Release Notes SRN063

PSoC Programmer Version 3.05 Release
Clock Programmer Version 1.2 Release
Release Date: April 30, 2009

Thank you for your interest in PSoC Programmer version 3.05. This document lists installation requirements and describes software updates and changes. This programmer release incorporates PSoC Device support for CY7C604xx, CY7C643xx, CY8C20x36, CY8C20x96, CY8C20x46, CY8C22x45, CY8C21x45, CY8C28xxx, CY8CTST201, CY8CTMG201, CY8CTST300, CY8CTMG300, CY8CTMA300, CY8CPLCxx, CY8CLED03D0x and CY8CLED16Pxx devices and a new programming tool for the Cypress Clock Devices.

System Requirements and Recommendations

System Requirements	Minimum	Recommended
• Processor Speed	500 MHz	1 GHz
• MB of RAM	64 MB	512 MB
• MB of Free Hard Drive Space	200 MB	512 MB
• Screen Resolution	1024x768	1280x1024
• CD-ROM Drive		✓
• USB Port, preferably Open Host Controller or Universal	✓	✓
• Windows® 2000, XP 2.0 (SP 1 or 2), or Vista 32-bit and 64-bit	✓	✓
• Windows .NET Framework 2.0	✓	
• Windows .NET Framework 3.5		✓
• Microsoft Internet Explorer 6.0 (SP1)	✓	✓
• Adobe Reader (For Viewing of .PDF Documentation)	✓	✓

Updates

PSoC Programmer is updated frequently, adding support for new devices as they appear.

Check http://www.cypress.com/psocprogrammer for the latest downloads of software and documentation.

New Devices for PSoC Programmer 3.05

The following table is a list of new devices for PSoC Programmer 3.05

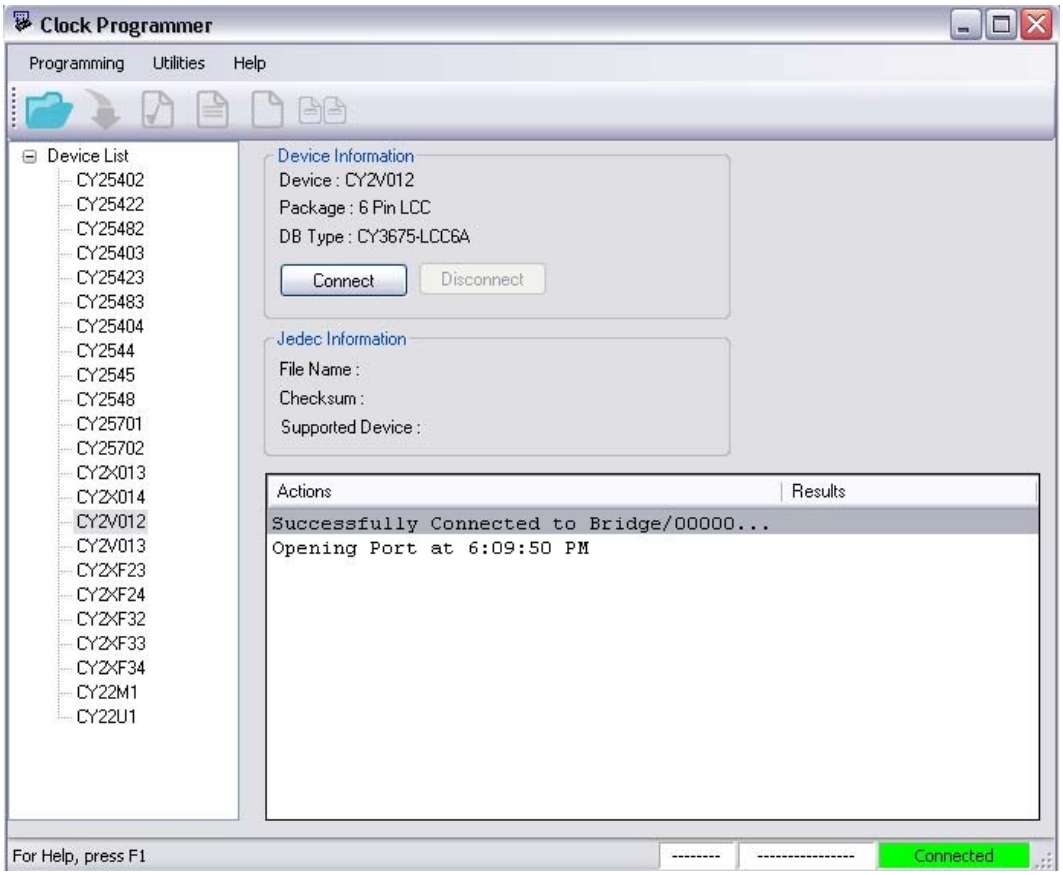
Device Family	Device
CY7C604xx	CY7C60413-16LGXC
CY7C643xx	CY7C64343-32LQXC
CY8C20x36	CY8C20236-24LKXI
	CY8C20336-24LQXI
	CY8C20436-24LQXI
CY8C20xx6	CY8C20396-24LQXI (T)
	CY8C20646-24LQXI (T)
CY8C22x45	CY8C22345-24SXI
	CY8C22545-24AXI

Device Family	Device
	CY8C22045-24PVXI
CY8C21x45	CY8C21345-24SXI
CY8C28x45	CY8C28445-24PVXI
	CY8C28445-24PXI
	CY8C28545-24AXI
	CY8C28645-24LFXI
CY8C28xx3	CY8C28623-24LTXI (T)
	CY8C28433-24PVXI (T)
	CY8C28533-24PVXI (T)
CY8CTST201	CY8CTST201-16LGXI
	CY8CTST201-24LQXI
	CY8CTST201-32LQXI
CY8CTMG201	CY8CTMG201-16LGXI
	CY8CTMG201-24LQXI
	CY8CTMG201-32LQXI
CY8CTST300	CY8CTST300-36LQXI
	CY8CTST300-48LTXI
	CY8CTST300CS-49FNXI
2CY8CTMG300	CY8CTMG300-36LQXI
	CY8CTMG300-48LTXI
	CY8CTMG300CS-49FNXI
CY8CTMA300	CY8CTMA300-36LQXI
	CY8CTMA300-48LTXI
	CY8CTMA300CS-49FNXI
	CY8CTMA300B-36LQXI
CY8CLED03D0x	CY8CLED03D01-56LTXI
	CY8CLED03D02-56LTXI
	CY8CLED03DOCD1-56LTXI
CY8CPLCxx	CY8CPLC20-28PVXI
	CY8CPLC20-48LFXI
	CY8CPLC20-OCD
CY8CLED16Pxx	CY8CLED16P01-28PVXI
	CY8CLED16P01-48LFXI
	CY8CLED16P01-OCD

Clock Programmer v1.2

Clock Programmer:

The Clock Programmer is now available as part of the PSoC Programmer 3.05 release. The Clock Programmer is a stand-alone programmer that uses the CY3240 USB-IIC Bridge tool to program Cypress Clock devices. The following is a picture of the Clock Programmer application.



Please see the Clock Programmer User Guide for detailed functional descriptions. All Clock Programmer updates are shipped with PSoC Programmer.

COM Updates:

To support the Clock Programmer updates were made to the PSoC Programmer COM architecture. The new updates are detailed in the PSoC Programmer COM guide. The COM architecture supports new API's for the CY3240 USB-I2C Bridge tool. You can create applications for the CY3240 USB-I2C Bridge using the COM architecture.

New Clock Devices Supported for Clock Programmer 1.2

The following table is a list of new Clock devices for Clock Programmer 1.2.

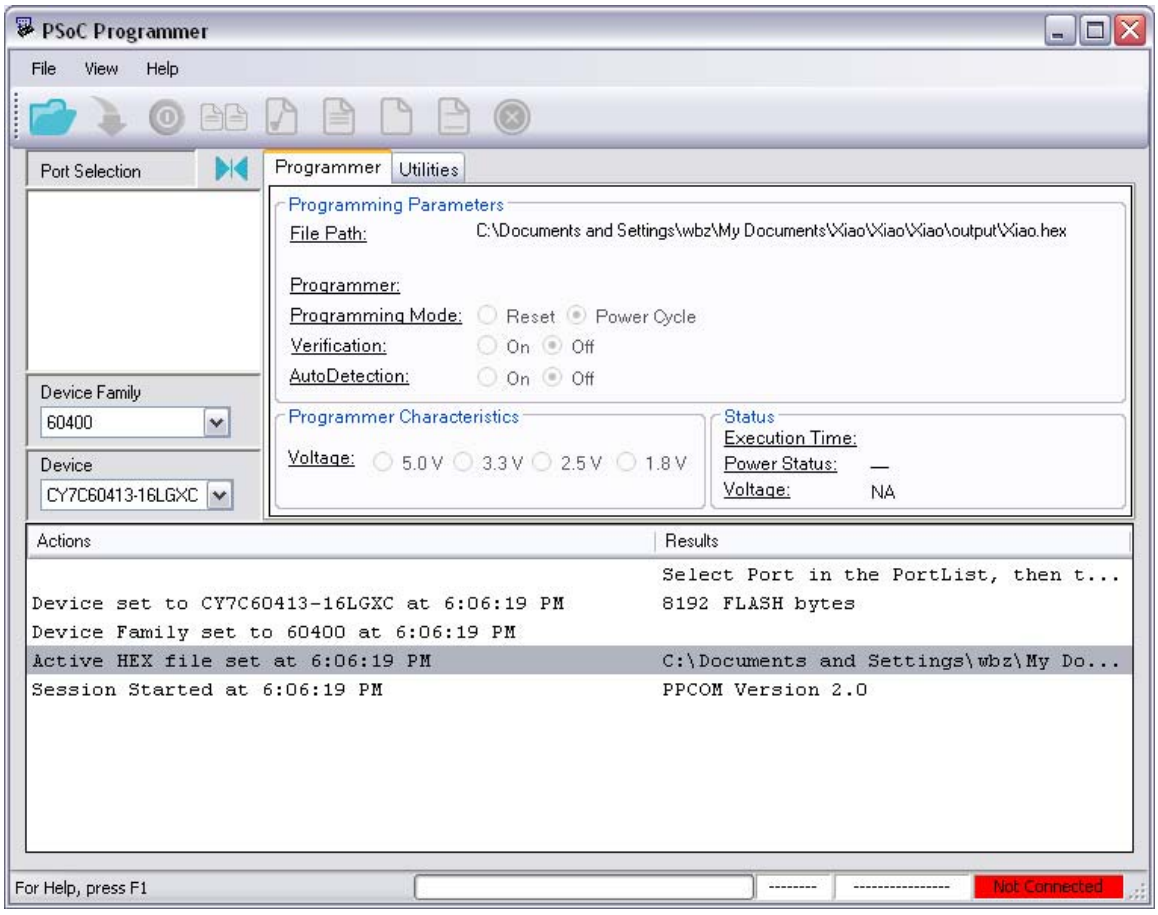
Device Family	Device
CY254xx	CY25402
CY254xx	CY25422
CY254xx	CY25482
CY254xx	CY25403
CY254xx	CY25423
CY254xx	CY25483
CY254xx	CY25404
CY254xx	CY2544
CY254xx	CY2545
CY254xx	CY2548

Device Family	Device
SSXO	CY25701
XO	CY25702
FleXO	CY2X013
FleXO	CY2X014
UniClock	CY22M1
UniClock	CY22U1
FleXO	CY2V012
FleXO	CY2V013
FleXO	CY2XF23
FleXO	CY2XF24
FleXO	CY2XF2
FleXO	CY2XF32
FleXO	CY2XF33
FleXO	CY2XF34

New for PSoC Programmer

PSoC Programmer has been upgraded to support the CY3240 USB-IIC Bridge from the COM level. This update has been made to support the new Clock Programmer. The new COM API's are exposed to the users in order to create custom projects and applications.

Additionally the PSoC Programmer "Programmer" tab has been updated. Critical information has been divided into sections, which makes for a more visually appealing layout.



Miniprog1 Firmware Update

PSoC Programmer 3.05 supports the Miniprog1 firmware revision 1.75. This revision fixes programming issues seen in the Universal CapSense Controller Kit (CY3280). Please refer to the User Guide for directions on upgrading the Miniprog1 firmware.

PSoC Programmer 3.05 Defects

The following list of defects is currently open for PSoC Programmer 3.05:

Defect #	Problem	Solution	Expected Fix
23474	If PSoC Programmer is open when the computer is put into Hibernation mode, upon returning to normal operations PSoC Programmer displays a programming error when trying to program a part.	Exit and re-enter PSoC Programmer to solve the problem.	None
26435	When more than 5-7 instances of PSoC Programmer are open and you stack like devices in the taskbar, the stacked entries read “COM Surrogate” instead of PSoC Programmer.	Do not group similar windows. This defect is believed to be a Windows issue.	None

Defect #	Problem	Solution	Expected Fix
31346	When Autodetect is enabled and the user is programming a POD device, PSoC Programmer can auto select the wrong device. This only occurs when programming a POD device.	When programming a POD device, have Autodetect set to 'Off' and manually select the target device.	Future Programmer release.
37637	Windows failures have been seen with the CY3240 USB-I2C Bridge. Failures are seen when connecting a second instance of the Bridge and then disconnecting the second instance.	Keep no more than one USB-I2C Bridge connected at any given time.	None
40243	"File Load" option not available when invoking PSoC Programmer from PSoC Designer in Vista 64 Bit.	Open PSoC Programmer from the start menu when programming a HEX file besides last compiled HEX file.	Future Programmer release.
45074	COM+ Registration failures seen during installation.	Please see release note section "PSoC Programmer COM+ and MSDTC Installation Issue".	Future Programmer release.

PSoC Programmer COM+ and MSDTC Installation Issue

If the PSoC Programmer installer crashes with a "1722 Windows Error" error message, there may be an issue with the Microsoft Distributed Transaction Coordinator service.

If the "Distributed Transaction Coordinator" service is missing from the list of services in:

Control Panel -> Administrative Tools -> Services

Please try the following instructions:

- Bring up the Windows Command prompt (Start -> Run -> cmd.exe).
- At the prompt, run the following command:

  msdtc –install

- Install PSoC Programmer again.

Microsoft documented the issue in the knowledge base: http://support.microsoft.com/kb/891801. Modifying your registry is potentially dangerous and is not suggested. The Microsoft Help documentation for the registry editor program says the following:

"Although Registry Editor enables you to inspect and modify the registry, normally you do not need to do so, and making incorrect changes can break your system."

Microsoft .NET Framework Installation

PSoC Programmer no longer bundles the Microsoft .NET framework for both 32 and 64 bit XP and machines. During installation the installer tests the Windows XP version and prompts the user to install the correct version of Windows .NET framework. Windows Vista contains the correct Windows .NET Framework with the operating system.

Use a USB2.0 Hub for Optimal Programming with MiniProg1

MiniProg1 programmer hardware has a low-speed USB interface. If you use a USB2.0 Hub between the computer running PSoC Programmer and the MiniProg1, the overhead in USB transactions is greatly reduced and actual programming time for the PSoC device is reduce by 30%. Dlink and Belkin USB2.0 Hubs were used to verify this behavior.

PSoC Programmer 3.05 allows you to turn off the verification procedure of the programming algorithm. If you turn off verification and use a high-speed USB hub you may see overall reductions of 40-50% in programming time. The programming algorithm uses a checksum calculation for verification. This feature is intended to shorten programming times in an engineering setting and not intended for use in manufacturing.

Device Driver Re-Installation

During installation of PSoC Programmer you are prompted to install the device drivers for PSoC Programmer. If you click “Cancel” and then want to install the drivers later, please perform the following steps to install the PSoC Programmer drivers:

- Navigate to the PSoC Programmer root installation directory.
- Open the *Drivers* folder.
- And Run the *driver.bat* file. This installs the PSoC Programmer drivers.

Programmer Limitations

1. You must change the programming mode manually (Power cycle or Reset mode).
2. After one Programmer instance is opened on a USB port, it holds the original port even if it is unplugged and moved to another port. This prevents another instance from using the original port. Closing and reopening the first instance resolves this.
3. There is no programming support for wafer sale parts.
4. When programming verification fails, the specific failing location(s) are not indicated.
5. ICE4000 is no longer supported in PSoC Programmer.
6. When using the ICE-Cube or MiniProg1 for programming, PSoC Programmer applies 3.3V to the XRES pin during connection. This may cause power to be applied to the target system. During programming, 3.3V is applied to the target system's SCLK(P1-1), SDATA (P1-0), and XRES pins.
7. The MiniProg1 programming device does not support CY8C25/26xxx parts.
8. 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.
9. PSoC Programmer may experiences “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.
10. The port selection window does not display port information if the port string is wider than the text window.

Documentation

Documentation is available in the PSoC Programmer Root Directory under Documents. The documents include *Programmer User Guide*, *psoc_programmer_com*, and *psoc_programmer_cli*.

For additional assistance go to http://www.cypress.com or contact our Application Team at 425.787.4814.

PSoC Training

It is recommend that first time users visit www.cypress.com/training for access to free comprehensive PSoC training modules.

Silicon Errata

The most up-to-date versions of the silicon errata are available on the web site at http://www.cypress.com/psoc and navigating to Errata Update → PSoC Mixed-Signal Array.

For assistance go to http://www.cypress.com or contact our Applications Team at 425.787.4814.

Cypress Semiconductor
198 Champion Ct.
San Jose, CA 95134-1709 USA
Tel: 408.943.2600
Fax: 408.943.4730
Application Support Hotline: 425.787.4814
www.cypress.com

© Cypress Semiconductor Corporation, 2007. The information contained herein is subject to change without notice. Cypress Semiconductor Corporation assumes no responsibility for the use of any circuitry other than circuitry embodied in a Cypress product. Nor does it convey or imply any license under patent or other rights. Cypress products are not warranted nor intended to be used for medical, life support, life saving, critical control or safety applications, unless pursuant to an express written agreement with Cypress. Furthermore, Cypress does not authorize its products for use as critical components in life-support systems where a malfunction or failure may reasonably be expected to result in significant injury to the user. The inclusion of Cypress products in life-support systems application implies that the manufacturer assumes all risk of such use and in doing so indemnifies Cypress against all charges.

PSoC Designer™, Programmable System-on-Chip™, and PSoC Express™ are trademarks and PSoC® is a registered trademark of Cypress Semiconductor Corp. All other trademarks or registered trademarks referenced herein are property of the respective corporations.

This Source Code (software and/or firmware) is owned by Cypress Semiconductor Corporation (Cypress) and is protected by and subject to worldwide patent protection (United States and foreign), United States copyright laws and international treaty provisions. Cypress hereby grants to licensee a personal, non-exclusive, non-transferable license to copy, use, modify, create derivative works of, and compile the Cypress Source Code and derivative works for the sole purpose of creating custom software and or firmware in support of licensee product to be used only in conjunction with a Cypress integrated circuit as specified in the applicable agreement. Any reproduction, modification, translation, compilation, or representation of this Source Code except as specified above is prohibited without the express written permission of Cypress.

Disclaimer: CYPRESS MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH REGARD TO THIS MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Cypress reserves the right to make changes without further notice to the materials described herein. Cypress does not assume any liability arising out of the application or use of any product or circuit described herein. Cypress does not authorize its products for use as critical components in life-support systems where a malfunction or failure may reasonably be expected to result in significant injury to the user. The inclusion of Cypress' product in a life-support systems application implies that the manufacturer assumes all risk of such use and in doing so indemnifies Cypress against all charges.

Use may be limited by and subject to the applicable Cypress software license agreement.