



# Release Notes

## CY8CKIT-001 Kit

Release Date: January 5, 2011

Thank you for your interest in the CY8CKIT-001 PSoC<sup>®</sup> Development Kit. This document lists installation requirements and describes kit updates and changes.

### Kit Features

The CY8CKIT-001 PSoC Development Kit is designed to aid hardware, firmware, and software developers in building their own systems around Cypress's PSoC 1, PSoC 3, and PSoC 5 architectures. The development board gives you the flexibility to configure the power domains. Input power to the board can be provided in one of two ways: 1) a 12 V 1 A power supply and 2) a 9 V alkaline battery.

This full featured board incorporates three onboard linear regulators that can be used to power peripherals and PSoC modules at voltages between 1.7 V and 5.0 V. These regulators include a fixed 5 V 1 A linear regulator, a fixed 3.3 V 300 mA linear regulator, and a 1.5 V to 5.0 V 300 mA adjustable regulator. The board also gives the ability to separate the PSoC core VDD rail into two separate rails, analog and digital. In addition, the board is capable of separating the I/O VDD rails, providing flexibility to power the I/O ports at different voltages.

The board is equipped with a 2x16 alphanumeric LCD module capable of 1.8 V to 5.0 V I/O. Also included are a mini-B full speed USB interface, a female DB9 serial communications interface, and a 12-pin wireless radio module interface supporting modules such as Artaflex's Falcon series of CyFi™ Low Power RF wireless modules.

The board also has a prototyping area containing a small bread board complete with I/O port sockets nearby, multipurpose LEDs, mechanical push buttons, and a multipurpose variable resistor. In addition, three capacitive sensing elements (two buttons and a five segment slider) are included on the board, allowing evaluation of CapSense<sup>®</sup> touch sensing applications.

Finally, the board has four GPIO expansion slots around the periphery providing expandability of the I/O to external boards. The board is designed with modularity in mind and, as a result, it supports the installation of various PSoC processor modules. This allows you to select specific modules to connect to the board based upon the desired features of PSoC 1, PSoC 3, and PSoC 5 devices.

**Note** The DVK uses the JTAG TMS/TCK pins (pins P1.0 and P1.3) to support the 2-pin serial debugger interface that is functionally equivalent to ARM's Serial Wire Debug (SWD). Do not use these pins in a design if you need the debugger. Use the PIN editor to move from these pins if they are allocated in a design.

The CY8CKIT-001 PSoC Development Kit includes:

- PSoC Development Board
- PSoC CY8C28 Family Processor Module
- PSoC CY8C38 Family Processor Module
- PSoC CY8C55 Family Processor Module
- MiniProg3 Programmer and Debugger
- 12 V Wall Power Supply
- Printed Documentation



- Quick Start Guide
- Schematics
- Kit CDs, which includes
  - CY8C28 Family Data Sheet
  - CY8C38 Family Data Sheet
  - CY8C38 Family Silicon Errata
  - CY8C55 Family Data Sheet
  - CY8C55 Family Silicon Errata
  - PSoC Creator™ Application and Release Notes
  - PSoC Designer™ Application and Release Notes
  - PSoC Programmer Application and Release Notes
  - PSoC Development Board Release Notes
  - Design files and firmware example projects written to evaluate the features of the PSoC devices supported by this kit.

### System Requirements and Recommendations

#### PSoC Designer Requirements for PSoC 1-based Development:

See the PSoC Designer release notes, available at the default installation location:  
 C:\Program Files\Cypress\PSoC Designer 5\Documentation\ReleaseNotes.pdf

#### PSoC Creator Requirements for PSoC 3 and PSoC 5-based Development:

See the PSoC Creator release notes, available at the default installation location:  
 C:\Program Files\Cypress\PSoC Creator\1.0\PSoC Creator\Documentation\release\_notes.pdf

### Kit Updates

The example projects for CY8C55 and CY8C38 family modules are updated to support the PSoC Creator 1.0 Production release.

### Known Issues and Workarounds

For a real-time list of known problems and solutions for PSoC Creator that may affect this kit, refer to our [Online Knowledge Base](#).

These tables list the known issues with the CY8CKIT-001 PSoC Development Kit (CY8CKIT-001A Rev. \*\*) that are specific to these board revisions:

- PSoC Development Board (121R-46100 Rev. \*\*)
- CY8C28 Family Processor Module (120-09547-0 Rev. \*\*)
- CY8C38 Family Processor Module (121R-49400 Rev. \*C)
- CY8C55 Family Processor Module (121R-54600 Rev. \*\*)
- Cypress MiniProg3 Programmer (Rev. \*A)

#### PSoC CY8C38 Family Processor Module (121R-49400 Rev. \*C)

Items	Affected Items	Revision	Fix Status
Some CY8C38 Family processor modules exhibit MHz crystal startup issues.	CY8C38 Family processor modules	*C or earlier	Silicon issue that will be fixed in ES3 version of silicon.



**Some CY8C38 Family processor modules exhibit MHz crystal startup issues.**

- **PROBLEM DEFINITION**  
Due to a silicon defect, some CY8C38 Family (PSoC 3) processor modules may exhibit MHz crystal startup issues. Using the external crystal (component Y2 on the processor module) in PSoC Creator designs may result in failure of the crystal to start reliably or not start at all.
- **SCOPE OF IMPACT**  
Users of MHz crystal on Rev \*C or earlier CY8C38 Family processor modules
- **WORKAROUND**  
None, at this time
- **FIX STATUS**  
This defect will be fixed in the next revision of the silicon.

**Cypress MiniProg3 Programmer (Rev. \*A)**

Items	Affected Items	Revision	Fix Status
Incorrect firmware may be loaded on some MiniProg3 devices.	Cypress MiniProg3 programming devices	*A	Fix available in PSoC Programmer 3.10 or later (visit <a href="http://www.cypress.com/go/psocprogrammer">www.cypress.com/go/psocprogrammer</a> ). See <a href="#">Knowledge Based Article</a> on this issue.

**Incorrect firmware may be loaded on some MiniProg3 devices.**

- **PROBLEM DEFINITION**  
Some Rev. \*A MiniProg3 devices were shipped with incorrect firmware revision. MiniProg3 devices with this incorrect firmware version may not work with CY8CTMA300xE devices. In addition, the MiniProg3 device may get warm when plugged into a host PC via the included USB cable.
- **SCOPE OF IMPACT**  
Users of Rev. \*A MiniProg3 device
- **WORKAROUND**  
Update to PSoC Programmer 3.10 or later and perform a manual firmware upgrade of the MiniProg3 device. See the associated [Knowledge Based Article](#) regarding this issue.
- **FIX STATUS**  
Some Rev. \*A MiniProg3 devices may not need the firmware upgrade. Refer to the [Knowledge Based Article](#) regarding this issue. PSoC Programmer 3.10 or later has the corrected firmware available for upgrading MiniProg3 devices that may have the incorrect firmware on them.

**PSoC CY8C55 Family Processor Module (121R-54600 Rev. \*\*)**

Items	Affected Items	Revision	Fix Status
Some CY8C55 Family processor modules exhibit MHz crystal startup issues.	CY8C55 Family processor modules	** or earlier	Silicon issue that will be fixed in ES2 version of silicon.



**Some CY8C55 Family processor modules exhibit MHz crystal startup issues.**

▪ **PROBLEM DEFINITION**

Due to a silicon defect, some CY8C55 Family (PSoC 5) processor modules may exhibit MHz crystal startup issues. Using the external crystal (component Y2 on the processor module) in PSoC Creator designs may result in failure of the crystal to start reliably or not start at all.

▪ **SCOPE OF IMPACT**

Users of MHz crystal on Rev. \*\* or earlier CY8C55 Family processor modules

▪ **WORKAROUND**

None, at this time

▪ **FIX STATUS**

This defect will be fixed in the next revision of the silicon.

## Documentation

On the kit CD, see

- CY8CKIT-001 PSoC Development Kit User Guide

After installing the PSoC Designer and PSoC Programmer software, refer to the documentation as needed:

- PSoC Designer > Help > Documentation
- PSoC Programmer > Documentation > User Guide

After installing the PSoC Creator software, see the documentation as needed:

- PSoC Creator > Help > Topics > Getting Started

Other documents included with this release are located in the \Documentation subdirectory of the PSoC Creator installation directory or the kit CD itself. The default location is:

C:\Program Files\Cypress\PSoC Creator\1.0\PSoC Creator\Documentation



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