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PSoC® Programmer Release Notes

Version 3.29.0
August 10, 2020

PSoC Programmer is Cypress's programming toolchain used for programming various Cypress devices.

- Supports applications including: PSoC Creator™, PSoC Designer™, TrueTouch® Host Emulator and MTK, CyClockWizard, and Ez-Click.

- Supports all PSoC architectures including PSoC 1, PSoC 3, PSoC 4, PSoC 5LP, PSoC 6, TrueTouch®, CapSense, and Clock devices.

- Supports all Cypress programming hardware such as MiniProg1, MiniProg3, MiniProg4, TrueTouch Bridge, KitProg1, KitProg2, KItProg3, ICE-Cube, CY3240 USB-I2C Bridge.

- Provides a COM layer that can be used to create custom applications.

- Installs secondary applications such as Bridge Control Panel and Clock Programmer.

PSoC Programmer 3.29.0 release delivers:

- KitProg3 v2.10 support

- Support for new part numbers within CCG3PA, PAG1S, USB-SC product lines

Contents

Delivered products with PSoC Programmer releases

The following products are delivered with this PSoC Programmer 3.29.x release:

Product	Version
Bridge Control Panel	1.22.0
Clock Programmer	1.9.0
KitProg1	2.21
KitProg2	1.05
KitProg3	2.10
Miniprog3	2.05 [3.11/2.10]
TrueTouch Bridge	1.39

New Features for PSoC Programmer 3.29.0

KitProg3 v2.10 support

PSoC Programmer 3.29.0 supports the new KitProg3 v2.10 firmware to work with PSoC 4, PSoC 5LP, and PSoC 6 MCU devices via PSoC Programmer and PSoC Creator tools. KitProg3 v2.10 offers enhanced USB-I2C/SPI bridging implemented on bulk endpoints what speeds-up USB communication.

You can also get the latest version of KitProg3 delivered with the Firmware Loader available at the Cypress GitHub repository.

Support for new part numbers

PSoC Programmer 3.29.0 provides support for new part numbers within CCG3PA, PAG1S, USB-SC product lines.

Resolved Issues

This release includes the following defect fixes:

ID	Description
PROGTOOLS-1322	Read operation was displaying extra flash protection data for CCG3PA.

Known Issues

This section lists the known issues with this release:

| ID	Problem	Workaround
PROGTOOLS-1838	Starting from KitProg3 v2.10, when KitProg3 is in CMSIS-DAP Bulk mode, it is not possible to debug and use USB-I2C/SPI bridging (for example, in the CapSense® Tuner, Bridge Control Panel) at the same time.	If you would like to use debug and USB-I2C/SPI bridging at the same time, there are two possible workarounds: • If performance for programming and debug is not critical, switch KitProg3 to **CMSIS-DAP HID** mode via the fw-loader utility. Firmware Loader is installed with ModusToolbox software, and is available separately on GitHub. • If you need faster performance for programming and debug, use the onboard KitProg3 for programming purposes and MiniProg4 for bridging purposes or vice versa. Both devices can be in **CMSIS-DAP bulk** mode.
298838	Device operation (Program/Verify/ Erase/Checksum) fails for PSoC 6 and FM0+ devices using MiniProg3 with SWD/JTAG protocol speed above 12 MHz.	Re-plug MiniProg3 after failure. Use up to 12 MHz SWD/JTAG protocol speed when programming or debugging PSoC 6 and FM0+ devices using MiniProg3.
229008	MiniProg3 is not detected when the host is using USB3.0 connected through some USB host controllers.	If you observe this issue, use USB 2.0 for MiniProg3 connection.

Known Limitations

The following are the known limitations related to KitProg3 v2.10:

- In some cases, Windows 7 does not recognize the KitProg3 bridge, so USB-I2C/SPI bridge devices are not available in either CMSIS-DAP HID or CMSIS-DAP bulk mode.

- After updating to KitProg3 v2.10, debug/programming tools such as PSoC Creator, PSoC Programmer, and Bridge Control Panel cannot connect to a device. An example of this behavior is that KitProg3 device is available but cannot be selected in the tool.

The following are the known limitations in PSoC Programmer 3.29.0:

- PSoC 6 MCU support: to use the JTAG protocol, the device flash should be erased or contain an application that has JTAG selected in PSoC Creator ('Debug Select' option in System Tab):
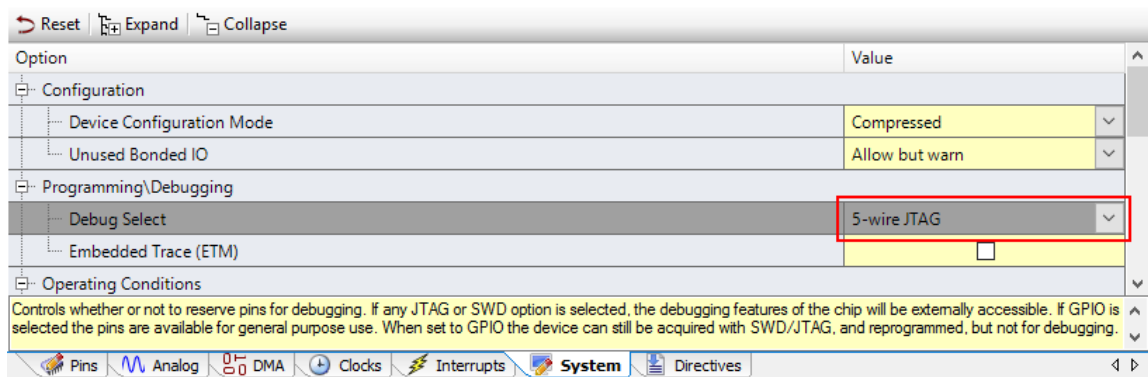
When either SWD (default) or GPIO is selected in this option, JTAG pins are disabled in the user application start-up code. This causes PSoC Programmer or 3rd party tools to be unable to access the device using JTAG protocol.

- When using standard CMSIS-DAP programmer/debugger, the device flash should be erased or contain an application that has SWD or JTAG selected in PSoC Creator ('Debug Select' option in System Tab). When GPIO is selected in this option, debug pins are disabled in start-up code of user application. PSoC Programmer or 3rd party tools then cannot access the device. The only option for accessing the device, when debug pins are configured as GPIO, is to enter Cypress-specific Test Mode, which is not supported with standard CMSIS-DAP transport. This can be done using following programmers: MiniProg3, MiniProg4, KitProg3 and using KitProg1 or KitProg2 in proprietary mode.

- PSoC 6 MCU support: for programming and debugging operations, the System Access Port (AP[0]) of SWJ-DP unit and either the Access Port for CM0+ core (AP[1]) or the Access Port for CM4 core (AP[2]) must be enabled in device access restrictions settings (Normal Access Restrictions in SFlash for NORMAL life-cycle stage or Secure Access Restriction in eFuse).

- Device operation (Program/Verify/Erase/Checksum) fails for S6E1Axx Kits, connected via MiniProg3, if performed quickly right after "Toggle Power" operation. This is known issue in MiniProg3 firmware. To avoid this, please wait for four seconds after power is toggled before doing further steps.

- Programming of TrueTouch, Clock, and CCGx devices via MiniProg4 is not guaranteed. Customers who wish to work with these devices should use MiniProg3 programmer.

- Scripts or applications based on PSoC Programmer's COM or Command Line interfaces will stop working after KitProg2 to KitProg3 firmware upgrade IF they are using hardcoded strings for the name of KitProg2 Port. Such scripts have to be modified with the new Port name, which can be obtained from PSoC Programmer's GUI or using "GetPorts" API.

■   Custom checksum operation is not supported for PSoC 5LP devices which contains an application that disables the debug pins ('Debug Select' option in System Tab of PSoC Creator's project is set to GPIO).

The full list of the legacy limitations is available in KBA210619.

Installation

Minimum and Recommended Requirements

Hardware/Operation System Requirements	Minimum	Recommended
Processor Speed	2 GHz	2 GHz Dual Core
GB of RAM	2 GB	3 GB
GB of free hard drive space	1 GB	1 GB
Screen resolution	1024x768	1280x1024
USB	Full Speed	2.0 Hi-Speed
Windows 7 / 8 / 8.1 / 10	✓	✓
Software Prerequisites *	**Minimum/Recommended Version**	
Microsoft Internet Explorer	7	
.NET Framework	2.0 SP2	
Adobe Reader (for viewing PDF Documentation)	6	9+
Windows Installer	3.1	
Python – For Code Examples	2.6	2.6

* Software prerequisites are checked/installed by Programmer's CyInstaller (except Python interpreters).

Applications Dependent on a PSoC Programmer Installation

The following applications require PSoC Programmer to be installed. All Cypress software and kit products, which use PSoC Programmer, install it as well (minimum required version):

■   PSoC Designer

■   PSoC Creator

■   TrueTouch Host Emulator

■   MTK

■   Ez-Click

■   ClockWizard

The following applications are included in the PSoC Programmer installation:

■   Bridge Control Panel (mandatory)

■   Clock Programmer (mandatory)

■   USB and I2C PSoC 1 Bootloader Hosts (optional, included by default)

■   Examples (optional, included by default)

Update Instructions

As part of the installation process, the Cypress Update Manager utility is also installed and located on the Start menu under the Cypress folder. You can use this utility to update all the programs you installed when updates for these become available.

Follow the instructions provided by the CyInstaller.

Check for the software updates to the Cypress PSoC development tools on the following web pages:

PSoC Software Tool	Link
PSoC Designer	http://www.cypress.com/go/psocdesigner
PSoC Creator	http://www.cypress.com/go/psoccreator
PSoC Programmer	http://www.cypress.com/go/psocprogrammer

Installation Notes

The installation process is a set of wizards that walks you through installing various components. You can install PSoC Programmer from the web.

Note Do not plug in any programming hardware until the software installation is complete.

Web Installation

1. Double-click the PSoC Programmer executable file to launch the PSoC Programmer installer.

2. Follow the prompts to install PSoC Programmer and various drivers.

3. When complete, close the installer.

Note that installation may fail when using the web because of firewall or administrator privileges. Contact your IT support for assistance

Cypress PSoC Kit Installation

A kit installer contains PSoC Programmer and may contain additional applications (such as PSoC Creator), documentation, and prerequisites needed for the associated kit. Both an executable installer and an ISO image are available on the kit webpage. The installation process is like that for PSoC Programmer, although the items or applications installed will vary. PSoC Programmer will be one of them.

Device Driver Re-Installation

Drivers for all Cypress devices are installed along with PSoC Programmer. Drivers are removed from the system during uninstallation of PSoC Programmer.

If you need to re-install drivers manually, do the following:

1. Navigate to the PSoC Programmer root installation directory.

2. Open the Drivers folder and run driverui.bat to uninstall current drivers.

3. Run the driver.bat file. This will install drivers from this PSoC Programmer release.

Coexistence with Older PSoC Programmer Releases

Only one version of PSoC Programmer can be installed in the system. During the installation of a new PSoC Programmer version, the previous one is removed. If you have an older version of PSoC Programmer (3.06 or below), uninstall it first and then proceed with installation of the latest release.

Further Reading

Documentation is available in the PSoC Programmer root directory and under Documents. The documents include:

- Help files (CHM) for: PSoC Programmer GUI, PRoC-UI Programmer, HexToSvf
- PSoC Programmer COM Interface Guide
- PSoC Programmer Command Line Interface Guide
- PSoC Programmer Example Code
- Clock Programmer User Guide
- MiniProg3 User Guide
- KitProg2 User Guide
- MiniProg4 User Guide
- KitProg3 User Guide
- Third-Party Tools User Guide. This user guide provides information on using the Cypress silicon in third party tools. It is located at ./3rd_party_configuration_files/Documents

The Bridge Control Panel includes the following documents:

- Help File (CHM)
- I2C-USB Bridge Guide
- Example User Guide

Silicon Errata

The latest versions of the silicon errata are available on the website at http://www.cypress.com/psoc under Related Documentation.

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