

Automation Products

Control Panels CP600

New CP665 and new features for CP600 range

- 12 innovated Control Panels
- Two new 13" Control Panels
- New functions
- updated PB610 Panel Builder 600



2014-12-13

Introduction of new hardware

The new products CP651, CP661, CP676, CP651-WEB, CP661-WEB and CP676-WEB provide performance boost, Ethernet switch, more memory, two USB interfaces, SD-Card, more drivers and new certificates like UL class 1 Div 2. These allow much more applications in more market segments.

New 13.3" CP665 and CP665-WEB

These offer outstanding screen resolutions in same cut-out size as the 12" CP661 and CP661-WEB. Resolution is 1,280*800 which is 113% more than those of 12" with 800*600. That additional space enables placement of more instruments, buttons, indicators or recipe selectors on fewer screens.

Panel Builder 600 V1.90.0.975

This version supports the new products CP651, CP661, CP665 and CP676. It supports IRC5 driver for direct communication with ABB Robot Controller IRC5.

ABB Robot IRC5 direct connection

IRC5 driver enables direct connection of CP600 with ABB IRC5 Robot Controller. Tag import from RobotStudio to Panel Builder 600 is fully supported. This gives straightforward system design with highest degree in engineering productivity.

CP600 can replace in some cases FlexPendant and is in many cases an ideal add-on to FlexPendant to give more productivity.

IRC5 driver is available for CP620/630/635/650/660/675 with index D1 onwards and all CP651/661/665/676.

Please note that this driver is exclusive to those panels being programmable with Panel Builder 600.

ABB Motion HCP and HCP2 drivers

CP620/630/635 with index C3 onwards, CP650/660/675 with index C2 onwards and all CP651/661/665/676 can be used with ABB Motion products like NextMove ES/ESB-2, MicroFlex e100 and e150 and MotiFlex e100.

Buzzer

The panel's buzzer can now be programmed with Panel Builder 600. Staff in front of panel now has extra indicator for defined events.

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Features of the new Control Panels

FEATURES	CP651, CP651-WEB	CP661, CP661-WEB	CP665, CP665-WEB	CP676, CP676-WEB
Display size	10.4", 4:3	12.1", 4:3	13.3", 16:9	15", 4:3
Display type	TFT, 64K colors, analog resistive touchscreen			
Resolution	800*600, SVGA	800*600, SVGA	1,280*800, WXGA	1,024*768, XGA
Backlight	LED, brightness: 300 Cd/m2 typ., 40000 HRS lifetime, dimmable			
Serial interfaces	One. Via software setup one of the following standards can be selected for the project: RS-232, RS-422, RS-485			
Ethernet interface	One interface with two RJ45 connectors and built-in Ethernet switch for easy cabling			
USB Host interface	Two. One compatible with version 2.0, one is compatible with version 2.0 and 1.1. For use with external keyboard, mouse, flash memory extension device, printer. Now two devices can connect simultaneously			
SD-Card slot	SD Card for backup, Flash memory extension, system maintenance			
User memory, CPU	256 MB Flash, 256MB RAM, ARM Cortex A8 SuperScalar-CPU, 32-bit, 1 GHz			
RTC	Yes, with built-in rechargeable back-up lithium battery			
Front plates, cut-outs	like CP650, depth +14mm	like CP660, depth +14mm	like CP660, depth +14mm	like CP675, depth +14mm
Rating, Approvals	IP66 front plate. CE, UL, UL c1 div2, DNV, GL, C-Tick, KCC (in preparation)			
Panel Builder 600 V1.90.0.975	Support of new control panels, IRC5 protocol, ABB Motion HCP and HCP2 drivers, two USB ports, SD-Card, more application memory (hardware feature depends on panel)			

Easy upgrades

ABB offers two pairs of control panels with same case dimensions - but with different displays:

- CP630 and CP635 have same case, while displays are: 320*240 and 800*480 which is **500%** more!
- CP661 and CP665 have same case, while displays are: 800*600 and 1,280*800 which is **113%** more!

Our customers can easily offer two different machine lines and adapt the cost to the market requirements.

WEB panel – why?

Engineers often create diagnostic screens with Control Builder Plus visualization when programming for PLC AC500 and AC500-eCo. These screens might be exactly what customers need on the Control Panel!

With WEB versions of CP600 panels, machine builders and integrators easily convert the diagnostic screens into powerful HMI. Just a few mouse clicks are necessary - and the job is done!

This features utilizes the web servers of AC500's PM573-ETH, PM583-ETH, PM59x-ETH, their XC variants, and the PM5xx-ETH CPU modules of AC500-eCo.

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Comparison of new Control Panels with current ones

Feature	CP650, CP660, CP675	CP651, CP661, CP676
Panel Builder 600 min-Version	190.0.623	190.0.975
Processor	MIPS+FPU 600 MHz	ARM Cortex A8 SuperScalar 32-bit 1 GHz
Memory	Flash Disk 128 MB	Flash Disk 256 MB
RAM	256 MB DDR	256 MB DDR
BSP	UN20, ver. 2.73	UN31, ver. 1.73
OS	WIN CE 6.0 Core	WIN CE 6.0 Core
Ethernet	One, one RJ45 connector	One, two RJ45 connectors with switch
Serial interfaces	2 RS-232/485/422	1 RS-232/485/422, either one configurable
USB ports	1 host (Ver 1.1+2.0)	2 host (1 V 2.0, 1 V 1.1+2.0)
Card slots	---	1 SD-Card slot
Frontplates, cut-outs	Successors have same dimensions	
Mounting depths	42 mm (CP675: 46 mm)	56 mm (CP676: 60 mm) which mean plus 14 mm
Display (size, resol.)	Successors have same size and resolution	
Backgroundlight	CCFL (CP650: LED)	LED
Weights	Successors have rather the same weight	
Approvals	cUL, DNV, C-Tick, KCC	cUL, UL class1 div2, DNV, GL, C-Tick, KCC (in prep.)

Compatibility Panel Builder 600

Panel Builder 600 can be installed in parallel to an older version. Projects created with an older version will be converted to the new version when opened in new Panel Builder 600 version and after acceptance by the user.

Please use serial protocols of AC500-eCo:

- ABB Modbus RTU for AC500 and AC500-eCo with tag import in CoDeSys "*.exp" format
- Modbus RTU for other controllers with tag import in "*.csv" format

Compatibility Control Panels

Multiple control panels can be used together in networks independent of their BSP.

Engineering Tool

PB610 Panel Builder 600 V1.90.0.975 will be distributed as part of Automation Builder V1.1.

Stand-alone product PB610 Panel Builder 600, order code 1SAP500900R0001, V1.90.0.623 Index C0, can be purchased like all other products. Please contact ABB sales for more details. Update: please download V1.90.0.975 from www.abb.com/plc. The downloaded file checks for an installed version prior executing the update.

Lifecycle Plan

- Classic for end of 2014: CP650, CP660, CP675, CP650-WEB, CP660-WEB, CP675-WEB
- Limited for end of 2015: CP650, CP660, CP675, CP650-WEB, CP660-WEB, CP675-WEB

Lifecycle: see www.abb.com/plc -> Control Panels -> CP600 -> Downloads. You may search for 3ADR059042M0201 or "Life cycle change of CP600 Control Panels CP650(-WEB), CP660(-WEB), CP675(-WEB)"

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Current and new Product Designators with Version Indexes and Order Codes

Those to be replaced by new products		New	
Product Designation	Order Code	Product Designation	Order Code
BSP UN31, V1.66		BSP UN31, V1.76	
CP620 C3	1SAP520100R0001	CP620 D1	1SAP520100R0001
CP620-WEB C2	1SAP520200R0001	CP620-WEB D1	1SAP520200R0001
CP630 C3	1SAP530100R0001	CP630 D1	1SAP530100R0001
CP630-WEB C2	1SAP530200R0001	CP630-WEB D1	1SAP530200R0001
CP635 C3	1SAP535100R0001	CP635 D1	1SAP535100R0001
CP635-B C3	1SAP535100R2001	CP635-B D1	1SAP535100R2001
CP635-WEB C2	1SAP535200R0001	CP635-WEB D1	1SAP535200R0001
BSP UN20, V2.73		BSP UN20, V2.80	
CP650 C2	1SAP550100R0001	CP650 D1	1SAP550100R0001
CP650-WEB C1	1SAP550200R0001	CP650-WEB D1	1SAP550200R0001
CP660 C2	1SAP560100R0001	CP660 D1	1SAP560100R0001
CP660-WEB C1	1SAP560200R0001	CP660-WEB D1	1SAP560200R0001
CP675 C2	1SAP575100R0001	CP675 D1	1SAP575100R0001
CP675-WEB C1	1SAP575200R0001	CP675-WEB D1	1SAP575200R0001
		BSP UN30, V1.76	
		CP651 A0	1SAP551100R0001
		CP651-WEB A0	1SAP551200R0001
		CP661 A0	1SAP561100R0001
		CP661-WEB A0	1SAP561200R0001
		CP665 A0	1SAP565100R0001
		CP665-WEB A0	1SAP565200R0001
		CP676 A0	1SAP576100R0001
		CP676-WEB A0	1SAP576200R0001
V1.90.0.623		V1.90.0.975	
PB610 C0	1SAP500900R0001	PB610 C1	1SAP500900R0001

Portrait or Landscape?

Both! CP600 and CP600-WEB provide "portrait mode" and "landscape mode".

Remote operations via Internet?

Yes! Remote operations via Internet or Intranet is easily possible for CP620/630/635/650/651/660/661 and CP665/675/676. "VNC server" comes free with Panel Builder 600. The VNC-compatible client to do remote operations is available free of charge for smartphones, tablets, PC's and Linux-PC. Customers will find them in internet or within Linux distributions. Operator and person in remote location operate the same screen.

Other forms of remote operations via Internet or Intranet is available for CP620/630/635/650/651/660/661 and CP665/675/676. The free "Windows client" and free ActiveX plug-in for Internet Explorer runs on PC's with Windows. Remote operators can operate any screen of panel, while local operator uses the panel's current screen.

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