

Manual

SD Data Station

#50541

FTP Data Station

#50542, #50543



Release

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The associated source text can be downloaded at

<http://www.wut.de/e-5www-60-inde-000.php>

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W&T

The FTP Data Station 2 and 3 and the SD Data Station offer all functionality of a FTP-, TFTP- and a SMB-Server, integrated in a very small mounting from. Access the internal memory or USB- / SD-storage using this protocols.

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1 Interfaces, Indicators and Installation

Describes the connection and installation options for the box.

1.1 Power

1.2 Network connection

1.3 USB-interface / SD-slot

1.4 LEDs

1.5 Button

1.6 Installation

1.1 Power

The box can be powered either via PoE or from an external power supply.

1.1.1 Power via PoE

The FTP Data Station and the SD Data Station is designed for use in PoE environments according to IEEE802.3af. Power is brought in here over the network infrastructure through the RJ45 terminal. The box supports both phantom power on data pairs 1/2 and 3/6 and power on the unused wire pairs 4/5 and 7/8.

To provide the supplied components with power management, the box identifies itself as a device in Power Class 2 (power consumption from 3.84W to 6.49W).

1.1.2 External power

Alternative to PoE the box can also be powered externally using the plug-in screw terminal on the underside of the housing. The DC voltage must be in a range of

24 ... 48V DC (+/-10%)

When applying the power please note the correct polarity. The 2-pin power plug is correspondingly labeled.



Reversing the polarity will not harm the hardware of the box.

1.1.3 Disconnect from suppl voltage

When disconnecting the FTP Data Station 3 from the supply voltage, the operating system gets shut down controlled. The energy for this process is taken from two capacitors. Especially

the file system is protected from failure, which could lead to problems at the next start of the system.

The capacitors are charged while operating the box.

1.2 Network connection

The box includes an IEEE 802.3 compatible network terminal. The physical connection is made using TP copper cable

1.2.1 10/100BaseT on RJ45

The 10/100BaseT network interface uses a shielded RJ45 connector. The pin configuration and function corresponds to an Auto-MDI(X) interface. Connection to a hub, switch or other network device is made using a maxim 100m long shielded patch cable.

Because the send and receive lines on connected devices are automatically detected, use of any (straight and crossed) network cable is possible.

The network connection is galvanically isolated from the supply voltage for at least 500V.

The box uses **autonegotiation**. To prevent communication problems, caused for example by a duplex mismatch, we recommend operating the port on the switch or hub in this mode as well. Here both the transmission speed and the duplex procedure is automatically negotiated and correspondingly set in the devices.



Managable switches often have special protocols (spanning tree protocol, port trunking, ...) as needed for example for uplinks to other switches or broadband connection of servers. These protocols are not generally needed for connecting normal terminal devices like the FTP Data Station / SD Data Station, and they may significantly slow down the opening of a connection after a restart. We recommend disabling these protocols and functions on the port used for the FTP Data Station / SD Data Station. Please consult your responsible network administrator.

1.2.2 Power-over-Ethernet (PoE)

The box can obtain its power over the network interface according to IEEE802.3af (Power-over-Ethernet). The data pairs may be used or the wire pairs not used for 10/100BaseT (see section **Power**).

1.3 USB-interface / SD-slot

The USB-interface of the FTP Data Station is USB 2.0 compliant. You can connect any USB-storage to this interface, which can then be accessed via network.

Using the SD-slot the memory of the SD Data Station can be extended up to 32GB. Memory cards of the type SD HC must be used. The external memory can also be accessed over the network.

All FAT-, NTFS or ext3-formatted storage can be used. The maximum available space on the storage is limited by the chosen file system. If the external storage contains several partitions, only the first one is detected and can be accessed.

When connecting an external storage its file system is checked first. Errors are corrected automatically.



Repairing the file system allows the further use of the memory. Maybe some data get lost during repairing the file system.

1.4 LEDs

Optical indication of the network status is provided by the box in the form of two LEDs integrated into the RJ45 jack. The device status is displayed by a multi-color indicator also on the front of the unit.

1.4.1 Network status

Two LEDs in the lower corners of the RJ45 jack indicate the current network status of the box. The green LED may assume the following states:

- Off: No link
- On: Link present
- Flashing: Active data communication

The orange LED indicates the current data rate:

- Off: 10MBit
- On: 100MBit

1.4.2 Multi-color indicator

The multi-color indicator on the front is used to represent the current **system status**:

- green / orange: **Normal state**. All services are started and the system is fully ready. An underlaid cyclical flashing indicates the system load. The faster this flashes, the greater the process load. At green an external storage is connected and attached successfully. At orange no storage is connected.
- blue: **Booting**. All services are being booted up. At this time no connections can be opened.
- Blue flashing: **Network traffic** to or from the box.
- White pulsing: Ongoing **firmware update**
- Red flashing (approx. 1Hz): **No link**

- Red, solid on: Serious system error. The system can no longer be properly started.

1.5 Button

1.5.1 Hardware reset

The **mechanical button** integrated into the multi-color display can be used for manual triggering a **hardware reset**. When the button is held down the multi-color display changes from green to yellow to red. This process takes around 5 seconds. Then all connections are closed and the system is restarted.

After startup is complete the indicator comes on green again, including the underlaid pulsing which indicates the processor load.

1.5.2 Eject external storage

A connected, external storage can be ejected by pushing the button twice.

During ejecting the storage the LED flashes. After that it lights orange.



When removing an external storage without ejecting it, stored data can be lost.

2 Navigation and Configuration Concept

If valid IP parameters are set in the FTP Data Station, the complete configuration of the system is made using Web-Based Management (WBM). Any Web browser can be used for access.

2.1 Open configuration access

2.2 Logon, make and save changes

2.3 Navigation

2.1 Open configuration access

Address the unit by entering the IP address from any Web browser. this takes you to Web-Based Management.

If the ports used for HTTP and HTTPS differ from the standard values (HTTP: 80, HTTPS: 443), the port number is required as a standard component of the address:

```
http://<ip-address>:<port>
```

or

```
https://<ip-address>:<port>
```

After sending the request the start page of the box will be shown in the browser.

2.2 Logon, changes, saving

Clicking on **Login** in the configuration tree takes you to the Login dialog.

Login

Password	<input style="width: 90%; height: 20px;" type="text"/>
<input style="background-color: #4f81bd; color: white; padding: 5px 15px;" type="button" value="Send"/>	

Login-Dialog

For access to the configuration, log in with the assigned password. No password is assigned by factory default. After that full access to the system is granted.



Changes take effect only after logging out using the options in the logout-dialog.

Use **Logout** to exit the system. The following options are provided here:

- **Save:** Any changes made are saved in the non-volatile memory of the box. The services affected by the configuration change are then restarted.
- **Restart:** The system is restarted and all active connections are closed. No configuration changes are saved.
- **Factory defaults:** Restores the factory default settings of the box. All user-defined settings are lost.
- **Logout:** Logs out without changing the configuration.

2.3 Navigation

Navigation is accomplished mainly using the navigation tree on the left side of the page. It is always possible to jump back to higher level pages using the breadcrumb navigation in the upper screen area.

2.3.1 Configuration tree

The configuration tree at left allows you to reach all the changeable options of the box. The individual configuration pages are sorted by topic and stored in a folder structure.

Clicking on the icon for a closed folder expands the corresponding directory. Clicking on the circled minus sign in front of an opened folder closes it again.

If you click on a closed or opened folder, a table overview of all the options available in this folder appears in the right area of the browser window. The individual entries in the table are also associated with links, which enables jumping to the respective page by selecting the link.

2.3.2 Breadcrumb navigation

Breadcrumb navigation is shown in the upper section of each page. This shows the path of the root directory for the configuration tree, **Home**, up to the currently opened page. Clicking on one of the page titles takes you directly to the higher level page.

2.3.3 Navigation without JavaScript

It is recommended that you enable JavaScript for using the configuration pages. If for security reasons you still prefer not to use JavaScript, you can navigate through the configuration using the breadcrumb navigation and the table overviews on the folder pages.

3 Assigning and changing IP parameters

After hardware installation, the IP address needed for operation in a TCP/IP network as well as the subnet mask and gateway address must be entered. Please consult your responsible system administrator for the correct values of these parameters.

The IP address of the unit as shipped is 190.107.233.110.

3.1 WuTility

3.2 Managing network parameters

3.3 Automatic address assigning using DHCP

3.4 Static mode

3.1 WuTility

The Windows tool WuTility version 4.02 and higher supports inventoring and management of the network basic parameters for the FTP Data Station:

- IP address
- Subnet mask
- Gateway address
- 2 x DNS-server address
- Switching between DHCP and Static

To assign these the PC and the box must be in the same physical network, whereby the function is independent of the current address setting for the box. This means even if the current IP parameters for the box do not match the PC settings, you can always make a change using WuTility. Any system password setup must be known.

The fastest way to install WuTility is using the Install button on the start page, using the product CD included with the unit.

Start WuTility then from

Start > Programs > W&T Software Toolkit > WuTility

The current version of WuTility can also be downloaded from our Web site:

<http://www.wut.de>

In addition to assigning parameters using WuTility, you can adjust the network configuration using the WBM as well.

3.2 Managing network parameters

The FTP Data Station / SD Data Station distinguishes between two modes with respect to its network-side basic parameters:

- Static
- DHCP

As shipped and after a factory default reset automatic address assignment per DHCP is enabled.

3.2.1 Static

The IP address, subnet mask and gateway are stored in the non-volatile setup and DHCP is enabled. The parameters set in this manner remain intact even after power interruptions and resets, until they are changed using the WuTility inventoring tool or via WBM.

3.2.2 DHCP

If automatic address assignment using DHCP is enabled, the box attempts to obtain its IP parameters from a DHCP server located in the network. If no DHCP server is in the network or if the attempt to obtain an IP address is rejected, the box operates using the factory default IP address 190.107.233.110. When switching from Static to DHCP mode via WuTility or WBM, this default IP address is defaulted to until valid parameters are assigned.

3.3 Automatic assignment using DHCP

Many network use DHCP (Dynamic Host Configuration Protocol) for centralized and dynamic assignment of the network parameters. As shipped and after a reset to the factory default settings DHCP mode is enabled, so that in network environments with dynamic IP parameter assignment all you need to do is connect the device to the network. The following parameters can be assigned using DHCP:

- IP address
- Subnet mask
- Gateway address
- 2 x DNS-server address
- Lease time



After an unintended parameter assignment or a change via DHCP to an unknown address, the unit can be found and identified from its unique MAC address using the WuTility management and inventoring tool. Changing the incorrect IP address as well as switching to Static mode while DHCP is deactivated can also be done via WuTility.

3.3.1 Enabling DHCP mode

DHCP protocol is enabled by switching from Static to DHCP mode using WuTility or the WBM. The previous static IP address is deleted when DHCP is enabled. The box defaults to its IP address 190.107.233.110 until new parameters are assigned by a DHCP server.

To set a unit to DHCP mode from WuTility, highlight the unit in the device list and click on the **IP-Address** button. In the following dialog window select the radio button **DHCP** and then click on **Next**.

To configure this option using WBM, log in to the browser using the configuration pages in the FTP Data Station and navigate to

Home >> Configuration >> FTP Data Station >> LAN

respectively

Home >> Configuration >> SD Data Station >> LAN

Select the option **Enable DHCP** and then click on the **Apply** button. Use **Logout** and **Save** to save the new setting in the box.



Switching from Static mode to DHCP causes the static set IP address to revert to the factory default setting 190.107.233.110. If the IP assignment using DHCP fails, for example because no DHCP server is available, the unit may no longer be accessible, especially in routed network environments. Re-enabling Static mode using WuTility is then only possible from a computer within the same physical network.

3.3.2 Disabling DHCP mode

DHCP is disabled by switching from **DHCP** mode to **Static** mode using WuTility or WBM. In both cases the new values for IP address, subnet mask and gateway address must be manually set.

To disable DHCP using WuTility, select the corresponding device in the inventory list of the program and click on the **IP-Address** button. In the resulting dialog window select the radio button **Static**. After entering the new IP address, subnet mask and gateway address, click on **Next**.

In WBM and while logged in navigate to the configuration page for the LAN-settings, unselect **Enable DHCP** and enter valid values for IP address, subnet mask and gateway address. After clicking on **Apply** you can save the values by clicking on **Logout** and **Save**.

3.3.3 System name

To support any possible automated updating of the DNS system by the DHCP server, the unit identifies itself within the DHCP protocol with its system name. The factory setting for this name is FTPDS2 / FTPDS3 followed by the last three places in the Ethernet address for the FTP Data Station, SD followed by the last three places in the Ethernet address for the SD Data Station. The system name of the unit can be changed using WBM.

3.3.4 Lease-Time

The lease time determined and transmitted by the DHCP server specifies the term of the assigned IP address. After half the lease time has expired the FTP Data Station / SD Data Station attempts to extend the term with the assigning DHCP server or to update the address. If this is not possible by the time the lease time has expired, for example because the DHCP server is no longer available, the box deletes its IP address and reverts to the factory set default IP address 190.107.233.110. At the same time the cyclical search for alternate DHCP servers is started in order to assign a new IP address.

After a reset both the assigned IP parameters as well as the lease time associated with the IP address are deleted. The unit starts up after a reboot with the default IP address and immediately begins DHCP requests.

In DHCP mode the remaining lease time together with the current IP address are displayed on the Web page

Home >> Properties.



If after expiration of the assigned lease time the DHCP server can no longer be reached, the unit deletes the current IP parameters, reverts to its factory default IP address and starts the cyclical search for alternate DHCP servers. All open connections are thereby closed. To prevent this problem we recommend configuring the lease time assigned in the DHCP server to infinite if possible.

3.3.5 Reserved IP addresses

The box is designed as a TCP server and provides services which can be automatically made use of on the computer side. To open a connection these need of course the IP address of the unit, so that it makes sense to reserve a particular IP address for the unit on the DHCP server. This is generally done by linking the IP address to be assigned to the unique Ethernet address, which can be found on the housing sticker.

3.3.6 Dynamic IP addresses

Fully dynamic address assignment, whereby the box gets a different IP address after every restart or after the lease time expires, is only practical in network environments with automated cross-linking between the DHCP and DNS services. This means that when a new IP address is assigned to the device, the DHCP server then also automatically updates the DNS system. The new address is thereby associated with the respective domain name. For detailed information about your network environment, consult with your system administrator.

3.4 Static mode

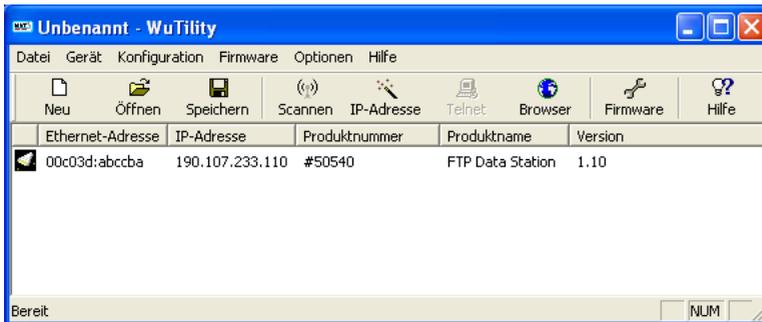
In **Static mode** the unit uses **static network parameters**, and automatic address assignment via **DHCP is disabled**. To assign the static values for IP address, subnet mask and gateway address there are two options.

3.4.1 Assigning static parameters using WuTility

Be sure that both the device and the computer you are using are connected to the same physical network. At startup **WuTility** automatically searches the local network for connected W&T network devices and generates an inventory list. This search process can be performed as often as desired by clicking on the **Scan** button:



From the inventory list you can identify the desired box based on its MAC address. When first installing, the default address (190.107.233.110) is set.



FTP Data Station scanned in WuTility

Select the desired box and click on the **IP Address** button:



In the resulting dialog window select the radio button **Static** and enter the desired values for IP address, subnet mask and gateway address.

The screenshot shows a dialog box titled "Geräteeinstellungen: Netzwerkparameter". It has two radio buttons: "dynamisch (DHCP)" and "statisch". The "statisch" option is selected. Below the radio buttons, there are several input fields and dropdown menus. The "IP-Adresse (muss eindeutig sein):" field is set to "10.40.27.98". The "Adressbereich:" dropdown is set to "Netzwerk #0". Below this, a message box says "Diese Adresse ist möglicherweise noch frei." The "Subnetzmaske:" field is set to "255.255.0.0". The "Vorgabe:" dropdown is set to "Windows-Netzwerk". The "Standardgateway:" field is set to "10.40.250.252". At the bottom of the dialog, there are three buttons: "< Zurück", "Weiter >", and "Abbrechen".

IP parameter assignment using WuTility



Every IP address must be unique within the network.

After clicking on the **Next** button you are prompted for the system password. Then the entered parameters are saved in the unit's non-volatile memory.

All other settings are made using the Web Based Management of the unit and an Internet browser. Select the desired box in the WuTility inventory list and click on the **Browser** button:



Changing network parameters is protected by the system password. To prevent misuse, we recommend assigning a system password.



If IP-Address, Subnetmask and Gateway doesn't match, these values will be replaced by the default-settings.

3.4.2 Assigning static IP parameters using WBM

As shipped and after a reset to the factory default settings, the box is in DHCP mode. As long as no DHCP server assigns an address, the box can also be reached at its default IP address 190.107.233.110. Switching to Static mode and assigning the new IP parameters can also be done from an Internet browser using WBM.



Always clarify all changes to the network settings on your computer ahead of time with your network administrator.

On the computer side the following conditions must be met:

- The IP address of the computer used is in the subnet 190.107.0.0 or is temporarily changed to an appropriate value. To change the IP address of the computer you need Administrator rights. Always clarify such a change in advance with your network administrator.
- On the computer used a fixed route is set which redirects the IP address 190.107.233.110 to the local network. To set up such a route you need Administrator rights on the system. The command line for creating a fixed route under Windows XP is:

```
route ADD 190.107.233.110 MASK 255.255.255.255 <IP-Address of the PC>
```

Then start your Internet browser and in the address line enter the target **http://190.107.233.110**. Log in to the device using Administrator rights and on the configuration page

Home >> Configuration >> FTP Data Station >> LAN

respectively

Home >> Configuration >> SD Data Station >> LAN

change the network settings to the new values.



If IP-Address, Subnetmask and Gateway doesn't match, these values will be replaced by the default-settings.

4 Configuring System Parameters

In the following section the configuration of system parameters is described. Access to these configuration options is through the Web Based Management (WBM) on the unit after you have logged in.

4.1 Edit device information

4.2 Select standard language

4.3 Set internal clock

4.4 Change password

4.5 Configure services

4.6 Modify LAN parameters

4.7 Change manufacturer data

4.1 Edit device information

From the menu tree navigate to

Home >> Config >> FTP Data Station >> Info

respectively

Home >> Config >> SD Data Station >> Info

and edit the following values:

- System name
- Description
- Device location
- Service contact

The **system name** directly affects the DHCP and DNS behavior. It can be used for example if these systems are appropriately configured to address the box in the browser.

The items **Description**, **Device location** and **Service contact** are only explanatory and are intended to help clarify the box in the application, make the installation location transparent, and indicate whom to contact when service is needed.

Using the option **Status-LED** the multi-color-LED in the front of the box can be switched on or off.

Info

System name	<input type="text" value="SD<wut1>"/>	Systemname, relevant for DHCP and DNS
Description	<input type="text" value="SD-Speicher im Netzwerk"/>	Use-oriented function of the device
Device location	<input type="text"/>	Location of installation
Service contact	<input type="text"/>	Can be called in case of errors and problems

Status-LED	<input checked="" type="radio"/> On <input type="radio"/> Off
-------------------	---

Configuration will take effect at logout

Send

Reload

Logout

Device information

Apply your changes before leaving the page by clicking on the **Send** button. The **Reload** button fills in any changed fields with their original values. **Logout** takes you to the Logout dialog.



*The configuration changes copied to the buffer memory using the **Send** button only take effect when at the end of a configuration process you have stored them in the non-volatile setup by clicking on **Save** in the logout dialog. After any required restart all changes will be active.*

4.2 Select standard language

On the configuration page Language, which is reached from the menu tree at

Home >> Config >> FTP Data Station >> Language

respectively

Home >> Config >> SD Data Station >> Language

you can select the standard language for the box. All Web pages are displayed in this language.

Available language profiles:

- German
- English

Language

Default-Language	<input checked="" type="radio"/>  <input type="radio"/> 	Defines the default-language.
Configuration will take effect at logout		
<input type="button" value="Send"/>	<input type="button" value="Reload"/>	<input type="button" value="Logout"/>

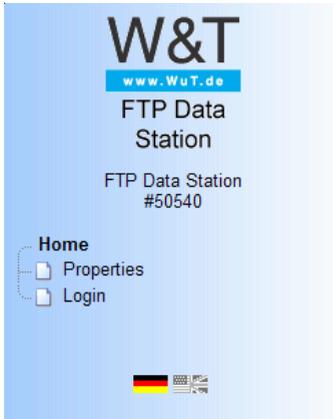
Configuring the standard language

Select the desired language by clicking on the corresponding flag and apply your change by clicking on the **Send** button to the buffer memory.



*The configuration changes copied to the buffer memory using the **Send** button only take effect when at the end of a configuration process you have stored them in the non-volatile setup by clicking on **Save** in the logout dialog. After any required restart all changes will be active.*

In addition to the fixed language selection using the method described above, you can also change the language profile so that it takes effect immediately. This is done by clicking on the flag symbols located below the menu tree. The grayed out flag shows here the currently active language profile. You can always switch to the language profile whose flag is not grayed out.



Quick selecting the system language

This method of selecting the language is however only valid for the current session. If the browser is closed or outside pages opened, this setting is lost. The next time the original page is opened the device reverts to the configured standard language.

4.3 Setting the device clock

Internal clock settings are made on the configuration page

Home >> Config >> FTP Data Station 2 >> Device Clock

respectively

Home >> Config >> SD Data Station >> Device Clock

Device Clock

Time-Server Client	<input checked="" type="checkbox"/>	Activates the time-synchronisation with a time-server
Time-Server 1	<input type="text" value="pool.ntp.org"/>	A time-server's IP-address or hostname
Time-Server 2	<input type="text" value="europe.pool.ntp.org"/>	IP-address or hostname of an alternative time-server
Set date/time	<input type="checkbox"/>	Applies Date and Time (available when Time-Server Client is switched off)
Date	<input type="text" value="26"/> <input type="text" value="11"/> <input type="text" value="2010"/>	Formatted date: MM.DD.YYYY
Time	<input type="text" value="08"/> <input type="text" value="09"/> <input type="text" value="30"/>	Formatted time: hh:mm:ss
Timezone	<input type="text" value="Berlin"/>	Current timezone

Configuration will take effect at logout

Send

Reload

Logout

Device clock settings

When you activate the option **Time-Server Client** the unit automatically retrieves the current date and time using Network Time Protocol (NTP). The time servers entered for **Time-Server 1** and **Time-Server 2** are contacted.

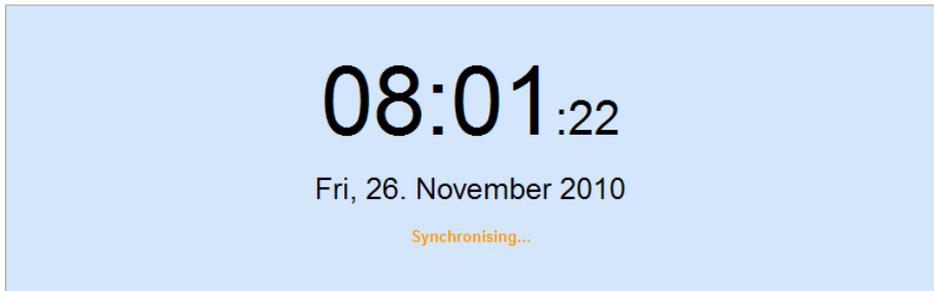
Time-Server 1 and **Time-Server 2** are contacted at the same time during a synchronization cycle. The name resolution of the host names entered there, should you be using a public time

server, normally returns multiple IP addresses. The more addresses are available to the process here, the faster the time will be calibrated.

The current status of the synchronization procedure can be seen on the Home page under the time and date information displayed there. The following status conditions are possible:

- Time synchronization disabled
- Deviceclock not synchronized!
- Synchronising...
- Deviceclock synchronized

Home



The screenshot shows a light blue rectangular area with the following content:

08:01:22
Fri, 26. November 2010
Synchronising...

Time and status information for the time server client on the homepage

After starting synchronization, second-accurate time information will be available after just a very short delay. The target accuracy of the time synchronization is in the microsecond range. To reach this accuracy, the process takes up to half an hour. The **Synchronising...** status displayed on **Home** is replaced by **Deviceclock synchronized** after full synchronization has been completed. If an error occurs during the procedure, the system is set to **System time not synchronized!**. There are then cyclical attempts to synchronize the time and date.

Once the next synchronization takes place automatically depending on the discrepancy with the internal clock.

When **Time-Server Client** is disabled, you can enable the option **Set date/time**. If this is active, transmitting the values with **Send** passes the time information set under **Date** and **Time** to the **Device Clock**. Regardless of whether using automatic or manual time setting, specify for **Timezone** the current location of the box. This selection control the offset to UTC as well as automatic adjustment of the time when changing from daylight savings to standard time and vice-versa.

Apply your changes on this configuration page by sending them to the buffer memory of the device: Click **Send**.



*The configuration changes copied to the buffer memory only take effect when at the end of a configuration process you have stored them in the non-volatile setup by clicking on **Save** in the logout dialog. After any required restart all changes will be active*

The internal clock of the FTP Data Station 2 and the SD Data Station is battery buffered. This means the set time information is not lost when disconnecting the unit from power. The battery used is a button cell with 3V and 125mAh. Due to the permissible ambient temperature of the unit, please use only types designed for an extended temperature range (-30 ... 80°C) when replacing the battery. The standard name for the battery is: BR1632. Please always properly dispose of used batteries.

The internal clock of the FTP Data Station 3 is supplied by two capacitors, after disconnecting from its power supply. The capacitors get charged while operating the box. They can run the clock up to one week.

4.4 Change password

Change the password on

Home >> Config >> FTP Data Station >> Password

respectively

Home >> Config >> SD Data Station >> Password

Check the option **Change password** and enter the new one. You have to repeat the password.

Change password

Change password	<input type="checkbox"/>	Check here for modifying the password
Password	<input type="text"/>	
Re-enter	<input type="text"/>	

Configuration will take effect at logout

Send **Reload** **Logout**

Changing the administrator account

 *The configuration changes copied to the buffer memory only take effect when at the end of a configuration process you have stored them in the non-volatile setup of the by clicking on **Save** in the logout dialog. After any required restart all changes will be active.*

4.5 Configure services

Services, provided by the unit, can be configured at

Home >> Config >> FTP Data Station >> Network-Service

respectively

Home >> Config >> SD Data Station >> Network-Service

Using **activate Web-Access** you can disable the WBM. At disabled WBM the reset of the box to the default settings is the only way to reactivate the WBM. Furthermore you can activate **HTTPS** to make the configuration-process more secure. Also the ports can be changed here and your own **HTTP-certificate** can be uploaded here.

As shipped the FTP-server in the box is disabled. By selecting the option **FTP-Server** you can access the user area with any FTP client through the configured TCP port. Log in using the user name **admin** and the currently assigned password.

To activate the TFTP-server, select **TFTP-Server**.

The device also offers access to the internally stored user files using SMB protocol. If you want this memory to be accessible in an MS Windows environment for example, select **Enable SMB-Server**. The system will then be displayed in the network environment, below the specified **Workgroup**, with the **System name**. To access this resource username (admin) and the currently configured password are required. The standard enabled login procedure can be disabled by deselecting **Login required**. In this case neither the user name nor a password are prompted when accessing the subfolder **userfiles**. Direct access to the file system is possible using:

```
\\<IP-Address>[\userfiles]
```

For viewing error logs there can be a SSH-Server activated, using the option **SSH-Access**. Username admin and the assigned password is for login required.

If the option **Reset-Port** is enabled, the box carries out a warm start after opening **Reset-Port**. If an Administrator password has been assigned, this must be sent to the system directly after opening the port.

The accessible management of the box can be controlled by **Allow Firmware-Update** and **activate WuTility-Management**.

The mode **datafuel-station** allows the later copy of data from the internal memory of the box to a connected USB- or SD-memory. The process is being started by pushing the button on the box twice. The behaviour of this mode can be modified by the options **Erase source-data after copy** and **Erase data on media before copy**.



*The configuration changes copied to the buffer memory only take effect when at the end of a configuration process you have stored them in the non-volatile setup by clicking on **Save** in the logout dialog. After any required restart all changes will be active.*

4.6 Modify LAN parameters

Change the LAN configuration of the box under

Home >> Config >> FTP Data Station >> LAN

respectively

Home >> Config >> SD Data Station >> LAN

To use automatic address assignment using DHCP, select the option **Enable DHCP**. Otherwise you can manually configure the parameters **IP address**, **subnet mask** and **gateway** in the text field provided. The two possible DNS servers are always editable, but are overwritten by addresses, delivered via DHCP.

LAN

Enable DHCP	<input type="checkbox"/>	Activates automatic IP-settings via DHCP
IP-Address	<input type="text" value="10.40.27.245"/>	Scheme: xxx.xxx.xxx.xxx
Subnet Mask	<input type="text" value="255.255.0.0"/>	Scheme: xxx.xxx.xxx.xxx
Gateway	<input type="text" value="10.40.250.252"/>	Scheme: xxx.xxx.xxx.xxx
DNS-Server 1	<input type="text" value="10.40.250.252"/>	Scheme: xxx.xxx.xxx.xxx
DNS-Server 2	<input type="text" value="0.0.0.0"/>	Scheme: xxx.xxx.xxx.xxx

Configuration will take effect at logout

Send

Reload

Logout

Configuring the network parameters



*The configuration changes copied to the buffer memory only take effect when at the end of a configuration process you have stored them in the non-volatile setup by clicking on **Save** in the logout dialog. After any required restart all changes will be active.*

4.7 Change manufacturer data

At

Home >> Config >> FTP Data Station >> Manufacturer

respectively

Home >> Config >> SD Data Station >> Manufacturer

you can change the data for manufacturer and product name or select an alternate logo.

Manufacturer

Name	<input type="text" value="Wiesemann & Theis GmbH"/>	Manufacturer information, which are displayed on the "Properties"-page.
Address	<input type="text" value="Porschestr. 12"/> <input type="text" value="42279 Wuppertal"/> <input type="text" value="Germany"/>	
Phone-No.	<input type="text" value="+49 (0)202 / 2680-0"/>	
Website	<input type="text" value="http://www.wut.de"/>	
Product-name	<input type="text" value="FTP Data Station"/>	
Logo	<input type="radio"/> No logo <input checked="" type="radio"/> Wiesemann & Theis logo  <input type="radio"/> Upload logo-file (max. 100KB) <input type="text" value=""/> <input type="button" value="Durchsuchen..."/>	Logo displayed above the navigation.

Configuration will take effect at logout

Modifying manufacturer data and logo

Under **Name, Address, Phone-No., Website** and **Product-name** enter the information you want to be shown on the **Properties** page for viewing by all users.

Under the **Logo** option you can select the company or product logo that you want to appear in the header of the configuration tree. Here you can select from:

- No logo: No graphical company or product logo is shown in the configuration tree.
- Wiesemann & Theis logo: The company logo of the manufacturer of the unit is displayed (factory default setting)
- User-defined logo: Any graphics file with a maximum size of 100kB can be loaded into the device and displayed above the configuration tree.



*The configuration changes copied to the buffer memory only take effect when at the end of a configuration process you have stored them in the non-volatile setup by clicking on **Save** in the logout dialog. After any required restart all changes will be active.*

5 Accessible folders

Access to the internal, solid memory and to the device connected external storage.

5.1 Rootfolder in the solid memory

5.2 External storage

5.1 Rootfolder in the solid memory

The device offers 750MB internal solid memory, which can be used completely by the user. Access this memory via SMB-share, you see the folder **userfiles**, located in the solid memory, as root. Connect via FTP or TFTP and you'll see this folder also.

The access via FTP and SMB requires, if not deactivated for SMB, authentication with username and password. The username is always **admin**, the password is the assigned one.

You can store any files in **userfiles** and download them from this location. Also creating and deleting of folders is possible.

The access via FTP, TFTP and SMB at the same time is allowed.



Changes made to the file system are visible to other users after updating their view.

5.2 External storage

Connect a FAT-, NTFS- or ext3-formatted external storage to the device, it will be displays as subfolder of **userfiles**, named **usbmedia** at FTP Data Station or **sdmedia** at SD Data Station.

As soon as the LED lights green, the folder is mounted and you can access the external storage.

Direct access the the external storage via SMB:

```
\\<IP-address>\userfiles\usbmedia
```

respectively

```
\\<IP-address>\userfiles\sdmedia
```

To access the external storage via FTP or TFTP, you have to set up the name of the folder as path in your client.

6 Appendix

6.1 Device reset

6.2 Restoring factory default settings

6.3 Firmware update

6.1 Device reset

In the following the methods for restarting the device are described. At a restart all active connections are closed. The current settings, as long as they have been actually saved, are not lost.

6.1.1 Reset using WBM

Logging in using WBM and Administrator rights offers you the option **Restart** in the navigation area under **Logout**. Click on this button and the system will perform a restart after brief confirmation dialog. This closes all active connections.

The following bootup procedure is indicated by blue pulsing of the Status LED.

6.1.2 Restart using the button

Use the button on the front panel to perform a restart by holding the button down for approx. 5 seconds. While the button is being pressed the color of the Status LED changes from green to yellow to red.

After approx. 5 seconds the blue pulsing of the Status LED indicates that the boot process is running.

6.1.3 Reset port

Alternately to resetting the device by clicking on the button in the logoff dialog or pressing the front panel button, the unit can also be restarted by addressing the Reset-Port (default: 8888). If no password is assigned, simply opening the port will trigger a warm start. If a password is set, this must be send to the unit as soon as the connection is opened.

The reset begins immediately, all active connections are closed or rejected. The device then begins to boot up, indicated by blue pulsing of the multi-color LED.



An explicit enabling of this option in the network settings is required in order to force the unit in this way into a warm start. This option is enabled in the factory default settings.

6.2 Restoring factory default settings

In some situations a reset to the factory default settings may be necessary. If the system is still capable of running and accessible through WBM, the factory default reset can be performed from the browser. If the device is no longer accessible through software, the reset must be performed by closing jumpers inside the unit.

When resetting to the factory default condition the basic settings are restored.

In addition, all files loaded by the user into the box are deleted.

6.2.1 Web Based Management

Log in using WBM and navigate to the logout dialog

Home >> Logout

Clicking on the **Factory defaults** button restores the device to its original factory default settings.

When this process is started the LED on the front panel begins to pulse blue. After the base configuration has been restored the system restarts. As soon as the LED turns green to indicate OK status, you can work with the unit again.

6.2.2 Inserting the jumper

To reset the system to its factory default settings when software access is not possible, you must first open the housing. To do this, first remove the housing panel which is latched into the housing body on both long ends with two lugs each. Then you can remove the circuit board from the body.



You must first disconnect the device from any external power supply, since damage to the circuit board could otherwise occur.

SD Data Station (#50541): Behind the SD-card you will find four contact pins. Jumper both the pins closest to the middle of the board using one of the jumpers provided and restore power.

FTP Data Station 2 (#50542): On the short side of the board where the network connector is also located you will find four contact pins. Jumper both the pins closest to the middle of the board using one of the jumpers provided and restore power.

FTP Data Station 3 (#50543): On the short side of the board where the network connector is not located you will find four contact pins. Jumper both the pins closest to the edge of the board using one of the jumpers provided and restore power.

As soon as you turn the unit on the system begins to restore its factory default settings. During this process the LED will pulse blue. As soon as the factory defaults are reconstructed, the LED will illuminate with a constant, weak blue. Now remove the jumper and place the circuit board back in the housing.

6.3 Firmware update

The operating software is being continuously improved. The following section describes the procedure for uploading the firmware.

6.3.1 Where is the latest firmware available?

The latest firmware including the update tools and a revision history are published on our Web site at

<http://www.wut.de>

From there the best way to navigate is to use the search function located on the left side. First enter the model number of the FTP Data Station 2 (50542), of the FTP Data Station 3 (50543) or of the SD Data Station (50541). From the associated selection box choose **Firmware** and then click on the **Go** button.

6.3.2 Firmware update under Windows

No special preparation is necessary for the firmware update.

The new firmware is transmitted to the device using WuTility. In the inventory list select the desired unit and click on the **Firmware** button:



In the following dialog select only the firmware file you want to obtain (*.uhd) and then click on the **Next** button. After the file has been sent the device automatically performs a restart and is then ready to use.



Interrupting the update process may under some conditions result in a failure of the system. Therefore

ensure the stability of the power supply and network connection.

6.3.3 Update concept

To prevent a defect in the system caused by a failed firmware update, the loaded firmware is not installed on the current image but rather on an alternate image. Each time the unit is booted up the more current image is booted, which allows the last update to be used.

If an error occurs during the update process and the firmware cannot be completely installed, the device will still be operational due to the presence of the original and unmodified image.

6.3.4 Boot alternate image

If a firmware update cannot be successfully ended, for example due to an interrupted network connection, it can happen that the box will then no longer boot. In this case you can boot from the original image, which was active when the firmware load failed, by jumpering the two contact pins, which don't cause the factory-default-reset the next time the system is started. A new update of the firmware overwrites the inactive image containing the defective installation.



The jumper must be removed after you have successfully updated.