Instruction Manual

VISAM TouchPanel

VTP-TC55 / VTP-TC125 / VTP-TC155 / VTP-TC175

A product of the

VBASE - HMI/SCADA – family

Document: **HB_VTPTC_55_125_155_175_v1.0d - FINAL**

Version: 1.0, English

VISAM Industrie IT

VISAM GMBH
Irlicher Straße 20
D-56567 Neuwied

Tel.: +49 (0) 2631 941288 – 0
Fax: +49 (0) 2631 941288 – 9

E-Mail: info@visam.de
Internet: http://www.visam.de

Technical Support
Tel.: +49 (0) 2631 941288 – 40

E-Mail: support@visam.de

We have taken all possible measures to ensure the correctness and completeness of this documentation. Despite all care, errors cannot be avoided and we would appreciate any information or ideas at any time.

We point out that the in the document used software and hardware terms as well as the trademarks of their respective companies are generally subject to trademark protection, trademark or patent protection.

Table Of Content

1 Important Explanation

To ensure the user a fast installation and startup of the described devices it is essential to carefully read and note the following instructions and hints.

1.1 Legal Bases

1.1.1 Copyright

1.1.2 Personnel Qualification

The construction of the following instruction and the usage of the VBASE-product family require basic knowledge about the used windows operating system and the used remote systems. (e.g. SPS)!

The in this document described product use is directed exclusively to professionals or trained personnel, who are also familiar with the valid standards.
The VISAM GmbH offers at request inexpensive training for the use of the here described products.

1.1.3 Intended Use

The systems are delivered from factory with the specific use case and with a dedicated hardware and software configuration. Alterations are only allowed in the context of the in the documentation featured possibilities. All other changes to the hardware or software and the non-conforming use of the systems nullify the liability of VISAM GmbH.

1.1.4 License Agreement

The usage of all in this documentation described programs and program parts are subject to the VBASE license agreement.

1.2 Range of validity

This document provides a general description, in conjunction with certain hardware and/or software. Note the latest and detailed descriptions accompanying the products!

1.3 Used symbols

	**Note** Information that should be noted to ensure a faultless and effective operation.
	**Hint** Tips and hints for the efficient use of the system respectively system optimization.
	**ESD** Warning of damage to the systems / components by electrostatic discharge. Precautions should be taken when handling electrostatically sensitive components.

2 Introduction

2.1 Regarding this document

This manual is intended to clarify the use of the VISAM TouchPanel devices („VTP"). In this document the device specific setting and possibilities are described.
The handling of the on this device installed VBASE HMI/SCADA software is described in a separate description.

2.2 The Article – and Model number

At this point a brief commentary on the article and model numbers of these VTP series is given.
The model number is rather general and serves as a rough identification of the VTP. The model number provides information about the operation system, the display size and the built-in version of the VTP.
The article number however contains even more information. In the following figure, the part of the article number is further explained.

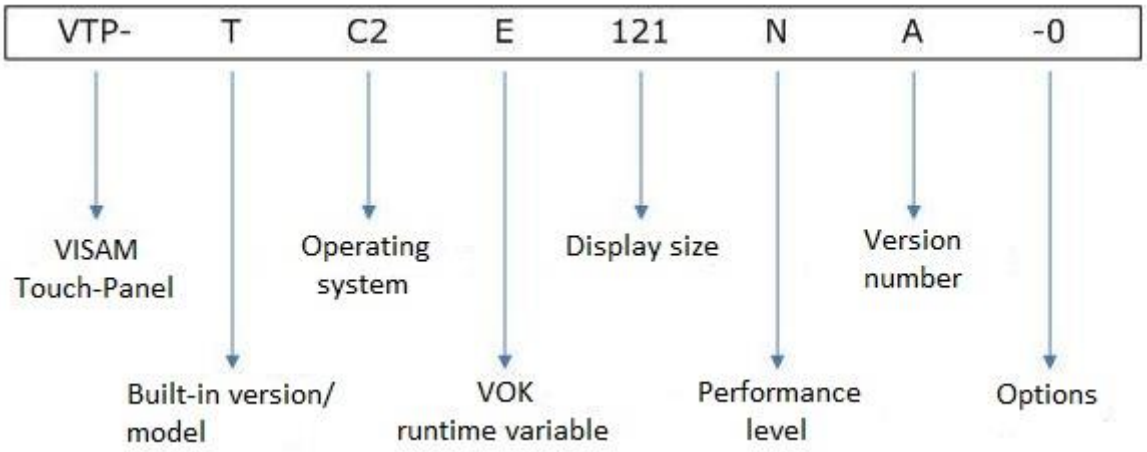


Figure 1 The information of the article number

3 Specification

3.1 System data

VTP-TC55 / TC125 / TC155 / TC175
Processor (CPU): Intel Atom N270 1,6 GHz (512 MB L2 Cache)
Chipset: Intel 945GSE + Intel ICH7M
Ram: 1GB DDR2 533 SDRAM (up to 2 GB extendable)
Data memory: CompactFlash®
LAN: Intel 10/100/1000 Base-T Ethernet controller, IEEE 802.3
Watchdog Timer: W83627, 1,6 seconds (system)

3.2 Interfaces

VTP-TC55
Serial interface: 2 x RS232 (COM1, 2)
Other: 1 x PS2
Network (LAN): 1 x RJ-45 Ethernet
USB: 2 x USB 2.0 („Host")

VTP-TC125 / TC155 / TC175
Serial interface: 1 x RS232 (COM1), 1 x RS 422/485 (COM2)
Network (LAN): 2 x RJ-45 Ethernet
USB: 2 x USB 2.0 („Host")

3.3 LCD Display

VTP-TC55
Display Type: VGA TFT LCD
Size: 5,7"
Maximum resolution: 640 x 480 Pixel
Brightness: 700 cd/m²
Contrast ratio: 800:1
Viewing angle (H/V): 160/140°

VTP-TC125
Display Type: SVGA TFT LCD
Size: 12,1"
Maximum resolution: 800 x 600 Pixel
Brightness: 450 cd/m²
Contrast ratio: 700:1
Viewing angle (H/V): 160/140°

VTP-TC155
Display Type: XGA TFT LCD
Size: 15"
Maximum resolution: 1024 x 768 Pixel
Brightness: 300 cd/m²
Contrast ratio: 700:1
Viewing angle (H/V): 160/140°

VTP-TC175
Display Type: SXGA TFT LCD
Size: 17"
Maximum resolution: 1280 x 1024 Pixel
Brightness: 350 cd/m²
Contrast ratio: 1000:1
Viewing angle (H/V): 170/160°

All
Maximum amount of colors: 262.000
Pixel size: 0.3075 x 0,3075 mm
Backlight: LED
MTBF (Backlight): 50.000 hours

3.4 Touchscreen

Type: Resistive
Controller: USB Penmount at VTP-TC55
RS-232 Interface at VTP-TC125/155/175
Translucent: ca. 75%
Lifespan: 10 Million touches (onto a single point)

3.5 Power Supply

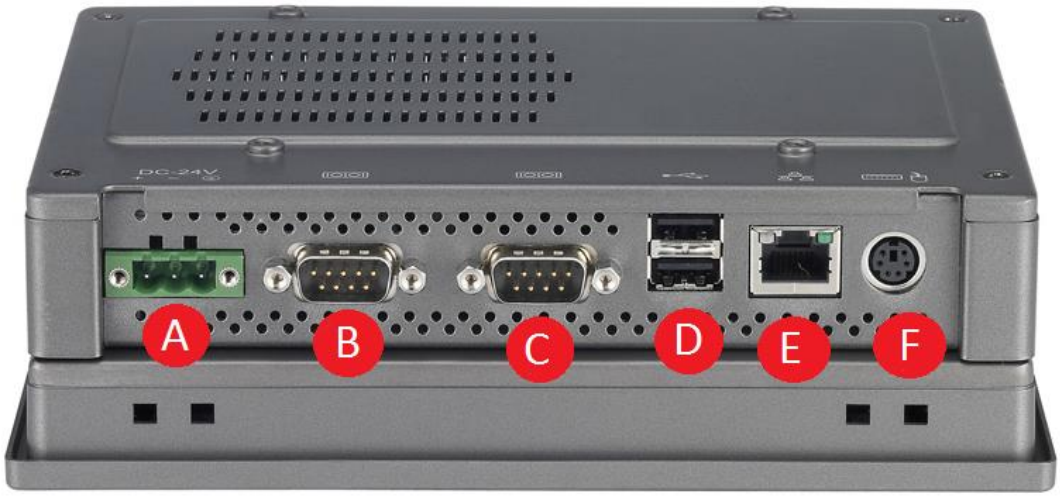
Supply voltage: 18 ~ 28 VDC
Electricity demand (maximum): 0,8 – 1,2 A (at 24VDC)

3.6 Integrated Software

Operation system: Microsoft Windows CE6.0
HMI/SCADA: VBASE run time environment
The integrated software is embedded software that may be only operated on the delivered hardware system!

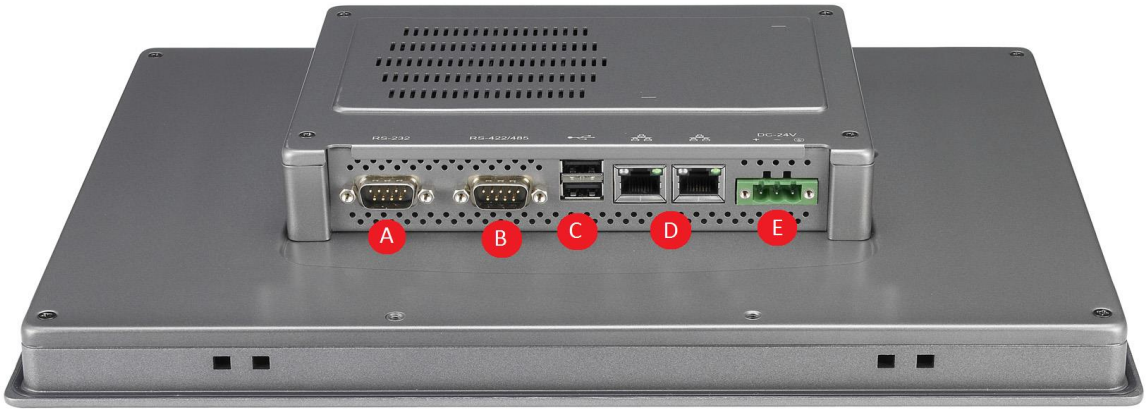
3.7 Interface Arrangement

The arrangements of the interfaces are depicted in the following figure:



A. DC in
B. COM (RS-232)
C. COM (RS-232)
D. USB 2.0
E. LAN
F. PS/2

Figure 2 Interface Arrangement VTP-TC55



A. COM (RS-232)
B. COM (RS-422/485)
C. USB 2.0 (2 Ports)
D. LAN 1 & LAN 2
E. DC in

Figure 3 Interface Arrangement VTP-TC 125/155/175

3.8 Connection assignment

3.8.1 Power Supply

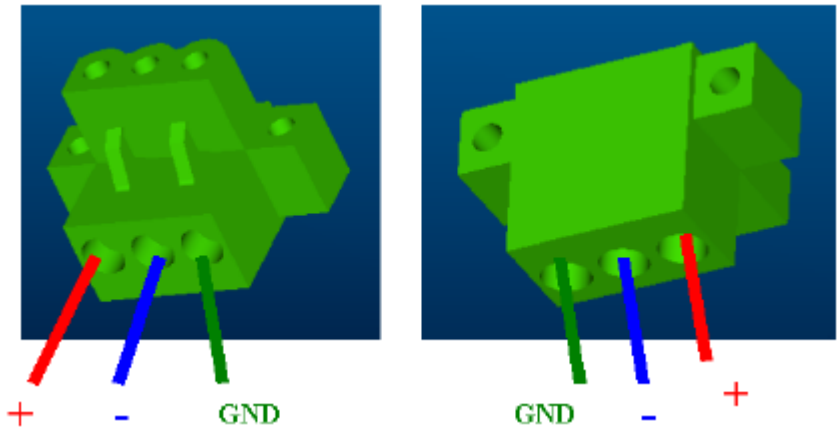


Figure 4 Plug Power Supply

Figure 5 Socket Power Supply

3.9 Power Switch

These devices do not have a power switch.

3.10 Environmental Conditions

Environmental Temperature (while operating): 0 ~ 45°C
Storage Temperature: -20 ~ 60°C
Humidity: 10 ~ 95% relative humidity (non-condensing)
Vibration Resistance: 2 grms (5 ~ 500 Hz) with CF-card, 1 grm with HDD kit.

3.11 Safety

Safety front side: IP65 / NEMA 4
CE certificated
FCC Class A

4 Software-Settings

4.1 Setup / Changing of the network (IP)-address

To change the network-address of the device, follow these instructions:
Open the windows start-menu << Settings. Select the point "Network and Dial-Up Connections".

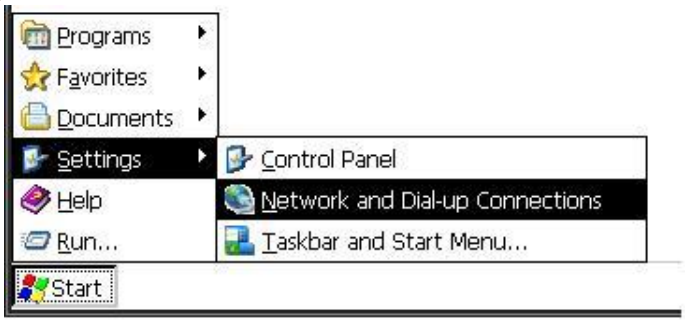


Figure 6 Windows Start-Menu

Figure 7 Connection

Here open the property of the network card by a double click on its name, here „IAG81681.

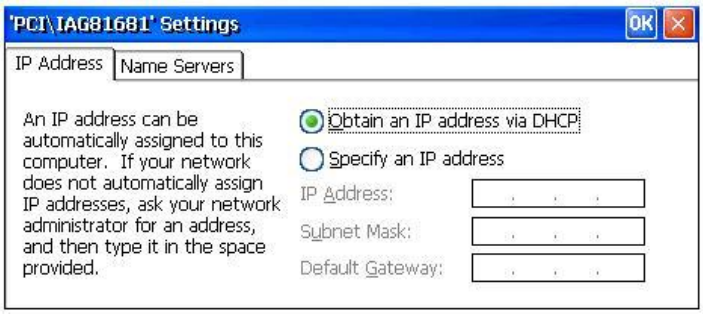


Figure 8 Ethernet-Setup

In the now opened property-window insert the desired network „IP-address", „Subnet Mask", and if needed the „Default Gateway". In the second tab „Name Server" the IP-address of the „DNS-Server" and the „WINS-Server" can be inserted. Confirm the input by clicking on „OK" (top right). Close the window „Network and Dial-Up Connections".

Save your settings by saving the „Registry" as described in the following section!

4.2 Save Changes to settings permanently

If you make changes in the area of the operating system (e.g. network- or display-settings) please note that after each change, the registry file „Registry" must be saved. **If not, all changes are lost at the shutdown respectively restart of the device!**

The tool for the permanent saving of the registry "Registry Saver" can be found in the Start-Menu >>"Programs" >> "Tools".

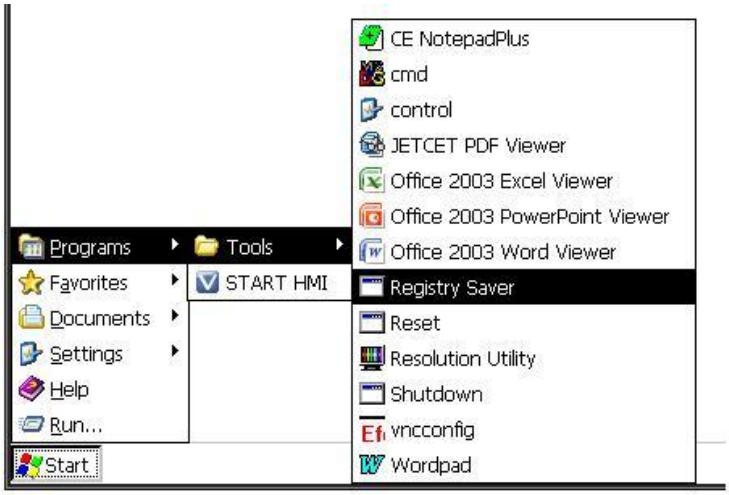


Figure 9 Registry Saver

After saving the registry a confirmation is shown by the program.

Figure 10 Confirmation about the saving of the registry

4.3 Automatic Startup of the HMI-Application

The VBASE-HMI-runtime environment (VOK) starts automatic after starting and booting of the device.
Was the HMI-Application and as such the runtime environment shutdown, it can be restarted with the help of the icon "START HMI" respectively by selecting it from the Start-Menu > "Programs" without having to restart the whole device.

The runtime environment with all accessories is located (ex-factory) in the directory:
"\HardDisk\VOK\"

4.4 FTP-Server, Data Transmission

The device features an integrated FTP-server which enables a simple data transfer with the device.
Please note that the FTP-Server is configured ex-factory in a way that after inputting username and password, full access to the device is granted.
To restrict the accesses respectively to secure the device against unauthorized usage, the on the device installed VTP-Tool (see section 4.10) can be used.

The default settings ex-factory are:
IP-Address: Default = DHCP (the device tries to retrieve an IP-address from the DHCP-server).
User: admin
Password: visam
FTP-Directory: /Harddisk/

The FTP-Server is also used by the VBASE-Editor for the transmission of projects and the setup of the device (see Help-system of the editor).

4.5 Touchscreen Calibration

It is possible to recalibrate the Touchscreen controller of the VTP from time to time. A recalibration is needed if the mouse cursor is not displayed at the touch point, but at a different position.

To calibrate select from the Start-Menu: „Settings" >> Control Panel and then the program „Stylus".

A window with two tabs opens.

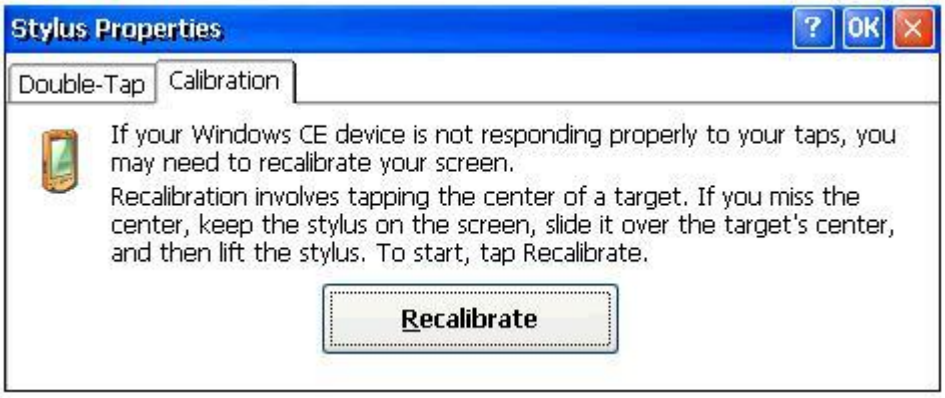


Figure 11 Touchscreen Calibration

Double-Tap – setting up the double-click speed
Calibration – to recalibrate the touchscreen

Follow the instructions on the screen and touch the corresponding calibration points successively on the touchscreen.

Save your settings by saving the „Registry" as described in the section „Save Changes to settings permanently"!

4.6 Remote control of the device via network

To remote control the device for a comfortable setup and maintenance, the application „VNC-Server" is available. Ex-factory the license-free tool "Efon VNC" is installed on the device.

On the PC-system from which you want to connect to the panel, a compatible VNC-Viewer (e.g. UltraVNC) must be installed and a network connection must be established

Ex-factory the VNC-Server is provided with a default-password („visam"). At the connection establishment the password will be queried.

Figure 12 VNC-Connection Establishment Remote Control

After the successful connection establishment the surface of the device can be used in a window (the VNC-Viewer) on the PC-system.

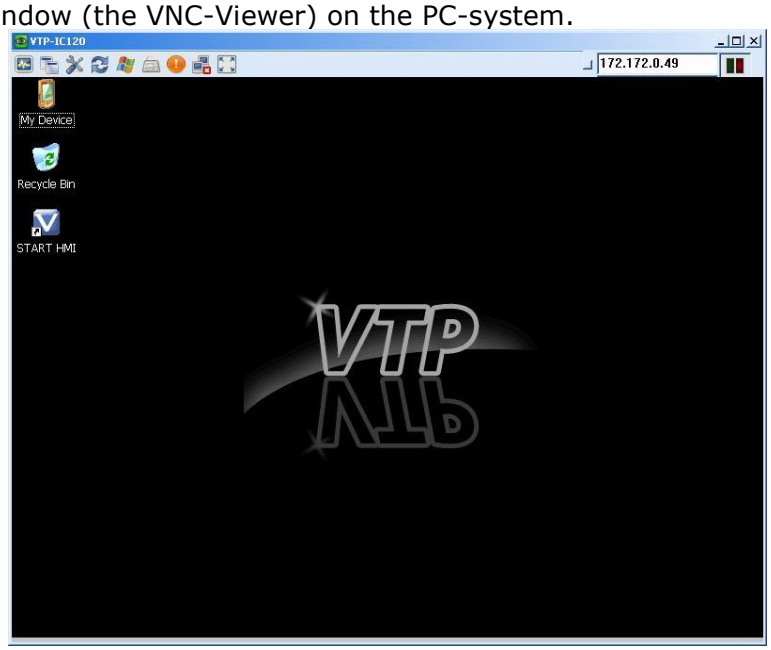


Figure 13 Remote-Desktop

Within this window the VTP (depending on the settings of the VNC-connection) can be remotely controlled with the mouse and the keyboard.

The password and additional settings for the VNC-Server respectively the VNC-Connection can be changed according to your needs with the help of the program „vncconfig". The VNC-Server is configured ex-factory that you don't need to make any changes. The program "vncconfig" can be found in the Start-Menu >> „Programs" >> "Tools".

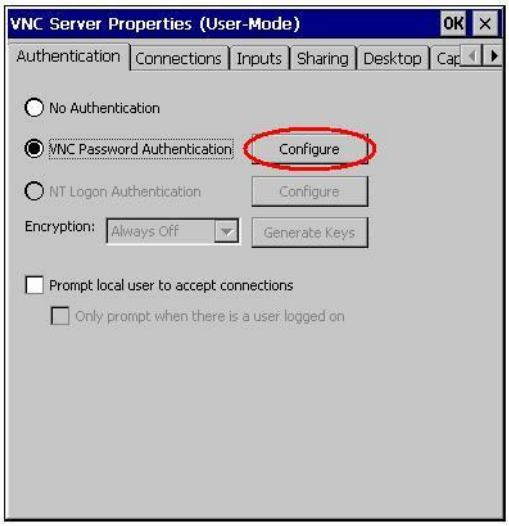


Figure 14 VNC-Server Settings

The password of the VNC-Connection can be changed by clicking the button „Configure" (see Figure 12).

Save your settings by saving the „Registry" as described in the section „Save Changes to settings permanently"!

4.7 Connect network share

A VTP can be connected to a PC-system respectively a server in a network to directly transmit data to these (e.g. Journaling).

To connect the VTP with a shared drive or directory on a tot he network connected system, proceed as follows:

Select in the Start-Menu >> „Programs“ >> „cmd“.

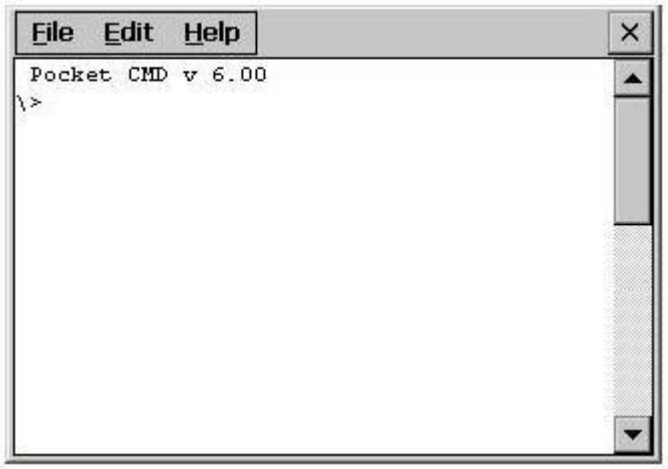


Figure 15 Prompt

Enter here the following commands:

"**net use share-name \\servername\share /user:<user> /password:<password>**"

„share-name“ – represents individual used name for the share.

„\\servername\share“ – describes the share on a distant device.

„<user>“ – represents the name of the user, who has the authorization to use the share.

„<password>“ – Represents the password which is used for the user that has the authorization to use the share.

After the successful input the share can be found "My Device" >> "Network" >> "share-name".

Save your settings by saving the „Registry“ as described in the section „Save Changes to settings permanently”!

4.8 Additional Settings in Windows CE

The installed operating system allows a series of additional settings which will not be considered in this description.

Always save your settings by saving the „Registry" as described in the section „Save Changes to settings permanently"!

4.9 Tools

In the menu „programs" – „Tools" some helpful programs can be found:

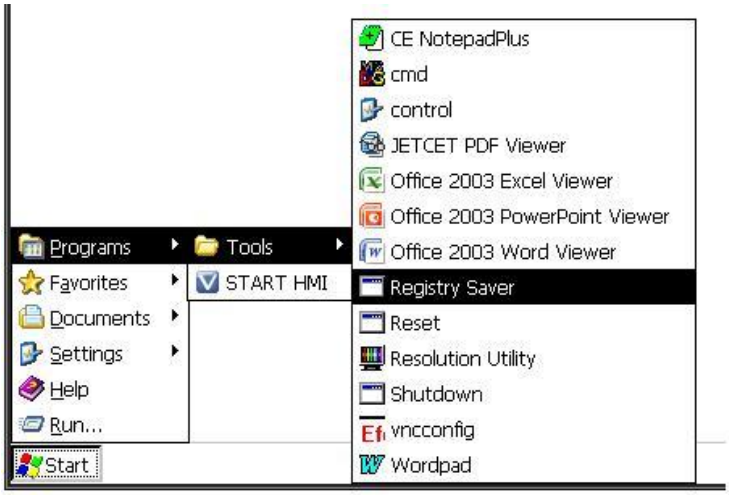


Figure 16 Tools in the menu „Tools"

4.9.1 The Tool CE NotpadPlus

„CE NotepadPlus" is a simple text editor for Windows CE.

4.9.2 The Tool cmd

„cmd" provides the prompt of the operating system Windows.

4.9.3 The Tool control

„control" opens the settings-directory of the operating system Windows CE.

4.9.4 The Tool JETCET PDF Viewer

„JETCET PDF Viewer" is as simple program to read PDF-files.

4.9.5 The Tool Office 2003 Excel Viewer

„Office 2003 Excel Viewer" is a program for the viewing of XLS- and XLT-files (Microsoft Excel).

4.9.6 The Tool Office 2003 PowerPoint Viewer

„Office 2003 PowerPoint Viewer" is a program for the viewing of PPT- and PPS-files (Microsoft PowerPoint).

4.9.7 The Tool Office 2003 Word Viewer

„Office 2003 Word Viewer" is a program for the viewing of RTF- and DOC-files (Microsoft Word).

4.9.8 The Tool Registry Saver

„Registry Saver" saves the registry (see chapter 4.2).

4.9.9 The Tool Reset

„reset" executes a restart (warm start) of the system.

4.9.10 The Tool Resolution Utility

„Resolution Utility" is a program with which the resolution of the monitor can be adjusted.

4.9.11 The Tool Shutdown

Was previously used in older versions and is now no longer needed, as the devices can only be reset.

4.9.12 The Tool vncconfig

„vncconfig" opens the configuration of the VNC-Server (see also chapter 4.6).

4.9.13 The Tool Wordpad

„Wordpad" is the Microsoft Text Editor for Windows CE.

4.10 VTP Tool

4.10.1 Generell

With the „VTP Tool" a tool is provided that can adjust a series of system-settings on your VTP.

In the following chapters the possiblities of these programs are described.

Always save your settings by saving the „Registry" as described in the section „Save Changes to settings permanently"!

To open the program double-click the symbol „My Device" on the desktop of the VTP. In the now open window double-click on the symbol "HardDisk". In the next view the program "VTP Tool" can be found and opened by double-clicking. After starting the program the following surface appears:

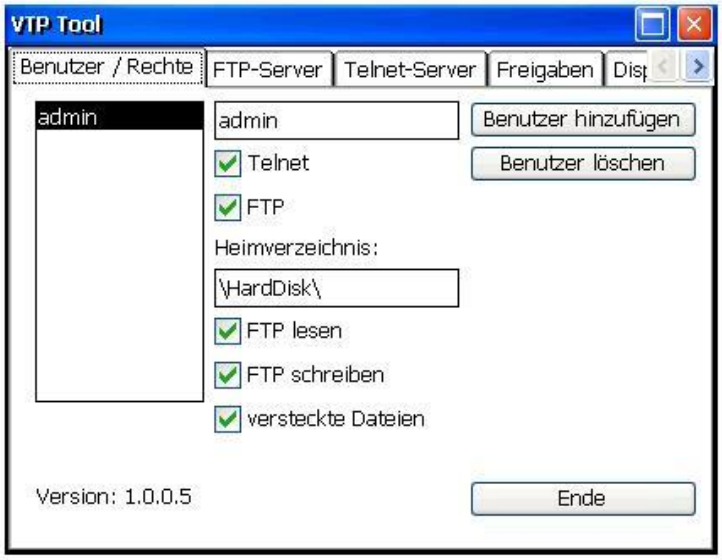


Figure 17 VTP Tool Start Picture

In the top area of the program window five tabs are lined up, which contain the different setting options.
By clicking the corresponding tab the view changes accordingly.
As in the figure 16 depicted the last tab cannot be completely displayed. But the tabs can be moved by clicking the small arrows in the top right.

Requirements for the functionality of the VBASE-runtime environment:
The following settings should not be changed at all. They are part requirements for the VBASE-project transmission from and to the VBASE-runtime environment (VOK).
Firstly, the FTP-Server must be activated that a VBASE-project (files) from the VBASE-Editor can be transmitted to the VTP or vice versa. On the other hand the Telnet-Server must be activated. This is necessary so that the VBASE runtime environment can be stopped by the VBASE-Editor for example before transmitting a VBASE project and subsequently be restarted.

At the delivery of the VTP the FTP-Server and the Telnet-Server are both activated with all options. The FTP-Server has also a default directory specified. This is the directory which is accessed by default when connecting via a FTP-Connection (even anonymous, if this option is checked). This directory must contain the folder "VOK". Both connection types can be specified, if they can be processed password-protected or anonymous. If you decide to password-protect the connections (the option „Use user login" must be activated) ensure that the corresponding user have the required authorizations. In this case it is advised to deactivate the option for the anonymous access to the FTP-Server.

4.10.2 User / Authorizations

This tab features the user administration for your VTP. Here you have the possibility to create new user, change user authorizations or to delete user. To change the password of an user, create the user another time but enter another password. The settings for the user remain. The user „admin" is already created at delivery. The password for the user „admin" is „visam". So the user „admin" is already shown in the list (see figure 17).

Add user:
To add a new user click on the button „Add User". Another window opens up in which the new user-name and the corresponding password can be entered. (see figure 18). Note that the user password will be displayed in clear text.
As soon as you click in one of the input fields a small window with a desktop-keyboard appears - the „Input Panel". With the help of this keyboard you can directly process the inputs on the VTP if you do not remotely control the device.

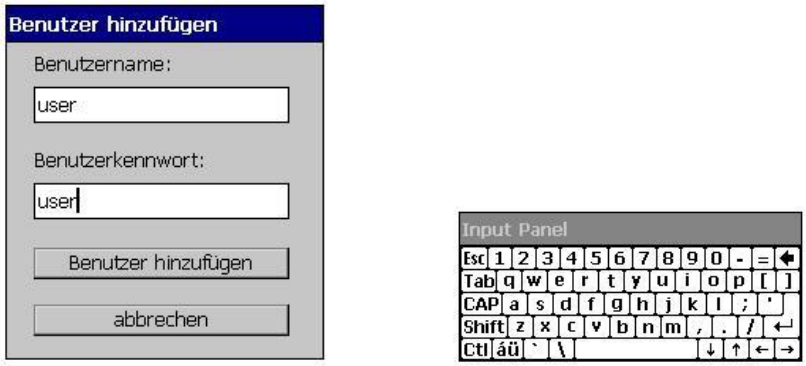


Figure 18 VTP Tool - creation of a new user and the „Input Panel"

Confirm your inputs by clicking on the button "Add User". The window will be closed and the new user will be inserted in the first place of the list (see figure 19). Additionally the home directory ("\Harddisk\") will be inserted automatically. This directory is the default directory on the VTP on which the user has access via the FTP-connection. At this point the access can be restricted to another directory.

Change of user authorizations:
To change the authorizations of a user the corresponding user must be selected by double-click from the entry of the list. The selected user is then displayed with a black frame (see red highlight in figure 19). Now the authorizations of this user can be changed. It can be determined if this user has access has access to the VTP via FTP- or Telnet-connection. The setting of these authorizations respectively their functionality require the activation of the Telnet- respectively

the FTP-server on the VTP (see chapter 4.10.3 and 4.10.4). If the user was granted access via FTP-connection, the input field „Home directory" must be edited to the directory to which the user should have access to. The default-home directory („\Hardisk\") is automatically inserted when creating a new user. This entry can be changed according to your needs. By clicking into the input field the „Input Panel" will be shown, to directly allow inputs on the VTP. Additionally the access authorizations of the FTP-connection of the user can be restricted. Thereby the option "FTP read" means a read-access to the home directory. The option "FTP write" allows the user to write files into the home-directory and to change or delete existing files. If the option "hidden files" is checked, the user can see all hidden system-files in this directory and is able to change and/or delete them.

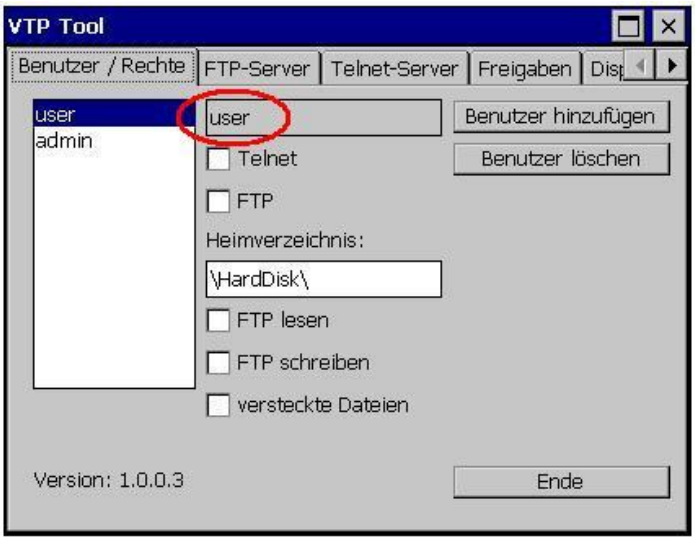


Figure 19 VTP Tool – Change of user authorizations

Delete user:
To delete a user the corresponding user must be selected with a double-click from the entry in the list. The selected user will then be displayed with a black frame (see red highlight in figure 19). Now click on the button "Delete user". The corresponding user will be deleted from the list.

4.10.3 FTP-Server

Figure 2 VTP Tool FTP-Server settings

In this tab the „global" settings for the FTP-server can be determined. The first option activates – if checked – the FTP-server on this VTP. This and the fourth option are prerequisites that user, which were granted FTP-access, can properly use these authorization.
The second options allows an anonymous user to establish a FTP-connection to the below stated default-directory. Neither a user name nor a password must be specified.
The third option allows an anonymous user to write files into the default-directory.
The fourth option allows besides an anonymous FTP-connection to the default-directory also the FTP-connection to the home-directory with a corresponding user login.
The entry in the input field „Default-directory" determines the directory to which an anonymous user has access to.

4.10.4 Telnet-Server

Figure 21 VTP Tool Telnet-Server settings

In this tab the „global" settings for the Telnet-server can be edited. The first options - if checked – activates the Telnet-server on this VTP. This option allows the Telnet-access to the VTP without specifying any user information. This function is required to start or stop the VBASE-runtime environment (VOK) via the VBASE-editor
The second option restricts the access to the VTP via Telnet to the users, that have the corresponding authorization for the Telnet-access. If this option is checked, a user login is required for the Telnet-access.

4.10.5 Display Settings

This function is not available for this product type (VTP-IC-55-175) within the application „VTP Tool". But you have the possibility to shut down the monitor after a given (adjustable) time with the tool "BacklightController".

5 Appendix

5.1 Fuse

These VTP are protected against eletrical damage by a fuse.
Specification of the Fuse: 250VAC, 5A
Size: 6,1 x 2,59 x 2,59 mm

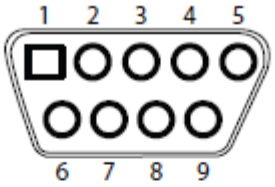
The fuse is triggered if a voltage > 29VDC is applied.

5.2 Change fuse

TO change the device fuse open the fuse cover (right next to the power switch).

5.3 PIN assignment of the serial interface

5.3.1 Serial interface S-232 (COM1, COM2)



	COM1		COM2
PIN	RS-232	RS-422	RS-485
1	NDCD	TX-	D-
2	NRX	TX+	D+
3	NTX	RX+	
4	NDTR	RX-	
5	GND	GND	GND
6	NDSR		
7	NRTS		
8	NCTS		
9	NRI		

Figure 22 RS-232 / RS-422 / RS-485 (COM1 / COM2)

5.4 Dimension and weight

5.4.1 Weight

Weight: 1,43 kg / 2,5 kg / 3 kg / 3,5 kg

5.4.2 Dimension/Cut out

VTP-TC55
Dimension: 195 x 148 x 58 mm (width x height x depth)
Cut out: 189,5 x 142,5 mm
Maximum thickness for panel mounting: < 6mm

VTP-TC125
Dimension: 311 x 237 x 54 mm (width x height x depth)
Cut out: 302,5 x 228,5 mm
Maximum thickness for panel mounting: < 6mm

VTP-TC155
Dimension: 383 x 307 x 58 mm (width x height x depth)
Cut out: 374,5 x 298,5 mm
Maximum thickness for panel mounting: < 6mm

VTP-TC175
Dimension: 413,7 x 347,2 x 63,8 mm (width x height x depth)
Cut out: 399,5 x 333 mm
Maximum thickness for panel mounting: < 6mm

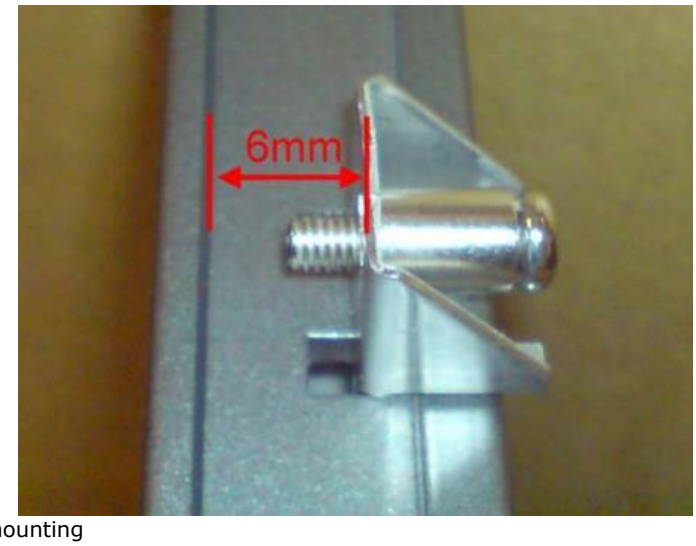


Figure 23 Panel mounting

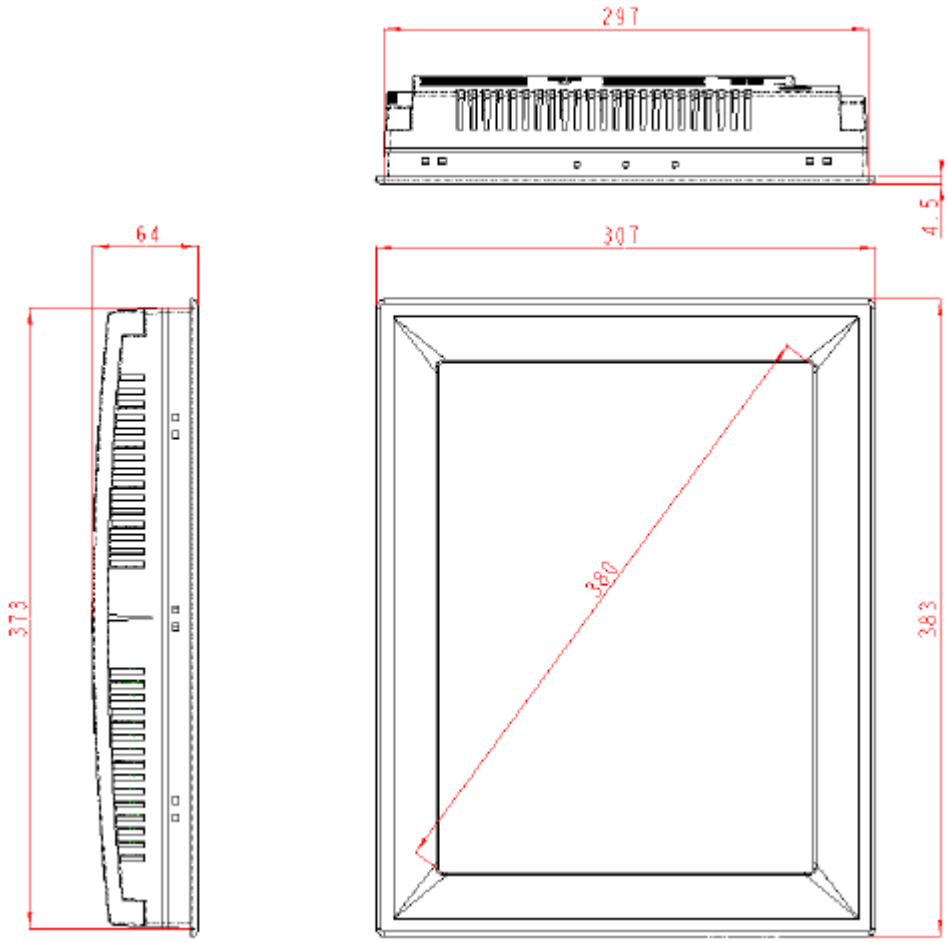


Figure 24 Cut out

5.5 Illustration directory