CYPRESS MICROSYSTEMS

PSoC™ Development Tools Selector Guide

The Cypress MicroSystems PSoC™ Development Tools combine a full-featured hardware In-Circuit Emulator (ICE) with outstanding PSoC Designer software to provide a powerful development environment at value pricing. The easy-to-use software will increase your design efficiency and reduce debug and evaluation time. PSoC Designer Device Editor enables rapid configuration of the PSoC device.

CY3205-DK Basic PSoC Development Kit

Everything you need to get started with PSoC is included in the Development Kit with support for the 28-pin PDIP package:

- PSoC Designer IDE Software CD-ROM
    - Device Editor
    - Application Editor
    - Assembler
    - Debugger
    - Tutorials/Training Material
    - Device Data Sheet
- ICE-4000 In-Circuit Emulator
- Generic ICE Pod
- 28-PDIP Pod, Foot, and Mask
- PSoC Pup Demonstration Board
- 110 ~ 240V Power Supply, Euro-Plug Adapter

- YProgrammer PCB with 28-PDIP Socket
- Parallel Cable, CAT 5e Cable
- 2 CY8C26443-24PI 28-PDIP Chip Samples

CY3202-C iMAGEcraft C Compiler

Taking advantage of the PSoC architecture, this optimizing C Compiler offers the designer increased development speed and portability. Although licensed separately, the compiler is fully integrated into PSoC Designer. PSoC Designer provides source-level debugging to round out its C-language support. Features Include:

- ANSI C Compiler
- Inline Assembly and Interface with Assembly Modules
- Modern Stack-Based Architecture
- 7 Basic Data Types Including IEEE 32-Bit Floating Point
- Assembler and Linker
- Math and String Libraries
- C Interrupt Service Routines
- Librarian

Emulation Pods for All Package Types

PSoC Emulator Pod Selection Guide

Emulation pods are available to support all pin counts for a particular package type. The pod kit includes the generic pod, feet for all pin counts of a package type, masks, chip samples, and a simple blink-the-LED 'Pup' demo board (not included in the CY3203-2 kit).

Chip Part #	Pod Kit Part #	Package Type	# of Feet Included
CY8C25122-24PI CY8C26xxx-24PI	CY3206-PI	8, 20, 28, 48 PDIP	1 Each
CY8C26xxx-24SI	CY3206-SI	20, 28, SOIC	2 Each
CY8C26xxx-24PVI	CY3206-PVI	20, 28, 48 SSOP	2 Each
CY8C26643-24AI	CY3206-AI	44 TQFP	2
--	CY3203-2	--	None (Pod and 2 Each of 8/20 and 28-Pin Masks)

Pup   Pod
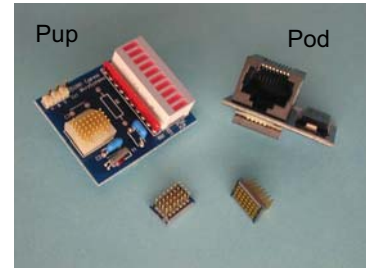
PSoC Emulator Replacement Pod Feet Selection Guide

The surface mount feet are soldered to the target PCB and are not reusable. Feet are delicate and may easily damage. Order enough additional feet to support anticipated prototype requirements.

Chip Part #	Spares Kit Part #	Description
CY8C25122-24PI	CY3203-012	2 Spare Pod Feet for 8-Pin DIP
CY8C26233-24PI	CY3203-022	2 Spare Pod Feet for 20-Pin DIP
CY8C26233-24SI	CY3203-050	10 Spare Pod Feet for 20-Pin SOIC
CY8C26233-24PVI	CY3203-060	10 Spare Pod Feet for 20-Pin SSOP
CY8C26443-24PI	CY3203-032	2 Spare Pod Feet for 28-Pin DIP
CY8C26443-24SI	CY3203-070	10 Spare Pod Feet for 28-Pin SOIC
CY8C26443-24PVI	CY3203-080	10 Spare Pod Feet for 28-Pin SSOP
CY8C26643-24PI	CY3203-042	2 Spare Pod Feet for 48-Pin DIP
CY8C26643-24PVI	CY3203-095	5 Spare Pod Feet for 48-Pin SSOP
CY8C26643-24AI	CY3203-105	5 Spare Pod Feet for 44-Pin TQFP

CY3203-032

Device Programming for Prototypes

YProgrammer boards are used with the ICE to program parts for system prototypes. The YProgrammer board is connected to the ICE in place of the pod. A single ZIF socket is included.

Chip Part #	YProgrammer Part #	Package Type
CY8C25122-24PI	CY3205-S1	8 PDIP
CY8C26233-24PI	CY3205-S1	20 PDIP
CY8C26233-24SI	CY3205-S2	20 SOIC
CY8C26233-24PVI	CY3205-S3	20 SSOP
CY8C26443-24PI	CY3205-S1	28 PDIP
CY8C26443-24SI	CY3205-S2	28 SOIC
CY8C26443-24PVI	CY3205-S3	28 SSOP
CY8C26643-24PI	CY3205-S1	48 PDIP
CY8C26643-24PVI	CY3205-S4	48 SSOP
CY8C26643-24AI	CY3205-S5	44 TQFP

CY3205-S1

To accommodate the largest number of pin counts with each board, the largest socket is installed. For example, the CY3205-S1 includes a 48-pin DIP socket. It therefore supports 8, 20, 28, and 48-pin DIP parts. The CY3205-S3 includes a 28-pin SSOP socket that can accept both the 20 and 28-pin SSOP parts. The body width of the 48-pin SSOP package is wider than the 20 and 28-pin so the CY3205-S4 is necessary for the 48-pin SSOP parts.
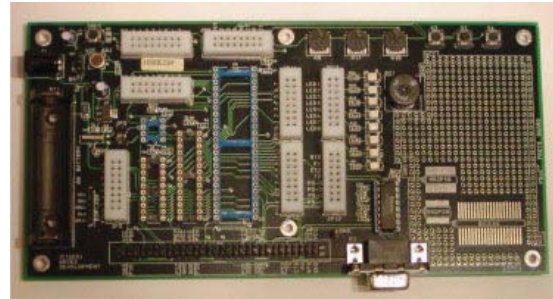
3rd Party Development Tools

Tools have been specially designed to accompany PSoC devices during development by the following 3rd-party vendors. Specific details for each of these tools can be found online under **3rd Party Tools** at http://www.cypressmicro.com/.

Aries Development

The PSoC PROTO BOARD is a complete standalone development board for evaluating and developing applications using PSoC devices. It was created to give engineers the ability to develop and test applications without creating their own custom board. It is easily configurable to schematically "look like" your end application. It allows development with any PSoC device in a DIP package.
http://aries-development.com/devtools/PSoC.htm

Arista Systems

- SERIAL Interface, speeds up to 115k baud.
- Application works in Windows 95/98/Me/NT/2000/XP.
- Easy to use programming application.
- Serial command protocol documented so you can program devices with your custom application.
- Multiple programmers can be connected to one computer.
- Supports reset or power-on programming mode acquisition.
- 3.3- and 5-volt compatible.
- When using power line to enable programming, programmer can switch amps.

- All PSoC devices supported.
- Auto Serial Numbering, assigns unique serial numbers to devices when programming, even when using multiple programmers over a network.
- Dual color LED on programmer turns red during programming.
- Multiple programming options, erase/verify/read/secure/retrieve checksums and device ID.
- Free software upgrades on the web for new PSoC devices in the future.
 http://www.aristasystems.com/psocisp.htm

Orlin Technology

The OTPSoC Kit enables evaluation and prototyping of the complete family of Cypress MicroSystems Programmable System-on-Chip (PSoC™) devices.
The OTPSoC retains compatibility with Cypress' own PSoC Pup basic evaluation board while adding a wealth of features to allow evaluation of the complete feature-set of the entire PSoC device family.
The OTPSoC fully supports the Cypress MicroSystems PSoC-ICE for code debug and both out-of-system and in-system programming.
http://www.orlin.com/OTPSoC.htm
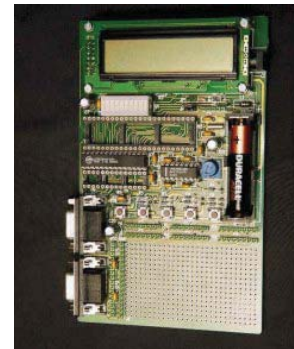
For information and support with PSoC devices: http://www.cypressmicro.com/.
Items may be purchased online at the Cypress Online Store: http://www.onfulfillment.com/cypressstore/.
Or you can purchase your Development Tools from one of Cypress' accredited e-commerce distributors.