

## PSoC® 1 Kit Selector Guide

Cypress has many evaluation and development kits that enable you to:

- Evaluate the capabilities of PSoC® 1 programmable system-on-chip devices
- Develop and debug applications using PSoC 1 devices to accelerate product development

The table below gives available kit options for different PSoC 1 families. A brief description of each kit is provided later in this document:

Family	Kit for Development/Evaluation	Debugging	
		Debugger	POD
CY8C29x66	CY3210-PSOCEVAL1  CY8CKIT-001 + CY8CKIT-008 <sup>3</sup>	CY3215-DK ICE	CY3210-29X66
			CY3250-29XXX
			CY3250-29XXX-POD
			CY3250-29XXXQFN
			CY3250-29XXXQFN-POD
CY8C28xxx	CY8CKIT-001 <sup>3</sup>  CY3210-PSOCEVAL1 + CY3210-28XXX(POD)	CY3215-DK ICE	CY3210-28XXX
			CY3250-28XXX
			CY3250-28XXX-POD
			CY3250-286XXQFN
			CY3250-286XXQFN-POD
CY8C27x43	CY3210-PSOCEVAL1  CY3236A-PIRMOTION	CY3215-DK ICE	CY3210-27X43
			CY3250-27XXX
			CY3250-27XXX-POD
			CY3250-27XXXQFN
			CY3250-27XXXQFN-POD

CY8C24x94	CY3210-PSOCEVAL1 + CY3210-24X94	CY3215-DK ICE	CY3210-24X94
	CY3214-PSOCEVALUSB <sup>3</sup>		CY3250-24X94QFN
	CY3280-24x94 UCC <sup>3</sup>		CY3250-24X94QFN-POD
CY8C24x23/A	CY3210-PSOCEVAL1 + [CY3210-24X23(EVALPOD) or CY8C24423A-24PXI]	CY3215-DK ICE	CY3210-24X23
			CY3250-24X23A
			CY3250-24X23A-POD
			CY3250-24X23AQFN
			CY3250-24X23AQFN-POD
CY8C22x45	CY3280-22X45	CY3215-DK ICE	CY3250-22345
			CY3250-22545-POD
CY8C21x34	CY3210-PSOCEVAL1 + CY3210-21X34(POD)	CY3215-DK ICE	CY3210-21X34
	CY3280-BK1 Universal CapSense Controller - Basic Kit 1		CY3250-21X34QFN-POD
CY8C21x23	CY3210-PSOCEVAL1 + CY3210-21X23(POD)	CY3215-DK ICE	CY3210-21X23
			CY3250-21X23
			CY3250-21X23-POD
			CY3250-21X23QFN
			CY3250-21X23QFN-POD

**NOTE:**

- 1) All the Kits can be programmed using CY3217-MiniProg1, CY8CKIT-002 PSoC MiniProg3.
- 2) CY3240-I2CUSB and MiniProg3 can be used as interfacing computer and PSoC device to test, tune and debug.
- 3) Kit can interface with CY3215-DK ICE, no separate POD is required

**Starter Kit**

**CY3270 PSoC FirstTouch Starter Kit:** This is a starter kit that provides a quick, easy, and affordable way to evaluate the power of PSoC 1. This kit demonstrates CapSense Touch & Proximity Sensing, Temperature Sensing and Light Sensing.

## Development/Evaluation Kits

**CY3210-PSoCEval1:** This PSoC 1 evaluation kit includes an LCD module, potentiometer, LEDs, and plenty of breadboard space to meet all of your evaluation needs. The MiniProg programming unit is also included with the kit and will program PSoC 1 devices directly on the evaluation board, or on other boards via a 5-pin header. Either a 28-pin PDIP part or CY3210-xxxx POD is required to develop a solution using this kit. Two 28-pin PDIP samples, one each of CY8C29466-24PXI and CY8C27443-24PXI are included along with the kit.

**CY3214-PSoCEvalUSB:** This PSoC 1 CapSense PLUS Evaluation Kit features a development board for the CY8C24794-24LFXI PSoC device. Special features of the board include both USB and capacitive touch sense development and debugging support. This evaluation board also includes an LCD module, potentiometer, LEDs, an enunciator and plenty of bread boarding space to meet all of your evaluation needs. The CY3214-PSoCEvalUSB board features an on-chip debugger and can be connected directly to an ICE-Cube (CY3215-DK, sold separately) for full featured in-circuit emulation and debugging. A MiniProg1 programming unit is also included in this kit for programming PSoC device.

**CY3280-22x45 Universal CapSense Controller Board:** The CY3280-22x45 Universal CapSense Controller Board provides customers with hardware to understand capacitive sensing and a software tool to set up and tune their project with minimal iterative code updates. This kit includes a MiniProg1 for programming and CY3240-I2USB Bridge for tuning and debugging, hardware and software of a PSoC application by bridging the USB port to I2C using Bridge Control Panel (included with PSoC Programmer) GUI. This kit can interface with CY3280 expansion boards (sold separately).

**CY3280-BK1 Universal CapSense Controller - Basic Kit 1:** The CY3280-BK1 Universal CapSense Controller Kit is designed for easy prototyping and debug of CapSense designs with pre-defined control circuitry and plug-in hardware. CY3280-21x34 Universal CapSense Controller Board is shipped along with CY

### **CY3236A-PIRMOTION - Pyroelectric Infrared (PIR) Motion Detection Evaluation Kit (EVK)**

The CY3236A-PIRMOTION EVK allows you to evaluate the CY8C27443-24PVXI PSoC device's ability to control a Pyroelectric Infrared (PIR) sensor to implement motion sensing applications such as automatic lighting controls, automatic door openers, security systems, kiosk wakeup and activating wireless cameras.

**CY3280-24x94 Universal CapSense Controller Board:** The Universal CapSense Controller Kit is designed for easy prototyping and debug of CapSense designs with pre-defined control circuitry and plug-in hardware.

### **Programmer/Debugger/Bridge**

**CY3217-MiniProg1:** This kit is the programming tool for all the PSoC 1 devices. This kit is shipped with all the development/evaluation kits of PSoC 1 (except CY3236A-PIRMOTION).

**CY8CKIT-002 MiniProg3:** This kit can be used to program all PSoC 1 devices and also as a USB to I2C Bridge for interfacing computer and PSoC devices to test, tune and debug.

**CY3240-I2USB:** This kit enables a USB to I2C interface between computer and PSoC devices to test, tune and debug.

**CY3215-DK ICE:** This PSoC Development Kit includes an In-Circuit Emulator (ICE) which consists of a base unit, USB 2.0 cable, and power supply. The base unit is connected to the host PC via the USB port. The ICE is driven by the Debugger subsystem of PSoC Designer. This software interface allows the user to run, halt, and single step the processor. It also allows the user to set complex event points. Event points can start and stop the trace memory on the ICE, as well as break the program execution. In addition to the Development Kit, different Emulation Pods are available to support a range of devices in the PSoC family. They plug into (or are soldered onto) the user's circuit board to provide the physical interface. Pods are

available for low-cost expansion of the ICE-Cube capability. This supports debugging of all PSoC 1 family of devices except CY8C25/26xxx devices.

Application Note [AN-73212 Debugging with PSoC 1](#) introduces the hardware and software debugger elements available in PSoC 1 and describes several common debugging techniques.

**Debugging Hardware:** For debugging PSoC 1 devices, the following hardware is required:

- In-Circuit-Emulator (ICE), and
- Debugging POD with OCD part.

The PODS of PSoC 1 family are mainly of two types: CY3210-xxx and CY3250-xxx. For debugging, ICE + CY3210 POD + RJ-45 ICE adapter + RJ45 Cable or ICE + CY3250 POD + Mask + POD Feet is required. The kits with the OCD device can interface with the debugger directly. To properly mount CY3250 style pods on a board, a foot kit and mask are required. A foot kit allows a pod to be mounted to a specific package footprint, enabling a single pod to be mounted to almost any board. A mask, which fits between the pod and the foot kit, aligns the pins from the foot kit to the appropriate holes in the pod and masks unused pins. Not all feet and pod combinations require a mask, because some pods fit only into a foot kit in one orientation. If required, the appropriate mask is supplied with the CY3250 pod or foot kit and does not need to be purchased separately.

**“POD Selector Guide”** is an Excel database to map between PSoC 1 devices, POD and POD Feet.

Note: The CY3250 POD suffixed with “-POD” is a Replacement POD (contains 2 PODs) and without the suffix is a POD Kit (contains one POD and Flex Cable to interface with ICE).

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Cypress Semiconductor	Phone: 408-943-2600
198 Champion Court	Fax : 408-943-4730
San Jose, CA 95134-1709	Website : <a href="http://www.cypress.com">www.cypress.com</a>

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➤ Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd  
Minhang District, Shanghai , China

➤ Sales :

Direct     +86 (21) 6401-6692  
Email      amall@ameya360.com  
QQ         800077892  
Skype      ameyasales1 ameyasales2

➤ Customer Service :

Email      service@ameya360.com

➤ Partnership :

Tel         +86 (21) 64016692-8333  
Email      mkt@ameya360.com