Release Notes SRN065

PSoC Programmer Version 3.10
Release Date: October 27, 2009

Thank you for your interest in PSoC Programmer version 3.10. These release notes list the installation requirements and describe software updates and changes. This programmer release incorporates PSoC Device support for the devices. Additionally PSoC Programmer 3.10 supports the new Miniprog3 programming tool for programming PSoC1 and PSoC3 devices. Also included is information about the new CyInstaller for installing PSoC Programmer.

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 (SP 1 or 2), or Vista 32-bit Windows 7	✓	✓
Windows .NET Framework 2.0 (32)	✓	✓
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 3.10

This table lists new devices for PSoC Programmer 3.10

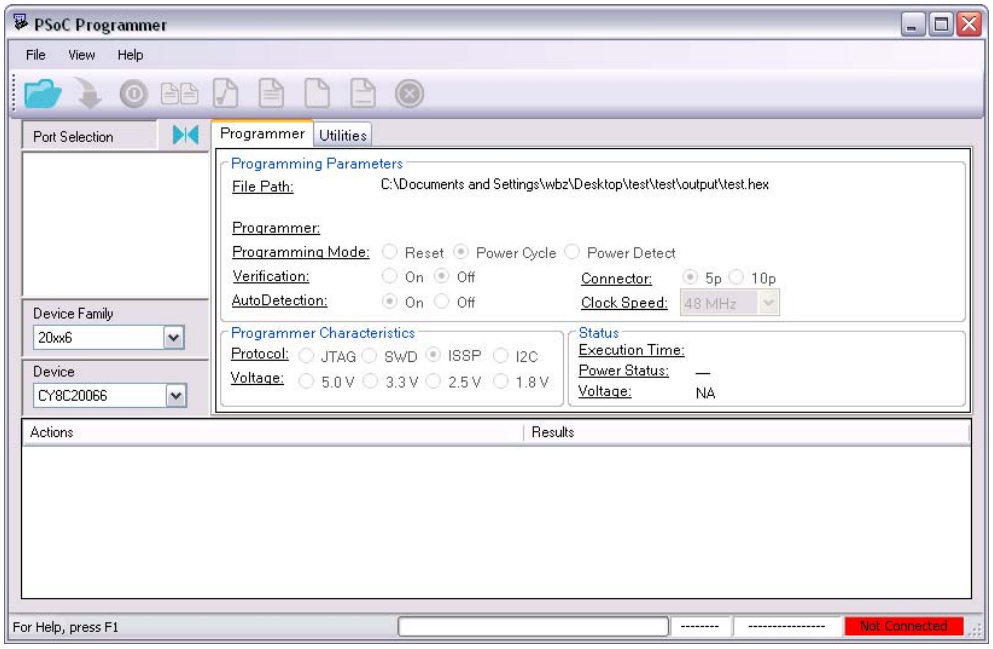
Device Family	Device
CY8C20xx6A	CY8C20236A
	CY8C20336A
	CY8C20436A
	CY8C20536A
	CY8C20636A
	CY8C20246A
	CY8C20346A
	CY8C20446A
	CY8C20546A
	CY8C20646A
	CY8C20266A
	CY8C20366A

Device Family	Device
	CY8C20466A
	CY8C20566A
	CY8C20666A
	CY8C20296A
	CY8C20396A
	CY8C20496A
CY8CTxx20xA	CY8CTMG200A-48LTXI
	CY8CTMG201A-48LTXI
	CY8CTMG200A-16LGXI
	CY8CTMG200A-24LQXI
	CY8CTMG200A-32LQXI
	CY8CTMG200A-48PVXI
	CY8CTMG201A-16LGXI
	CY8CTMG201A-24LQXI
	CY8CTMG201A-32LQXI
	CY8CTMG201A-48PVXI
	CY8CTST200A-48LTXI
	CY8CTST201A-48LTXI
	CY8CTST201A-16LGXI
	CY8CTST201A-24LQXI
	CY8CTST201A-32LQXI
	CY8CTST201A-48PVXI
	CY8CTST200A-16LGXI
	CY8CTST200A-24LQXI
	CY8CTST200A-32LQXI
	CY8CTST200A-48PVXI
CY8C21x34	CY8C21334-12PVXE
	CY8C21334-24PVXA
	CY8C21534-12PVXE
	CY8C21534-24PVXA
CY8C24x23A	CY8C24223A-12PVXE
	CY8C24423A-12PVXE
	CY8C24423A-12PVXA
CY8C24x94	CY8C24894-24LFXA
CY8C29x66	CY8C29466-12PVXE
	CY8C29466-12PVXA
CY8CLED0xxxx	CY8CLED01D01-56LTXI
	CY8CLED02D01-56LTXI
	CY8CLED03G01-56LTXI
	CY8CLED04G01-56LTXI
CY8CTMA1xx	CY8CTMA120-56LFXA
CY8CTMG1xx	CY8CTMA120-56LFXA
CY8CTMA300E	CY8CTMA300E-36LQXI
	CY8CTMA300E-48LTXI
	CY8CTMA300E-49FNXI
CY8CTMA301E	CY8CTMA301E-36LQXI
	CY8CTMA301E-48LTXI
	CY8CTMA301E-49FNXI
CYONS2xxx	CYONS2010-LBXC

Device Family	Device
	CYONS2011-LBXC
CYONSFN2xxx	CYONSFN2051-LBXC
	CYONSFN2061-LBXC
	CYONSFN2151-LBXC
	CYONSFN2161-LBXC
	CYONSFN2162-LBXC
	CYONSFN2053-LBXC
CY8C3xxx	Complete family listing. (100+ devices)
CY8C5xxx	Complete family listing. (100+ devices)

New for PSoC Programmer 3.10

New PSoC Programmer 3.10 features.



- PSoC Programmer supports new PSoC3 devices in addition to new and existing PSoC1 devices.
- PSoC Programmer 3.10 integrates the new Miniprog3 development tool
- PSoC Programmer supports new features of Miniprog3 through new GUI features.
- PSoC Programmer provides user interface for selecting Miniprog3 supply voltages. The voltages are 1.8V, 2.5V, 3.3V, 5.0V and no power.
- Miniprog3 supports JTAG, SWD, ISSP programming and I2C protocols.
- The Miniprog3 can read the target board voltage and display that value to PSoC Programmer.

- Adjust the Miniprog3 clock speed.
- Miniprog3 has signed (32 and 64 bit) Windows XP and Vista drivers.
- PSoC Programmer 3.10 supports the CY3240 USB-I2C Bridge tool and the Miniprog3 I^2C capabilities from the COM level.
- New Patch programming feature allows you to program serial and calibration values into flash blocks you specify.
- PSoC Programmer is supported by the CyInstaller, which reduces the total PSoC Programmer installer size.
- Included in this release are numerous defect fixes from PSoC Programmer 3.06.

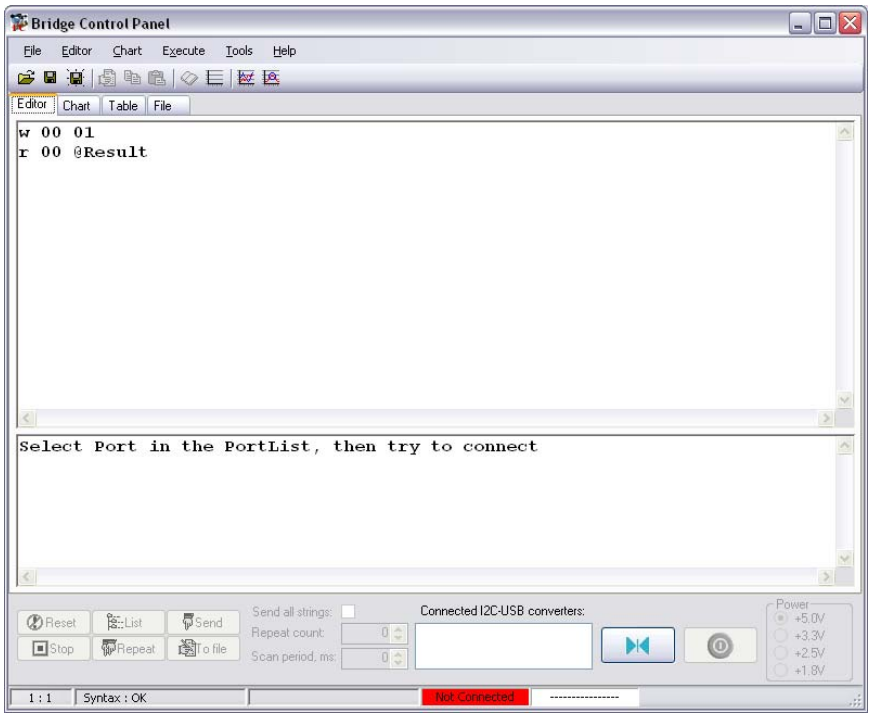
  For more information regarding new features and detailed functionality please see the PSoC Programmer 3.10 COM, PPCLI and User Guides.

Bridge Control Panel

The Bridge Control Panel v1.0 has been released to production status. The PSoC Programmer 3.06 release included a live beta of the Bridge Control Panel. In the RTM release PSoC Programmer 3.10 includes numerous beta defect fixes.

The Bridge Control Panel is a migration of the old USB-I2C Bridge software shipped with CY3240 kits. This release of the Bridge Control Panel includes a GUI migration with a few minor updates. The Bridge Control Panel supports the following:

- USB-I2C serial debugging interface and charting software.
- Hardware support for the CY3240 and the Miniprog3 USB-I2C Bridge capabilities.
- I2C Bootloader utility, located under the menu ‘Tools’.
- Numerous example projects contained in the root installation directory.



Bridge Control Panel Beta Installation

PSoC Programmer 3.06 included a live beta release of the Bridge Control Panel v1.0. If you wish to use the production version of the Bridge Control Panel v1.0, shipped with PSoC Programmer 3.10, you must first uninstall all existing versions of PSoC Programmer 3.06.

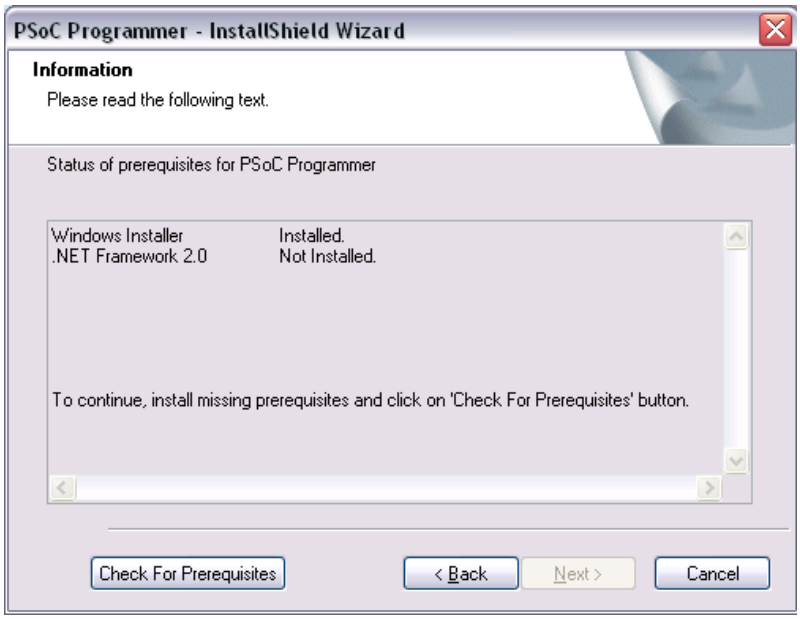
Cypress does not support Beta and Production version of the same software on the same computer. There are conflicts that could arise and we highly suggest that customers fully uninstall PSoC Programmer 3.06 prior to installing any version of PSoC Programmer 3.10 in order to use the production release of the Bridge Control Panel v1.0.

CyInstaller

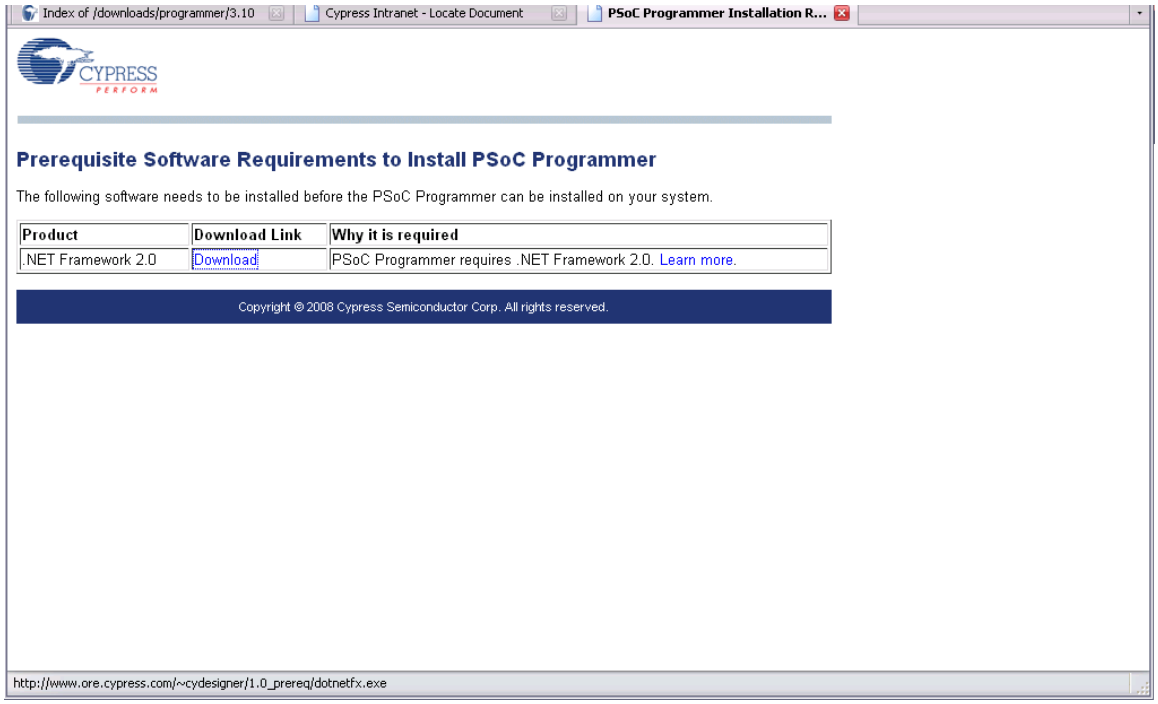
New for PSoC Programmer 3.10 is the CyInstaller. CyInstaller performs installation, un-installation and update operation for a given Cypress software product.

You begin by clicking the CyInstaller executable. The installer checks the system to ensure minimum requirements are met. If critical requirements are missing CyInstaller identifies which requirements are needed.

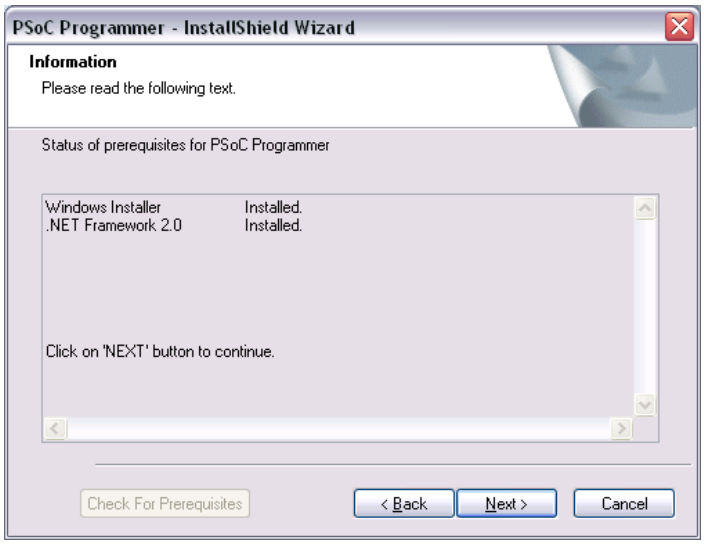
CyInstaller displays which element is missing.



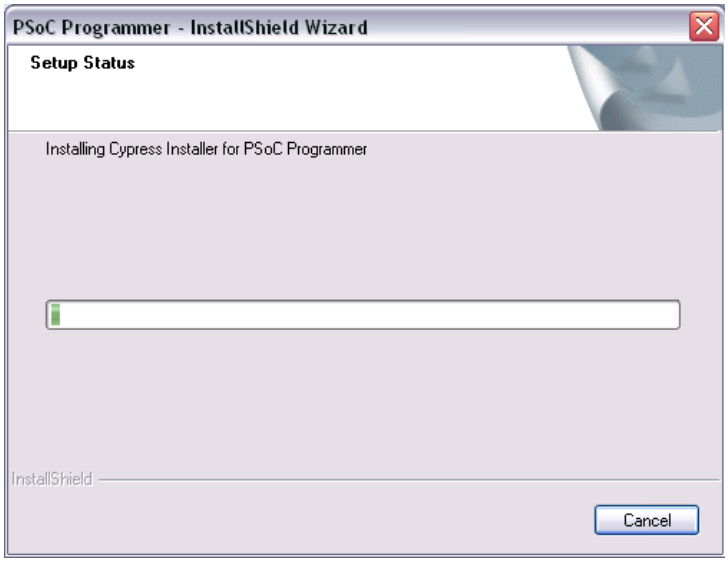
CyInstaller opens a browser window for you to download and install the prerequisite components. Click *Download* and install the program.



After installing the prerequisites, click “Check for prerequisites”. CyInstaller should have all the prerequisites labeled as “Installed”.

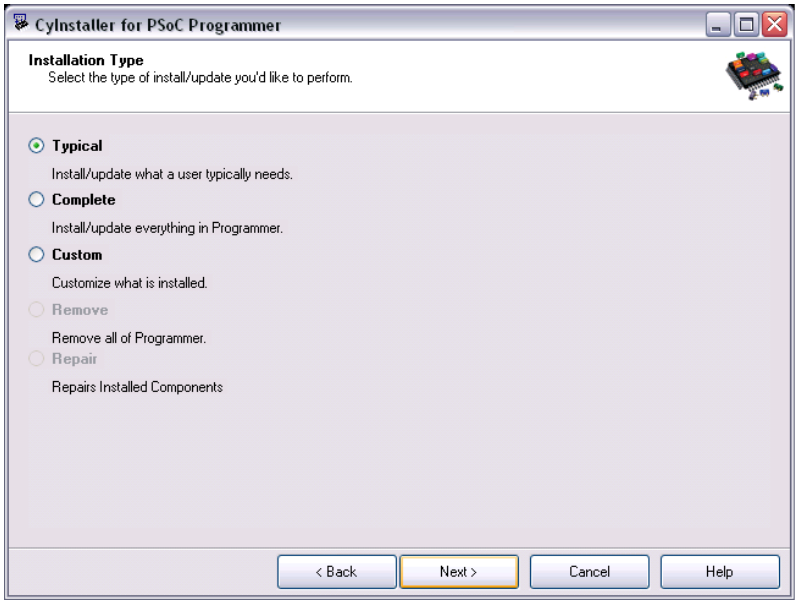


Click “Next” and the CyInstaller installs CyInstaller.

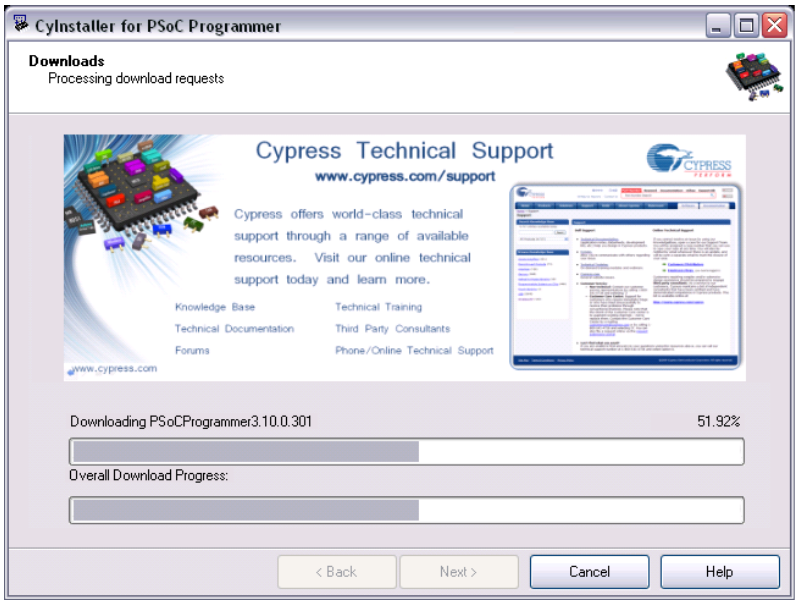


After the installation is complete CyInstaller opens and prompts you to begin the PSoC Programmer installation options.

You are offered a number of options when installing PSoC Programmer. Select the desired option and click **Next**.



CyInstaller begins downloading and installing PSoC Programmer.



At the end of installation you are prompted to install the Device drivers for the supported programmers. In Windows Vista the Device Driver Installation Wizard does not pop to the front during installation and instead blinks in the task bar.

After the drivers are installed CyInstaller completes the installation process.

For additional information please go to the PSoC Programmer web page, www.cypress.com/psocprogrammer.

Miniprog1 and Miniprog3 Firmware Update

PSoC Programmer 3.10 supports a firmware upgrade for Miniprog1 and Miniprog3. This revision of the firmware has been updated to support the CY8CTMA30xE devices.

PSoC Programmer 3.10 Known Problems and Solutions

The following section details the current outstanding defects for the release of PSoC Programmer 3.10. The Defects are detailed and available work arounds are given.

Problem	Solution	Expected Fix
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.	Have one USB-I2C Bridge connected at one time. This is a hardware limitation.	None
The CY3240 USB-I2C cannot be upgraded through PSoC Programmer or Bridge Control Panel.	There are no updates and will be no updates to the CY3240 Bridge. Equal functionality is provided with the Miniprog3 USB-I2C Bridge capabilities.	None
Programming fails when First Touch Kit 3 or Miniprog1 are removed while another First Touch Kit or Miniprog1 is programming.	This issue is not reproducible. To avoid this issue, do not remove programmers while another programmer is programming a device.	Not a reproducible issue.
If the Miniprog3 clock is set to greater than 1/3 of the chip bus clock speed, The Programming/Debugging may fail and an error message will be displayed.	For reliable results, the Minipro3 clock should not be set to greater than 1/3 of the chip bus clock. The maximum programming/debugging speed id dependent upon the CFGSPEED NVL setting (12MHz or 48MHz)	None
With PPCLI you may see a glitch on the optional XRES pin while accessing NVL with the Miniprog3	0x05 should be written to the register address 0x500A before accessing NVL	Next revision
When optional XRES is enabled, Read/Verify features may not work with the Miniprog3	Connecting an external pull-up resistor (Vcc) to the optional XRES pin may fix this problem	Next revision
When you supply an external power source to the target device, Power Cycle programming mode should not be used.	Please use Reset programming mode when supplying external power to the target device.	None
If after programming using Reset programming mode you do not remove the applied power and attempt to program the device using Power Cycle you will see programming irregularities.	Please cycle power on the target device and remove the external power supply before programming with Power Cycle mode.	None
Miniprog3 rev5 and rev6 are Beta programmers and will not be supported in the future.	An outdated programmer will be detected by PSoC Programmer and a message will be displayed that this revision of the Miniprog3 is no longer supported. Please navigate to the following web page to purchase the latest version of the Miniprog3: www.cypress.com/go/cy8ckit-002	None

Problem	Solution	Expected Fix
A small quantity of Miniprog3 revision *A programmers were shipped with outdated firmware. If the firmware is not updated the Miniprog3 will not function with the CY8CTMA300xE devices.	PSoC Programmer will detect that the firmware is out of date. Please navigate to the Utilities tab and click the Update Firmware version. After the firmware is updated the Miniprog3 will be fully functional.	Manual S/W updates using online Knowledge Based Article.
Miniprog3 has been seen to fail when programming the CY7C638xx devices.	Please use Miniprog1 instead.	Next software release.

Increasing the Miniprog1 Programming Times

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. Subsequently the programming time for the PSoC device is reduced by 30%. Dlink and Belkin USB2.0 Hubs were used to verify this behavior.

PSoC Programmer 3.10 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 manufacturing use.

Device Driver Re-Installation

During installation of PSoC Programmer you are prompted to install the device drivers for 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.

Programmer Limitations

- You must change the programming mode manually using the provided radio buttons.
- 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.
- 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 PSoC Programmer.
- 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.
- The MiniProg1 programmer does not support CY8C25/26xxx parts.

- 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 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.
- The port selection window does not display port information if the port string is wider than the text window.
- If you select the Fixed Reminder option, please know that there may not be an update for PSoC Programmer currently available. Please reset the reminder interval under the Fixed Reminder, switch to an automatic web update, or disable the update reminder. Close and restart PSoC Programmer to reset the notification in the banner and in the status window.
- 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.

Documentation

Documentation is available in the PSoC Programmer Root Directory under Documents. The documents include *Programmer User Guide*, *PSoC Programmer COM Interface Guide*, and *PSoC Programmer Command Line Interface Guide*.

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

PSoC Training

First time users should 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.

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