



**SpiderControl™**  
**MICROBROWSER**

**Windows CE Edition**  
**Version 5.0 / 6.0**



**iniNet . Erfolgreiche Kunden**

E-mail: [info@ininet.ch](mailto:info@ininet.ch), [www.ininet.ch](http://www.ininet.ch), Tel: +41 61-716 96 26

# Contents

<b>LICENSE AGREEMENT</b> .....	<b>4</b>
<b>ABBREVIATIONS</b> .....	<b>5</b>
MMI .....	5
*.PRJ .....	5
VIEW .....	5
TEQ (*.TEQ) .....	5
PAINTER .....	5
APPLET .....	5
PPO .....	5
CONTAINER .....	5
<b>INSTALLATION</b> .....	<b>6</b>
SYSTEM REQUIREMENTS .....	6
INSTALLATION CODE .....	6
AUTOMATIC STARTUP .....	6
<b>FIRST STEPS</b> .....	<b>7</b>
HOST OR IP ADDRESS .....	7
PATH OR URL .....	7
ALWAYS USE THESE SETTINGS .....	7
<b>CODESYS VISUALIZATIONS</b> .....	<b>8</b>
SUPPORTED FEATURES .....	8
EXITING THE MICROBROWSER .....	8
<b>HOW TO CREATE A LOCAL START PAGE</b> .....	<b>9</b>
CREATE A CoDeSys START PAGE .....	9
<b>XML CONFIGURATION FILE</b> .....	<b>10</b>
VERSION <VERSION> .....	12
START PAGE <START_PAGE> .....	12
LOG FILE <LOG_FILE> .....	12
PROXY <PROXY_HOST> AND <PROXY_PORT> .....	12
VPI <VPI_USER> AND <VPI_PASS> .....	12
REGISTRATION CODE <PROMPT_URL> .....	12
PROMPT URL <PROMPT_URL> .....	12
FULL REDRAW <FULL_REDRAW> .....	12
DEBUG LEVEL <DEBUG_LEVEL> .....	13
KIOSK-MODE <KIOSK> .....	13
KEEP ALIVE <KEEP_ALIVE> .....	13
HTTPD ENABLED <HTTPD_ENABLED> .....	13
HTTPD PORT <HTTPD_PORT> .....	13
HTTPD DEBUG LEVEL <HTTPD_DEBUG_LEVEL> .....	13
SIP <SIP> .....	14
IMAGE MEMORY MAX <IMG_MEM_MAX> .....	14
TEMP DIRECTORY <TEMP_DIR> .....	14
WARNING BUTTON <WARN_BTN> .....	14
REMOTE MODE <REMOTE_MODE> .....	14
TEQ CACHE <TEQ_CACHE> .....	15
LOADING MESSAGE <LOADING_MSG> .....	15
SHOW SELECTION <SHOW_SELECTION> .....	15
CONFIG PAGE <CONFIG_PAGE> .....	15
CONFIG FILE <CONFIG_FILE> .....	16
BOOT DELAY IN SECONDS <BOOT_DELAY_SEC> .....	16
SET WIDTH <SET_WIDTH> .....	16
SET HEIGHT <SET_HEIGHT> .....	16
INACTIVITY TIMEOUT IN SEC <INACTIVITY_TO_SEC> .....	16
INACTIVITY, POLL TIME SUBSTITUTE IN MS <INACTIVITY_PTS_MS> .....	16
TMZ ENABLED <TMZ_EN> .....	17
MEMORY RAM-DISK <MEM_RAMDISK_KB> .....	17
MEMORY HEAP 1 <MEM_HEAP1_KB> .....	17
MEMORY HEAP 2 <MEM_HEAP2_KB> .....	17
MEMORY HEAP 3 <MEM_HEAP3_KB> .....	17
MEMORY HEAP 4 <MEM_HEAP4_KB> .....	18
MEMORY LR HEAP <MEM_LRHEAP_KB> .....	18
MFC HTTP <MFC_HTTP_EN> .....	18
MFC HTTP CACHE <MFC_HTTP_CACHE> .....	18
HTTP VERSION <HTTP_VERSION> .....	19
SHIFT- HOTKEYS <SHIFT_HOTKEYS_EN> .....	19

PERCO FILE <PERCO_FILE>.....	19
STORAGE PATH <STORAGE_PATH>.....	19
BUILT-IN DIALOG <BUILT_IN_DIALOG>.....	20
SCALE FACTOR <SCALE_FACTOR>.....	20
EXPORT ENABLE <EXPORT_EN>.....	20
EXPORT PATH <EXPORT_PATH>.....	21
CHECK FOR PROJECT UPDATE <CHECK_FOR_UPDATE> .....	21
COOKIE <COOKIE> .....	21
SOCKET CONNECTION TIMEOUT <SOC_CONTIMEO_MS>.....	21
SOCKET RECEIVE TIMEOUT <SOC_RCVTIMEO_MS>.....	21
SOCKET SEND TIMEOUT <SOC_SNDTIMEO_MS> .....	22
VIEW ALIGNMENT <VIEW_ALIGNMENT>.....	22
SWIPE DETECTION DELAY IN MS < SWIPE_DETECTION_DELAY_MS> .....	22
BACKGROUND COLOR <BG_COLOR>.....	22
OPTIMIZE FIRST REDRAW <OPTIMIZE_FIRST_REDRAW> .....	22
RETURN TO THE CONFIGURATION PAGE <RETURN_TO_CONFIG_PAGE_SEC> .....	22
<b>SHORTCUTS.....</b>	<b>23</b>
EXIT .....	23
OPEN CONFIGURATION DIALOG .....	23
TOGGLE FULL SCREEN .....	23
<b>CODESYS MICROBROWSER FAQ.....</b>	<b>24</b>



# License Agreement

READ THE TERMS OF THIS AGREEMENT AND ANY PROVIDED SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT") CAREFULLY BEFORE OPENING THE SOFTWARE MEDIA PACKAGE. BY OPENING THE SOFTWARE MEDIA PACKAGE, YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO ALL THESE TERMS, PROMPTLY RETURN THE UNUSED SOFTWARE TO YOUR PLACE OF PURCHASE.

## 1. LICENSE TO USE

ININET GRANTS YOU A NON-EXCLUSIVE AND NON-TRANSFERABLE LICENSE LIMITED TO THE INTERNAL USE OF THE ACCOMPANYING SOFTWARE AND DOCUMENTATION AND ANY ERROR CORRECTIONS PROVIDED BY ININET SOLUTIONS GMBH (COLLECTIVELY "SOFTWARE").

## 2. GOVERNING LAW

THIS AGREEMENT SHALL BE GOVERNED BY THE LAWS OF KANTON BASELSTADT, SWITZERLAND.

## 3. DISCLAIMER OF WARRANTY

THIS SOFTWARE AND THE ACCOMPANYING FILES ARE SOLD "AS IS" AND WITHOUT WARRANTIES AS TO PERFORMANCE OR MERCHANTABILITY OR ANY OTHER WARRANTIES WHETHER EXPRESSED OR IMPLIED. BECAUSE OF THE VARIOUS HARDWARE AND SOFTWARE ENVIRONMENTS INTO WHICH ININET SOLUTIONS MAY BE PUT, NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS OFFERED. GOOD DATA PROCESSING PROCEDURE DICTATES THAT ANY PROGRAM BE THOROUGHLY TESTED WITH NON-CRITICAL DATA BEFORE RELYING ON IT. THE USER MUST ASSUME THE ENTIRE RISK OF USING THE PROGRAM. ANY LIABILITY OF THE SELLER WILL BE LIMITED EXCLUSIVELY TO PRODUCT REPLACEMENT OR REFUND OF PURCHASE PRICE.

## 4. RESTRICTIONS

SOFTWARE IS CONFIDENTIAL AND COPYRIGHT. THE TITLE OF ANY SOFTWARE AND ALL ASSOCIATED INTELLECTUAL PROPERTY RIGHTS ARE RETAINED BY ININET SOLUTIONS GMBH AND/OR ITS LICENSORS. YOU MAY NOT MAKE COPIES OF SOFTWARE OTHER THAN A SINGLE COPY OF SOFTWARE FOR ARCHIVAL PURPOSES. YOU MAY NOT MODIFY, DECOMPILE, AND REVERSE ENGINEER SOFTWARE. SOFTWARE IS NOT DESIGNED OR LICENSED FOR USE IN ON-LINE CONTROL OF AIRCRAFT, AIR TRAFFIC, AIRCRAFT NAVIGATION OR AIRCRAFT COMMUNICATIONS; OR IN THE DESIGN, CONSTRUCTION, OPERATION OR MAINTENANCE OF ANY NUCLEAR FACILITY. YOU WARRANT THAT YOU WILL NOT USE SOFTWARE FOR THESE PURPOSES.

## 5. LIMITATION OF LIABILITY

TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL ININET SOLUTIONS GMBH OR ITS LICENSORS BE LIABLE FOR ANY LOST REVENUE, PROFIT OR DATA, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, HOWEVER CAUSED REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE SOFTWARE, EVEN IF ININET SOLUTIONS GMBH HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

IN NO EVENT WILL ININET SOLUTIONS GMBH'S LIABILITY TO YOU, WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR OTHERWISE, EXCEED THE AMOUNT PAID BY YOU FOR SOFTWARE UNDER THIS AGREEMENT. THE FOREGOING LIMITATIONS WILL APPLY EVEN IF THE ABOVE STATED WARRANTY FAILS ITS ESSENTIAL PURPOSE.

## 6. TERMINATION

THIS AGREEMENT IS EFFECTIVE UNTIL TERMINATED. YOU MAY TERMINATE THIS AGREEMENT AT ANY TIME BY DESTROYING ALL COPIES OF SOFTWARE. THIS AGREEMENT WILL TERMINATE IMMEDIATELY WITHOUT NOTICE FROM ININET SOLUTIONS GMBH IF YOU FAIL TO COMPLY WITH ANY PROVISION OF THIS AGREEMENT. UPON TERMINATION, YOU MUST DESTROY ALL COPIES OF SOFTWARE.

Java is a registered trademark of Sun Microsystems Inc.  
Solaris is a registered trademark of Sun Microsystems Inc.  
Windows NT/95/98/ME/2000/XP and WinCE are registered trade marks of Microsoft Inc.  
Mac OS is a registered trademark of Apple Inc.  
OS/2 is a registered trademark of IBM Inc.  
Pentium is a registered trademark by Intel Inc.

## Abbreviations

### **MMI**

Man Machine Interface, e.g. a SpiderControl™ views displayed at a touch panel or browser.

### **\*.prj**

File extension for a SpiderControl™ project file generated by the SpiderControl™ EDITOR.  
A SpiderControl™ project comprises everything to form a MMI on a touch panel or in a browser.

### **View**

A view is what the user of a MMI sees at one moment inside a window or a browser. A \*.teq file implements a view.

### **TEQ (\*.teq)**

File extension for a SpiderControl™ view file generated by the SpiderControl™ EDITOR.

### **Painter**

A painter is a graphic object, which is used by the SpiderControl™ EDITOR. This object is programmed in JAVA. Several painters were packed into a Applet which resides on an embedded system.

### **Applet**

Is a Java program, which can be launched in a browser from within a HTML page.

### **PPO**

Stands for Process Point. A process point is a variable of the user application that should be made visible towards the MMI.

### **Container**

A container is a local variable, which has a scope within the actual applet/view. Containers are used to exchange values between different painters in a view or between different views of the same applet

## Installation

This software is written for use on Microsoft Windows CE™ Operating Systems. For the different versions (4.2, 5.0,...), flavors (Windows CE Handheld, Pocket-PC, Windows Mobile) and processor technologies (Strong-ARM, MIPS, PPC, X86,...), a specified version of the MicroBrowser should be purchased.

### System requirements

The SpiderControl MicroBrowser needs less than 1 MB free space on the disk and requires at least 32 MB of RAM.

To install the software, the user should copy files from the installation directory

```
MicroBrowser_CE.exe  
mfcce400.dll  
MsgBox.teq
```

...

into a persistent and writable area (e.g. FlashDisk) of the Windows CE device. After this, the application can be started.

### Installation Code

To complete the installation, a license code must be purchased from iniNet. The application will generate a target specific challenge code, which consists of 16 Bytes and a CRC. This challenge code shall be sent to:

[Info@ininet.ch](mailto:Info@ininet.ch)

You will receive a response code (16 Bytes) that will enable the MicroBrowser on this device.

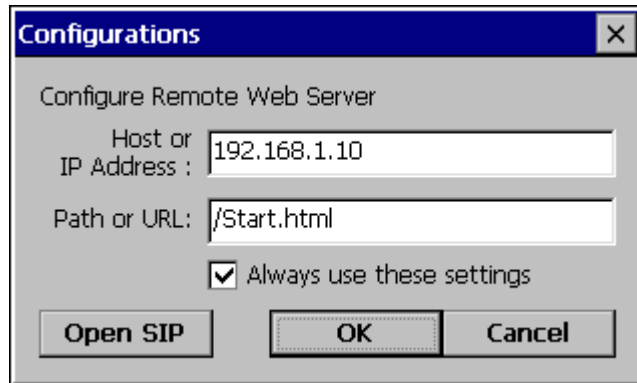
If you are planning to use many license keys, iniNet can provide you with an automated Web-Portal license generator.

### Automatic Startup

To start the MicroBrowser application automatically after startup of the device, there are many different procedures. Please contact your hardware reseller for detailed information, how the auto-startup procedure is implemented on your device.

## First Steps

After the successful installation, the following dialog appears:



This dialog allows entering the default URL, which the MicroBrowser should open.

### Host or IP Address

The first line asks for the IP-Address of the target system webserver, where the SpiderControl MMI's are located. If your network has a DNS (Name server) and your local TCP/IP configuration on the WinCE device is configured to know the name server's address, you can alternatively use a symbolic host name instead of the IP address.

### Path or URL

The "Path or URL" field should contain the HTML-File name that was automatically generated by the SpiderControl Editor. If this file is stored in a subdirectory relatively to the webserver's root directory, this path information should be added here. Please use '/' as separator. Alternatively, since version 129, you can enter the full URL with http:, in this case the IP field is ignored.  
Ex.: `http://192.168.1.10/Start.html`

### Always use these settings

If you select this checkbox, the above dialog will not appear the next time that you start the MicroBrowser. All the above configurations will be stored in a XML-file that is located in the working directory of the MicroBrowser. If you need to change the settings later, but the checkbox was already set before, this file can be edited with an editor or this dialog can be reopened with the shortcut Alt-O or Shift-O if this latest is enabled.

# CoDeSys Visualizations

## Supported Features

The MicroBrowser supports visualizations designed with CoDeSys 2.x, given that the corresponding version was purchased.

The following items are supported:

- Rectangle
- Ellipse
- Polygon
- Polyline
- Curve
- Pie
- Bitmap
- Visualization
- Button
- WMF file
- Table
- Trend
- Alarm table
- Scrollbar
- Meter
- Bar display
- Histogram
- Run external program (platform dependent)
- Recipe / Watchlists
- Client write access

While these configuration possibilities are NOT supported:

- Font styles:
  - underline
  - strikethrough
- Frame style other than solid
- Tooltip-display
- Keyboard shortcuts
- CONNECT\_TO

## Exiting the MicroBrowser

There is a possibility to configure a button to quit the MicroBrowser. To do so, one have to configure the button with the intern command: "INTERN EXITPROGRAM" (in the tab "input->Execute program").



## How to create a local start page

First of all, the MicroBrowser doesn't act like a normal web browser – it can't parse normal HTML pages. The MicroBrowser can parse Spider Control and CoDeSys 2.x HMIs. Therefore the start page has to be created in one of these formats.

### Create a CoDeSys Start Page

#### Creating the start page

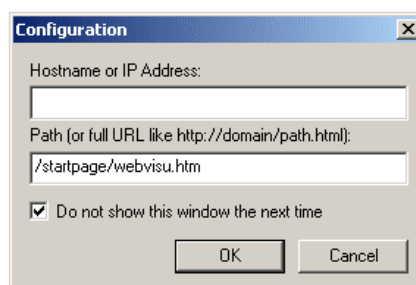
- 10 Create a new CoDeSys visualization. We are going to use the simulation mode, so the target platform shouldn't matter. You can for example use the simulation target "PLCWinNT".
- 11 Design your start page. It can consist of more than one visualization.
- 12 Add buttons to jump to the PLCs, by adding the "INTERN LINK" command. E.g. "INTERN LINK http://192.168.1.116/webvisu.htm".

#### Compiling and getting the files together

- 13 Select "Simulation Mode" (menu: "Online" -> "Simulation Mode").
- 14 Build the project (menu: "Project" -> "Build").
- 15 Log in (menu: "Project" -> "Login"). In the output view, you should see that the XML files were generated.
- 16 Go to the project options (menu: "Project" -> "Options") under "Directories" and write down the directory "Compile files".
- 17 Browser with the Explorer to this directory and copy the generated XML files to a new directory. Also copy the file "visu\_ini.xml". If there are too many files in the "compile" directory, delete all files and recompile the start page. Then you'll easily find the files.
- 18 One more file is needed, the HTML page "webvisu.htm". You can find this file in the main directory of CoDeSys, in the subdirectory "Visu". Copy this file to the new create directory. Note that this file can be renamed to anything you want.
- 19 The directory should at least contain these three files:
  - HTML-file: e.g. webvisu.htm
  - Start visu: e.g. plc\_visu.xml
  - visu\_ini.xml

#### Configuring the MicroBrowser

- 20 Next, you need to copy the created directory with the files to the panel, e.g. with a memory stick. A good choice is to copy the directory near the file "MicroBrowser\_CE.exe".
- 21 Start the MicroBrowser and set the settings according to the picture below.



## XML Configuration File

It is essential that the MicroBrowser can write, open and modify this file on the local file-system. The XML-File is called `uBrowser.xml` and is located in the installation directory of the MicroBrowser\_CE.exe. The file can be edited with any ASCII-text editor. The contents of this file is as follows (contents may vary):

```

10 <?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
11 <uBrowser>
12     <!--Configuration file of the MicroBrowser-->
13     <version>140</version>
14     <start_page>http://192.168.0.10/PLCSample.html</start_page>
15     <log_file>uBrowser.log.txt</log_file>
16     <proxy_host></proxy_host>
17     <proxy_port>80</proxy_port>
18     <vpi_user></vpi_user>
19     <vpi_pass></vpi_pass>
20     <reg_code></reg_code>
21     <prompt_url>1</prompt_url>
22     <full_redraw>1</full_redraw>
23     <debug_level>1</debug_level>
24     <kiosk>1</kiosk>
25     <keep_alive>1</keep_alive>
26     <httpd_enabled>0</httpd_enabled>
27     <httpd_port>80</httpd_port>
28     <sip>1</sip>
29     <img_mem_max>20971521</img_mem_max>
30     <temp_dir>\Temp\~mb~</temp_dir>
31     <warn_btn>1;0;!;1,1,23,23;255,128,64;0,0,0;</warn_btn>
32     <remote_mode>0</remote_mode>
33     <teq_cache>0</teq_cache>
34     <loading_msg>1;0>Loading...;0,0,0,0;0,0,0;0,0,0;</loading_msg>
35     <show_selection>0</show_selection>
36     <config_page></config_page>
37     <config_file></config_file>
38     <httpd_debug_level>0</httpd_debug_level>
39     <boot_delay_sec>0</boot_delay_sec>
40     <set_width>0</set_width>
41     <set_height>0</set_height>
42     <inactivity_to_sec>0</inactivity_to_sec>
43     <inactivity_pts_ms>0</inactivity_pts_ms>
44     <tmz_en>0</tmz_en>
45     <mem_ramdisk_kb>0</mem_ramdisk_kb>
46     <mem_heap1_kb>0</mem_heap1_kb>
47     <mem_heap2_kb>0</mem_heap2_kb>
48     <mem_heap3_kb>0</mem_heap3_kb>
49     <mem_heap4_kb>0</mem_heap4_kb>
50     <mem_lrheap_kb>0</mem_lrheap_kb>
51     <mfc_http_en>1</mfc_http_en>
52     <mfc_http_cache>1</mfc_http_ cache >
53     <http_version>1</http_version>
54     <shift_hotkeys_en>1</shift_hotkeys_en>
55     <perco_file>uBrowsCo.xml</perco_file>
56     <storage_path></storage_path>
57     <built_in_dialog>0</built_in_dialog>
58     <scale_factor>1</scale_factor>
59     <export_en>0</export_en>
60     <export_path></export_path>
61     <check_for_update>0</check_for_update>
62     <cookie></cookie>
63     <soc_contimeo_ms>0</soc_contimeo_ms>
64     <soc_rcvtimeo_ms>0</soc_rcvtimeo_ms>
65     <soc_sndtimeo_ms>0</soc_sndtimeo_ms>
66     <view_alignment>0</view_alignment>
67     <bg_color></bg_color>
68     <optimize_first_redraw>0</optimize_first_redraw >
69     <return_to_config_page_sec>2</return_to_config_page_sec>
70     <swipe_detection_delay_ms>200</swipe_detection_delay_ms>
71 </uBrowser>

```

**Version** <version>

This is the version of the configuration file. DO NOT MODIFY IT!

**Start page** <start\_page>

This is the start URL, to open either a local file or remote file:  
<start\_page>Start.html</start\_page> relative to the program path.  
<start\_page>http://192.168.1.10/Start.html</start\_page>  
Default is "Start.html".

**Log file** <log\_file>

The MicroBrowser is able to create a Log-File for debug purposes. This file will increase, until it reaches 1 MB. it is cleared each time you restart the program. See also <debug\_level>.  
Default is "uBrowser.log.txt".

**Proxy** <proxy\_host> and <proxy\_port>

The tags proxy-host and proxy-port may contain the respective information. Let the proxy\_host empty, since these properties are **are not yet supported**.

**VPI** <vpi\_user> and <vpi\_pass>

The VPI properties are only needed, if you plan to access a target system over internet, using VPI-Portal. These properties contain user-name and password for the portal. Please contact iniNet for details.

**Registration code** <prompt\_url>

Since version 106.  
The license key that you have received from iniNet will be stored here.

**Prompt URL** <prompt\_url>

Since version 107.  
If this property is set to '1', the MicroBrowser will open the URL-Dialog on startup. Set to '0', to force the MicroBrowser to directly start the page defined in <start\_page>. In this case, it will not open the dialog anymore (same as choosing 'Do not open...'). See also shortcuts (Alt-O) to restore this option back.  
Default is "1".

**Full Redraw** <full\_redraw>

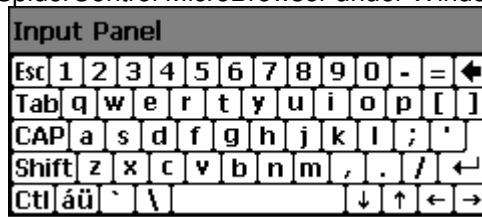
Since version 108.  
Sets the MicroBrowser to perform a full redraw for each update. If this property is set to 0, the MicroBrowser will perform conditional redraws, meaning that only changing objects will be drawn. This option improves the refresh of the MicroBrowser but requires that the HMI is well designed to support this option. Also, you can change this option at runtime, for a specific view, by writing 0 (on gain focus event) and 1 (on lost focus event) onto the container variable "@MB\_FULL\_REDRAW".  
But we suggest to let the default option, i.e. '1'.

<b>Debug Level</b>	<debug_level>	<p>Since version 109. Increasing the 'debug level' will generate more information in the log file. '0' will turn logging off, 1 is the default setting, '2' is the maximum.</p>
<b>Kiosk-Mode</b>	<kiosk>	<p>Since version 109: This tag switches the MicroBrowser to the so-called 'Kiosk-Mode', where the menu bar will disappear. To hide the task-manager bar of WinCE, use the configuration dialog of the operating system (Right button click on the task-bar, choose 'hide') In this mode, a thin frame of 2 (vertical) and 5 (horizontal) pixels will remain. E.g. if you use a VGA resolution, choose a view size of 635x470 pixels to avoid scroll-bars. = 0: kiosk mode is disabled. = 1: kiosk mode with frame and task bar. Since version 114: = 0: kiosk mode is disabled. = 1: kiosk mode with frame and task bar. = 2: kiosk mode without frame and task bar (full screen &amp; always on top). Since version 115: = 3 same as 2 but hot-keys like Shift-O, Shift-X, Alt-O, Alt-X, ... are disabled. Since version 120: = 4: The full screen is enabled but the view is not always on top. = 5: This mode allow to start the MicroBrowser (XP only) by adjusting its window size with the size of the applet-tag defined in the html file of the web-project. See the project configuration dialog in Editor. Not full screen. Since version 123: The following kiosk modes 0, 2, 3, 4 and 5 are implemented on MicroBrowser XP too.</p>
<b>Keep Alive</b>	<keep_alive>	<p>Sets this option to '1', to support Keep-Alive connections. Since version 110: was default disabled. Since version 137: is default enabled with http_version = 1</p>
<b>Httpd enabled</b>	<httpd_enabled>	<p>Since version 110. If this option is set to '1', the MicroBrowser will start a web server listening on the port specified by httpd_port.</p>
<b>Httpd port</b>	<httpd_port>	<p>Since version 110. Port number of the enabled webserver. Should be '80'.</p>
<b>Httpd debug level</b>	<httpd_debug_level>	<p>Since version 116. Debug level for the webserver. '0' will turn logging off, '2' is the maximum. This option will help you to see the incoming requests from any browser on the webserver. Default is '0' (turned off).</p>

## SIP <sip>

Since version 111.

SIP stands for Soft Input Panel and defines the way, to edit any value on the SpiderControl MicroBrowser under Windows CE.



Set to 0, to disable the Windows SIP and use instead of the keypad.teq and alphapad.teq in your web project. Set to 1, to enable the Windows SIP and automatically open the Windows SIP dialog (default). Set to 2, to enable the Windows edit-box, but without opening the SIP dialog. In the two latest cases, the user may edit the value with a PS2 or USB keyboard.

(\*)Default is '1'.

Sets the SIP method:

- = 0: Windows SIP is disabled, use keypad.teq and alphapad.teq.
- = 1: Windows SIP is enabled, open the SIP on edit-box (\*).
- = 2: Windows edit-box is enabled, but do not open the SIP dialog.

Since version 129:

= 3: Windows SIP is enabled in edit-box, like for SIP 1. And force the opening and closing of the SIP on every Windows input dialog, like the configuration dialog.

## Image memory max <img\_mem\_max>

Since version 111.

Sets the size max in bytes used to cache image files in the MicroBrowser.

Since V.133: Default is 2 MB: '2097152' for CE (and 100 MB for XP)

## Temp directory <temp\_dir>

Since version 111.

Sets the temporary directory but also the prefix of temporary files.

Should be "\\Temp\\~mb~" or "~mb~". The latest will create temporary files with prefix "~mb~" on relative path

## Warning button <warn\_btn>

Since version 111.

Configure the warning button in this way

```
1;time_in_sec;Label;x,y,width,height;bgndRed,bgndGreen,bgndBlue;  
fgndRed,fgndGreen,fgndBlue;
```

The first option allow to enable=1 or disable=0 the button. time\_in\_sec is the time in second to display the button but 0 means always on top. Label is the text in button. x,y,width,height allow to configure the position and the size of the button and next properties allow to define the foreground and background color in decimal RGB code.

Default: 1;0;!;1,1,23,23;255,128,64;0,0,0;

Ex.: 1;0;Warning!;1,1,80,30;255,128,64;0,0,0;

## Remote mode <remote\_mode>

Since version 112.

Sets the remote mode in this way:

- = 0: Files and RPC are remote (Default)
- = 1: Local files with remote RPC
- = 2: Local files with local PPO variables, but remote write.

Set this option to '1' in order to load HMI files from local file system (on MicroBrowser side) and only send CGI requests on the target. The IP address and the path comes from the start page.

For example, in the URL: `http://192.168.1.2/demo/start.html`

CGI requests: `http://192.168.1.2/cgi-bin/...`, and pathes for local files are: `.\demo\start.html, .\demo\*.teq, .\demo\*.gif, ....`

#### **Teq cache** <teq\_cache>

Since version 113.

If this option is enabled, the MicroBrowser will perform the caching of TEQ files in Ramdisk. We suggest to disable this option (0), and use the Windows cache, see <mfc\_http\_en> and <mfc\_http\_cache>.

See also: <mem\_ramdisk\_kb> if the TEQ cache is enabled.

Default is 0 for Windows and 1 for other platforms.

**Since version 136:** Supports value 2 to cache all TEQ files at start-up.

#### **Loading message** <loading\_msg>

Since version 113.

Configure the loading message displayed on TEQ jump.

1;Param;Text;x,y,width,height;bR,bG,bB; fR,fG,fB;

The first option allow to enable=1 or disable=0 this feature.

Param:

= 0: Text is centred using width and height of the TEQ file.

= 1: Text is centred using following param.: x,y,width,height.

= 2: Text is the file name of the image to display on coordinates specified by following param.: x,y,width,height.

Parameters: bR,bG,bB; background color (unused).

Parameters: fR,fG,fB: RGB color of the text.

Default: 1;0>Loading...;0,0,0,0;0,0,0,0,0,0;

Ex.: 0;2;sanduhr.gif;4,412,20,20;0,0,0,0,0,0;

#### **Show Selection** <show\_selection>

Since version 115.

Sets the MicroBrowser to perform the drawing of the selected objects.

Default is '0'.

#### **Config Page** <config\_page>

Since version 115.

Sets the MicroBrowser to open any configuration page before jumping on any URL. The MicroBrowser will ignore the start page if any configuration page is defined and if <prompt\_url> is set to 0. If the specified URL cannot be opened, it will return to the configuration page, to let the user change the URL, and it will try again after a few seconds.

See the detail in « Configuration Page on MicroBrowser.pdf ».

Default is empty.

Ex.: <config\_page>MB\_Config/MB\_Config.html</config\_page>, in this case, the MicroBrowser expects that the configuration project is placed relative to the program path, in the subfolder MB\_Config and the file MB\_Config.html

See also <config\_file>

**Config File** <config\_file>

Since version 115.  
Define the configuration file used to store data from configuration project.  
The default setting is empty, but the default file name is "MB\_Config.ini".  
Ex.: <config\_file>MB\_Config/MB\_Config.ini</config\_file>  
See also <config\_page>

**Boot delay in seconds** <boot\_delay\_sec>

Since version 116.  
Sometimes, on reboot, the MicroBrowser needs to wait for the system to initialize all resources, like network adapters. This option allows you to set the number of seconds to wait, at startup, before the MicroBrowser tries to load the start page.  
Default is '0' (disabled).

**Set Width** <set\_width>

Since version 117.  
Set the width of the view. The default behaviors of the MicroBrowser is that the view is automatically resized to the size of the TEQ file, showing scrollbar if necessary. This property will force the width of the view and ignore the width of the TEQ file.  
Default is '0' (auto).  
Ex.: 320 (pixels)

**Set Height** <set\_height>

Since version 117.  
Set the height of the view. The default behaviors of the MicroBrowser is that the view is automatically resized to the size of the TEQ file, showing scrollbar if necessary. This property will force the height of the view and ignore the height of the TEQ file.  
Default is '0' (auto).  
Ex.: 240 (pixels)

**Inactivity Timeout in sec** <inactivity\_to\_sec>

Since version 118.  
Set the inactivity timeout in seconds used to substitute the refresh period. See Inactivity Poll Time Substitute.  
Default is '0' (disabled).  
Ex.: 60 (seconds)

**Inactivity, Poll Time Substitute in ms** <inactivity\_pts\_ms>

Since version 118.  
Set the poll time of substitution in milliseconds, to use as soon as the timeout is reached. This feature is useful to reduce the traffic on the network. First the MicroBrowser starts with the refresh period defined in the SpiderControl Editor project, can be fast. If no activity is detected after a time defined in „inactivity\_to\_sec“, the MicroBrowser will use the refresh period configured in <inactivity\_pts\_ms>. As soon as the MicroBrowser detects any user activity again, it will restore the default refresh period from the project.  
Default is '0' (disabled).  
Ex.: 3000 (ms)



### **TMZ Enabled** <tmz\_en>

Since version 119.

Set if time zone is enabled to display date and time for alarming and for offline trend. We suggest enabling TMZ, if the target supports time zone and generates UTC timestamp (i.e. the target is configured with local date and time, and the time zone is correctly set, or if the target is configured with the time of Greenwich and GMT+0). Thus the MicroBrowser will display dates and times depending on user local time settings, defined on his computer. For example with GST (GMT+1), the date and time is displayed with UTC time + 1 hour. In other case, if TMZ is disabled, the timestamp returned by the target will be displayed as is, without any time zone or daylight conversion. This parameter is ignored for online trend, since it always works with local time, and for SAIA alarming and offline trend, where time zone is not supported.

The TMZ can be set dynamically, by writing 0 or 1 in the predefined container variable "MB\_tmz\_en".

Default is '0' (disabled).

Ex.: 1 (Enabled)

### **Memory RAM-Disk** <mem\_ramdisk\_kb>

Since version 121.

Set memory size of RAM-Disk in KB. The RAM-Disk is used to create temporary files by the MicroBrowser for FileViewer and DropDownList painters, to download files from remote web server, to let files in cache, if <teq\_cache> is enabled and also by the Web-Server if this latest is running. The ramdisk is cleared, on every URL jump performed by the MicroBrowser. Set the debug level to 2, to see how much memory is really used. Use this parameter with care!

Default is '0' (use the default ramdisk size of 1 MB)

**Since version 136:** Default ramdisk size 2 MB for CE, and 4 MB for XP.

Ex.: 1024 (KB)

### **Memory Heap 1** <mem\_heap1\_kb>

Since version 121.

Set memory size of heap 1 in KB. This memory is used to allocate painter objects of the current view and to create the list of PPO. The heap memory is cleared, on every TEQ jump. Set the debug level to 2, to see how much memory is really used. Use this parameter with care!

Default is '0' (use the default heap size of 2 MB)

Ex.: 2048 (KB)

### **Memory Heap 2** <mem\_heap2\_kb>

Since version 121.

Set memory size of heap 2 in KB. This memory is used for container variables, html tags from static HTML and CSV files, for trending macro instances, and for log data in online trends,.... The heap memory is cleared, on every URL jump performed by the MicroBrowser. Set the debug level to 2, to see how much memory is used. Use this parameter with care!

Default is '0' (use the default heap size of 2 MB)

Ex.: 2048 (KB)

### **Memory Heap 3** <mem\_heap3\_kb>

Since version 127.

Set memory size of heap 3 in KB. This memory is used to store the log data from HD-Log files and from macro offline trends. The heap memory is cleared on URL jump or when the user presses any Clear-Logs button on one of these macro objects. Set the debug level to 2, to see how much memory is really used. Use this parameter with care!

But since MicroBrowser release 1.5.14.112, the online trend allocates memory in heap 3 too, for creating new trend-points.

Default is '0' (use the default heap size of 1 MB)

Ex.: 1024 (KB)

#### **Memory Heap 4** <mem\_heap4\_kb>

Since version 132.

Set memory size of heap 4 in KB. This memory is used to store the log data from online trends macro. The heap memory is cleared on URL jump or when the user presses any Clear-Logs button on one of the online trend macro. Set the debug level to 2, to see how much memory is really used. Use this parameter with care!

Default is '0' (use the default heap size of 1 MB for CE and 4 MB for XP)

Ex.: 1024 (KB)

#### **Memory LR Heap**

<mem\_lrheap\_kb>

Since version 121.

Set memory size of LR heap in KB. This memory is used to save html-tags from dynamic CSV files. The heap memory is cleared on every HTML jump and every time, the user loads a new language file. Set the debug level to 2, to see how much memory is really used. Use this parameter with care!

Default is '0' (use the default heap size of 1 MB)

Ex.: 1024 (KB)

#### **MFC HTTP**

<mfc\_http\_en>

Since version 122.

Set this option to 1, to use the Windows API to get files from the web server. Enabled, the MicroBrowser will use the Windows cache, depending on the parameter below <mfc\_http\_cache>. Disabled, the MicroBrowser will use the SpiderLink API to load files. And caching files depending on the parameter <teq\_cache>.

Default is 1 (Enabled)

Ex.: 0 (Disabled)

##### **Since version 136**

0: disabled

1: enabled for file requests (like before)

2: (only enabled for CGI requests)

3: enabled for all http requests (automatically enabled with SSL)

#### **MFC HTTP Cache**

<mfc\_http\_cache>

This option works if parameter <mfc\_http\_en> is enabled. It allows to set options of the Windows cache.

Default is 1 (Re-synchronize)

Options:

= 0: RELOAD: The caching is disabled, always reload the file.

= 1: RE-SYN.: Load the file from cache if it is not newer.

= 2: OFFLINE: Load the file from cache.

= 3: Use settings defined in Windows Internet Options (IE).

Since version 128.

Before the MicroBrowser used the parameter 3.

**HTTP Version** <http\_version>

Since version 126.  
Set this option to 1, to use HTTP/1.1 on http requests performed by the SpiderLink (CGI or to get files if <mfc\_http\_en> is disabled).  
Since version 137 the default value is 1 for HTTP/1.1.

**Shift- Hotkeys** <shift\_hotkeys\_en>

Since version 124.  
Set this option to 1 to enable, or 0 to disable the Shift- combinations hotkeys, like Shift-O, Shift-X, ... Therefore, default hotkeys like Alt-X and Alt-O still enabled even if the Shift- combinations are disabled. To disable all hotkeys (Shift- and Alt- combinations) use kiosk mode 3.  
Default is 1 (Enabled)  
Ex.: 0 (Disabled)

**PERCO File** <perco\_file>

Since version 128.  
Set path and file name of the perco file, where persistent container variables are saved (from "MB\_PERCO\_0" to "MB\_PERCO\_19"). The default name is "uBrowsCo.xml" and the file is placed on the program folder, but you can now specify an absolute path, like this:  
Ex.: <perco\_file>\FlashDrv\uBrowsCo.xml</perco\_file>

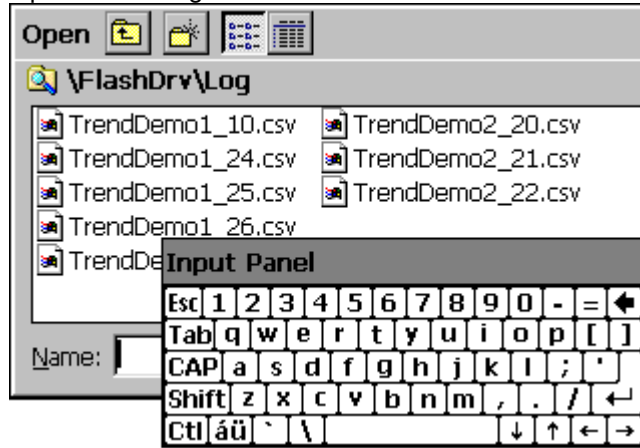
**Storage Path** <storage\_path>

Since version 129.  
Set the path where the MicroBrowser will save the trend and alarm Log files. If the field is empty, the user will be prompt to specify the folder and the file name with the standard Save file dialog. Otherwise, the file will automatically be saved, in the specified folder and based on the TEQ file name, like this:  
<storage\_path><teqFileName>\_X.csv  
where X is an integer value, incremented every time a new file is created, depending on the existing files in the storage folder.  
Default is empty.  
Ex.: <storage\_path>\FlashDrv\Log\</storage\_path>

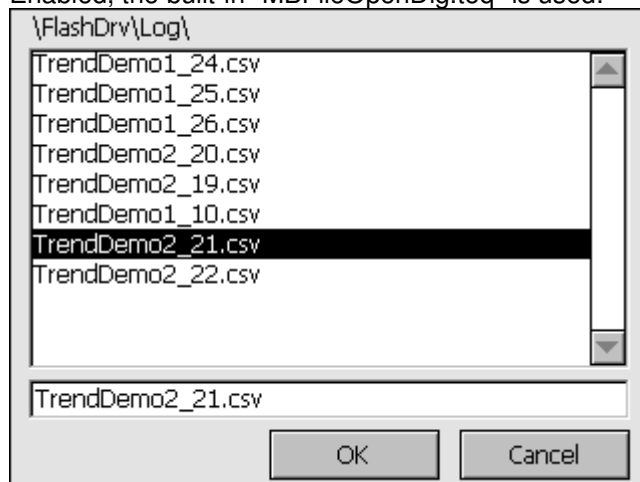
**Built-In Dialog** <built\_in\_dialog>

Since version 129.

Set this option to 1 to enable, or 0 to disable the built-in dialog, to open trend and alarm Log files. Default is disabled, the standard Windows Open File dialog is used:



Enabled, the built-in "MBFileOpenDlg.teq" is used:



**Since version 136**

Saves Alarm Log File with prefix "Alr\_", i.e. "Alr\_TeqFile\_n.csv"  
Saves Trend Log File with prefix "Trd\_", i.e. "Trd\_TeqFile\_n.csv"

**Scale Factor** <scale\_factor>

Since version 131.

This factor sets the scaling of the whole HMI. Default is scaling factor 1, which means original size of the elements. A special case is introduced with scale\_factor = 0. In this case, the MicroBrowser will scale the HMI to the physical screen dimensions, so that the view size is stretched or shrunk to meet the physical screen dimensions. The aspect ratio is kept. With scale\_factor = -1 the view is also scaled to the physical dimensions, but the aspect ratio is not kept.  
Default: 1.

**Export Enable** <export\_en>

Since version 130.

When this flag is set to 1, the MicroBrowser will export all views that are visualized to the local storage system and path given by the parameter <export\_path>. This feature can also be used to translate a CoDeSys

HMI into a SpiderControl HMI. In that case both, the .xml and .teq files, are being generated and stored on the local storage system.  
Default is disabled: 0.

#### **Export Path** <export\_path>

Since version 130.  
This is the path to which the files are exported, when the export setting is enabled (<export\_en>1</export\_en>).  
Default is empty.  
Example:  
<export\_path>\Temp\</ export \_path> for Windows CE  
<export\_path>C:\Temp\</ export\_path> for Windows XP

#### **Check For Project Update** <check\_for\_update>

Since version 131.  
When this is set to a value different from 0 the MicroBrowser will periodically check whether the project on the server was updated. If true the project is reloaded automatically. The specified value defines the cycle period in seconds. The period must be at least as long as the time needed to upload the whole new project!  
In CoDeSys, it may be necessary to make a "Clean All" command before uploading the updated project.  
Default is disabled: 0  
Example: 60 (for a 60s cycle period)

#### **Cookie** <cookie>

Since version 134.  
Set the specified cookie line, to append on every HTTP requests sent by the MicroBrowser to the web server.  
Default is empty.  
Example: <cookie>param=1234</cookie>

The cookie tag can contain multiple parameters, separated with semi-column ';'. For example <cookie>param=1234; lang=de</cookie>

#### **For SAIA PCD**

This tag can be used to save the low level password on a SAIA PCD server, like that: <cookie>pwd=1234</cookie>  
Note the PCD password MUST be defined in upper case, for example: pwd=ABCD.

#### **Socket Connection Timeout** <soc\_contimeo\_ms>

Since version 135.  
Set the connection timeout in milliseconds.  
Default: 0 (uses the default value of 10 seconds)  
Example: 60000 (for 60 seconds)

#### **Socket Receive Timeout** <soc\_rcvtimeo\_ms>

Since version 135.  
Set the receive timeout in milliseconds.  
Default: 0 (uses the default value of 10 s or 60 s for SAIA MB-XP /-CE)  
Example: 60000 (for 60 seconds)

**Socket Send Timeout** <soc\_sndtimeo\_ms>

Since version 135.  
Set the send timeout in milliseconds.  
Default: 0 (uses the default value of 10 seconds)  
Example: 60000 (for 60 seconds)

**View Alignment** <view\_alignment>

Since version 136.  
Set alignment of the view, only on full-screen.  
Default is 0: Top-left.  
Example: 4: Middle centered (vertical and horizontal centered)

0	1	2
3	4	5
6	7	8

**Swipe detection delay in ms** <swipe\_detection\_delay\_ms>

Since version 139.  
Set time in milliseconds to detect a swipe gesture.  
Default: 200 (ms)

**Background Color** <bg\_color>

Since version 140.  
Set the background color of the screen (outside the TEQ view), the value can be written in Hexadecimal form like #RRGGBB, where RR, GG, BB are the three components of the color code (Red, Green, Blue)  
Default is empty (use white color or the background color defined in TEQ file)  
Examples:  
#FF8040 (Orange color in hex)  
255, 128, 64 (The same color in decimal form)

**Optimize first redraw** <optimize\_first\_redraw>

Since version 140.  
Set optimization flag, to draw the view immediately after a view jump, with un-initialized PPO variables (disabled for CoDeSys).  
If this option is enabled, it will first load the TEQ file, show the view with un-initialized PPO variables and then do the update and redraw the view with the right variables.  
Default: 0 (Disabled)  
Examples: 1 (Enabled)

**Return to the configuration page** <return\_to\_config\_page\_sec>

Since version 140.  
Return to the configuration page when holding the touch down more than the specified time in seconds.  
Default: 2 (Returns after 2 seconds)  
Examples: 0 (Disabled)

## Shortcuts

At runtime (in Kiosk-Mode), there is no other way to control the MicroBrowser than using the following shortcuts, which can be entered by the default keyboard (also touch-pad). The following keys are supported:

### **Exit**

To exit from the MicroBrowser: Alt-X (or Shift-X if enabled).

### **Open Configuration Dialog**

To open the dialog and modify the URL: Alt-O (or Shift-O if enabled). By clicking the OK button, the MicroBrowser will generate the configuration file (uBrowser.xml) again, with the current settings.

### **Toggle Full Screen**

To toggle Full Screen on MicroBrowser XP: Alt-F11  
Since version 122.  
Since version 123, the hot key Alt-F11 is also disabled on kiosk mode 3.

## CoDeSys MicroBrowser FAQ

Following questions are being asked often concerning the MicroBrowser CoDeSys.

### **I can't connect! It says "File Not Found!"**

This most often has 2 possible causes:

1. Older versions of the MicroBrowser CoDeSys (prior to 1.5.15.116) don't support the option "compressed webvisu".

2. Some CoDeSys PLC's are case sensitive. Older versions of MicroBrowser CoDeSys get the entry page with the name "PLC\_VISU.xml" written in big letters. But the file on the webserver is written "plc\_visu.xml". Possible workaround: Modify the "webvisu.htm" File on your PLC and change this line:

```
<param name="STARTVISU" value="PLC_VISU">  
to  
<param name="STARTVISU" value="plc_visu">
```

### **Why are arrays not displayed correctly?**

Normally arrays are not working with the applet from CoDeSys itself. But with our MicroBrowser CoDeSys it is possible, BUT the indexed variants of the needed array elements must also exist in the view, because otherwise the variable address is unknown.

Example:

".g\_afb\_GF[g\_index].i\_bo\_configured" is an indexed variant which can be read and written with MicroBrowser CoDeSys, but you must already know during build-time of your project, which indexes are used, and you also have to include the resolved variants of the variable in the view: ".g\_afb\_GF[6].i\_bo\_Configured" (for instance in a hidden text-field).