



BACS_CCx_TP Cabinet

Scope of delivery:

- The complete mounted control cabinet with panel PC and required power supply.
- X BACS_WEBMANAGER - number depends on the model of the cabinet.
- X RCCMD licences - one for each BACS_WEBMANAGER.
- Set of BACS Bus Cables per installed BACS_WEBMANAGER
 - o 2x B4BCRJ10025 25 cm
 - o 2x B4BCRJ1004 40 cm
 - o 1x B4BCRJ1007 70 cm
 - o 1x B4BCRJ1015 1,5 m
- 1x base plate with seal and installation screws
- 1x cabinet key
- 1x BACS_PEN3
- 1x CDMAN Manual CD
- 1x BACSQS_DE German manual for BACS
- 1x BACSQS_EN English manual for BACS
- 1x CS141 SNMP Quick start manual
- 1x BACS_CCx_TP German documentation
- 1x BACS_CCx_TP English documentation
- 1x recovery USB stick, external PC power supply (secondary open end) and power cable

Configuration of the WEBMANAGER

- **All installed web managers are set to the delivery state.**
- IP-address: **10.10.10.10**
- Login: **Admin**
- Password: **cs141-snmp**
- Sliding switch: **left position** for manual operating mode.

If more than one web manager is in use, ensure to disconnect all web managers from the installed switch except the WEBMANAGER intended to be configured. Please note, the start-up configuration will only allow to configure one web manager to the desired IP address at a time.

To gain access to the web manager setup, your computer needs an IP address that will not be assigned to a WEBMANAGER, e.g. 10.10.10.123).

Please note: Do not use the IP address 10.10.10.10 for the computer!

For more information on configuration, refer to page 6 onwards or refer to the Quickstart manual.



Information about the Software of the Panel PC

The Panel PC comes with a pre-installed Windows 10 Pro operating system. The windows key to activate the copy of windows 10 pro is located on a sticker at the backside of the Panel PC.

For the activation procedure, an internet connection is recommended.

Pre-set folder structure

Folder: **c:\ICO_Driver**

- ICO TPC-6000 Windows Driver Packet

Folder: **c:\Software-Installation**

- BACS-Utilities
- BACS-Reader
- ModbusPoll free
- UNMS II free
- Acrobat Reader (Internet connection required for final installation)
- Mozilla Firefox Browser (Internet connection required for final installation)
- Google Chrome Browser (Internet connection required for final installation)

Completely Pre-installed programs come with English language. To change language, re-install the software and select your preferred language.

The installation work will add following shortcuts to the desktop:

- Acrobat Reader
- Admin Console UNMS II
- BACS View
- BACS Reader
- BACS Programmer
- Edge Microsoft Browser
- Firefox Mozilla Browser
- Google Chrome Google Browser
- Modbus Poll
- Software-Installation Link to the installation directory

We recommend using Mozilla Firefox or Google Chrome as default browser.



First start of the TPC-6000 Touch panel PC

We recommend ensuring an Internet connection available for configuring the system! Otherwise, offline installations must be carried out manually.

Your task at the initial boot:

- Select your preferred language:
 - German
 - English
 - French
 - Hispanic
- Select the region in which the system is operated.
- Select your preferred keyboard layout.
- Optional setting: If there is no need for a second keyboard layout, skip.
- Setting up network / internet connection;
In case of the installation site does not provide an Internet access, select "I don't have Internet".
- This enables an optional next step: Windows asks twice for a valid internet connection. If the device still has no Internet access, select "Continue with restricted setup".
- - Accept the terms of license.

Setting up the user account

- Enter a user name
- Enter a password
- Repeat the password
- Select up to 3 security questions to get access in case of a forgotten password

Additional windows 10 setup questions

We recommend these settings

- | | |
|--|---------------|
| - Use the cross-device activity history | No |
| - Getting help from digital assistance systems | Reject |
| - Disable voice control: Cortana shall not answer to "Hey Cortana" | |
| - Use voice control | no |
| - Use Location for tracking | No |
| - Search my device | No |
| - Send Data for analysis to Micro Soft | basic |
| - Improving free hand and input control | No |
| - Get user experiences based on send data | No |
| - - Allow apps to use an ID for advertising | Np |

Initial Windows setup is no finished. Reboot the system and log on with your user's name.



We recommend deleting these shortcuts from the desktop:

- Microsoft Edge
- All shortcuts that you no longer use or need.

Furthermore, we recommend removing the following shortcuts from the taskbar:

- Microsoft Edge
- Mail
- Microsoft Store
- - Right-click in the taskbar to deactivate "Show Cortana" button

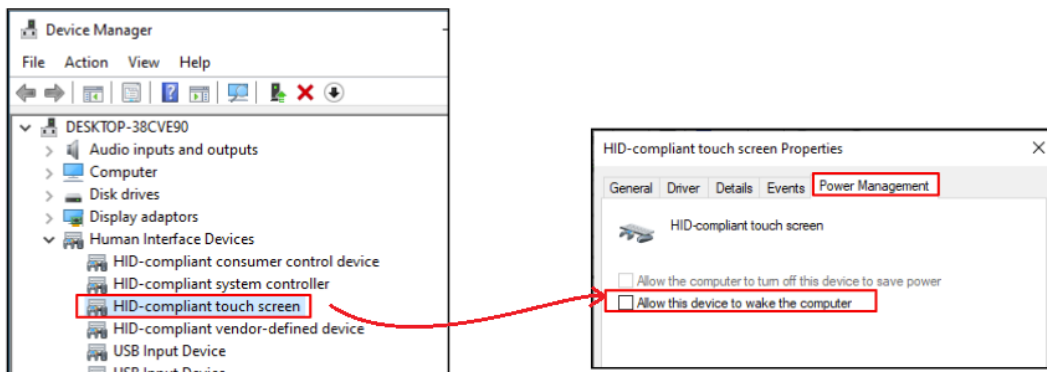
Configuration: Computer wakeup signal by display touch

The display is disabled by the power saving features of Windows 10 during hibernation and is not a hardware error:

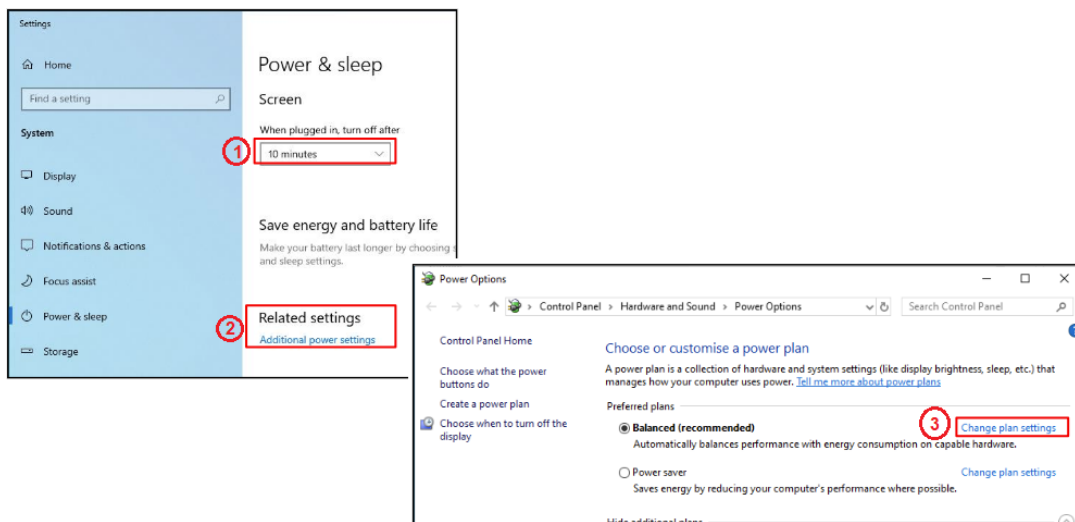
The operating system runs into a sleep mode to save energy when the computer is not in use. Since the touch interface is an optional HID interface, it will be disabled by default. As a result, a USB keyboard works, but not swiping or tapping.

To avoid this behaviour, the touch display must be added to the list of active devices:

1. In the device manager, find the HID-compliant touch screen:
Make sure that "Allow this device to wake up computer" is **disabled**.



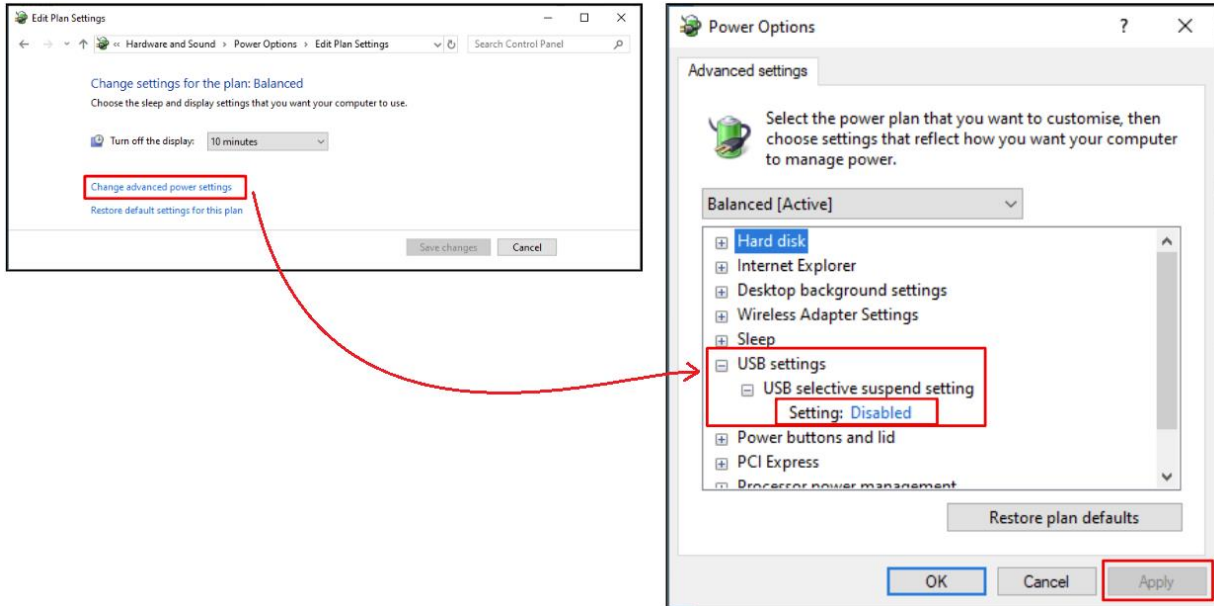
2. Adapt the Energy safe features
 - Turn off screen after 10 minutes (1)
 - Click on Additional power settings (2).)
 - Click Change plan settings (3)





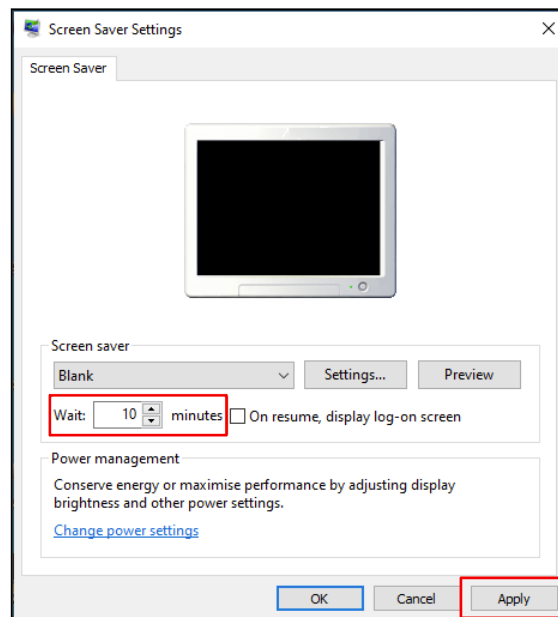
Adjust the advanced energy saving functions as follows:

- In the USB settings, click +
- Open the USB selective suspend setting with +.
- As setting, choose "Disabled"
- Confirm the settings with "Apply".



3. Adapt the current screen saver settings

- As screensaver, select the blank screen
- Set the start time to 5-7 minutes.
- Click Apply to confirm your settings
- Click "OK" close the configuration dialogue

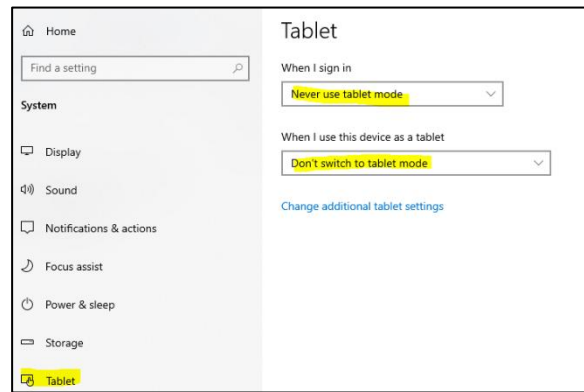




How to Disable the tablet mode

With the Windows feature "Tablet Mode", the display driver may hang up. To avoid problems with the display driver, we recommend deactivating the tablet mode.

- Right click on desktop "Display settings "
- Select Tablet and change the settings as shown in the graphic to "Desktop mode

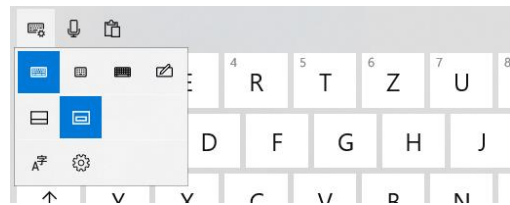


Using the Touch Screen Keyboard function:

Using the pop-up keyboard

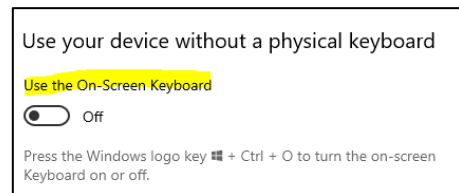
- Right-click in the "Taskbar" and activate "Show Touch keyboard button" From now, the keyboard symbol is displayed next to the clock. Tipping the keyboard symbol will open the on-screen keyboard.

At the Keyboard context setting, it is possible to change the general keyboard layout.



The on-screen keyboard

- Click **Windows Start and select settings.**
- Select „Ease of Access “and search for the menu entry “Keyboard”
- **Note**



This is a permanent on-screen keyboard – once closed, you need to re-visit the settings menu. If this is your choice, we recommend to minimize the keyboard for re-use.

External Mini-Keyboard

An external keyboard with an integrated touchpad is included for easier data entry. The mini keyboard comes with 4 Velcro straps for attaching the device to/within the cabinet door.

As factory default service, both, the receiver and the charging cable, are already connected to the panel PC. The keyboard has an on /off switch - Keep in mind to turn it off when configuration work is done.

Please keep in mind: The internal battery of the keyboard will be drained faster if not switched off.

You do not need to change the keyboard battery – if empty, use the USB cable to recharge the device accordingly.

For more information, please refer to the keyboard's leaflet.



Using the USB Recovery stick

Additional hardware required:

- External USB keyboard to get access to the panel PC BIOS system
- USB-Recovery-Stick

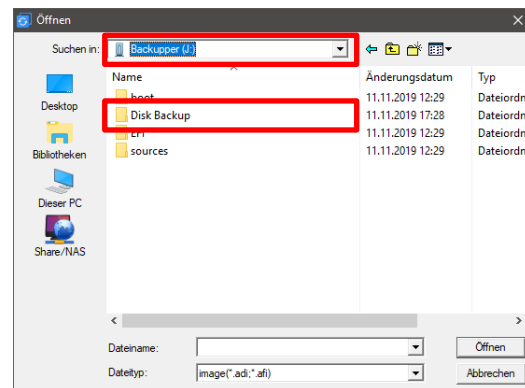
Important: A system recovery resets the hard disk to its delivery state and formats it beforehand. All data will get lost! **Please backup your data before using the recovery function!**

Preparing a system recovery:

1. Connect the USB keyboard to one of the black USB ports. (USB 2.0).
2. Plug the USB stick into the blue USB port (USB 3.0).
3. Power up the computer while pressing del and open the BIOS setup
4. Select the menu „**BOOT**“
5. At „**Hard Drive BBS Priorities**“ select „**Boot Option #1**“and change the settings to USB-Stick boot.
6. Press „**F4**“, save the settings and restart the computer.
7. The computer will accept the USB stick as boot device.

How to trigger the recovery procedure

1. Open the Recovery program and click **“Select to Restore”**
2. Choose the image file:
 - a. Select the USB-Stick
 - b. open the directory **“Disk Backup”**
 - c. Select the ***.adi - file**
3. Select **“Restore the entire Disk”** and click on Disk0 (selected disk0 will be shown green).
4. **Disk Restore**, click Disk0 (ca. 111,80GB).
5. Accept the warning that the entire drive will be formatted.
6. Click **„Disk Restore“**.
7. The recovery preparation procedure needs about 30 minutes.
8. When finished, you need to remove the USB stick:
 - a. Close the tool; the computer restarts automatically.
 - b. When the monitor blanks out and the computer beeps, remove the USB stick.
 - c. The installation routine starts – this will also need about 40 minutes.
 - d. **Please wait: do not switch off the computer until installation is finished!**
9. After installation, the language selection screen will be shown.



LAN Routing – a small network configuration guide for BACS_CC1_TP

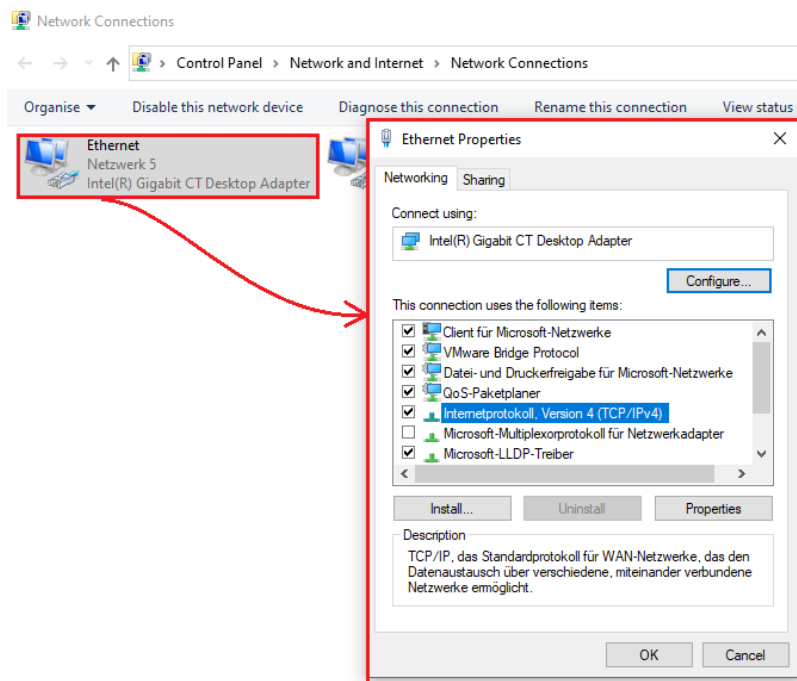
The network interfaces are a little tricky. On first start-up, the computer cannot hold preconfigured network interfaces: First, you need to run the Windows initial setup and define a user. With this user, it is possible to configure the network interfaces for use with BACS or your customer's network.

If your intention is to use the Panel Computer to configure the BACS WEBMANAGER, you need to configure the computers network interfaces first:

Configuration: Standalone and use for local systems or initial configuration work

By default, each BACS WEBMANAGER will use the pre-set IP address 10.10.10.10 on the very first start. After you have set the IP address within the basic setting, the WEBMANAGER will take over the new IP address. Therefore, depending on the configuration progress, the network cards may have to be adjusted accordingly, so that the BACS WEBMANAGER remains accessible.

1. Open the network configuration and select at the network interface "Properties" from the context menu. At the configuration dialog, select TCP IP v4:



Double-click the TCP /IPv4 - entry:

Please note that both, the IP address and the subnet mask, have a fundamental influence on the accessibility of the web manager.:

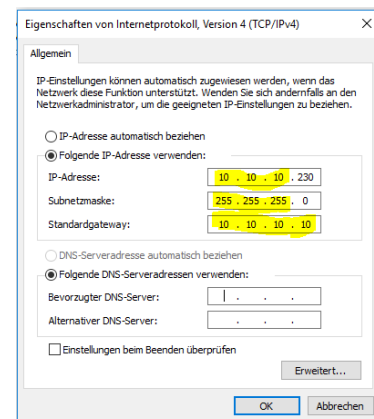
Enter these values:

IP address: 10.10.10.XXX*

Subnet mask: 255.255.255.0

Gateway: 10.10.10.10

*XXX: This value can be freely defined, just ensure, it is in between 1 and 254 and is not "10".





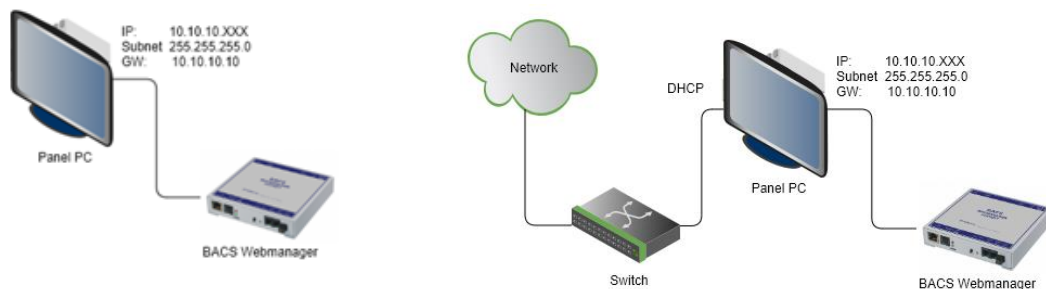
Note

An IP address may only be represented once in the network. In general, it is not possible to operate two different devices with the same IP address. This will lead into an IP address conflict, and both devices are not reachable. In case of more than one BACS WEBMANAGER, ensure to adjust the respective IP address before connecting the next WEBMANAGER to the network.

2. Panel PC: Setting up the second network interface

OK, while the first network card has been set up exclusively for the BACS Webmanager, the second network card is free and can be set to match the client's network. The problem is, this setup can only be carried out on site during installation because it must fit to the customer's network

However, as DHCP is activated by default, the Panel PC (Windows) will automatically search for a valid DHCP server that is allowed to assign a corresponding IP address. If no DHCP server answers the request, Windows will take a randomly generated address. There are basically two installation possibilities:



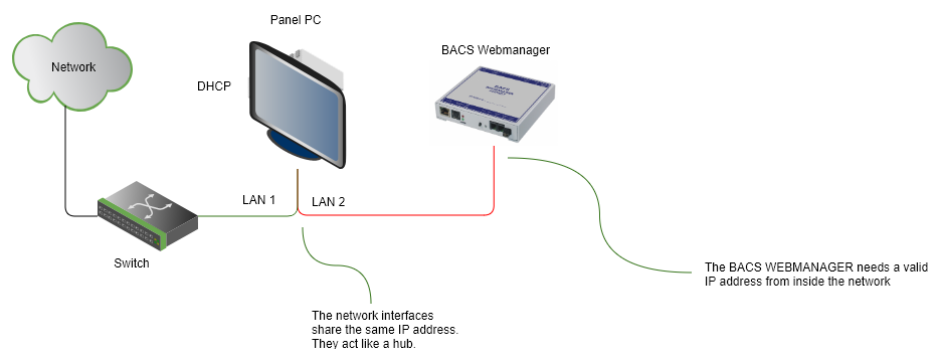
Standalone / no DHCP found or a fix IP address for BACS and a valid DHCP Uplink

In this example, the BACS WEBMANAGER is set to work in a network around the IP address range 10.10.10. 1 - 254. From the Panel PC you can access the WEBMANAGER directly. If you connect the second interface to the network, you can call the panel PC via the remote desktop and display the BACS WEBMANAGER accordingly, but not reach the BACS WEBMANAGER directly.

Bridging – Stitching the network interfaces of a panel PC together

From now, network administration starts....

If you combine both network cards of the Panel PC with a network bridge, they work together as a single network hub. Both network cards share an IP address (you need only one IP address for the computer) and appear as one device in the network. The BACS will receive via DHCP a valid IP address or need an IP address from the customer's network. With this technique, signals are looped through accordingly





from both sides of the network – but with some disadvantages. As soon as the operating system goes down and hibernates, the network connection is closed up until someone wakes up the operating system. The network connection of the BACS WEBMANAGER depends on a working network uplink to the customer's network via the panel PC. If the computer goes down for some reasons, the connection is lost.

Optional: additional Bridging configuration

If you choose this operating mode, you will recognize that the default IP address 10.10.10.10 is not accessible. This is correct, the IP address 10.10.10.10 is not included within your customer's network IP range and must be added manually via a command window:

Run the command prompt „as administrator“ (It will not work without it) – this will grant a higher access level.

Now, enter the following command:

```
route add -p 10.10.10.10 192.168.3.5
```

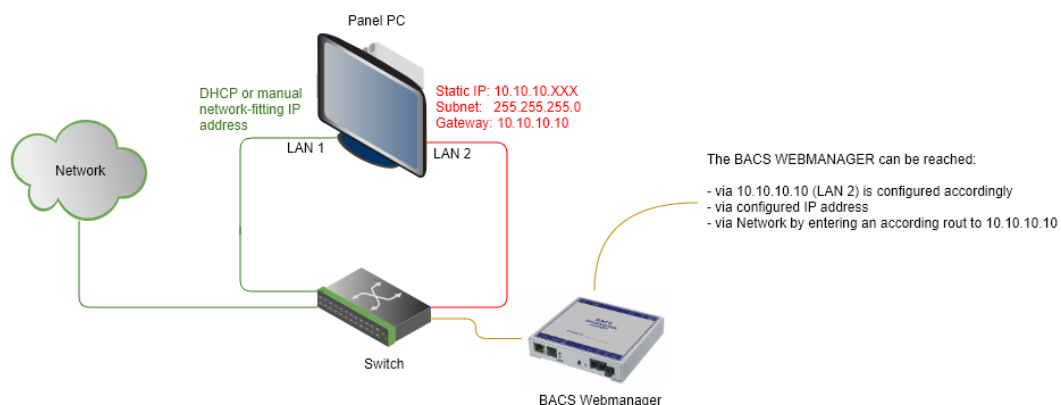
```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19043.1348]
(c) Microsoft Corporation. All rights reserved.
C:\Windows\system32>
```

Windows will confirm the execution with a simple "OK" - in this example, you will add a permanent route (-p) to the destination 10.10.10.10 from the IP address 192.168.3.5. Afterwards open the web browser and enter `http(s)://10.10.10.10` - the web interface of the BACS WEBMANAGER will answer.

3. Using an external switch

Our recommendation to unleash the full potential with an external network switch:

- Local access in configuration mode technicians on site. No additional Laptop is required
- Full network access in normal mode
- Remote access to the panel PC for any maintenance work and remote support
- And much more ...



One network card will be configured to reach the BACS Web Managers on site in configuration mode directly. The second network card is set to the company LAN. As both network cards act as individual network devices, they can operate on the same switch. The BACS WEBMANAGER can be reached from the panel PC in both cases, as Windows can manage its own network cards internally.