TCP/IPv4)` and go again to `Properties`.

5. Please open now in `Internet Protocol Version 4 (TCP/IPv4) Properties` window, see Fig. 15, the register `Alternate Configuration` and activate the checkbox `User configured`.

6. Now enter a user-defined IP address for your PC. Note that the network portion of the address must be identical to the network portion of the IP address of the thermoIMAGER TIM NetPCQ, that is, it must be 192.168.0. However, the IP address of the device portion must be different from the thermoIMAGER TIM NetPCQ address (IP address 192.168.0.100); for example, use IP address 192.168.0.1, see Fig. 16.

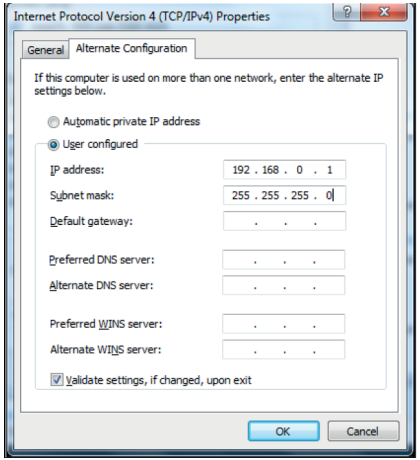


Fig. 16 Internet Protocol Version 4 (TCO/IPv4) - User configured IP address

After you have made these settings and connected your PC with the thermoIMAGER TIM NetPCQ using an Ethernet cable your PC will establish a point-to-point connection. This procedure can take several minutes.

In the Network and Sharing Center your network will now be shown up as a non-identified network.

- Please start now the thermoIMAGER TIM Connect on your PC and open the menu item `Tools/ Extended/ Remote devices....`
- In the window which is appearing, see Fig. 17, you should set a hook on `Enable` and enter the IP address of thermoIMAGER TIM NetPCQ (192.168.0.100) at `IP adress of current remote device.`
- Press `OK`.

The software will establish a connection to the remote device thermoIMAGER NetPCQ automatically.

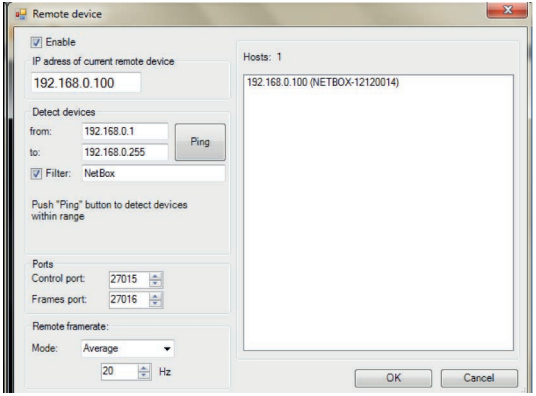


Fig. 17 Search for network devices in TIM Connect

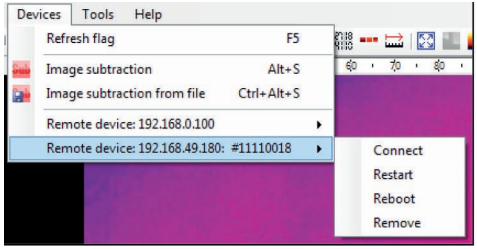


Fig. 18 Device selection in TIM Connect

Under `Remote framerate`, see Fig. 17, you can enter the desired frame rate which should be transmitted via the network.

Under the menu item `Devices`, see Fig. 18, the thermoIMAGER TIM which is connected to the thermoIMAGER NetPCQ shows up now. The following functions can be selected here:

`Connect`	Manual connection with the remote device
`Restart`	Restart of the Imager Net Server application on the thermoIMAGER TIM NetPCQ
`Reboot`	Reboot of the thermoIMAGER TIM NetPCQ
`Remove`	Remove of the device entry in this menu

If the used thermoIMAGER TIM is connected for the first time to the thermoIMAGER TIM NetPCQ the following message appears:

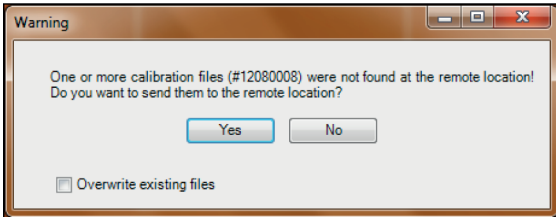


Fig. 19 `Warning` view

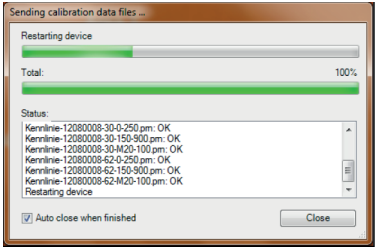


Fig. 20 `Sending calibration data files`

➡ Please confirm with `Yes`.

The calibration files will be transferred automatically from your PC to the thermoIMAGER TIM NetPCQ and stored there. Now you should see the live TIM picture from the thermoIMAGER TIM on your PC.

Alternatively you can copy the calibration data also manually via an USB stick into the thermoIMAGER TIM NetPCQ folder `D:\Imager\Cali`.

6.7 Ethernet Network Communication

- Please connect your thermoIMAGER TIM with the supplied USB connection cable with the thermoIMAGER TIM NetPCQ.
- Please connect the Ethernet connection of the thermoIMAGER TIM NetPCQ with a network or internet (via a router e.g.).
- Now connect the power supply to the thermoIMAGER TIM NetPCQ and to the mains. The thermoIMAGER TIM NetPCQ will start to boot the system and should be ready to use after 2 - 3 minutes.

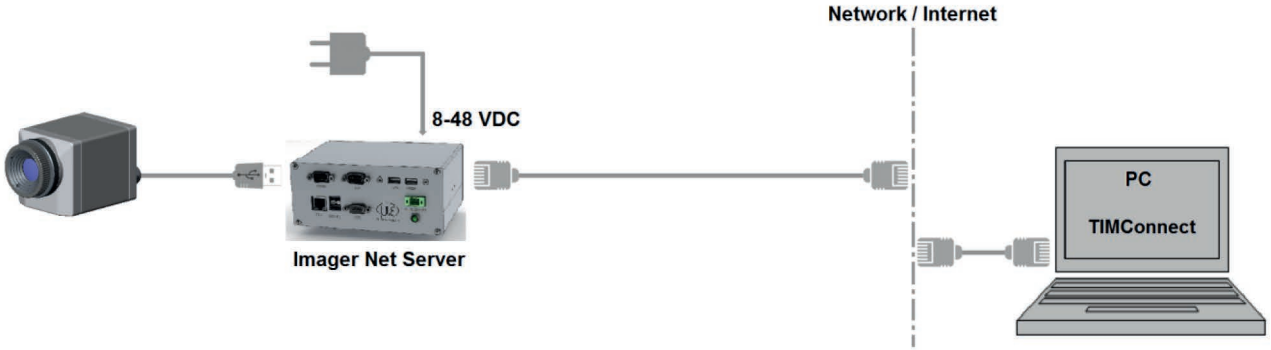


Fig. 21 Ethernet network connection / TIM NetPCQ powered via power supply

If the TIM NetPCQ is used in a network it gets its IP address from a DHCP server. In order to find the thermoIMAGER TIM NetPCQ in the thermoIMAGER TIM Connect of your local PC the address range of the local network must be known.

- Thereto please open the Network and Sharing Center on your local PC, go to `Local Area connection`, see Fig. 22 and open `Details`, see Fig. 23.

The Window `Network Connection Details`, see Fig. 24, shows now your own IPv4 address.

- Please start now the thermoIMAGER TIMConnect on your local PC and open the menu `Tools > Extended > Remote devices ....`
- In the window which opens, see Fig. 25, set a hook on `Enable` and enter the address range of your local network under `Detect devices`.

The fourth block should have the range 0 to 255.

If you now press `Ping`, see Fig. 25, all computers inside the selected address range will be shown.

Fig. 22 Network center view: Local Area Connection

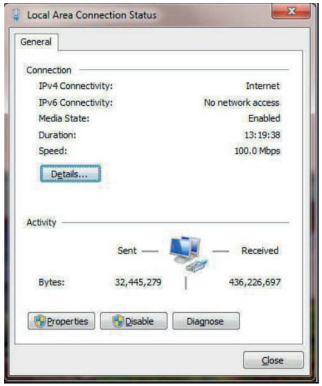


Fig. 23 Local `Area Connection Status` view

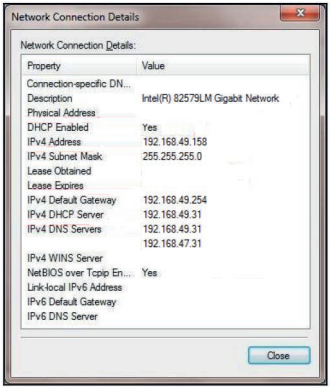


Fig. 24 `Network Connection Details` view

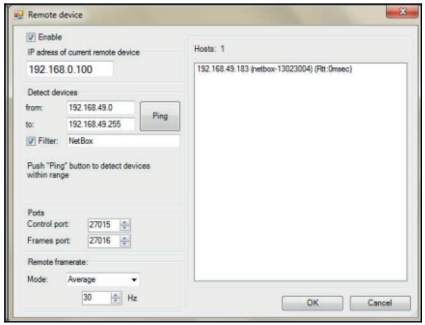


Fig. 25 Remote device view

Under `Remote framerate`, see Fig. 25, you can enter the desired frame rate which should be transmitted via the network.

Now only computers with NetPCQ in their name will be shown.

Under `Hosts`, see Fig. 25, you should see now your thermoIMAGER NetPCQ.

➡ Please mark this and press `OK`.

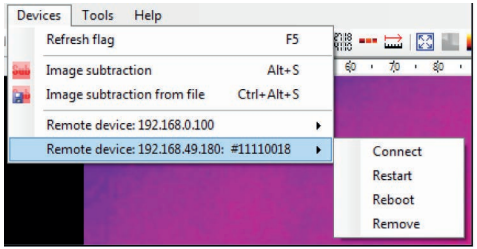


Fig. 26 Device selection in TIM Connect

Under the menu item `Devices`, see Fig. 26, the thermoIMAGER TIM which is connected to the thermoIMAGER NetPCQ shows up now.

The following functions can be selected here:

`Connect`	Manual connection with the remote device
`Restart`	Restart of the Imager Net Server application on the thermoIMAGER TIM NetPCQ
`Reboot`	Reboot of the thermoIMAGER TIM NetPCQ
`Remove`	Remove of the device entry in this menu

If the used thermoIMAGER TIM is connected for the first time to the thermoIMAGER NetPCQ the following message appears:

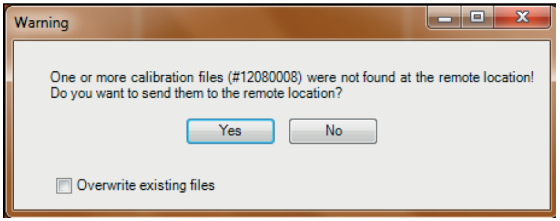


Fig. 27 `Warning` view

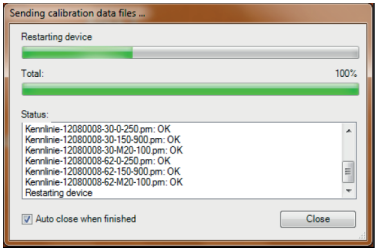


Fig. 28 `Sending calibration data files`

➡ Please confirm with `Yes`.

The calibration files will be transferred automatically from your PC to the thermoIMAGER TIM NetPCQ and stored there. Now you should see the live TIM picture from the thermoIMAGER TIM on your PC.

Alternatively you can copy the calibration data also manually via an USB stick into the thermoIMAGER TIM NetPCQ folder `D:\Imager\Cali`.

6.8 Stand-alone Operation

As a stand-alone PC the thermoIMAGER NetPCQ can expand a IR camera to a separate system. For this operation mode you should connect a VGA display and a USB keyboard to the thermoIMAGER NetPCQ. In addition the system can also be controlled via a remote access over an Ethernet connection, see 6.2.

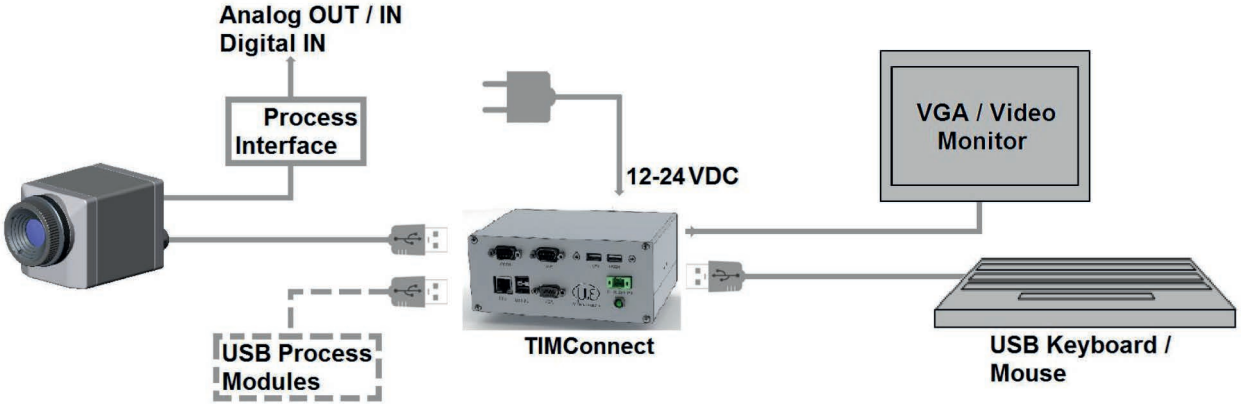


Fig. 29 Stand-Alone operation/ thermoIMAGER TIM NetPCQ powered via power supply

After booting the thermoIMAGER NetPCQ the first time you will see the Imager Net Server application.

➡ Please close the monitor program and change it to thermoIMAGER TIM Connect in the configuration dialog (Netbox Control Center), see 6.3.

6.9 Write Protection Filter

In Windows 10, you can assign a write protection filter to individual drives.

The operating system and TIM Connect software are saved on drive C. Below are steps you can perform to assign a write protection filter to that drive.

By default, the Unified Write Filter (UWF) is disabled. To enable UWF in Windows 10, proceed as follows:

➥ Open `System control` > `Programs and Features` > `Turn Windows-Features on or off`.

i To do so, you need administrator rights.

➥ Enable `Unified Write Filter` under `Device Lockdown`, see Fig. 30.

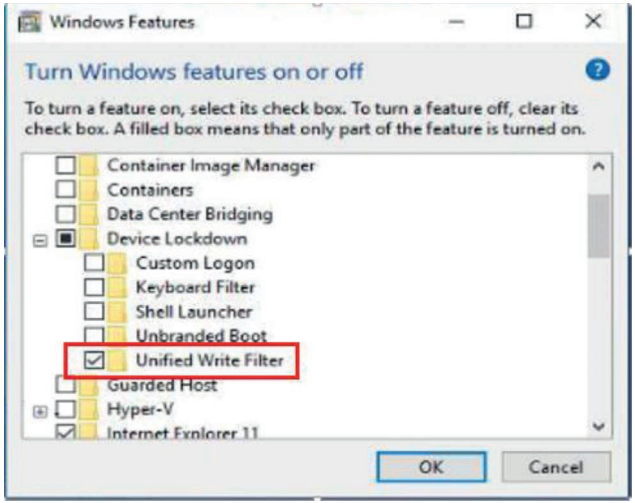


Fig. 30 View: System control - Windows Features - `Device Lockdown`

Der UWF filter is operated using command lines.

Note the following steps:

Step 1:

➡ Open the `Command Prompt` using the `CMD` command and run it as an administrator.

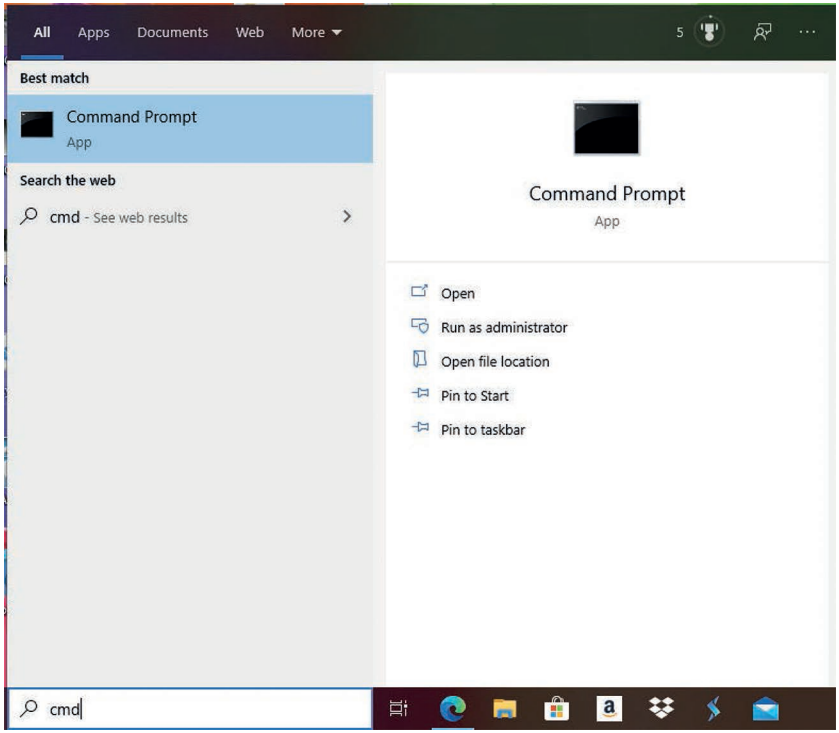


Fig. 31 View: `Command Prompt` - Run as administrator

Step 2: All commands for the UWF filter start with `uwfmgr`.

Using the `uwfmgr ? command`, you can display all available commands for the filter.

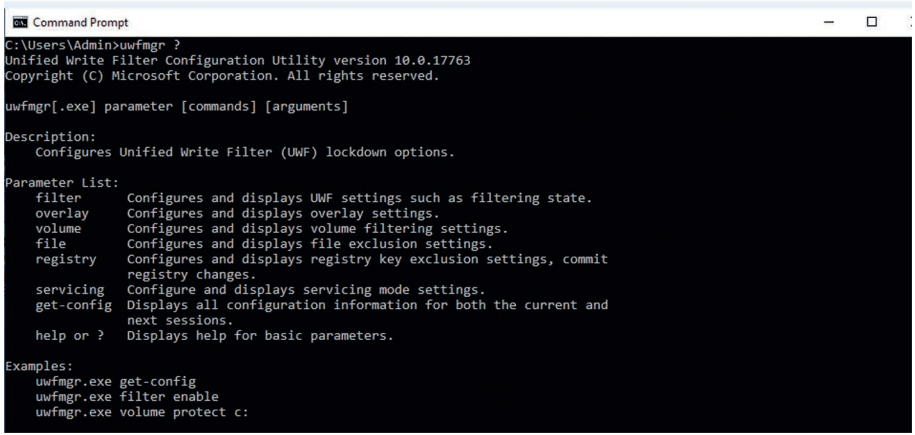


Fig. 32 Command overview `uwfmgr`

The `uwfmgr get-confi` command lets you retrieve the current status of the filter.

If the UWFM filter is turned off, the following view is displayed:

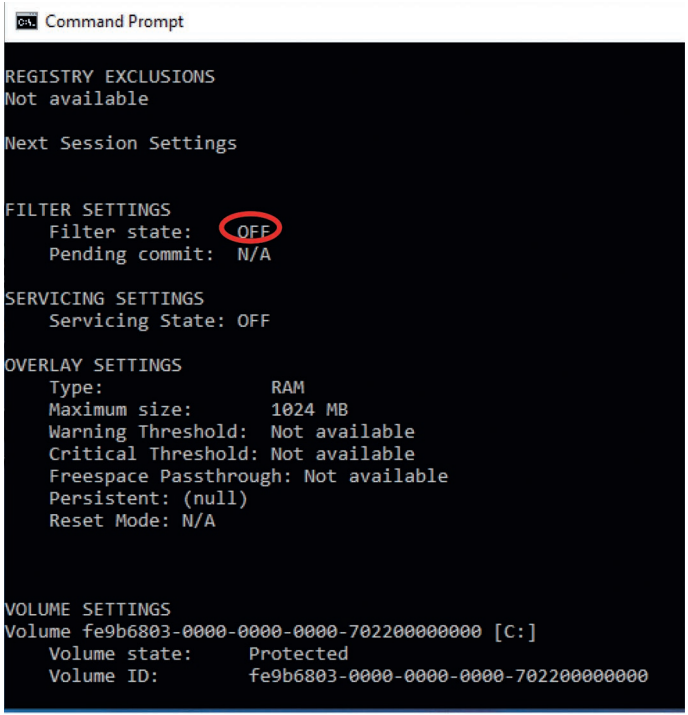


Fig. 33 UWFM filter turned off

➡ To enable the filter, enter the `uwfmgr filter enable` command.

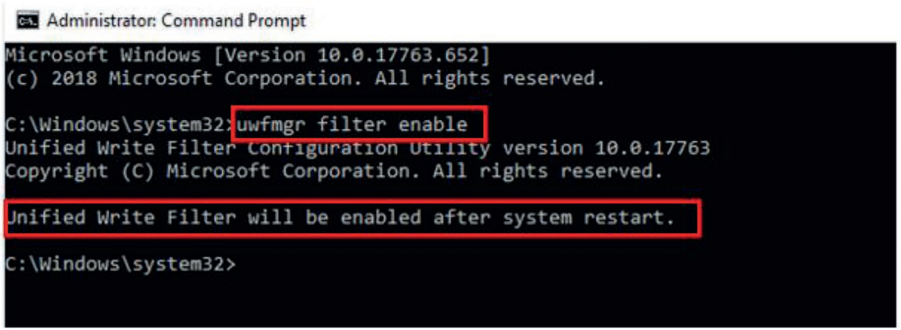
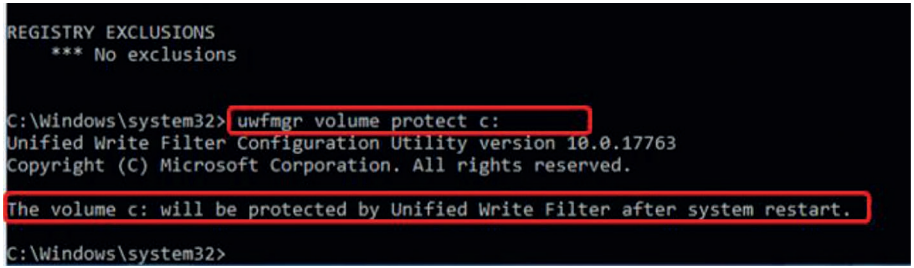


Fig. 34 Command `uwfmgr filter enable`

To enable the write filter, you must restart the system!

To disable the filter again, use the `uwfmgr filter disable` command.

To now assign the write protection filter to hard drive C, use the `uwfmgr volume protect c` command.



To disable the protection of hard drive C again, enter the `uwfmgr volume unprotect c:` command.

6.10 System Recovery

If a recovery of the Windows operating system of the thermoIMAGER TIM NetPCQ is required, please use the included USB flash drive.

Follow the steps below and do not disconnect the power supply to the thermoIMAGER TIM NetPCQ during the recovery under any circumstances.

After recovery, the thermoIMAGER TIM NetPCQ is in default mode; that is, any data saved to the SSD are lost.

Step 1:

- Connect a VGA monitor and USB keyboard to the thermoIMAGER NetPCQ.
- Connect the USB recovery flash drive to a USB port and turn on the thermoIMAGER NetPCQ.
- Once you see the start screen below, see Fig. 35, press the DEL key.

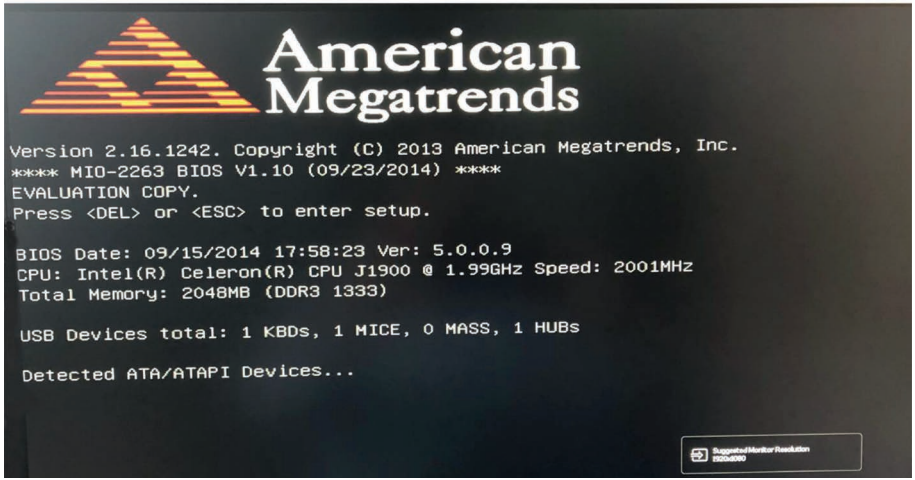
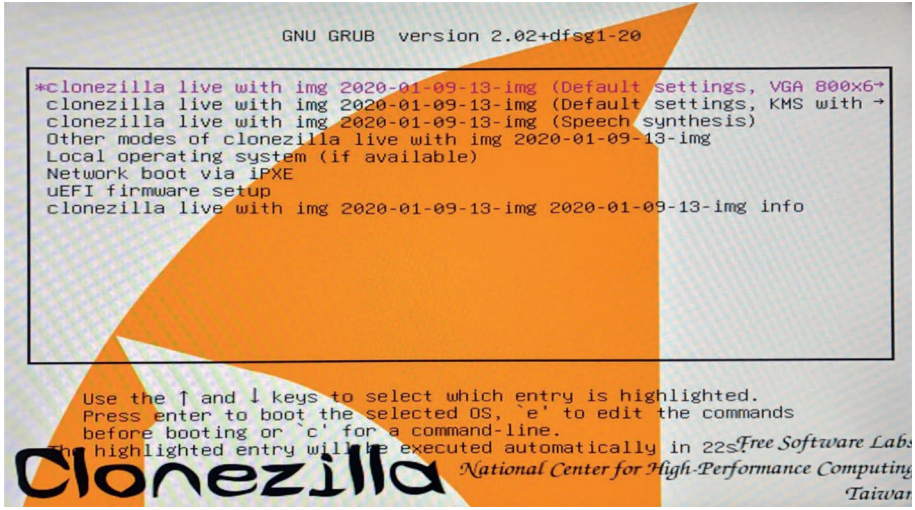


Fig. 35 Start screen of system recovery

Step 2:

The following view is now displayed:



➡ Select `Enter`.

The warning below, asking whether you really want to recover the system, is displayed:

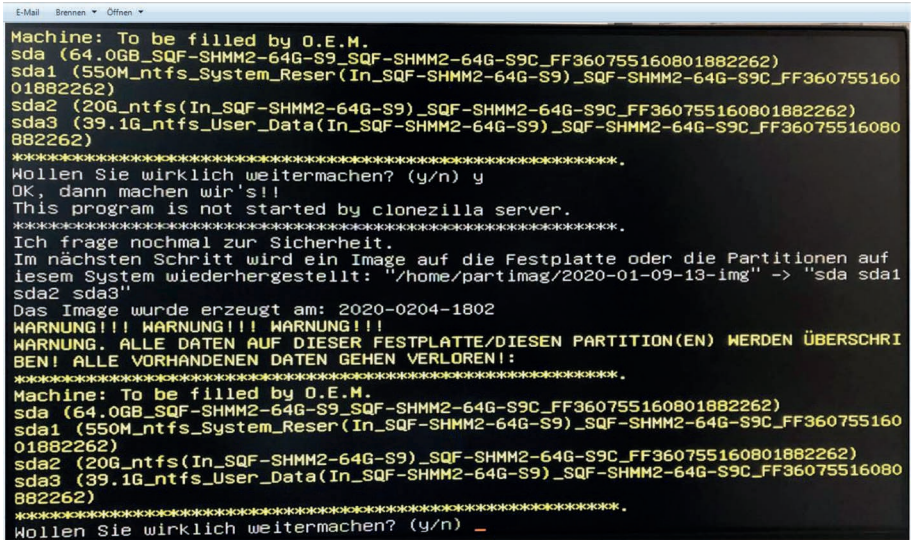
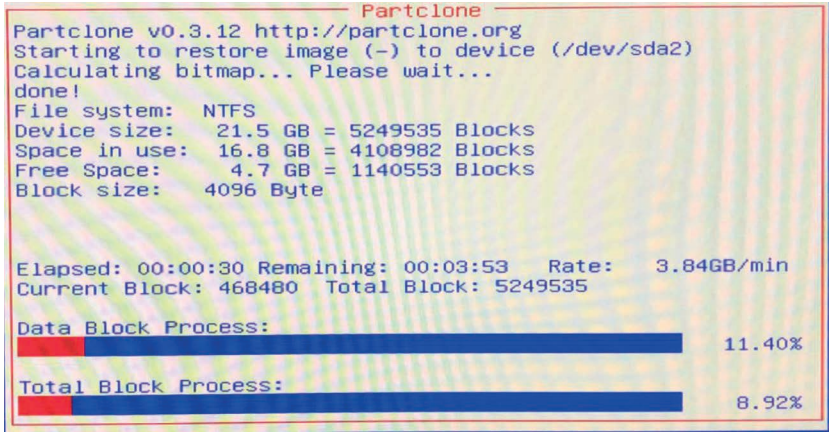


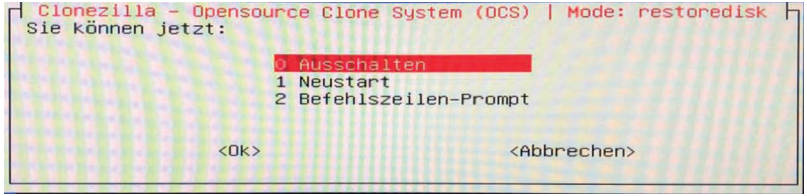
Fig. 36 Query recovery

➡ Confirm with `y`.

The system recovery now starts and the screen below is displayed:



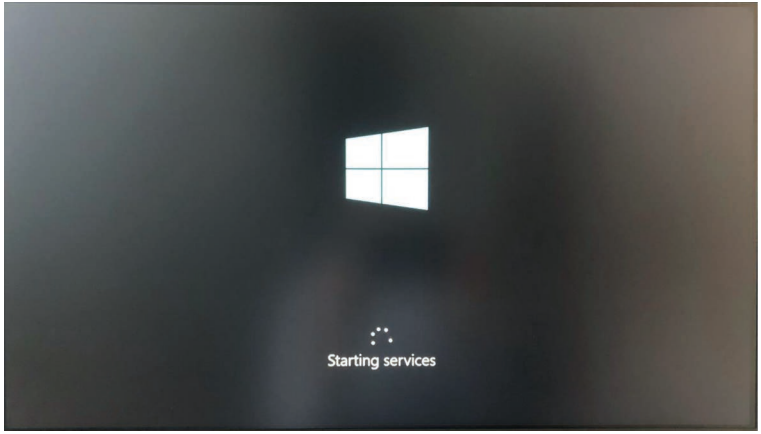
➡ After the restore process has been completed, select `Ausschalten` in the next window and confirm with `OK`.



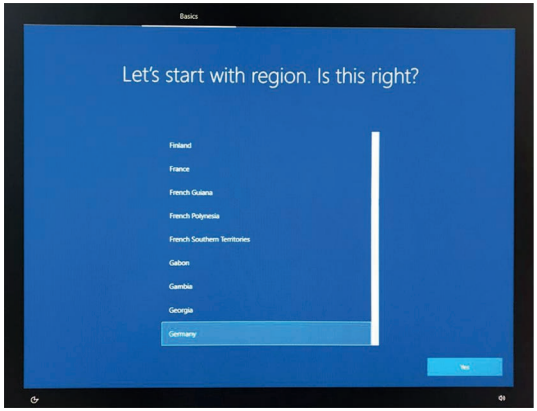
Step 3:

- After shutting down, briefly disconnect the power supply.
- Now reconnect the power supply and restart the computer.

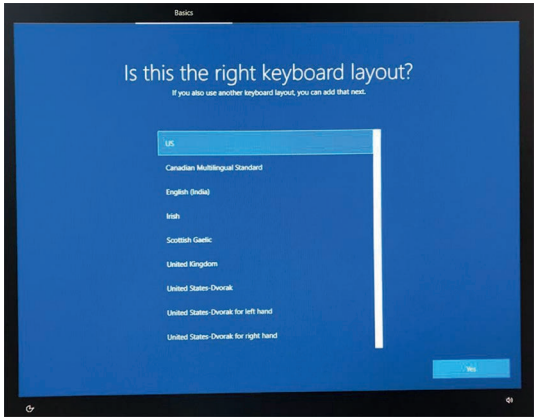
You will see the following screen:



➡ Select your region and confirm with `yes`.



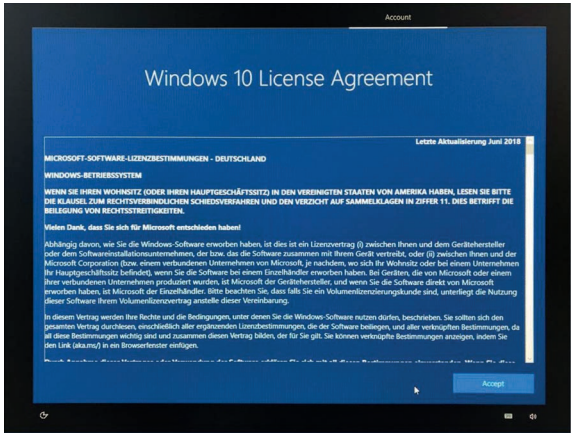
➡ Now select your keyboard layout and confirm with `yes`.



i Please note that the region and keyboard layout selections cannot be changed later.

Next, the Windows 10 licensing terms are displayed.

➡ Please confirm these with `Accept`.



Step 4:

After the final restart, you now see the Windows desktop.

7. Instructions for Operation

7.1 Cleaning

The housing of the thermoIMAGER NetPCQ can be cleaned with a soft, humid tissue moistened with water or a water based cleaner.

NOTICE

Never use cleaning compounds which contain solvents. Take care that no moisture infiltrates into the housing.
> Destruction of the Mini-PC

8. Liability for Material Defects

All components of the device have been checked and tested for functionality at the factory. However, if defects occur despite our careful quality control, MICRO-EPSILON or your dealer must be notified immediately.

The liability for material defects is 12 months from delivery. Within this period, defective parts, except for wearing parts, will be repaired or replaced free of charge, if the device is returned to MICRO-EPSILON with shipping costs prepaid. Any damage that is caused by improper handling, the use of force or by repairs or modifications by third parties is not covered by the liability for material defects. Repairs are carried out exclusively by MICRO-EPSILON.

Further claims can not be made. Claims arising from the purchase contract remain unaffected. In particular,

MICRO-EPSILON shall not be liable for any consequential, special, indirect or incidental damage. In the interest of further development, MICRO-EPSILON reserves the right to make design changes without notification.

For translations into other languages, the German version shall prevail.

9. Service, Repair

In the event of a defect on the Mini-PC or the USB stick (USB recovery stick) please send us the affected parts for repair or exchange.

In the case of faults the cause of which is not clearly identified, please send the entire measuring system to:

MICRO-EPSILON MESSTECHNIK
GmbH & Co. KG
Koenigbacher Str. 15
94496 Ortenburg / Germany

Tel. +49 (0) 8542/ 168-0
Fax +49 (0) 8542 / 168-90
info@micro-epsilon.com
www.micro-epsilon.com

For customers in USA apply:

Send the affected parts or the entire measuring system back to:

MICRO-EPSILON USA
8120 Brownleigh Dr.
Raleigh, NC 27617 /USA

Tel. +1 919 / 787-9707
Fax +1 919 / 787-9706
me-usa@micro-epsilon.com
www.micro-epsilon.com

For customers in Canada or South America applies:

Please contact your local distributor.

10. Decommissioning, Disposal

➡ Remove the cables from the Mini-PC.

Incorrect disposal may cause harm to the environment.

➡ Dispose of the device, its components and accessories, as well as the packaging materials in compliance with the applicable country-specific waste treatment and disposal regulations of the region of use.

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