



PSoC® Programmer Release Notes

Version 3.17

Release Date: December 6, 2012

Thank you for your interest in the PSoC® Programmer. The release notes lists all the new features, installation requirements, supported devices and defects fixed from the previous release.

The PSoC Programmer supports the PSoC Creator™, PSoC Designer™, MTK, and TrueTouch Host Emulator applications. PSoC Programmer also installs secondary applications such as the Bridge Control Panel and the Clock Programmer. PSoC Programmer supports all Cypress programming hardware such as the MiniProg1, MiniProg3, TrueTouch Bridge or the CY3240 USB-I2C Bridge. The PSoC Programmer provides to all users a COM layer that can be used to create custom applications.

The PSoC Programmer supports all the PSoC architectures including PSoC® 1, PSoC 3, PSoC 5 and the TrueTouch devices.

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New Features for PSoC Programmer

This PSoC Programmer release supports PSoC Creator 2.2, updated TrueTouch Bridge firmware, improved 3rd party configuration files, new device support, and defect fixes.

HID over I2C Protocol Support

PSoC Programmer has added the HID over I2C protocol to the Programmer COM hardware layer. Programmer has implemented updated to the I2C APIs to support this capability. The HID over I2C protocol will be available to all TrueTouch customers who use the TrueTouch Bridge programmer and bridge. To implement this capability there is an update to the TrueTouch Bridge firmware. Users will need to update their firmware using PSoC Programmer. Programmer will either ask you to update it manually using the *Upgrade Firmware Button* in the utilities tab or will complete the upgrade automatically if the user has selected that option from the *Programming Options* menu.

EEPROM Support in uVision and uLink Configuration Files

This release of PSoC Programmer has added EEPROM configuration support to the configuration files for uVision and uLink programmer.

JTAG SVF Player Verification Support

PSoC Programmer supports SVF file creation for JTAG programming and testing. This utility is available in the root installation directory of PSoC Programmer. For this release the SVF output files for PSoC 5 LP and PSoC 3 devices have been verified on a number of 3rd party JTAG SVF players.

JTAG 4-Wire Support in PSoC Creator

PSoC Programmer has release and update to the Programmer hardware layers to enable 4-wire JTAG programming and debugging using PSoC Creator, using PSoC 3 and PSoC 5 LP devices. This update addresses a defect found in previous releases of Programmer.

Support for GEN5 Silicon

PSoC Programmer has added support for updated GEN5 silicon.

Updated DVKProg5 Firmware for PSoC 5 LP Devices

We have updated the firmware for the DVKProg5 debugger and programmer which supports the PSoC 5 and PSoC 5 LP based CY8CKit-050 kits. This firmware was updated to address issues seen with programming and debugging of PSoC 5 LP based kits.

Update to Fix Programming of PSoC 5 LP Devices Configured in Low Power Mode

This release of Programmer addresses an issue seen with customers trying to program PSoC 5 LP devices that were configured in a low power state prior to programming. This programming failure was seen using Power Cycle programming modes using the Minipro3 programmer.

New Supported Devices for PSoC Programmer

The following new devices have been added to this PSoC Programmer release.



| Family | Device | |
|---------------------|----------------------|---------------------|
| CY8C24x93 | CY8C24193-24LQXI | |
| | CY8C24493-24LTXI | |
| | CY8C24393-24LQXI | |
| | CY8C24293-24LQXI | |
| | CY8C24593-24LQXI | |
| | CY8C24693-24LQXI | |
| | CY8C240093-24LQXI | |
| | | |
| CY8CTMA4xx | CY8CTMA463-48LQIKG | |
| | CY8CTMA463-48LQIKA | |
| | CY8CTMA4635-56LQIKA | |
| | CY8CTMA4635-56LQIKG | |
| | CY8CTMA4635-56LQIKCG | |
| | CY8CTMA4634-56LQIKCG | |
| | CY8CTMA463-56LQIES3 | |
| | | |
| CY8CTMA44x | CY8CTMA440-48LQI | |
| | CY8CTMA440-48LQIES | |
| | CY8CTMA440-48LQIES2 | |
| | CY8CTMA442-48LQI | |
| | CY8CTMA442-48LQIES | |
| | CY8CTMA442-48LQIES2 | |
| | CY8CTMA445-48LQI | |
| | CY8CTMA445-48LQIES | |
| | CY8CTMA445-48LQIES2 | |
| | CY8CTMA446-48LQI | |
| | CY8CTMA446-48LQIES | |
| | CY8CTMA446-48LQIES2 | |
| | CY8CTMA441-44LQI | |
| | CY8CTMA441-44LQIES | |
| | CY8CTMA441-44LQIES2 | |
| | CY8CTMA442-44LQI | |
| | CY8CTMA442-44LQIES | |
| | CY8CTMA442-44LQIES2 | |
| | CY8CTMA445-44LQI | |
| | CY8CTMA445-44LQIES | |
| | CY8CTMA445-44LQIES2 | |
| | CY8CTMA446-44LQI | |
| | CY8CTMA446-44LQIES | |
| | CY8CTMA446-44LQIES2 | |
| | | |
| | CY8CTMA5xx | CY8CTMA500-48LQI |
| | | CY8CTMA500-48LQIES |
| | | CY8CTMA500-48LQIES2 |
| CY8CTMA542-48LQI | | |
| CY8CTMA542-48LQIES | | |
| CY8CTMA542-48LQIES2 | | |
| CY8CTMA545-48LQI | | |
| CY8CTMA545-48LQIES | | |
| CY8CTMA545-48LQIES2 | | |
| CY8CTMA546-48LQI | | |
| CY8CTMA546-48LQIES | | |
| | | |



| Family | Device |
|------------|---------------------|
| | CY8CTMA546-48LQIES2 |
| | CY8CTMA547-48LQI |
| | CY8CTMA547-48LQIES |
| | CY8CTMA547-48LQIES2 |
| | CY8CTMA548-48LQI |
| | CY8CTMA548-48LQIES |
| | CY8CTMA548-48LQIES2 |
| | CY8CTMA542-44LQI |
| | CY8CTMA542-44LQIES |
| | CY8CTMA542-44LQIES2 |
| | CY8CTMA545-44LQI |
| | CY8CTMA545-44LQIES |
| | CY8CTMA545-44LQIES2 |
| | CY8CTMA546-44LQI |
| | CY8CTMA546-44LQIES |
| | CY8CTMA546-44LQIES2 |
| CY8C1x3xx | CY8C10304-24PVXI |
| | CY8C10305-48AXI |
| CY8C1x4xx | CY8C10404-24AXI |
| | CY8C10405-24AXI |
| CY8C3xxx | CY8C3665AXI-198 |
| | CY8C3665LTI-199 |
| | CY8C3666AXI-200 |
| | CY8C3666LTI-201 |
| | CY8C3666AXI-202 |
| | CY8C3666LTI-203 |
| | CY8C3865AXI-204 |
| | CY8C3865LTI-205 |
| | CY8C3866AXI-206 |
| | CY8C3866LTI-207 |
| | CY8C3866AXI-208 |
| | CY8C3866LTI-209 |
| | CY8C3245LTI-163KA |
| | CY8C3245LTI-163KG |
| | CY8C3246LTI-149KA |
| | CY8C3246LTI-149KG |
| | CY8C3446LTI-073KA |
| | CY8C3866LTI-030KA |
| | CY8C3866LTI-030KG |
| CY8CTMA395 | CY8CTMA395-LTI-00KA |
| | CY8CTMA395-LTI-00KG |
| | CY8CTMA395-LTI-01KG |

Update / Upgrade Notes

Upgrade Using Cypress Update Manager

All users who currently have PSoC Programmer 3.10 or later installed should use the CyInstaller Update Manager to upgrade their Programmer release.



PSoC 3 ES2 vs. ES3 Support

PSoC Programmer allows Hex files targeting the specific silicon to be programmed into that silicon only. For example, if you generate a Hex file for ES2 revision silicon, you will not be able to program that file into ES3 devices. The warning messages are displayed if you attempt to program a Hex file into the wrong silicon revision. Make sure the tools that you are using support the silicon revision.

Coexistence with Older PSoC Programmer Releases

Uninstall all releases of the PSoC Programmer 3.06 before you install or update to the latest PSoC Programmer.

Defects Fixed

The following defects were fixed in this release of the PSoC Programmer.

| Defect | Fix and Impact | Defect |
|--|---|--------|
| Programmer Application | | |
| Minipro3 Taking a long time to connect | Updated registration scripts for programmer drivers | 138038 |
| Cancelling uninstall corrupts COM object | PSoC Programmer MSI now installs during roll back. | 116544 |
| | PSoC Programmer MSI now contains rollback actions to undo custom actions taken during the uninstall process. | |
| Restricting PSoC UI devices (CYRF89x) to a 3.6 maximum programming voltage | Implemented use case restrictions for voltage selections. | 130497 |
| Review the Bridge Control Panel and PSoC Programmer readme files | Updated readme files to address typos, grammar errors and clarity | 139234 |
| Removing the PDF User Guide and exchange it for CHM file | Removed the pdf user guide and updated all installer shortcuts | 138406 |
| Update to PSoC 5 and PSoC 5 LP NVL programming scripts | All examples check NVLs before programming. | 138450 |
| | Also for PSoC 5 voltage is checked for <= 3.3 for correct programming. | |
| Programming pins are left as inputs after programming | Solution is to set the Debug Port Selection to GPIO in PSoC Creator, which releases the SWD pins from the SWD controller, and sets them to analog Hi-Z. | 137577 |
| Hardware | | |
| N/A | N/A | N/A |
| Installer | | |
| N/A | N/A | N/A |
| Documentation | | |
| N/A | N/A | N/A |
| Bridge Control Panel | | |
| N/A | N/A | N/A |

Known Issues

The following is a list of known issues for PSoC Programmer release.

| Defect | Fix and Impact | Defect |
|--|---|--------|
| Miniprogram1 firmware v1.77 causes an acquire failure. | In the previous releases of the MiniProg1 firmware, the reset line was pulled low during the power cycle programming. The MiniProg1 now supports devices that have active low reset line states. To account for this, the MiniProg1 now leaves the reset line in a high-z state. Be aware of any pull up or pull down resistor circuitry that could hold the chip in a reset state. | 69058 |
| Power Cycle Mode for PSoC 3 and PSoC 5 using the revision *A MiniProg3 is implemented with reset toggling. | The Power Cycle mode for the MiniProg3 is currently using the reset line to acquire the target device using both the SWD and the JTAG protocols. A firmware solution is available for future revisions of silicon. If development is blocked, please file a tight link support case with Cypress. | 69694 |
| CyInstaller Live Update is not supported for Windows 2000 systems. | Customers will be able to install the PSoC Programmer using the CyInstaller. To update to a new version, you must completely uninstall the existing version of the PSoC Programmer using the CyInstaller and then download the latest CyInstaller from the PSoC Programmer web page. | 75099 |
| Uninstall of PSoC Programmer does not uninstall drivers. | The PSoC Programmer installer does not uninstall the device drivers by design. Many Cypress software tools utilize the drivers. | 96542 |
| Programming Encore II devices using Power Detect programming mode is not working with the Miniprogram3. | The Miniprogram3 does not support power detect programming for Encore II due to its Pull-Down interface on Data line. The Miniprogram3 does support power cycle and reset modes for the Encore II devices. | 119896 |

Device Reorganization and Consequences:

An update was made to the PSoC Programmer database organization that impacts customers programming certain devices using PSoC Programmer 3.12 Beta (or older) with PSoC Designer 5.0 SP6 and earlier. Please see the following knowledge base article that details the issue and solution.

<http://www.cypress.com/?rid=45688>

Limitations

The following are the known limitations with PSoC Programmer:

- You must change the programming mode manually using the provided buttons.
- The supported programming and bridging hardware can only be used by one application at a time. Closing the port in one application releases the hardware for other client applications.



- There is no programming support for wafer sale parts.
- When programming verification fails, the specific failing location(s) are not indicated.
- ICE4000 is no longer supported in the PSoC Programmer.
- When using the ICE-Cube or MiniProg1 for programming, the PSoC Programmer applies 3.3 V to the XRES pin during connection. This may cause power to be applied to the target system. During programming, 3.3 V is applied to the target system's SCLK(P1-1), SDATA (P1-0), and XRES pins.
- The MiniProg1 programmer does not support CY8C25/26xxx parts. The ICE-LPT and ICE-4000 programmers support the CY8C25/26xxx parts. You need to use PSoC Programmer version 2.33 or earlier if needed.
- A very infrequent USB connection issue notifies you that an unknown device was detected when a MiniProg1 is plugged in. Unplugging the MiniProg1 and then reconnecting it solves this issue.
- PSoC Programmer may experience “Can't Acquire Device” errors for CYRF69103-40LFXC. There have been intermittent reports of “Can't Acquire Device” errors, which may be individually chip dependent. Programming another device eliminates the problem.
- CY3210-MiniProg1 may have two capacitors soldered onto the SCL and SDA programming lines causing failures during programming. To remove these capacitors, please contact Cypress technical support for additional steps in addressing this issue.
- The CY3240 USB-I2C Bridge firmware cannot be upgraded in the field. You are urged to purchase a MiniProg3 programmer and bridge, which supports USB-I2C functionality and supports field upgrades.

Installation

Minimum and Recommended Requirements

| Hardware/Operation System Requirements | Minimum | Recommended |
|--|------------------------------------|-----------------|
| Processor Speed | 2 GHz | 2 GHz Dual Core |
| MB of RAM | 2 GB | 3 GB |
| MB of Free Hard Drive Space | 1 GB | 1 GB |
| Screen Resolution | 1024x768 | 1280x1024 |
| CD/DVD Drive | Not Req. | ✓ * |
| USB | Full Speed | 2.0 Hi-Speed |
| Windows® XP (SP2 or higher), Vista, or Windows 7 | ✓ | ✓ |
| Software Prerequisites ** | Minimum/Recommended Version | |
| Microsoft Internet Explorer (not IE8 beta) | 7 | |
| .NET Framework | 2.0 SP2 | |
| Adobe Reader (for viewing PDF Documentation) | 6 | 9+ |
| Windows Installer | 3.1 | |

* CD/DVD drive is only required for installation with no web access.

Applications Dependent on a PSoC Programmer Installation

The following applications require PSoC Programmer to be preinstalled. Both PSoC Designer and PSoC Creator installers will deliver the correct version of PSoC Programmer.



- PSoC Designer
- PSoC Creator
- TrueTouch Host Emulator
- MTK

The following applications are included in the PSoC Programmer installation:

- Bridge Control Panel is selectable from PSoC Programmer CyInstaller installation
- Clock Programmer is selectable from PSoC Programmer CyInstaller installation

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 have installed when updates for them become available.

Follow the instructions provided by the CyInstaller.

Installation Notes

The installation process is a set of wizards that walk you through installing various components. You can install the PSoC Programmer and various prerequisites from the web, or from a CD. There are slight differences in the process, based on the medium used to install the software. CyInstaller is supported by both the web installation and through an ISO image that can be downloaded and burned to a CD.

The CDs provide the necessary prerequisites and the wizards to guide you through installing the appropriate software. The Web installation requires you to download and install the executables separately. The following sections contain more specific installation details.

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

Web Installation

If you are downloading the software from the web, you should run the PSoC Programmer executable.

1. Double-click the PSoC Programmer executable file to launch the PSoC Programmer InstallShield Wizard.
2. Install all the prerequisites as needed.
3. Follow the prompts to install the PSoC Programmer. The CyInstaller for the PSoC Programmer opens and displays a series of steps to install the PSoC Programmer and various drivers. When complete, close the installer.

Please note that you may experience installation failure using the web installation method, this is commonly due to firewall or administration privileges. Please contact your IT individual for assistance or download the ISO image provided on the Programmer web page and burn the image and install Programmer from the CD.

PSoC Programmer CD Installation

The PSoC Programmer ISO image contains the PSoC Programmer, and various prerequisites.

1. Burn and Load the CD into the PC. The main installer program should run automatically. If not, double-click the *cyautorun.exe* file to launch it.

2. On the main installer, click the **Install Software for PSoC...** button to launch the PSoC Creator InstallShield Wizard.
3. Follow the prompts on the wizard. The first step prompts to install the PSoC Programmer.
The CylInstaller for PSoC Programmer opens and displays a series of steps to install the PSoC Programmer and various drivers.
4. Continue to follow the prompts until PSoC Programmer and the drivers are installed, and then resume with the main installer program.

Cypress PSoC Kit CD Installation

A kit CD contains the PSoC Programmer, and additional applications, such as PSoC Creator or the PSoC Designer, documentation, and prerequisites needed for the associated kit. The installation process is similar to the PSoC Programmer CD installation; however the overall process differs, as follows:

1. Load the CD. The kit installer program should run automatically. If not, double-click the autorun program to launch it.
2. On the kit installer, follow the prompts to begin the installation process. The first step prompts to install the PSoC Programmer.
3. The CylInstaller for PSoC Programmer opens and displays a series of steps to install the PSoC Programmer and various drivers.
4. Continue to follow the prompts until PSoC Programmer and the drivers are installed, then resume with the kit installer program.
5. Continue the prompts to install the application IDE's, PSoC Creator or PSoC Designer. Please see the respective release notes for these tools for detailed instructions.

Device Driver Re-Installation

During installation of PSoC Programmer you are prompted to install the device drivers for the PSoC Programmer. If you clicked "Cancel" originally, and now you want to re-install the drivers, please do the following:

Navigate to the PSoC Programmer root installation directory.

Open the *Drivers* folder and run the *driver.bat* file. This installs the PSoC Programmer drivers.

Further Reading

Documentation

Documentation is available in the PSoC Programmer Root Directory under Documents. The documents include:

- Programmer User Guide
- PSoC Programmer COM Interface Guide
- PSoC Programmer Command Line Interface Guide
- PSoC Programmer Example Code

Updates

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 |

Customer Issues

Customers who experience problems with either the PSoC software or PSoC devices should contact customer support at <http://www.cypress.com/support>. Alternatively call either of the following phone numbers 1-800-541-4736 (ext. 8) or 1-425-787-4814.

Silicon Errata

The most up-to-date versions of the silicon errata are available on the website at <http://www.cypress.com/psoc> under Related Documentation.



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