APPLICATION NOTE

CP600 CONVERTING A CP600 PROJECT TO A CP600 2ND GENERATION PROJECT

HINTS AND TIPS

Contents

1 Introduction

1.1 Scope of the document

Support Users to convert a project made for CP600 to project for CP600 2nd.

The document describes the general differences between the CP600 and CP600 2nd generation and gives some hints to execute all necessary steps for conversion.

1.2 Compatibility

The application example explained in this document have been used with the below engineering system versions. They should also work with other versions, nevertheless some small adaptations may be necessary, for future versions.

- CP600 / CP600 2nd generation
- Panel Builder V2.8.1.477 or newer

1.3 Overview

2 General Differences

2.1 Hardware, OS

	CP6xx	CP64xx
Processor Speed	ARM Cortex A8 600MHz	ARM Cortex A8 1 GHz
Memory	• Flash Disk 128Mbyte • 256MB DDR	• Flash Disk 4 GB • 512 MB DDR
Operating System	Microsoft Windows CE 6.0	Linux
Application Memory	30…60MB	150 MB

2.2 Interfaces and Slots

	CP6xx	CP64xx
Ethernet	2x ETH 10/100 Mbit	2x ETH 10/100 Mbit
Serial ports	1x SER RS-232/-485/-422	1x SER RS-232/-485/-422
Card Slot	1x SD-card Slot	1x SD-card Slot
USB	2x USB Host	2x USB Host

2.3 SD Card

	CP6xx	CP64xx
Size	Max. 2 GB (ABB tested Cards)	Max. 2 GB (ABB tested Cards)
Format	Standard	SDHC supported (Delivery from ABB in preparation)
Card Function	• Update Project • Update Runtime	• Update Project • Update Runtime

2.4 Licenses

Same as before. There are no changes in the licenses system.

2.5 Replacement Options

If you want to transfer a PB610 project form a today´s CP635, CP651 or CP676, which have direct successors in CP600 2nd generation (CP6407, CP6410, CP6415), you will face no difference in screen size and resolution, means, your current application will fit for the successor screen without any borders or other mismatches. If you want to replace a today´s CP620, CP630, CP661, CP665, which don´t have direct successors in CP600 2nd generation, screen sizes and resolutions might be different. In that even after optimal adaption of the PB610 application some borders will remain on the new target control panel.

current panel	size	resolution	replacement	size	resolution	factor	borders	cutout	interfaces
CP620	4.3”	480x272	CP604	4.3“	480x272	1.000	no	same	-1xETH, -SD
			CP6605	5“	800x480	1.667	13 px up+down	same	same
CP630	5.7”	320x240	CP6407	7“	800x480	2.000	80 px left+right	same	same
CP635	7”	800x480	CP6407	7“	800x480	1.000	no	same	same
			CP607	7“	800x480	1.000	no	same	-1xETH, -SD
			CP6607	7“	800x480	1.000	no	same	+1xETH
CP651	10.4”	800x600	CP6410	10.4“	800x600	1.000	no	same	same
CP661	12.1”	800x600	CP6415	15“	1024x768	1.280	no	bigger	same
CP665	13.3”	1280x800	CP6615	15.6“	1366x768	0.960	69 px left+right	wider	+1xETH
CP676	15”	1024x768	CP6415	15“	1024x768	1.000	no	same	same

3 Convert Application

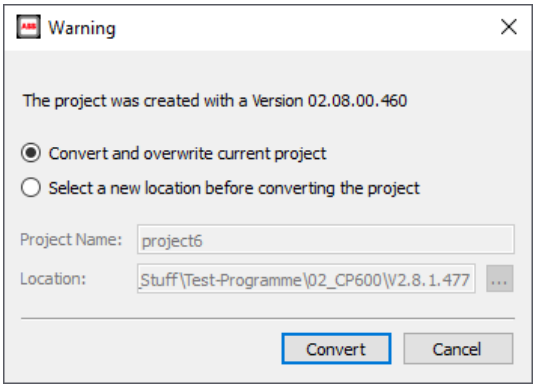
3.1 Update Project or new Project

Update Project can be done by “Project Properties” in the section “Project -> Project Type” (see chapter Convert Project with Panel Builder)

- Target HMI will be changed
- Standard application will be transferred

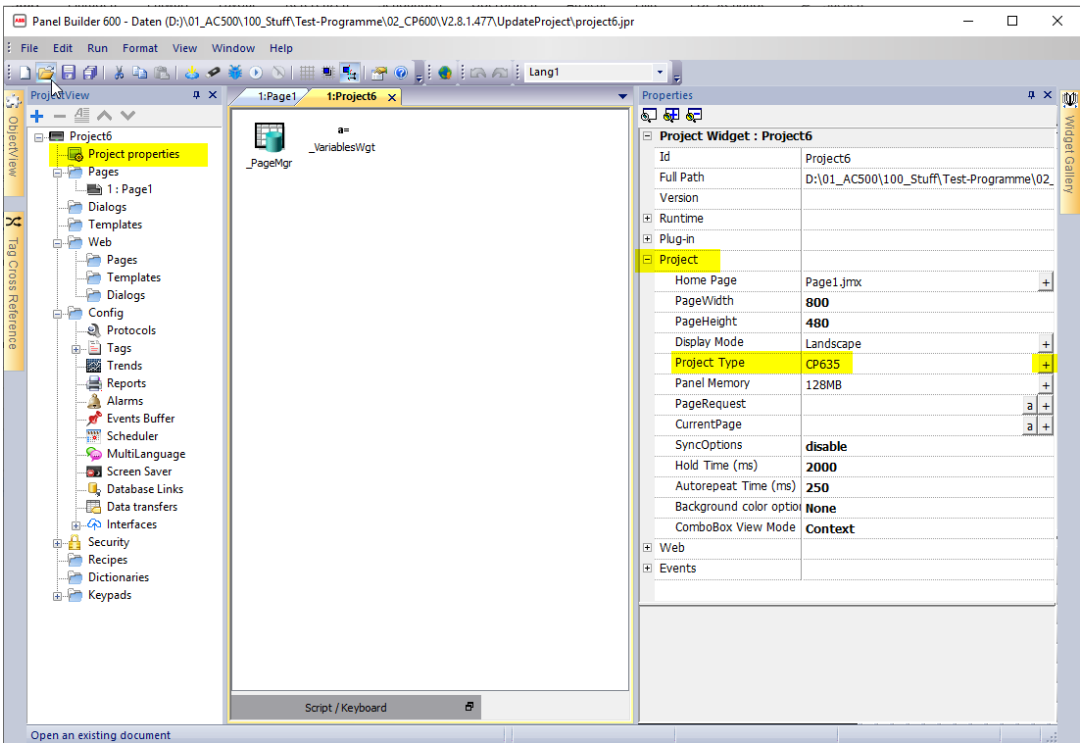
3.2 Convert Project with Panel Builder with same screen size

- Create backup of your current Panel Builder project
- Open existing project with Panel Builder in version V2.8.1.447 or newer
- You will be asked if you want to update the project

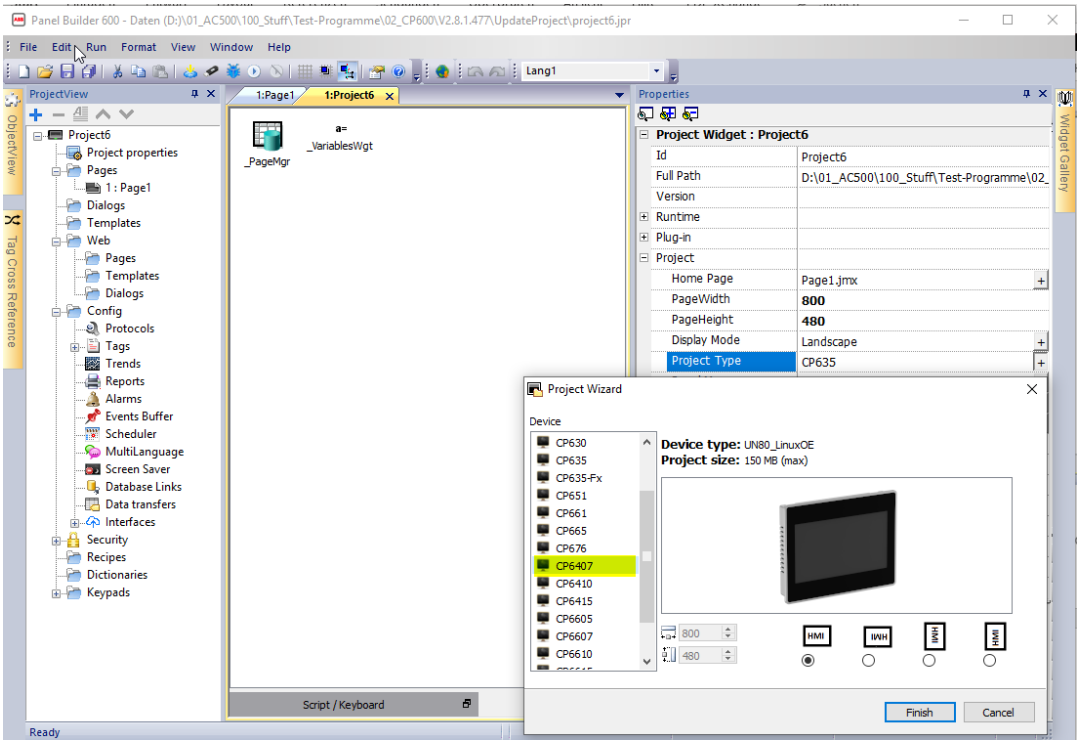


- Confirm with “Convert”

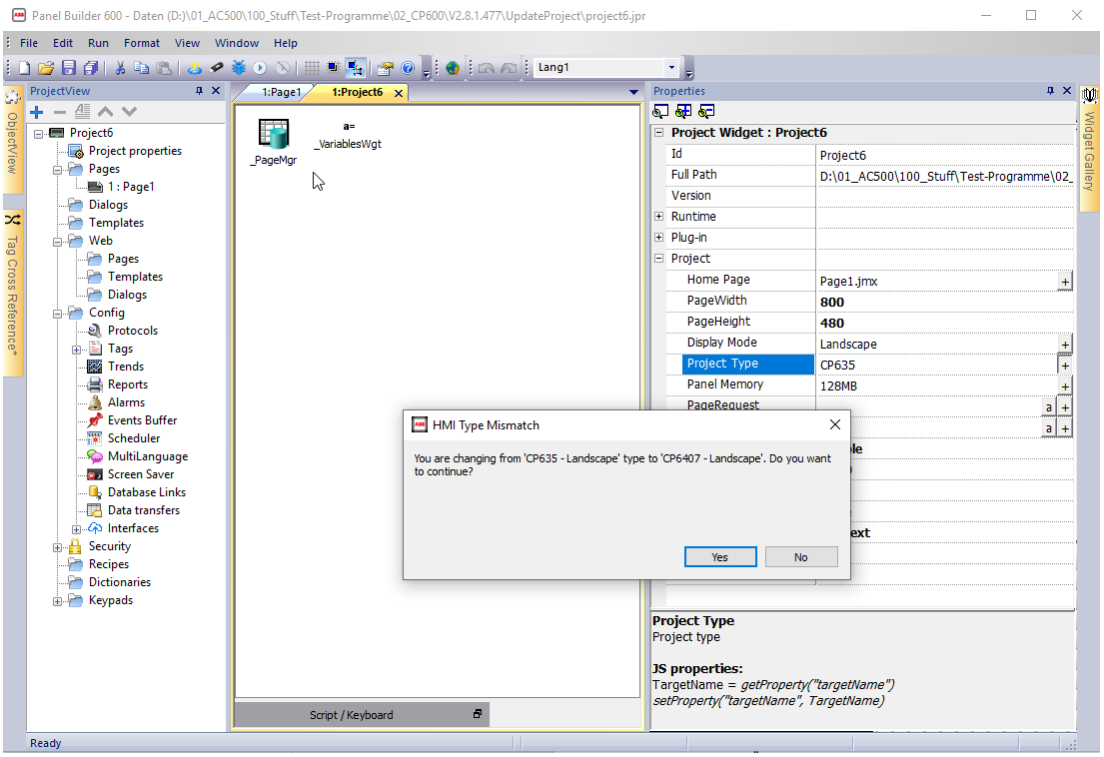
- Double Click “Project Properties”



- Expand the **Project** entry and select **Project Type**
- Push Button right to “**+**” Button
- Select the matching target, the table is shown in chapter 2.5 Replacement Options



- Confirm with **Finish**
- A hint will be shown, that the target will be changed



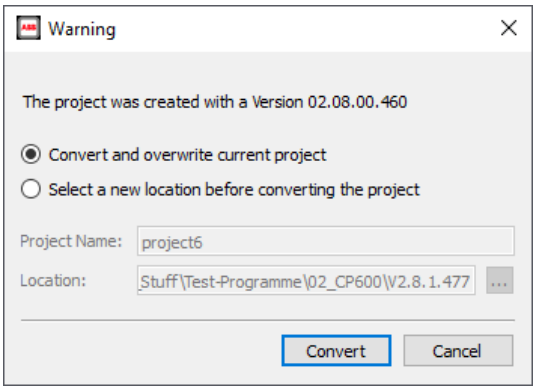
- Confirm with **Yes**

CAUTION!

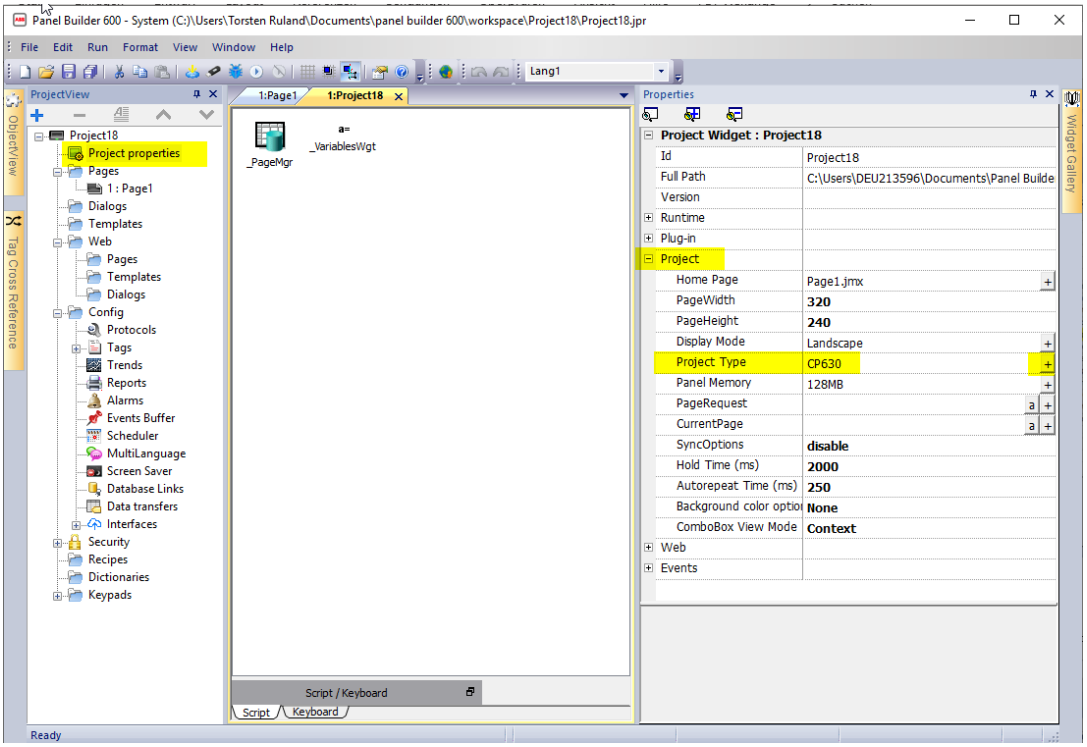
If IRC5 driver is used, it has to be replaced by IRC5 Linux driver with relevant configuration parameters.

3.3 Convert Project with Panel Builder with different screen size

- Create backup of your current Panel Builder project
- Open existing project with Panel Builder in version V2.8.1.447 or newer
- You will be asked if you want to update the project

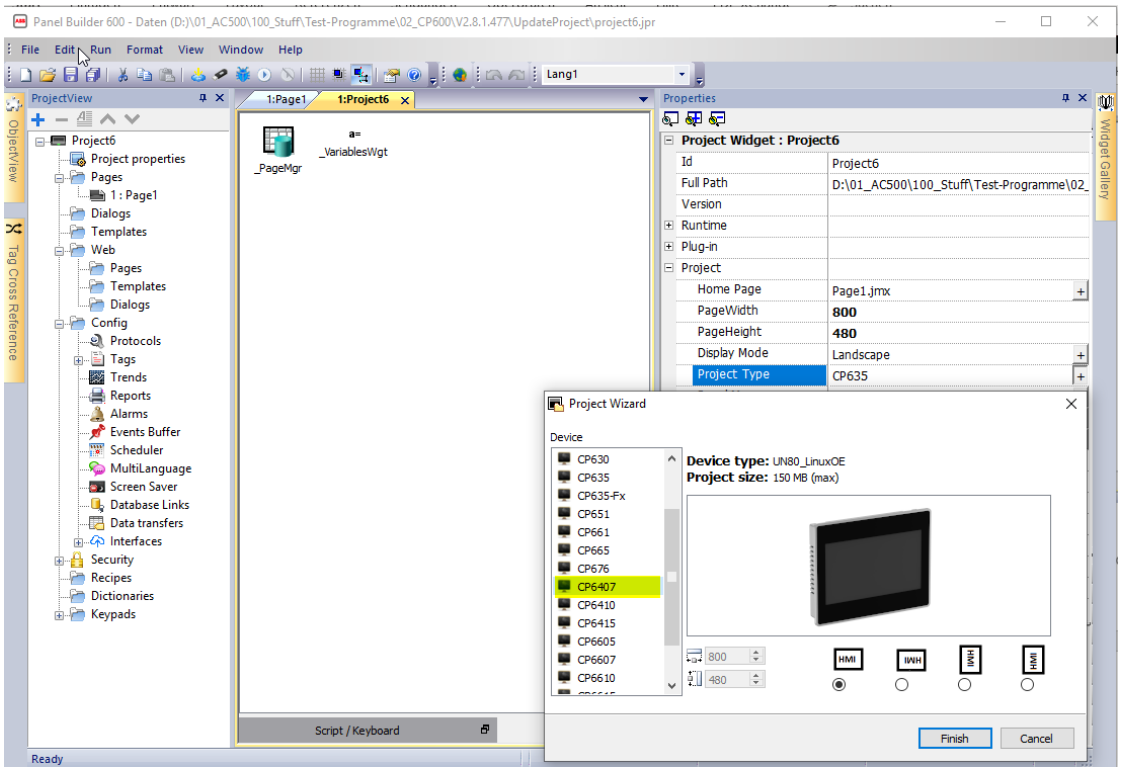


- Confirm with “Convert”
- Double Click “Project Properties”

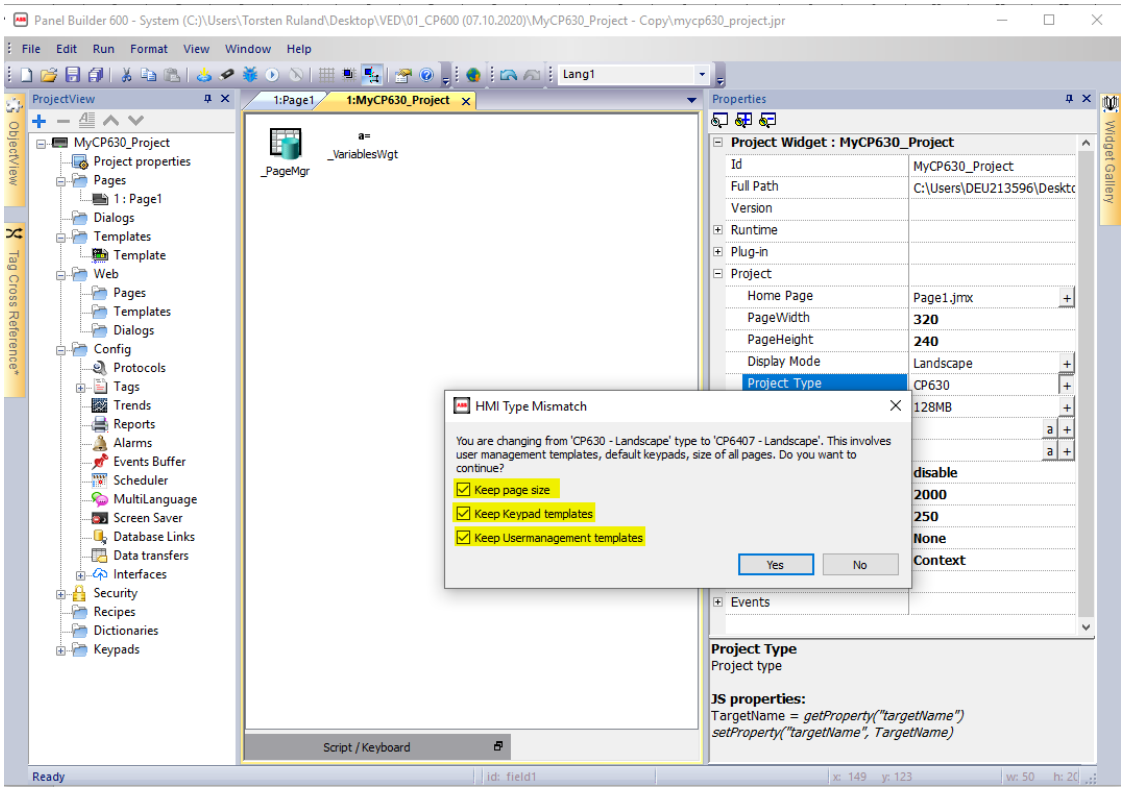


- Expand the **Project** entry and select **Project Type**
- Push Button right to “**+**” Button

- Select the matching target, the table is shown in chapter 2.5 Replacement Options

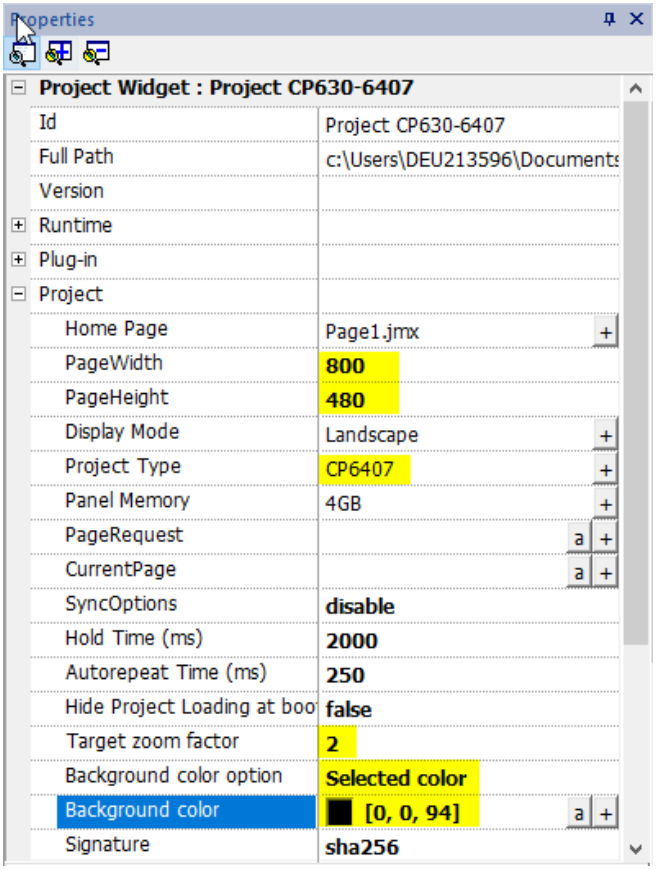


- Confirm with **Finish**
- A hint will be shown, that the resolution of the new target is different. Quadruple resolution of the application, adapted from CP630 800x480 pixels instead of former 320x240 pixels



- Select all three checkboxes (**Keep page size, Keep Keyboard templates and Keep Usermanagement templates)** and confirm with **Yes**

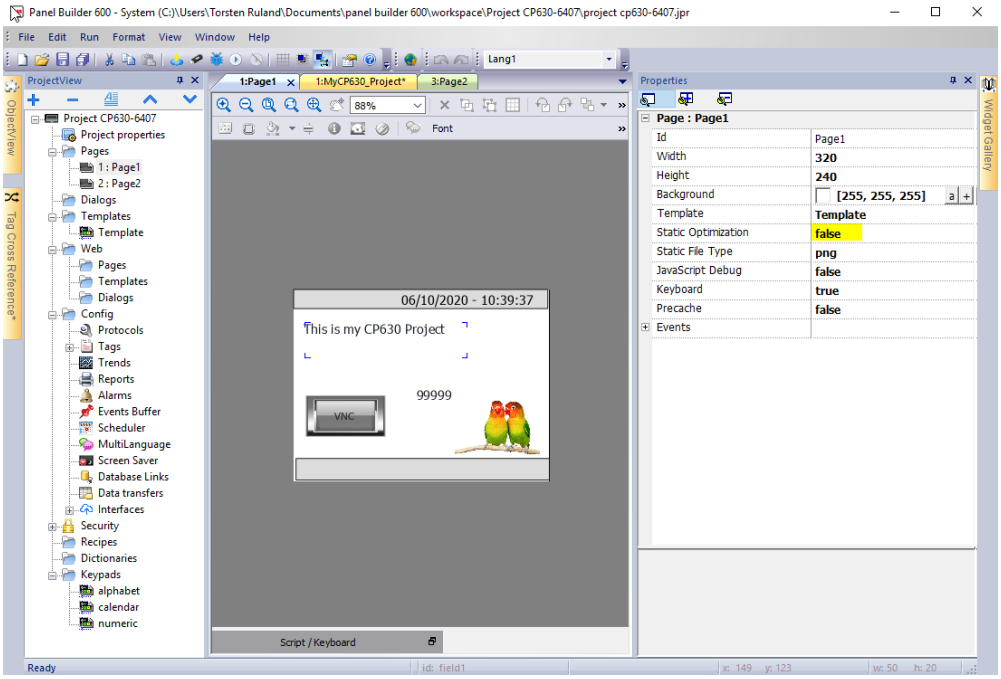
- Some additional parameters must be adapted. Please enable the **Show Advances properties** button in the upper left corner
- Set the parameters as seen in the screenshot below



  - Current target device (here: **project type**) „CP630“ has to be replaced by „CP6407“
  - Checking the box **Keep page size, Keep Keyboard templates and Keep Usermanagement templates** will make sure, that current application can just be zoomed correctly
  - **PageWidth** and **PageHeight** represent the resolution of the target device and are updated automatically with the selection of CP6407
  - Target zoom factor: It shall be defined in that way, that at least one - either the horizontal or the vertical - resolution meets the equivalent resolution of the new target device.
    In this example – target zoom factor: **2** ➔ 2x (320x240) ➔ 640x480 (see table in chapter 2.5)
    - the zoomed vertical resolution complies with the vertical resolution of the new CP6407
    - The zoomed horizontal resolution of 640 is by 160 less than 800 of the new CP6407 ➔ Since the application is displayed with central alignment there will be two stripes (width of 80 pixels each) of background left and right on the CP6407
  - Background color: This option defines the color of the borders, which will be visible on the panels screen left and right from the presentation of the appli-

cation. In this example blue color was selected for better visibility of the borders. In real applications black background color [0, 0, 0] might be the best solution.

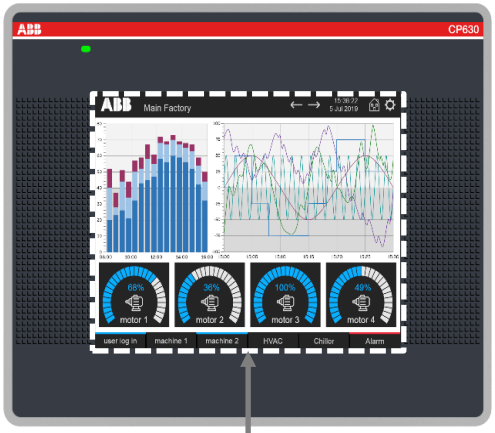
- A further parameter must be adapted. Please switch to your first page in the project. There we have to adapt one parameter.
- Set the parameter as seen in the screenshot below for **each** page



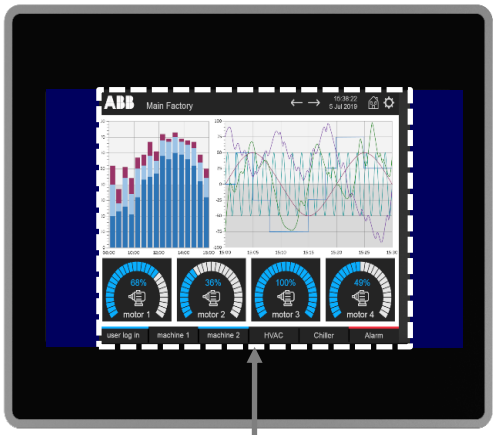
  - Please set the parameter **Static Optimization** to **false**. This will enable rendering during runtime.

- The result from the above settings:

CP630



CP6407



same application size on screen

CP6407: double resolution stripes of background color left and right

CAUTION!

If IRC5 driver is used, it has to be replaced by IRC5 Linux driver with relevant configuration parameters.

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