
Welcome to ABB Automation Builder 1.0.1

This README file contains important information about the Automation Builder and the Control Builder Plus software.

Please read this file carefully and completely. It contains the latest information and relevant documentation.

System Requirements:

- Pentium PC, 1GHz, 3 GB RAM
- Hard disk memory: 10 GB
- SVGA graphics adaptor 256 colors, resolution of 1024x768 pixels
- USB 2.0 port
- Windows XP (Service Pack 3 or later) /
Windows 7 (32/64 Bit) Professional / Enterprise / Ultimate

Attention:

The installation of the ABB Automation Builder software requires administrator rights.

Prior to installation, the Control Builder Plus, CoDeSys software and the CoDeSys Gateway Server must be shut down.

If you have already installed the ABB Automation Builder 1.0, you can perform an update to the ABB Automation Builder 1.0.1 via the Service Release 1.

Information about the installation of the Service Release 1 (SR1) Update package:

A basic requirement for the installation of the SR1 Update package is that Automation Builder 1.0/Control Builder Plus 2.3.0 have already been installed.

1. Start the setup by double-clicking on the update package (ABB_Automation_Builder_V1.0_SR1.exe). You will be guided interactively through the installation.
2. Press the "Update" button to obtain an overview of changes, innovations and further links.
3. The update checks which software components have been installed on your computer and then shows you the required updates. All installed software components will be automatically updated.
4. Start the installation by pressing the "Update" button.

Remark:

If you decide to install additional Automation Builder packages with the original USB media after installing the Service Release, please re-apply the Service Release to also update these additional packages.

Information about the installation of the complete Automation Builder 1.0.1 by means of a USB stick:

1. Deinstall earlier versions of Control Builder Plus from your computer. You can keep using your previous projects with the new version in the corresponding compatibility mode or update them to the new version.
2. Installation of the software using the installation menu of the ABB Automation Builder USB stick. If the setup does not start automatically, start it via run "start_menu.exe".
 - Select the installation language of the ABB Automation Builder setup.
 - Press the "Installation" button.
 - Establish the type of installation. Once you have completed the selection of the software packages or have decided in favor of the standard installation, start the installation by pressing the "Install" button.
 - The next screen shows you the installation sequence and the components of the software packages to be installed.
 - You will be guided interactively through the installation.
3. If you have selected a user-defined installation, you can select or deselect optional software packages manually during the installation. These are the AC500 PLC packages:
 - Drive Manager
 - AC500-S safety PLC
 - OPC serverand
 - CP600 operating panels
 - Motion Controller – MicroFlex e150
 - Robot Controller – IRC5
 - Programmable drives ACS880

Version identification

In Control Builder Plus, you can display the installed version via Help -> About....



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1. Important information about Control Builder Plus

PS501 Control Builder Plus V2.3.0 is based on CODESYS Automation Platform V3.5.0.3 and CoDeSys V2.3.9.40.

Note: To make it easier to read, the Control Builder Plus is abbreviated hereinafter as CBP.

1.1 *Special information regarding AC500-S safety PLCs*

Before using the safety configuration and programming tools contained in PS501 CBP, you must have read and understood the AC500-S Safety PLC User Manual (see www.ABB.com/PLC). Only qualified personnel is allowed to work with AC500-S Safety PLCs.

Compiling and executing safety projects on SM560-S Safety CPUs require the purchase of a PS501-S license enabling package.

1.2 *Compatibility of PS501 Control Builder Plus*

PS501 V2.3.0 offers special compatibility features for projects created with CBP V2.2.1 and CBP V2.1.0. Side-by-side installation of different versions is not required. Projects created with CBP V2.2.x and CBP V2.1.x can be opened in two different ways:

- Opening in the compatibility mode: The project is opened with the version of CBP it was initially created with. In this case, newer features and devices cannot be used.
- Opening in the update mode: The project is updated to the newest version of CBP. However, the new features and devices may require an update of the PLC firmware as well. After the update, the project can no longer be opened with previous versions. Keeping a backup copy for further use with previous versions should be considered.

Projects created with previous versions can be updated to the new version.

For further information, please see the end user documentation and online help.

If you are using a PLC with a firmware version older than that of the CBP, the PLC will generate a diagnostic message if features are used that are not yet supported. In this case, you should consider updating your PLC to a firmware equal to or higher than the version of CBP.

1.3 *PROFINET*

The PROFINET configuration format has changed from version V2.0.x to V2.1.0 of PS501 Control Builder Plus.

- A PROFINET configuration created with CBP V2.0.x requires CPU-FW V2.0.x
- A PROFINET configuration created with CBP V2.1.0 or higher requires CPU-FW V2.1.3 or higher.
- Using the "Update device" function in CBP will automatically convert it to the new configuration format.

1.5 Information and updates via Internet

The latest news, information and updates around the controller family AC500, the visualization system CP600 and the Automation Builder can be found at www.abb.com/PLC.

2. Changes in Automation Builder 1.0 Service Release 1

The service release includes changes for the following device groups:

PLC-AC500

- Various bug fixes and improvements
- Support of PM556-ETH

	PM554	PM564	PM554-ETH	PM564-ETH	PM572	PM573-ETH	PM582	PM583-ETH	PM590-ETH	PM591-ETH	PM592-ETH	and Device
New functions												
Quick data exchange between PM5xx and SM560-S					X	X	X	X	X	X	X	SM560-S
New function block BOOTPRO_HASH_INFO, which provides MD5 values for all parts of a user program. The MD5 values only change when the user program changes.	X	X	X	X	X	X	X	X	X	X	X	
From C-Code access to further standard functions atof, atoi, atol, strtod, strtol, strtoul, calloc, realloc, bsearch, qsort is possible.					X	X	X	X	X	X	X	
DO524	X	X	X	X	X	X	X	X	X	X	X	DO524

Safety PLC AC500-S

	PM554	PM564	PM554-ETH	PM564-ETH	PM572	PM573-ETH	PM582	PM583-ETH	PM590-ETH	PM591-ETH	PM592-ETH	and Device
New functions												
Example: Implementation for high-speed data exchange between PM5xx and SM560-S					X	X	X	X	X	X	X	SM560-S

ABB Drive Manager

- Various bug fixes and improvements in stability
- Improved monitoring functionality
- Monitoring data can now be exported.

Control Panel - CP600

- Various bug fixes and improvements
- Export of the Panel Builder project directly from Control Builder Plus

Programmable Drive - ACS880

- Added option to set application parameters to defaults in Create boot application download. This ensures that application parameters are not holding old values after reboot of the drive with new an application.
- There is created application file packages (Application.wrp) for the external tools to add all application files firmware loading package.
- Parameter read/write functions (also input/output mapping) are changed to use external scaling interface in system library AY1LB_System_ACS880_V3_5 1.9.05. This is valid in ACS880 Primary Control Program AINfx 1.5x onwards. Previous system library versions internal scaling was used. Other parameters are having same scaling in internal and external interface. It is strongly recommend to check all parameter write/read functions and mappings in application in order to verify correct function. Here is listed parameters which are having different scaling in new firmware AINLx1.5 compare to older firmware (1.41. or older) in case of reading /writing or using input/output mapping.
- (5.11, 21.18, 27.16, 17.20, 27.21,43.1, 43.8, 43.9, 43.10, 43.11, 43.12, 92.11, 93.11, 97.3, 97.4,97.11, 97.13, 97.16, 97.17, 98.11, 98.12, 98.13, 98.14, 98.15)

Motion Controller - MicroFlex e150

- Various bug fixes and improvements
- Support for the following MicroFlex e150 firmware versions:
 - Builds 5710, 5711 and 5712

3. Changes in Automation Builder 1.0

PLC-AC500

	PM554	PM564	PM554-ETH	PM564-ETH	PM572	PM573-ETH	PM582	PM583-ETH	PM590-ETH	PM591-ETH	PM592-ETH	and Device
New functions												
Safety libraries for AC500-S Safety					X	X	X	X	X	X	X	SM560-S
Support for AC500-S Safety PLCs					X	X	X	X	X	X	X	SM560-S
Extension of the CAA file library by FILE_MOVE, FILE_DISKFORMAT and FILE_DISKSTATUS	X	X	X	X	X	X	X	X	X	X	X	
Performance improvement PM59x									X	X	X	
PS501 Control Builder Plus SW update via packages	X	X	X	X	X	X	X	X	X	X	X	
C programming					X	X	X	X	X	X	X	
Integrated version support. CBP V2.3.0 also includes CBP versions V2.2.1 and V2.1.0.	X	X	X	X	X	X	X	X	X	X	X	
Function block BOOTPRG_HASH for calculating MD5 Hash via the boot project in the PLC.	X	X	X	X	X	X	X	X	X	X	X	
Support of modular EtherCAT devices					X	X	X	X	X	X	X	
CANopen configuration supports deactivation of CANopen devices					X	X	X	X	X	X	X	
Keyboard support for menu navigation in CBP	X	X	X	X	X	X	X	X	X	X	X	
Installation of the CBP integrated into the Automation Builder V1.0 setup	X	X	X	X	X	X	X	X	X	X	X	
Improved navigation between editors and the associated objects in the device tree.	X	X	X	X	X	X	X	X	X	X	X	
Export of a device list	X	X	X	X	X	X	X	X	X	X	X	
Improved performance in "Create configuration data"	X	X	X	X	X	X	X	X	X	X	X	
Integration of the IRC5 robot controller as PROFINET device					X	X	X	X	X	X	X	ABB IRC5
Integration of MicroFlex e150 servo drive as EtherCAT device					X	X	X	X	X	X	X	MicroFlex e150
IEC-61131 programming of the ACS880 industrial drive												ACS880
DriveManager support for ACS550, ACQ810 drives on Profibus and PROFINET					X	X	X	X	X	X	X	ACS550, ACQ810

4. Update of devices in Automation Builder 1.0 Service Release 1

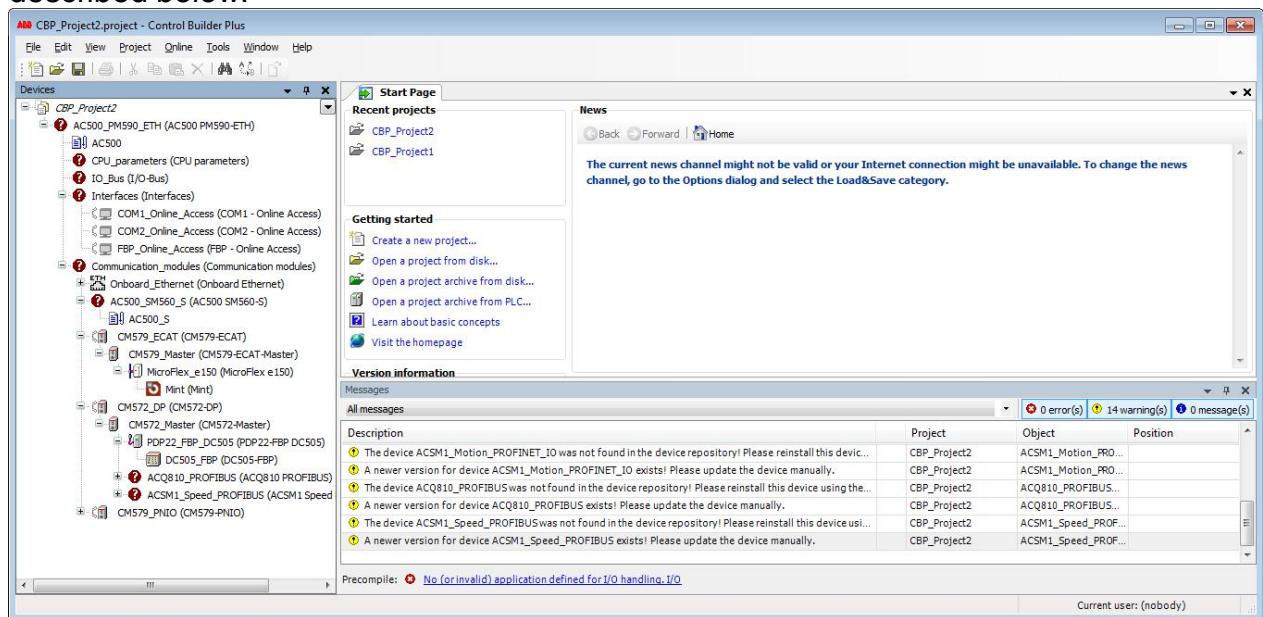
For several devices newer versions are provided with the Automation Builder 1.0 SR1. This requires manual device object updates in certain scenarios:

- When opening projects/project archives created with Control Builder Plus prior to 2.3.0 a complete project update is required which updates automatically all devices in the project. In general no manual steps are required.
- When opening projects/project archives created with Control Builder Plus version 2.3.0 the devices are not automatically updated to the latest available version (2.3.X). Manual steps are required which are explained in details in the section below.

Device Updates in projects/project archives created with Control Builder 2.3.0

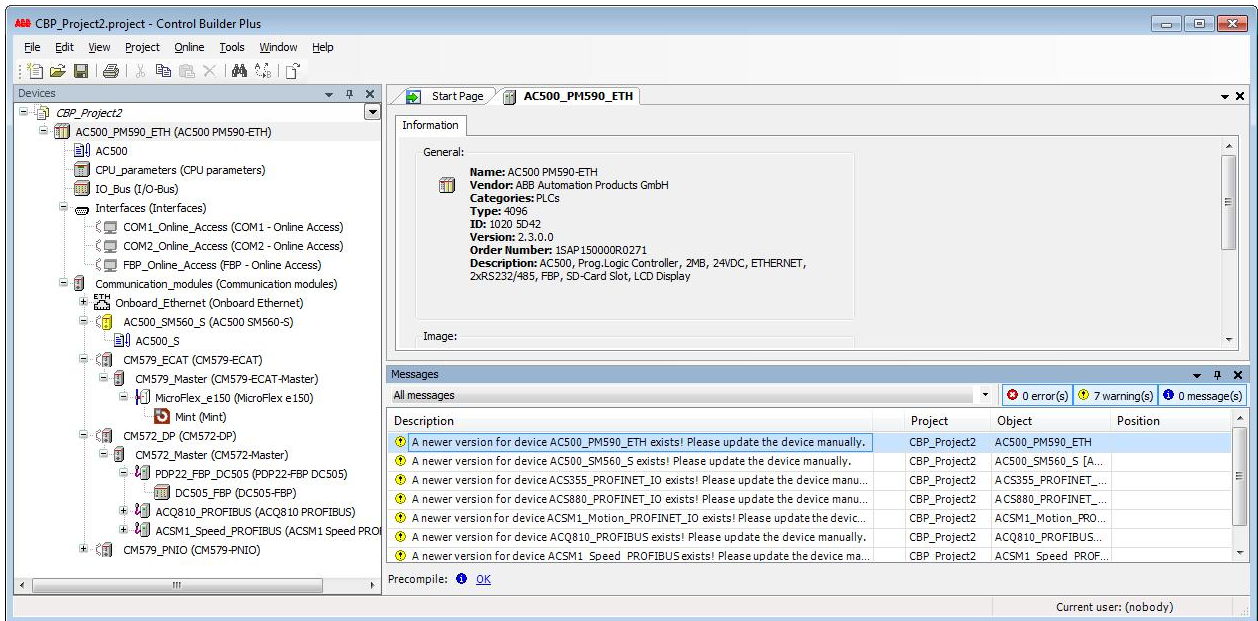
Opening Projects:

After opening a project some device objects might be highlighted with question marks. Additionally, the Message Window lists all objects that should be updated to the latest version of the description file. The steps to update the device objects are described below.



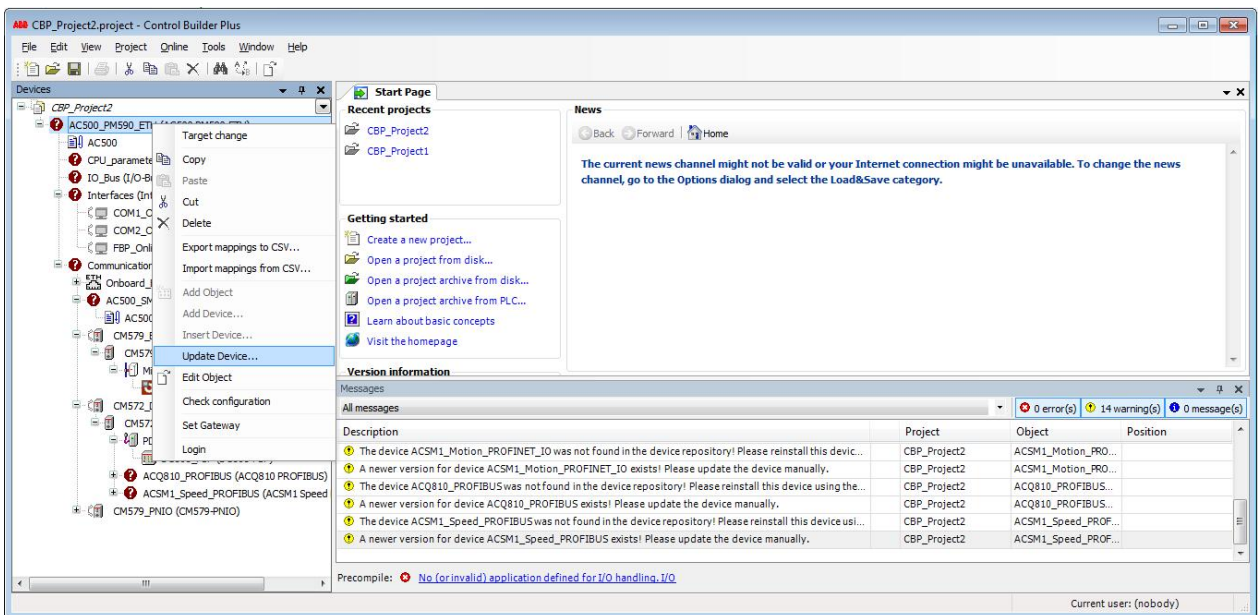
Project archives:

When opening a project archive the original device description version is installed in the current device repository on customer's choice. The Message Window lists all objects that should be updated to the latest version of the description file. The steps to update the device objects are described below.

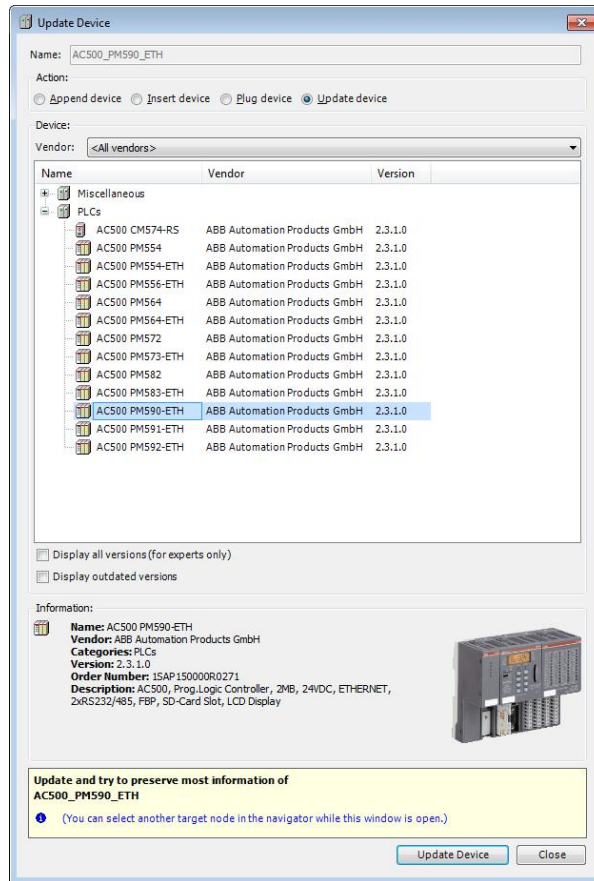


Device Updates Steps:

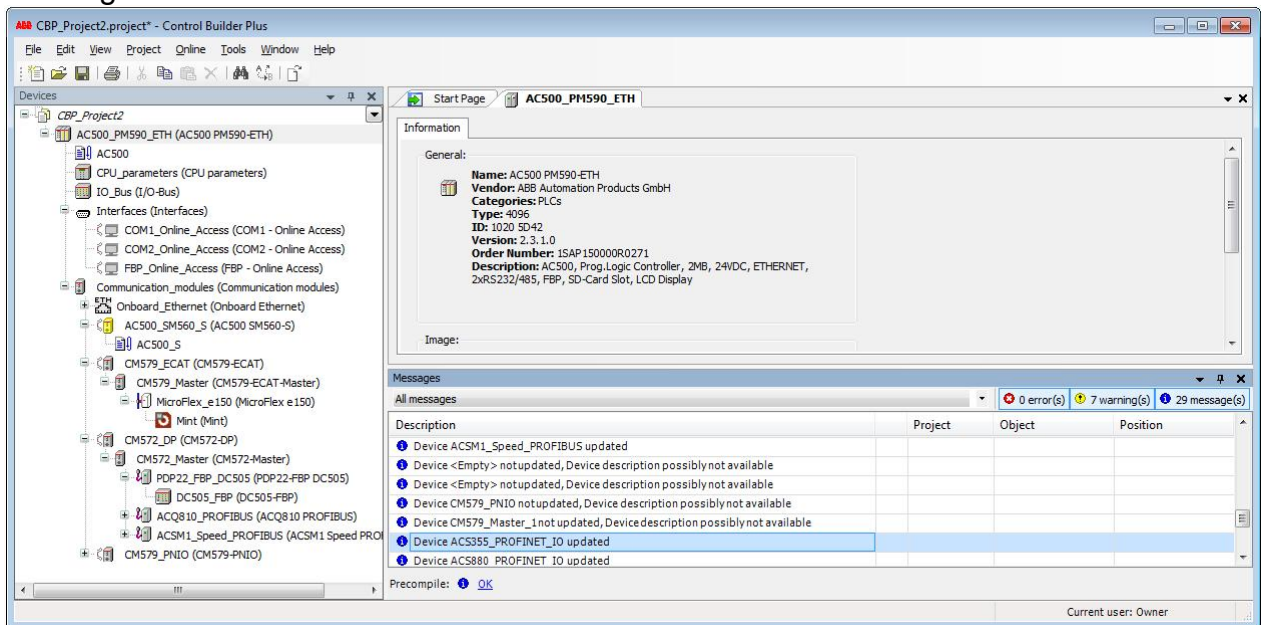
- Please update the AC500 PM node via “Update device” in context menu. All sub nodes will be updated automatically to the latest available version 2.3.X.



- Select in the dialog the same device with version 2.3.1.



All sub nodes below the selected AC500 PM are automatically updated to the latest version 2.3.X in the device repository. The device update result is shown in the Message Window.



General Remark:

It is not recommended to open projects/project archives created or updated with the Control Builder Plus SR 1 version in previous Control Builder Plus 2.3.0 versions! Devices, their parameters and functionality might not work properly in previous versions.