PSoC™ Microcontroller Tools

Highlights

- **Full-functioned IDE with:**
  - *Device Editor*
  - *Application Editor*
  - *C Compiler*
  - *Assembler*
  - *Librarian*
  - *Debugger*
- **Graphical User Interface**
  - *Point-and-click to add or delete "User Modules"*
  - *Diagrams configuration on-screen as defined*
- **Device code generated from user selections**
  - *Registers and interrupt vectors programmed*
  - *Application Program Interfaces (API) defined*
- **Integrated ICE with single socket programmer**
  - *Provides full debugging features in target code such as trace, watch variables, breakpoints*
  - *Immediate support for new devices*

CYPRESS MICROSYSTEMS
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Changing the Embedded World™

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World Class Tools – PSoC Designer™ and ICE

The Cypress MicroSystems™ Programmable System-on-Chip™ (PSoC™) Microcontroller includes reconfigurable digital and analog resources, as well as an array of fixed functions such as temperature sensor, flexible clocking, and interrupt controller.

The PSoC Designer™ Integrated Development Environment (IDE) helps users harness the power and flexibility of the PSoC Microcontroller by providing "point-and-click" system design capability. The PSoC Designer IDE includes pre-configured, characterized peripheral functions in the form of User Modules and extensive user assistance in the form of help dialogs, pull-down menus and other GUI aids. This integrated development environment provides tools for configuring the PSoC Microcontroller in addition to the standard application programming functions.

A highly-functional, low-cost in-circuit emulator (ICE) is available that fully integrates with the PSoC Designer IDE, providing comprehensive debugging of the device configuration and the user's application.
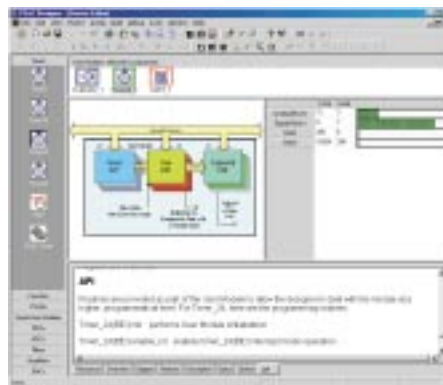
Device Editor – Select User Modules View

Device Editor – Place User Modules View

PSoC Designer – Device Editor

PSoC Blocks are user-configurable system resources that form the building blocks of the PSoC Microcontroller. When users select desired peripheral functions (User Modules), one or more PSoC blocks are configured to implement the required function.

The Device Editor provides a point-and-click GUI for selecting the User Modules that a user's application requires. Comprehensive documentation is available on-line for User Modules. Once a user selects the User Modules, the Device Editor provides a graphical representation of the PSoC Microcontroller for User Modules placement into PSoC blocks, User Modules selection, and User Module I/O connection to the desired pins.

The Device Editor then generates the device configuration which defines the PSoC Microcontrollers' registers at power-up, sets up the interfaces for the start of application programming, and provides a data sheet of the configured part.

PSoC™ Microcontroller Tools
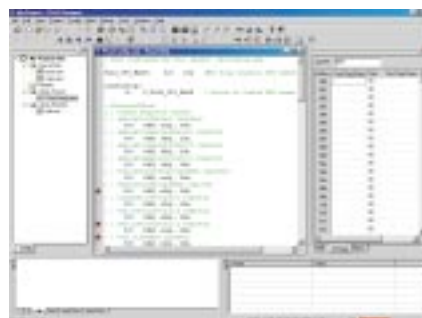
PSoC Designer™ – Application Editor Mode

The Application Editor Mode provides a complete application development environment for developing assembly and C language applications. Files are added and removed from the project from within the Application Editor and can be compiled and assembled individually (when visible) or as an entire project with the builder. The linker/librarian manages the application files, and APIs and device configuration files generated by the Device Editor.
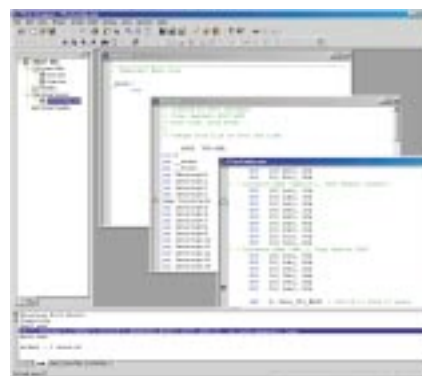
PSoC Designer – Debugger Mode

The Debugger and PSoC Emulator provide hardware in-circuit emulation that allows the user to test their project in a hardware environment while viewing and debugging device activity in a software environment. The user can step through the application code, set up breakpoints, define watch variables and initiate and view traces right from the GUI of PSoC Designer. As errors are found, they can be corrected by switching to the Application Editor Mode — only a mouse-click away from the Debugger Mode.

The PSoC Emulator provides a single socket for device programming, and because it is provided by Cypress MicroSystems, rather than a third-party vendor, our user is guaranteed immediate support for new device families as they are developed by Cypress MicroSystems™.

Application Editor Mode

Debugger Mode

PSoC Development Kit:

Cypress MicroSystems offers a complete Evaluation Kit for the PSoC Microcontroller.
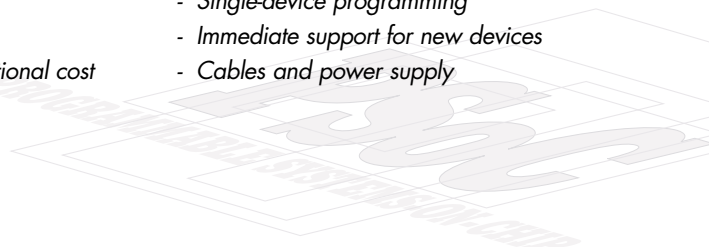
EACH KIT INCLUDES:
PSoC Microcontroller Device Sample Kit
PSoC Designer IDE with:

  - *Device Editor*
  - *Application Editor*
  - *Assembler, Linker and Debugger*
  - *C Compiler available at an additional cost*
  - *MS Windows-compatible (95/98/Me/NT/2000)*

In-Circuit Emulator with:

  - *Parallel port interface*
  - *Single-device programming*
  - *Immediate support for new devices*
  - *Cables and power supply*

For more information and to discuss your specific application, email us at:
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