



# PSoC® Programmer Release Notes

Version 3.18

**Release Date:** April 1, 2013

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, PSoC4, PSoC 5 and the TrueTouch devices.

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## New Features for PSoC Programmer

This PSoC Programmer release supports PSoC Creator 2.2 SP1, PSoC Designer 5.4, improved 3<sup>rd</sup> party configuration files, new device support, and defect fixes.

### PSoC 4 Silicon Support

The PSoC Programmer 3.18 release provided new silicon support for the ARM Cortex-M0 PSoC 4 CY8C41/42xx device families. These new devices are supported using the Minipro3 and kit based programmers DVKProg1 and KitProg. Customers can develop applications for these devices by using the latest version of PSoC Creator.

### Support for PSoC 4 Low Cost Kit (CY8CKit-042)

PSoC Programmer 3.18 has provided programming support for the Low Cost PSoC 4 development kit (CY8CKit-042). This kit provides programming and debugging support for PSoC 4 devices using a PSoC 5LP device. The PSoC 5LP device enumerates as a KitProg device in PSoC Programmer. This programmer and debugger will also be supported in the latest revision of PSoC Creator.

The PSoC 4 low cost kit will support SWD programming using the PSoC 5LP device, but will also support USB-I2C and USB-UART bridging capabilities. The I2C bridging protocol will be supported at the Programmer COM level and from the Bridge Control Panel. UART (RX8) will be supported in Bridge Control Panel, standard Terminal applications, and via WinAPIs or other libraries for COM-ports communication.

### Support for PSoC 1 Development Kit (CY8CKit-100)

PSoC Programmer 3.18 has added programming support for the PSoC 1 Development Kit (CY8CKit-100). This development kit provides support for small processor modules, similar to the processor modules supported on the CY8CKit-001.

The CY8CKit-100 provides programming and debugging capabilities using a PSoC 3 device. This device will enumerate as a DVKProg1 from within PSoC Programmer.

This development kit will support a number of PSoC 1 based processor modules as well as one PSoC 4 based processor module. The PSoC 4 based processor module will support the CY8C41xx family only.

For the PSoC 1 based processor modules PSoC Programmer has added programming support as well as enabled programming from within PSoC Designer.

For the PSoC 4 based processor modules both programming and debugging is supported in PSoC Programmer and PSoC Creator.

### PSoC 4 Example Support

PSoC Programmer 3.18 has also added Programmer COM level support for PSoC 4 silicon. Example projects have been added for custom SWD programming applications using the Programmer COM hardware interface layer. For more information please see the Programmer COM guide in the *Documentation* folder under the start menu or the root installation directory of PSoC Programmer. To gain access to the examples please navigate to the following directory:



[Root Install Path] \Cypress\Programmer\3.18\Examples\Programming\PSoC4\

### PSoC 5LP Generic Programmer (FX2) Support

PSoC Programmer has added PSoC 5LP support for the Generic FX2 based programmer. This programmer is free to all users who wish to integrate a low cost programmer or debugger on their target system or board. Previous releases of the Generic Programmer capability enabled support for PSoC 3 and PSoC 5 based devices.

### Bridge Control Panel v1.8 Support for COM Interface

The Bridge Control Panel had added support for COM ports in reading and displaying data. Customers will be able to select the COM port interface from the port menu in the Bridge Control Panel, specify commands and communicate with and display data from their target application. All command formatting and syntax updates are covered in the Bridge Control Panel help guide available in the start menu selection or in the root installation menu. We also include COM port examples in the root installation directory of the bridge control panel or described in the Bridge Control Panel examples guide in the start menu selections.

[Root Install Path]\Cypress\Bridge Control Panel\1.8\

### PSoC 5 Support in uVision and uLink Programmers

For the PSoC Programmer 3.18 release the programming and debugging support provided in the MDK 4.70 release of Keil uVision IDE has been fully tested. In this release of the IDE Keil has provided full programming and debugging support for PSoC 5 devices without the need for uLink FLM configuration files.

### PSoC 5LP Updated BSDL File Support

PSoC Programmer 3.18 has updated the BSDL files shipped with every installation. The BSDL files are critical when setting up or developing a JTAG boundary test system using a PSoC 5LP device.

### Support for new CyInstaller 2.3 Version

PSoC Programmer 3.18 has updated to the latest revision of the CyInstaller, version 2.3. This version of the installer offers improved installation capabilities and minor defect fixes. This installer change does not represent any backwards compatibility issues with previous installers and will not affect existing installations.

## New Supported Devices for PSoC Programmer

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

Family	Device
CY8C41xx	CY8C4124PVI-432
	CY8C4124PVI-442
	CY8C4124LQI-443
	CY8C4124AXI-443
	CY8C4125AXI-473
	CY8C4125PVI-482
	CY8C4125LQI-483
	CY8C4125AXI-483
CY8C42xx	CY8C4244PVI-013



Family	Device
	CY8C4244PVI-015
	CY8C4244PVI-004
	CY8C4244LQI-008
	CY8C4244LQI-007
	CY8C4244AXI-021
	CY8C4244AXI-034
	CY8C4244PVI-432
	CY8C4244PVI-442
	CY8C4244LQI-443
	CY8C4244AXI-443
	CY8C4245PVI-011
	CY8C4245PVI-009
	CY8C4245PVI-009ES
	CY8C4245LQI-017
	CY8C4245LQI-005
	CY8C4245LQI-005ES
	CY8C4245AXI-028
	CY8C4245AXI-025
	CY8C4245AXI-018
	CY8C4245AXI-018ES
	CY8C4245AXI-473
	CY8C4245PVI-482
	CY8C4245LQI-483
	CY8C4245AXI-483
CY8C5xxx-LP	CY8C5668AXI-LP034
	CY8C5667AXI-LP040
	CY8C5667LTI-LP041
CY8CTMA4xx	CY8CTMA466-44LQI
	CY8CTMA466-48LQI
	CY8CTMA466-49FNI
	CY8CTMA466-56LQI
	CY8CTMA466-60BUI
	CY8CTMA467-44LQI
	CY8CTMA467-48LQI
	CY8CTMA467-49FNI
	CY8CTMA467-56LQI
	CY8CTMA467-60BUI
	CY8CTMA468-44LQI
	CY8CTMA468-48LQI
	CY8CTMA468-49FNI
	CY8CTMA468-56LQI
	CY8CTMA468-60BUI
CY8CTMA5xx	CY8CTMA562 -56LQI
	CY8CTMA562 -56LQIES
	CY8CTMA565-56LQI
	CY8CTMA565-56LQIES
	CY8CTMA568-56LQI
	CY8CTMA568-56LQIES
	CY8CTMA564 -70BUI



Family	Device
	CY8CTMA564 -70BUIES
	CY8CTMA565-70BUI
	CY8CTMA565-70BUIES
	CY8CTMA568-70BUI
	CY8CTMA568-70BUIES
	CY8CTMA578-70BUI
	CY8CTMA578-70BUIES
	CY8CTMA599-70BUI
	CY8CTMA599-70BUIES
CYRF89xxx	CYRF89435-68LTXC
	CYRF89135-68LTXC
CY7C69xxx	CY7C69356-48LTXC
CY8C24x93	CY8C24493-24LQXI
CY8C20xx6A	CY8C20236A-24LKXA
	CY8C20566A-12PVXE
	CY8C20566A-24PVXA
CY7C642xx	CY7C64215-56LTXCKG
	CY7C64215-56LTXI
	CY7C64215-56LTXIT
	CY7C64215-56LTXIKG
CY7C603xx	CY7C60323-PVXCKN
CY8C3xxx	CY8C3866AXA-040ES5
	CY8C3846AXE-175ES5
	CY8C3446AXE-115
	CY8C3446AXA-099
	CY8C3246AXA-131
	CY8C3866AXA-035
	CY8C3245AXA-158
	CY8C3866AXA-040
	CY8C3846AXE-175
	CY8C3846AXE-175
	CY8C3866FNI-210
	CY8C3665FNI-211
	CY8C3866FNI-210ES
	CY8C3446AXI-099ES5
	CY8C3866AXI-040ES5
	CY8C3866LTI-030ES5
	CY8C3244AXI-153
	CY8C3244LTI-123
	CY8C3244LTI-130
	CY8C3244PVI-133
	CY8C3245AXI-158
	CY8C3245AXI-166
	CY8C3245LTI-129
	CY8C3245LTI-139
	CY8C3245LTI-144
	CY8C3245LTI-163
	CY8C3245PVI-134
	CY8C3245PVI-150



Family	Device
	CY8C3246AXI-131
	CY8C3246AXI-138
	CY8C3246LTI-125
	CY8C3246LTI-128
	CY8C3246LTI-149
	CY8C3246LTI-162
	CY8C3246PVI-122
	CY8C3246PVI-147
	CY8C3444AXI-116
	CY8C3444LTI-110
	CY8C3444LTI-119
	CY8C3444PVI-100
	CY8C3445AXI-104
	CY8C3445AXI-108
	CY8C3445LTI-078
	CY8C3445LTI-079
	CY8C3445LTI-081
	CY8C3445LTI-089
	CY8C3445PVI-090
	CY8C3445PVI-094
	CY8C3446AXI-099
	CY8C3446AXI-105
	CY8C3446LTI-073
	CY8C3446LTI-074
	CY8C3446LTI-083
	CY8C3446LTI-085
	CY8C3446PVI-076
	CY8C3446PVI-091
	CY8C3446PVI-102
	CY8C3665AXI-010
	CY8C3665AXI-016
	CY8C3665LTI-006
	CY8C3665LTI-044
	CY8C3665PVI-007
	CY8C3665PVI-008
	CY8C3665PVI-080
	CY8C3666AXI-036
	CY8C3666AXI-037
	CY8C3666AXI-052
	CY8C3666LTI-027
	CY8C3666LTI-050
	CY8C3865AXI-019
	CY8C3865LTI-014
	CY8C3865LTI-062
	CY8C3865PVI-060
	CY8C3865PVI-063
	CY8C3866AXI-035
	CY8C3866AXI-039
	CY8C3866AXI-040



Family	Device
	CY8C3866LTI-030
	CY8C3866LTI-067
	CY8C3866LTI-068
	CY8C3866PVI-021
	CY8C3866PVI-070
	CY8C3665AXI-198
	CY8C3665LTI-199
	CY8C3666AXI-200
	CY8C3666LTI-201
	CY8C3666AXI-202
	CY8C3666LTI-203
	CY8C3865AXI-204
	CY8C3865LTI-205
	CY8C3866AXI-206
	CY8C3866LTI-207
	CY8C3866AXI-208
	CY8C3866LTI-209
	CY8C3665AXI-198
	CY8C3665LTI-199
	CY8C3666AXI-200
	CY8C3666LTI-201
	CY8C3666AXI-202
	CY8C3666LTI-203
	CY8C3865AXI-204
	CY8C3865LTI-205
	CY8C3866AXI-206
	CY8C3866LTI-207
	CY8C3866AXI-208
	CY8C3866LTI-209
CY8CEBIKExxx	CY8CEBIKEAXI-111

## 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
<b>Programmer Application</b>		
Add PSoC 5 LP Support to Generic FX2 Programmer	Support was added to the FX2 firmware for the Generic Programmer	144097
PSoC Programmer auto detecting wrong part number	Fixed ambiguity for EncoreII pods - added CY8C601xx/602xx/CY8CRF families in POD detection condition	146591
Update BSDL Files for PSoC 5LP Devices	Latest BSDL Files are now included in the PSoC Programmer 3.18 release	145596
<b>Hardware</b>		
N/A	N/A	N/A
<b>Installer</b>		
Incorporate PSoC Programmer with the latest CyInstaller 2.3	PSoC Programmer 3.18 will ship with the CyInstaller 2.3.	147519
<b>Documentation</b>		
N/A	N/A	N/A
<b>Bridge Control Panel</b>		
Enhancement - Support COM Port Data	Added support of COM-port in BCP 1.8.	138207
RX8 Labeling update	Updated label from RX8 to RX8 (UART)	146923

## 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	75099



	Programmer web page.	
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 Minipro3.	The Minipro3 does not support power detect programming for Encore II due to its Pull-Down interface on Data line. The Minipro3 does support power cycle and reset modes for the Encore II devices.	119896
PRoC UI devices cannot be programmed above 3.3V	The Minipro3 and Minipro1 programmers can supply power to the target device in excess of 3.3V. The PRoC UI devices can only be programmed in the 1.7-3.3V range. Customers must take care when programming the PRoC-UI devices. Programming above 3.3 Volts may cause damage to the device or the radio chip.  Warnings have been added to PSoC Programmer if the user were to select the PRoC-UI devices in a hazardous configuration.	N/A
Intermittent errors in P4/SWD EnumerateDevices API	Some customers may see intermittent issues when creating custom programming/testing GUIs and using the EnumerateDevices API for PSoC 4 devices. This issue is primarily seen when using old Minipro3 programmers (Revision 5 and *A). These users are encouraged to update to the latest revision of the Minipro3 (*B) via the Minipro3 kit web page which does not have this issue:  <a href="http://www.cypress.com/go/cy8ckit-002">www.cypress.com/go/cy8ckit-002</a>	148470
Programmer does not work if installed in other disk	Customers who install Programmer into a customer directory must not use '-' characters in the file path name.	138786

**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 MiniProg 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 clears 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	✓	✓
<b>Software Prerequisites **</b>	<b>Minimum/Recommended Version</b>	
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 CyInstaller 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 CyInstaller 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
- Clock Programmer User Guide



- MiniProg3 User Guide

Also we provide guide for using Cypress silicon in 3<sup>rd</sup> party tools. This document can be found under `.3rd_party_configuration_files/Documents` folder:

- Third-Party Tools User Guide

### Updates

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

PSoC Software Tool	Link
PSoC Designer	<a href="http://www.cypress.com/go/psocdesigner">http://www.cypress.com/go/psocdesigner</a>
PSoC Creator	<a href="http://www.cypress.com/go/psoccreator">http://www.cypress.com/go/psoccreator</a>
PSoC Programmer	<a href="http://www.cypress.com/go/psocprogrammer">http://www.cypress.com/go/psocprogrammer</a>

### 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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