

Manual

Web-Count 6x Digital



Typ
Modell
Release

Web-Count 6x Digital
#57652
EN 3.25 02/2011 PA

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W&T

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W&T

1. Introduction

With the Web-Count from W&T it is possible to acquire pulse counts over the six integrated, digital inputs and send network-based reports. The status of the inputs and the associated counters can be conveniently monitored from any browser. A network-based report can be sent for example via mail, FTP, SNMP or Syslog.

The device also features the functionality of a data logger. All counter events are, supplemented by a time stamp, stored in the internal, non-volatile 8MB flash memory. Recording of events allows unbroken reconstruction at any time of the input configuration, which can be used for example for analysis purposes.

An integrated Web server provides configuration pages for setting the device parameters. Browser-based software is used for observing the count inputs; the software can also be loaded from the Web server of the Web-Count into any browser. The Web-Count displays the current state of the various counters in a self-refreshing cycle. The data logger can also be read using this software. Various filters can be applied for showing the data in as clear a way as possible and reducing extraneous data to a minimum .

The supply voltage can be provided either via PoE through the network or from an external power supply.

The features of the Web-Count make it especially suited for autonomous monitoring and measurement tasks. Reports over a network will quickly reach even very distant personnel, which promotes decentralization of locations. The network connection enables use of an existing infrastructure, thereby making it possible to send messages individually and without additional cabling. Operation and monitoring is possible, thanks to the integrated, browser-based software, not only in the Intranet, but also worldwide over the Internet using any desired browser.

2. Startup

Just a few steps are needed to incorporate the Web-Count into your network and get it running.

2.1 Supply voltage

The following describes the two methods of providing power to the Web-Count.

The types of voltage supply described here provide only power to the device. Wiring the inputs requires an additional power supply.



If the device is powered using PoE, connecting or disconnecting an additional external power source while the device is running may result in the Web-Count restarting. The device resumes normal function after just a few seconds, but Input events which may have taken place in the meantime will not be stored in the internal logger.

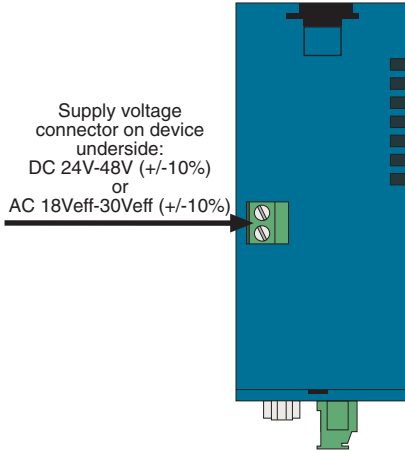
2.1.1 External supply voltage

Connect a supply voltage of 24V...48V DC (+/-10%) or 18Veff...30Veff AC (+/-10%) to the terminal on the underneath of the device. You may use power supplies sold by W&T or any desired power supply which meets the technical requirements.



The external supply voltage for the device is always required in networks not providing PoE, but may also be used in PoE environments.

When powering with DC voltage, note correct polarity. Labeling can be found on the screw terminals on the green power plug.



Underside of the device with terminal for the external power supply

It is also possible to power the device with 12V DC. There however you must take into account the very poor efficiency of the power supply and the associated elevated current draw.

2.1.2 Voltage supply using PoE

The Web-Count is equipped for use in Power over Ethernet environments per IEEE802.3af. The voltage is then provided by the network infrastructure using the RJ45 terminal. The device supports both phantom feed using data pairs 1/2 and 3/6 or spare-pair power using the unused wire pairs 4/5 and 7/8.

To enable power management for the supplying components, the Web-Count identifies itself as a Power Class 1 device with a power draw of 0.44W to 3.84W.

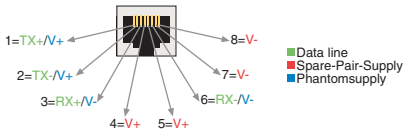


With an external power supply the Web-Count can also be used in networks not providing PoE support.

2.2 Network connection

The Web-Count provides an IEEE 802.3 compatible network connection on a shielded RJ45 connector. Pin assignments correspond to an MDI interface (see figure), so that connection

to a hub or switch is made using a 1:1 wired and shielded patch cable.



Configuration of the RJ45 PoE network jack

The factory default setting for the Web-Count on the network side is for Auto-Negotiation. Data transmission speed and duplex procedure are automatically negotiated with the connected switch/hub and set appropriately.

The network connection is galvanically isolated to 500V with respect to the power supply as well as the digital Inputs and the serial port.

Thanks to the integrated Power over Ethernet technology, the device can be supplied with the necessary operating voltage through the network connection.

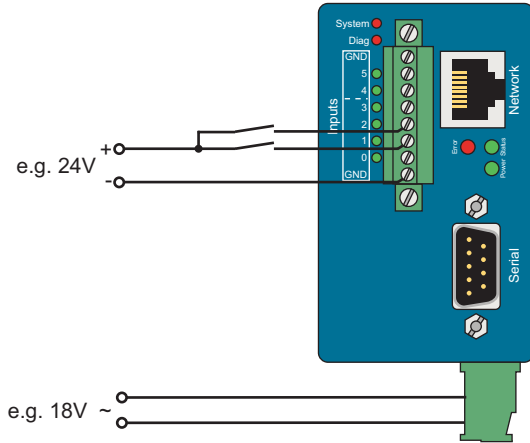
2.3 Wiring the inputs

The permitted input voltage range is +/-30V with respect to reference ground.

The switching threshold of the inputs is 8V +/-1V. Lower voltages are recognized as an OFF or 0 signal. Voltages higher than 8V are evaluated by the Web-Count as an ON or 1 signal. Input voltages between 7V and 9V should be avoided, since their meaning may be ambiguous.

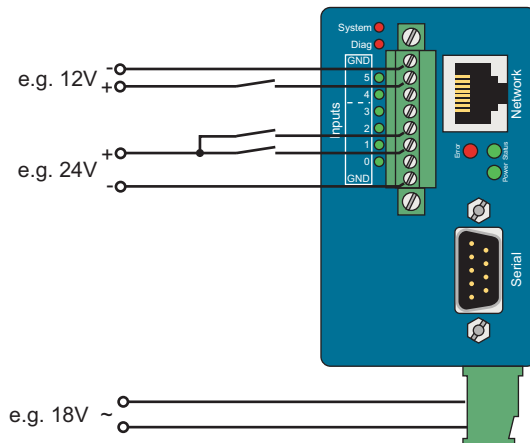
The Web-Count inputs are divided into two groups: Inputs 0 - 3 and inputs 4 + 5. These groups are galvanically isolated from each other to 2kV. A separate reference ground is brought out for each input group.

The following wiring example shows how two inputs are controlled. It is important that the signals from one input group have the same reference ground.



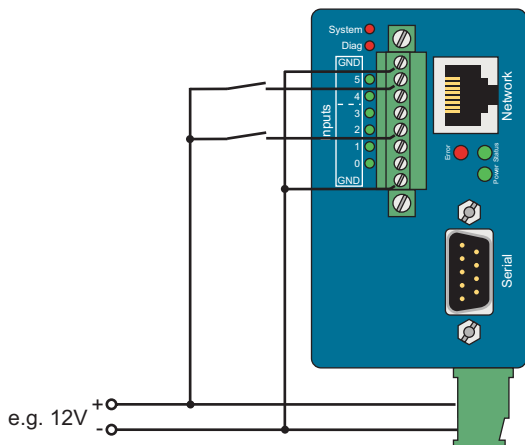
Controlling two inputs in a group

If the input signals have a different reference ground, they should be divided between the two input groups.



Signals with different reference ground

If you need to use the inputs for monitoring the states of potential-free contacts, the supply voltage for the unit can also be used as the signal voltage. In this case you need to operate the Web-Count with a DC voltage of 12V-30V. A corresponding wiring example is shown in the following illustration.



Supply voltage as signal voltage

In addition to detecting the input status ON and OFF, each input also has a counter. By default pulses (positive edges) are counted. The counters can however be configured for edge counting. Furthermore, two inputs can be used together for incremental, direction-dependent counting. Here the counter which first detected the change is incremented.

2.4 Assigning the IP address using Wutility

Once the hardware has been powered as described above using either PoE or an external power supply, the IP address required for operating in a TCP/IP network needs to be assigned. The necessary values (IP address, subnet mask, etc.) can be obtained from your system administrator.



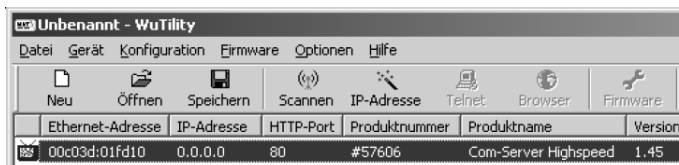
The assigned IP address must be unique within the network.

There are several ways to assign the IP address. To make the process as convenient as possible, we have developed the *WuTility* program, which you can download from our homepage <http://www.wut.de>. This procedure is described in the following. A summary of possible alternatives can be found in the Appendix to this manual.

Ensure that the PC you are assigning the IP address with is in the same subnet as the Web-Count you are configuring. Both devices must be connected to the network.

At startup the *WuTility* automatically searches the local network for connected W&T network devices and displays them in an inventory list. The scan procedure can be repeated as often as desired by clicking on the *Scan* button.

Now select the Web-Count from the displayed list. If you have more than one unconfigured W&T network devices in your network, you can use the MAC address to create the relationship between list entry and terminal device:

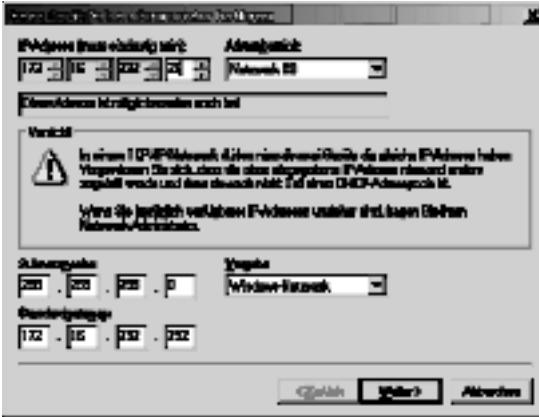


The screenshot shows the 'Unbenannt - WuTility' application window. It has a menu bar with 'Datei', 'Gerät', 'Konfiguration', 'Firmware', 'Optionen', and 'Hilfe'. Below the menu bar is a toolbar with icons for 'Neu', 'Öffnen', 'Speichern', 'Scannen', 'IP-Adresse', 'Telnet', 'Browser', and 'Firmware'. At the bottom, there is a table with the following data:

Ethernet-Adresse	IP-Adresse	HTTP-Port	Produktnummer	Produktname	Version
00c03d:01fd10	0.0.0.0	80	#57606	Com-Server Highspeed	1.45

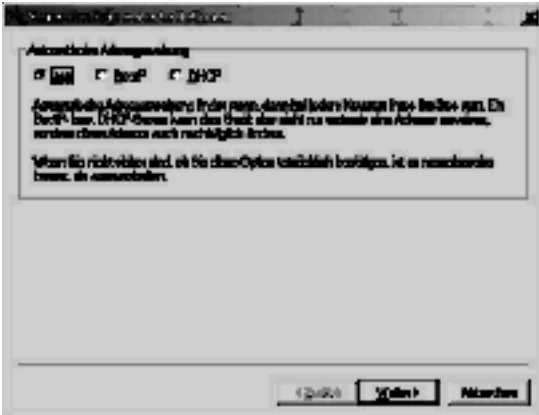
WuTility with found W&T network device

Use the button *IP address* to go to the configuration dialog box. There you enter the desired network parameters for the device. Confirm your entry by clicking on the *Next* button:



Configuration dialog box for network parameters

In the following window you can activate the BOOTP or DHCP client of the device for automatic IP address assigning:



Configuration dialog box for address assigning

By clicking on the *Next* button the Web-Count is assigned the entered network parameters. All the columns of the inventory list in *WuTility* are filled with information. Clicking on the *Browser* button opens your standard browser and you can see the start page for the device.

2.5 Automatic IP address assignment

Many networks use either DHCP (Dynamic Host Configuration Protocol) or its predecessor BOOTP, described in the following section, for centralized and dynamic assignment of the network parameters. The factory default setting is for DHCP activated in your Web-Count, so that all you need to do in network environments with dynamic IP address assignment is connect the device to the network. The following parameters can be assigned using DHCP:

- IP address
- Subnet mask
- Gateway
- DNS server
- Lease-Time



To prevent unintended address assignments or address changes, we recommend deactivating DHCP and BOOTP/RARP unless they are expressly used in the respective network environment. W&T network devices with incorrectly assigned IP addresses may be subsequently reconfigured using the WuTility.

2.5.1 Activating/deactivating assignment procedures

The factory default setting is for DHCP activated. The following options are available for deactivating, specifying a different assignment procedure or for reactivating at a later time:

- **WuTility:** In the inventory list select the desired Web-Count and click on the *IP address* button. In the first dialog box you enter the network parameters you want to assign and confirm by clicking on *Next*. In the following dialog box activate the desired protocol for automatic IP address assigning or turn this option off there. Click on *Next* to apply the configured parameters to the device.
- **Serial port:** As part of serial IP address assignment you can specify directly following the address string the following options for activating/deactivating the DHCP and BOOTP/RARP protocols: **-0** (deactivates DHCP and BOOTP/RARP), **-1** (activates BOOTP/RARP) and **-2** (activates DHCP). A detailed

description of the procedure is found in the section *Alternative IP address assigning*.

- **Web-Based Management:** Using Web-Based Management you can alternately activate the protocols or deactivate both of them. For detailed information please refer to the section *Network Basic Settings*.

2.5.2 System name

In order to support any later automated updating of the DNS system by the DHCP server, the Web-Count identifies itself within DHCP with its system name. The factory set name is *Web-Count 6x Digital*- followed by the last three places in the Ethernet address. For example, the factory set system name of a Web-Count having Ethernet address 00:c0:3d:01:02:03 is *Web-Count 6x Digital-010203*. The system name of the device can be changed using Web-Based Management.

2.5.3 Lease-Time

The lease time determined and conveyed by the DHCP server specifies the time of validity of the assigned IP address. After half the lease time has expired the Web-Count attempts to extend the validity or update the address. If this is not possible by the time the lease time expires, for example because the DHCP server is no longer accessible, the Web-Count deletes its IP address and starts a cyclical search for alternate DHCP servers in order to assign a new IP address.

If DHCP is activated, the remaining lease time together with the current IP address in the menu branch

Home >> Doc >> Property

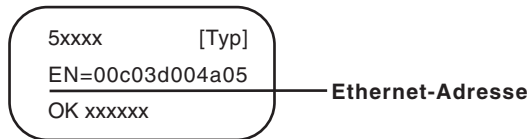
is displayed in seconds.



If after the assigned lease time has expired the DHCP server cannot be reached, the Web-Count deletes its IP address. All existing TCP and UDP connections between the device and other network devices are interrupted by this action. To prevent situations of this type, we recommend configuring the lease time in the DHCP server for infinite if possible.

2.5.4 Reserved IP addresses

The Web-Count provides services which other devices (clients) in the network can make use of as needed. To open a connection they of course need the current IP address of the Web-Count, so that in these application cases it makes sense to reserve a particular IP address for the Web-Count on the DHCP server. As a rule this is done by linking the IP address to the worldwide unique Ethernet address of the device which can be found on the housing sticker.



Ethernet address on sticker on the side of the housing

2.6.5 Dynamic IP addresses

Fully dynamic IP address assignment, whereby the Web-Count receives a different IP address each time it restarts or after the lease time has expired, only makes sense in network environments having automatic cross-connection between the DHCP and DNS services. In other words: When assigning a new IP address to the device, the DHCP server then automatically updates the DNS system as well. The new IP address is associated with the respective domain name. For detailed information concerning your network environment, refer to your system administrator when in doubt.

For time server queries, sending of e-mails or other client applications where the device actively searches for the connection to server services in the network, dynamic IP addresses can also be used.

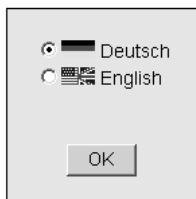
2.7 Language selection

The first time one of the controller pages (*home.htm*, *user.htm*, *logger.htm*) is opened by the device's own Web server, you are prompted to select the device language.

In the address bar of your browser enter the IP address of the device or the IP address followed by the name of one of the controller pages and send the query. On the loaded page select the desired system language and confirm your selection by clicking the *OK* button. This completes this configuration step, and you are taken to the start page of the device.

Web-Alarm 6x6 Digital-03F598

Sprachauswahl / Language selection



Language selection at initial startup

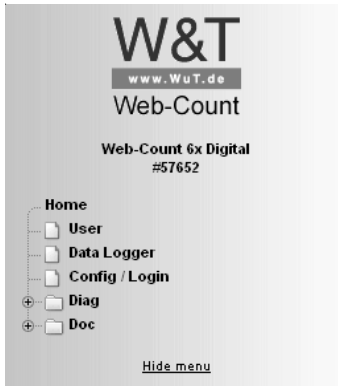
2.8 Assigning the basic network parameters

Open the start page of the Web-Count by entering the IP address in the address line of your browser and use the link *Show menu* to display the device configuration menu. Alternately you may also go to the address

`http://<IP address of the Web-Count>/index.htm`

Here the configuration menu is already visible and does not have to be manually displayed.

Select *Config*.



Configuration menu in the base state

You are now prompted to enter a password. By default no password is assigned, so that you can simply click on the *Login* button without entering a password. You are now logged in with administrator rights.

Config / Login

Password :

Login

Undo

[Back to Web-Count Homepage](#)

Login dialog

On the next page select the configuration path using the profiles

Login Rights:

Admin

Navigate with the tree on the left side. Avoid the use of the buttons "Next" and "Back" of your browser, this might cancel your changes of configuration data.



Selection for profiles or Expert mode

Select the profile *Basic network parameters* and click on the *Display profiles* button.

Config >> Session Control >> Profiles >> Profiles

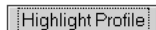
Profiles : Select a matching profile and press 'Temporary Storage'. All corresponding entries of this profile will be highlighted.

Select the highlighted entries in the menu tree on the left side.

No profile (expert mode)

Basic configuration:

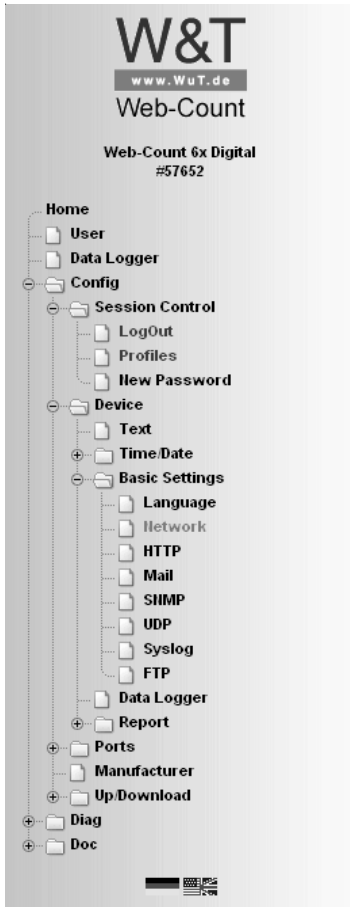
- Basic network parameter
- Configuration of port and device name
- Local clock settings
- Automatic clock settings with the network time service
- Report per E-Mail
- SNMP incl. Report per Trap
- Syslog Messages incl. Report
- Report per FTP (Client Mode)



Profile selection

The unit now shows the menu points highlighted in blue which you need to adjust for the configuration of the selected profile. Use the red highlighted menu points *Logout* and *Profiles* to

save or cancel changes or show a new profile for furtherer configuration of the Web-Count.



Configuration menu with activated profile assistance

First edit *Network* and then logout using *LogOut*. On the following page enter all the required network parameters and accept them by clicking on the *Save* button.

Config >> Device >> Basic Settings >> Network


IP Addr :


Subnet Mask :

Gateway :

BOOTP Client : BOOTP or DHCP can only be used if the respective entry on the DHCP server assigns a reserved IP address.
Important: If you are in doubt, uncheck 'BOOTP enable' and 'DHCP enable'.

STATIC
 BOOTP enable
 DHCP enable

DnsServer1 : IP address of DNS server (format xxx.xxx.xxx.xxx)
 

DnsServer2 : IP address of DNS server (format xxx.xxx.xxx.xxx)
 

Keep Alive Time : Checking of established connections without any data traffic.
Interval in seconds.

Free memory: 38238 bytes

Network configuration

The *Logout* button ends the configuration procedure and saves the changes in the device.

Then clicking on the *Save* button saves your settings in the device and ends the configuration session. If network parameters were changed during the session, the device automatically restarts itself to apply the changed values.

Config >> Session Control >> LogOut

Save new configuration

Exit without saving

Restore Factory Defaults

Open port for an update from a non-Windows system

Reset without saving

Logout options

The device is now ready to use in your network. Again use the profiles for additional configurations and continue through the configuration process.

3 Operation and Monitoring from the Browser

Once the Web-Count has been configured with the required basic network parameters and connected to the network, you may begin further configuration and operating and monitoring of the unit from your browser.

3.1 Addresses

There are five pages which you can address directly from the browser. The URLs are briefly explained and listed below.

The main page is self-refreshing and updates the state of all the counters and makes it possible for logged in users to visualize selected counters in various formats and read out the contents of the data logger:

`http://<IP address of the Web-Count>/home.htm`

The following link opens the homepage, as described above, with a configuration menu shown:

`http://<IP address of the Web-Count>/index.htm`

The user page, which is also self-updating on a cyclical basis, displays the state of the inputs, the counters and the utilization of the data logger:

`http://<IP address of the Web-Count>/user.htm`

To export the contents of the data logger to a CSV file:

`http://<IP address of the Web-Count>/logger.htm`

Diagnostics messages can be retrieved at the following address:

`http://<IP address of the Web-Count>/diag.htm`

3.2 Homepage

The homepage, which is reached at

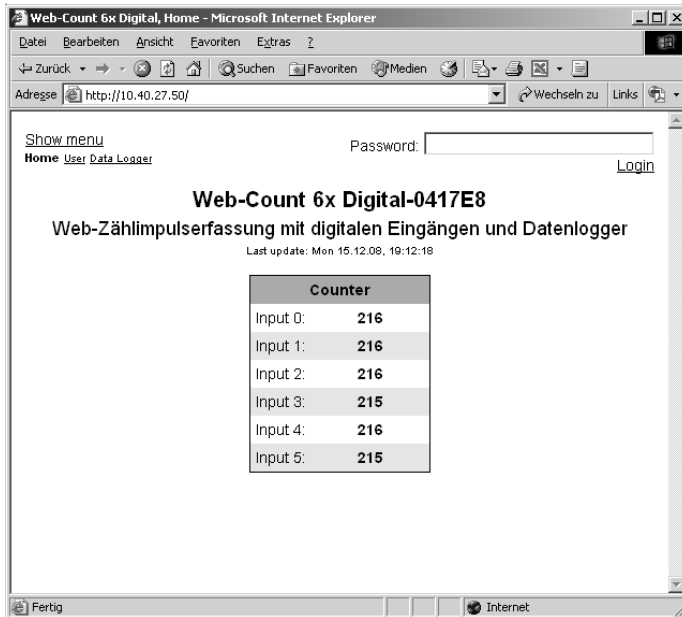
`http://<IP address of the Web-Count>/home.htm`

- offers an overview of all counter states.
- Allows you to display the counter values in various formats for comparison purposes.
- Allows you to display relative and absolute counter states.
- Provides tools for reading counter information from the data logger.

At the top edge of the screen you will find links for showing the configuration menu and navigating to the two other main pages. The current page is always displayed in boldface in the row. There are also control elements for logging in.

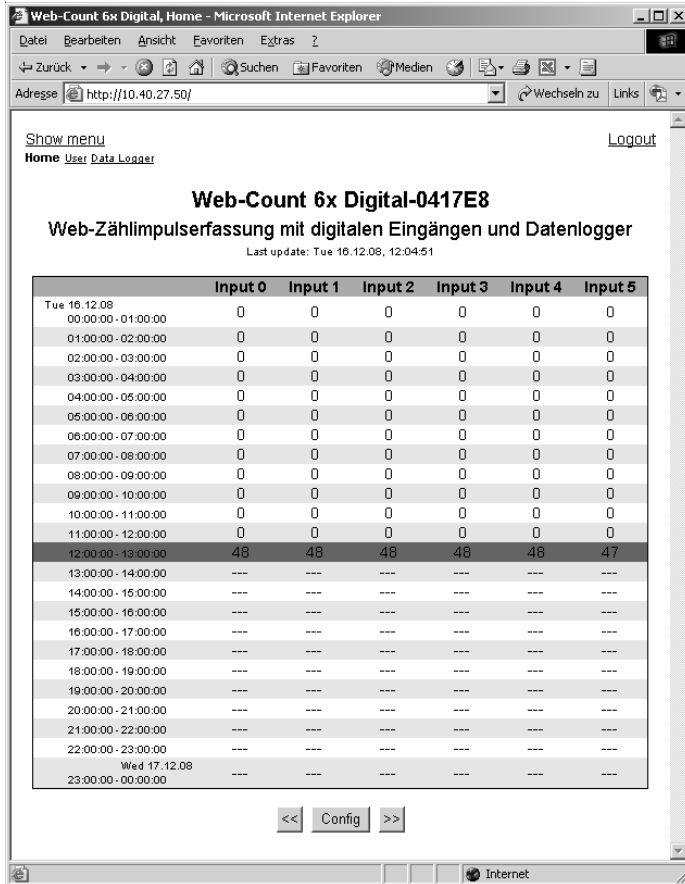
The information displayed is updated once a second. This happens automatically, with no user intervention required. The time of the 1st update is shown below the headers. The time indicated is the system time of the Web-Count. If the time indication ends with an asterisk, the system clock of the unit is synchronized with the time server set in the configuration.

If you are not logged in, you will see a table listing of all the counters. Shown are the names configured in the unit and the current measured count state changes.



Homepage when first opened

After a successful login, either using the dialog box or from the main page or configuration menu, you are taken to the standard view. To construct this view, the data logger is first read, which is indicated by a progress bar. Then you see a tabular representation of all the counters divided into intervals of one hour. Each interval shows only the counter state changes that have occurred during the interval. The time window of the overall display stretches over the current day.

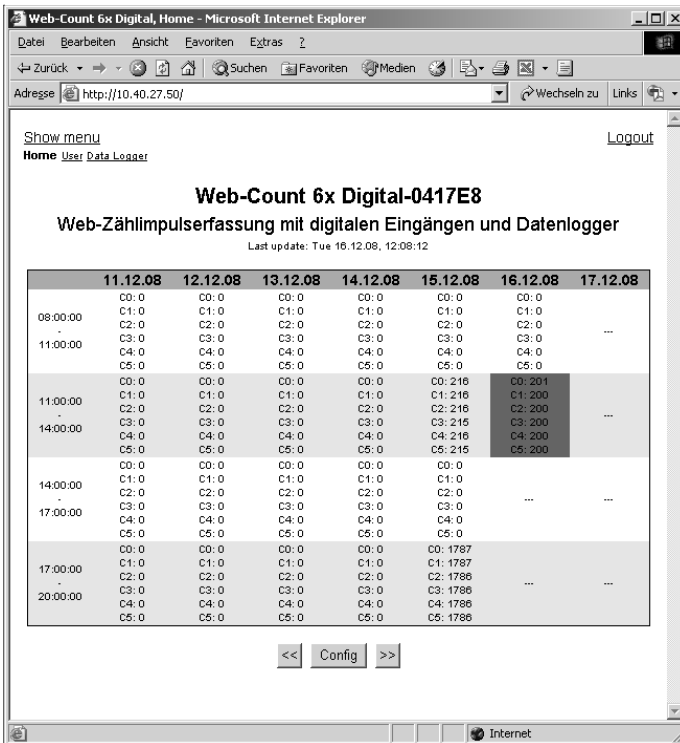


Standard view with all counters

if the current device time lies within one of the displayed intervals, the respective line is highlighted in green. The values of the interval then update themselves cyclically, so that all current changes to the counter states are immediately displayed.

The measured values can also be shown in the hourly schedule view. Here the Y-axis is identical to the standard view. You read the intervals on this axis. In contrast to the standard view, the individual counter values are contained in the cells. Complete days are entered on the X-axis. This format allows you to

directly compare measured values from successive days. This display is self-updating.



Hourly schedule over one week

When logged in there is a button field shown below the various displays. These buttons can be used to:

- ...Shift the displayed time window into the past (left arrow).
- ...Show the dialog used for configuring the display (*Config* button).
- ...Shift the displayed range into the future (right arrow).

Modify view

Type of view

Default
 Timetable

Columns: Counter

Input 0
 Input 1
 Input 2
 Input 3
 Input 4
 Input 5

Rows: Intervals

Start date: (DD:MM:YYYY)

Start time: (hh:mm)

Duration:

Step:

Relative:

Configuration window in „Standard“ mode

If you open the configuration dialog window using the *Config* button, the first option you have is to select the type of display.

For the standard display you can select the counters you want to show and configure the Y-axis. This includes the following information:

- **Start date:** Date in format DD:MM:YYYY
- **Start time:** Start time in format hh:mm
- **Duration:** Total duration of the displayed time
- **Increment:** Size of the individual intervals
- **Relative:** Type of counter representation. Only the counter state changes which have occurred during the interval are displayed if this option is checked.

The values for the *Duration* and *Increment* options are selected from a list of predefined possibilities. To prevent entering a

larger *Increment* than the set *Duration*, the software automatically adjusts the selection possibilities for the *Increment* option.

Modify view

Type of view

Default

Timetable

Cells: Counter

Input 0

Input 1

Input 2

Input 3

Input 4

Input 5

Columns: Main-Intervals

Type: Week-view

Month-view

Start date: (dd:MM:yyyy)

Rows: Sub-Intervals

Start time: (hh:mm)

Duration:

Step:

Relative:

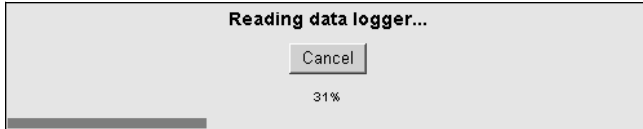
Configuration dialog window in „Hourly schedule“ mode

To display the measured values in the hourly schedule format, first select the counters whose values you want to show in the table cells. Then configure the X-axis (you can select a week and a month as the lengths) and determine the start date. Finally, set the parameters for the Y-axis. Here you set the *Start time*, the *Duration*, the duration of the *Increment* and the *Relative* option.



In addition to automatically checking whether the increment is greater than the set duration, the program also checks whether the set duration exceeds the next day limit.

Clicking on *OK* applies the changes and starts building the display. Clicking on *Cancel* returns you to the current display.



Progress of reading the data logger

You can stop reading out of the data logger at any time by clicking the *Cancel* button. Displayed then are the data which were read up to the time the loading process was cancelled.

3.3 User page

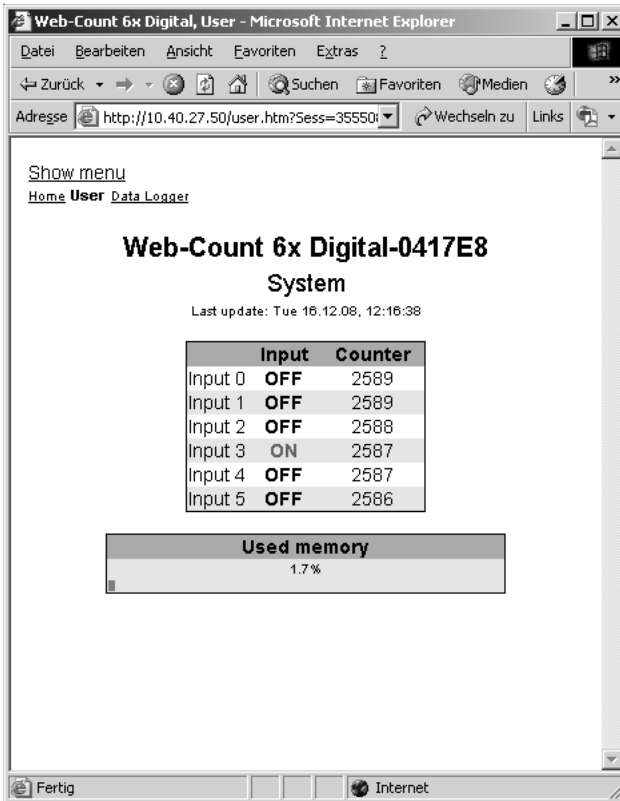
The user page provides an overview of the status of the

- Inputs
- Counters
- Data logger utilization

The page is opened, if not by clicking on navigation links, by entering the following address:

`http://<IP address of the Web-Count>/user.htm`

The page is refreshed cyclically once a second. The time of the last update is shown in the tables. The time represented there is also the device time of the Web-Count.



The screenshot shows a Microsoft Internet Explorer window displaying the 'Web-Count 6x Digital-0417E8 System' page. The browser's address bar shows the URL 'http://10.40.27.50/user.htm?Sess=35550i'. The page content includes a 'Show menu' link, navigation links for 'Home', 'User', and 'Data Logger', and the system title 'Web-Count 6x Digital-0417E8 System'. Below the title, it indicates the last update time as 'Tue 16.12.08, 12:16:38'. A table lists the status of six inputs, with 'Input 3' being the only one that is 'ON'. A 'Used memory' bar shows 1.7% usage.

	Input	Counter
Input 0	OFF	2589
Input 1	OFF	2589
Input 2	OFF	2588
Input 3	ON	2587
Input 4	OFF	2587
Input 5	OFF	2586

Used memory
1.7%

User page with system information

The overviews show activated inputs highlighted in green. When deactivated they are black.

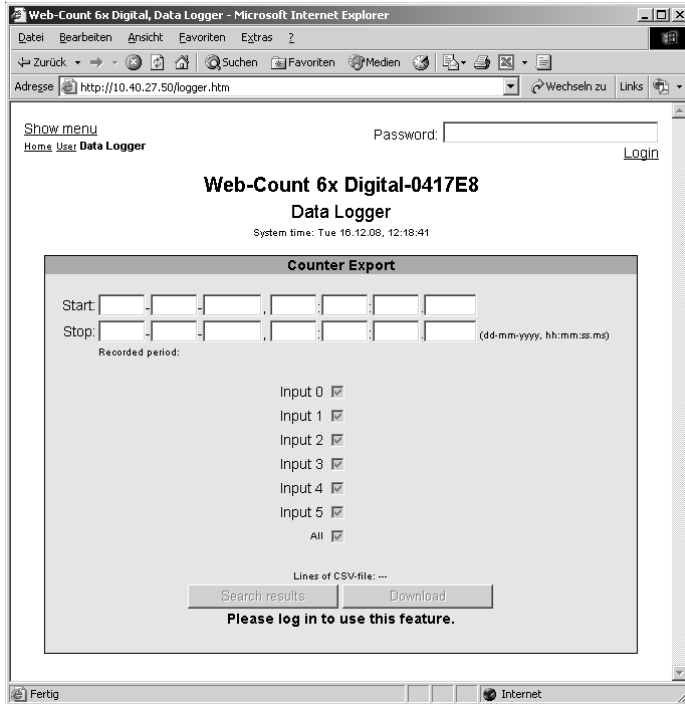
The references in the upper left corner allow you to show the configuration menu and directly navigate to the *home.htm* and *logger.htm* pages. The name of the currently visited page is shown in boldface.

3.4 Data logger page

By opening the data logger page at:

<http://<IP address of the Web-Count>/logger.htm>

you can export the contents of the data logger to a CSV file. This file can be used for archiving or further processing, using for example a suitable table processing program. The input screen allows you to export data to individual time ranges and specific events.

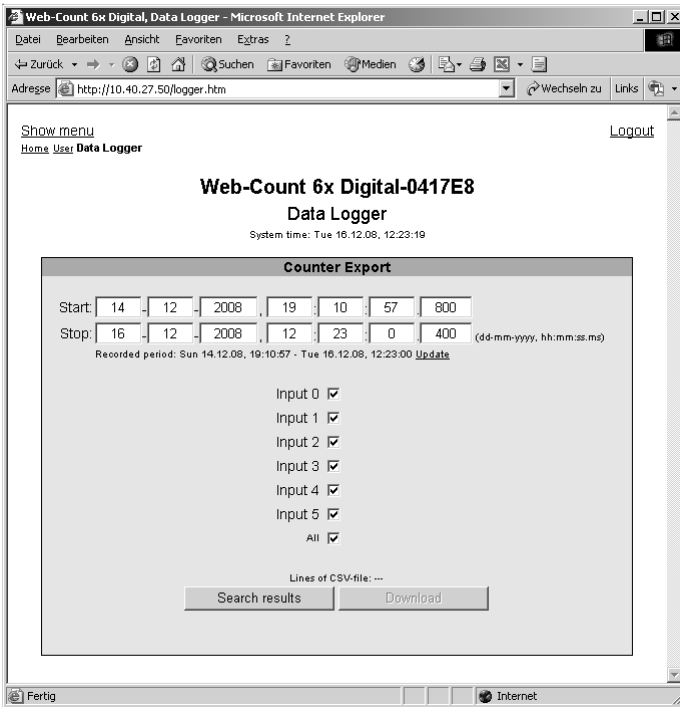


Data logger page with user logged out

Exporting data requires operator or administrator rights. If you are not logged in with the appropriate rights, all the control elements are grayed out.

Logging in enables the buttons. In addition, the times of the first and last memory events are read from the data logger memory and entered in the input screen. This information tells you the time period in which the data logger was in operation.

The time period is also shown under the text fuekds for the start and stop time.



Data logger page after search

The logger contents is exported in two steps. First you must specify a valid time period. This can concentrate either on a section of the data logger or include the complete logging time as it is automatically entered after a login. In additionm, you can use the check boxes to refine the trigger screen if you are not interested in all the event sources. Clicking on the *Search events* button starts the search routine, which searches the specified time period in the logger for events of the selected sources. The number of hits is shown in the input screen in parentheses behind the source name.

The progress of the search is shown by a status bar at the lower edge of the input screen. Clicking on the *Cancel search* button cyclically updates the line number of the loadable CSV file.

Once the search is complete, you can refine your search criteria according to the found events or load a CSV file with the hits onto your computer.



If you need to open the loaded CSV file for example for analysis purposes using Microsoft Excel, note that some versions of the table editor can only open documents having a maximum of 65536 lines.

A loaded CSV file contains one column each for:

- Date
- Time of day (without milliseconds)
- Milliseconds
- Each counter

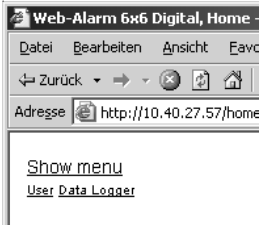
The search can be cancelled at any time by clicking on the *Cancel search* button. The user interface then returns to the starting point and is ready for new entries.

3.5 Hiding and showing the configuration menu

If the configuration menu is not visible, the pages

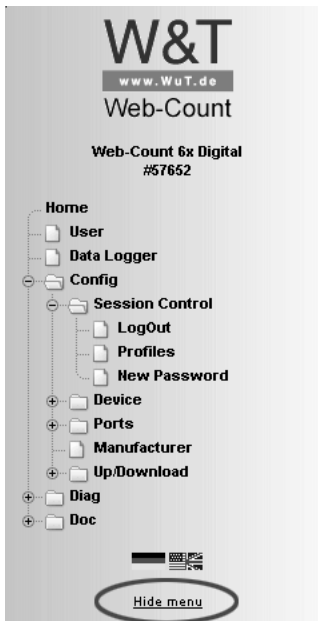
- Home (*home.htm*)
- User (*user.htm*)
- Data Logger (*logger.htm*)

in the upper left corner provide the link *Show menu* for making the menu tree visible.



Link for showing the configuration menu on the homepage

In addition to the link for showing the configuration menu, the pages listed above also provide links for opening the two other controller pages.



Link for hiding the configuration menu

The link for hiding the configuration menu is then only visible beneath the menu tree if one of the three main pages (*home.htm*, *user.htm*, *logger.htm*) is shown in the right section of the browser. Otherwise a configuration page is displayed which provides information about a running configuration

process. This requires access to the complete menu tree, which is why hiding the menu is not supported at this point.

3.6 Login and Logout

Depending on the login, the Web-Count distinguishes between three different access levels:

- *Default User*: Every user who accesses the device without a password has this status initially. The status of the Web-Count can now be read out and displayed. Reading the data logger or changing the configuration is however not possible.
- *Administrator*: The administrator password provides full access to the device. Changing the configuration and reading the data logger is now possible.
- *Operator*: Operator access rights are limited to read out the data logger.


Regardless of the access level, each operator is able to read out accumulated errors from the diagnostics page and view device information under the *Doc* heading.

The more access rights a user has, the more complete the menu tree. Items not available based on the login are hidden.

A login can be done either using the dialog in the upper rightcorner on the *home.htm* and *logger.htm* pages or using the sub-item *Config* from the menu tree. The dialog box on the main pages is then only visible if the menu tree is hidden.



Login dialog on one of the three main pages

 *It makes no difference where login is done. But if the configuration of the device was changed, logout must be done from the „Config“ page in the menu tree. If you log out from one of the main pages, the changes you made are lost.*

A login with administrator rights can overwrite an already existing login. In this case the user is prompted during the login to accept the existing login.



Prompt on a main page for accepting an existing login

A login is rejected if an incorrect password is entered or if you attempt to overwrite an existing login using insufficient access rights.



Message for rejected login on a main page

The entered password is hashed, using the MD5-algorithm (derived from RSA Data Security, Inc. MD5 Message Digest Algorithm), and send secure.

3.7 Change passwords

Go to the page

Config >> Session Control >> New Password

to change the password of the administrator or of the operator. To view this page administrator rights are required.

Enter the new password for the user, which password you want to change, and retype it. Save the changes temporarily by pressing *Temporary Storage*. After the next logout the new passwords are active.

4 Reports

The Web-Count lets you specify 12 different reports whose resolution depends on input states or counter states or which may be time-controlled. Various network protocols are available for sending the messages:

- Mail (SMTP)
- SNMP
- Syslog
- UDP Peer
- TCP Client
- FTP Client

For a counter- or input-triggered report to be generated, the trigger signal must be present for at least 100ms. The response of the Web-Count follows...

- ...for mail reports after no more than 10 seconds.
- ...for all other message types after no later than one second.

If an input or counter triggered report cannot be delivered, because for example the destination server is not replying, then sending of the report is repeated every minute. If this report is triggered again before the first message could be delivered, it is overwritten by the re-triggering.

Time- and TCP-based reports are repeated after failed sending. The information needed for correct repeating of the reports is saved in the data logger.



If the Web-Count is powered off while it is unsuccessfully attempting to deliver a message, it catches up after power is restored by sending all the messages which were present up to the time power was restored.

4.1 Configuring reports

You can use the configuration menu to set the parameters for Reports 1 - 12. To do this, open the configuration page

Config >> Device >> Report >> Report X

In the *Report Name* field enter a name for the report.

Report Name :

The *Report Enable* box must be checked for the report to be issued when the trigger condition is met. To deactivate the report, simply uncheck the box. It is not necessary to delete the settings.

Report Enable :

In the *Input Trigger* block you configure the condition that must be met in order for the report to be issued. You can activate the involved inputs and define the state which must exist at the trigger mmoment. An input can be OFF or ON or the counter associated with the input can have a certain counter state. The option ANY releases a report at every change of the input state.

Input Trigger : If all of the checked input conditions are true, a report will be generated (AND-combination).

- Input 0 OFF ON ANY Counter 0
- Input 1 OFF ON ANY Counter 1
- Input 2 OFF ON ANY Counter 2
- Input 3 OFF ON ANY Counter 3
- Input 4 OFF ON ANY Counter 4
- Input 5 OFF ON ANY Counter 5



Note that when selecting multiple inputs as the trigger, the configured condition for all inputs must be met in order to trigger a report. This is an AND-operation of the individual events.

If you have specified a counter state in the Input Trigger area for one or more counters, you can enter this value in the *Max Counter Value* field.

Max Counter Value : A report will be sent if MaxCounterValue is set to a value between 1 and 2147483648 and if any of the inputs checked above reaches this counter value.



Only one counter state can be specified as the trigger threshold even if multiple inputs were set based on their counters.

To enable cyclical repetition of reports whose trigger condition is based on counters, the counter states can be cleared when sending the report. Otherwise the count would be continuously incremented after triggering, so that the trigger condition would never be reached. This parameter is set in the *Counter Clear* area.

Counter Clear : Counter clear on report send

For observing an amount of impulses in a specified time-window, use the *Rate of change* function.

Rate of change : Minimum Mode: A report will be sent if no more than this number of impulses are counted within the rate of change window as stated below.
Maximum Mode: A report will be sent if more than this number of impulses are counted within the rate of change window as stated below.

Rate of change window : Time slot in minutes.

Rate of change mode : OFF
 Minimum
 Maximum

This function releases a report, when the at *Rate of change* configured number of impulses within the at *Rate of change window* configured time is not reached in *Minimum*-mode, or exceeded in *Maximum*-mode.

The *Interval* field is used to determine the send interval for the report. The default setting is *E*, which corresponds to one-time sending. You can enter any desired number of minutes as intervals for resending the report.

Interval : Interval to send in minutes, E=one-time (default), 0 or empty=Off.



Sending of a report is only repeated as long as the report is active, i.e. until the trigger drops out.

In addition to the input and counter-based reports, the messages can also be time-controlled. To activate time control, select the option *Interval Timer* at *Enable Timer*.

The definition of the time rules is set in the *Start*-column at the *Time Trigger* area. The timer interval to be set here is based on the CRON service such as used in Linux and Unix systems. Valid characters are:

- *: Stands for all valid values in the respective input field (e.g. every minute or every second).
- -: Specifies a range of from...to. Day of the week 2-4 stands for example for TGuesday to Thursday, whereas an entry of „*“ triggers the timer on every day of the week.
- /: Interval within the entered range. For example minute „0-45/2“ triggers the timer in the range between the 0th and 45th minute every two minutes (0, 2, 4, 6, 8, 10,44).
- ,: Specifies an absolute value. Example: Minute 0, 15, 30 triggers the timer every hour on the hour, every quarter-past hour and every half hour.

Aktivating the option *Time Window* at *Enable Timer* enables the masking of non-time-triggered reports. Define the start and stop dates in the columns *Start* and *Stop*.

Enable Timer : According to the defined interval regular reports will be generated.
 Interval Timer
 Time Window
 Timer off

Time Trigger : Output of the report triggered by timer.

Input [Number *, - /]			
Field	Start	Stop	Range of values
Minute	<input type="text"/>	<input type="text"/>	0-59
Hour	<input type="text"/>	<input type="text"/>	0-23 (0 is midnight)
Day_of_month	<input type="text"/>	<input type="text"/>	1-31
Month	<input type="text"/>	<input type="text"/>	1-12
Weekday	<input type="text"/>	<input type="text"/>	0-6 (0 is sunday)

The *Enable* block contains all message types. Here you select the communication path used for sending the report.

- Enable :**
- Mail enable
 - SNMP Trap enable
 - UDP Client enable
 - TCP Client enable
 - Syslog Messages enable
 - FTP Client enable

Accept the changes by clicking on *Save*.

4.2 Formulating report texts

Texts for the various messages are configured on the sub-pages of the individual reports, for example:

Config >> Device >> Report >> Report 1 >> Mail

In the fields *Subject* and *Report Text* you enter the subject and message text you want to send.

Subject :

Report Text :

These terms could be used as a placeholder in the following message text:	
Time:	<t>
Single Input:	<i0> ... <i15>
Single Counter:	<c0> ... <c5>
Relative Counter:	<r0> ... <r5>
All Inputs (Hex):	<i>

Subject and text entry for a report

To fill the message texts dynamically with current information for the device, tags are also available as shown in the following table. These placeholders, when entered in the report text, are replaced by the current system value when the report is sent.

Report Variable	Description
<dn>	Device Name (Config >> Device >> Text)
<i>	Input state, hex
<ix>	State of input no. x (ON / OFF)
<inx>	Name of input no. x
<cx>	Counter value of counter no. x
<sx>	Counter value of counter no. x, multiplied by coefficient
<rx>	Counter change value since last report
<srx>	Counter change value since last report, multiplied by coefficient
<ux>	entered unit for the input no. x
<t>	Time of event (TT.MMM.YYYY hh:mm:ss)
<\$y>	Yeay (YYYY)
<\$m>	Month (MM)
<\$d>	Day (DD)
<\$h>	Hour (hh)
<\$i>	Minute (mm)
<\$s>	Second (ss)
	Time of last message, only available for time-triggered reports:
<\$Sy>	Yeay (YYYY)
<\$Sm>	Month (MM)
<\$Sd>	Day (DD)
<\$Sh>	Hour (hh)
<\$Si>	Minute (mm)
<\$Ss>	Second (ss)
	Milliseconds, only available at reporting logger content
<tm>	Milliseconds (3 digits)

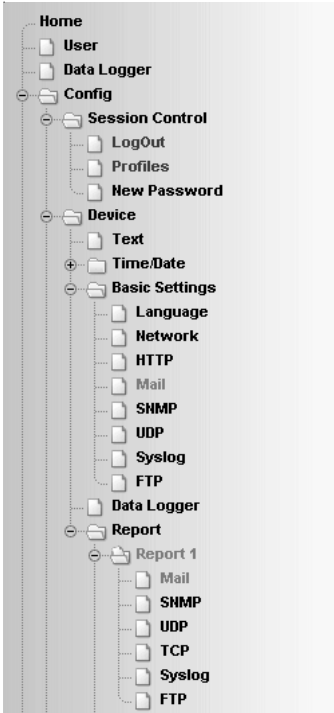
x is value from 0 to 5

Mail tags for dynamic formulation of report texts

In addition to the texts, the message pages must also contain the parameters specific to the message type. Additional information about this can be found in the respective sections.

4.4 Report via e-mail

Open the profile *Report via E-Mail*.



Profile „Report via E-Mail“

Configure the trigger condition for the desired report as per the section *Configuring reports*.

4.4.1 General settings

First open the page

Config >> Device >> Basic Settings >> Mail


to configure the basic settings for sending e-mails as explained in the following.

The e-mail function allows you to deliver a report via mail to one or more e-mail recipients.

Config >> Device >> Basic Settings >> Mail

Name : Identification as sender:

ReplyAddr : If the receiver of the mails selects 'reply to', these replies shall be sent to the following third address, because the device cannot receive mails.


MailServer : Name or IP address of the SMTP mailserver (format xxx.xxx.xxx.xxx)
 

Authentication : SMTP authentication off
 ESMTP
 SMTP after POP3

User :

Password :

Retype Password :

POP3 Server : Name or IP address of the POP3 mailserver (format xxx.xxx.xxx.xxx) only for 'SMTP after POP3'
 

Enable : Mail enable

Mail basic configuration

The following parameters can be set here:

In the *Name* field enter the name you want to appear at the e-mail recipient.

The *ReplyAddr* represents the address the device uses to identify itself.

In the next step (*MailServer*) set the IP address of your mail server or its host name (for configured DNS server only) which the device should use. If the e-mail port does not correspond to the standard port 25, you can append the port to the address following a colon:

mail.provider.de:<Port>

If the mail server requires authentication, set the corresponding procedure for identification of the user under *Authentication*.

- SMTP authentication off: No authentication
- ESMTP: A user name and password are required to log in on the mail server.
- SMTP after POP3: SMTP access requires first that access be made via iPOP3, so that the user can be identified. For this setting you specify in addition an associated POP3 server.

Finally, activate the mail function using the check box *Mail enable*.

Accept the settings by clicking on *Save*.

4.4.2 Mail parameters and texts

Lastly, the definition of the reports and the specific mail parameters are required. To do this, open page

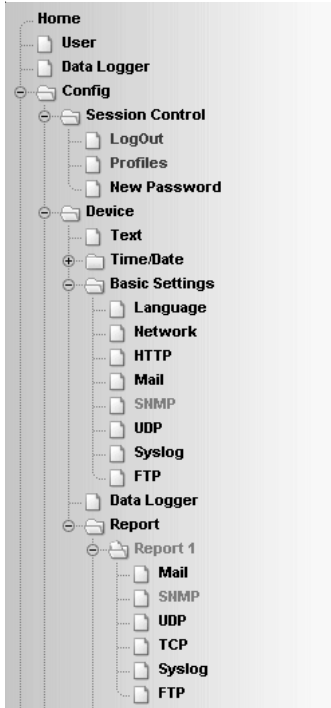
Config >> Device >> Report >> Report X >> Mail

In the field *E-Mail-Addr* enter the address of the recipient. If the e-mail is being sent to multiple recipients, separate the addresses from each other using a semicolon.

Finally, configure the required report texts as described in the section *Formulating report texts* and accept the changes by clicking on *Save*.

4.5 Report via SNMP-Trap

For assistance, open the profile *SNMP incl.Report per Trap* auf.



Profile „Report per Trap“

Configure the trigger condition for the desired report according to the steps explained in the *Reports* section.

4.5.1 General settings

Open page

Config >> Device >> Basic Settings >> SNMP

Check the *SNMP enable* box. This starts the SNMP function in the device, which processes sending reports via SNMP.

Accept the changes by clicking on *Save*.

4.5.2 SNMP parameters and texts

Finally, you must define the messages and the specific SNMP parameters. To do this, open the page

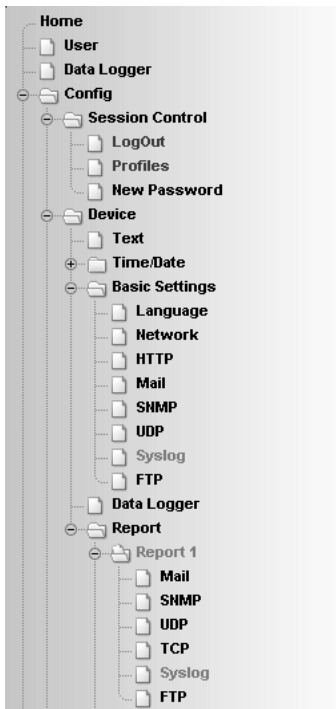
Config >> Device >> Report >> Report X >> SNMP

In the *Manager IP* enter the IP address of the SNMP manager which will receive the report and display or evaluate it.

Finally, configure the necessary message texts as described in the section *Formulating report texts* and save your changes by clicking on *Save*.

4.6 Report per Syslog

Open the profile *Syslog Messages incl. Report*.



Profile „Syslog Messages incl. Report“

Configure the condition for the desired report according to the steps described in section *Configuring reports*.

4.6.1 General settings

Go to the configuration page

Config >> Device >> Basic Settings >> Syslog

and activate the option System Messages enable.

This option turns on the Syslog function in the Web-Count and enables sending of messages using the Syslog protocol.

Accept the changes by clicking on *Save*.

4.6.2 Syslog parameters and texts

Go to page

Config >> Device >> Report >> Report X >> Syslog

and in the IP ADdr field enter the IP address of the recipient. Under Port enter the port number you want to use for communication.

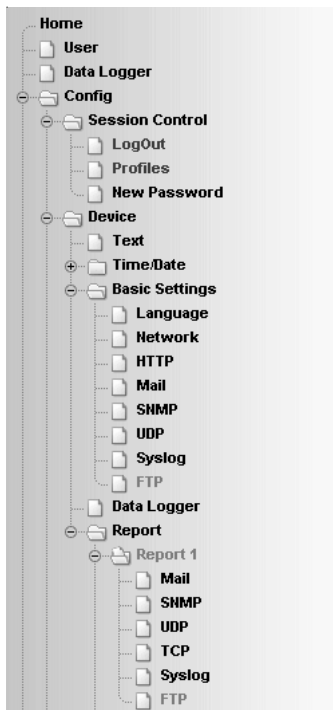
Lastly, configure the required message texts as described in the section *Formulating report texts* and save your changes by clicking on *Save*.

4.7 Report per FTP

Send messages via FTP and write them directly to an FTP server.

Open the profile *Report per FTP (Client Mode)*.

Configure the trigger condition for the desired report according to the steps explained in the section *Configuring reports*.



Profile „Report per FTP“

4.7.1 General settings

Go to page

Config >> Device >> Basic Settings >> FTP

and specify the basic parameters for message sending.

For *FTP Server IP* enter the IP address or the host name (only for configured DNS server) of your FTP server to which the data should be sent.

In the *FTP Control Port* field specify the port through which you want to make the connection. The standard port for FTP access is 21. This port is already set by default and should work on most systems with no difficulty. Should you require a different port, check with your network administrator.

For User and Password enter the access data required for FTP access.

Some FTP servers require a special account entry for login. If this is the case for your server, enter the account name in *FTP Account*.

If the box *PASV* under *Options* is checked, the server is instructed to operate in passive mode. This means the data connection is opened by the Web-Count. If this option is disabled, the FTP server handles opening of the data connection. If the server is firewall protected, you should enable the PASV option, since otherwise connection attempts could be blocked.

Config >> Device >> Basic Settings >> FTP

FTP Server IP :	Name or IP address of the FTP server (format xxx.xxx.xxx.xxx) <input type="text" value="192.168.0.5"/>
FTP Control Port :	Port No.: 1...65536 (default 21) <input type="text" value="21"/>
User :	<input type="text" value="user"/>
Password :	<input type="text" value="password"/>
FTP Account :	<input type="text" value="account"/>
Options :	Switch FTP server into Passiv Mode. (possibly necessary in a firewall environment) <input type="checkbox"/> PASV
Enable :	<input checked="" type="checkbox"/> FTP enable

FTP basic configuration

Finally, enable the FTP function of the device using the *FTP Enable* check box and accept the changes by clicking on *Save*.

4.7.2 FTP parameters and texts

Go to page

Config >> Device >> Report >> Report X >> FTP

and enter the report-specific FTP parameters.

For *FTP Local Data Port* specify the local data port of the Web-Count. Valid values are between 1 and 65536. Entering *AUTO* means the device will dynamically select the port.

Under *File Name* enter the path to the file you want the device to access. The file name can use the same tags as in the FTP report text.

The options STORE and APPEND allow you to select whether the sent data are written to a new file or to added to an existing file. If the file does not yet exist, it is created in both cases.

Options : STORE
 APPEND

FTP options „STORE“ and „APPEND“

Finally, configure the required report texts as described in the section *Formulating report texts*. If you want a line feed, insert a CRLF by pressing the RETURN key at the end of the line. Accept the changes by clicking on *Save*.

On

Config >> Device >> Report >> Report 1 >> FTP

the option *Logger data since last message* can be checked. Then at transferring the report all logger data since the last report is transferred in the specified format. This function needs a lot of performance, and is only available at Report 1.



Please make sure that you have chosen a Timebase that fits to your application to prevent a huge amount of data to be transferred within a report.

4.8 Report per TCP-Client

Configure the trigger condition for the desired report according to the steps described in *Configuring reports*.

Go to page

Config >> Device >> Report >> Report X >> TCP

and enter in the *IP Addr* field the IP address of the TCP server. For *Port* enter the destination port.

Finally, configure the required report texts as described in the section *Formulating report texts*. Accept the changes by clicking on *Save*.

4.9 Report per UDP-Client

Go to page

Config >> Device >> Basic Settings >> UDP

and check the option *UDP enable* and save this change by clicking on *Save*.

Configure the trigger condition for the desired report according to the steps described in *Configuring reports*.

Go to page

Config >> Device >> Report >> Report X >> UDP

and enter in the *IP Addr* field the IP address of the UDP server. For *Port* enter the destination port.

Finally, configure the required report texts as described in the section *Formulating report texts*. Accept the changes by clicking on *Save*.5 Data Logger

5 Data Logger

The device includes an internal data logger which records status changes for all the counters along with all report outputs, visualizations and user inputs. The logging routine runs at a frequency of 10 Hz, which enables writing 10 logger entries per second. One entry can include status changes for multiple event sources. If there is more than one change on an input, only the final value from the measuring interval is stored. The intermediate steps are discarded. If there are no counter events, no data records are stored in the logger.

There are two types of entries which are stored in the data logger: Report and counter events. The occurrence of a report is associated with significantly more information than a simple counter event. As a consequence, report events are significantly more memory-intensive. Taking this fact into account, the data logger can record a maximum of 130,000 report events or 1,000,000 of the less memory-intensive counter events. Depending on how the device is used, various mixtures of entry types may result in the device memory. Saving of report events is necessary for enabling later sending of non-deliverable, time-triggered reports.

The data logger memory is an 8MB flash memory that operates in ring fashion. Once the memory is completely full, the oldest data are replaced by new events.

The logger entries are stored non-volatile, so that the data remain intact even when the device is unpowered.

The data logger is operable as soon as the device is powered up. The data logger also records the usual events with no active network connection.

5.1 Minimal saving-interval

On

Config >> Device >> Data Logger >> Timebase

You can specify the minimal saving-interval. This is set to 100ms on default. It defines the lowest distance between two logger entries. Are there several events within an interval, these are logged as one combined entry at the end of the interval.

5.2 Erase logger content

The content of the data logger can be erased by formatting the memory. Also the internal pointers can be resetted, what the restoration of the cleared data enables.

5.2.1 Clearing the memory

If the memory is cleared using the option *Clear data memory* on page

Config >> Device >> Data Logger

this is done by clearing the contents listing of the data logger. There is no physical deletion of stored contents.

5.2.2 Restoring data

If the data logger was cleared using the option *Clear data memory*, it is possible to reconstruct contents which have not in the meantime been overwritten with current events. .

If memory reconstruction is possible, the page

Config >> Device >> Data Logger

shows the *Restore data memory* button.

Config >> Device >> Data Logger

Alle Daten im Speicher löschen

Datenspeicher löschen

Datenspeicher so weit möglich wieder herstellen

Datenspeicher wiederherstellen

Formatierung ohne Datenwiederherstellung

Datenspeicher formatieren

Option for reconstructing the memory contents

Reconstruction restores the contents directory based on the memory entries which have not yet been overwritten.



Note that only content which has not in the meantime been overwritten can be restored.

5.2.3 Formatting the memory

To perform a permanent, no longer restorable clearing of the memory, it must be formatted. This can also be done on page

Config >> Device >> Data Logger

by using the option *Format memory*.

Formatting takes about 1 minute. The progress of the action is displayed by a message on the pages *home.htm* and *use.htm*. During formatting the data logger is disabled. Arriving input events are not saved and are lost.

Web-Count 6x Digital-0417E8

Web-Zählimpulserfassung mit digitalen Eingängen und Datenlogger

Formatting in progress...

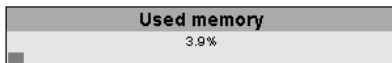
Memory formatting message



The information logged in the memory is permanently deleted by the formatting process.

5.3 Memory utilization

You can view the memory utilization of the data logger on the *user.htm* page. The status bar shown there indicates what percent of the memory is being used.



Graphic representation of the memory utilization

Like the rest of the page, the information about the memory utilization is also updated once a second.



Even if the memory is already filled and the oldest information is being overwritten by the new data, the ring structure means that the status bar never reaches 100%. This is because old data are deleted in blocks and before the available memory space is consumed.

6 Basic settings

6.1 Device name

From the configuration menu open the page

Config >> Device >> Text

to edit the following texts:

- Device Name: Name of the Web-Count
- Device Text: More detailed description
- Location: Location where the Web-Count is installed
- Contact: Contact address for service

Config >> Device >> Text

Device Name : Appears on page **Home** and on user-defined pages.

Web-Count 6x Digital<wut1>

Device Text : Appears on page **Home** and on user-defined pages.

Web-Zählimpulserfassung mit digitalen Eingängen
und Datenlogger

(For a new line use
)

Location : Location of installation

Contact : Contact address

Free memory: 38304 bytes

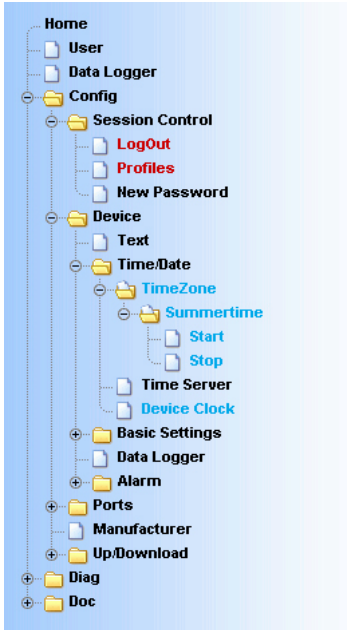
Temporary Storage Undo Logout

Configuration page for device texts

Save your changes by clicking on the *Save* button before you exit the page.

6.2 Local time setting

To manually set the system clock, the device provides a guided procedure using the profiles. To do this, open the profile *Local time setting*.



Configuration tree with selected profile for local time setting

6.2.1 Time zone

On this page you specify the time zone in which the device is located. The settings refer to UTC (Universal Time Coordinated). Apply the settings by clicking on *Save*.

Config >> Device >> Time/Date >> TimeZone

UTCoffset : Offset to Universal Time (UTC),
disregarding summer time, e.g. CET = +1

 :

Enable : Apply Time Zone

Free memory: 32407 bytes

Time zone configuration

6.2.2 Summertime

If you want your device to automatically adjust to daylight saving time, first enter the offset to UTC. The standard value (including for Germany) is two hours. Activate this function by checking the box *Apply Summertime* and save the settings.

Config >> Device >> Time/Date >> TimeZone >> Summertime

UTCoffset : Offset to Universal Time,
regarding summer time, e.g. CEST = +2

 :

Enable : Apply Summertime

Free memory: 32407 bytes

Setting daylight saving time

On the *Start* and *Stop* pages you can modify the rule for when to begin and end daylight saving time.

The factory default setting is for daylight saving time to begin on the last Sunday in March at 2:00 a.m. The end of daylight saving time is preset for the last Sunday in October at 3:00 a.m.

Config >> Device >> Time/Date >> TimeZone >> Summertime >> Start

Month : Summertime starts in

Mode : on

Weekday :

Time : at
 :

Free memory: 32407 bytes

Rule for beginning daylight saving time

6.2.3 Device Clock

If you do not wish to use a time server, you can set the clock manually here. Then click on *Logout* and save your settings.

Config >> Device >> Time/Date >> Device Clock

Time : :

Day :

Month :

Year :

Free memory: 32407 bytes

Manually setting the system clock

The clock is battery backed, so that the setting remains intact even after interrupting power to the device and you do not have to reset the time after the next restart.

6.3 Automatic time setting using a network service

The configuration for the local time setting using a time server can also be made using a profile.

Just as for the local time setting, here also you must take into account and change as needed the configuration pages *Timezone*, *Summertime*, *Start* and *Stop*.

In addition, you also configure for the actual time compensation via network service on the *Time Server* page. Here you can store the addresses of two time servers, so that the time can be compensated even if one of the servers cannot be reached. Clicking on the magnifying glass symbol behind the addresses allows you to check the availability of the servers. You can also indicate the whole hour at which the compensation should be done daily.

Then activate the option *Apply Timeserver*.

Config >> Device >> Time/Date >> Time Server

UTC Server1 : Name or IP address of the timeserver (format xxx.xxx.xxx.xxx)

de.pool.ntp.org 

UTC Server2 : Name or IP address of the timeserver (format xxx.xxx.xxx.xxx)

europe.pool.ntp.org 

Sync.Time : Daily synchronisation time with the time server (hour: 0-23).

0

Enable : Apply TimeServer

Free memory: 32407 bytes

Temporary Storage

Undo

Logout

Options for time servers

The preset addresses are only an example and do not necessarily have to be used.



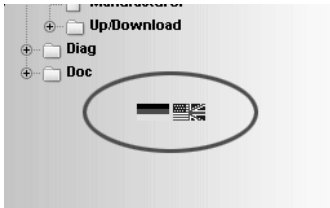
If you enter a name as the time server address, be sure that you have first configured both a gateway and a DNS server. Otherwise the address cannot be resolved. .

Click on *Logout* and save your settings.

6.4 Language

You can use the configuration menu to specify the system language. This can be done either using the flag link below the configuration menu, or navigate to:

Config >> Device >> Basic Settings >> Language



Flag link below the configuration menu

On the opened page select the desired language and save you change by clicking on *Save*.

Config >> Device >> Basic Settings >> Language

Language : Deutsch
 English

Language selection



Changing the language requires operator or administrator rights.

6.5 HTTP port

From the page

Config >> Device >> Basic Settings >> HTTP

you can specify the port through which the device is accessed. The default setting is the standard HTTP port 80. If you would like to use a different port, this may have to be explicitly indicated when opening the page, for example when opening the page *home.htm*.

http://<IP address of the Web-Count>/home.htm:<portnumber>

Config >> Device >> Basic Settings >> HTTP

HTTP Port : Default. Port 80

Free memory: 32407 bytes



Configuring the port number

6.6 System traps per SNMP and SNMP basic configuration

The following traps can be sent to an SNMP manager using SNMP protocol:

- Cold Start: Restart after power has been interrupted or has failed
- Warm Start: Restart after device reset

In addition, diagnostic messages which have arrived in the device can be sent.


The SNMP configuration is made on the following page:

Config >> Device >> Basic Settings >> SNMP

Config >> Device >> Basic Settings >> SNMP

Community string: Read :

Community string: Read-Write :

Manager IP : SNMP System Traps:
Name or IP address of the SNMP manager (format xxx.xxx.xxx.xxx).
 

System Traps :

- Cold Start
- Warm Start
- Diag Messages

Enable : SNMP enable

Free memory: 32407 bytes

Temporary Storage

Undo

Logout

SNMP configuration



As opposed to the other messaging procedures, SNMP is activated by default.

Here you define the basic parameters needed for SNMP operation:

- **Community String: Read:** This character string can be used for read access to the device in your SNMP manager.
- **Community String: Read-Write:** This string gives you both read and write access to the device in your SNMP manager.
- **Manager IP:** Contains the IP address of your SNMP manager. Web-Count SNMP messages are sent to this address.
- **System Traps:** Select the messages you want to send.
- **Enable:** Enable the SNMP function

6.7 System Messages per syslog

Just as for the SNMP traps, you can send Cold Start, Warm Start and diagnostic messages to a syslog server.

Config >> Device >> Basic Settings >> Syslog

Syslog Server IP : Syslog System Messages:
Name or IP address of the Syslog server (format xxx.xxx.xxx.xxx).

10.40.27.2 

Syslog Server Port : Port No.: 1...65534 (default 514)

514

System Messages : Cold Start
 Warm Start
 Diag Messages

Enable : System Messages enable

Free memory: 32407 bytes

Temporary Storage

Undo

Logout

System messages using the syslog protocol

To enable this message system, go to the configuration page

Config >> Device >> Basic Settings >> Syslog

and enter the IP address of a syslog server and the port number through which you want communication to take place.

Select the message types you want to send to the server and check *System Messages enable*.

Save your settings by clicking on *Save*.

6.8 Ports

6.8.1 Filter

On the configuration page

Config >> Ports >> Inputs >> Filter

you can define one or more time windows, in which an active input signal is forwarded to the system for further processing.

The configuration requires the times of start and stop via CRON.

Enable this function via *Enable Filter*.

6.8.2 Inputs 1 - 6

Individual basic settings can be made for each of the six inputs.

For example to change the settings for Input 0, go to the navigation tree and select

Config >> Ports >> Inputs >> Input 0

Config >> Ports >> Inputs >> Input 0

Name : Replaces standard name in displays, please keep short.

Text : Port description.

Filter : Pulses with a duration shorter than specified here (duration in 1/1000 sec), are ignored.

Input Mode :

Pulse settings	
Change detection enable	Counter regards any change, a complete pulse will increase the counter by 2, minimum duration 1ms.
Change detection disable	Counter regards only complete pulses (Change OFF->ON->OFF). Minimum duration 1ms
Anyway, counter can regard 1000 edges per second max.	
Bidirectional Counter enable	Two adjacent inputs (0+1, 2+3,...) will be combined for analysis of bidirectional sensors.
Time Meter enable	Counter integrates the time, when this input is active. All other options will be disabled.

Change detection enable
 Bidirectional counter enable
 Time Meter enable

Scale :

Unit :

Free memory: 38973 bytes

Basic configuration „Input 0“

For *Name* enter a name for the input. This name is then displayed in the browser for counter input 0. If there is no name entered, this input will be hidden on home.htm. This function

can be used for cleaning up the site, if not of all inputs is made use.

The description entered in the *Text* field can for example describe the function of the sensor in greater detail or its installation location.

Filters allows you to specify a minimum time a signal must be present in order to be recognized. If a level is present on the input for less than the time defined here, it is ignored. The value is entered in 1/100ths of a second. If no value is entered here, the function is disabled..

There are other options available as well:

- *Change detection enable*: If this option is enabled, every state change is counted. One pulse increments the counter by two.
- *Bidirectional counter enable*: Two adjacent inputs (0 + 1, 2 + 3, 4 + 5) are combined for processing direction-dependent signal devices.
- *Time Meter enable*: Changes the behaviour of the counter. If this option is enabled, the counter will be incremented every second by one, when the input is high. This mode can be used to get a time meter.

Scale allows you to enter a coefficient, which is multiplied by the counter value at displaying or sending it. By this way you can measure physical values, using converters which give one pulse per measured unit, and display them correctly. Having activated the option Time Meter, enter e.g. a coefficient of 0.0002777777778 to get the number of hours measured by the input.

The field *Unit* keeps the physical unit, belonging to the measured size.

On the *Counter Mode* page

Config >> Ports >> Inputs >> Input X >> Counter Mode

you specify which edge of a pulse is used to increment the counter. If you are using the device in bi-directional counter mode, you can also specify a timeout time here after which an incompletely recognized counter event is rejected.

The second sub-page *Counter Set*

Config >> Ports >> Inputs >> Input X >> Counter Set

allows you to set the counter to any desired value.

7 Troubleshooting and Testing

The Web-Count features internal error management and diagnostics. This can be found in the configuration tree under the heading

Diag

7.1 Report

If an error occurs, this is indicated on the Web-Count itself by flashing of the *Diag* LED. In addition, any error messages are documented in a Diagnostics Report and can be read out there at any time.

All error messages are stored in the device and remain there even if the cause of the error has been eliminated. If the error is no longer current, it is moved from the Diagnostic Report to the Diagnostic Archive.

Diagnose

- Gerätestatus: OK

Diagnose Archive

- System: Es wurde eine Netzwerkstörung erkannt (Kabel offen o. kein Link).



Diagnostic Report and Diagnostic Archive

The Diagnostic Report and Diagnostic Archive can be viewed under

Diag >> Report

Clicking on the *Delete Report* button deletes all existing messages from the memory.



To delete both error memories using the „Delete Report“ button, you must be logged in as an administrator.

Diagnose

- Gerätestatus: OK

Diagnose Archive

- System: Es wurde eine Netzwerkstörung erkannt (Kabel offen o. kein Link).



Access with administrator rights

A reset, regardless of whether it was generated by interrupting power or by a reset from the *Logout* page, also deletes the report.

In addition, error and diagnostic messages can also be processed using SNMP traps or as a Syslog message. For more detailed information, refer to the sections *System Traps using SNMP* and *System Messages using Syslog*.

7.2 Check Config

As administrator you are able to see an overview of the current configuration and check it at a summary Web page.

Open this page from the configuration menu:

Diag >> Test >> Check Config

This Web page shows which access and message types are activated with which parameters. The device performs a plausibility check of the settings. If missing parameters are detected which prevent proper operation of the access type, the corresponding fields are highlighted in orange. Clicking on the link for the wrong configuration takes you directly to the corresponding settings page.

Parameter	HTTP	UDP	SNMP	Mail	Syslog	FTP
Enable Flag	----	OFF	ON	ON	OFF	OFF
Source Port	80	42279	161	auto	514	auto
Source IpAddr	10.40.27.71	10.40.27.71	10.40.27.71	10.40.27.71	10.40.27.71	10.40.27.71
Destination Port	n.a.	n.a.	162	25	----	----
Destination IpAddr	----	----	10.40.27.99	----	----	----
Active	OFF	OFF	ON	FAIL	OFF	OFF

Fehlerhafte oder unvollständige Eingaben werden orange markiert.
 Wählen Sie in diesem Fall unter [Config>>Session Control>>Profiles](#) das entsprechende Profil aus und überprüfen Sie die blau gekennzeichneten Parameter.

Overview and plausibility check of settings with error

Also checked and displayed are which transmission paths for the reports were selected and whether all the required parameters were configured. Here also the access types which were not fully configured are highlighted in orange.

Parameter	Mail Report	SNMP Trap	UDP Client	TCP Client	Syslog Report	FTP Report
Report / Trap	OFF	OFF	OFF	OFF	OFF	ON

Report transmission paths

7.3 Check Report

To check whether the configured reporting types work properly for the activated reports, you can go to the page

Diag >> Test >> Check Report

and set manual triggers and resets for the available reports.

These buttons allow you to trigger all the messages for the activated reports without the actual trigger condition being met.

Test der Reporte

Web-Count 6x Digital-0417E8

Web-Zählimpulserfassung mit digitalen Eingängen und Datenlogger

No	Name	Test	
1	Testreport	Trigger	Reset

last update: Di, KW44, 28.10.2008 11:00:45 *

[zurück zur Web-Count Homepage](#)

Page for testing activated reports

Clicking on the *Trigger* button tells the device that the condition for generating the report has been met. The status of the inputs is irrelevant here, but the actual trigger condition should not in fact be met. This is a virtual report triggering.

The *Reset* button rescinds the artificially set trigger. This is absolutely necessary after testing the reports, since otherwise an actually occurring report condition will not be recognized.

7.4 LEDs

On the page

Diag >> Test >> LED

you can use the *LED Test* button to activate all the LEDs on the device for two seconds. This function simplifies identification of the device and helps to check the functionality of the LEDs.

Diag >> Test >> LED

Activates all LEDs for 2s, e.g. to identify the device locally

LED Test

Test page for the device LEDs

8 Documentation

8.1 Manual

Explanation of the login levels and important configurations.

<p>Wellcome to Wiesemann & Theis Web-Count 6x Digital</p> <p>We would like to give you an introduction into getting started with the Web-Count and it's configuration.</p>	
<p>Login</p>	<p>There are three level of access with different rights, depending on the login:</p> <ul style="list-style-type: none"> • User without rights is everybody who calls up the websites of the Web-Count. All entries are read-only. • Admin login permits full access to all elements of I/O control and configuration. • Operator login permits access to the control of the reports and the configuration of the report messages. <p>A login take place depending on the password under this menu entry: Config</p> <p>If there is no password defined (default configuration) the access level would always be Admin rights.</p>
<p>Configuration</p>	<p>The main configuration requires Admin Login. The multiple functions of the Web-Count result in a great count of possible configurations. Don't let this confuse you. Simply walk through the navigation tree top-down and leave all entries unchanged which are not required by your configuration.</p> <p>The "Quick Start" manual shipped with the Web-Count shows you which menu items have to be regarded in the operation mode you chose.</p> <p>The most important configuration parameters are:</p> <ul style="list-style-type: none"> • Network Configuration Config >> Device >> Basic Settings >> Network • Report Config >> Device >> Report >> Report x <p>Configuration changed will be saved by pressing the "Temporary Storage" button. All changes will be activated by the Save an Logout Buttons.</p> <p>If you wish to restore the factory defaults please select Config >> Session Control >> Logout >> Restore Defaults.</p>
<p>For further informations refer to the "Quick Start" manual. A detailed reference book will be found on the Web-IO product page under the following link: www.WuT.de</p>	

Abbreviated „Manual“

8.2 Data sheet

The data sheet provides information about the key properties and technical data for the Web-Count.

Product No.:	#57652 Web-Count 6x Digital
Network:	10/100BaseT autosensing
Protokoll:	TCP and UDP Client, FTP, Mail, SNMP incl. Traps, inventorying, group management
Response times:	Data and switching traffic: typically 12ms
Digital inputs:	6 x Digital In, max. input voltage +/-30V, protected against reverse connection within this range Switching threshold 8V, +/- 1V, "On" current = 2.2 mA
Plug adapter:	1 x 8 terminal screws
Electrical isolation:	Digital inputs: min. 1000 V
Serial port RS232:	9600 Baud, 8 data bits, 1 stop bit, no parity
Displays:	Status LEDs for network 6 LEDs for digital statuses
Power supply:	Device supply: DC 24V-48V, AC 18V-30V
Storage temperature:	-25°C - 70°C
Operating ambient temperature:	0°C - 55°C: non spacing installation 0°C - 50°C: spacing installation
Housing:	Plastic housing for top hat rail installation 106,8 x 87,8 x 62,6 mm (l x b x h)
Weight:	approx. 200g

Web-Count data sheet

8.3 Property

The *Property* page contains information about the manufacturer, the hard- and software version and the identification of the device in the network.

Device Information	
Manufacturer	Wiesemann & Theis GmbH
- Address	Porschestra. 12 42279 Wuppertal Germany
- Support Hotline	+49-(0)202-2680-0
- Internet	http://www.wut.de
Typ	Web-Count 6x Digital
Order No.	#57652
Software Revision	3.06
Hardware Revision	1.00
Bios Software Revision	3.00.489
Device Identification:	
Name of Device	Web-Count 6x Digital-0417E8
System Description	Web-Zählimpulserfassung mit digitalen Eingängen und Datenlogger
Ethernet Address	00-C0-3D-04-17-E8
IP Address	10.40.27.50
DHCP: DNS Server	0.0.0.0
DHCP: Lease Time	00:00:00 sec

„Property“ page

9 Appendix

9.1 LEDs

In the following the meaning and function of the LEDs on the front panel of the Web-Count is explained

9.1.1 Power-LED

Indicates presence of supply voltage. If the LED is not on, please check for correct wiring of the power supply.

9.1.2 Status-LED

Flashes whenever there is network activity with the Web-Count. Periodic flashing indicates that the port has a connection to another station.

9.1.3 Error-LED

The Error-LED uses various flashing codes to indicate error states on the device or network port.

1x flashing: Check network connection. The Web-Count is not receiving a link pulse from a hub or switch. Check the cable or the hub/switch port.

2x or 3x flashing: Perform a device reset by momentarily interrupting power to the unit. If this does not clear the error, restore the device to its factory defaults. Since this resets all network settings, you should write them down first.



If the Power, Status and Error LEDs are all on at the same time, the self-test performed after each start and reset of the device could not be correctly finished. The reason for this may be an incomplete firmware update. The Web-Count is no longer operable in this state. Please return the unit through your dealer to W&T for inspection

9.1.4 Diag-LED

Indicates internal configuration errors. For error analysis open the page

`http://<IP-Adresse des Web-Count>/diag`

from the device.

9.1.5 System-LED

Indicates an internal communications error. Try to restart the device by momentarily interrupting power. If the condition remains, please return the unit through your dealer to W&T for inspection.



If the Web-Count has no IP address or address 0.0.0.0, the Diag LED and the System LED will remain on after a reset or new start. The LEDs will turn off only if an IP address is assigned.

9.1.6 Input 1-6

Indicates the status of the digital inputs. If the LED is on, the input is switched and is treated internally as high/logical 1.

9.1.7 Output 1-6

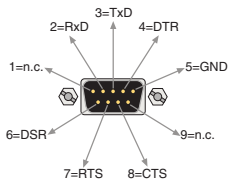
Indicates that an output is switched. If the LED is out, there is no voltage on the output.

9.2 Emergency access

The Web-Count has a serial port which can be used as an emergency access. This allows you to:

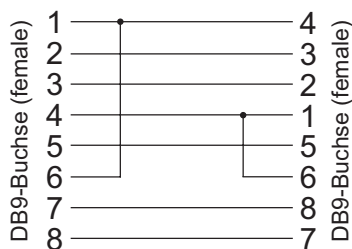
- Assign an IP address
- Restore the factory default settings
- Delete all passwords
- Open a port for a firmware update
- Format the data logger

The pin configuration for the serial port is shown in the following illustration.



Pin configuration for the serial port

Since the pin configuration of the RS232 port is identical to that of a PC, standard cables may be used.



Assignments for a null modem cable

Communication with the emergency access of the device is handled without handshake signals. This means a cable carrying only RxD, TxD and GND is sufficient for use

To enable the emergency access, use a null model cable to connect the device to a PC and start a serial terminal program. Set the connection settings to *9600baud, no parity, 8 bits, 1 stop bit, no handshake.*

If the device is connected to the power supply, disconnect it. Turn the supply voltage back on and immediately press the following letters on your keyboard *three times* to open the desired access:

u: Opens an update port. YOU can now load firmware.

f: Restores the device to its factory default settings. All previously made user settings are lost.

p: Deletes all assigned passwords.

Successful opening of the selected emergency access is indicated by flashing of the System and Diag LEDs.

x: For assigning or changing the IP address. An entry prompt appears. Enter the desired IP address and confirm by pressing *Enter*.

d: Deletes the contents permanently by formatting. During this process the *System* and *Diag* LEDs flash.

9.3 Factory defaults

Some situations require that the Web-Count be restored to its factory default settings. There are three ways to do this:

- Using Web-Based Management
- Using the serial emergency access



Restoring the factory default settings returns the unit to its state as shipped from the factory. First write down all the settings so that you can later restore the configuration as needed.

9.3.1 Web-Based Management

To restore the factory default settings using Web-Based Management, log in to the configuration pages and navigate to

Config >> Session Control >> LogOut

On the page shown in the main window you can click on the *Restore Defaults* button to return the unit to its original settings.

9.3.2 Serial emergency access

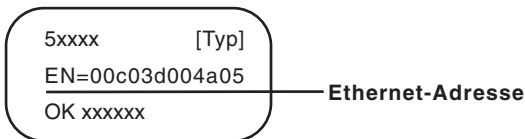
Connect the Web-Count to a PC using a null modem cable and, as soon as you have turned the power on, press the *f* key on your keyboard three times.

9.4 Alternative IP address assignment

The following describes methods for assigning an IP address to the unit instead of using the *WuTility* program.

9.4.1 ARP command

Required is a PC which is located in the same network segment as the Web-Count and on which TCP/IP is installed. Read the MAC address of the Web-Count on the device (e.g. EN=00C03D004a05).



Ethernet address on the sticker located on the side of the unit

Under Windows you now ping another network device and then insert a static entry into the computer's ARP table using the command line described below:

```
arp -s <IP address> <MAC address>
```

e.g. under Windows:

```
arp -s 172.0.0.10 00-C0-3D-00-12-FF
```

e.g. under SCO UNIX:

```
arp -s 172.0.0.10 00:C0:3D:00:12:FF
```

Now ping the device, here

```
ping 172.0.0.10
```

The IP address is now stored in non-volatile memory.



This method can only be used if no IP address has yet been assigned to the Web-Count, i.e. the entry is 0.0.0.0. To change an already existing IP address, you must open the configuration menu from the browser or select the serial path.

9.4.2 Serial port

In contrast to the procedures described above, you can use the serial port to change an already existing IP address for the Web-Count.

Connect the RS232 port on the device to a PC and start a terminal program (e.g. Hyperterminal). In the program create a direct connection through your COM port and set the serial properties to *9600 baud, no parity, 8 bits, 1 stop bit, no handshake*. Interrupt power to perform a reset while holding down the *x* key until the reply

`I Pno. +<Enter>`

appears. Enter the IP address using the usual point notation (xxx.xxx.xxx.xxx) and finish your entry by pressing *Enter*. You can also enter the subnet mask and gateway and turn off the BootP client directly by using the following syntax after the entry prompt:

`<IP address>, <subnet mask>, <gateway>-0`



If you make a typing mistake, you cannot correct it using Text Backspace. The procedure must be repeated.

If the entry was correct, an acknowledgment follows with the assigned parameters; otherwise the current IP address appears on the monitor together with the message *FAIL*. This procedure can be repeated as often as desired or necessary.

To turn off the DHCP and BootP functionality directly, directly enter the expression *0* directly after the parameters (e.g. 192.168.1.2-0). The possible options must be separated from the other parameters by a hyphen. The following entries are possible:

- 0: Disables DHCP and BootP
- 1: Enables BootP/RARP
- 2: Enables DHCP

9.4.3 RARP server (UNIX only)

Working with an RARP server enabled under UNIX is based on entries in the configuration files */etc/ethers* and */etc/hosts*. First expand */etc/ethers* by one line with the assignment of the Ethernet address of the Web-Count to the desired IP address. In */etc/hosts* the link with an alias is then determined. After you have connected the device in the network segment of the RARP server, you can use the network to assign the desired IP address to the device.

Your Web-Count has for example the MAC address *EN=00C03D0012FF* (sticker on the device) and should get IP address *172.0.0.10* and alias *WT_1*.

Entry in the file */etc/hosts*: *172.0.0.10 WT_1*

Entry in the file */etc/ethers*: *00:C0:3D:00:12:FF WT_1*

If the RARP daemon is not yet active, you must start it now using the command *rarpd -a*.

9.5 Firmware update

The operating software of the Web-Count is being continually improved. The following section describes how to perform a firmware upgrade

9.5.1 Current firmware

The most current firmware including the available update tools and a revision list is published on our Web site at <http://www.wut.de>.

Before downloading, please write down the 5-digit model number found on the Web-Count. From our Web site you can get to the product overview sorted by article numbers, through

which you can get directly to the data sheet for the device. Here you follow the link to the current version of the firmware.

9.5.2 Firmware update over the network

Required is a PC running Windows 9x/NT/2000/XP/Vista with a network connection and activated TCP/IP stack. For the update process you need two files, which as already mentioned are available for downloading from our homepage:

- The executable update tool for sending the firmware to the Web-Count
- The file with the new firmware to be sent to the Web-Count

No special preparation of the Web-Count is necessary for the update.

The *WuTility* tool used for the update detects all the W&T devices located in your network and is for the most part self-explanatory. If you do have questions or anything is unclear, please use the associated documentation or the online help.



Never intentionally interrupt the update process by disconnecting the power supply. The Web-Count will be rendered non-functional after an incomplete update.

Never mix files having different version numbers in the name. This will result in non-functionality of the device.

The Web-Count automatically detects when transmission of the operating software is complete and then carries out a reset.

9.6 Up- and download

Under the heading UpDownload, which can also be reached from the configuration menu, you can up- and download the device configuration:

Config >> Up/Download >> Download

and

Config >> Up/Download >> Upload

When downloading the device configuration, which is stored in XML format, you can download Web-Count settings and make any necessary changes. The changed settings can then be loaded back into the device using the Upload function.

For the XML upload you create or change a text file with the corresponding parameters and then load them into the device. The configuration of the Web-Count must begin with the expression

```
<io-WebCount6x6.1>
```

and end with the expression

```
</io-WebCount6x6.1>
```

The syntax for configuring per XML is as follows:

```
<Option>  
  <Parameter1>value</Parameter1>  
  <Parameter2>value</Parameter2>  
</Option>
```

The individual options and parameters correspond to the configuration items in the menu tree.



Note, especially for mass updates and configurations, that the IP address stored in the XML file is always the programmed in the device. This must first be modified.

In addition, the SNMP MIB you need for incorporating the device into SNMP management systems can be downloaded. Depending on the system language selected, load the German or English version.