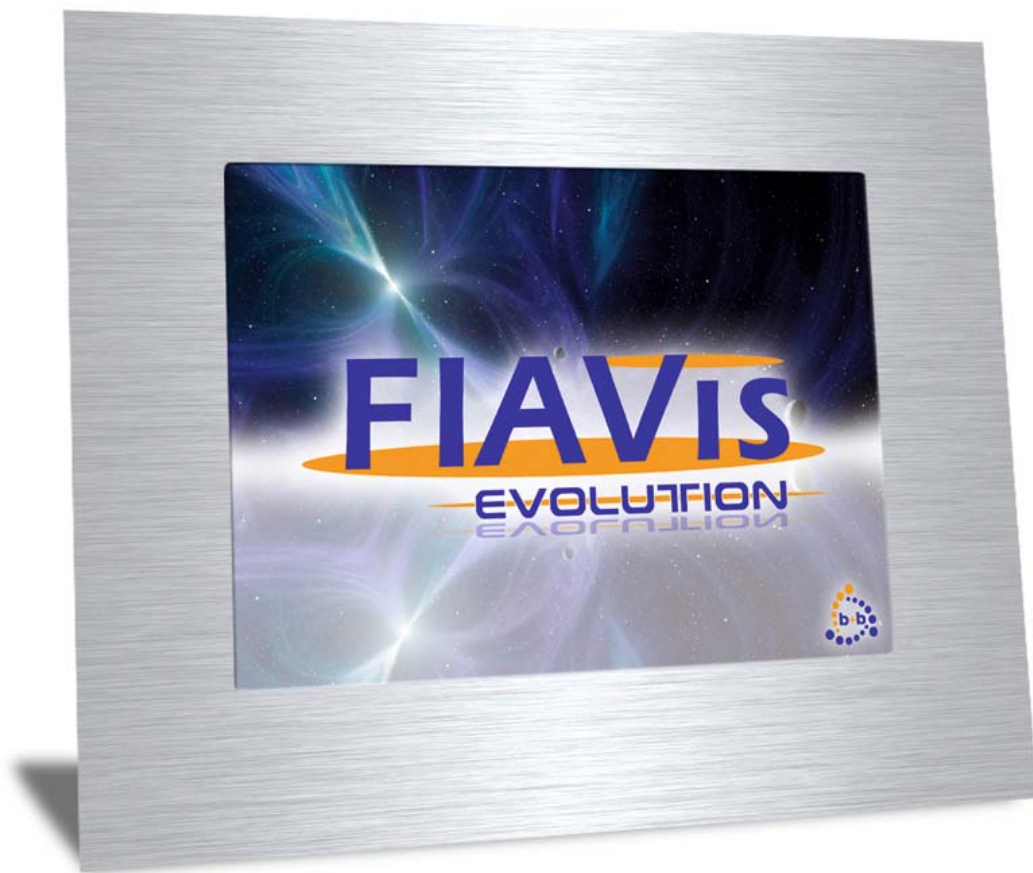




**Automations- und
Steuerungstechnik GmbH**

User manual



**Installing and using the FIAVis
Evolution Touch-Panel PC**

Order number: E001-H030002



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User manual FIAVis Evolution

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This handbook describes also functions, which are options.
Only qualified persons are allowed to install our units.

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FIAVis Evolution – Hardware

Introduction

The FIAVis Evolution System consists of a modern fanless embedded PC with a touch panel and an integrated EIB/KNX bus 2-wire coupling unit. A complete unlimited FIAVis system (parameterization tools, visualization tools, web server) with all available FIAVis options is already preinstalled and ready to use.

The FIAVis Evolution Panel PC is not only a local control station with touch visualization and integrated Soft-PLC, it can also be used as a central datapool server for fast EIB/KNX access for other PCs connected via LAN.

Client PCs can use the FIAVis Commander visualization or any internet browser software to control the EIB/KNX system. It is also possible to read and write values via LAN with different visualization software and own applications. For this kind of application the FIAVis Evolution Panel PC offers OPC and an open network protocol.

The preinstalled “Windows XP embedded” operating system gives the user the opportunity to install additional Windows applications on his FIAVis Evolution Panel PC. With the activated file system protection the integrity of the operating system is assured.

Contents of delivery

- FIAVis Evolution Touch Panel PC with integrated EIB/KNX – bus coupling unit with two wire EIB/KNX connector
- Preinstalled Windows XP embedded, WebServer, FIAVis Software
- CD with Documentation

Available options

- 15“ TFT, 1024 x 768 pixel, resistive 5-wire Touchscreen
- Individual design front panel
- Enclosure box for flush-mounting



Technical data

CPU

Processor	Intel® Celeron® M 600MHz, 512KB Cache (fanless, passive cooled)
RAM	512MB DDR RAM
Chipset	Intel® 852GM + ICH4
Operating system	Windows XP embedded SP2
Memory	1GB USB 2.0 Flash (~250MB free space)

Display	<i>(Standard)</i>	<i>(with 15" option)</i>
Size	10,4" TFT	15" TFT
Resolution	SVGA (800 x 600 pixel)	XGA (1024 x 768 pixel)
Number of colors	262.144	16,2 millions
Touchscreen	resistive 4-wire touchscreen	resistive 5-wire touchscreen

Interfaces

1 x RS232
1 x VGA
2 x USB 2.0
2 x LAN 1Gbit
1 x Audio Line Out
1 x EIB / KNX 2-wire interface

Size	<i>(Standard)</i>	<i>(with 15" option)</i>
Dimensions (W x H x D) (mm)	320 x 264 x 91	417 x 341 x 92
Weight	4 Kg	6 Kg

General

Power supply	100V – 230V AC, max. 2,5A
Temperature range	0°C – 40°C
Degree of protection	IP54 (frontside, after installation)
Casing	robust 2mm aluminium casing, compact design



Overview

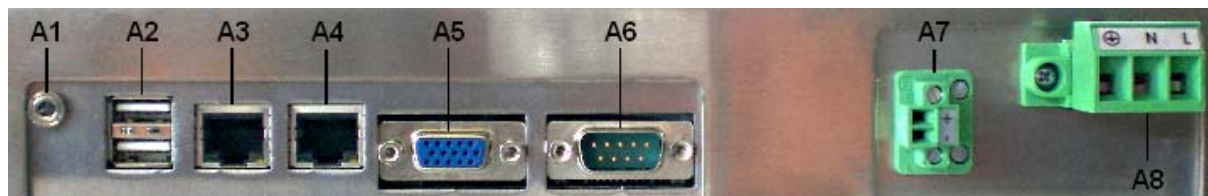


Figure 1: FIAVis Evolution connector overview (back side)

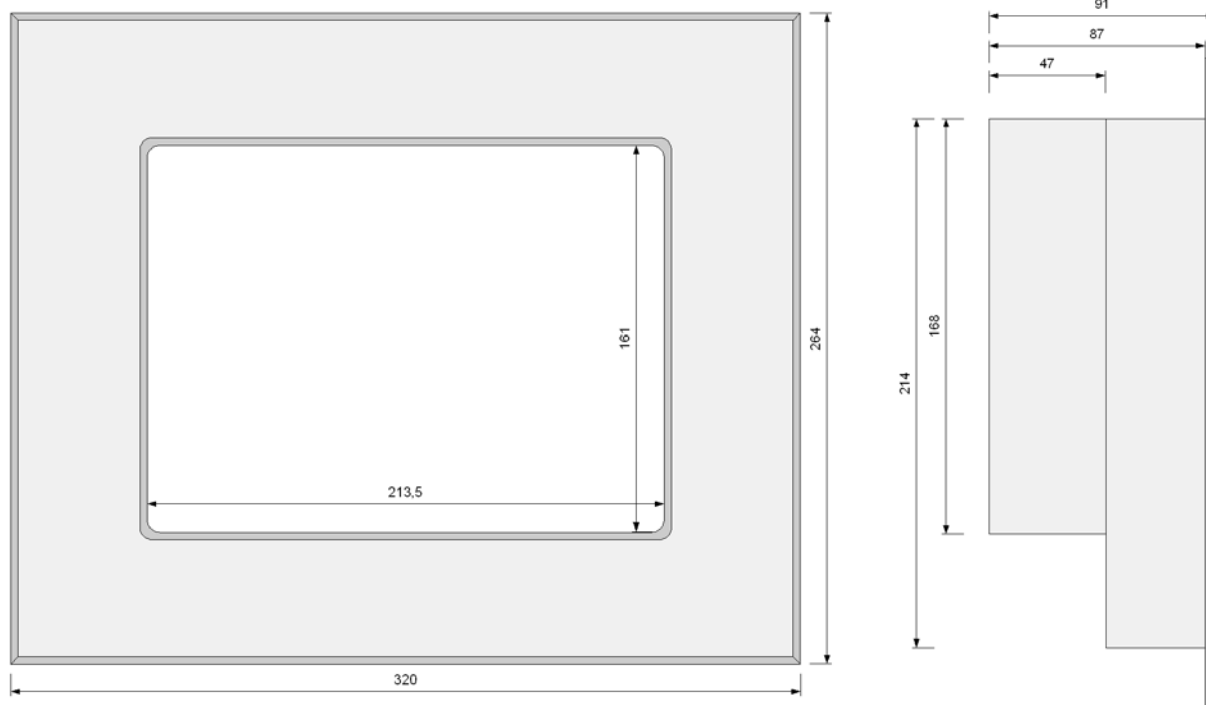
- A1** Audio Line Out, 3.5mm jack plug
- A2** 2 x USB 2.0, USB connector type A
- A3** LAN 1Gbit, RJ-45 connector
- A4** LAN 1Gbit, RJ-45 connector
- A5** VGA, D-SUB connector (female) 15pin
- A6** RS-232 (COM 1), D-SUB connector (male) 9pin
- A7** EIB/KNX 2-wire connector (Attention polarity!)
- A8** Power supply 100V - 230V AC



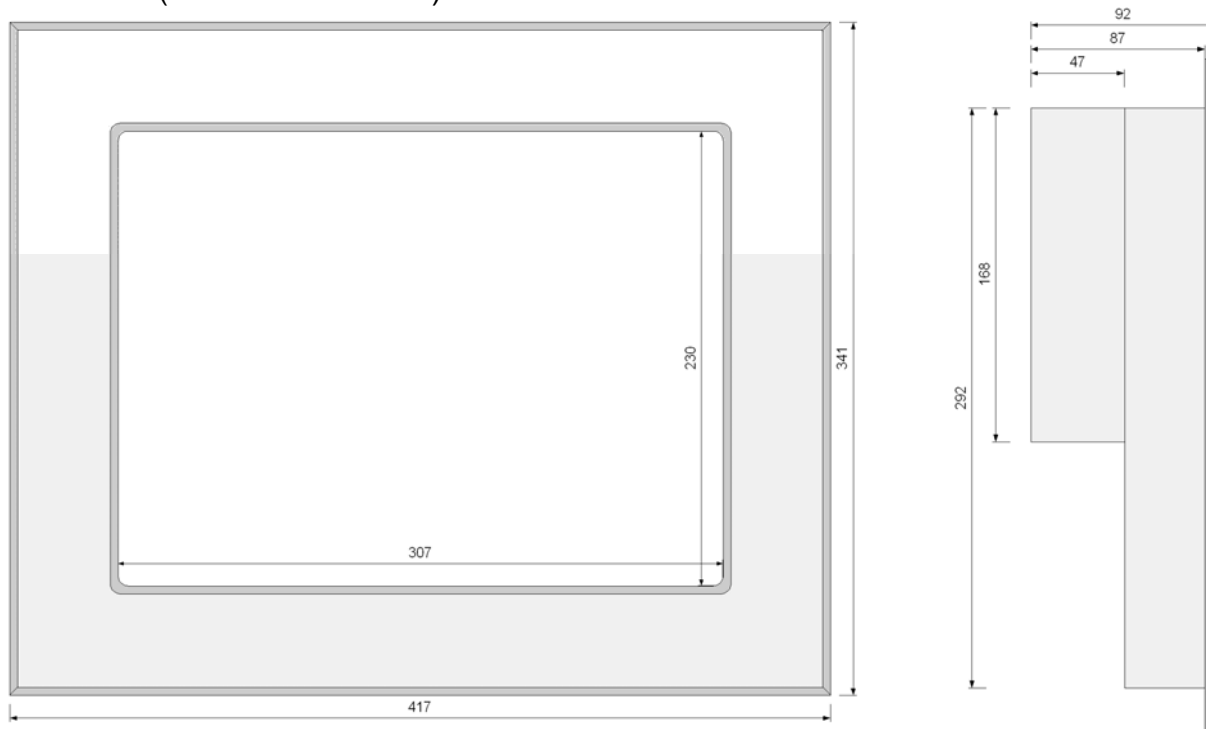
: Protective conductor **N**: Neutral conductor **L**: Phase conductor

Dimensions

10,4" model (Dimensions in mm)



15" model (Dimensions in mm)





Installation instruction

The FIAVis Evolution Panel PC can be mounted on two different ways:

1. Industrial enclosure mounting
If the Panel PC should be mounted in an industrial enclosure, it can be fixed from behind. For this mounting application there are two windings (M4) per side available at the Panel PC.
2. Wall mounting
There's an optional enclosure box for flush-mounting available.

After mounting the FIAVis Evolution Panel PC you need to connect the Panel PC to the EIB/KNX bus system (**A7**) (Attention polarity!), to the network (**A3** or **A4**) and to the power supply 100V-230V AC (**A8**). You can also connect additional devices via USB connector (**A2**) or via serial interface (**A6**) to the Panel PC. The Panel PC also offers you the opportunity to connect external speakers via 3.5mm stereo jack (**A1**).

If everything is connected properly you can switch on the main power supply. The FIAVis Evolution Panel PC will start automatically; there's no separate power switch available.

After installing the FIAVis Evolution Panel PC you have to configure it (see „*FIAVis Evolution – Software installation*“).



FIAVis Evolution – Software installation

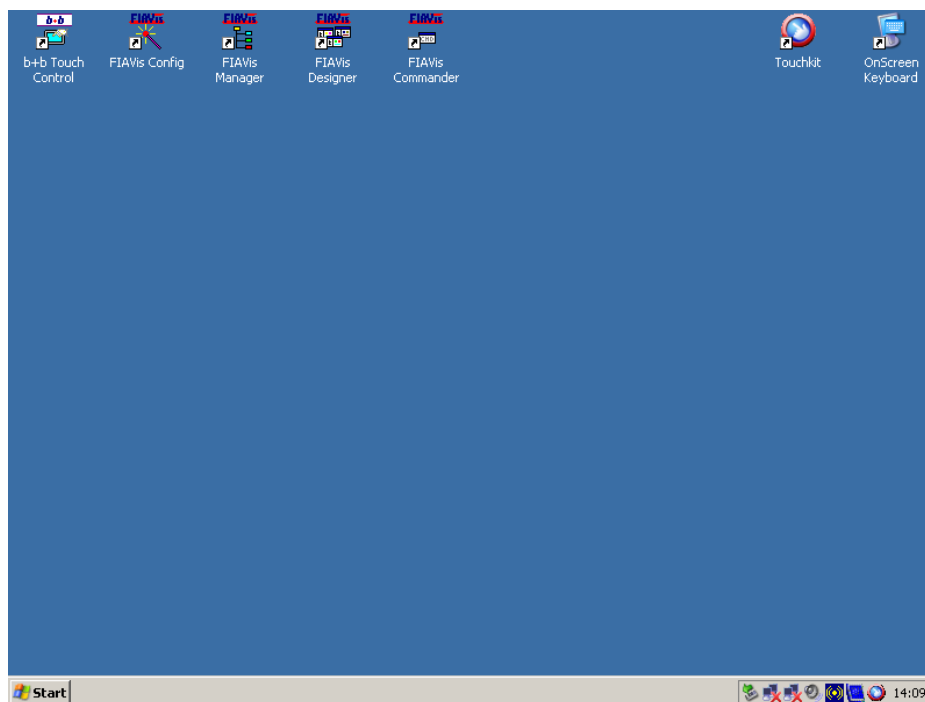
Introduction

The FIAVis Evolution Panel PC has a Windows XP embedded and the complete FIAVis software package (FIAVis Base datapool service, FIAVis Manager, FIAVis Designer) preinstalled. There's also a FIAVis Commander demo project available and additionally a preconfigured Apache web server.

The file system of the FIAVis Evolution Panel PC is protected by default, i.e. you cannot do any permanent changes in the most directories (Windows directory, etc.). The only directory that is available for changes is the "FIAVis" directory (C:\FIAVis), because the FIAVis project data needs to be written to this directory.

It is recommended to do the whole FIAVis parametrization work and visualization development on your workstation and afterwards transfer the project to the FIAVis Evolution Panel PC via network connection. But it is of course also possible to do smaller project changes on your Panel PC; all needed software is preinstalled.

After your first system boot up the following desktop will show up:





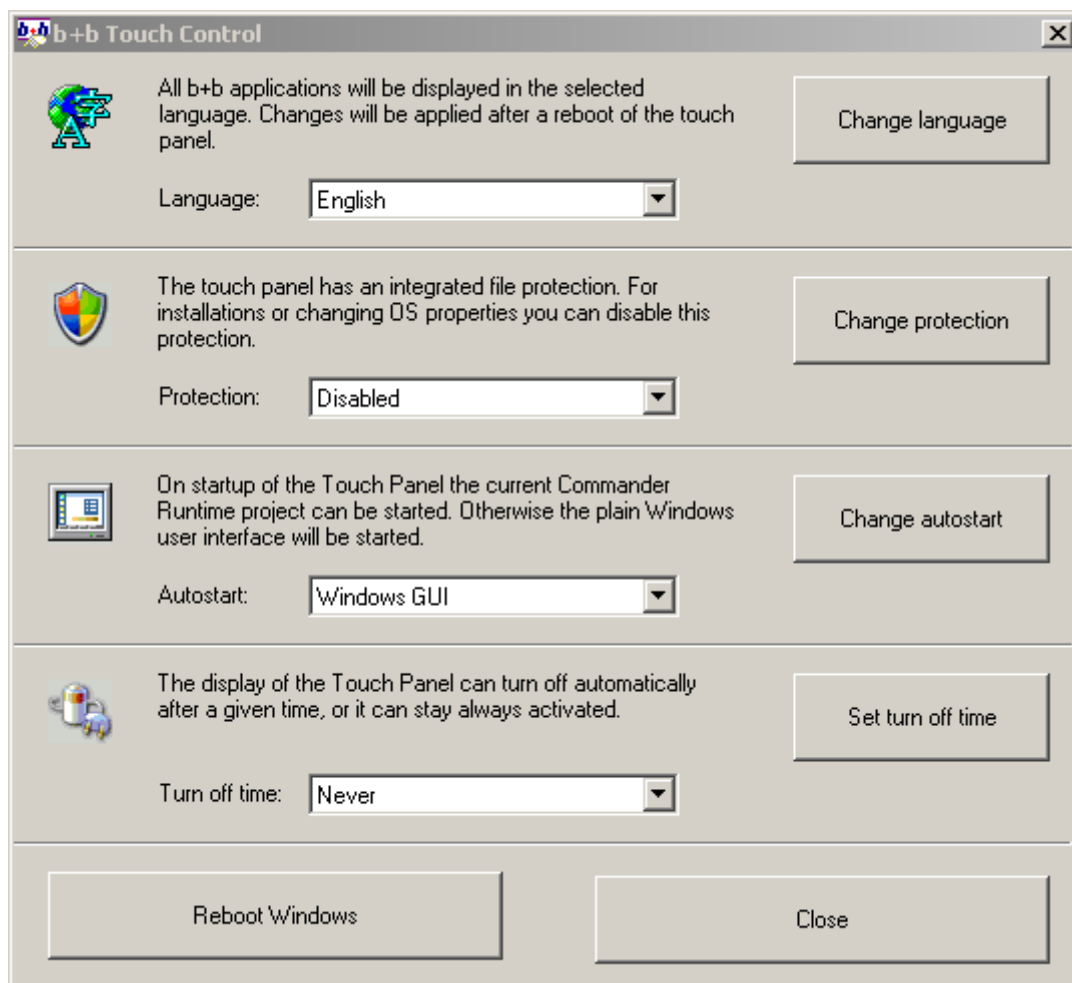
General settings

The file system of the FIAVis Evolution Panel PC is protected by default. This is why you cannot do any permanent changes to the Windows XP embedded operating system: after rebooting the Panel PC all of your changes were reversed.

Of course there is the opportunity to temporarily disable the filesystem protection so you can do permanent changes to your Windows XP embedded installation. Start the “b+b Touch Control” tool by a double-click on the icon (which you can find on the upper left corner of your desktop) to disable the file system protection:



The following window will occur after a doubleclick on the icon:





The „b+b Touch Control“ Tool offers you four different basic settings:

1) Language selection

You can choose English or German as language. The language selection here is only relevant for all b+b Programs (FIAVis). To configure the Windows Language, you have to use the Window's Control Panel.

2) File protection

If you want to do some permanent changes to the Windows settings or you want to install additional own programs to your FIAVis Evolution Panel PC, you can disable the file protection here. It is recommended that the file protection is enabled again after your installation / configuration!

3) Autostart

With the Autostart option you can choose if the FIAVis Commander Runtime project should be startet automatically on Windows XP embedded start or if the Windows standard desktop should be started.

4) Turn off time

The "Turn off time" option sets the time after which the backlight of the Touch Panel is turned off automatically. In this mode the Touch Panel saves energy, while all FIAVis logics are still running normally. The Touch Panel is turned on as soon as you touch the screen.

Every basic setting option will be applied by pushing the appropriate button on the right side. Afterwards a reboot of the PC is needed to activate the selected option.

The "b+b Touch Control" Tool also offers a button for restarting the Windows XP embedded system. It is not possible to restart the FIAVis Evolution Panel PC via the Windows "Start" menu.

To shut down the FIAVis Evolution Panel PC permanently, you have to disconnect the power supply; there's no separate power supply switch.

Important: It is recommended that the file protection is enabled before you cut the power supply! This prevents the Windows XP embedded installation from being corrupted while power loss!



Windows settings

It is necessary to disable the file protection for all of the following settings. To do this, start the “b+b Touch Control” Tool, choose “Disabled” for the “Protection” option and push the button “Change protection”. After the reboot the file system protection is disabled and you can do permanent changes to your system settings.

Important: It is recommended that you re-enable the file system protection after you have done all changes! This is needed to save the Windows system from being corrupted in case of a power loss.

In the Windows world a mouse and a keyboard is needed for almost any program. The mouse is realized with a Touch Panel (pushing long the same position emulates a right click), the Microsoft program „OSK“ (Onscreen Keyboard) is used as a keyboard replacement if no USB keyboard is connected. You can start the OSK with the corresponding icon on the upper right corner of your desktop:



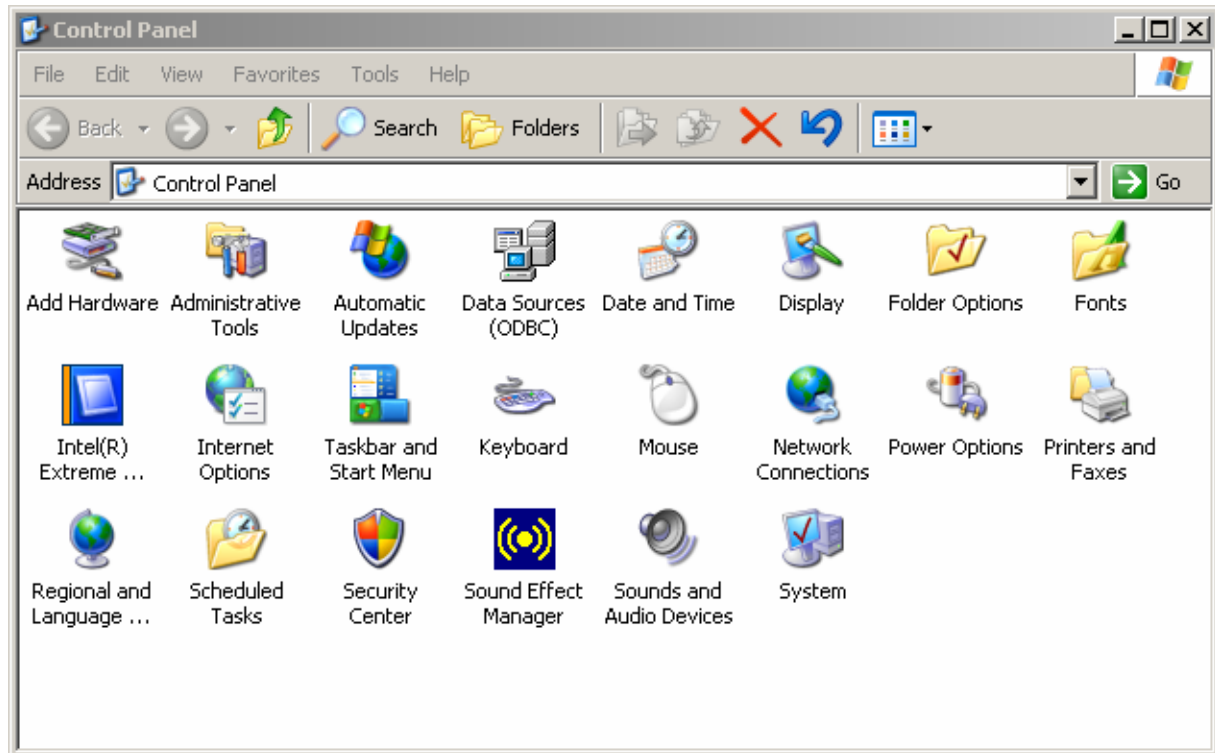
If you need to change the Touch Panel settings (calibrate the Touch Panel, change the double click timings, etc) start the tool „Touchkit“ which you can find on the upper right corner of your desktop:



You can change the most system settings, like in every Windows installation, with the Windows Control Panel. To open it, push the “Start” button and choose “Control Panel”.



The following window occurs, where you can change the most relevant Windows settings:



If you want to e.g. assign your FIAVis Evolution Panel PC a static fixed IP address, just doubleclick on “Network Connections” and choose your network connection.



FIAVis Configuration

The FIAVis Evolution Panel PC offers a complete FIAVis Installation. This software package was installed in the directory "C:\FIAVis". You can find all icons to start the FIAVis configuration tools on top of your desktop:

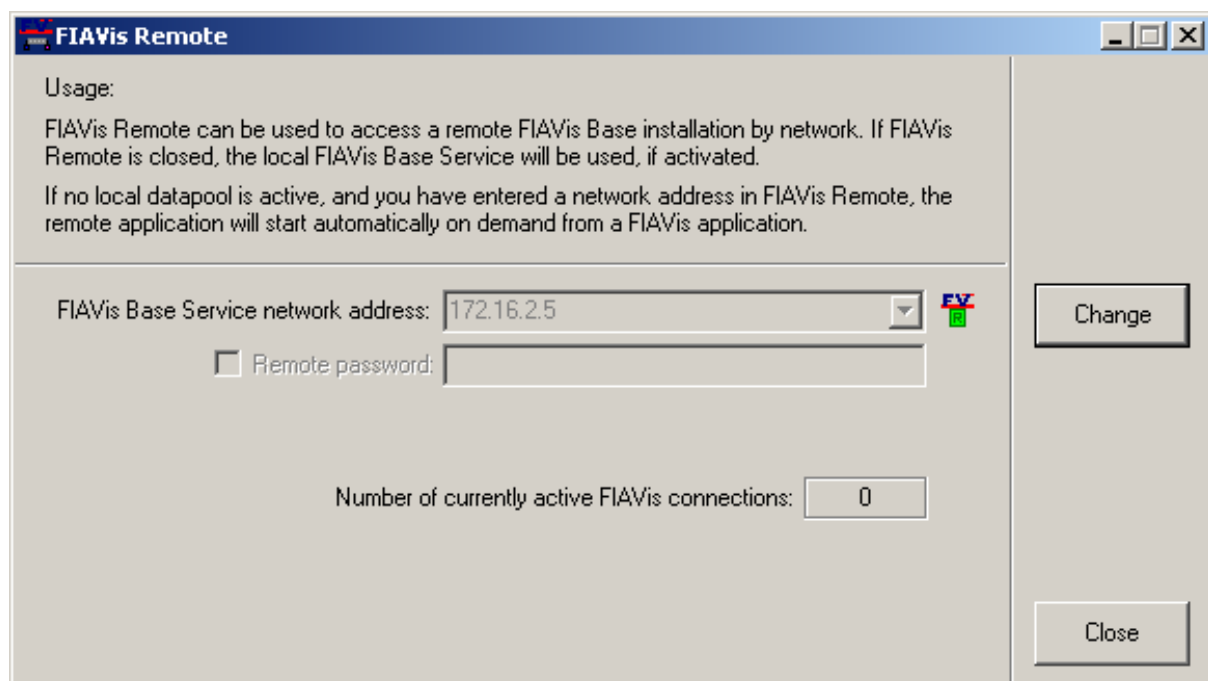


Please consult the „FIAVis user manual“ for information about how to use these configuration tools.

The installed FIAVis software package is identical to the “normal” FIAVis software for desktop PCs. This gives you the opportunity to use the FIAVis upgrade packages to update your FIAVis system to the newest version.

It is even more comfortable to send updates and also your project data via network to the FIAVis Evolution Panel PC. This is possible if you have a FIAVis system including the “FIAVis Remote” tool installed on your workstation.

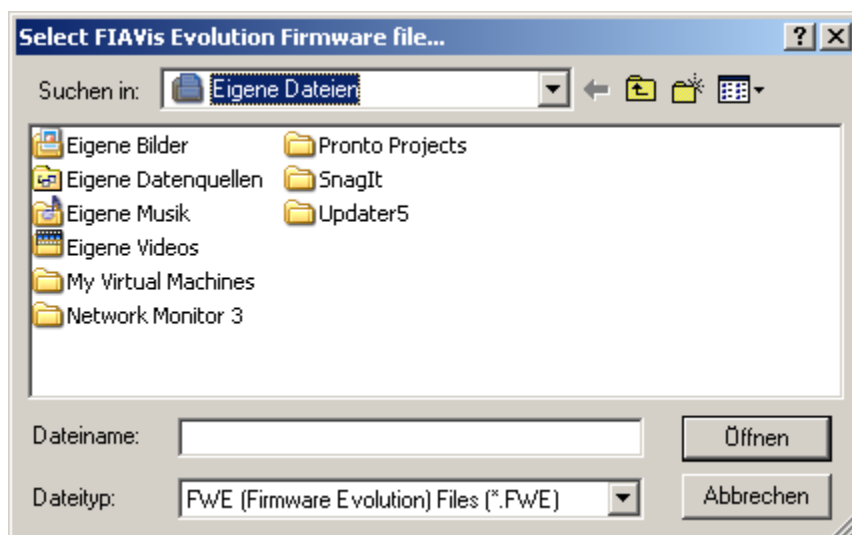
Start the program “FIAVis Remote” on your workstation and enter the IP address of your FIAVis Evolution Panel PC. If the Panel PC can be reached via network a green icon will be displayed in the FIAVis Remote:





You have the opportunity to transfer your project data (EIB/KNX addresses, logics) the normal way via FIAVis Manager. The FIAVis Remote tool transfers is responsible for saving this data on the FIAVis Evolution Panel PC. All other FIAVis program packages are also working on the FIAVis Evolution Panel PC via remote connection.

FIAVis program updates can also be easily transferred the described way via FIAVis Manager and FIAVis Remote. Just open the FIAVis Manager and click on the menu item "Explorer → FIAVis Evolution Firmware transfer". The following file open dialog will occur after a security query:



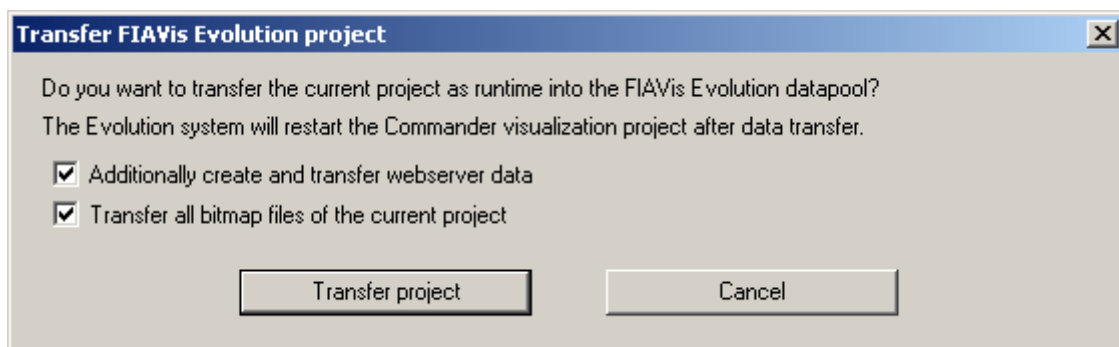
In this dialog you have to choose a file with the extension ".FWE". This file is provided from b+b and can be downloaded from our website www.bb-steuerungstechnik.de, to stay up to date with your FIAVis system.



FIAVis Designer

With the FIAVis Evolution system you can of course use all possibilities of the FIAVis Commander. In the following you can find some hints for a better FIAVis Evolution Touch panel configuration:

- 1) Picture properties: Set up the picture dimensions to your Touch panel resolution (800x600 / 1024x768).
- 2) Project properties: Enable the option "Do not show the window caption of the Commander window", and disable the option "Display ... menu".
- 3) Project properties: The option "Use 2D frames with Text-Buttons" highlights all buttons for a modern user interface.
- 4) User management: You can choose the option "Use screen keyboard for user login (touch screen)" to pop up an Onscreen keyboard automatically.
- 5) Do not use the default edit fields, because the user cannot enter text without a (virtual) keyboard. Use "Input window" fields instead, those are optimized for touch screen usage.
- 6) Do not forget to add a "Close" button (picture changer field) to have the possibility to close the visualization. You can hide this button most time, or user-protect it, but keep in mind that without it you will not be able to return to the desktop. Beside plugging in a keyboard, the only other possibility is to replace the current visualization project with a different (unprotected) one, which is described in the next step.
- 7) First, build and test your user interface on your workstation. To transfer the project choose the menu item "FIAVis Evolution project transfer" (yellow arrow) in the FIAVis Designer. The following window will occur:



If you click on the button "Transfer project" the project will be transferred via remote and is started automatically on the FIAVis Evolution Panel PC. The



previous FIAVis Commander project will be replaced. If you did not change any graphics in your project you can uncheck the option „Transfer all bitmap files of the current project“ to speed up the data transfer.

With the option “Additionally create and transfer webserver data“ you can also update the web server on the FIAVis Evolution Panel PC with the new FIAVis commander data.

The transferred FIAVis Commander project can be found in the directory „C:\FIAVis\Data\Runtime“ on the FIAVis Evolution Panel PC after transfer.



FIAVis Webserver

An Apache web server is installed per default on the FIAVis Evolution Panel PC, the web server is distributing your FIAVis Commander visualization project via network as HTML. You can reach your FIAVis control panel from every PC in your network via browser if you enter the IP address of your FIAVis Evolution Panel PC.

If you want to disable the web server temporarily, click on „Start“ → „All Programs“ → „Apache http Server“ → „Control Apache Server“ → „Stop“. If you want to disable the web server completely (because of security issues or because you don't need it), you have to deactivate it by using the MSConfig.exe tool. Do not forget that you have to disable the file system protection (see *“General settings”*) for this action.