Platform CE-devices eStudio Version 2.91



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1 How to use CE-devices

The following interfaces from CE-devices will be supported by elrest:

d <mark>vi</mark>	Digital interface to terminal
VGA	Analog interface to terminal
	Interface to all peripheral devices like USB-stick, keyboard, mouse, printer and so on
RS 232 RS 485	Serial interfaces RS232 and/or RS485. These interfaces can be used with all UART protocols or the still implemented protocol RTU-Modbus.
CAN	Open field bus interface to all CAN protocols, like Truck-Norm J1939-based.
CANopen	CANopen is a popular Layer7 protocol for the automation.
ESB	elrest Systembus, a CAN based self configure system bus.
Ethernet	TCP-Modbus as UDP or TCP can be used for Ethernet. Other protocols can be implemented with the socket functions.

1.1 Panel Configurations Tool (PaCo)

1.1.1 General

Start \rightarrow Programs \rightarrow Utilities \rightarrow Panel Configuration

General

field 1: DEVICE INFORMATION

Information above the device.
 Please keep ready this information in the case of contacting our support.

field 2: GENERAL

- Watchdog
- Don't start Windows CE© Shell
 If activated, the Windows CE© can not be called.
 If the application runs, the taskbar will no longer display.
 CAUTION: use input fields, so when you click on the field the keyboard input will not support anymore.

evice Configuration Utility		ок 🗙
General Autostart Applications Use	ers FTP HTTP RAS	
Device Information		
Device Name: Nething	IP Address:	192.168.1.214
WinCE Image Timestamp: 5.00 19.	06.2006 16:20:39,01	
FPGA Version: 26.06.06,01	Hardware revision:	0
General		
Watchdog 0 ms		
Don't start Windows CE shell.		
Simple Network Time Protocol		
SNTP Server: tock.usno.navy.mil	Clien	it-Only
Refresh rate: 5 Minutes 📑		

- A boot without your application looks like this: retreating of this option: Press the service switch you can recall the Windows – Shell.
- field 3: Simple Network Time protocol

In an existing internet connection the system clock will be synchronized in adjustable intervals.

1.1.2 Watchdog

It is generally divided into:

- Hardware Watchdog
- Software watchdog (e.g. Watchdog in Codesys)

The visionary P4xx has a hardware watchdog:

This is implemented in the FPGA. To activate or to refresh the time in 10ms is written to a register of the FPGA.

The settings for the watchdog to be made in the panel configuration.

The settings in the registry under the key HKEY_LOCAL_MACHINE \ Drivers \ BuiltIn \ watchdog ' in the entries, IsEnabled 'and' timeout 'saved.

If the option is enabled and a value> 0 then set the watchdog is activated by ElaDesign in Ob0. At this point, the same is also the refresh of the watchdog. If this is not within the specified time, the panel will be restarted. The settings are taken only once at the start of ElaDesign.

When you exit the ElaDesign watchdog will be disabled.

The visionary P2xx has a software watchdog:

The Windows CE kernel resets the Prozessor-Watchdog in a Watchdog-Thread back. This thread has a CE-priority of 100.

The watchdog is not reset, so after 16 seconds a reset is triggered, i.e. the device restarts.

So the watchdog reset is triggered only when an error in a program with a higher priority (i.e., less than 100) occurs.

Device Configuration Utility OK 🗙				
General Autostart Applications Users	FTP HTTP RAS			
Device Information				
Device Name: FredP406	IP Address:	192.168.1.102		
WinCE Image Timestamp: 5.00 19.06	5.2006 16:20:39,01			
FPGA Version: 41.06.06,02	Hardware revision:	0		
General				
Watchdog 5000 ms				



1.1.3 Auto start

Adjust all starting application programs. The order in the list is the order of calling the	Integratio should be	n of files, which after the boot e started.	Panel Configuration Utility OK General Autostart Applications Run Autostart programs Image: Seconds. Additional Autostart programs Image: Seconds. Applications: Image: Seconds. Applications: Image: Seconds. Applications: Image: Seconds. Application: Image: Seconds.
programs. The first entry should be autoscan.exe for supporting the eStudio auto scan functionality.	Tipp	Adjust all starting application per programs. The first entry should be autose	rograms. The order in the list is the order of calling the can.exe for supporting the eStudio auto scan functionality.

1.1.4 User admimistration

With the Panel Configuration all ftp-users, rights awarded and directories are assigned.

The menus are self-explanatory.

The following points should be explained in detail:

Home Directory: the user starts downwards. The access of directories above is impossible.

Virtual Roots: a directory from another tree can be merged to the home directory. You have access to this directory and all following.

boneo comgaration otinej	
General Autostart Applications Users FTP HTTP RAS	
Enable server Allow low port values	
O Allow anonymous I Allow anonymous upload I Allow anony	mous Vroots
Use Authentication	
Users:	
✓ andreas	RWH
✓ mathias	RWH
🗹 frank	RWH
Default directory: \Flashdisk	
Virtual roots:	👛 🗙
/rezepte \Flashdisk\ElaDesign\Rezepte	
Change the virtual root	×
Alias: /rezepte	
Path: Flashdisk ElaDesign Rezepte	





If no home directory is selected, the user has full access to the panel despite write rights.

vice Configuration	on Utility		OK
eneral Autostart A	pplications Users FTP H	TTP RAS	
		1	
User HTTP virtual root	HTTP directory path	Rights	
🜆 andreas	\home\andreas	FTP(RWH);	
🜆 mathias	\Flashdisk\ElaDesign	FTP(R);	
1000		ere(e)	

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Be aware, the home directoy must have at least one backslash.

1.1.5 FTP

See \underline{user} administration.

1.1.6 http

Release the directories for the http web server Application sample: A directory \httptest was created on the flashdisk.

In this directory a web side index.htm was created.

Configuration from this samples:

Access to the web browser:

Percel Continuation Utility Okl x Change the HTTP virtual path X Virtual path: Interfect Physical path: Interfect Authentication: (none) Users: Interfect Virtual path: Interfect Vir





1.1.7 RAS

See chapter RAS

1.1.8 Advanced

The tab "Advanced" is the system button for windows presetting.

Brightness:

- Strength of the backlight

Pa	nel Configuration Utility
6	eneral Autostart Applications Users FTP HTTP RAS Advanced
	Date/Time LAN System Volume & Sounds
	Brightness: 51
	Contrast:
	Internet Explorer
	Scrollbar Size
	Vertical: 19 Default Options
	Horizontal: 19 Default
	Development Environment: eStudio 💽



Internet Explorer

An indication of the scroll bar width options:

In the example value 50-50 in place of Default 19/19

Options...

Adjustments of the Internet- Explorers

Date/Time

Adjustment of

- Date
- Time
- Time zone

LAN

- Specify the IP- address and subnet mask
- Obtain the DHCP
- Specifiy the Domain Name Servern (DNS)
- WINS

System

• Display the system informations

Memory

- RAM Adjustments between flashdisk file system or program memory strorage of the runtime.
- Only the unused storage can be adjusted.

Device Name

• Specify the device name and descripe the name of the device in the network.

Copyright

Specify the Rights.

File Edit View Favorites	×
Address http://www.elrest.de/visio	•
The page cannot be displayed	
The page you are looking for is currently unavailable experiencing technical difficulties, or you may need t settings.	•
Done 📃 📃 Local intranet	
Internet Options OK	×
General Connection Security Privacy Advanced Popups	
Start Page: http://www.msn.com	
Search Page: http://search.msn.com	
User Agent (requires browser restart): Default (Windows CE)]
Cache Size (in KB): 512 Delate Provide History	1







Volume and Sound

(not on all CE-devices available)

Adjustments of loudness, keyboard an touch beeper.



The upper adjustments can also under telnet or the CoDeSys application adjust. See telnet setting.

1.2 Initalisation of the datapoints (CoDeSys)

Initalisation, see CoDeSys manual:

x = value will be retained - = value gets reinitialized

- Retain variables are identified by the keyword RETAIN. These variables maintain their value even after an uncontrolled shutdown of the controller as well as after a normal switch off and on of the controller (corresponding to command 'Online' 'Reset'). When the program is run again, the stored values will be processed further. A concrete example would be a piece-counter in a production line, which recommences counting after a power failure. All other variables are newly initialized, either with their initialized values or with the standard initializations.
 However, be retain variables in 'Reset cold', 'Reset Origin' and in contrast to persistent variables in the case of a re-download re-initialized.
- Persistent variables are identified by the keyword PERSISTENT. Unlike Retain variables, these variables retain their value only after a re-Download, but not after an 'Online' 'Reset', 'Online' 'Reset (original)' or 'Online' 'Reset (cold)', because they are not saved in the "retain area". If also persistent variables should maintain their values after an uncontrolled shutdown of the controller, then they have to be declared additionally as VAR RETAIN variables. A concrete example of "persistent Retain-Variables" would be an operations timer that recommences timing after a power failure.

VAR	VAR RETAIN	VAR PERSISTENT	VAR RETAIN PERSISTENT
			VAR PERSISTENT RETAIN
-	X	-	Х
-	-	-	-
-	-	-	-
-	-	Х	x
Х	X	X	Х
	VAR - - - x	VAR VAR RETAIN - x - x - -	VARVAR RETAINVAR PERSISTENT-xxxxxx



The behavior from CoDeSys is not identical with the behavior from eStudio. We distinguish the following chapter Constant, PERSTENT and RETAIN.

1.3 Initalisation of the datapoints (eStudio)

1.3.1 Constant Value in eStudio

However retain variables are in 'Cold reset', 'Reset origin' and re-initialized after a new program download - as opposed to persistent variables.



If the persist.bin file exists, and at least the persit file has once stored all datapoints, then all datapoints will be initialized with this stored value at each power up.

If not, and if the resource.res file exists, all datapoints will be initialized with this start value at each power up. Ne Exist Persisit.bin Ne Persist.bin Resource.Res

0

mit gespeichertem Parameter (PERSISTENT)

mit batteriegepuffertem Wert (RETAIN)

Initialisierung

C immer mit Startwert



Before every firmware download, store the file persit.bin and erase this file afterwards.

You can store the file persist.bin:

- with the CoDeSys function FwSave(SAVE_PERSIST_BIN); from the library sFWxx.lib
- or with the telnet "save" command.
- with the datapoint "SaveParameter"

1.3.3 Batterie buffered values (RETAIN) with eStudio

Initialisierung

Yes

1 anna

C immer mit Startwert

O

Is Battery

ok?

Exist Persisit.bin

No

No

🛐 Resource.Res

mit gespeichertem Parameter (PERSISTENT)
 mit batteriegepuffertem Wert (RETAIN)

If the SRAM works correct, the values are stored by batterie buffered sram. The correct behavior of these values depends on the state of the battery and a checksum from the sram.

If this does not exist, but the file persist.bin exists, and at least the persit file has once stored all datapoints, then all datapoints will be initialized with this stored value at each power up.

If not, and if the resource.res file exists, all datapoints will be initialized with this start value at each power up



See details in sUWxx_GB.pdf.

1.4 Use the device internal EEprom's



Data in the EEPROM may be written up to 100,000 times

Each device has a large 2 Kbytes EEPROM file. These can be viewed under ftp / copied. For security purposes, you can save this file to a device of a serial number on the PC.

🦄 ftp://192.168.5.88/Flashdisk/ElaDesign/	_ 🗆 🔀
<u>D</u> atei <u>B</u> earbeiten <u>A</u> nsicht <u>F</u> avoriten E <u>x</u> tras <u>?</u>	7
Ġ Zurück 🝷 🕥 🚽 🏂 🔎 Suchen 🝺 Ordner 🔢 🗧	
Adresse 👰 ftp://192.168.5.88/Flashdisk/ElaDesign/	Vechseln zu
Ordner × Name ▲	Größe 🔼 📩
□	2,01 KB 3,27 MB 128 KB 512 KB
Benutzer: Anonym 😜 Internet	

Of these, 2 Kbytes are only **512 bytes** for application-specific data free. The data can only be stored in format DWORD or REAL These data types have a size of four bytes, so *maximum 128* variables of type **DWORD** or **REAL** can be stored.

To access of these values the following optionsare given:

• In eStudio can dialog, data points firmware variables can be created.



- In the field **DP firmware** can 'EE' data types long (ie DWORD) or EE float (ie REAL) is selected.
- Using the control elements of 'and' through the variable index can only be given in the region of 128-255 .About the control field ">"the data points will be created.

1.4.1 EEprom.bin: Verwendung in CoDeSys

May, within CoDeSys SFW it can be accessed directly to the data

Note: aUserFreeSpace[] is from Typ WORD, because of this the Word-Index [256] corresponds to the DWORD-Index [128], from which the EEPROM data are starting.



If you want to copy the EEPROM data into the project, you can create a recipe:



All configured EEPROM values can be copied by pressing the "READ" key and transmitted with the WRITE key "to another device.

Name: Rezept3		OK
Datenpunkt Geraet15_EE_Long_00	Wert 45	Abbrecher
		Download
		Export Import

1.5 Boot the system





Which of the possible applications should be started, can be configured in the panel (Paco)

1.5.1 Startup Procedures: Overview

The devices are equipped on startup about various auto startup mechanisms.

- o The o Start of batch files
- o launch of Windows CE applications (configurable via configuration tool "Paco"
- Start of an update procedure to update device software from external data sources.

1.5.2 Start of batch files at device start

When you start Windows CE, if available, the following batch files are executed (in this order):

- o On a USB flash drive: \ Memory Stick \ ElaAutostart.bat
- On the device: \ Flash Disk \ SysExtras \ Startup batch \ startup.bat

1.5.3 Startup of Windows CE applications

After the start of Windows CE a button appears on the desktop, with this can be interrupted the startup procedure. This termination is possible only for a certain configurable period of time, a second counter counts backwards. Then the configured applications will be started.

This startup procedure can be configured by the configuration tool elrest , named "Paco".

Here can be set the application to be started and the time duration for the demolition switching field

With duration of 0 seconds, the user has no possibility to interrupt the startup procedure at the device start

Here, and in the factory settings are usually the following applications configured and should normally not be disabled.

o Autoscan.exe

is responsible that the device from eStudio can be found via autoscan if the runtime is not running.

ElaDesignCoDeSys.exe
 The actual application runtime. Maybe the name of the file can be varied by device or type of use

1.5.4 Update functionality in devices starting

When you start Windows CE it will be searched for a previously created backup.

Updates are performed (in order) to the external USB keys and (if supported by the device) of CF card.

Details of the backup / update functionality see the chapter "Update the Device".

1.5.5 Start the PLC runtime system

The PLC runtime system will be started by a startup item (in the Paco tool, see above).

Depending upon the device, the following run-time applications are available:

- ElaDesignCoDeSysCE.exe: elrest HMI and CoDeSys PLC run-time environment.
- ElaDesignCE.exe:. elrest HM, this is a pure Visio panel without PLC. A programming can be here with C / C + + optionally done
- PLC_CE_RT.exe HMI / CoDeSys runtime environment of the Wago-derivatives (Control Panel / CP)
- CE_RT.exe
 HMI runtime environment of the Wago-derivatives (VisuPanel / VP
- PLCCEARM.exe
 Target visualization / CoDeSys runtime environment CoDeSys V2.3
- P4xx_V3.exe TargetVisualisierung / CoDeSys- runtime environment CoDeSys V3 the programming

1.5.6 Starting application from CF-card

The requirements are still increasing. If the storage space of the internal flashdisk is not large enough, then the application can change to the external CF/SD card.

Plug in an CF card an create an new folder : "Eladesign"

Don't use a different name. Some services like visioweb need this absolute path.

<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	<u>G</u> o	F <u>a</u> vorites		🕻 🔹 🐛
A <u>d</u> dr	ess \\St	orage C	ard			
Name					Size	Туре
🔁 Elac	design)					File Folder

Copy all file from your project from : \Flashdisk\Eladesign to \Storage Card\Eladesign\

or in case of a new project, just copy the runtime (ElaDesignCoDeSysCE.exe) to this folder.

Cange in PaCo the directory.

If you have copied the complete project, your are ready. With the next starting of the system the application will be started from CF card.

Applications:	•	2	\mathbf{X}	+	÷
IFlashdisk\SysExtras\System\Autoscan.exe				_	
\Flashdisk\ElaDesign\ElaDesignCE.exe					
Storage Card\Eladesign\ElaDesignCoDeSvsCE.exe					

Tipp

Change in eStudio

- .

Change the target directory to the new working directory.

Select	
🕀 📇 Resou	
Demo_CM_P	New
Demo_Daten	Paste
Demo_Seiten	
Demo_Stoeru	Generate resource file
Demo3SCan(Download resource file
DemoAction	

Downloaden	
	ad_de.xml 06.09.2011 12:35 ad_en.xml 06.09.2011 12:35 ad_ky.xml 06.09.2011 12:35 ource.Res 12.09.2011 16:33
Adresse: Zielverzeichnis:	192.168.5.97 /Flashdisk/ElaDesign

"Download resource file".

Change now the target directory to:

Zielverzeichnis:	/Storage Card/Eladesign		
	Download starten	Abbrechen	



Start the download of the resource file.



If you still starting the runtime from the internal flashdisk a CF card ist plugged with the resource file, then this primarly started.

If you want to start the application from the internal storage, just unplug the CF card and the system will start from \Flashdisk\Eladesign\

Spaces in the name from directories are supported under CoDeSys.



ST

sDirName	<pre>STRING:='/Storage Card/'; (* CF- card *)</pre>
sDirNameUSB	:STRING:='/Memory Stick/' (* USB-stick *)
sDirNameFlash	<pre>:STRING:='/flashdisk/Eladesign/'; (* internal flash *)</pre>

1.6 Network configuration

Check the IP- Adresse:

Click in the task bar to the network symbol.



Start → Settings → Network and Dial-Up Connections →

Setting → PaCo,

Change the IP- address:

In PaCo:

DM9CE1

or

right mouse click Properties

Confirm with [OK]

Save the (System-) Settings:

Start → Programs → Utilities → Save Registry

confirm with OK.



If the settings are not saved in the registry, the next startup comes up with the old settings.

When Exit of PaCo a dialog for saving appears.

💼 Programs	Þ	🗁 ActiveSync 💿 🕨	
👷 F <u>a</u> vorites	۲	🗁 Communication 🔹 🕨	
Documents	۲	🚞 Utilities 🔹 🕨	🕰 NotePad
🚱 Settings	۲	🎇 Command Prompt	🖉 Panel Configuration
🖅 <u>R</u> un		💦 Windows Explorer	💣 Registry Editor
🐉 Start 🗞 Ne	etw	ork Connections	🕰 Save Registry

1.7 Update the devices



1.7.1 Update the runtime

Select the files for the update carefully and use only the files that are to be actually updated!

Copy the new runtime file to the directory Flashdisk\Eladesign\

Exit the runtime before copying.





On different updates the firmware struct can be changed. If you want start from default, just delete the file eeprom.bin.

The runtime will create a new eeprom.bin with default values at startup.



To avoid losing data produce them in any case, a backup copy of all in the ElaDesign directory the files. For example, in the file eeprom.bin etc. telnet and ESB - deposited settings.

The following files should be copied with ftp:

- eeprom.bin see chapter eeprom.
- eventlog.bin In this file all alarm and event messages are stored. If you need this information, copy this file.
- ElaDesignCoDeSysCE.exe This file must be copied.

• DEFAULT.PRG

If you want copy the CoDeSys application, also the file **DEFAULT.CHK** must be copied.

• persit.bin

In this file all MARKER (%M) datapoints independent of CONSTANT, RETAIN oder PERSIT setting will be stored. To store the datas, use the following CoDeSys code lines: psUW := UwGetStructPointer(FALSE); M5_PERSIST := M5_PERSIST + 1; psUW^.nSaveParameter := 1; To be sure, that the file will be stored, at least one PERSIT

datapoint must be changed.

Resource.res

This file is from resgen generated with all visualization elements. HINT: some picture files like BMP 24 color, JPEG and GIF

are not included.

🍑 🕨 The Internet 🕨 192.168.5.237 🕨 F	lashDisk 🕨 Elal	Design			
earbeiten Ansicht Extras ?					
ren 🔻					
Name	Größe	Тур			
eeprom.bin	3 KB	BIN-Datei			
ElaDesignCoDeSysCE.exe	2.612 KB	Anwendung			
eventlog.bin	128 KB	BIN-Datei			
persist.bin	512 KB	BIN-Datei			
Resource.Res	578 KB	Compiled Resource Script			

1.7.2 Update the runtime with the SD/CF-card/USB-Medien

1.7.2.1 Overview

To prepare for the update, copy the files to upgrade to an external storage medium in the directory: CCopy the files from the following directories

"\Control\<Geräteart>\Update\ElaDesign\" to the CompactFlash card:

<Device type> corresponds to the device type of the panel as visio_P408 (see either eStudio dialog Modify / device settings or Telnet> command state).

visio P2xx supports here USB devices and SD cards, visio P4xx CF cards and USB media.

It can either be updated the following files:

•	ElaDesignCE.exe	ElaDesign-runtime
•	ElaDesignCoDeSysCE.exe	ElaDesign/CoDeSys-runtime
•	ElaLibCE.dll	program library for the ElaDesign-runtime
•	default.*	CoDeSys- program files
•	eeprom.bin	setting of the ElaDesign-runtime
•	eventlog.bin	event list
•	persist.bin	persist datas
•	resource.res	resource
•	keypad*.xml	keypad-files
•	*.rec	recipies

Ab der CustomInitUtils.dll-Version V1.65.0.0 können hier sämtliche Dateien im Verzeichnis \Eladesign sowie bis zu 50 darin enthaltene Unterverzeichnisse aktualisiert werden.

From the CustomInitUtils.dll version V1.65.0.0 can all files in the \ Eladesign and up to 50 contained subdirectories be updated

Außerdem kann die Geräte-Registry aktualisiert werden. Weitere Informationen hierzu siehe Abschnitt ,Update der Geräteregistry'.

In addition, the device registry can be updated. For further information, see the section, update the device registry'

1.7.2.2 Realization des Updates

Insert the Compact Flash card or USB storage device into the slot on the panel and then start the panel. After the launch of Windows CE © following window appears:

If you confirm with "YES" a backup to _\Control\< type of device >\Backup\ElaDesign

If you continue with 'yes' will be first a backup of all runtime-files in the directory "\control\\backup\ElaDesign\" is created.

This will only happens if this directory is empty or not present.

Then the update will be processed.

On the panel, the date of the updated files stored, so that when a re-start of the panel of the update process will not start running again.



1.7.3 Update der Geräte-Registry

This functionality is available from the CustomInitUtils.dll version V1.65.0.0.

For this purpose, before the above-described update process a file

\Control\<kind of device>\Update\ElaDesign\registry.dat

Have to be created. It is copied to the update process on the device, and then written into the device registry. The registry is stored.

The text file "registry.dat" is evaluated using the following syntax

First, set a registry key to be called:

[HKEY_LOCAL_MACHINE\Software\MyKey1]

The following values will be stored under this registry key:

"DWORD-Registry-Typ-Name":dword=1234

"STRING-Registry-Datentyp-Name"="STRING-Registry-Datentyp-Wert"

"@"="default String-Eintrag"

Now, additional registry keys can be described:

[HKEY_LOCAL_MACHINE\Software\MyKey2]

The following values will be stored under this registry key:

"DWORD-Registry-Typ-Name":dword=1234

An example of writing a Paco startup entry:

[HKEY_LOCAL_MACHINE\Software\elrest automationssysteme GmbH\Init]

"Launch01"="\Flashdisk\MyFolder\MyApp.exe"

"Params01"="-MyCommandlineParameter"

"Enable01"=dword:1

Aktuell werden die Registry-Schlüssel HKEY_LOCAL_MACHINE, HKEY_CLASSES_ROOT und HKEY_CURRENT_USER und die Registry-Datentypen DWORD und String unterstützt.

Currently, the registry key HKEY_LOCAL_MACHINE, HKEY_CLASSES_ROOT, and HKEY_CURRENT_USER and the registry data types DWORD and string are supported.



There should be no space before/ after the equal sign and the colon

1.7.4 Update the runtime with CF-Telnet

Preparation see 'Update when Windows starts '

Set a telnet connection to the device. Therefore on the panel has to be run ElaDesign - Runtime

Enter the command cf -1

It appears the following in Telnet:

Telnet 192.168.1.151	
fred ce login:uusseerr	
fred:ccff11	
Stopping runtime	
\$fred/>	
Verbindung zu Host verloren.	-

On the panel will be first the runtime terminated.



Then it will be a backup of all runtime - files in the directory " \control\\backup\ElaDesign\" is created. This will only happens if this directory is empty or not present

<u>File E</u> dit <u>V</u> iew <u>G</u> o	Favorites		×		
Address \Storage Card\Control\fred_P406					
Name	Size Type	Date Modified			
🗁 Update 🗁 Backup	File Folder File Folder	12/8/2006 3:12 PM 12/8/2006 4:14 PM			
ElaDesign Bacl	kuping				
From: To:	\Flashdisk\ElaDesign\ElaDesignCE.ex \Storage Card\Control\FRED_P406\E	:e 3ackup\ElaDesign\ElaDesignCE.exe			
Cancel					
💦 Start 🗁 fred_P406	ElaDesign Backuping	@ 🕹 DE 4:14	РМ 🚺 🏸		
Then the update will be processed.					

<u>File E</u> dit <u>V</u> iew <u>G</u> o	Favorites		×
Address \Storage Card\C	ontrol\fred_P406		-
Name	Size Type	Date Modified	
i⊂ Backup i⊂ Update	File Folder File Folder	12/8/2006 4:14 PM 12/8/2006 3:12 PM	
ElaDesign Up From: To:	dating \Storage Card\Control\FRED_P406 \Flashdisk\ElaDesign\ElaDesignCoD	\Update\ElaDesign\ElaDesignCoDeSysCE.ex leSysCE.exe	e
Cancel			
💦 Start 🔁 fred_P406	Updating	🛞 🕹 DE 🧉	4:20 PM 🔞 🏴

And afterwards re-strarting the runtime.

1.7.5 Update the runtime from CoDeSys

Preparation see 'Update when Windows starts

To carry out CoDeSys out an update to the runtime using the function with the parameter 1 FwCFRestore



On the panel will be first the runtime terminated.



Then the update will be processed

<u>File E</u> dit <u>V</u> iew <u>G</u> o	Favorites		×
Address \Storage Card\Co	ontrol\fred_P406		•
Name	Size Type	Date Modified	
C Backup	File Folder	12/8/2006 4:14 PM	
🗁 Update	File Folder	12/8/2006 3:12 PM	
ElaDesign Upd	lating		
Erom	Storage Card\Coptrol\EDED_0406	Windste\ElaDecian\ElaDecianCoDeSucCE.ev	
To:	\Flashdisk\ElaDesign\ElaDesignCoE)eSysCE.exe	
		·	
Cancel			
💦 Start 📄 fred_P406	Updating	🛞 🕹 DE 4	k:20 PM [🞯 🗭

And afterwards re-strarting the runtime.

Tipp

In the use of the function "FwCFRestore" no backup will be created. In order to create a backup using the function "FwCFSave".

1.7.6 Update device files

There is a fundamental possibility to copy files to the device with FTP or devices files to update via FTP.



Attention! Update device software (such as editing dll files) should normally be carried out only after consultation with a elrest staff. This could lead to possibly equipment malfunctions

Here then is the device start at startup mechanism to interrupt (startup dialog). For start- up the device then the autostart mechanism has to be interrupted.(startup dialog). For devices without a display, the corresponding startup entries should be disabled, and reboot the device.

Then, the service switch should be pressed in order to stop the running components.in the background, which are running maybe.

1.7.7 Update the Windows CE© operating system

An upgrade of the Windows CE© operating system only by elrest or by trained service personnel will be carried out



At the windows - upgrade can be stored in the registry settings will be lost. A downgrade (uploading a older version) is not allowed and can impair the function of the device and the device damage.

The files in the directory "SysExtras" and its subdirectories must be of elrest for the respective Windows CE[©] Image released.

1.7.8 Update FPGA

An update of the FPGA can be carried out only in the house elrest.

1.8 Remote maintenance with Microsoft Tools

1.8.1 Sysadmin

Windows CE5 and CE6 offer opportunities to control the device from a remote location, or to administrate.

Access to the system as a sysadmin should be strictly protected.

Therefore it is recommended to create a user, with the as a sysadmin on the device can be accessed.

Insert, for example the user "Service" to.

You go in the combo box under Enable the user "service" and change the virtual path for sysadmin on user.

Panel Configuratio	on Utility			ОК ×
General Autostart	Applications Users FTP	HTTP RAS	6 Advanced	
User HTTP virtual root	FTP Home Directory HTTP directory path	Rig	phts	
	· · · · · · · · · · · · · · · · · · ·			
New U	ser		×	
User f	Name: Service			
Passw	/ord: ****			
Confir	m Password: ****			
	0	к	Cancel	
			Remove user	New user
Panel Configuratio	on Utility			ок ×
General Autostart	Applications Users FTP	HTTP RAS	6 Advanced	
Enable server				
Logging directory:	\windows\www			
MaxLogSize:	32768	Bytes		
Admin Users:				
✓ ADMIN ✓ Service				
Virtual paths:				<u> </u>
/ /Admin	\Flashdisk\wwwpub\ \windows\httpdadm.dll	ALL ALL	(all) (all)	<u> </u>
/SysAdmin	\windows\sysisapi.dll	USER	(JIL)	
/upnpisapi	\windows\upnpsvc.dll	ALL	(all)	-

After these changes, storing the registry, and a <u>device reboot</u> is necessary.

Change the HT1	'P virtual path		×
Virtual path:	/SysAdmin		_
Physical path: Authentication:			··]
Users:		<u>۳</u> ×	
ADMIN	ADMIN		
Service	NTLM ADMIN		
,		OK Cancel	

Known problems in Windows 7:

Is your Windows 7 PC within a domain, it attempts to register you on the domain.

Of course this is not possible

because P4xx usually not in a domain. The login failed

Solution:

allow the other unprotected access as a sysadmin on the device. Set the sysadmin to "USER" to "All" (Authentication = none)

Windows-Sicherhe	eit X
Verbindung wir	rd hergestellt mit 192.168.5.97.
	Service Service Domäne: ELREST Anmeldedaten speichern
	Smartcard einlegen
	OK Abbrechen

Change the HTT	P virtual path			×
Virtual path:	/SysAdmin			
Physical path:	\windows\sysisapi.dll			
Authentication:	USER	•		
Users:	(none) USER ADMINISTRATOR			\sim
ADMIN Service	AL N	d <mark>min</mark> TLM ADMIN		
		1		
			OK	Cancel
E let	p:// 192.168.5.97 /sysadmin/	P≁ ⊵¢×	🥖 Windows CE Web	-based A ×
Choose your	client:			
No Frames (sim	uple) or 4.0 ±			



System Tools - Processes

This menu allows you to terminate processes and any to start.

It is very useful in order to e.g. the runtime to terminate to update, and try again to start.

eg:

- 1.) Delete : ElaDesignCoDeSysCE.exe
- 2.) Transfer the runtime
- 3.) Launch Process:

/Flashdisk/Eladesign/ElaDesignCoDeSysCE.exe

Key <Execute>

System Tools – System Info

This menu allows you to regard the memory. It is very useful in order to detect e.g. memory leakage.

File Browser - +VisioP4xx

In order to transfer files suitable. However, this task can be solved via FTP elegant

also.



System Info Processes Refresh

System Information Windows CE 5.0 Version Processors 1 Architecture ARM 920 Total Memory 25892 KB Free Memory 6084 KB Total Store 5968 KB Free Store 5525 KB Network Adapters Remote-NDIS Host NE2000 Compatible Ethernet Driver AsyncMac NDISWAN Miniport PPTP NDISWAN Miniport L2TP NDISWAN Miniport DM9102 Fast Ethernet Adapter Null Ethernet Miniport Driver Machine Time 9/14/2011 3:59 PM W. Europe Standard Time

ard <u>Refresh</u>

VisioP4xx\Flashdisk

	VisioP4x
ta	
s	
	Upload File

Durchsuchen

Сору То:	
New Directory Name:	Create Directory

Use with utmost caution Remove Directory Will recursively delete everything

	Filename	Size	Modified	Created
Delete Copy	default.mky	52 B	9/8/2007 12:00 PM	9/8/2007 1
Delete Copy	KUKVncSvr.exe	37 KB	9/13/2011 2:03 PM	9/13/2011
Delete Copy	System.mky	52 B	9/14/2011 3:19 PM	9/14/2011

Upload

Registry Editor

It allows you to edit the Windows registry.

Window		m Tools File Bro	owser Registry Editor		
+HKEY_CLASSES_ROOT +HKEY_CURRENT_USER -HKEY_LOCAL_MACHINE Time +TAPI	Refresh HKEY_LOCA	L_MACHIN	E\ControlPanel		
+TCPIP	New Value Name: New Value 001				
MUI +init +Drivers +System +Comm	New Value Type	REG_SZ	EG_DWORD REG_BIN	IARY O	
+Time Zones	Modified Value:				
+Printers +Services Ident	New Subkey Na	me:	Create Ke	ЭУ	
+Explorer +Snd Drivers32 +AudioCompressionMa	Use with cautio	Delete Key	/ Will recursively o	lelete everything	
+Windows CE Services Windows CE Tools +HARDWARE		Туре	Value Name	Value Data	
Loader Platform	Delete Modify	REG_SZ	Default	(value not set)	
ControlPanel	Delete Modify	REG_DWORD	PanelState	60100	
+Audio +KUKINIT HKEY_USERS	<u>Delete</u> <u>Modify</u>	REG_DWORD	InputConfig	2	

1.8.2 RemoteAdmin

Windows CE6 offers possibilities the device from a remote location to control, or to administrate.

Login in as:	
User: admin	Windows CE Remote Management Tool
Password: admin	Remote Admin Device Log On:
	To access the device, type your password and then click Log On. Your base station password is case sensiti Password: Verification:
The device reset.	
	Gateway is Resetting Please wait a moment, your device is resetting. Once completed you may be asked for a username and pa

As a result you can administrate your own password and the system.

🏉 Remote Admin - Windows	nternet Explorer	
🔆 🗸 🖉 http://192.168.	5.215/RemoteAdmin/UserManager.htm	v 4
🚖 🕸 🌈 Remote Admin		
Windows CE Remote	: Management Tool	
Home • Device Management Set Time Configure Network HostName Config • Security Add/Del Users • File Server and Printer Add/Del Share Add/Del Printer Add/Del Network Adapter SMB Server Statistics	Use this page to Add/Delet Add/Modify User User [Password Verify Add New Delete Users User ADMIN	e users.
Change the HTTP w	rirtual path	×
oirtuarpatri: j/re	moteadmin	
Physical path:]\wi	ndows\REMOTEADMIN.dll	
Authentication: (
Users:		
	ОК	Cancel

1.9 Remote maintenance with Telnet

1.9.1 General to Telnet

Telnet is designed to operate an external computer via the Internet as you would in front of it. Telnet is a simple solution for that telewor

Telnet is mainly intended for unix systems. It allowed the in-OS login (login) of a user to a host computer connected to the Internet in the form of an rlogin (remote login). The login is only possible if you are familiar with user-ID and password, i.e. on the selected host as a registered user. After the dial-up you will get a Unix shell (command prompt) and can enter operating system commands on the remote computer, start programs etc.

The program allows, by its own PC devices from the series visio or combo to configure. For the configuration of these devices is necessary knowledge of the commands, as described below.

You can establish an Telnet connection:

• With the program "telnet.exe".

🖾 Eingabeaufforderung	
Microsoft Windows 2000 [Version 5.00.2195] (C) Copyright 1985–1999 Microsoft Corp.	
C:\users\default>telnet 192.168.1.124	

HINT: is to win 7 is no longer in the standard package.

• With the program "hyperterminal.exe".You can choose the option:

Connect To
tel 💦
Enter details for the host that you want to call:
Host address:
Port number: 23
Connect using: TCP/IP (Winsock)
OK Cancel

• Or if you have in the target system the RS232-debug option enabled, you can use the serial interface with each Terminlprogramm (hyperterminal, Tera term, o. (a.) use equally.

Except in the case of the serial connection is initially a login:


Confirm with "user" or "supervisor".

With the command : help you can list all available commands.



For your convenience commands have a submenu. By entering the commands will appear the submenu or at a command the information.

All commands can be executed by their initial letters, as long as the assignment is clear.



Program hints:

many telnet settings can be read and written in coDeSys. I.e. the codesys- window initialization routine can be written in a way that your system settings in codesys can be carried out. As a result you will find code samples each relate to the reading. In order to be able to write the value, simply swap the allocation:

(*read*) nDisplayBrightness :=psFW^.uRemanent.sMasterEEprom.nDisplayBrightness;

(*write*) psFW^.uRemanent.sMasterEEprom.nDisplayBrightness:= nDisplayBrightness;

IMPORTANT:

Before you can work the first time with psFW (PointerStructureFirmWare) and psUW (PointerStructureUserWare), you must have the pointer initialized. By the Initialize codesys is the beginning of the exploitable the FW and UW announced.

WARNING to pointers:



This assignment does not find, or faulty instead, is the access to the system randomly. The change of the password can for the overwrite of the operating system be responsible. Therefore you should make sure it is essential that all Pointerinitialisierung are correct

🗣 PLC_PRG (PRG-ST)
0001PROGRAM PLC_PRG
0002 VAR
0003 psFW : POINTER TO sFW:=0; (* Zeiger auf sie Startadresse der Firmwaredatenpunkte *)
0004 psUW: POINTER TO sUW:=0; (* Zeiger auf sie Startadresse der Userwaredatenpunkte *)
0005 END_VAR
0006
0007
8000
0001 IF psFW = 0 OR psUW = 0 THEN
0002 psFW:= FwGetStructPointer(0 (*nDummy*));
0003 psUW:=UwGetStructPointer(0 (*nDummy*));
0004 RETURN; * Nachfolgendet Code darf nur ausgeführt werden, wenn für psFW/psUW eine Adresse zugewiesen wurde *)
0005 END_IF;
0006

In the following you have online access to all data points:

⊡…psFW = <00810000>	
⊡psFW^	
·····.szFirmwareTime = '17:35:57'	



All commands can be executed by their initial letters, as long as the assignment is clear. It is important to pay attention to upper / lower case.

The scope and the content of the commands vary with the respective device and the software version of the runtime. A clear command - description is therefore only in the product manual can be seen.

1.9.2 Telnet command: help

You will find further help with the command "help diagnostic".

```
$visio_P205V/>help diagnostic
SNMP Station: diagnostic commands:
    logging - set logging options
```

By entering the following commands the following functions can be executed:

logging (submenu) :

functions to logging

1.9.3 Telnet command: state

Display the state of the device:

\$visio_P205V/>state
>visio_P205V
>Runtime-Version : 2.03-01 Aug 11 2010 18:57:11
>CE-Version : 6.16 13.07.2010
>CoDeSys CAN
>Module 191=run, CAN:terminated 125kBaud
>192.168.5.191, subnet 255.255.255.0, gatew. 0.0.0.0
>MAC=00-07-7E-00-57-B7 foK SN=-1737075662 Date 25.07.2001 01:07:48

- row 1: type of device
- row 2: runtime-version
- row 2: software type
- row 3: modul number, CAN termination resistor activated, CAN transfer rate
- row 4: Ethernet IP-address
- row 5: MAC-ID and system date

1.9.4 Telnet command: date

Read and modify the system clock / system date Example:

CM211/>date >Date/Time: 2.1.2008 07:12 CM211/>**date 15.12.2010 17:00** >Date/Time: 15.12.2010 17:00

1.9.5 Telnet command: stepper

CM211/>stepper

```
1 = Move Relative
example:
stepper 1 1 250
stepper +----> 1=Start relative movement
stepper +----> bit coded stepper => 1:= Stepper 0
stepper
        +----> relative Position in pulses
    _____
3 = PositionActual
               _____
_ _ _
  _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
4 = StepperRamp
example:
stepper 4 7 1000 1000 1000 0
stepper +----> 4=set Ramp
stepper +-----> bit coded stepper => 7:= Stepper 0, Stepper 1 + Stepper 2
         +----> Velocity [Pulses/s]
stepper
             +----> Accelaration [Pulses/s^2]
stepper
                 +----> Decelaration [Pulses/s^2]
stepper
stepper
                    +--> RampForm [For now only 0]
7 = Initialize
Has to be run after Reboot
                      _____
```

1.9.6 Telnet command: analog

Monitor, modify and configure the analog channel

CM211/>analog

```
calibrate all channel in to valid range
sensor ==> 0=AIN_0_10VOLT, 3=AIN_0_20mA, 21=AIN_PT100_2WIRE
example:
analog 3 0 0 50 777
analog +----> 3=calibrate
      +----> 0=channel
analog
       +----> 0=sensor AIN_0_10VOLT
analog
          +----> 50=min value for 0[V]
analog
             +----> 777=max value for 10[V]
analoq
_____
analog 1
                                 = show all analog channels
analog 2 <channel> <sensor>
                                 = configure the analog sensor
analog 3 <channel> <sensor> <min> <max> = calibrate the analog channel=<0..n>, min=value for 0[V],
max=value for 10[V]
```

1.9.7 Telnet command: digital

Overview:

CM211/>digital

Digital 1 : HINT: this monitoring-output is on the serial interface not supported. Please us the telnet.

```
---- digital : show all channels -----
CM211 2.9-8 Dec 15 2010 14:37:30 HW1.0
-----
digital inputs:
00000000 0000000
_____
digital outputs: <n>, change channel, <+>,<-> change FORCED value
000000000 0000000 PLC values
******** ******* FORCED values
   _____
frequency inputs: <r> reset to zero
                         ı.
channel [0]='FIN_OFF
channel [1]='FIN_OFF
                         1
channel [2]='FIN_OFF
channel [3]='FIN_OFF
channel [4]='FIN_OFF
channel [5]='FIN_OFF
channel [6]='FIN_OFF
                         ı.
channel [7]='FIN_OFF
                         1
```

Digital 2 <Channel> <Type>

Example:

Digital 213

 \rightarrow channel 1 will be set as quadcounter

```
CM211 2.9-8 Dec 15 2010 14:37:30 HW1.0
_____
digital inputs:
0000000 0000000
_____
digital outputs: <n>, change channel, <+>,<-> change FORCED value
000000000 0000000 PLC values
******** ******* FORCED values
~
_____
frequency inputs: <r> reset to zero
                       ,
channel [0]='FIN_OFF
channel [1]='FIN_QUADCOUNT
                      1.1
                            0.000[Hz] overflow
                        ,
channel [2]='FIN_OFF
channel [3]='FIN_OFF
                        ,
channel [4]='FIN_OFF
                        .
                       1
channel [5]='FIN_OFF
channel [6]='FIN_OFF
                       .
                       ,
channel [7]='FIN_OFF
```

1.9.8 Telnet command: option

Change the device specific options:

\$visio_P205V/>option

Clear Eventlogger : 6	clear eventlog SRAM
Key repeatabili. :	7set value [0,1] ->"on"
Key beeper (0=off) :	8set value [015] -> (2)
Touch beeper(0=off) :	12set value [015] -> (3)
Modbus0=Off,1=TCP,2=UDP:	20 -> 2
Modbus Port Read <502>:	21 -> 502 (client+server)
Modbus Port Write <502>:	22 -> 502 (client)
Brightness Display :	26[0<200>255] (51)
Use internal keyboard :	27set value [0,1] ->"yes"
Edit Style :	34set value [<0>-standard,1-4keys] ->"0"
RTU: Use Coils for Bits:	37set value [<0>,1] ->"no"
RTU Timeout :	38set value [ms] -> 200
RTU Frame Spacing :	39set value [ms] -> 10

• Clear Eventlogger ("option 6"):

Erase the eventlog entries, stored in RAM storage.

• Key repeatabili. ("option 7"):

If this option is enabled, the keys are cyclically of control panels for the duration of the activity. At deactive option, only the state changes of the keys.

• Key beeper ("option 8"):

This option determines whether and how long (factor of 10 ms) the internal beeper when pressing a button is turned on.

• Touch beeper ("option 12"):

This option determines whether and how long (factor of 10 ms) the internal beeper when pressing the touch is turned on.

• Modbus0=Off,1=TCP,2=UDP ("option 20"):

Determines whether the integrated Modbus client/server is active and with what protocol he works.

• Modbus Port Read ("option 21"):

Determines the port for read operations of the internal Modbus Client/Server

• Modbus Port Write ("option 22"):

Determines the port for write operations of the internal Modbus Client/Server

• Close KeyPad after inp. ("option 24"):

With this option, it can be determined whether or not the input field is to close after an entry or not.

• Brightness Display ("option 26"):

With this option you can adjust the brightness of the display will be set in normal operation. (*O 26 Byte*) nDisplayBrightness :=psFW^.uRemanent.sMasterEEprom.nDisplayBrightness;

• Use internal Keyboard ("option 27"):

With this option, it can be determined whether the input field of the runtime (internal) or the Windows CE is to be used.

• Keyb. Backl. Brightness ("option 28"):

With this option you can adjust the brightness of the keyboard backlight be set..

- Edit Style ("option 34"):
 : 34...set value [<0>-standard,1-4keys] ->"0"
- RTU: Use Coils for Bits ("option 37"):

With this option, the request of bits will be done as coils (FunktionCode 02), instead of FunktionCode 03, the default is No.

• RTU Timeout ("option 38"):

Default:=200ms

Time after which a new request for additional tabs by the master is made, if the slave does not response.

• **RTU Frame Spacing** ("option 39"):

Default:=10ms

Actuating between 2 inquiries. This time is set too small; the register will be requested again, although the Slave news in the concept is to respond. The value should be at least verified is like choosing the double of the cycle time of the slaves.

1.9.9 Telnet command: save

Save the datas in files:



save 'persist.bin' (save 2) :

Saves the data points as a 'persistent' defined in the file 'persist.bin'. With storage of persistent data will also retain data is stored, if at least a current value of the persistent data differs from the stored values (see also command load). The persistent data can also by setting the Userware-Variablen SaveParameter = 1 are stored.

In addition the number of saves, and the time and date of the last save operation.

save 'eventlog.bin' (save 3) :

Saves the stored in RAM in the entries of the Eventloggers file 'Eventlog.bin'.

CoDeSys is available here under the command FwSave(nMode) of the library sFwXX.lib are available.

For example:



(* flash the retain- and persistant-datas *)
FwSave(16#11);

1.9.10 Telnet command: load

Load the datas from file:



load 'persist.bin' (load 2) :

Invites persistent data (default values for "with stored parameters (persistent)" and "with battery-backed value (retain)" defined data points) from the file 'persist.bin' (see also save command).

load 'eventlog.bin' (load 3) :

Loads in the file 'Eventlog.bin' entries stored in the RAM of the Eventloggers. The file does not exist; the entries in RAM will be erased.



1.9.12 Telnet command: can

Change of parameters and diagnosis of the CAN-interfaces:

Telnet 192.168.1.126	
\$visio/>ccaann	
CAN0 : Remote Normal Queue Overrun CAN0 MSG01/02(send obj.): 0 6366 0 0 CAN0 MSG15 (recv obj.): 0 0 0 0 CAN0 MSG15 (recv obj.): 0 0 0 0 CAN0 User : 0 0 0 0 CAN1 MSG17/18(send obj.): 0 0 0 0 CAN1 MSG31 (recv obj.): 0 0 0 0 CAN1 User : 0 0 0 0 0	
ESB functionality : 1set value [0,1] (off) CANØ Baud : 2set value [10,20,50,100,<123>,125,250,500] (500) CANØ extended (29bit) : 3set value [<0>,1] (0) CANØ NodeID (My Module) : 4set value [<2] (62)	
CAN1 Baud :14set value [10,20,50,100,<123>,125,250,500] (125) CAN1 extended (29bit) :15set value [<0>,11] (0) CAN1 NodeID (My Module) :16set value [<0>,11] (0) CAN1 NodeID (My Module) :16set value [<2]	▼

Statistic:

Shows the number of received and sent telegrams of the CAN-interfaces

In the statistics queue/overrun there must be no overflow. If this occurs, however, must be adjusted Thread-Zeiten.

CAN monitor ("can 0 "):

HINT: This Monitoring-output as serial output is not available. Please use Telnet.

Scroll keys with +/ -

CAN 0 : show receiving CAN frames	, press <+>,<->	for page or <cr></cr>		
CAN=Bus ok(0000000), 125[kBits/s], 11bit normal,	MaxIndex=0256, Free	= 3076 from	m 18480[kB]
CANO receive 0+RTR	0	1082.728 transmit	0+RTR 0	
Timestamp $ Index ID L E R Data$	Ti	mestamp Index ID	L E R Data	
0.000 >000< 0000 0	11	0.000 >000< 0000	0	
0.000 001 0000 0	11	0.000 001 0000	0	
0.000 002 0000 0	11	0.000 002 0000	0	
0.000 003 0000 0	11	0.000 003 0000	0	
0.000 004 0000 0		0.000 004 0000	0	

005	0000 0			0.000	005	000000		
006	0000 0			0.000	006	000000		
007	0000 0			0.000	007	000000		
800	0000 0			0.000	008	000000		
009	0000 0			0.000	009	000000		
010	0000 0			0.000	010	000000		
011	0000 0			0.000	011	000000		
012	0000 0			0.000	012	000000		
013	0000 0			0.000	013	000000		
014	0000 0			0.000	014	000000		
015	0000 0			0.000	015	000000		
	005 006 007 008 010 011 012 013 014 015	005 0000 0 006 0000 0 007 0000 0 008 0000 0 009 0000 0 010 0000 0 011 0000 0 012 0000 0 013 0000 0 014 0000 0 015 0000 0	005 0000 0 006 0000 0 007 0000 0 008 0000 0 009 0000 0 010 0000 0 011 0000 0 012 0000 0 013 0000 0 014 0000 0 015 0000 0	005 000000 006 000000 007 000000 008 000000 009 000000 010 000000 011 000000 012 000000 013 000000 014 000000 015 000000	005 0000 0 0.000 006 0000 0 0.000 007 0000 0 0.000 008 0000 0 0.000 009 0000 0 0.000 010 0000 0 0.000 011 0000 0 0.000 012 0000 0 0.000 013 0000 0 0.000 014 0000 0 0.000 015 0000 0 0.000	005 0000 0 0.000 005 006 0000 0 0.000 006 007 0000 0 0.000 007 008 0000 0 0.000 007 009 0000 0 0.000 008 009 0000 0 0.000 009 010 0000 0 0.000 010 011 0000 0 0.000 011 012 0000 0 0.000 013 013 0000 0 0.000 014 015 0000 0 0.000 015	005 0000 0 0000 <td< td=""><td>005 0000 0 0000 <td< td=""></td<></td></td<>	005 0000 0 0000 <td< td=""></td<>

CAN=Busoff(00000001), 125[kBits/s]	11bit normal, Max	Index=0256, Free=	3076 from 18480[kB]
CAN1 receive 0+RTR 0	108	32.740 transmit)+RTR 0
Timestamp $ Index ID L E R Data$	Timest	amp Index ID L E	RData
0.000 >000< 0000 0		0.000 >000< 0000 0	
0.000 001 0000 0		0.000 001 0000 0	
0.000 002 0000 0		0.000 002 0000 0	
0.000 003 0000 0	11	0.000 003 0000 0	
0.000 004 0000 0		0.000 004 0000 0	
0.000 005 0000 0	11	0.000 005 0000 0	
0.000 006 0000 0	11	0.000 006 0000 0	
0.000 007 0000 0	11	0.000 007 0000 0	
0.000 008 0000 0	11	0.000 008 0000 0	
0.000 009 0000 0	11	0.000 009 0000 0	
0.000 010 0000 0		0.000 010 0000 0	
0.000 011 0000 0		0.000 011 0000 0	
0.000 012 0000 0		0.000 012 0000 0	
0.000 013 0000 0		0.000 013 0000 0	
0.000 014 0000 0		0.000 014 0000 0	
0.000 015 0000 0	11	0.000 015 0000 0	

ESB functionaltity ("can 1"): Default:1
with this command can the ESB - functionality on the CAN-interface 0 selected.
Select CAN or ESB functionality in order: 0 for Can or 1 for ESB.
Example in CoDeSys;
(*C 1 Byte*) bESBActivated:=psFW^.uRemanent.sMasterEEprom.bESBActivated;
If the ESB functionality is not activated ,the following additional options for both CAN interfaces are
available. If it is turned on only for CAN 1

 CANn Baud ("can 2 / 14") Default:125 Selection of the baud rate for the respective CAN interface. Note: 123 kbaud is not supported for CoDe Sys-programming. Example in CoDeSys; (*C 2 INT*) nCAN0Baudrate:=psFW^.uRemanent.sMasterEEprom.nCAN0Baudrate; (*C 13 INT*) nCAN1Baudrate:=psFW^.uRemanent.sMasterEEprom.nCAN1Baudrate;

- CANx Extended (29bit) ("can 3 / 15") Default: 0 Length of the CAN Identifier (1 = 29 bit, 0 = 11 bit) Example in CoDeSys;
 (*C 3 Byte*) bCAN029bit:=psFW^.uRemanent.sMasterEEprom.bCAN029bit;
 (*C 14 Byte*) bCAN129bit:=psFW^.uRemanent.sMasterEEprom.bCAN129bit;
- CANx NodelD (My Module) ("can 4 und 16"):
 a) CANopen active : Node for CANopen Slave
 b) CAN Layer2 active: modul address for CoDeSys-programming over USB- or Centronix-interface
- CANx CANopen Active/Node ("can 5 und 17"): Activate from CoDeSys-CANopen. The CANopen node will be configured from CoDeSys. Note: For the for CoDeSys-programming muss CANopen be activated. Example in CoDeSys; (*C 5 Byte*) bCAN0CanOpenActice:= psFW^.uRemanent.sMasterEEprom.bCAN0openActive;

(*C 17 Byte*) bCAN1CanOpenActice:= psFW^.uRemanent.sMasterEEprom.bCAN1openActive;

- CANx Layer2 Active ("can 6 und 18"): Activate the elrest CAN protocol. To enable this option, further options are available. For further details, see the chapter "communications can".
- CANx Send Id ("can 7 und 19"): Base address for the Send-ID.
- CANx Recv Id ("can 8 und 20"): Base address for the Receive-ID.
- CANx Intermod Id ("can 9 und 21"): Base address for the Intermodul-ID.
- **CANx Intermod Master** ("can 10 und 22"): Switch to Multi-Master operation mode.
- CAN0 Termination ("can 13 <on/off>") Default: 1
 Turns off the internal CAN0-termination resistor (if in hardware available)
 0 : termination resistor is off
 1 : termination resistor is on
 fixed on xxx board (on/off) : will be shown, if the termination resistor exist.
 Example in CoDeSys:
 Under CoDeSys there are no separate parameters. Here we must read, masked and be written.

26		
27	(* Relaise für den Abschlusswiderstand rücksetzen, C.	AN Konfiguration und Neustart erforerlich
28	IF bCANTermination = 0 THEN	
:29	nCopyTemp	:= INT_TO_BYTE(psFW^.uRemanent.sSlaveEEprom.OptionFlag);
:30	wMaskeOptionFlag	:= 2#00100000;
:31	nCopyTemp	:= nCopyTemp OR wMaskeOptionFlag;
:32	psFW^.uRemanent.sSlaveEEprom.OptionFlag	:= nCopyTemp;
:33	ELSE	
:34	nCopyTemp	:= INT_TO_BYTE(psFW^.uRemanent.sSlaveEEprom.OptionFlag);
:35	wMaskeOptionFlag	:= 2#11011111;
:36	nCopyTemp	:= nCopyTemp AND_wMaskeOptionFlag;
:37	psFWA.uRemanent.sSlaveEEprom.OptionFlag	:= nCopyTemp;
:38	END_IF	
:39		
:40	ESB := psFW^.uRemanent.sSlaveEEprom.OptionFlag;	
:41	*)	
:42	1	
43		

Is the ESB-functionality is turned on, the following additional options for the CAN-interfaces 0 available.

률 Telnet 192.168.1.126	_ 0
\$visio/>ccaann	
CAN1 : Remote Normal Queue Overrun CAN1 MSG17/18(send obj.): 0 0 0 0 CAN1 MSG31 (recv obj.): 0 0 0 0 CAN1 User : 0 0 0 0	
ESB functionality : 1set value [0,1] (CANO) Save ESB-Configuration : 2compare [<0>:OUI,1:TYP,2:NOT] -> TYP Restart ESB-Config. : 3 SDOs of module n : 4	
actualESB modules saved (2) ESB-OK # type order OUI type OUI 1 CS100 1 3025408 CS100 3025408 2 CS100 1 3418624 CS100 3418624	
CAN1 Baud :14set value [10,20,50,100,<123>,125,250,500] (125 CAN1 extended (29bit) :15set value [<0>,1] (1) CAN1 NodeID (My Module) :16set value [62] (62) CAN1 CANopen Active/Node:17set value [0,<1>] (1) on 0 Node CAN1 ElaCAN Active :18set value [0,<1>] (0)	5>
\$visio/>	

• Save ESB-Configuration ("can 2"):

Saves the current device configuration in the serial EEPROM and determines whether and what the criterion (OUI, Type). This configuration should be checked.

- Restart ESB-Config. ("can 3"): Read the current configuration on the ESB.
- SDOs of module n ("can 4"): only for internal use.
- **Diagnose:** shows the current status of the ESB (for more information, see "communication ESB").

1.9.13 Telnet command: profibus

Prerequisite

• select the card:

At the beginning, the correct map under options may be enabled (2k or 8k). Failing that, the system selects 2k-card (Option 3 = True).

Options : 0.no Option 1.DIO8/IO1 2.RS232/RS [COM-2k] 4.COM-8k

• activate the profibus diagnostic:

\$CP-104/>pprr

DPM COM-DPM V01.208 26.10.06		
set profibus diagnostic	:	1 -> On
get life list of slaves	:	2
get config. of slave	:	3 [1127]
global state field	:	4
task info	:	5
dump input data	:	6
dump output data	:	7

set profibus diagnostic ("pr 1")

After activation card must now in the first line with the name log. All other ProfibusOptionen will become visible. After activation of the card, the name of it has to be reported on the first line. All other ProfibusOptionen be visible.

get life list of slaves ("pr 2") list of seleteced and actually exisiting slaves

get config. of slave ("pr 3") Information on programming the slaves.

\$CP-104/>pprr 33 55
station 5 :
Station 'S5' get config f a i l e d ------

global state field ("pr 4") State information from the Profibus slaves

\$CP-104/>pprr 44

0:GloablStateField

```
bCtrl=0
bAClr=0
bNonExch=1
bFatal=0
bEvent=0
bNRdy=0
bTout=0
bDPM_state=OPERATE
bErr_Rem_Adr=5
bErr_Number=17
usBus_Error_Cnt=0
usTime_Out_Cnt=0
20,00,20
00,00,00
00,00,00
00,00,00
00,00,00
00,00,00
00,00,00
00,00,00
00,00,00
00,00,00
00,00,00
00,00,00
00,00,00
00,00,00
00,00,00
00,00,00
global state field ("pr 5")
$CP-104/>pprr
                55
0:TaskInfo
         , Version=0000,Condition=0
         , Version=1060,Condition=0
PLC
USR_INTF, Version=1394,Condition=2
```

- , Version=0000,Condition=0
- , Version=0000,Condition=0
- , Version=0000,Condition=0
- FDL , Version=3127,Condition=0

dump input data ("pr 6") monitor the Profibus input – memory

dump output data ("pr 7")

monitor the Profibus output - memory

1.9.14 Telnet command: setdef

Set all settings to the default factory values.



The values are only reset after a reboot of the runtime. Should the values not be reset so the command is still be entered once.

1.9.15 Telnet command: password

The command

password <own password>

will set the password for telnet after an restart.

In future it is only possible to login in Telnet with this password. The FTP functionality remains not.

Example:

Password *enter.

1.9.16 Telnet command: setmod

Change the module address:

Telnet 192.168.5.62	
\$visio/>sseettmmoodd 220000	
WARNING: 'setmod' will kill all current elrest connections!!!!	



1.9.17 Telnet command: setip

Change the IP-address:



The IP-address will be accepted only if DHCP is turned off. Telnet must subsequently with the revised IP address be restarted.

Example in CoDeSys:

VAR



```
psFW: POINTER TO sFW := 0;
xREAD: BOOL;
dwTemp: DWORD;
xWRITE: BOOL;
MP_IP_Adress: ARRAY [0..3] OF BYTE;
END_VAR
```

```
IF psFW = 0 THEN
    psFW := FwGetStructPointer(0);
END_IF
IF psFW <> 0 THEN
     IF xREAD THEN
           dwTemp := psFW^.uRemanent.sMasterEEprom.nMyIP_address;
           MP_IP_Adress[0]:=DWORD_TO_BYTE(SHR(dwTemp,0));
           MP_IP_Adress[1]:=DWORD_TO_BYTE(SHR(dwTemp,8));
           MP_IP_Adress[2]:=DWORD_TO_BYTE(SHR(dwTemp,16));
           MP_IP_Adress[3]:=DWORD_TO_BYTE(SHR(dwTemp,24));
           xREAD:=FALSE;
     END_IF;
     IF XWRITE THEN
           dwTemp:=USINT_TO_DWORD(MP_IP_Adress[0]);
           dwTemp:=dwTemp OR (SHL(USINT_TO_DWORD(MP_IP_Adress[1]),8));
           dwTemp:=dwTemp OR (SHL(USINT TO DWORD(MP IP Adress[2]),16));
           dwTemp:=dwTemp OR (SHL(USINT_TO_DWORD(MP_IP_Adress[3]),24));
           psFW^.uRemanent.sMasterEEprom.nMyIP_address:=dwTemp;
           xWRITE:=FALSE;
     END_IF;
END IF
```



Runtime versions < 2.00 :

In this Runtime versions the IP-address is only updated when the program starts. When at program start is not a valid Ethernet connection present, appears as an IP address the 0.0.0.0



As an IP-address is always the last set IP-address is output, indipendently whether the Ethernet connection is present or not.



Example CoDeSys:

	IF xREAD then
	dwTemp: = psFW^.uRemanent.sMasterEEprom.nMyIP_subnet;
-	<pre>MP_IP_Subnet[0]:=BYTE_OF_DWORD(dwTemp,0);</pre>
ST	<pre>MP_IP_Subnet[1]:=BYTE_OF_DWORD(dwTemp,1);</pre>
	<pre>MP_IP_Subnet[2]:=BYTE_OF_DWORD(dwTemp,2);</pre>
	<pre>MP_IP_Subnet[3]:=BYTE_OF_DWORD(dwTemp,3);</pre>
	XREAD:=FALSE;
	END_IF;
	IF XWRITE THEN
	dwTemp:=USINT_TO_DWORD(MP_IP_Subnet[0]);
	dwTemp:=dwTemp OR (SHL(USINT_TO_DWORD(MP_IP_Subnet[1]),8));
	dwTemp:=dwTemp OR (SHL(USINT_TO_DWORD(MP_IP_Subnet[2]),16));
	dwTemp:=dwTemp OR (SHL(USINT_TO_DWORD(MP_IP_Subnet[3]),24));
	psFW [^] .uRemanent.sMasterEEprom.nMyIP_Subnet:=dwTemp;
	xWRITE:=FALSE;
	END_IF;

1.9.19 Telnet command: gateway

Change the Gateway-address:



1.9.20 Telnet command: setdhcp

Turn the DHCP on or off.

Telnet 192.168.5.62	
\$visio/>sseettddhhccpp 00	
DHCP reset	
\$visio/>	-

Example CoDeSys; (*setdhcp byte*)

nDHCPactivated:=psFW^.uRemanent.sMasterEEprom.nDHCPactivated;

1.9.21 Telnet command: cf

See chapter "Update-functionality"





If no CF-card is plugged, the message "CF: not available"

1.9.22 Telnet command: threats

Show an Set the Thread-times:

🚮 Telnet 192.168.5.22	2					
>Thread		Per	iod [ms]			
>	Set	Avg	Max	Min	Last	
> OB00	endless	2.50	40.07	1.94	3.56	
> 0B01 : 1	10	9.98	10.11	9.86	9.99	
> 0B1314	1(fixed)	0.97	1.16	0.83	1.00	
> ESB State : 4	10	9.97	10.10	9.87	9.99	
> ESB/CAN	1(fixed)	0.97	1.15	0.84	0.99	
>CoDeSys						
> VISUTASK	endless	2.51	40.32	1.94	3.58	
> TaskPrio1	20	20.12	20.20	19.79	20.16	
> TaskPrio16	100	100.00	100.08	99.93	_99.99	
> TaskPrio24	500	499.98	500.03	499.98	500.02	
<u>}</u>						
>Thread	Count		-Duratio	n Lmsj		
2 0000	040000	Hnà	max	Min (Last	
> OBON	218787	0.65	11.12	0.63	0.90	
	121753	Z.06	2.29	1.63	1.74	
> UB1314	1217528	0.0Z	0.08	0.01	0.0Z	
> ESB STATE	121450	0.04	0.04	0.01	0.01	
ESB/GHN	1217569	0.04	0.05	0.01	0.04	
	470000	0 07	2 24	0 05	0 07	
> VISUINSK	100007	0.07 0.06	3.34 0 07	0.05	0.07 0.06	
/ IdSKFF101	24377	0.00 0.00	0.07	0.04	0.00 0.0C	
V Taskrriuio	1000	0.00 0 04	0.00 0 0c	0.00	0.00 0 0c	
S TASKI P1024	1010	0.04	0.00	0.04	ຍ.ຍວ	
Śvisio/>_						▼

In the upper part of the display, the cycle times of each task are displayed. Some threads (eg OB01) can be set here.

In the lower part of the number of iterations and the execution time of each task is displayed.

Cycle times and processing times are measured between two invocations of the command.

From the FW- Version 2.00 a further instruction set is available. It is listend in <threath> , or just <T>

<T 0>

An overview from the priorities of the threads:

table	of a.	ll threads with prio: (0 255, 0 is the highest priority.
table	of a. 0. 1 2 10 13 14 16ff 32 33ff -97. 200ff 208ff 248 248 5 248 5 248 5 248 5 248 5 5 248 5 5 5 5 5 5 5 5 5 5 5 5 5	II threads with prio: (<pre>9 255, Ø is the highest priority. -time above drivers, e.g. CAN</pre>
Prio	248ff	CoDeSys Thread 2431:	: see task configuration the <value> priority</value>
~ r 10	290	0846	: recipe processing : event list processing : mask processing (VisuLoop) : keyboard processing (VisuLoop)

<T>

You will get a s	screenshot of the	e initiated s	ystem times.
------------------	-------------------	---------------	--------------

> Memory H	ree=		11968 fro	DM 2675	40 L K R I								
> Threads					Per	iod [ms]-		Dura	ation [m:	s]	Load-		-
>	Set:	[no] [Count	Min	Cur.	Max	Min	Avg	Max	%	OS-Prio	
0B00			endless	22923	11.98	65.80	68.00	0.55	48.13	48.13	73.1	250	
0B01	:	1	5	69404	0.45	11.51	16.47	0.33	1.70	11.68	14.7	32	
IOs	:	3	10	42021	9.71	10.01	10.31	0.01	0.03	0.16	0.3	14	
0B1314			2(fixed)	211119	1.60	1.97	2.41	0.03	0.04	0.26	2.1	15	
CAN Int			interrupt	0	0.00	0.00	0.00	0.00	0.00	0.00	0.0	10	
CAN0/1			2(fixed)	211723	1.70	1.98	2.33	0.02	0.04	0.221	1.9	13	
> CoDeSys	-Thre	ads-											-
Thread0			5	101667	3.60	12.00	12.26	0.08	9.90	10.00	82.5	16	
Thread1			7	72200	0.14	0.15	13.69	0.07	0.08	0.24	52.4	17	
Thread2			11	43589	0.14	11.94	16.47	0.07	0.08	0.24	0.7	18	
Thread31			51	80590	0.14	6.89	77.041	0.07	11.97	48.521	100.01	255	

threads 0 = thread info

threads 1 <value> set new value of OB01 = 10 [ms]

threads 2 <value> set new value of OB02 = 10 [ms]

threads 3 < value> set new value of IOs = 10 [ms]

threads 10 = show cycle time perodic

By entering the command <T 10>, this table is constantly updated. Therefore you receive an onlinemonitor. The minimum and maximum values will be reset by a renewed call to the command.

Declaration for the picture:

Free Memory: Free space / Total Available memory in MB.

This information is valuable to get pogrammed wasted space on the track (memory-leech) Threads Name of System or projected CoDeSysthreads indicating the set cycle time

- Count: counter, calls total.
- Period [ms] scoreboard of the cycle time with min/max/jitter
- duration [ms] display the throughput time for a cycle with min- /max jitter
- load % ratio of duration to period in % Example: Period:10ms, Duration: 5ms load 50 %
- OP-prio Windows- priority of the respective task. HIGH [0 250] LOW

details of the Windows- priorities you will find under the Chapter threads

threads 1 <value> set new value of OB01 = 10 [ms]

threads 2 <value> set new value of OB02 = 10 [ms]

- threads 3 <value> set new value of IOs = 10 [ms]
 - <T 1 xyz> Set the time for the system OB1 (WindowsPrio 32). This Threath is triggered by the RealTimeTickerMainThread in an adjustable interval (1ms – 50 s)

is called.

In this thread, Eonline processed, will be the TCP/Upd- Modbus communications and various UW-functions for IO's and CLC and the ElaSim-function OB1 () is called.

• <T 2 xyz>

Setting the time for the system OB2 (WindowsPrio 16) This Threath is triggered by the RealTimeTickerMainThread in an adjustable interval (1ms – 50 s) is called. In this function ElaSim-function OB2 () is called.

• <T 3 xyz>

Setting the time for the system IO (WindowsPrio 14) Here, all IO calls are made.

1.9.23 Telnet command: reset

Restart the device.



1.9.24 Telnet command: restart

Restart the Runtime.

Felnet 192.168.5.222	- D ×
\$visio/>rreessttaarrtt	
Restarting runtime	
\$visio/>	-

1.10 Application

1.10.1 Start an Application

If it has not already been opened by the Austostart was opened

My Computer -> Flashdisk -> ElaDesign -> ElaDesignCE or. ElaDesignCoDeSys



Eile dit	⊻iew	<u>G</u> o	F <u>a</u>	vorites] [] 🗇
Address \F	ashdisk\E	laDesi	gn		
Name					Size
DEFAULT				11	oytes
EEPROM				2,0	OOKB
🎽 ElaDesignC	E			1.4	15MB
🎽 ElaDesignC	oDeSys0	E		2.3	14MB
🔊 ElaLibCE				4.5	50KB
EVENTLOG	3			1	28KB
PERSIST				5	12KB
🖻 resource				14	.1KB

1.10.2 Terminate an Application

Close a project / of the Runtime and return to Windows CE©

1.) With the right mouse button on the runtime symbol in the taskbar.

2.) or you implement in your application the function "end program".



1.11 **Data Exchange**

1.11.1 Establish an AutoScan-Connection

To make the device available for eStudio, it is necessary to include a program on the P4xx.

Start → Programs→Utilities→Panel Configuration

- startup applications
- select the file, as shown to the right.
- confirm with [OK]
- Save the registry

1.11.2 Establish a ftp-connection



Register Anonymous

1.11.3 Establish a telnet-connection

This requires running the runtime!

Standard user password : user

For more detailed informationen see chapter Telnet.

Hint: You can connect with the HyperTerminal a telnet connection.

fred ce	login:uusseerr			
fred:sst				
>FRED_P4 >ElaDesi >Module >MAC=00-	06 1.60-8 gn ElaOnline Cf 55335=userware, 97-7E-FF-FF-FF	AN , CAN:termi nOK SN=-1	nated 250kBaud Date 07.06.2006	02:23:3

anel Configuration Utility General Autostart Applications

Applications

Arguments:

Run Autostart programs after 3 seconds. Additional Autostart program

Application: IElashdisk\SysExtras\System\AutoScan.ex

¥

1.11.4 Establish a VNC-connection



The connection with the RealVNC - viewer may occasionally be interrupted. In addition, the use of VNC that only "right mouse clicks' are possible.

1.11.5 Web-visualization
Register the Visioweb - Libraray.
Start on panel side :
\Flaskdisk\SysExtras\RegSvrCEEx.exe

Select the file to be registered:

Save the registry.

Register the Visioweb Client dll

In order to access with your P400 on further devices with visioweb:

"Initialize and script ActiveX controls not marked as safe"

RemoteLCD.dll has to be initialized.

Furthermore the settings in Internet Explorer have to be changed:

Press the button "Settings"

Set the

to "Enable"

	File Name: //Hashdisk/w/w/pub/kemotel/CD_CE.dll	
	<u>R</u> egister <u>U</u> nregister	
Internet Ontio	pr.	
	Contraction Advanced Popups	
	💐 💽 📥 Sites	
Internet	Local Trusted sites Restricted sites	5
This zo placed	iet ne contains all Web sites you haven't in other zones	
nternet	<u>q</u>	ж×
ActiveX cc Script Dis En. Pro Initializ Dis En. Pro	ontrols and plug-ins ActiveX controls marked safe for scripting able ompt re and script ActiveX controls not marked as safe able ompt	
🔲 🗐 Run Ai	ctiveX controls and plugins	









Start the Internet Explorer with the IP address of the device.



1.12 **Operating system settings**

1.12.1 Memory allocation

The memory layout of the system can be configured. To enable the use of very large PLC and HMI applications resources, the following dialog can be used:



Start → SettingsControl Panel → System → memory

Storage Memory named here space that can be used for Windows internal processes "Program Memory "designated space that can be used for Windows applications.

If there are problems with too large PLC applications, this field should be enlarged The controller should not be put fully on the left to make shure that the windiows system will have a minimum of storage memory available.

Should the change be permanent, then the registry must be saved.

If there are no problems with the resource or application on size, then the default will be retained.

Appears at the start of an application,

the error message "Insufficient memory", as described

above may be that increased program memory '.

Recommendation for standard ab Windows CE© - Image:

(Settings for "Allocated Memory" in KB)

viso P2xx series, Booth CE version 6:18 Storage: 9856KB / Program: 25772KB

visio P4xx series This setting differs depending on the version, Storage: 4-6Mb, 28Mb Program 26.



System Properties	ok ×	
General Memory Device Name Copy	rights	
Storage Memory	y unused RAM can be adjusted. Program Memory	
Allocated 9664KB	Allocated 21232KB	
In Use SOOKB	In Use 6812KB	

1.12.1.1 SRAM memory allocation

Is there a SRAM on the			Start-Offset [hex]	length [hex]
then this is assigned		SRAM-Speicher 512kB = 8:0000		
as follows	SRAM	ID	00:000	00:0008
		CoDeSys Retain without presistant	00:0008	01:FFF8
		tIO / flag	02:0000	02:0000
		Debug	04:0000	01:0000
		Eventlogger	06:0000	02:0000

Since

version 2.3.1 and 2.9.3 (205 will be only supported with CE image version of 6:18 or a specific driver.)

		Start-Offset [hex]	Länge [hex]
	SRAM-Speicher 1024kB = 10:0000		
SRAM	ID	00:0000	00:0008
	tIO / flag	02:0000	02:0000
	Debug	04:0000	01:0000
	Eventlogger	06:0000	02:0000
	CoDeSys Retain without Persistant	08:0000	08:0000

Calibration of the Touch 1.12.2

The touchscreen is already in the installations-menu calibrated. At the request of the touch but can be calibrated again.

To this end, serves the tool "Stylus"



Start \rightarrow Settings \rightarrow Panelconfiguration \rightarrow Stylus

You double-click Settings

Touch- Recalibation

Change to tab-folder 2

;

Carefully follow the instructions that are show displayed above the screen.

- Tap in the middle of the cross with the touch pen.
- Hold this for at least 2 seconds to position the cross again.

Save the new calibration

In order to save the determined values permanently, therefore the Windows Registry have to be stored.

Select:

F







Stylus

Confirm with [Recalibrate]

Carefully press and bindly field shaces in the careful of the target. Edge at the target arms accord at streen. Fress the Esc key to careful
+



1.13 Preemptive multitasking

Why task configuration?

In many installations a safe and continuous control processing is indispensable.

Therefore, tasks, such as a data collection, the checking of the system battery or the updating of the HMI in lower prior tasks created. These tasks are of little time critical and therefore allow an editing in the background. The main program will thus not disturb in the execution.

1.13.1 Task configuration

If no task configuration is selected under CoDeSys V2.3, the PLC_PRG program block is called from the thread. The thread can be observed by Telnet times.

If the task configuration used in CoDeSys is given a fixed allocationthen, a fixed allocation will then be given.

Under µE devices up to 32 tasks can be created. Here, 0 corresponds to the highest Prorität, 31 of the lowest. For example:



Since the CoDeSys version of the low-priority task can V2.3.6.x (OB0) are defined as free running. This means that both OB0 due to its priority, as well as its type property is always called when all other tasks are not processed.

Among P400 was significantly expanded with the CoDeSysVersion> = 2.3.6.x the configuration options. The most common default configuration represents below.

Main task:

- Name: OB2
- Priority: 16
- category: cyclical, 10ms
- functions: machine sequence

Normal task:

- name: OB1
- Priority: 17
- category: cyclical, 100ms
- function: FileIO, post-calculation, Print ...

HMI task:

- name: OB0
- Priority: not relevant since it automatically on WindowsPrio 247
- type: Externally driven Visuloop or Eladesignloop
- function: all the functionalities around HMI such as screen image updates, keyboard control etc.

The use of "externally driven" is for the HMI -task compared to "free running" should be preferred, since the CoDeSys-Task with the HMI task of the operating system's running. The system receives a significantly higher level of dynamics. Don't use only a Singletask application.

1.13.2 Description of the task's

In ElaDesign Runtime the following threads are created:

Designation	Priority	Description
RealTimeTickerMainThread	1	This thread is a timer hardware interrupt triggered every 1ms executed. He serves as a clock for all the other timer- triggered threads
CtrlTask	2	CoDeSys internal task
CANCEThread	10	This thread is triggered by an interrupt of the CAN controller and contains the hardware-related CAN routines.
CANSyncThread	12	(No longer available as of version 1.70) This thread is triggered by the real- time ticker MainThread and is called in an adjustable interval (1ms - 50s). This thread is the synchronization of the ESB.
CANXchgThread	13	This thread is the real- time ticker MainThread triggered every 1ms called. This thread is the exchange of CAN or ESB.
CANStateThread	14	This thread is triggered by the real-time ticker main thread in a configurable interval (1ms - 50s) is called. This thread is monitoring the status of the ESB.
IOThread	14	Processing of the analog inputs and outputs. (Version 2.0)
TimerThreadOb13_14	15	This thread is the real-time ticker MainThread triggered every 1ms called. In this thread, various timer functions for 1 and 10 ms, and the OB13 ElaSim functions () and OB14 () is called
CoDeSys-Tasks	16 + CoDeSys- Prio.	CoDeSys program tasks with priority 0-15
TimerThreadOb02	16	This thread is triggered by the real-time ticker main thread in a configurable interval (1ms - 50s) is called. In this thread, the ElaSim ob2 function () is called.
TimerThreadOb01	32	TimerThreadOb01 32 This thread is triggered by the real-time ticker main thread in a configurable interval (1ms - 50s) is called. This thread is executed EOnline, is the Modbus communication and various functions for UW-O's and CLC and ElaSim ob1 function () is called.
CoDeSys-Tasks	200+CoDeSys-Prio.	CoDeSys program tasks with priority 16-23
tPlcLoad	245 (255 2.0 – 2.10)	CoDeSys internal task
tTCPSrv	245 (65 2.0 – 2.10)	CoDeSys internal task
tTCPClt0	245 (65 2.0 – 2.10)	CoDeSys internal task
VISU_TASK	247	CoDeSys Visutask program or task with the name VISU_TASK.oder task type, External Event-driven and the event ElaDesignLoop
CoDeSys-Tasks	248+CoDeSys-Prio.	CoDeSys program tasks with priority 24-31
MainThread	250	Thread of Windows CE application.
TimerThreadOb00	250	This thread is executed in a loop. Between each iteration is 1ms waiting for. This thread is executed ElaDesign and UDP communication and calls the function ElaSim Ob0 ().
TimerThreadLowPrio	253	This thread is executed in a loop. Between each iteration is 1ms waiting for. In this thread are low-priority work such as Telnet executed

Shaded entries are only a runtime with CoDeSys (ElaDesignCoDeSysCE.exe) exists.

All entries in italics are in a runtime with CoDeSys (ElaDesignCoDeSysCE.exe) not available.
CM211/ table	>t 0 of al	l threads with prio:	0 255, 0 is the highest priority.
	-0	96 reserved for real	-time above drivers, e.g. CAN
Prio	1	RealTimeTicker	: low level hardware timer
Prio	2	CoDeSys CtrlTask	: low level hardware timer codesys
Prio	10	CAN Int	: CAN Task
Prio	13	CAN0/1	: CAN data exchange with application
Prio	14	IOs	: all I/O processing
Prio	16ff	CoDeSys Thread 015	: see task configuration the <value> priority</value>
Prio	32	OB01	: driver-communication
			: TCP/UDP-Modbus communication
			: remote panel communication
Prio	33££		: reserved
	97	152 used by the defa	ult Windows CE -based device drivers, e.g. RS232, Ethernet
1	.53	247 reserved for rea	ul-time below drivers
Prio 2	00ff	CoDeSys Thread 1623	3: see task configuration the <value> priority</value>
Prio 2	08ff		: reserved
Prio 2	47	CoDeSys VISU Task	: processing VisuLoop for 3S Target-Visu
2	48	255 maps to non-real	-time priorities
Prio 2	48ff	CoDeSys Thread 2431	: see task configuration the <value> priority</value>
Prio 2	50	OB00	: recipe processing
			: event list processing
			: mask processing (VisuLoop)
			: remote panel communication
			: keyboard processing (VisuLoop)

We will be differences the following areas:

Description	Priorities
Real time tasks with a priority above the Windows CE© device drivers	0 – 15
Real-time above drivers tasks in real time with a priority below the Windows $\mbox{CE}\xspace{\mbox{c}}\xspace{\mbox{c}}$ device drivers	16 - 23
non-real-time tasks	24 - 31

All tasks are working asynchronously with each other and to ElaDesign An exception is here an externally-driven task with the event 'ElaDesignLoop'. This is called in every run of ElaDesign.

• Extern ereignisgesteuert		
Eigenschaften Ereignis:	ElaDesignLoop]

1.13.3 Recommended Task configuration

If your application uses interfaces from the controller, the different priorities of the individual interfaces are considered.

• <u>CAN</u>

Only the CanController operates on a higher priority than CoDeSys priority 0 If you only CAN in the application, you can operate the main task of the application under CoDeSys with the priorities between 0.und.15

• Ethernet, RS, USB

All other Windows CE-drivers are between CoDeSys 15 and 16 priority Do you need one of these interfaces, it is recommended that the main task from your application to run CoDeSys Prio16.

• FileIO

The write and read of a file will be controlled by the CE operating system. The required time depends on location (Flaskdisk, USB, ExternHDD, CF, SD) and different amount of data. This time can be extremely varied and up to several seconds, this must necessarily be considered in your application. E.g. to create a log file should be a task with priority 31 (WindowsPrio 250) are created. Copy the required variables from the main task in this task order and start the necessary task in this file file services.

MAINTASK

The main task contains your application. This includes the processing of inputs and outputs, and communication with various other devices. The priority of this task arises from the interfaces used to control.

eg: Cyclic Task cycle time T # xyms priority 16

The application created by the system and the task can watch it with the telnet command <Threath>. More, see the section: $\underline{\text{Telnet}} \rightarrow \underline{\text{Threads}}$

<u>VISUTASK</u>

Visutask belong all lines of code, wich deal with HMI employ. These include: query keys, screen position, numbers of screen-masks etc. Still, all commands of the library Pultxx compulsory to apply at this level such as PultMaskOpen, DrawBitmap ... etc.

At codesys- programs, this task usually will be designed freewheeling. However, since the runtime for its part has already a visutask it is advantageous, the codesys- Visutask in sync with the operating system-Visutask to edit. You should therefore select: externally driven - Visuloop /EleDesignLoop, prio <26 * > (WindowsPrio 247).

Note: The priority plays no role in this case, since the interrupt regardless of their stated priority by the Visuloop of the operating system is triggered.

Telnet

CM211/>t

> Memory Free= 25500 from 37856[kB]

> Threads					Period	l [ms]		Durat	ion	[ms] Load-	
>	Set:	[no]	I	Count	Min	Cur.	Max	Min	Avç	g Max % OS-1	Prio
OB00			endless	2606	9.83	9.83	28.95	0.00	0.5	2 6.32 5.2 250	
OB01	:	1	10	2675	8.94	9.92	28.95	0.31	0.3	2 0.77 3.3 32	
IOs	:	3	10	2676	8.97	9.93	28.95	0.23	0.2	3 0.45 2.3 14	
OB1314			1(fixed)	26759	0.04	1.00	11.35	0.01	0.03	2 0.27 2.1 15	
CAN Int		i	nterrupt	0	0.00	0.00	0.00	0.00	0.00	0.00 0.0 10	
CAN0/1			1(fixed)	26751	0.05	0.98	11.09	0.01	0.02	2 0.17 2.2 13	
> CoDeSys-	-Threa	ads									
DefaultTa	as		10	2675	8.87	9.92	29.02	0.04	0.0	5 0.32 0.5 200	

threads 0 = thread info

threads 1 <value> set new value of OB01 = 10 [ms]

threads 3 <value> set new value of IOs = 10 [ms]

threads 10 = show cycle time perodic

threads 11 = disable profiler

1.13.4 Task configuration in the undisturbed operation

If the cycle time, such as in the example, 100 ms, large will be selected, as the sum of the individual program modules without realtime error, the correct task schedule will be processed. We speak of an undisturbed operation.

Ungestörter Betrieb



1.13.5 Task configuration with realtime error

When compared to the example for the smooth operation of the program within a thread will be replaced by a much longer or the cycle time is reduced, can be made in the example, OB0 not fully completed. The thread is interrupted and the next iteration of the program at the interruption continued. After the execution of the remaining Ob-Resets is the same thread again started and runs until the interruption after all of the cycle time.

Degraded mode

Gestörter Betrieb



Also in the troubled operation is the execution of the OB2 and OB1 guaranteed.

In the present example is also the OB0 are dealt with, even if at a later date. It would, however, still an OBx present, so this was never executed.

1.13.6 Interrupt from Task's

The current task can be in any position of a higher prioity task being interrupted. The continuation of the task will be done at a later date to the body, the interruption took place.



Because this is a preemptive multitasking system, the inputs and outputs will be processed in a separate thread "IO with a higher priority than all user threads. If the cycle time of this thread is less or larger than the user threads, the input and output data are not available in every cycle re-read This happens regardless of whether the system is in undisturbed or faulty operation.

1.14 Multi Languages

What to do when creating a project with multi - languages using for example a cyrillic character. Cross reference, read the documente:

- Tips_and_Tricks_GB.pdf
- ElaDesign_GB.pdf

1.14.1 Configuration of the Keypads

If you are using telnet, Option 27

→ o 27 1 <return>

You do <u>not have</u> selected the internal keypad, so I the Windows CE© - keypad will be opened. But a language dependent switching will not be done.

📑 Telnet 192.168.1.126
fred ce login:uusseerr
6 d
tred:00
Options : 0.no Option 1.DI08/I01 2.RS232/RS 3.
Clear Eventlogger : 6clear eventlog SRAM
Key repeatabili. : 7set value [0,1] ->"on"
Key beeper (0=off) : 8set value [015] -> (2
Modbus0=Off,1=TCP,2=UDP: 20 -> 2
Modbus Port Read <502>: 21 -> 502 (client+server)
Modbus Port Write <502>: 22 -> 502 (client)
Close KeyPad after inp.: 24set value [0,1] ->"yes"
Brightness Display : 26[0<200>255] (200)
Use internal keyboard : 27set value [0,1] ->"no"
\$fred/>o 27 1_

1.14.2 Configuring its self-created keypad layouts

In eStudio Version 2.83 inches are already multiple keypads included in the project.

Ab eStudio Version 2.91 müssen Sie benötigten Keypads noch hinzufügen. Gehen Sie dabei wie folgt vor:

From eStudio Version 2.91, you have to add the required keypads. Proceed as follows:

- Click the right mouse button on the resource
- From the context menu, New '
- Select the Insert New Object "dialog the object type, keypad layout '
- Click OK
- Next, choose "Add from Template"
- Click on "Template" und choose the template whichyou want.

🔀 Projektverwal	ung eStudio	
Datei Bearbeit	n Ansicht Extras Hilfe	
i 🗋 i 🗴 🖬 🛍	🖨 💪 💿 🕒 🖫 🏭 🕥	_
Demos	Neues Objekt einfü	igen 💦
🕀 🦲 Projekte	nedes objekt enna	
E TestOrdner	Objekttyp:	OK
E Testpro	*kt 🥥 Alarmdefinition	Abbreahen
inter	essourcen	Abbrechen
	A Font	
	🥮 Keypad Layou	3
	🔤 Keypad XML C	Config
	Maske Marii	
	Bezeptdefinitio	n
	ABC Text	
	I	
	11	
Neues Keypad La	out 🔀	
Aus V	rlage bipzufügen	
Name:		
Г	OK Cancel	
L		
Bitmapauswahl		
E:\ElaSoft\EStudio\Def	ult\keypads	2
Ordner	Name 🛆 Size Type	
	≅ keypadb_de 22 KB XML-Do ≌ keypadb en 19 KB XML-Do	ku ku
Keypads	keypadb_ky 19 KB XML-Do	ku := 1 2 3 4 5 6 7 8 9 0 · = +
21	keypads_de 22 KB XML-Do keypads_ep 19 KB XML-Do	ku <mark>: ::::::::::::::::::::::::::::::::::</mark>
Hardware	■ keypads_ky	ки аля ч с м и т ь б ю . анн +
4:11		
Vorlagen		ФЫВАПРОЛДЖЭ/
Eigene Dateien		
		463x334, 256 Farben

Yrojektverwaltung eStudio						
Datei Bearbeiten Ansicht Optionen Hilfe						
🖃 🧰DemoSprachen	^	Name 🗸	ID	Größe	Geändert am	Dim
🖻 🧠 P2xx		i ≪kb_de.bmp		103 KB	09.06.2008 11:25	309
Ressourcen Sourcen Sourcen Sourcen Kevpads		₿kb_en.bmp		69 KB	09.06.2008 12:56	309
		🕉 kb_ky.bmp		69 KB	09.06.2008 14:08	309
		當 keypad_de.xml		22 KB	09.06.2008 11:23	
		當 keypad_en.xml		19 KB	09.06.2008 13:47	
		🕆 keypad_ky.xml		19 KB	09.06.2008 14:09	



You can select these keypad_<language>.xml and kb_<language>.bmp to extend your required languages. OK Abbrechen

Create additional language keypads:

1.)Copy the xml file that you want to use as a template. Use this command, New Copy ... 'from the context menu. Assign an appropriate name, for example keypad_jp.xml in creating a Japanese fon

2.) Edit this file and follow the English-speaking comments in the XML file.

3.) Create the suitable kb_jp.bmp BITMAP file.based on the comments

You can also customize an existing keyboard to your wishes. For example, the size change or create your own design. It is advisable always to use an existing keypad as a template. kb_de.bmp
kb_en.bmp
kb_en.bmp
kb_ky.bmp
keypad_de.xml
keypad_en.xml
keypad_ky.xml
keypad_ky.xml
keypad_ky.xml
keypad_ky.xml
keypad_ky.xml
keypads>
<keypad name="alpha keyboard">
<keypads>
<keypad name="alpha keyboard">
<type>1</type>
<!--type - optional - (1 - text, 2 - r
<!--name (optional for the momer
<!--the first specified keyboard is
<!--the keyboard layout is depend</pre>

< !-- the type and the languages id

Chance the language code.

The example here is 1031 = German exchange. The new keyboard will replace this Change the keypad bitmap name.

Chance the label of the text.

There is a distinction between numeric and alphanumeric keypads. These are used automatically to change according to the type of data. The distinction is made in the xml file by setting the type.



<keypado name="my numbers keyboard" notitle="1" frame="0"> <type>2</type>

<!--type - optional - (1 - text, 2 - number, by default: 1)-->

1.14.3 Configuring the language selection

Select in the foremost publicised the languages which should be used.



Bild

Neu

Bearbeiten

Löschen

Wert

1031 1033

1049

Text

Deutsch

Englisch

Russisch

Create a userware datapoint "nPrimaryLanguage".

Select the data type "retain" so that your language setting is retained after a reboot.

Switching of the language.

Supply the userware datapoint with the value of the code

1.14.4 Language dependent font selection

Using the example of Russian: Select the "Device Settings" the original Russian character set.

I.e. is nPrimaryLanguage to 1049 (= Russian) found Eladesign it turns all of the "Russian" to the specified character sets on CP1251_6x8.

Einstellungen für Gerät 'Messe1'

Allgemein PC-Verbindung Schriftart

Aligement Powerbindung Somman					
	Deutsch	Russisch			
CP1251_6x8					
cp1252_8x8					
Default	cp1252_8x8	CP1251_6x8			
Ela11x7					
Ela13x7					
Ela21x11					
Ela7x5		CP1251_6x8			
ELA8X15					
ELA8X8		CP1251_6x8			
Ela8x8u		CP1251_6x8			
DOM8Y6		CD1261 6v8			

FONT	german	english	russian
Ela21x11FNT	Yes	Yes	-
Ela11x7.FNT	Yes	Yes	-
Ela13x7.FNT	Yes	Yes	-
Ela8x15.FNT	-	Yes	-
Ela8x8.fnt	-	Yes	-
Ela8x8u.fnt	-	Yes	-
Ela7x5.FNT	Yes	Yes	-
ROM8x6.FNT	-	Yes	-
Rom8x6u.FNT	-	Yes	-
CP1251_6x8.FNT	-	Yes	Yes
CP1251_11x7.fnt	Yes	Yes	-
CP1252_13x7.FNT	Yes	Yes	-
CP1252_15x8FNT	Yes	Yes	-
CP1252_21x11.FNT	Yes	Yes	-
CP1252_8x8.fnt	Yes	Yes	-
CP1252_7x5.fnt	Yes	Yes	-
Times New (TTF)	Yes	Yes	-
System (TTF)	-	-	-
Tahoma (TTF)	Yes	Yes	-
Times New Roman (TTF)	Yes	Yes	-
WingDings (TTF)	-	-	-

So the fonts appear on the target system.

	Fonts
Ela21×11.FNT	äÄöÖüÜß-AaBbCc123456
Ela11x7.FNT	а́а́оо́и́иβ-АаВьСс123456
Ela13×7.FNT	αΑοσυυβ-ΑαΒьСс123456
Ela8x15.FNT	АавьСс123456
Ela8x8.FNT Ela8x8u, fot	∑-: n~_=-AaBbCc123456 aAoouu=-AaBbCc123456
Ela7x5.FNT	ääööüüß-AaBbCc123456
ROM8×6.FNT Rom8×6u:FNT	AaBbCc123456
CP1251_6×8.FNT	ддццьья-АавьСс123456
CP1251_11×7.fnit (ääööüüß-AaBbCc123456
CP1252_13×7.FNT	άΑοσμύβ-ΑαΒbCc123456
CP1252_15×8.FNT	äÄöÖüÜß-AaBbCc123456
CP1252_21×11.FNT	äÄöÖüÜß-AaBbCc123456
CP1252_8x8.fnt CP1252_7x5.FNT	¨ä Α ö Ö ü Ü β - A a B b C c 1 2 3 4 5 6 .ä β ö ö ü Ü β - A α B b C c 1 2 3 4 5 6
Courter new JTF.	äÄöÖüÜß-AaBbCc123456
System TTF	.™⊗`\ν` ⇐Ų−ΑαΒβΧχ123456
Tahoma TTF	äÄöÖüÜß-AaBbCc123456
Times.New Roman. TTF	äÄöÖüÜß-AaBbCc123456
Wingdings TTF	୵୳୵୵ଽଽୢଽଽୡଽଢ଼୷୷୷

1.14.5 Configuring different languages

Enter the English and Russian texts in eStudio.

To enter the Russian texts, turn the language to the locale of the windows operating system on Russian.

The Cyrillic characters can now be entered directly into eStudio.

If you do not have Russian keyboard, they could be of great use a visual

For more information, please visit : "ElaDesign_DE"

	180	22	- and sent (sets of reasoners	-		
	100	22		Text		
Resourcen	No.	32				
E Fonts	MM CO.MPL	32		Log.ID:	10	
66 Keypads	Me dd.MM.yy	32				
Texte	Medd.MM.yyyy	32		Councher	Russiech	
COLLANCO L	Eingabe	32		oprocrie.	In secondaria	101
	Mi Esc	32		Text	110	127
·LANCO_2	Mi HH:mm	32		1,000	1.14	
04_04_02_Asys	as hh:mm	32				
* 🛄 060130	Mi HH:mm:s.I	32				
12154_1	HH:mm:ss	32				
* 📴 12154_1_CE	Mi Kennwort	32	Password		1	



Not all fonts support German special characters.



Please note this in the project planning:

1.14.6 Download the languages text and the keypads

Translate the resource and transfer them to the device. Now another dialog appearsfor the XML file.

Please confirm this.

Hint:

The keypad usually is transferred once.

🖻 💼 P400_SPS_Drive						
🗄 🎆 Messe1						
🧰 Date	npunkte					
🗄 💼 Prog	ramme					
🖻 🔄 Ress	ourcen					
- 🔂 B	Neu					
- F F - 88 K	Einfügen					
	Ressourcedatei erzeugen					
🔁 M	Ressourcedatei downloaden					
ade T	Simulation starten					

👪 Bitmaps	
F Fonts	
🕉 Keypads	
🖭 Masken	
🖹 Menüs	
abc Texte	
Ressourcedatei dow	vnloaden 🛛 🗙
Datei:	C:\Projekte\P400_SPS_Drive\Messe1\resource\resource.res
Datum:	23.11.2006 09:36
Adresse:	192.168.1.230
Zielverzeichnis:	\Flashdisk\ElaDesign
[Download starten Abbrechen

Keypad XML Con	ig-Datei(en) downloaden 🗙
Adresse:	192.168.1.230
Zielverzeichnis:	\Flashdisk\ElaDesign
	OK Abbrechen
	AAA_BBB

If language selection is performed correctly, it will appear on the keyboard display.

Please note that the default font. See "restrictions" below.

HHH_555													
Значе	ernne t		Э Динс. алыны 80										
Esc	1	2	3	4	5	6	7	8	9	0		-	+
Caps	ë	й	ц	у	ĸ	e	н	Г	ш	щ	3	x	Ъ
Lock	ф	ы	в	a	п	р	0	л	Д	ж	Э	1	1
Shift	я	4	С	М	И	т	ь	6	ю	×	Sp	ace	+

1.14.7 Import / export from languages

Export the language by selecting

"Export → completely in CSV

Subsequent execution only applies for standard characters (no Kyrilisch, Japanese)

🗐 📄 DemoSprachumschaltung 🚾 dd.MM. 32.... 🗄 🍣 Pxxx 📠 dd.MM.yy 32... 🗆 🚞 Datenpunkte 🚾 dd.MM.yyyy 32... 🗄 💼 Ressourcen Eingabe 32... abc ESC Fonts 32... abc GB 5 🖻 🖭 Masken 💵 HH:mm 32... IDEFAULT_COMPONEN 🐱 hh:mm 32... IDEFAULT_DESKTOP MH:mm:s, 32... START 32... HH:mm:ss abc Texto abc | 6 Neuer Text 🗄 💼 DemoWebV 🐱 Kennwort 32... Neu... DemoWoch 🗄 💼 Dinkelacker_ Exportieren Eine Sprache Drachensee Importieren ۲ Komplett in 'csv'-Datei 🗄 🥽 Drucker, D4: Texte exportiern ? × Speichern Pxxx ▼ ← 🗈 💣 🎟▼ 🗀 Bitmaps Fonts

Aardware Menus Resource Simulation		
Dateiname:	texte.csv	Exportieren
Dateityp:	CSV-Dateien (*.csv)	Abbrechen
Trennzeichen:	F	

To import in Excel:

Open Excel, and then the CSV file. The start of Excel by double-clicking on the file may lead to an import is faulty

	A1						
	Α	В	С	D	E		
1	Deutsch[1031]	id	Log. ID	Englisch (USA	Italienisch[1040]		
2	Anzeige EINS	1	0	Display One	Due		
3	Anzeige ZWEI	2	0	Display Two	tre		
4	Anzeige DREI	3	0	Display Tree	Un		
5	D	4	0				
6	GB	5	0				
7	1	6	0				
8	Eingabe	32773	0				
9	Kennwort	32774	0				
10	dd.MM.yyyy	32775	0	M/d/yyyy	dd/MM/yyyy		
11	dd.MM.yy	32776	0	M/d/yy	dd/MM/yy		
12	dd.MM.	32777	0	M/d/	dd/MM/		
13	HH:mm:ss	32785	0	h:mm:ss xx	H.mm.ss		
14	HH:mm:s,II	32786	0	h:mm:s,ll xx	H.mm.s,II		
15	hh:mm	32787	0	h:mm xx	h.mm.		
16	HH:mm	32788	0	H:mm	H.mm.		
17		32795	0	AM			
18		32796	0	PM			
19	Esc	32797	0				
20		32798	0				

For the import in the project please go analog to the export before. (Excel safe in CSV, eStudio import).



1.15 Recipe

Recipes are used for handling larger quantities of data:

- Recipes on the devices can be read and written.
- You can recipes from the devices on the PC be read and written
- Recipes, with Excel (import/export) are to be replaced

1.15.1 Create of recipe

Recipes are loaded with the CoDeSys functions FwSave / FwLoad and saved

The data is saved on the "Flash Disk", so it is no program execution possible during the process. Only a limited number of write accesses are possible at the memory. Therefore it is necessary to plan the recipe-building during the development phase.

In general, it is useful to create a recipe for frequent changes array. I.e. They lead the change, or modify the recipe does not save, but only when you save the whole recipe. See the example on the right:

- value 0= Cola access on indexes[0]
- value 1= Cola Light access on indexes[1]
- value 2= spezi access on indexes[2]
- value 3 = lemonade access on indexes[3]

The following example was carried out without the array in order to explain the function and structure of recipes

All values are in %

Re	Rezept ändern						
Ν	lame : Kombi	nation					
Γ	Datenpunkt	Wert 0	Wert 1	Wert 2	Wert 3		
Ī	Wasser	80	90	80	80		
	Zucker	10	0	10	10		
- 1	Colamasse	10	10	5	0		
	Limonadenpulver	0	0	5	10		

In this example forms the vertical components, the drinks and the horizontal the ingredients in the programming is then accessed as follows on the values.

- KindOfDrink: = 2; (* Selecting spezi *)
- Mixer1: =water[KindOfDrink];
- Mixer2: =sugar[KindOfDrink];
- Mixer3: =weight of Cola[KindOfDrink];
- Mixer4: =powder of lemonade [KindOfDrink];

Creating the data points

In this example, the data points, percent_Cola; percent_Fanta; percent_ suggar and create a text variable in which the recipe name is passed.

A recipe will be created in: project device name new object recipe defintion datapoints: percent_Cola; percent_Fanta; percent_ suggar The name of the recipe is juice



Demo_Rezepte Signature Signature Signature Signature Signature Signature Demo_Rezepte Signature Signature Demo_Rezepte Signature Si	Rezeptdefinition	
CobeSys+Orgramme CobeSys+Orgramme Resourcen Armdefinitionen Profis DisplayLit_COMPONE DisplayLit_COMPONE DisplayLit_COMPONE SinglayLit_Compone	Name: Saft Datenpunkte: 2 + 4 Prozent_Colo Prozent_Limonade Prozent_Zucker	OK Abbrechen

In the listbox, the recipe will be selected.

The values will be shown: carbon dioxide, water and sugar.

In the input fields cola, lemonade and sugar the recipe can be

- Shown
- Set
- stored

Web-Datele
P305
Rezepte
0 × Hasser
0 % Zucker
COLA
COLA Rezept vorwahl
COLA_LIGHT SPEZI
FANTA Anzeige Status
Rezept Laden Rezent speichern
nezept speronern
event Funktionsteder Englisheder Ioner funktion [Jogingloset] Fonal funktion [Jogingloset]
Schalter Annual Schalter Engenhansen - Schalter Engenhansen - Besschalter Later -
Detersont Programme Control Detersont Programme Control Programme
Regulateday (14 -
CK _ binden _ Linguised _ OKRitecter _ Target
Meneric Listoox
Sotiering pach Text
Wert Text Bild Neu
1 COLA 2 COLA_LIGHT Beatbeiten
3 SPEZI 4 FANTA
C Texte/Werte aus Stringarray
Datenpunkt: Von: 0 Bis: 0

1.15.2 Load and save recipes

Save or load of recipes will be performed with the following functions:

- Function key element
- Switch Type
- Recipe Definition
- Recipe
- Data point: load or store to select

ы л а ы			
ମ ସ୍ଥା ଗ	Element Funktionsta	ter Igänglichkeit	X
	Schalttyp: Rezeptfunktion:	Rezeptfunktion	D
	Datenpunkt:	Laden Speichem Speichem unter Löschen Rel. OI	liziert 🔹
	Rezeptdefinition:	Rezeptdefinition	
		OK Abbrechen	Übernehmen

Important when Reset of the device:

- files with the recipes are **not remanently savedt** by Eladesign "save"
- files with the recipies are **remanently saved** and loaded with the function and FwLoad and FwSave.





With Fwsave the data will be written into the flash. This has the consequence that performing the FwSave no threads at this priority or below will be executed. See chapter Task.

The recipes.exe can be operated stand-alone or in this example by eStudio from start.

- Recipe
- Drinks
- Right-click on Recipe: change.

The Recipes.exe offers the following options:

- Writing prescriptions
- Read recipes
- export a csv file (Excel file)
- Import is possible only with the csv file that was generated by exports.





1.16 Alarms

Alarms are used to handle of alarm - and event messages.

1.16.1 Create alarm definitions

Right mouse click at device type => New => Alarm definition.

🖾 🕬 CWMOhen_piake_boop GanOpen_wago GANOpen_wago GANOpen_wago Neues Objekt einfügen × 🗄 📄 Datenpunkte Objekttyp: OK 🗄 🛅 Programme 🙆 Alarmdefinition ٠ 🖻 🧰 Ressourcen Alarmdefinitionen Alarmdefinitionen Bitmaps FF Fonts Masken Masken Menüs FF Rezeptdefinitionen Texte Abbrechen 🧱 Bitmap CoDeSys-Programm Datenpunkt FF Font HTML-Datei Kalender Maske Menü Metzwerk Projektiertes Gerät Rezeptdefinition 🚞 Web-Dateien 🗄 🥞 CM100 -🗄 🕳 CM110alt Alarmdefiniti X Alarm (Quittierung erforderlich) Тур: Datenpunkt: Indiziert Rel. Offset: 🛛 🚔 📕 Datenpunkt au Text X V IK K >> >> Bezeichnung • ÷ Datenpunkt Abnah_Byte_SINT Abnahme_Bit Kennwortebene für Quittierung: Beschreit Gerä 🔲 Kein Ereignis bei Giehe Alarm OK Abbrechen Alarm1 Alarm3 Alarm4 Alamie Comboboxint Digita[_Input_00_00 Digita[_Input_00_02 Digita[_Input_00_03 Digita[_Input_00_04 Digita[_Input_00_05 Digita[_Input_00_06 Digita[_Input_00_06 ital Innut 00 _ 🗆 X <u>ø • A</u> • .



Classes:

The alarms can be divided into classes. Thus all alarms or one class per alarm list will be displayed.

Single and all confirmation of alarm.

Under the element function key the typ alarm function have to be selected. Now it is possible, to select single and all confirmation of alarm.



If alarms come, go, collect or individual are acknowledged, all tasks on the same priority or below will be stopped briefly.

Reason: the alarms are written in the evenlog.bin file. This file will be saved remanently on the Flash and during the Flash deletion all tasks will be stopped

2 Communication

2.1 ActiveSync and mobile device center



2.2 Modem connection

The connection between PC and CE devices build an analog telephone line.



2.2.1 RAS (Remote Access Service)

The **Remote Access Service** is a service for remote access to a Windows CE© - device. Both RASfunctionalities, server and client, are supported. The connection between a RAS-client and the RAS-server can be via a modem, VPN or direct connections are produced.

The RAS can be configured on the Windows CE© device over the Panel Configuration Utility, short PaCo.

anel Configuration Utility OK 🗙						
General Autostart Applications Users	FTP HTTP RAS					
Enable server IP header compr.	🔽 Data compr. 🗌 L	Jse Authentication				
Users:	Require encryption					
	Authentication protocols:					
	🔽 МЗ-СНАР 🔽 МЗ-СН	IAP v2				
IP Addresses						
Get Addresses from: AutoIp Pool						
Static ID Adde Starts 102 169	254 1 Couply	254				
State in Addi State, 192 , 188 ,		237				
Lines:		🗙 🖄				
L2TP Line 0	vpn	0 s				
Hayes Compatible on COM1:	modem	0 s				
FFUART on COM1:	direct	0 s				
RAS VPN Line 0	vpn	Os				

Enable server	Enable the RAS-Server on each system start.				
IP header compr.	The RAS-Server use VJ TCP/IP header compressing method.				
Data compr.	The RAS-Server use data compressing.				
Use Authentication	A RAS connection can only be produced on a user authentication.				
Require encryption	A RAS-connection requires	encryption.			
Users	The list of users for an auth A new user can be created	nenticated RAS-connection on the users page.	can be established.		
IP Addresses					
Get Addresses from					
	Autolp Pool	The RAS-Server generate from the 'standard subnet communicate this to.	s random IP addresses pool' and shall		
	DHCP The RAS-server calls IP addresses from a Dynamic Host Configuartion Protocol (DHCP) server.				
	Static Pool	The RAS-Server uses IP-addresses from the static collection. This will always be the lowest unused IP address allocated.			
		Static IP Addr Start	The first IP address in the static collection.		
		Count	The number of IP- addresses in the static collection.		
Authentication protocols Lines	The RAS Server support the following Authentication protocols: PAP (Password Authentication Protocol) CHAP (Challenge Handshake Authentication Protocol) MS-CHAP (Microsoft Challenge-Handshake Authentication Protocol) MS-CHAP v2 (Microsoft Challenge-Handshake Authentication Protocol version 2.0) The following RAS-enabled devices are supported: Modem VPN (Virtual Private Network) The network uses a public transportation for private data. Participants of a VPN can exchange data, such as in an internal LAN. Each of the participants themselves have not to be directly connected. The connection via the public network is usually encrypted. The term "private" does not mean, as it's often assumed that it is an encrypted transmission. A connection between the networks will be produced via a tunnel between VPN Client and VPN server. Mostly the tunnel will be backed up, but also an unsecured plain text tunnel is a VPN. Direct - via a serial interface				

CAUTION: it is only COM1 supports.

For each RAS-head you can **disconnect idle seconds** setting.

Danal Configuration Utility					
Parter configuration other					
General Autostart Applications Users	FTP HTTP RAS				
Enable server IP header compr.	Data compr. Use Authentication				
Users:	Require encryption				
Authentication protocols:					
	MS-CHAP MS-CHAP V2				
[IP Addresses					
Get Addresses from: AutoIp Pool 💌					
Static IP Addr Start: 192 . 168 .	254 . 1 Count: 254				
, ,					
Lines:	*				
	VPD Üs				
Haves Compatible on COM1:	modem 0.c				
FFUART on COM1:	direct Disable				
RAS VPN Line 0	vpn Set Disconnect Idle Seconds				
-					

Disconnect idle seconds

- the time, in seconds, after which the device disconnects if no traffic is carried out.

Panel Configuration Utility		ок 🗙
General Autostart Applications Users FTF	HTTP RAS	
🔽 Enable server 🔽 IP header compr. 🔽	Data compr.	Use Authentication
Users:	Require encryption	
RAS Line - Global Parameters		×
Device Name: Hayes Compatible d	on COM1:	
Device Type: modem		
Disconnect The t	ime, in seconds, at	which
Tule Seconus; the d	evice disconnects at	ter being idle.
	OK	Cancel
Lines:		385 V
		L 🔨
L2TP Line 0	vpn	0 s
Hayes Compatible on COM1:	modem	0 s
FFUART on COM1:	direct	0 s
RAS VPN Line 0	vpn	0 s

Modem and direct lines can be configured.

anel Configuration Utility		ок 🗙
ieneral Autostart Applications Users	FTP HTTP RAS]
Device Properties		ок 🗙
Port Settings Call Options		
	_[Connection Pr	references —
□ Manual Dial (user supplies dial strings)	Baud Rate	115200 💌
r Terminals	<u>D</u> ata Bits	8 🔻
- Use terminal window	Parity	None 🔽
before dialing	Stop Bits	1
Use terminal window <u>a</u> fter dialing	Elow Control	None 🔻
	-	E 🔨
🗹 L2TP Line 0	vpn	0 s
Hayes Compatible on COM1:	modem	Disable
FFUART on COM1:	direct	
🗹 RAS VPN Line 0	vpn	Set Disconnect Idle S

Panel Configuration Utility		OK	X
General Autostart Applications Users FTP H	ITTP RAS		
Device Properties		ОК	×
Port Settings Call Options			
Call Setup ✓ Cancel the call if not connected within ✓ Wait for dial tone before dialing Wait for credit card tone 0 sec	120 se	econds	
E <u>x</u> tra Settings (special modem commands may	v be inserte	ed into the dial string)
☑ L2TP Line 0	vpn	0 s	
Hayes Compatible on COM1:	modem	Disable	
FFUART on COM1:	direct	Set Disconnect Id	lo Soc
	vpn	Set Disconnect Iu	ie sec

Tipp	•	Make sure that the authentication mechanism of Server and Client match.
1	•	Make sure that the security mechanisms of Server and Client match.
	•	Make sure that the settings, in particular, the flow control, of a modem lines in the Panel Configuration Utility (PaCo) match with those of the modem. Not all modems are properly after a reboot will be reconfigured. This can be checked with AT commands status. If the settings do not match, change the modem settings through appropriate AT commands and save them in a profile on the modem
	•	If you want to create a RAS-connection via the serial interfacewill make sure that the interface will not be used from another program. By default, COM1 is used for an activesync connection. You can check this functionality on the setting allow connection with desktop computer when device is attached in
	•	The baud rates from the server and the client should be the same.
	•	If you have a CE-device-panel as a client would like to use make sure that these RAS- management is not for the RAS-server is enabled (see Panel Configuration Utility). If you use a P4XX-panel as a client make sure that these RAS-line is not activated for the RAS-server (see Panel Configuration Utility).
	•	There is only supported COM1
	•	The RAS-functionality is available from Imageversion 5.03 and also needs the appropriate "SysExtras" -directory.
	•	Windows CE $^{\odot}$ 5.0 or 6.0 supports the EAP (Extensible - Authentication - protocol) does not.
2.2.2	Ren	note maintenance via modem

2.2.2.1 Remote maintenance with Robotics

Windows CE© -device as a remote access server, PC as a RAS-Client (Windows XP Professional) Users can access from a PC via a dial-up connection on a Windows CE© -device

Modem setting for a example

Modem an CE-Device/PC: U.S. Robotics 56k Faxmodem

standard setting

AT&F0 Loads the default parameter settings of the Firmware

AT&W0 Saves the current configuration of the modem in profile 0.

ATY0 When you turn on the modem, it woll the loaded the configuration profile 0.



The modem and the panel restart to examine the default settings of the modem. Therefore the RAS-Server have to be without saving the registry:

1						
<u>File V</u> iew						? ×
Ö	P 🗋	» 😣	1	2	÷	Ĩ
Certificates	<u>Date/Time Dia</u>	lina Display	Innut Panel	Internet	Keyboard	Mouse
Network and Dial-up Co Stylus	Panel Configurat General Autostar Enable server Users: Users: Un IP Addresses Get Addresses fro Static IP Addr Sta	ion Utility t Applications User ✓ IP header compr m: AutoIp Pool • t: 192 . 168	S FTP HTTP . V Data com Require e Authenticatio V PAP V MS-CHAP . 254 . 1	RAS pr. V uncryption n protocols: CHAP MS-CH	OK se Authentication AP v2 254	× rage hager
	Lines:	ble on COM1:	moo	dem	🖄 🗙 Os	-
ಶ Start 🚱	Control Panel	Panel Configuration	on Ut		🕹 DE	2:06 PM [🚱 💌

Start the "Windows CE© DDK TTY" –Tool from Microsoft:



Start the "Windows CE© DDK TTY" –tool from Microsoft:

≹Start → Run



The modem and the panel **restart** to examine the default settings of the modem.

This requires to disabled the RAS- Server without saving the registry:

Elle Edit Help V DTR V RTS V DSR V CTS DCD RING		
TOTR RTS DSR CTS DCD RING		×
U.S. Robotics 56K FAX EXT Settings		4
BO EO F1 L2 M1 QO V1 X4 YO		
SPEED=38400 PARITY=N WORDLEN=8		
DIAL=TONE OFF LINE CID=0		
&A1 &BO &C1 &D2 &HO &IO &K1		
aM4 aNO aPO aR1 aSO aT5 aUO aY1		
SOO=000 SO1=000 SO2=043 SO3=013 SO4=010	S05=008	
S07=060 S08=002 S09=006 S10=014 S11=072	s12=050	
\$15=000 \$16=000 \$18=000 \$19=000 \$21=010	s22=017	
\$25=005 \$27=001 \$28=008 \$29=020 \$30=000	S31=128	
s33=000 s34=000 s35=000 s36=014 s38=000	s39=012	
S41=004 S42=010		_
LAST DIALLED #:		
DK		
Start 📴 Control Panel 🦳 WinCE DDK TTY	🕹 DE 2:14 PM	9
<u>File Edit Help</u>		>
TTR TRTS DSR CTS DCD RING		
F Settings		4
) V1 X4 Y0		
WORDLEN=8		
CID=0		
CID=0		
CID=0 HO &IO &K1		
CID=0 HO &IO &K1 SO &T5 &UO &Y1		
CID=0 HO &IO &K1 30 &T5 &UO &Y1		
CID=0 HO &IO &K1 SO &T5 &UO &Y1 =043 SO3=013 SO4=010 SO5=008 SO6=004		
CID=0 40 &IO &K1 50 &T5 &UO &Y1 =043 \$03=013 \$04=010 \$05=008 \$06=004 =006 \$10=014 \$11=072 \$12=050 \$13=000		
CID=0 40 &IO &K1 50 &T5 &UO &Y1 =043 \$03=013 \$04=010 \$05=008 \$06=004 =006 \$10=014 \$11=072 \$12=050 \$13=000 =000 \$19=000 \$21=010 \$22=017 \$23=019		
CID=0 40 &IO &K1 50 &T5 &UO &Y1 =043 S03=013 S04=010 S05=008 S06=004 =006 S10=014 S11=072 S12=050 S13=000 =000 S19=000 S21=010 S22=017 S23=019 =008 S29=020 S30=000 S31=128 S32=002		
CID=0 HO &IO &K1 SO &T5 &UO &Y1 =043 S03=013 S04=010 S05=008 S06=004 =006 S1D=014 S11=072 S12=050 S13=000 =000 S19=000 S21=010 S22=017 S23=019 =008 S29=020 S30=000 S31=128 S32=002 =000 S36=014 S38=000 S39=012 S40=000		
CID=0 H0 &IO &K1 50 &T5 &UO &Y1 =043 \$03=013 \$04=010 \$05=008 \$06=004 =006 \$10=014 \$11=072 \$12=050 \$13=000 =000 \$19=000 \$21=010 \$22=017 \$23=019 =008 \$29=020 \$30=000 \$31=128 \$32=002 =000 \$36=014 \$38=000 \$39=012 \$40=000		
CID=0 H0 &IO &K1 S0 &T5 &UO &Y1 =043 S03=013 S04=010 S05=008 S06=004 =006 S10=014 S11=072 S12=050 S13=000 =000 S19=000 S21=010 S22=017 S23=019 =008 S29=020 S30=000 S31=128 S32=002 =000 S36=014 S38=000 S39=012 S40=000		
CID=0 HO &IO &K1 SO &T5 &UO &Y1 =043 S03=013 S04=010 S05=008 S06=004 =006 S10=014 S11=072 S12=050 S13=000 =000 S19=000 S21=010 S22=017 S23=019 =008 S29=020 S30=000 S31=128 S32=002 =000 S36=014 S38=000 S39=012 S40=000		
CID=0 HO &IO &K1 SO &T5 &UO &Y1 =043 S03=013 S04=010 S05=008 S06=004 =006 S10=014 S11=072 S12=050 S13=000 =000 S19=000 S21=010 S22=017 S23=019 =008 S29=020 S30=000 S31=128 S32=002 =000 S36=014 S38=000 S39=012 S40=000		
CID=0 HO &IO &K1 SO &T5 &UO &Y1 =043 S03=013 S04=010 S05=008 S06=004 =006 S10=014 S11=072 S12=050 S13=000 =000 S19=000 S21=010 S22=017 S23=019 =008 S29=020 S30=000 S31=128 S32=002 =000 S36=014 S38=000 S39=012 S40=000		
CID=0 H0 &IO &K1 S0 &T5 &UO &Y1 =043 S03=013 S04=010 S05=008 S06=004 =006 S10=014 S11=072 S12=050 S13=000 =000 S19=000 S21=010 S22=017 S23=019 =008 S29=020 S30=000 S31=128 S32=002 =000 S36=014 S38=000 S39=012 S40=000		
CID=0 HO &IO &K1 SO &T5 &UO &Y1 =043 S03=013 S04=010 S05=008 S06=004 =006 S10=014 S11=072 S12=050 S13=000 =000 S19=000 S21=010 S22=017 S23=019 =008 S29=020 S30=000 S31=128 S32=002 =000 S36=014 S38=000 S39=012 S40=000		

2.2.2.2 Remote maintenance with Devolo

Modem PC/Windows CE© -Device: MicroLink 56k i Devolo

settings: standard

For example, with the Hyper Terminal-Tool you can set the default settings.



AT&F Loads the default parameter settings of the firmware.

AT&W0 Saves the current configuration of the modem in profile 0.

AT&Y0 When you turn on the modem, it woll the loaded the configuration profile 0.

Restart the modem and check the default settings active profile: of the modem.

With the AT&V-command can be displayed the current configuration profile.

E0	$\mathbf{L0}$	м1	Q0	V1	хЗ		
\$B0	\$D0	\$T0					
%A0	%E1						
&C1	&D2	&G0	&S0	&Т4	&Y0		
*E0	*Q0						
-H0	-M0						
\C0	\D0	\J0	\T0	\V0			
: D0							
S00:0	000 s(02:043	S07:0	060 s	10:010	\$64:010	S94:000
Press	any ke	ey to d	ontinu	ıe			

2.2.2.3 Remote maintenance with Dr. Neuhaus

Modem with Windows CE© -Device: Dr. neuhaus Smarty 19.2 TI

setting: standard

AT&F Loads the default parameter settings of the firmware.

AT&W0 Saves the current configuration of the modem in profile 0.

AT&Y0 When you turn on the modem, it woll the loaded the configuration profile 0.

Restart the modem and check the default settings of the modem.	at&v ACTIVE PROFILE: B99 E1 L2 M1 Q0 V1 W2 X3 Y0 %D0 %E1 %U0 &C1 &D2 &G0 &S0 &Y0 S00:000 S01:000 S02:043 S03:013 S04:010 S05:008 S06:002 S07:060 C02:002 C00:00C C10:000 C10:010 C14:020 C12:000 C12:000
With the AT&V-command can be displayed the	s08.002 s09.006 s10.000 s12.000 s14.2AB s10.00B s10.000 s21.30B s22:36H s23:1EH s25:005 s26:001 s27:00H s38:000
current configuration profile.	STORED PROFILE 0: B99 E1 L2 M1 Q0 V1 X3 Y0 %D0 %U0 &C1 &D2 &G0 &S0 S00:000 S14:2AH S18:000 S21:30H S22:36H S23:1EH S25:005 S26:001 S27:00H S38:000
	STORED PROFILE 1: B99 E1 L2 M1 Q0 V1 X3 Y0 %D0 %U0 &C1 &D0 &G0 &S0 S00:001 S14:2AH S18:000 S21:20H S22:36H S23:1EH S25:005 S26:001 S27:00H S38:000
	TELEPHONE NUMBERS:
	&Z0= &Z1=
	&Z2=
	&Z3=
	OK

- The Panel, the modem and possibly the PC reboot.
- On the PC-page, you can query the modem and view the log file for the modem.

Check the cable (see modem manual)

- DTR-status ignore (AT&D0 for devolo / U.s. robotics)
- auto answer mode on the modem of the device.
- Appropriate "SysExtras" -directory use.

Eigenschaften von MicroLink 56k i	×
Allgemein Modem Diagnose Erweitert Treiber	
Modeminformation	
Feld Wert	
Hardwarekennung SERENUM\ELS0813	
Befehl Antwort	
ATQ0V1E0 Erfolgreich AT+GMM +GMM: "MicroLink 56k-i" AT+FCLASS=? 0,1,1.0,2,2.0,2.1,8,8.0	
A HILLS=? 0,1,1.0,2,2.0,2.1,0,0.0	
Modem abfragen	
Protokollierung	1
An Protokoll anhängen Protokoll anzeigen	
OK Abbrecher	1

More information about the modem settings refer to the documentation. "Communication_RS232_GB".

2.2.2.4 Configuration of the CE-device

RAS-server configuring over the Panel Configuration Utility.

Panel Configuration Utility	ок 🗙
General Autostart Applications Users	FTP HTTP RAS
Enable server IP header compr. Users: U1 U2	Data compr. Use Authentication Require encryption Authentication protocols: PAP CHAP MS-CHAP MS-CHAP v2
IP Addresses Get Addresses from: AutoIp Pool Static IP Addr Start: 192 . 168	1 . 1 Count: 254
Lines:	<u>n x</u>
Hayes Compatible on COM1:	modem O s

 Double-click on the Hayes Compatible on COM1: to configure the RAS-line. The server settings have to be matched with the client settings and those of the modem.

Device Properties		ок 🗙			
Port Settings Call Options					
	Connection Preferences				
Manual Dial (user supplies dial strings)	Baud Rate	19200 💌			
rTerminals	<u>D</u> ata Bits	8			
use terminal window	<u>P</u> arity	None 🗨			
└── b <u>e</u> fore dialing	Stop Bits	1			
Use terminal window <u>a</u> fter dialing	Elow Control	None			
Device Properties		ОКХ			
Port Settings Call Options					
Call Setup					
Cancel the call if not connected	within 🛛 sec	onds			
Wait for dial tone before dialing					
Wait for credit card tone O seconds					
Extra Settings (special modem comman	nds may be inserted	into the dial string)			

2. Registry saving.

Registry → Programs → Utilities → Save

If you don't save the registry after a reboot of the device; the connection entry is no longer available. In the newer versions PaCo they are prompted to save when you exit the program

2.2.2.5 Configuration of the PC

3. Modem install (Start -> Settings -> Control Panel -> Phone- and Modem Optionens)

Telefon- und Modemoptionen	? ×
Wählregeln Moderns Erweitert	
Folgende Modems sind installiert:	
Modem Zugewiesen zu	
Kommunikationskabel zwischen zwei Com COM1	_
MicroLink 56k i COM1	
Hinzufügen Entfernen Eigenschaft	en
OK Abbrechen Oberne	hmen

4. Select

Start -> Settings-> Netzwork Connections -> Create new Connections



< <u>Z</u>urück

Weiter >

Abbrechen

5. Choose a dial-up connection.

6. Enter the connection name.

- 7. Enter the number with which the connection will be established.
- Assistent für neue Verbindungen Zu wählende Rufnummer Welche Rufnummer wird verwendet, um diese Verbindung herzustellen? Geben Sie die Rufnummer unten ein. <u>R</u>ufnummer: 95 Sie müssen eventuell eine "1" bzw. eine Vorwahl oder beides einbeziehen. Wählen Sie die Rufnummer auf Ihrem Telefon, wenn Sie sich nicht sicher sind, ob diese zuszählichen Nummern erforderlich sind. Die gewählte Nummer ist korrekt, wenn Sie bei dem Telefonanruf einen Modernton hören. <<u>Z</u>urück <u>W</u>eiter> Abbrechen Assistent für neue Verbindungen Verfügbarkeit der Verbindung Sie können diese Verbindung allen Benutzern zur Verfügung stellen oder nur für sich selbst verwenden. Eine Verbindung, die nur für die eigene Verwendung erstellt wird, wird in Ihrem Benutzerprofil gespeichert und steht nur zur Verfügung, wenn Sie angemeldet sind. Verbindung erstellen für: Alle Benutzer C Eigene Verwendung Weiter > Abbrechen < Zurück Verbindung mit "PC2fred_modem" herstellen ? ×

u1 Benutzername: •• Kennwort: E Benutzernamen und Kennwort speichern für: Nur für eigene Verwendung C Alle Benutzer dieses Computers Wählen Abbrechen

8. You can make this connection available to all users or only use it for themselves

9. Click on the Properties button to configure the connection

Hilfe

Eigenschaften

10. Click on the **Configure** button to configure the modem.

🖕 PC2fred_modem Eigenschaften	? ×
Allgemein Optionen Sicherheit Netzwerk Erweitert	
Verbindung herstellen über:	
Modem - MicroLink 56k i #2 (COM1)	
Konfigurieren.	
Rufnummer	
Ortskennzahl: Rufnummer:	
95 Andere	
Landeskennzahl:	
▼]]
🔲 Wählregeln verwenden 🛛 🖤 ählregeln	
	<u>'</u>
Symbol bei Verbindung im Infobereich der Taskleiste anzeige	n
OK Abbrec	hen

 The PC-modem, the modem settings of the Windows CE© © -device and the modem settings must be fit together.

Modemkonfiguration		? ×
MicroLink 56k i #2 (C	COM1)	
Max. Übertragungsrate (Bit/s):	115200	•
Modemprotokoll		7
Hardwarefunktionen Hardwareflusssteuerung Modemfehlerkontrolle ak	aktivieren tivieren <tivieren< td=""><td></td></tivieren<>	
 Terminalfenster einblenden Modemlautsprecher verwen 	iden OK Abbi	rechen

12. Select the connection options.

PC2fred_modem Eigenschaften	? ×
Allgemein Optionen Sicherheit Netzwerk Erweitert	
Wähloptionen ✓ Status während des Wählens anzeigen ✓ Name, Kennwort, Zertifikat usw. abfragen ✓ Windows-Anmeldedomäne einbeziehen ✓ Rufnummer abfragen	
Wahlwiederholungsoptionen Anzahl der Wahlwiederholungen: 3 Zeit zwischen Wahlwiederholungen: 1 Minute Leerlaufzeit, nach der aufgelegt wird: Niemals Wählvorgang wiederholen, falls Verbindung getrennt	× v wurde
X.25	
ΟΚΑ	bbrechen

 On the Security tab, select the security option "Expands" for defining the advanced security settings.

PC2fred_modem Eigenschaften
Allgemein Optionen Sicherheit Netzwerk Erweitert
Sicherheitsoptionen O Typisch (empfohlene Einstellungen)
Identität folgendermaßen verifizieren:
_
Automatisch eigenen Windows-Anmeldenamen und Kennwort (und Domäne, falls vorhanden) verwenden
Datenverschlüsselung ist erforderlich (Verbindung wird bei unverschlüsselten Daten getrennt)
 Erweitert (benutzerdefinierte Einstellungen)
Diese Einstellungen erfordern Kenntnisse über Sicherheitsprotokolle.
Interaktive Anmeldung und Skripting
🗖 Skript ausführen:
Bearbeiten Durchsuchen
OK Abbrechen

14. Select the data encryption. This must according to the Panel- data encryption option.

Windows CE© does not support this!

rweiterte Sicherheitseinstellungen	?)>
Datenverschlüsselung:	
Optional (Verbindung auch ohne Verschlüsselung)	•
© Extensible-Authentication-Protokoll (EAP) verwenden	
	-
Eigenschafter	ì
Folgende Protokolle zulassen	
Unverschlüsseltes Kennwort (PAP)	
Shiva-Password-Authentication-Protokoll (SPAP)	
Challenge-Authentication-Protokoll (CHAP)	
Microsoft CHAP (MS-CHAP)	
Alte MS-CHAP-Versionen f ür Windows 95-Server zula	ssen
Microsoft CHAP, Version 2 (MS-CHAP v2)	
 Für MS-CHAP-basierte Protokolle automatisch eigenen Windows-Anmeldenamen und -Kennwort (und Domäne, fa vorhanden) verwenden 	alls
OK Abbrech	nen

	🖕 PC2fred_modem Eigenscha	ften	? ×
	Allgemein Optionen Sicherheit	Netzwerk Erweitert	1
	Typ des anzurufenden Einwähls	ervers:	
	PPP: Windows 95/98/NT4/20	00, Internet	<u> </u>
		Einst	ellungen
	Diese Verbindung verwendet fol	gende Elemente:	
	 ▼ T Netzwerkmonitortreiber		
	Internetprotokoll (TCP/If Date: und Druckerfreier	P) be für Misseeft Netzur	atka
	Virtual Machine Network	: Services	
	🗹 🖳 Client für Microsoft-Netz	werke	
	Installieren Dein:	stallieren Eigen	schaften
	Beschreibung		r
	Netmon-Paketaufnahmetreibe Pakete vom lokalen Netzwerł	er, der es Netmon ermog « zu empfangen.	licht,
		UK	Abbrechen
F	PPP-Einstellungen		? ×
	CP-Erweiterungen aktivier	en	
	🔽 Softwarekomprimierung akti	vieren	
	🔲 Mehrfachverbindungen für I	Einzelverbindungen a	ushandeln
		OK Abb	orechen
	Algemein Optionen Sicherheit Netzweit Erweiten	Algemen	
	Typ des anzundenden Einwehltervers: PPP: Windows 35/98/NT4/2000, Internet	PErntellungen konnen automatisch zugen Netzwerk dese Funktion unterstützt. Wende Netzwerk-administrator, um die geeigneten IF	esen werden, werm das n Sie sich andernfals an den Einstellungen zu beziehen.
	Diese Verbindung verwendet folgende Elemente:	IP-Advesse automatisch besiehen Folgende IP-Advesse verwenden: P-Advesse	
	War Netzwerknoekoneber Weizer PK/SPV/NetBIDS-kompakbles Transportpro	DNS Serverachesse automatisch beziel Enlande DNS Serverachessen umann	ten
	CoS Paketplaner CoS Paketplaner Costei und Diucketreigabe für Microsoft-Netzwerke Installeren. Dendalleren Eigenschaften	Bevocuger DNS-Server.	
	Beschvebung TCP/IP, des Standasdprotokoll für WAN-Netzwerke, das den		Envicitent .
	Datenaustausch über verschiedene, inteinander verbundene Netzwerke emioglicht.		
	OK Abbrechen		OK Abbrechen
PC2fred_	modem Eigenschaften	? X	
Allgemein	Dptionen Sicherheit Netzwerk	rweitert	
- Windows	-Firewall		
Netzwerł auf diese	ks beitragen, indem das Zugreifen n Computer vom Internet	Einstellungen	
eingesch	ränkt oder verhindert wird.		
	eine nauzung der internetverbindung eren Benutzern im Netzwerk gestatter	ı, die	
Inter	netverbindung dieses Computers zu v	erwenden	
🔽 Eine	DFÜ-Verbindung herstellen, wenn eir	n Computer im	
Netz	werk auf das Internet zugreift		
Ande Nutz	ren Benutzern im Netzwerk gestatter ung der Internetverbindung zu steuer	n, die gemeinsame n oder zu	
deak Informati	tivieren onen über <u>Gemeinsame Nutzung</u> netverbindung	Einstellungen	
	netverbindung		

ΟK

16. On the **Advanced** tab, click the **Settings** button, to make sure, that Windows Firewall allows this connection.

Abbrechen

17. In this case deactivate the Windows-Firewall.



18. Now you can establish the connection.

Verbinden mit "PC2fred_modem"		
3	95 wird gewählt	
	Abbrechen	
Verbinde	n mit "PC2fred_modem"	
3	Benutzername und Kennwort werden verifiziert	
	Abbrechen	
Verbinde	n mit "PC2fred_modem"	
3	Authentifiziert.	
	Abbrechen	

19. After the connection is established you will

have the icon , displayed in the taskbar. If you double-click on it the status of the connection will be indicated.

Status von PL2fred_m	odem	<u> </u>
Allgemein Details		
	1	[
Eigenschaft	Wert	
Gerätename	MicroLink 56k i	
Gerätetyp	modem	
Servertyp	PPP	
Ubertragungen	TCP/IP	
Authentifizierung	MS CHAP V2	
Komprimierung	MPPC	
PPP-Multilinkframing	Inaktiv	
Server-IP-Adresse	192.168.186.236	
Client-IP-Adresse	192.168.52.129	
		Schließen

Now the connection can be used for the With the VNC server maintenance.

🚊 ftp:/	/192.168.18	6.236/				- D ×
Datei	Bearbeiten	Ansicht	Favoriten	Extras	?	1
Adresse	👰 îtp://19	2.168.186	.236/			
🚞 Applic	ation Data					
🚞 Flash	disk					
🛅 My Do	ocuments					
🚞 Netwo	ork					
🚞 profile	es					
🚞 Progr	am Files					
🚞 Temp						
🚞 Windo	ows					
🖻 Contr	ol Panel.Ink					
Benutze	r: Anonym	🥝 Inter	net			1.

Connection details		×
VNC serve	er: 192.168.186.236	OK
	Use host:display	Cancel
	e.g. snoopy:2 (Display defaults to 0 if not given)	Options

a remote maintenance can be done by:


2.2.2.6 Windows CE[©] -device as RAS-client, PC as RAS-server (Windows XP Professional)

On the PC-side:

 Windows CE© -device as a RAS-client, PC as a RAS-Modem install (Start -> Settings -> Control Panel -> Phone and Modem Options).

2. Set the maximum data transfer rate between the PC and the modem and set the dial option.

elefon- und Modemoptionen	<u>?</u> ×
Wählregeln Modems Erweitert	
Folgende Modems sind installiert:	
Modem	Zugewiesen zu
Kommunikationskabel zwischen zwei Com	COM1
J	
Hinzufügen Entferner	n Eigenschaften
OK Abb	rechen Übernehmen
genschaften von MicroLink 56k i	<u>?</u> ×
Anschluss: COM1	
Lautstärke	
Maximale () hertragungsrate	
115200 💌	
C. AMILE	
Wahloptionen	
Vor dem Wählen auf Freizeichen war	ten
Wahloptionen	ten

1 - 1 - 1

the dial option.

ΟK

Abbrechen

 On the Diagnostics tab can be tested the modem. If the test is successful, the result will be is displayed as follows:

genschaften von MicroLink 56k i	?)
Allgemein Modem Diagnose Erweitert Treibe	er
Feld Wert	
Hardwarekennung serenum\els0813	
Befehl Antwort	_
AT400/TEU Errorgreich AT+GMM +GMM: "MicroLink 56k-i"	
AT+FCLASS=? 0,1,1.0,2,2.0,2.1,8,8.0	
AT#CLS=? 0,1,1.0,2,2.0,2.1,8,8.0	
	Modem abfragen
Protokollierung	
🔲 🛆n Protokoll anhängen	Protokoll anzeigen
	OK Abbrechen

 Create an incoming connection (Start -> Settings -> Control Panel -> Network Connections -> create a new connection).



 Select the "network connection type" and choose" setting up an advanced connection" to, set up the PC so that a Windows CE© -device can access it.

Assistent	für neue Verbindungen
Netz w Wi	erk verbindungstyp ie möchten Sie vorgehen?
с с	Verbindung mit dem Internet herstellen Stellt eine Verbindung mit dem Internet her, so dass Sie den Browser verwenden und E-Mail lesen können. Verbindung mit dem Netzwerk am Arbeitsplatz herstellen Stellt eine Verbindung mit einem Firmennetzwerk (über eine DFU- oder VPN-Verbindung) her, so dass Sie von zu Hause oder unterwegs arbeiten können. Eine grweiterte Verbindung einrichten Stellt eine direkte Verbindung mit einem anderen Computer über einen seriellen, parallelen oder Infrarotanschluss her oder richtet diesen Computer so ein, dass andere Computer darauf zugreifen können.
	< <u>Z</u> urück <u>W</u> eiter≻ Abbrechen

- Select the type of network "incoming connections to allow".
 Thus a Windows CE© -device is able to make a connection to this PC via modem .
- Assistent für neue Verbindungsoptionen Welchen Verbindungstyp möchten Sie einrichten?
 Image: Comparison of the second second

Geräte für eingehende Verbindungen Sie können die Geräte angeben, die der Computer für die Annahme eingehender Verbindungen verwendet.

Aktivieren Sie das Kontrollkästchen neben jedem Gerät, das für eingehende Verbindungen verwendet werden soll.

🗆 🍠 Kommunikationskabel zwischen zwei Computern (COM1)

Verbindungsgeräte:

MicroLink 56k i

I)

Eigenschaften

Abbrechen

Weiter >

< Zurück

 Select the modem that the PC for the incoming connections should use.
 Press the Properties button to adjust the PC-modem properties.

8. Set the PC Modem-connection settings.

MicroLink 56k i #2-¥erbindu	Ingseinstellungen 🏾 🍸 🗙
Allgemein Erweitert	
Anrufeinstellungen	ztes (manuelles) Wählen
Trennen nach Leerla	uf von 30 Minuten
Wählvorgang abbrec	hen nach 60 Sekunden
Datenverbindungseinstellur Übertragungsrate:	ngen 115200
Datenprotokoll:	Standard-EC
Komprimierung:	Deaktiviert
Flusssteuerung:	Keine
	OK Abbrechen

	Ingseinstellungen	
gemein Erweitert		
Terminalfenster		
Terminalfenster vor	dem Wählen einblenden	
🔲 Terminalfenster nac	h dem Wählen einblenden	
- Hardwareeinstellungen		
Datenbits:	8	- I
Device		-
Fantac	Keine	
Stoppbits:	1	1
Modulation:	Standard	-
VPN-Verbindung herstellen.	Verbindung mit diesem Computer über eine	S.
VPN-Verbindung herstellen. VPN-Verbindungen zu dem Com Computer einen im Internet beka Wenn Sie VPN-Verbindungen zu der Computer VPN-Pakete sende Sollen VPN-Verbindungen mit die	Verbindung mit diesem Computer über eine puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat. Ilassen, wird der Windows-Firewall so modifiziert, da en und empfangen kann. ssem Computer zugelassen werden?	1 155
VPN-Verbindung herstellen. VPN-Verbindungen zu dem Com, Computer einen im Internet beka Wenn Sie VPN-Verbindungen zu der Computer VPN-Pakete sende Sollen VPN-Verbindungen mit die © VPN-Verbindungen zulass © VPN-Verbindungen zulass	Verbindung mit diesem Computer über eine puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat. ilassen, wird der Windows-Firewall so modifiziert, da en und empfangen kann. esem Computer zugelassen werden? sen zulassen	r 1955
VPN-Verbindung herstellen. VPN-Verbindungen zu dem Com Computer einen im Internet beka Wenn Sie VPN-Verbindungen zu der Computer VPN-Pakete sende Sollen VPN-Verbindungen mit die © VPN-Verbindungen zulass © VPN-Verbindungen nicht	Verbindung mit diesem Computer über eine puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat. Ilassen, wird der Windows-Firewall so modifiziert, da en und empfangen kann. esem Computer zugelassen werden? sen zulassen	1955
VPN-Verbindung herstellen. VPN-Verbindungen zu dem Com Computer einen im Internet beka Wenn Sie VPN-Verbindungen zu der Computer VPN-Pakete sende Sollen VPN-Verbindungen mit die © VPN-Verbindungen zulass © VPN-Verbindungen nicht	Verbindung mit diesem Computer über eine puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat. ilassen, wird der Windows-Firewall so modifiziert, da en und empfangen kann. esem Computer zugelassen werden? sen zulassen (< Zurück Weiter) Ab	i ass brechen
VPN-Verbindung herstellen. VPN-Verbindungen zu dem Com Computer einen im Internet beka Wenn Sie VPN-Verbindungen zu der Computer VPN-Pakete sende Sollen VPN-Verbindungen mit die © VPN-Verbindungen zulass © VPN-Verbindungen nicht	Verbindung mit diesem Computer über eine puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat. ilassen, wird der Windows-Firewall so modifiziert, da en und empfangen kann. sem Computer zugelassen werden? sen zulassen (< Zurück Weiter Ab	t ass brechen
VPN-Verbindung herstellen. VPN-Verbindungen zu dem Com Computer einen im Internet beka Wenn Sie VPN-Verbindungen zu der Computer VPN-Pakete sendu Sollen VPN-Verbindungen mit die © VPN-Verbindungen nicht VPN-Verbindungen nicht ent für neue Verbindungen mutzerberechtigungen	Verbindung mit diesem Computer über eine puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat. Ilassen, wird der Windows-Firewall so modifiziert, da en und empfangen kann. sem Computer zugelassen werden? sen zulassen	brechen
VPN-Verbindung herstellen. VPN-Verbindungen zu dem Com Computer einen im Internet beka Wenn Sie VPN-Verbindungen zu der Computer VPN-Pakete send Sollen VPN-Verbindungen mit die © VPN-Verbindungen nicht VPN-Verbindungen nicht VPN-Verbindungen nicht sollen VPN-Verbindungen nicht Sollen verbindungen nicht Sollen verbindungen nicht Sollen verbindungen nicht sie können die Benutzer angeber herstellen dürfen.	Verbindung mit diesem Computer über eine puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat. ilassen, wird der Windows-Firewall so modifiziert, da en und empfangen kann. sem Computer zugelassen werden? sen zulassen (Zurtück Weiter) Ab	dibrechen
VPN-Verbindung herstellen. VPN-Verbindungen zu dem Com Computer einen in Internet beka Wenn Sie VPN-Verbindungen zu der Computer VPN-Pakete send Sollen VPN-Verbindungen mit die © VPN-Verbindungen nicht VPN-Verbindungen nicht vPN-Verbindungen nicht Sie können die Benutzer angebe herstellen dürfen. Aktivieren Sie das Kontrollkästch diesem Computer herstellen dürfe deaktivierte Benutzerkonten, dar	Verbindung mit diesem Computer über eine puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat. Ilassen, wird der Windows-Firewall so modifiziert, da an und empfangen kann. sem Computer zugelassen werden? sen zulassen (< Zurück Weiter > Ab en, die eine Verbindung mit diesem Computer en neben den Benutzernamen, die eine Verbindun en Bedenken Sie, dass andere Faktoren, wie z. B. Herstellen von Verbindungen beeinflussen könne	brechen ig mit n.
VPN-Verbindung herstellen. VPN-Verbindung herstellen. VPN-Verbindungen zu dem Com Computer einen im Internet beka Wenn Sie VPN-Verbindungen zu dar der Computer VPN-Pakete send Sollen VPN-Verbindungen mit die © VPN-Verbindungen zulass © VPN-Verbindungen nicht VPN-Verbindungen nicht Sie können die Benutzer angebe herstellen dürfen. Aktivieren Sie das Kontrollkästch diesem Computer herstellen dürfe deaktivierte Benutzerkonten, das Benutzer, denen die Verbindung	Verbindung mit diesem Computer über eine puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat. ilassen, wird der Windows-Firewall so modifiziert, da en und empfangen kann. sem Computer zugelassen werden? sen zulassen (Zurück Weiter> Ab en, die eine Verbindung mit diesem Computer en neben den Benutzernamen, die eine Verbindun an Bedenken Sie, dass andere Faktoren, wie z. B. s Herstellen von Verbindungen beeinflussen könne gestattet ist:	brechen ig mit n.
VPN-Verbindung herstellen. VPN-Verbindung herstellen. VPN-Verbindungen zu dem Com Computer einen im Internet beka Wenn Sie VPN-Verbindungen zu dar der Computer VPN-Pakete send Sollen VPN-Verbindungen mit die © VPN-Verbindungen nicht VPN-Verbindungen nicht VPN-Verbindungen nicht VPN-Verbindungen nicht Sie können die Benutzer angebe herstellen dürfen. Aktivieren Sie das Kontrollkästch deaktivierte Benutzerkonten, där Benutzer, denen die Verbindung Sie können Lie Benutzer angebe herstellen dürfen. Aktivieren Sie das Kontrollkästch deaktivierte Benutzerkonten, där Benutzer, denen die Verbindung Sie Administrator Gast Hilfeassistent (Hilfeassisten Sie Prodana (Prodana) StePOPT 388945-010	Verbindung mit diesem Computer über eine puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat. ilassen, wird der Windows-Firewall so modifiziert, da en und empfangen kann. ssem Computer zugelassen werden? sen zulassen (Zurück Weiter> Ab en, die eine Verbindung mit diesem Computer en neben den Benutzernamen, die eine Verbindun en Bedenken Sie, dass andere Faktoren, wie z. B. s Herstellen von Verbindungen beeinflussen könne gestattet ist: chine Account) entenkonto für den Remotedesktop) 2N=Microsoft Corporation,L=Redmond S=Washinal	sss g mit n.
VPN-Verbindung herstellen. VPN-Verbindung herstellen. VPN-Verbindungen zu dem Com Computer einen in Internet beka Wenn Sie VPN-Verbindungen zu dem Sollen VPN-Verbindungen mit die VPN-Verbindungen nicht VPN-Verbindungen nicht VPN-Verbindungen nicht Sie können die Benutzer angebe herstellen dürfen. Aktivieren Sie das Kontrollkästch diesem Computer herstellen dürfe deaktivierte Benutzerkonten, das Benutzer, denen die Verbindung Marken (LSPNET (ASP.NET Marken) Gast Marken (Hilfeassistent (Hilfeassist Marken) SUPPORT_388945a0 (C	Verbindung mit diesem Computer über eine puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat. Ilassen, wird der Windows-Firewall so modifiziert, da en und empfangen kann. sem Computer zugelassen werden? sen zulassen Zurück Weiter > Ab en, die eine Verbindung mit diesem Computer Ab en, die eine Verbindung mit diesem Computer Ab en, die eine Verbindung mit diesem Computer Ab en neben den Benutzernamen, die eine Verbindun an Bederken Sie, dass andere Faktoren, wie 2. B. s Herstellen von Verbindungen beeinflussen könne gestattet ist: chine Account) entenkonto für den Remotedesktop) CN=Microsoft Corporation,L=Redmond, S=Washingt	brechen g mit n.

9. You can allow or to refuse the VPN connections

10. Select the users that are allowed to connect to this PC

<Zurück Weiter > Abbrechen

11. Select the Internet protocol (TCP/IP) and press the properties button.

Assistent für neue Verbindungen			
Netzwerksoftware Die Netzwerksoftware ermögli Verbindungen von anderen C	icht dem Compute omputern.	r das Annehmen [.]	von 🔊
Aktivieren Sie das Kontrollkäs eingehende Verbindungen ak	tchen neben jede tiviert werden soll	m Typ von Netzw en.	erksoftware, für den
Netzwerksoftware:			
🗹 🏹 Internetprotokoll (TCP	/IP)		
🗹 🜉 Datei- und Druckerfre	igabe für Microsol	it-Netzwerke	
🗹 📇 Virtual Machine Netwo	ork Services		•
	Installieren	Deinstallieren	Eigenschaften
Beschreibung:			
TCP/IP, das Standardprotoko verschiedene, miteinander ver	ll für WAN-Netzw rbundene Netzwe	erke, das den Dal rke ermöglicht.	tenaustausch über
		<zurück< td=""><td>Veiter > Abbrechen</td></zurück<>	Veiter > Abbrechen

12. Set how and wich IP addresses are to be assigned to the registering computer.

TCP/IP-Eigenschaften f	ür eingehende Verbindungen	<u>? ×</u>		
Netzwerkzugriff				
🔽 Anrufern den Zugr	iff auf das lokale Netzwerk gestatten			
□ □ TCP/IP-Adresszuweisur	a			
C TCP/IP-Adressen	automatisch durch DHCP zuweisen			
TCP/IP-Adressen	angeben			
Von:	192 . 168 . 1 . 216			
Bis:	192 . 168 . 1 . 217			
Gesamt: 2				
Computer Angabe der eigenen IP-Adresse gestatten				
	ОК АЫ	prechen		

9	S Netzwerkverbindungen								
ſ	Datei Bearbeiten Ansicht Favoriten Extras Erweitert ?						<i>R</i>		
(🔇 Zurück 👻 🕥 - 🏂 🔎 Suchen 🎼 Ordner 🔛 -								
A	dresse 🔇 Netzwerkverbindungen								-
			Name	Тур	Status	Gerätename	Rufnummer oder Hostadresse	Besitzer	
	Netzwerkaufgaben	*	Eingehend						
	🛐 Neue Verbindung erstellen		🍉 Eingehende Verbindungen	Eingehend	Keine Clients verbunden			System	
	Windows-Firewalleinstellungen ändern		LAN oder Hochgeschwindigkeitsinternel	:					
	👩 Verbindung löschen		B. LANI Markinski sa	1.001 a day Markana akuvin	Under due a bound shalls	President 440: 10/100 Jahamata		Custom	
	Einstellungen dieser Verbindung ändern		25 LAN-Verbindung	LAN OUER HOCHGESCHWILL.	verbindung hergestellt	broaucom 440x 10/100 integrate		System	
	Andere Orte	×							
	Detaile	×							
	Details	•							
_									

- On the WindowCE-devices side:
 - 13. Select

Start \rightarrow Settings \rightarrow Network and Dial-Up Connections \rightarrow Make New Connections Select the connection type Dial-up Connection.



14. Select the modem Hayes Compatible on COM1.

CAUTION: it is only COM1 supports.

Press the button Configure. The modem will be configured.

15. The modem settings must be consistent with those of the modem (in the special flow control and baud rate). This can be checked via AT-commands (see modem documentation). After you have left this dialog with OK press the button TCP/IP Settings

Modem			×
<u></u>	fred2PC_mode	n	
<u>S</u> elect a	a modem:		
Hayes	Compatible on C	OM1:	
		[<u>C</u> onfigure
<u>T</u> CP/I	(P Settings	S <u>e</u> curit	ty Settings
		< <u>B</u> ack	<u>N</u> ext >

Device Properties			ok ×
Port Settings Call Options			
☐ <u>M</u> anual Dial (user supplies dial strings)	Connection Pre	ferences — 19200	┛
Terminals Use terminal window before dialing Use terminal window after	Earity Stop Bits	None	
L dialing		None	
Device Properties			OK ×
Port Settings Call Options			
Call Setup	d within 120 <u>s</u> e	conds	

 $E_{\underline{X}}$ tra Settings (special modern commands may be inserted into the dial string)

seconds

Wait for credit card tone

16. Insert here the TCP/IP settings.

The protocol that the server can be used either PPP (POINT-TO- Point-Protocol), or SLIP (Serial Line Internet Protocol). The software compression can lead to a higher data transfer rate than the hardware compression done. It must also, if possible, the corresponding setting in the modem will be set (via AT-commands, see modem documentation).

Normally improves use IP header compression the capacity. In some cases, it will not be handled correctly by the server.

Finish the dialog with OK.

17. To set the security settings the Security Settings button has to be pressed It is necessary that these match with the server settings.

Windows CE© 5.0 or 6.0 supports EAP does not.

Save your settings with OK.

TCP/IP Securitys	
General Name Servers	
fred2PC_modem	
Use server-assigned IP address	
Use <u>so</u> ftware compression Use <u>IP</u> header compression	
TCP/IP Settings	OK ×
General Name Servers	
fred2PC_modem	
✓ Use server-assigned addresses	
DNS:	
Alt D <u>N</u> S:	
AR WINS:	
Security Settings Advanced Security Settings	OK ×
Use Data encryption	
Logon security: Use Extensible Authentication Protocol (EAP)	
	•
Propertie	?5
Ginancrypted password (PAP) Ghallenge Handshake Authentication Protocol (CHAP) Microsoft CHAP (MS-CHAP) Microsoft CHAP Version 2 (MS-CHAP v2)	
Preview user name and password	

18. Enter the phone number in order to establish the connection.

Phone Number	×
fred2PC_modem	
<u>C</u> ountry/region code: Area code:	
Phone number:	94
Eorce long distance	
	K <u>B</u> ack Finish

19. Save the Registry.

Start \rightarrow Programs \rightarrow Utilities \rightarrow Save Registry if you don't save the registry, after a restart of the device the connection entry will no longer exist.

<u>File E</u> dit <u>V</u> iew Ad	va <u>n</u> ced 🗙 😭	<u><u> </u></u>		? ×
Name	Туре	Status	Device Name	
🕸 Make New Connection				
fred2PC_modem	Dial-up	Disconnected	Hayes Compatible on COM1:	
🦫 com1_115k	Direct	Disconnected	FFUART on COM1:	
🕹 DM9CE1	LAN	Enabled	DM9CE1	

20. Double-click the modem connection, enter the user and the password and press the Connect button.

D	ial-Up Connect	ion			×
	🛃 fred2	PC_modem			
	<u>U</u> ser Name:	Gast	Phone:	0 94	
	Password:		Home		
	D <u>o</u> main:			Dial Properties	
		Save password	Conr	nect Can	cel





On the PC-side the connection appears.

9	Netzwerkverbindungen						_	
ſ	Datei Bearbeiten Ansicht Favoriten	Extras Erweitert ?						
(子 Zurück 👻 🕥 🗸 🏂 🔎 Suche	en 🎼 Ordner 🛛 🎹 🗸						
A	dresse 🛸 Netzwerkverbindungen							•
		Name	Тур	Status	Gerätename	Rufnummer oder Hostadresse	Besitzer	
	Netzwerkaufgaben 🕆	Eingehend						
	Neue Verbindung erstellen	Se Eingehende Verbindungen	Eingehend	1 Client verbunden			System	
	ändern	Gast	Lingenend	verbindung hergestellt	MICROLINK 56K I #2		System	
	🥂 Verbindung trennen	LAN oder Hochgeschwindigkeitsinte	ernet					
	😵 Status der Verbindung anzeigen	🕹 LAN-Verbindung	LAN oder Hochgeschwin	Verbindung hergestellt	Broadcom 440x 10/100 Integrate		System	
	Andere Orte ×	:						
	Details ¥	:						

2.2.3 VPN-connection

2.2.3.1 Windows CE[©] -device as RAS-Server, PC as RAS-Client (Windows XP Professional), without Authentication

On the Windows CE© -devices-side:

1. With the **Panel Configuration Utility** can the RAS-server be configured.

Panel Configuration Utility	ок 🗙
General Autostart Applications Users	FTP HTTP RAS
Enable server IP header compr.	🔽 Data compr. 📃 Use Authentication
Users:	Require encryption Authentication protocols:
	PAP CHAP MS-CHAP MS-CHAP V2
IP Addresses Get Addresses from: AutoIp Pool	1
Static IP Addr Start: 192 . 168 .	254 . 1 Count: 254
Lines:	<u>۳</u> 🗙
RAS VPN Line 0	vpn 0 s

On the PC-side:

2. Select

Start -> Settings -> Control Panel -> Network Connections -> create a new connection.

Select the network connection type with the network at the workplace, in order to manufacture from a VPN connection to the Windows CE© -device to produce. In "network connection type" select "Connect to the network at my workplace" to restore a VPN-connection to the Windows CE© device.



3.	Select the VPN connection to make a	Assistent für neue Verbindungen
	network connection with a VPN connection.	Netzwerkverbindung Wie soll die Netzwerkverbindung am Arbeitsplatz hergestellt werden?
		Folgende Verbindung erstellen:
		C DFO-Verbindung
		Stellt eine Verbindung über ein Modem und eine reguläre Telefonleitung oder über eine ISDN-Telefonleitung her.
		© VPN-Verbindung
		Stellt eine Netzwerk verbindung mit einer VPN-Verbindung (Virtual Private Network) über eine Internetverbindung her.
		<zurück weiter=""> Abbrechen</zurück>
4.	Enter the connection name	Assistent für neue Verbindungen
		Verbindungsname Geben einen Namen für die Verbindung mit Ihrem Arbeitsplatz an.
		Geben einen Namen für die Verbindung im folgenden Feld ein.
		Firmenname
		fredP4 ^x VPN_Client
		Sie können zum Beispiel den Namen Ihres Arbeitsplatzes oder den Namen des Servers, mit dem eine Verbindung hergestellt werden soll, eingeben.
		<zurück weiter=""> Abbrechen</zurück>
5.	Select the IP address of the Windows CE©	Assistent für neue Verbindungen
	-device, to which a connection is to be established	VPN-Serverauswahl Wie lautet der Name bzw. die Adresse des VPN-Servers?
		Geben Sie den Hostnamen oder die IP-Adresse des Computers ein, zu dem eine Verbindung hergestellt werden soll.
		Hostname oder IP-Adresse (z.B. microsoft.com oder 157.54.0.1):
		132.100.1.210

Abbrechen

< Zurück Weiter >

6. This connection can make available to all users or only use for themselves

Assistent für neue Verb	lindungen		
Verfügbarkeit der V Sie können diese ^v sich selbst verwen	' erbindung √erbindung allen Benutz den.	ern zur Verfügung stellen ode	er nur für
Eine Verbindung, d Benutzerprofil gesp	lie nur für die eigene Ver beichert und steht nur zu	wendung erstellt wird, wird in r Verfügung, wenn Sie angen	Ihrem neldet sind.
Verbindung erstelle	en für:		
 Alle Benutze 	er		
🔿 Eigene Verv	vendung		
		<zurück :<="" th="" weiter=""><th>Abbrechen</th></zurück>	Abbrechen
Verbindung mit '	"fredP4XX_VP	N_Client" herstell	en <mark>?</mark> X
C		2	
Benutzername:	prodana		
Kennwort:			
 Benutzernan Nur für e Alle Bent 	n <mark>en und Kennwo</mark> i igene Verwendur utzer dieses Comp	rt speichern für: ng puters	
Verbinden	Abbrechen	Eigenschaften	Hilfe

7. Click on the **Properties** button in order to configure the connection.

8. On the **Security** tab you can select the licensable security option expands from, in order to put the advanced security settings.

fredP4XX_VPN_Client Eigenschaften	<u>? ×</u>
Allgemein Optionen Sicherheit Netzwerk Erweitert	
Sicherheitsoptionen C Typisch (empfohlene Einstellungen)	
Identität folgendermaßen verifizieren:	
▼	
Automatisch eigenen Windows-Anmeldenamen und Kennwort (und Domäne, falls vorhanden) verwenden	
Datenverschlüsselung ist erforderlich (Verbindung wird bei unverschlüsselten Daten getrennt)	
Erweitert (benutzerdefinierte Einstellungen)	
Diese Einstellungen erfordern Kenntnisse über Sicherheitsprotokolle.	
IPSec-Einstellunger	
OK Abbre	hen

9. Select the data encryption. This must be match with the Windows CE© -device.

Windows CE 5.0 or 6.0 doesn't support EAP.

Dater	iverschlusselung.
Uptic	onal (Verbindung auch ohne Verschlusselung)
_ Anr	neldesicherheit
0	Extensible-Authentication-Protokoll (EAP) verwenden
	Ŧ
	Eigenschaften
۲	Folgende Protokolle zulassen
	Unverschlüsseltes Kennwort (PAP)
	Shiva-Password-Authentication-Protokoll (SPAP)
	Challenge-Authentication-Protokoll (CHAP)
	Microsoft CHAP (MS-CHAP)
	Alte MS-CHAP-Versionen für Windows 95-Server zulas:
	Microsoft CHAP Version 2 (MS-CHAP v2)
	Für MS-CHAP-basierte Protokolle automatisch eigenen Windows-Anmeldenamen und -Kennwort (und Domäne, fal vorhanden) verwenden
	OK Abbreche

Verbinden mit "fredP4XX_VPN_Client"	Verbinden mit "fredP4XX_VPN_Client"
Benutzername und Kennwort werden verifiziert	Authentifiziert.
Abbrechen	Abbrechen

2.2.3.2 Windows CE[©] -device as RAS-Client, PC as RAS-Server (Windows XP Professional)

On PC-side:

Select
 Start -> Settings -> Control Panel ->
 Network Connections -> create a new
 connection.
 Stell eine Verbindung sit
 Stell eine Verbindung sit
 Stell eine Verbindung sit

Select "network connection type" "setting up an advanced connection" so a Windows CE© -device can access it.



< Zurück

Weiter >

Abbrechen

 Select the "network type": "incoming connections to allow" A Windows CE © - device can thus establish a connection with this PC over the Internet / Intranet

• Ignore the window and press Next.

Select the option "Allow VPN connections."



Netzwerksoftware:

Beschreibung:

🗹 🏹 Internetprotokoll (TCP/IP)

🛛 🚑 Virtual Machine Network Services

🗹 📇 Datei- und Druckerfreigabe für Microsoft-Netzwerke

Installieren..

TCP/IP, das Standardprotokoll für WAN-Netzwerke, das den Datenaustausch über verschiedene, miteinander verbundene Netzwerke ermöglicht.

< Zurück

 Select the user who may connect to this PC

 Highlight the entry Internet Protocol (TCP/IP) and press the Properties button.

•

Abbrechen

Deinstallieren Eigenschaften

Weiter >

• Ensure a how and what are the IPaddresses will be assigned to the PC dialing computers.

TCP/IP-Adresszu	veisuna
C TCP/IP-Adr	essen automatisch durch DHCP zuweisen
• TCP/IP-Adr	essen angeben
Von:	192 . 168 . 1 . 216
Bis:	192 . 168 . 1 . 218
Gesamt	3



On the Windows CE© -devices-side:

Select → Settings → Control Panel →

- Network and Dial-Up Connections
- Network and Dial-Up Connection
- Make a new connection.
- Select the connection type Virtual Private Network (PPTP).

Make New Connection	×
<u>Type a name for the connection:</u>	
fred2PC_VPN	
Select the connection type:	
O Dial-Up Connection	
O Direct Connection	
🖲 Virtual Private Network (PPTP)	
🔿 Vi <u>r</u> tual Private Network (L2TP)	
O PPP over Ethernet (PPPoE)	
< Back Next >	

• Either enters the hostname or the IP address of the PC, to which a connection will be established.



• Insert here the TCP/IP settings.

Can the software compression to a higher data transfer rate. Normally improves use IP header compression the capacity. In some cases, it will not be handled correctly by the server.

Finish the dialog with OK.

TCP/IP :	Settings	ОK	×
General	Name Servers		
2	fred2PC_VPN		
	server-assigned IP address		
Use Vuse Vuse	Slip software compression IP header compression		
		_	
TCP/IP 9	Settings	ОК	×
TCP/IP 9 General	Settings Name Servers	ОК	×
TCP/IP 9 General	Settings Name Servers fred2PC_VPN	OK	×
General	Settings Name Servers fred2PC_VPN server-assigned addresses	ОК	×
TCP/IP S General	Settings Name Servers fred2PC_VPN server-assigned addresses	ОК	×
TCP/IP S General	Settings Name Servers fred2PC_VPN server-assigned addresses S: NS:	ОК	×

Alt WINS:

 Press the buttonSecurity Settings ... to set this .They have to be be agreed with the server settings. Windows CE© 5.0 or 6.0 does not support EAP. Save your settings and click OK.



• Save the Registry.

Start → Programs → Utilities → Save Registry

if you don 't save the registry, after a restart of the device the connection entry does no longer exist.

<u>File E</u> dit <u>V</u> iew Ad	va <u>n</u> ced 🗙 😭 🖭	· III		? ×
Name	Туре	Status	Device Name	
🕸 Make New Connection				
fred2PC_VPN	Virtual Private Network	Disconnected	RAS VPN Line 0	
🥪 com1_115k	Direct	Disconnected	FFUART on COM1:	
🕹 DM9CE1	LAN	Enabled	DM9CE1	

 Double-click on the VPN connection, enter the user and password and press the OK button.



 Status of the set VPN connection is displayed

fred2PC_VPN Status		×
2	Connected	
	Hide this message:	Hide
		Disconnect

On the PC-side the connection appears:

🯂 Netzwerkverbindungen							_ 🗆 🗙
Datei Bearbeiten Ansicht Favo	oriten Ext	ras Erweitert ?					A
🔆 Zurück 👻 🕤 - 🏂 🔎	Suchen	💫 Ordner 🛛 🎹 🗸					
Adresse 🔕 Netzwerkverbindungen							•
		Name	Тур	Status	Gerätename	Rufnummer oder Hostadresse	Besitzer
Netzwerkaufgaben	≽	Eingehend					
Andere Orte	*	Seingehende Verbindungen	Eingehend	1 Client verbunden			System
		🗢 Gast	Eingehend	Verbindung hergestellt	WAN-Miniport (PPTP)		System
Details	*	LAN oder Hochgeschwindigkeitsinterne	t				
		🕹 LAN-Verbindung	LAN oder Hochgeschwin	Verbindung hergestellt	Broadcom 440× 10/100 Integrate		System

After you have set up the connection in the

taskbar, the icon will be displayed. When you double-click, the status of the connection will be indicated.

	Status von Gast		? ×
A	llgemein Details		
	Eigenschaft Servertyp Übertragungen Authentifizierung Verschlüsselung Komprimierung Server-IP-Adresse	Wert PPP TCP/IP MS CHAP V2 MPPE 128 MPPC 192.168.1.216 192.168.1.217	
			Schließen

2.2.4 Direct-connection on the serial interface (Null-Modem-Cabel)

2.2.4.1 Windows CE[©] -Device as RAS-Server, PC as RAS-Client (Windows XP

Professional), with authentication

On the Windows CE© -device side:

1. The RAS-server will be configured on the Panel Configuration Utility

 Double-click the entry FFUART on COM1: in order to configure the RAS-head. The server settings should match with the client settings.

anel Configuration Utility		ОК
General Autostart Applications Users	FTP HTTP RAS	
Enable server IP header compr.	🔽 Data compr. 🛛 [Use Authentication
Users:	Require encryption	ר
	Authentication protoco	ols:
₩ U2		HAP
	мы-снар м	IS-CHAP VZ
IP Addresses	1	
Get Addresses from: Autolp Pool		
Static IP Addr Start: [192], [168],		unt: [254
Lines:		<u>۲</u> ۲
FFUART on COM1:	direct	0 s
evice Properties		ок
Port Settings Call Options		ок
evice Properties Port Settings Call Options	Connection Pre	OK
evice Properties Port Settings Call Options Manual Dial (user supplies dial strings)	Connection Pre	ok eferences
evice Properties Port Settings Call Options Manual Dial (user supplies dial strings)	Connection Pre Baud Rate Data Bits	ок eferences 19200 с 8 с
evice Properties Port Settings Call Options Manual Dial (user supplies dial strings) Terminals Use terminal window	Connection Pre Baud Rate Data Bits Barity	ok ferences 19200 8 None
evice Properties Port Settings Call Options Manual Dial (user supplies dial strings) Terminals Use terminal window before dialing	Connection Pre Baud Rate Data Bits Barity Stop Bits	OK Pferences 19200 8 None
	Connection Pre Baud Rate Data Bits Parity Stop Bits Flow Control	OK Interferences Interferences Interferences Interferences Interferences Interferences Interferences Interferences
evice Properties Port Settings Call Options Manual Dial (user supplies dial strings) Terminals Use terminal window before dialing Use terminal window after dialing	Connection Pre Baud Rate Data Bits Barity Stop Bits Elow Control	OK 19200 8 None 1 None
evice Properties Port Settings Call Options Manual Dial (user supplies dial strings) Terminals Use terminal window before dialing Use terminal window after dialing evice Properties	Connection Pre Baud Rate Data Bits Barity Stop Bits Bow Control	OK 19200 8 None 1 None
evice Properties Port Settings Call Options Manual Dial (user supplies dial strings) Terminals Use terminal window before dialing Use terminal window after dialing evice Properties Port Settinge Call Options	Connection Pre Baud Rate Data Bits Barity Stop Bits Elow Control	OK 19200 8 None 1 None
evice Properties Port Settings Call Options Manual Dial (user supplies dial strings) Terminals Use terminal window bgfore dialing Use terminal window after dialing evice Properties Port Settings Call Options	Connection Pre Baud Rate Data Bits Barity Stop Bits Elow Control	OK 19200 8 None 1 None
evice Properties Port Settings Call Options Manual Dial (user supplies dial strings) Terminals Use terminal window before dialing Use terminal window after dialing evice Properties Port Settings Call Options Call Setup	Connection Pre Baud Rate Data Bits Barity Stop Bits Elow Control	OK 19200 8 None None OK
evice Properties Port Settings Call Options Manual Dial (user supplies dial strings) Terminals Use terminal window before dialing Use terminal window after dialing evice Properties Call Setup Call Setup Call Setup	Connection Pre Baud Rate Data Bits Barity Stop Bits Elow Control	OK 19200 8 None None None OK
evice Properties Port Settings Call Options Manual Dial (user supplies dial strings) Terminals Use terminal window before dialing Use terminal window after dialing evice Properties Call Setup Call Setup Call connectee Wait for dial tone before dialing	Connection Pre Baud Rate Data Bits Barity Stop Bits Elow Control	OK 19200 8 None 1 None OK

3. Save the registry.

Start → Programs → Utilities → Save Registry

If you don 't save the registry, after a restart of the device the connection entry does no longer exist.

4. Select

PC Connection → Settings → Control Panel →

COM1 can't used at the same time from the RAS-Server and the ActiveSync

PC Connectio	n Properties	OK ×
PC Connection	<u>ا</u>	
. 	These settings control the connection betwee CE device and desktop computer. Warning: A settings may result in an inability to connect w computer.	en your Windows djusting these ith your desktop
Allow c	onnection with desktop computer when devic	e is attached
Connect usi	ng: 'com1_115k'	<u>C</u> hange

On the PC-side:

- Select
 Start -> Settings -> Control Panel ->
 Network Connections -> create a new
 connection.
 Select the network connection type setting
 up an advanced connection from a
 connection with a Windows CE© -device
 via the serial interface.
- 6. Select the network connection directly with other computer manufacture from the connection over the serial connection.
- Eine erweiterte Verbindung einrichten Stellt eine direkte Verbindung mit einem anderen Computer über einen seriellen, parallelen oder Infrarotanschluss her oder richtet diesen Computer so ein, dass andere Computer darauf zugreifen können. < Zurück Weiter > Abbrechen Assistent für neue Verbindunger Erweiterte Verbindungsoptionen Welchen Verbindungstyp möchten Sie einrichten? Wählen Sie einen Netzwerktyp. C Eingehende Verbindungen zulassen Ermöglicht anderen Computern, eine Verbindung mit diesem Computer über das Internet, eine Telefonleitung oder ein direktes Kabel herzustellen. • Verbindung direkt mit anderem Computer herstellen Stellt eine Verbindung mit einem anderem Computer über seriellen, parallelen oder Infrarotanschluss her Abbrechen < Zurück Weiter >

Stellt eine Verbindung mit dem Internet her, so dass Sie den Browser verwenden und E-Mail lesen können.

Stellt eine Verbindung mit einem Firmennetzwerk (über eine DFÜ- oder VPN-Verbindung) her, so dass Sie von zu Hause oder unterwegs arbeiten können.

O Verbindung mit dem Netzwerk am Arbeitsplatz herstellen

Assistent für neue Verbindun Netzwerkverbindungstyp

Wie möchten Sie vorgehen?

O Verbindung mit dem Internet herstellen

7. Select the PC as a guest





8. Enter the connection name.



 Select the COM port from the Windows CE© - device is connected.

10. You can connect to all users or only for themselves.



11. Click on the Properties button in order to configure the connection.

Verbindung mit	"192.168.1.21	8" herstellen	<u>? ×</u>
C		2	M
Benutzername:	u1		
Kennwort:	••		
🔲 Benutzerna	men und Kennwo	ort speichern für:	
💿 Nur für	eigene Verwendu	ng	
C Alle Ber	nutzer dieses Corr	puters	
Verbinden	Abbrechen	Eigenschaften	Hilfe

12. Click on the **Configure button** to enter the selected COM-Port to configure.

😴 192.168.1.218 Eigenschaften	<u>? ×</u>
Allgemein Optionen Sicherheit Netzwerk Erweitert	1
Gerät auswählen:	
Kommunikationskabel zwischen zwei Computern (COM	1) 💌
Konfi	gurieren
Symbol bei Verbindung im Infobereich der Taskleiste	anzeigen
OK	Abbrechen

13. The PC settings and the Windows CE© - device have to match.

Modemkonfiguration		? ×
Kommunikationskabel	zwischen zwei Computern (COM1)	
Max. Übertragungsrate (Bit/s):	115200	-
Modemprotokoll		7
Hardwarefunktionen Hardwareflusssteuerung Modemfehlerkontrolle akt	aktivieren ivieren tivieren	
 Terminalfenster einblenden Modemlautsprecher verwend 	den OK Abbred	chen

14. Select the connection options.

192.168.1.218 Eigenschaften 🤶	×
Allgemein Optionen Sicherheit Netzwerk Erweitert	
Wähloptionen ✓ Status während des Wählens anzeigen ✓ Name, Kennwort, Zertifikat usw. abfragen ✓ Windows-Anmeldedomäne einbeziehen	
Wahlwiederholungsoptionen Anzahl der Wahlwiederholungen:	
Zeit zwischen Wahlwiederholungen: 1 Minute	
Leerlaufzeit, nach der aufgelegt wird: Niemals	
🔲 Wählvorgang wiederholen, falls Verbindung getrennt wurde	
OK Abbrechen	

15. Advanced search setting

security advanced

Allgemein Optioner	h Sicherheit	Netzwerk	Erweitert
Sicherheitsoption	en		
🛛 🔿 Typisch (emp	fohlene Einste	llungen)	
Identität folge	endermaßen ve	rifizieren:	
			T
🗖 Automatis	sch eigenen W	indows-Anme	ldenamen und
Kennworl	: (und Domäne	, falls vorhand	len) verwenden
🗖 Datenver	schlüsselung is	st erforderlich	(Verbindung
wird ber u	inverschlusselt	en Daten getr	enntj
 Erweitert (ber Disse Finstel 	hutzerderinierte Luczera erfender	Einstellunger	Ŋ
über Sicherh	eitsprotokolle.	n Kennmisse	Einstellungen

16. You can select the data encryption.
This must be in according to the Windows CE© - device.
Windows CE© supports EAP does not.

Erweiterte Sicherheitseinstellungen
Datenverschlüsselung:
Optional (Verbindung auch ohne Verschlüsselung)
C Extensible-Authentication-Protokoll (EAP) verwenden
Eigenschaften
Folgende Protokolle zulassen
Unverschlüsseltes Kennwort (PAP)
Shiva-Password-Authentication-Protokoll (SPAP)
Challenge-Authentication-Protokoll (CHAP)
Microsoft CHAP (MS-CHAP)
☑ Alte MS-CHAP-Versionen für Windows 95-Server zulassen
Microsoft CHAP, Version 2 (MS-CHAP v2)
Für MS-CHAP-basierte Protokolle automatisch eigenen Windows-Anmeldenamen und -Kennwort (und Domäne, falls vorhanden) verwenden
OK Abbrechen

17. The network properties.

🭠 192.168.1.218 Eigenschaft	en		? X
Allgemein Optionen Sicherhe	it Netzwerk	Erweitert	
Typ des anzurufenden Einwähl	servers:		
PPP: Windows 95/98/NT4/20	000, Internet		•
		Einstellunge	'n
Diese Verbindung verwendet fo	olgende Elemei	nte:	
 Netzwerkmonitortreiber Internetprotokoll (TCP/ Datei- und Druckerfreig Virtual Machine Netwoi Client für Microsoft-Net 	IP) jabe für Micros rk Services zwerke	oft-Netzwerke	▲ ●
Installieren Deir	nstallieren	Eigenschafte	en
Beschreibung Netmon-Paketaufnahmetreib Pakete vom lokalen Netzwe	ber, der es Netr rk zu empfange	non ermöglicht, en.	
	0	K Abbre	echen
PPP-Einstellungen			? ×
☑ I CR.Frweiten maen aktivit	aran		
Softwarekomprimierung al	cicii klivieren		
Mehrfachverbindungen fü	ir Finzelverbir	dungen ausha	ndeln
			ndein
	OK	Abbrech	ien 📗

18. On the **advanced** tab, click the **setting** button, to be sure that the Windows Firewall allows the connection.

🝠 192.168.1.218 Eigenschaften 🔗 🔀
Allgemein Optionen Sicherheit Netzwerk Erweitert
Windows-Firewall Zum Schutz dieses Computer und des Netzwerks beitragen, indem das Zugreifen auf diesen Computer vom Internet eingeschränkt oder verhindert wird.
Gemeinsame Nutzung der Internetverbindung
Anderen Benutzern im Netzwerk gestatten, die Internetverbindung dieses Computers zu verwenden
Eine DFÜ-Verbindung herstellen, wenn ein Computer im Netzwerk, auf das Internet zugreift
Anderen Benutzern im Netzwerk gestetten, die gemeinsame Nutzung der Internetverbindung zu steuern oder zu deaktivieren
Informationen über <u>Gemeinsame Nutzung</u> der Internetverbindung
OK Abbrechen

19. In this case you disable the Windows Firewall.



20. Now you can connect

Yerbinden mit "192.168.1.218"	Verbinden mit "PC2fred_direct"	
Wählvorgang	Benutzername und Kennwort werden verifiziert	
Abbrechen	Abbrechen	

21. After the connection is established you will

have the icon is displayed in the taskbar. With double-click the connection status will be displayed.

🝠 Status von PC2fred_dir	ect ?X
Allgemein Details	1
Eigenschaft Gerätename Gerätetyp Servertyp Übertragungen Authentifizierung Komprimierung PPP-Multilinkframing Server-IP-Adresse Client-IP-Adresse	Wert Kommunikationskabel zwischen zw modem PPP TCP/IP MS CHAP V2 MPPC Inaktiv 192.168.163.187 192.168.15.96
	Schließen



2.2.4.2 Windows CE[©] - device as RAS-Client, PC as RAS-Server (Windows XP Professional), without authentication

Assistent für neue Verbindungen

On the PC-side:

- Select Start -> Settings -> Control Panel -> Network Connections -> create a new connection
- Select the network connection type: an advanced connection A Windows CE© - unit can now be accessed.
- Select the network type incoming connections to allow
 A Windows CE © - device can now connect via the serial interface

Netzwerk verbindungstyp Wie möchten Sie vorgehen?	
C Verbindung mit dem Internet Stellt eine Verbindung mit dem Inte und E-Mail lesen können.	nerstellen net her, so dass Sie den Browser verwenden
Verbindung mit dem Netzwerl Stellt eine Verbindung mit einem Fit VPN-Verbindung) her, so dass Sie	: am Arbeitsplatz herstellen mennetzwerk (über eine DFÜ-oder von zu Hause oder unterwegs arbeiten können.
Eine erweiterte Verbindung e Stellt eine direkte Verbindung mit e parallelen oder Infrarotanschluss h andere Computer darauf zugreifen	nrichten nem anderen Computer über einen seriellen, r oder richtet diesen Computer so ein, dass cönnen.
	<zuriück weiter=""> Abbrechen</zuriück>
istent für neue Verbindungen	
<mark>stent für neue Verbindungen</mark> E rweiterte Verbindungsoptionen Welchen Verbindungstyp möchten Sie	einrichten?
itent für neue Verbindungen inweiterte Verbindungsoptionen Welchen Verbindungstyp möchten Sie Wählen Sie einen Netzwerktyp. © Eingehende Verbindungen zu Ermödicht anderen Computern ein	einrichten?
stent für neue Verbindungen Erweiterte Verbindungsoptionen Welchen Verbindungstyp möchten Sie Wählen Sie einen Netzwerktyp. © Eingehende Verbindungen zu Ermöglicht anderen Computern, ein Internet, eine Telefonleitung oder e	einrichten? asseni a Verbindung mit diesem Computer über das n direktes Kabel herzustellen.
istent für neue Verbindungen Erweiterte Verbindungsoptionen Welchen Verbindungstyp möchten Sie Wählen Sie einen Netzwerktyp. Eingehende Verbindungen zu Ermöglicht anderen Computern, ein Internet, eine Telefonleitung oder e Stellt eine Verbindung mit einem an Infrarotanschluss her.	einrichten? assen: Verbindung mit diesem Computer über das n direktes Kabel herzustellen. h Computer herstellen derem Computer über seriellen, parallelen oder
 stent für neue Verbindungen Erweiterte Verbindungsoptionen Welchen Verbindungstyp möchten Sie Wählen Sie einen Netzwerktyp. Eingehende Verbindungen zu Ermöglicht anderen Computern, ein Internet, eine Telefonleitung oder e Verbindung girekt mit anderen Stellt eine Verbindung mit einem an Infrarotanschluss her. 	einrichten? asseri Verbindung mit diesem Computer über das n direktes Kabel herzustellen. h Computer herstellen derem Computer über seriellen, parallelen oder
istent für neue Verbindungen Erweiterte Verbindungsoptionen Welchen Verbindungstyp möchten Sie Wählen Sie einen Netzwerktyp. Emöglicht anderen Computern, ein Internet, eine Telefonleitung oder e Verbindung girekt mit anderen Stellt eine Verbindung mit einem an Infrarotanschluss her.	einrichten? asseri Verbindung mit diesem Computer über das n direktes Kabel herzustellen. n Computer herstellen derem Computer über seriellen, parallelen oder
stent für neue Verbindungen Erweiterte Verbindungsoptionen Welchen Verbindungstyp möchten Sie Wählen Sie einen Netzwerktyp. © Eingehende Verbindungen zu Ermöglicht anderen Computern, ein Internet, eine Telefonleitung oder e © Verbindung direkt mit anderen Stellt eine Verbindung mit einem an Infrarotanschluss her.	einrichten? asseri a Verbindung mit diesem Computer über das n direktes Kabel herzustellen. n Computer herstellen Jerem Computer über seriellen, parallelen oder

- Select the COM-Port.
 Press the Properties button in order to configure the connection.
- Assistent für neue Verbindungen Geräte für eingehende Verbindungen Sie können die Geräte angeben, die der Computer für die Annahme eingehender Verbindungen verwendet. Aktivieren Sie das Kontrollkästchen neben jedem Gerät, das für eingehende Verbindungen verwendet werden soll. Verbindungsgeräte: Kommunikationskabel zwischen zwei Computern (COM1) Eigenschaften < Zurück Abbrechen Weiter > Kommunikationskabel zwischen zwei Computern-Verbindungs... 🎦 🗙 Allgemein Erweitert Anrufeinstellungen 🔲 Vermittlungsunterstütztes (manuelles) Wählen Trennen nach Leerlauf von Minuten Wählvorgang abbrechen nach Sekunden Datenverbindungseinstellungen • 19200 Obertragungsrate: $\overline{}$ Datenprotokoll: -Komprimierung: Keine • Flusssteuerung:

• Connection settings

ΟK

Abbrechen

Hardware setup •

Kom	munikationskabel zwisc	hen zwei Computern-Yerbindungs ? 🗙
AI	lgemein Erweitert	
	Terminalfenster	dem Wählen einblenden h dem Wählen einblenden
	Hardwareeinstellungen	
	Datenbits:	8
	Parität:	Keine
	Stoppbits:	1
	Modulation:	
		OK Abbrechen
Assis	tent für neue Verbindungen	
E	ingehende VPN-Verbindung Ein anderer Computer kann eine VPN-Verbindung herstellen.	Verbindung mit diesem Computer über eine
	VPN-Verbindungen zu dem Com Computer einen im Internet beka	puter durch das Internet sind nur möglich, wenn der nnten Namen bzw. eine IP-Adresse hat.

Wenn Sie VPN-Verbindungen zulassen, wird der Windows-Firewall so modifiziert, dass der Computer VPN-Pakete senden und empfangen kann.

< Zurück Weiter >

Abbrechen

Sollen VPN-Verbindungen mit diesem Computer zugelassen werden? VPN-Verbindungen zulassen

C VPN-Verbindungen nicht zulassen

VPN connections allow or refuse •

You can provide the connection to all users • or only for themselves.

Assistent für neue Verbindungen
Benutzerberechtigungen Sie können die Benutzer angeben, die eine Verbindung mit diesem Computer herstellen dürfen.
Aktivieren Sie das Kontrollkästchen neben den Benutzernamen, die eine Verbindung mit diesem Computer herstellen dürfen. Bedenken Sie, dass andere Faktoren, wie z. B. deaktivierte Benutzerkonten, das Herstellen von Verbindungen beeinflussen können.
Benutzer, denen die Verbindung gestattet ist:
ASPNET (ASP.NET Machine Account) Gast Gast Gift Hifeassistent (Hilfeassistentenkonto für den Remotedesktop) Gift Hifeassistent (Prodana) Gift SUPPORT_388945a0 (CN=Microsoft Corporation,L=Redmond,S=Washingt
Hinzufügen Entfernen Eigenschaften
<zurück weiter=""> Abbrechen</zurück>

• Select the Internet protocol (TCP/IP and press the **Properties** button.

Setting like / what IP address is assigned

to the dialed-in computer

•

etzwerksoftware Die Netzwerksoftwa Verbindungen von a	are ermöglicht dem Computer das Annehmen von anderen Computern.
Aktivieren Sie das K eingehende Verbind	ontrollkästchen neben jedem Typ von Netzwerksoftware, für den ungen aktiviert werden sollen.
Netzwerksoftware:	okoll (TCP/IP)
Beschreibung: TCP/IP, das Standa verschiedene, miteir	Installieren Deinstallieren Eigenschaften ardprotokoll für WAN-Netzwerke, das den Datenaustausch über nander verbundene Netzwerke ermöglicht.
' IP-Eigenschaft letzwerkzugriff	 < Zurück Weiter > Abbrech cen für eingehende Verbindungen
/ IP-Eigenschaft letzwerkzugriff ☑ Anrufern den	< Zurück
/IP-Eigenschaft letzwerkzugriff ☑ Anrufern den CP/IP-Adresszuw ○ TCP/IP-Adresszuw	 < Zurück Weiter > Abbrech cen für eingehende Verbindungen Zugriff auf das lokale Netzwerk gestatten veisung ssen automatisch durch DHCP zuweisen
/IP-Eigenschaft letzwerkzugriff ✓ Anrufern den CP/IP-Adresszuw ○ TCP/IP-Adre ● TCP/IP-Adre	< Zurück
 /IP-Eigenschaft letzwerkzugriff ✓ Anrufern den CP/IP-Adresszuw CP/IP-Adresszuw TCP/IP-Adre ▼CP/IP-Adre Von: 	<zurück weiter=""> Abbreck cen für eingehende Verbindungen Zugriff auf das lokale Netzwerk gestatten reisung ssen automatisch durch DHCP zuweisen ssen angeben 192 . 168 . 1 . 216</zurück>
 /IP-Eigenschaft letzwerkzugriff ☑ Anrufern den CP/IP-Adresszuw ☑ TCP/IP-Adres ☑ TCP/IP-Adre ☑ TCP/IP-Adre Von: Bis: 	<zurück weiter=""> Abbreck cen für eingehende Verbindungen Zugriff auf das lokale Netzwerk gestatten reisung ssen automatisch durch DHCP zuweisen ssen angeben 192 . 168 . 1 . 216 192 . 168 . 1 . 217</zurück>

🏂 Netzwerkverbindungen							<u>- 0 ×</u>
Datei Bearbeiten Ansicht Fav	oriten Ex	tras Erweitert ?					-
🔆 Zurück 👻 🕥 - 🏂 🔎	Suchen	🌔 Ordner 🛛 🎹 🗸					
Adresse 🔕 Netzwerkverbindungen							•
		Name	Тур	Status	Gerätename	Rufnummer oder Hostadresse	Besitzer
Netzwerkaufgaben	×	Eingehend					
Andere Orte	×	👺 Eingehende Verbindungen 🛛	Eingehend	Keine Clients verbunden			System
		LAN oder Hochgeschwindigkeitsinterne	et in the second se				
Details	×	B					. .
		🚣 LAN-Verbindung	LAN oder Hochgeschwindigkeitsinternet	Verbindung hergestellt	Broadcom 440x 10/100 Integrated Controller		System

On the Windows CE© - devices-side:

Make sure that no direct RAS-head is enabled.

from the RAS-client and activesync

new connection → Direct Connection

Select

Select

😽 Start

PC Connection.



Select the connection type:

- O Dial-Up Connection
- Direct Connection
- Virtual Private Network (PPTP)
- Virtual Private Network (L2TP)
 - O PPP over Ethernet [PPPoE]
 - < Back Next >
- Select FFUART on COM1 from. CAUTION: only COM1 is supported. Press the button "Configure" for the COM1interface to configure.



 The settings must be agree with those of the PCs (in the special flow control and Baud rate) after you have left this dialog with OK press the button TCP/IP Settings ...



Cancel the call if not connected within <u>seconds</u>

Extra Settings (special modern commands may be inserted into the dial string)

seconds

Port Settings Call Options

Wait for dial tone before dialing Wait for credit card <u>t</u>one

Call Setup

 Insert here the TCP/IP settings. The protocol that the server used is either PPP (POINT-TO- Point-Protocol), or SLIP (Serial Line Internet Protocol).

The software compression can cause to a higher data transfer rate.

Normally improves use IP header

compression performance. In some cases, but these do not work correctly handled by the server.

Normally the Use IP header compression will be improved the

performance. Partly this is not correctly handled from the server Close the dialog with OK.



TCP/IP Settings				OK ×
General Name Se	ervers			
fred2PC_	_direct			
✓ Use server-as:	signed	addres	ses	
<u>D</u> NS:]
Alt D <u>N</u> S:				
<u>W</u> INS:				
Alt W <u>I</u> NS:				

• Press the button Security Settings to set	Security Settings OK 🗙
the security settings.	Advanced Security Settings
They must be consistent with the server	✓ Use <u>D</u> ata encryption
settings.	Logon security:
Windows CE© 5.0 or 6.0 does not.	Use Extensible Authentication Protocol (EAP)
Support EAP	
Save your settings with OK.	Properties
	✓ Unencrypted password (PAP)
	✓ Challenge Handshake Authentication Protocol (CHAP)
	Microsoft CHAP (MS-CHAP)
	Microsoft CHAP Version 2 (MS-CHAP v2)
	· · · · · · · · · · · · · · · · · · ·
	✓ Preview user name and password

• Save the Registry.

→ Programs → Utilities → Save Registry

if you do not save the registry is after a restart of the device of the connection entry no longer exists.

<u>File E</u> dit <u>V</u> iew Ad	va <u>n</u> ced	X 🛐 📴 📴	111	? ×
Name	Туре	Status	Device Name	
🗞 Make New Connection -				
fred2PC_direct	Direct	Disconnected	FFUART on COM1:	
🎭 com1_115k	Direct	Disconnected	FFUART on COM1:	
🕹 DM9CE1	LAN	Enabled	DM9CE1	

• Double-click the direct-connection and enter the users password.

Enter Network Password				
۴	Please type y	assword.		
	<u>U</u> ser Name <u>P</u> assword <u>D</u> omain	Gast		
	Save pass	word		
fred2	PC_direct	t Status	×	:
3	⊳ Conn	ected		
	Hide	this message:	H <u>i</u> de Disconnect	

On the PC-side the connection will be appeared :

Netzwerkverbindungen						
Detei Bearbeiten Ansicht Favoriten Extras Erweitert ?						
Adresse 🔕 Netzwerkverbindungen						•
	Name	Тур	Status	Gerätename	Rufnummer oder Hostadresse	Besitzer
Netzwerkaufgaben ×	Eingehend					
Andoro Orto	婱 Eingehende Verbindungen	Eingehend	1 Client verbunden			System
Alluere orte	🍠 <nicht authentifizierter="" benutzer=""></nicht>	Eingehend	Verbindung hergestellt	Kommunikationskabel zwischen zwei Computern		System
Details ¥	LAN oder Hochgeschwindigkeitsinterne	et				
	🕹 LAN-Verbindung	LAN oder Hochgeschwindigkeitsinternet	Verbindung hergestellt	Broadcom 440x 10/100 Integrated Controller		System

 After the connection is established you will have the icon displayed in the taskbar. With double-clicking the connection status is displayed.

🝠 Sta	atus von <nicht auth<="" th=""><th>entifizierter Benutzer></th><th><u>? ×</u></th></nicht>	entifizierter Benutzer>	<u>? ×</u>
Allge	emein Details		1
E	Eigenschaft	Wert	
9	Servertyp	PPP	
	Jbertragungen	I CP/IP MDDC	
	Comprimierung Server-IP-Adresse	192 168 1 216	
l l	Client-IP-Adresse	192.168.1.217	
			Schließen

😰 ftp://192.168.1.217/					
Datei Bearbeiten Ansicht Favo	riten Extras ? 🛛 🦺				
Adresse 👰 ftp://192.168.1.217/					
Application Data Temp Flashdisk Control Panel.Ink Control Panel.Ink Profiles Program Files					
Benutzer: Anonym 🛛 🤡 Internet	11				

2.3 RS232

- 2.3.1 Low-Level RS232 or RS485
- 2.3.2 RTU-Modbus over RS232 or RS485

2.4 CAN

2.4.1 Low-Level CAN

The CAN- communication is analogous to the previous VisioControl -systems with CAN03.lib.

The following should be considered when a project of Can03 changed to 04.

- The command CanInit() now called CanInitialize();
- The naming structure within the firmware has changed

Background

From Can sfW04 multiple interfaces ca be addressed



nCheckRecvID := psFW[^].uRemanent.sMasterEEprom.nCan0BaseIntermodulID +
INT_TO_DWORD(psFW[^].uRemanent.sMasterEEprom.nCan0ClientNo);

2.4.2 CANopen from 3S

Here you can translate in the codesys both CANopen Master as well as CANopen slave be projected.



In the documents "Kommunikation_CANopen_DE.pdf" this is described in detail.

By using 3S- CANopen for manufacture a communication you need older libraries. The current 3S- libraries are faulty and have a continuous connection reset as a result.

Use the "older" files (in the image scanned) in place of the original files. (here with a underline marked)

The communication takes place now, as in other systems





The use of CANopen Bibliotheken from codesys the calls according to the following schedule:

If there is no module parameter of the generated CanMasters updating, then the call of the CanMasters will be generate in the first alphabetical task. Otherwise, these module parameter is pecified the name of the task, in which the CanMaster is called.

The Rx and Tx-PDOs are in the highest priority of all the tasks that the PDO referencing, called.

If PDOs or the Master calling after the above schema in an event task called, a warning is printed.

For shifting the PDO-calls in a different task, the IO-references have to move in this task.

To move the master call, the module update task parameter has to be changed, or another task to be done about name change to alphabetically first.

The calls to the library CanDevice are all produced in the CanDevice specified task.



For further information on the use of the can Open-Bibliotheken under codesys are the documentation "Kommunikation CANopen DE.pdf" to remove..

2.4.3 Change under 3S control configuration



For version 2.0 the control configuration must be rebuilt. <u>An acquisition from an older version is</u> <u>not possible</u>. You want to migrate from V1 to V2, recommends it, both by means of 2 emitted by many programs to keep an open mind in order to replicate the V2 canWould you like to migrate from V1 to V2, it is recommended that both control configurations are still opened with 2 programms using two programs open to reproduce the V2.
V1 (old) V2 (new)



It will be automatically registered a block with System. [fix] when a CanMaster is integrated The address moves on 8448Dec.

Should this not be done automatically, so please choose Extras → Default configuration



3 Visualization

To grant the customer maximum flexibility it can be choosen between two visualizations

3.1 Visualization with ElaDesign

See the eStudio_manual

3.2 Visualization with CoDeSys 3S Target-Visu

3.2.1 Runtime

the following files have to be installed on the target :



In the PACO the following programs have to be started in the above order:

- AUTOSCAN.exe
- PlcCeArm.exe
- webs.exe
 This is only necessary for the Web server option.

3.2.2 Development Envirement

It must be selected following target setting :

Zielsystem Einstellungen	
Konfiguration: [efrest P4xx 35-Visu V2.3.9 [Zielplat/form Speicheraulteilung Allgemein Netzfunktionu	en Visualisierung
Anzeigebreite in Pixet: 640 Anzeigehöhe in Pixet: 480 ☐ 8.3 Dateiformat verwenden ☑ Alarmbehandlung innerhalb der Steuerung ☑ Trenddatenaufzeichnung innerhalb der Steuerung	Unterstützte Schriftarten im Zielsystem: PArial Pi Courier New Pi Symbol Pi Tahoma Pi Times New Roman
Systemvariable 'CurrentVisu' aktivieren Vereinfachte Eingabebehandlung Web-Visualisierung Komprimierung Download der Visualisierungsdateien verhindern	Target-Visualisierung VISU_INPUT_TASK verwenden Taskerzeugung deaktivieren Tastaturbedierung für Tabelle
	Voreinstellung OK Abbrechen

Select the following options are:

width in pixels.

This describes the subframe in the codesys Visual Editor.

- [X] web visualization Turn off or turn on this option. When this is turned off, will not generate various Java applets.
- [X] system variable 'CurrentVisu' causes a synchronous Operate flow between target, codeSys - Visu and Web server.



At the start of codesys from the eStudio project management will be the target system settings automatically set correctly.

An important change will take place in the task configuration.

To do this, you will receive from eStudio 2.84 additional, new Targetfiles. Use the codesys - target: PXXX RT >V2.0 <= Version 1.x (old) >= Version 2.0 (new)

Zielsystem Einstellungen		
Konfiguration:	elrest IT1.2/P303/P305/CM1xx V2.3.11	-
Zielplattform Sp	elrestIT1.2/P303/P305 V2.3.12 (4MB SPAM) ei elrestIT1.2/P303/P305/CM1xx V2.3.11 elrestP101 V2.3.11	<u>^</u>
Plattform:	P2xx (CP-035, CP-057) V2.3.9 (ARM9) P4xx (CP-104, CP-121) V2.3.10 (Intel XScale) multicom/LT_4MB_SRAM V1.1 Release >= EV/1.57	
-Code	D2~ (CD-035, CD-057) 1/2 3 12 (ADM0) DT N- 2 0	
Compiler Keil	P4xx (CP-104, CP-121) V2.3.12 (Intel XScale) RT >= 2.0	*
<= Versio	n 1.x (old) >= Version 2.0 (new)	

Manual installation of targets.

You can download from our homepage the V2- Target - package.

3.2.3 WEB-Server



4 Application

4.1 Voice- and sound output



4.2 Rotate the screen

Rotate.exe <Degree>

This application allows you to your screen 90 °, 180° or 270° degrees to rotate. For example, this is desired for service.



The rotate the picture via software requires up to 30% of the system performance.

```
IF wRotate <> wRotate_old THEN
CASE wRotate OF
ST 90: dwAppl:= RunApplication('\Flashdisk\ElaDesign\Rotate.exe', '90');
180:dwAppl:= RunApplication('\Flashdisk\ElaDesign\Rotate.exe', '180');
270:dwAppl:= RunApplication('\Flashdisk\ElaDesign\Rotate.exe', '270');
ELSE
dwAppl:= RunApplication('\Flashdisk\ElaDesign\Rotate.exe', '0');
END_CASE
wRotate_old:= wRotate;
END_IF;
```

4.3 VNC enable

To this end, it offers itself to Windows CE© a VNC server to start. This may, for example with VNC viewer 3.3.3.3 be accessed.



The performance will be affected by this. Disable this for the Averse.

The settings for this purpose are as follows:

The access can be password protection: this must be the following Registry - Key be changed: [HKEY_LOCAL_MACHINE\SOFTWARE\VNC] Password==<Passwort>"

Then save the registry.

Connection details		
VNC server:	192.168.5.191 Use hostdisplay	OK Cancel
	e.g. snoopy:2 (Display defaults to 0 if not giv	ven) Options
Connection Options		X
Preferred encoding	coding Mouse	3 Buttons (with 2-button click) ouse buttons 2 and 3 dixels to 8-bit (for slow networks) / (inputs ignored) en mode 1 / 1 (experimental)

4.4 Starting applications

4.4.1 Internet Explorer

In this example, the Internet Explorer start page and the "www.elrest.de" open (line9).

5 Seconds after the start of the application, the runtime by dwAppID=0 again brought to the foreground.

After a total of 10 seconds will be closed IE again.



4.4.2 PDF Viewer

With external PDF- viewern documents can be called from within the application.

In the example below for example with Foxitreader and the wago 750-337 Manual in german or english language.

```
Vite and the set of the set
```



4.4.3 PaCo

Panel configuration is an integral part of elrest CE to get and is used for the comfortable setting of all important system settings.

	(* ####################################
	Open PaCo
ST	#######################################
	IF xStartPaCo THEN
	xStartPaCo:=FALSE;
	<pre>ApplID:=RunApplication('\flashdisk\SysExtras\Tools\PaCo.exe', '');</pre>
	END_IF;

5 Support

Hotline

For additional information and assistance, you can our hotline at the following times:

Monday - Friday: from 8.00 - 12.00 and 13.00 - 16.30

Outside of these times, you can contact us via e-mail or fax to get:

Telephone:	++49 (0) 7021/92025-33
Fax:	++49 (0) 7021/92025-29
E-mail:	hotline@elrest.de

Training and Workshops

We offer training or project based workshops to elrest products.

For further information, please contact our sales department.

Telephone:	++49 (0) 7021/92025-0
Fax:	++49 (0) 7021/92025-29
E-mail:	vertrieb@elrest.d

6 History

date	name	chapter	change

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