W&T

www.WuT.de

# Operating instructions

Commissioning and applications

## transfer.box LAN-USB

valid for the product:
#53763 transfer.box LAN-USB

v1.00, 29.04.2021, english

Errors and changes excepted:

Since we can make mistakes, none of our statements may be used without verification. Please notify us of any errors or misunderstandings you become aware of so that we can identify and correct them as quickly as possible.

Only carry out work on or with W&T products if it is described here and you have read and understood the instructions in full. Unauthorized actions can cause hazards. We are not liable for the consequences of unauthorized actions. If in doubt, please ask us or your dealer again!

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# 1. Security and law

## Notes

These instructions contain information relating to your personal safety. They are introduced by a signal word that expresses the severity of the danger:

**DANGER** means an imminently hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING** indicates a possible hazard that could result in death or serious injury.

**CAUTION** indicates a possible hazard that may result in injury.

The signal word of the highest applicable hazard level is used in each warning. This means that if there is an indication of danger to life, there may also be a risk of injury.

If a warning refers to an entire section or a sequence of work steps, it precedes these and is structured as follows.

---

**⚠ SIGNAL WORD Nature and source of the Hazard**
**Consequences of the danger**
➔ An action step to avert the consequences of the danger.
➔ A further action step to avert the consequences of the danger.

---

A warning that refers to an individual work step immediately precedes it and is structured as follows:

1. Previous work step

   **⚠ SIGNAL WORD: Nature and source of the hazard**
   **Consequences of the danger**
   ➔ Action step to avert the danger
   ➔ Further action step to avert the danger
2. Work step to which the note refers
3. Subsequent work step

Some further information within these instructions is also highlighted:

**! Note: Risk of material damage**
Circumstances that can lead to material damage

***i* General information**
General information on the following text section

**Further information**
Reference to further information.

**P Product**
The following section refers only to a specific product.

**Target groups**
The following section or sequence of actions is aimed at a specific target group.

## Instructions for action

Tasks for achieving specific goals are instructions in the form of step-by-step instructions. These have the following structure:

### Solve task

The introductory paragraph summarizes the task and points out general prerequisites that are necessary for implementation. This is followed by a list of

- items needed for implementation and
- concrete requirements that must be met

1. first action step
2. second action step
3. third action step

Achieved result and, where applicable, a performance review.

## Other design elements

References to websites:
wut.de

User input:
129.11.121.1

Sourcecode:
```
print(„This is a programming example“)
```

Emphasis in text:
Identifiers, such as **button labels**, are highlighted in the body text.

## Qualified personnel

**⚠ WARNING** **Danger to life due to electric current**
**Improper installation can lead to accidents involving electrical current**
➔ Installation by qualified personnel only
➔ Observe documentation
➔ Observe safety regulations

The products described in these instructions may only be installed and commissioned by personnel who are qualified for the respective task. The documentation corresponding to the respective task must be observed; in particular the safety and warning notices contained therein.

Due to their training and experience, qualified personnel are able to recognize risks and avoid potential hazards when handling the products described.

## Intended use

The transfer.box can be connected to a host system via USB and used as a USB mass storage device. The same file storage can also be accessed on the network side. This enables network-side file exchange with systems that only have the option of accessing a USB memory device locally.

## Product modifications

Product modifications are not permitted. Wiesemann & Theis GmbH is not liable for damage resulting from unauthorized product modification.

## Electrical safety

- Before starting any work on the transfer.box, disconnect the power supply completely using suitable measures and secure it against being switched on again.
- Only use the appliance in closed and dry rooms.
- Do not expose the device to high ambient temperatures or direct sunlight. Observe restrictions with regard to the maximum ambient temperature.
- Keep ventilation openings clear and maintain a distance of at least 10 cm between the transfer.box and neighboring heat sources.
- Observe nominal values for input voltage and output currents.
- During installation, ensure that no free-hanging wires protrude into the interior of the appliance. Ensure that no individual wires protrude from strands. Use wire end ferrules.
- Screw the connection terminals tight.
- Screw down unused connection terminals.
- Only use power supply units that guarantee safe isolation of the low-voltage side from the mains supply in accordance with EN62368-1 and have “LPS” properties.

## Electromagnetic compatibility

**Note: Electromagnetic interference**

To ensure electromagnetic compatibility, only use shielded network cables!

The transfer.box meets the industrial limits for interference immunity as well as the stricter emission limits for households and small businesses. There are no EMC-related restrictions with regard to the usability of the devices in these environments.

## Conformity to standards

**Complete declarations of conformity**

The complete declarations of conformity for your device can be found on the corresponding online data sheet at wut.de/53763

The transfer.box conforms to the following standards and normative documents:

- EN 55032:2015 + A11:2020 Kl. B
- EN 61000-3-2: 2014
- EN 61000-3-3: 2013
- EN 61000-4-2: 2009
- EN 61000-4-3: 2006 + A1, A2
- EN 61000-4-4: 2012
- EN 61000-4-5: 2014 + A1
- EN 61000-4-6: 2014
- EN 61000-4-8: 2010
- EN 61000-4-11: 2004 + A1
- EN 61000-6-2: 2005
- EU Directive 2011/65/EU (RoHS) + Directive 2015/863/EU

## Storage

Store the transfer.box in a dry room. Ensure that the ambient conditions are observed. The temperature must be between -40°C and +70°C, the humidity must not exceed 95% relative humidity. We recommend storage in the original packaging.

## Transport

There are no special restrictions regarding transportation. However, to protect the product from mechanical stress, we recommend that it is only transported in its original packaging.

## Disposal

Electronic devices must not be disposed of with household waste, but must be disposed of properly as electrical waste. The transfer.box is labeled in accordance with 2012/19/EU on waste electrical and electronic equipment. This directive regulates the Europe-wide take-back and recycling of old electronic devices. You can dispose of the device via existing collection and take-back systems or return it to your specialist dealer.

# 2. Product information

## Manufacturer

Wiesemann & Theis GmbH
Porschestr. 12
42279 Wuppertal
Germany

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Fax: +49 (0)202 2680-265
E-Mail: info@wut.de
wut.de

WEEE registration: DE 77008276
BattG registration: 21000788

## Product labeling

The product type is clearly identified by the article number on the device sticker. The unique device identification can be found in the form of the MAC address on the underside of the device. This consists of twelve characters (six bytes in hexadecimal notation), starting with the manufacturer identification 00:c0:3d. The following 6 characters uniquely identify your device.

***i*** **Damage to or loss of the device sticker**
The article number and MAC address can be read out via the web interface and the WuTility tool (wut.de/wutility) if the device sticker is damaged or lost.

## Scope of delivery

The scope of delivery inculdes:

- transfer.box LAN-USB
- USB connection cable
- Quick guide
- Risk information

## Accessories and spare parts

To ensure reliable operation, we recommend the use of original W&T accessories:

Power supply unit with Euro plug (#11021)
Output: 24V DC, 500mA, energy efficiency: Level VI, no-load power < 0.075W
wut.de/11021

15 watt DIN rail power supply unit (#11080)
Universal LPS power supply unit with wide-range input 100-240V, 1 TE
wut.de/11080

## Symbols on the products

| Symbol | Explanation |
|---|---|
| CE | CE marking<br><br>The product complies with the requirements of the applicable EU directives. |
|  | WEEE marking<br><br>The product must not be disposed of with household waste, but must be disposed of in accordance with the disposal regulations for electrical waste applicable at the place of installation. |

# 3. Installation

**Installers**

The following section is aimed at the installers of the transfer.box and assumes appropriate technical knowledge.

## Top hat rail mounting

**Note: Risk of material damage**

Please observe the safety instructions in chapter 1.

The transfer.box can be mounted on a DIN rail (TH 35).

1. Place the transfer.box on the top edge of the top-hat rail with the mounting angled slightly upwards.
2. Press the device against the top-hat rail from the front until the holder engages with an audible click.

The transfer.box is now permanently mounted on the top-hat rail.

## Setting up the power supply

### Setting up the power supply via PoE

The transfer.box can be powered via the network socket as a power class 2 device via PoE in accordance with IEEE802.3af. For this you need

- A PoE switch or a PoE injector

1. Connect the network socket of the transfer.box to the PoE switch / PoE injector using a shielded network cable.

The transfer.box goes into operation.

### Set up power supply via external supply unit

**⚠ WARNING Danger to life due to electrical current**

**Using the wrong power supply unit can lead to electrical accidents and fire**

➔ Only use power supply units in accordance with the specification

➔ Observe documentation

➔ Observe safety regulations

The transfer.box can be supplied with power via an external power supply unit. Such a power supply unit must be potential-free and the reference earth for the output voltage must not have a direct connection to the protective earth conductor. Furthermore, safe isolation between the extra-low voltage side and the supply network in accordance with EN60950-1 and LPS properties are mandatory.

- a power supply unit that meets the specifications
- a screwdriver

1. Attach the green terminal adapter to the power supply unit
2. Plug the green terminal adapter into the socket on the device

The transfer.box goes into operation.

## Connecting the network cable

The transfer.box is equipped with a gigabit network interface. This network interface can be configured using the WuTility software (wut.de/wutility) or the user interface of the transfer.box. To connect to a network, you need:

- A patch cable

1. Use a patch cable to connect the transfer.box to the network into which you want to integrate the device.

The transfer.box is connected to the network.

## Establish USB connection

The transfer.box is equipped with a USB 2.0 interface (socket, type B). This can be used to connect it to a compatible host system, where it then logs on as a USB mass storage device.

- one USB connection cable (plug, type A <> plug, type B)

1. Connect the transfer.box to the host system that is to access the file storage of the transfer.box using a USB connection cable.

The transfer.box is connected to the host system. As soon as the green plug LED lights up continuously, the driver is loaded and access to the file storage is possible.

# 4. Commissioning

**Network administrator**
This section is aimed at network administrators and requires knowledge of network configuration. If you as a user do not know what to do with the steps described here, please contact your system administrator.

## Making network setting

You will need the following information to carry out the tasks described below:

- MAC address of the device to be configured
- Network parameters of the device to be configured: IP address, subnet mask, gateway, DNS and time server.

### Making network settings via the WuTility

In this section, you assign a basic network configuration to the transfer.box using the WuTility configuration software. If you want to configure several devices, make a note of the respective MAC addresses, which you will find on the underside of the device.

For the realization you need:

- a current web browser
- the WuTitliy software (wut.de/wutility)

1. Open the Wutility.
2. Select the device you want to configure from the list of available devices using its MAC address.
3. Click on the **IP address** button in the toolbar.
4. Enter the desired network parameters in the following dialog box.
5. Click on **Continue**.

The transfer.box accepts the settings and then restarts.

## Making network settings via DHCP

If automatic configuration via DHCP is activated in your network, the transfer.box obtains a configuration after you have connected it to the network. To find out the IP address of your transfer.box, you need either

- Access to the leases of your DHCP server, for example via the log file or via the display of network users on your router.
- the WuTitliy software (wut.de/wutility)

1. Open the log file of your DHCP server or the overview of the network participants on your router to determine their IP address using the MAC address of the transfer.box.
2. If necessary, configure a fixed lease for the transfer.box so that it can always be reached at the same IP address.

The transfer.box can now be reached via the IP address assigned by the DHCP server.

## Make network settings via the standard IP

In this section, you assign an IP configuration to the transfer.box via the web interface. To do this, use the preset default IP of the device:

- Administration rights for the network interface of your PC
- a current web browser

1. Assign your network interface a temporary or secondary IP configuration in the network 190.107.233/24.
2. Open your web browser.
3. Enter the IP address 190.107.233.110 in the address line.
4. Log in. No password is assigned by default and you can log in without entering a password.
5. Click on **Basic settings**.
6. Click on **Network**.
7. Enter the desired network configuration.
8. Click on the **Save** button at the bottom right.

The transfer.box adopts your setting and can be reached via the assigned IP address.

# Call up the web interface

## Call up web interface via IP address

The web interface can be accessed via the IP address of the transfer.box.

1. Open your web browser.
2. Enter the IP address of the transfer.box in the address bar.

The web interface is displayed.

## Call up the web interface via WuTility

The web interface can be accessed via WuTility.

1. Open the WuTility.
2. Select the device whose web interface you want to access from the list of available devices.
3. Click on the **Browser** button in the toolbar at the top.

The transfer.box web interface opens in your web browser.

## Make language settings

The web interface is available in German and English translation.

1. Click on the circle with the country flag in the top right-hand corner of the web interface.
2. Use the country flag to select the language in which the web interface should be displayed.

The language of the web interface changes.

## Make further settings via the web interface

All other settings for the transfer.box are made via the web interface. Here you will find the following controls.

- Crumb navigation (top)
- Main menu (left)
- Save button
- Reload button
- Buttons in dialog boxes

### Log in

To make settings via the web interface, you must first log in. No password is assigned on delivery and you can log in without entering a password.

1. Call up the web interface.
2. Click on the **Log in** button in the top right-hand corner of the user interface.
3. Enter the password, if you have assigned one.
4. Click on **Log in**.

You can now make settings via the web interface.

### Setting the date and time

***i*** **Manually set time is not saved permanently**

Please note that a manually entered time will be lost after a few days if the power supply is interrupted.

By default, the transfer.box is set so that the time is automatically obtained from ntp.org when Internet access is functioning. Alternatively, you can configure your own time server or enter the time manually.

1. Open the web interface.
2. Click on the **Basic settings** button in the menu.
3. Then click on the **Date and time** button.
4. Activate the **External time server** option and enter up to two time servers. Alternatively, deactivate the **External time server** function and enter the current time under **Manual configuration**.
5. Select the **time zone** that applies to the device location.
6. Click on the **Save** button.

The transfer.box takes over the configuration for date and time.

## Change device information

The transfer.box displays information about the device and the manufacturer on the web interface. This information refers to the product itself and to Wiesemann & Theis as the manufacturer in the delivery status. You can customize this information, for example if you use the transfer.box as a component in your own product.

7. Select the **Information** button in the menu under **Basic settings**.
1. Enter details about the product in the **Device information** area.
2. Enter details about the manufacturer in the **Manufacturer information** section.
3. Save the changes.

The changed information is displayed on the start page of the transfer.box under the menu item **Properties**.

# Set/change passwords

**! Note: Danger from cyber attacks**

No passwords are set in the factory settings. To make unauthorized access more difficult, you should use secure passwords.

To protect the transfer.box from unauthorized access, the configuration area and network-side access to the file storage can each be protected by a password.

- To set or change the passwords, you must be logged in to the configuration area.

1. Select the **User** button in the left-hand menu under **Basic settings**.
2. To set a password for the first time, click on the **Add password** button next to the relevant area. If a password has already been set, click on the **Change password** button.
3. Enter the new password in the dialog box and confirm it by entering it again.
4. Then click on the **Save** button.

The configuration area and/or network-side access to the file storage of the transfer.box is now protected by a password.

## Activate access to the file storage

On the network side, the internal file storage of the transfer.box can be accessed via the SMB (Samba), FTP and SSH protocols. These accesses can be activated individually. To access them, you must log in with the user name **storage** and the password you have assigned.

1. Log in to the configuration area.
2. Navigate to **Basic settings** and select the sub-item **Network**.
3. Activate the protocols via which you want to access the file storage of the transfer.box.
4. Then click on the **Save** button.

The selected accesses are active.

# 5. Internal file storage

The internal file storage (2.5 GB) of the transfer.box can be accessed both via USB and via the network. Changes are visible for the other access path after a brief synchronization. The sync LED flashes during the synchronization phase.

When changes are made via SMB, FTP or SSH, the USB drive is temporarily disconnected from the host system. Once synchronization is complete, it is mounted again and the changes are visible to the host system.

USB-side changes to the file storage are usually immediately available for network-side access.

### USB access

Read and write access to the file storage of the transfer.box via USB is possible from a host system.

- The host system must support USB mass storage devices.
- The transfer.box must be successfully integrated.

1. Open the mounted USB drive of the transfer.box on the host system.
2. Read or write access to the drive contents, and therefore to the file storage of the transfer.box.

Changes to the file system are now also visible for network-side access.

### Network access

Read and write access to the file storage of the transfer.box via the network is possible via SMB (Samba), FTP and SSH.

- The desired protocol for access must be activated in the network settings of the transfer.box.

1. Start a suitable client software for access.
2. Log in with the user name **storage** and the password you have assigned.

Access to the internal file storage of the transfer.box is now possible.

## Expert settings

In rare cases, it can happen that the transfer.box is not properly integrated by a host system. To be able to successfully access the internal file storage, it is then necessary to adjust the USB parameterization.

Immediately after connecting a USB storage device, some host systems write, read and delete files on the removable storage device in order to recognize and integrate it correctly. Such accesses are ignored for the duration of the initialization timeout (in seconds) and are therefore also not visible via SMB, FTP and SSH.

### Change initialization timeout

If a host system starts an unusually long initialization process, the timeout time can be adjusted.

1. Log in to the configuration area.
2. Navigate to **Basic settings** and select the sub-item **USB settings**.
3. Change the value for the **initialization timeout** (in seconds).
4. Then click on the **Save** button.

The value has been changed and is active.

Changes to the file system are only synchronized after the synchronization timeout has expired (in seconds) and are only then available for other access.

### Change synchronization timeout

Depending on the access frequency and the data rate during access, it may be necessary to adjust the timeout.

1. Log in to the configuration area.
2. Navigate to **Basic settings** and select the sub-item **USB settings**.
3. Change the value for the **synchronization timeout** (in seconds).
4. Then click on the **Save** button.

The value has been changed and is active.

# 6. Maintenance

## Opening the housing

**Note: Risk of material damage due to electrostatic discharge**

Electrostatic discharges can destroy components on the circuit board. If you do not have ESD equipment, touch the metal frame on the network interface before opening the housing in order to achieve potential equalization.

Some maintenance work requires access to the circuit board. You can open the housing for this purpose.

1. Remove the power supply and the network cables.
2. Remove the transfer.box from the top-hat rail.
3. Touch the metal edge of a network socket to carry out potential equalization.
4. Press the narrow housing sides of the transfer.box together lightly so that the plastic lugs on the long sides of the cover are released from the housing body.
5. Pull off the front panel.

You can now pull the circuit board out of its guide to carry out maintenance work.

## Werkseinstellungen hardwareseitig wiederherstellen

The transfer.box can be reset to the factory settings using a jumper inside the device.

1. Open the housing of the transfer.box according to the previous instructions.
2. Pull the circuit board out of the guide.
3. There are two jumpers in the middle of the circuit board, each of which is only connected to one contact pin.
4. Close the contact bridge of the jumper that points to the back of the device.
5. Supply the circuit board with voltage.
6. The recovery process is indicated by the following blink code: Short on, long off.
7. After successful execution, the flashing pattern is inverted: Long on, short off.
8. Disconnect the circuit board from the power supply.
9. Set the jumper back to the uncontacted initial position.
10. Close the housing.

You can now reassemble the transfer.box and put it back into operation.

## Restore factory settings via software

You can also reset the transfer.box in the configuration area of the web interface.

1. Click on **Maintenance** in the menu.
2. Click on the **FACTORY DEFAULTS** button in the Reset area.
3. Confirm the reset in the following dialog.
4. Observe the status LED. During resetting, it flashes in the following pattern: short on, long off.
5. After successful execution, the flashing pattern is inverted: Long on, short off.

You can now put the transfer.box into operation again.

## Perform firmware update

This section describes a firmware update using the WuTility software. The current settings of the transfer.box are not changed or reset by a firmware update.

For the implementation you need:

- the WuTitliy software

  wut.de/wutility

- The latest firmware for your product

  wut.de/53763

1. Download the latest firmware from the above Internet address.
2. Unzip the zip file.
3. Open the WuTility.
4. Select the device whose firmware you want to update from the list of available devices in WuTility.
5. Click on the **Firmware** button in the toolbar.
6. Select the UHD file with the current firmware.
7. Click Next to perform the update.
8. Wait for the feedback in WuTility.
9. After a successful update, click on the **Finish** button to complete the process.

The transfer.box restarts with the changed firmware and can be reached via the network again after a short time.

## Warm start

You can restart the transfer.box via the configuration interface.

1. Click on **Maintenance** in the menu.
2. Click on **RESTART DEVICE** in the Restart area.
3. Confirm the restart in the following dialog.

After a successful restart, the web interface is reloaded.

# 7. Außerbetriebnahme

## Remove the device from the DIN rail.

The transfer.box can be easily removed from the DIN rail. To do this, you need:

- A small flat-head screwdriver

1. Disconnect the network cable and the power supply..
2. There is a black tab at the height of the DIN rail below the transfer.box. Use the screwdriver to pull it down..
3. Tilt the front of the transfer.box up to lift the device off the top-hat rail..

You can now service, store or dispose of the transfer.box..

## Proper disposal

Electrical appliances must not be disposed of with household waste..

1. Please dispose of the transfer.box at your local collection point or return it to your specialist dealer..

Many thanks!

# 8. Technische Daten

**Online data sheets**
Detailed information about the product, tools and the latest firmware can be found in the online data sheet at wut.de/53763.

## Connections and displays

| | |
|---|---|
| Network: | 1 x 100/1000BaseT<br>Autosensing/Auto-MDIX, RJ45 |
| USB: | 1 x USB 2.0 (Type B-Socket) |
| Galvanic isolation: | RJ45 network connection min. 1500V |
| Supply voltage: | Power over Ethernet (PoE) or<br>24 ... 48V DC (+/- 10%) via screw terminal |
| Current consumption: | PoE Class 2 ( 3,84 ... 6,49W)<br>typ. 140mA at 24V DC external supply |
| Displays: | LEDs for system, error and network and USB sta tus |

## Hardware and software

| | |
|---|---|
| Processor and memory: | Marvell 88F6820<br>Flash: 8GB (eMMC)<br>RAM: 1GB (DDR3) |
| Services: | SMB<br>FTP<br>SSH |
| USB-Memory: | 2,5GB (Fat32) |

## Housing and other data

| | |
|---|---|
| Housing: | Plastic casing with integrated<br>DIN rail mounting<br>105 x 22 x 77mm (L x B x H) |
| Weight: | approx. 120g |
| Storage temperature: | -40 ... +70°C |
| Operating temperature: | 0 ... 60°C |
| Permissible humidity: | 0 ... 95% relative humidity, non-condensing |

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