PSoC™ Programmer release notes

Version 3.29.5

About this document

Scope and purpose

PSoC™ Programmer is the programming toolchain used for programming our various devices.

- Supports applications including: PSoC™ Creator, PSoC™ Designer, Touch Tuning Host Emulator and MTK, CyClockWizard, and Ez-Click.
- Supports all PSoC™ architectures including PSoC™ 1, PSoC™ 3, PSoC™ 4, PSoC™ 5LP, PSoC™ 6, PSoC™ Multitouch, CAPSENSE™, and Clock devices.
- Supports all our programming hardware such as MiniProg1, MiniProg3, MiniProg4, Touch Tuning 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 3.29.5 release delivers:

- KitProg3 v2.40 support
- Support for PSoC™ 3 device family via MiniProg4 probe
- Updates to new touch branding guidelines

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1 Delivered products with PSoC™ Programmer releases

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

Product	Version
Bridge Control Panel	1.23.0
Clock Programmer	1.9.0
KitProg1	2.21
KitProg2	1.05
KitProg3	2.40
Miniprog3	2.05 [3.11/2.10]
Touch Tuning Bridge	1.39

2 PSoC™ Programmer 3.29.5 updates

2.1 KitProg3 v2.40 support

PSoC™ Programmer 3.29.5 supports the new KitProg3 v2.40 firmware to work with PSoC™ 3, PSoC™ 4, PSoC™ 5LP, and PSoC™ 6 MCU devices via PSoC™ Programmer and PSoC™ Creator tools. KitProg3 v2.40 offers new device support and minor improvements.

2.2 Support for PSoC™ 3 device family via MiniProg4 probe

PSoC™ 3 programming is already supported by multiple debug probes. In addition to those probes, PSoC™ Programmer 3.29.5 provides the support for PSoC™ 3 device family programming via MiniProg4 probe.

2.3 Updates to new touch branding guidelines

According to the new touch branding guidelines, the tool is now called Touch Tuning Bridge.

3 Known Issues

This section lists the known issues with this release:

Problem	Workaround
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 CAMPSENSE™ 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.
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.
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.

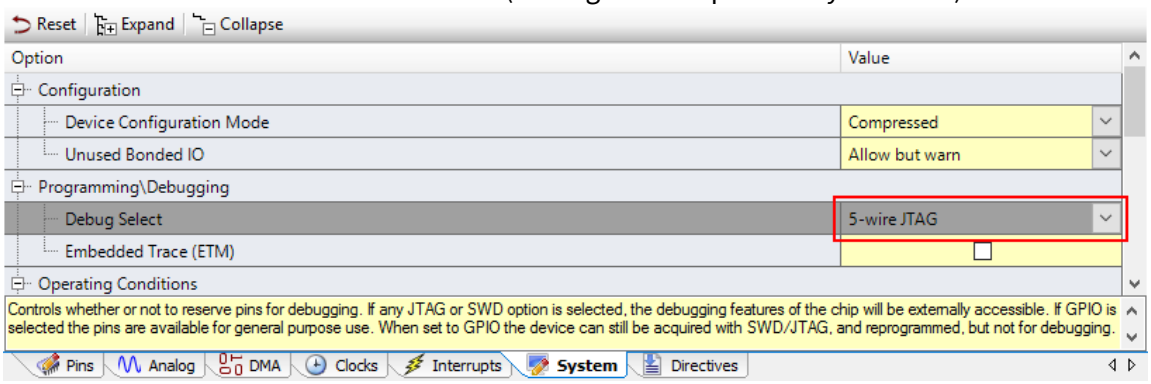
4 Known Limitations

The following are the known limitations related to KitProg3 v2.40 and later:

- 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 v2.40 and later, 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 3.29.5:

- 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 PSoC™ Multitouch, 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.

5 Installation

5.1 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).

5.2 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
- Touch Tuning 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)

5.3 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.

Installation

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

PSoC™ Software Tool	Link
PSoC™ Designer	https://www.infineon.com/cms/en/design-support/tools/tools-archive/psoc-designer-archive/
PSoC™ Creator	https://www.infineon.com/cms/en/design-support/tools/sdk/psoc-software/psoc-creator/
PSoC™ Programmer	https://www.infineon.com/cms/en/design-support/tools/programming-testing/psoc-programming-solutions/

5.4 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.*

5.5 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: *Installation may fail when using the web because of firewall or administrator privileges. Contact your IT support for assistance*

5.6 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.

5.7 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.

5.8 Coexistence with Older PSoC™ Programmer Releases

Only one version of PSoC™ Programmer can be installed on 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.

6 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 our 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

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