

Мікропроцесорна техніка

(лекція 4)
Благітко Б.Я.
2019 р.

PSoC Creator 4.2
Designing with PSoC 3/5



PSoC@3/5 Interrupts

PSoC Creator 4.2
Designing with PSoC 3/5



Project Objective

- Generate interrupt for rising edge signal on pin
- Set a Flag in Interrupt Service routine (ISR)
- Increment Count variable in main code if Flag is set
- Clear the Flag in main code

Figure 1-1. Simplified Block Diagram

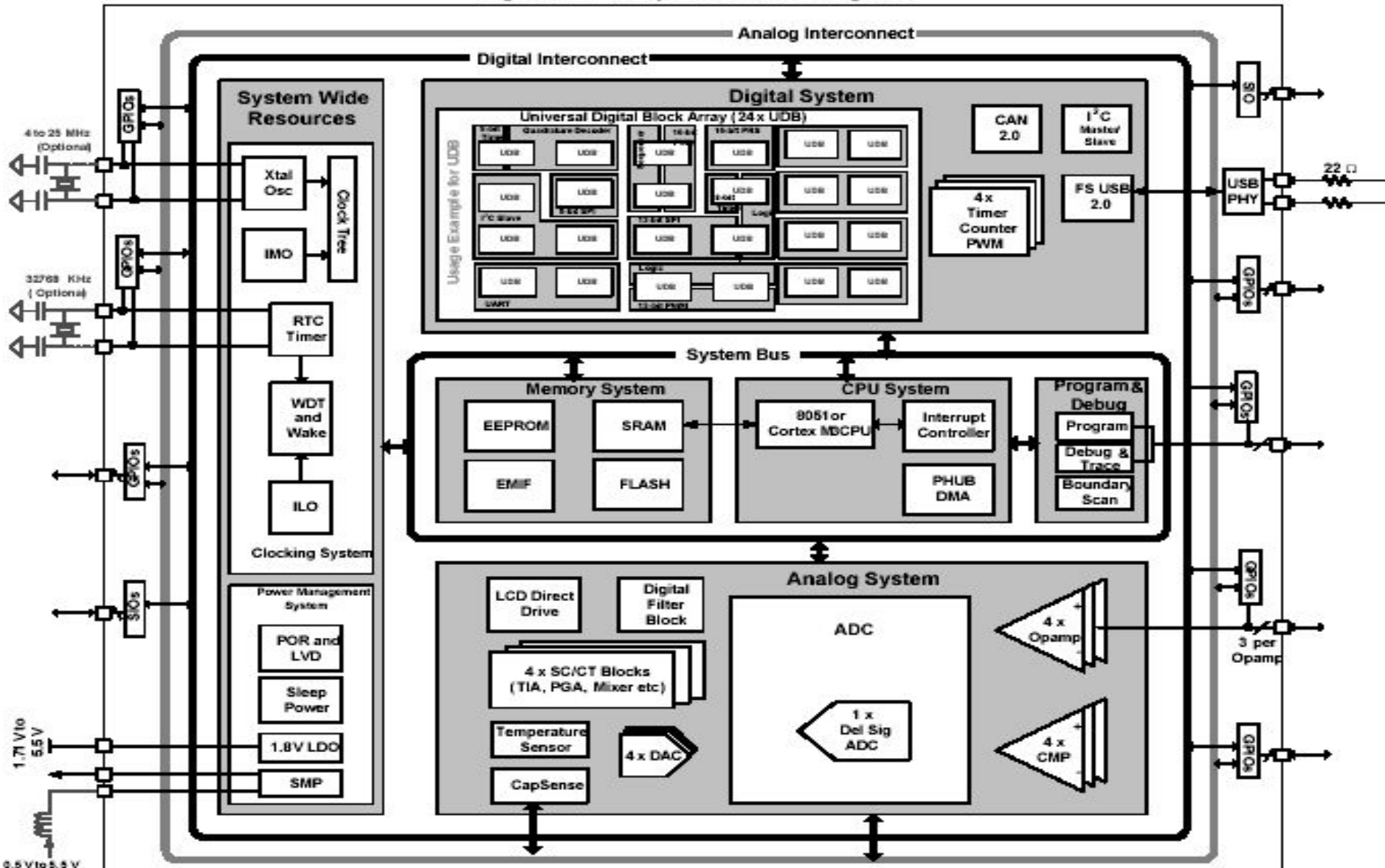


Figure 7-3. Component Catalog

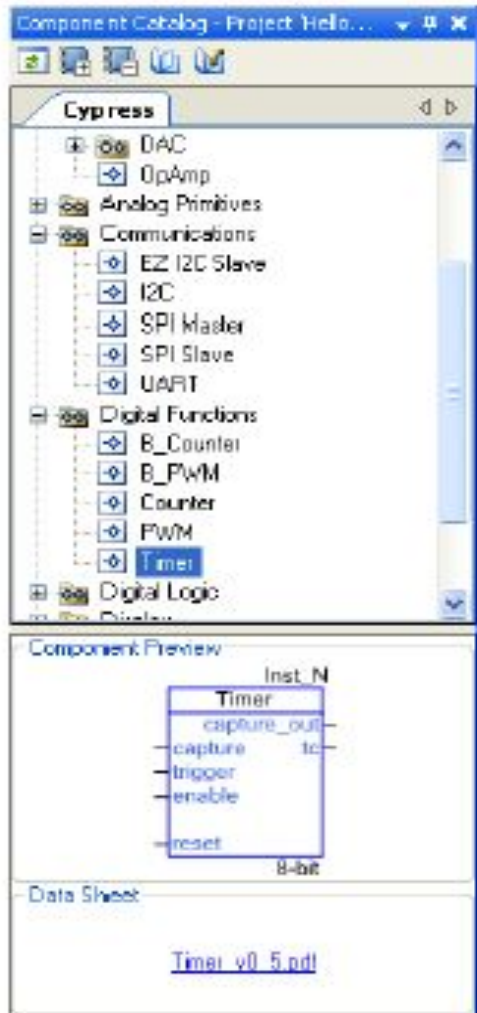
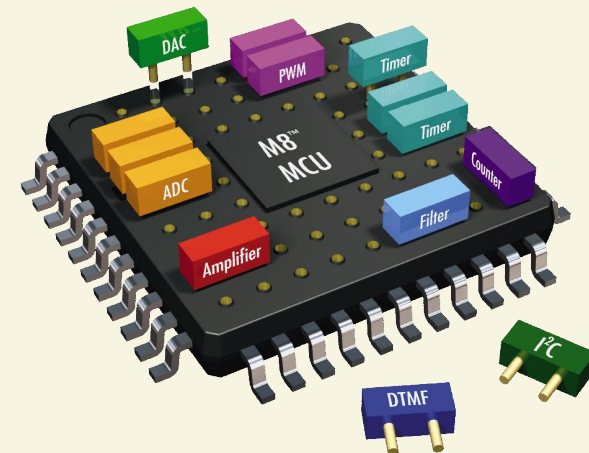
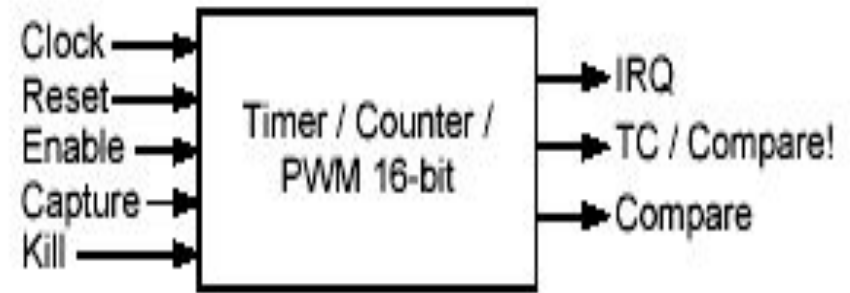


Figure 7-21. Timer/Counter/PWM





PWMs, Timers and Counters

PWMs, Timers and Counters share many capabilities but each provides specific capabilities.

When to Use a PWM

The most common use of the **PWM** is to generate periodic waveforms with adjustable duty cycles. The PWM also provides optimized features for power control, motor control, switching regulators and lighting control. The PWM can also be used as a clock divider by driving a clock into the clock input and using the terminal count or a PWM output as the divided clock output.

When to Use a Counter

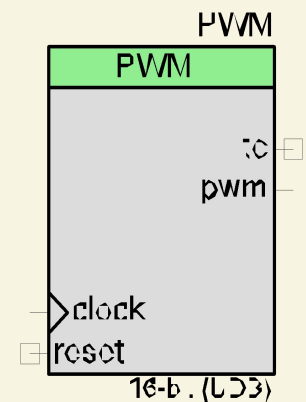
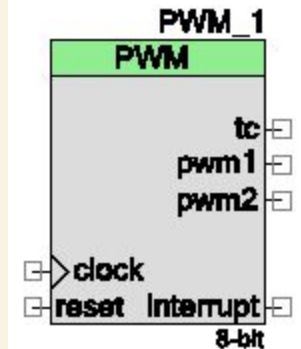
A **Counter** component is better used in situations that require the counting of a number of events but also provides rising edge capture input as well as a compare output.

When to Use a Timer

A **Timer** component is better used in situations focused on timing the length of events, measuring the interval of multiple rising and/or falling edges, or for multiple capture events.

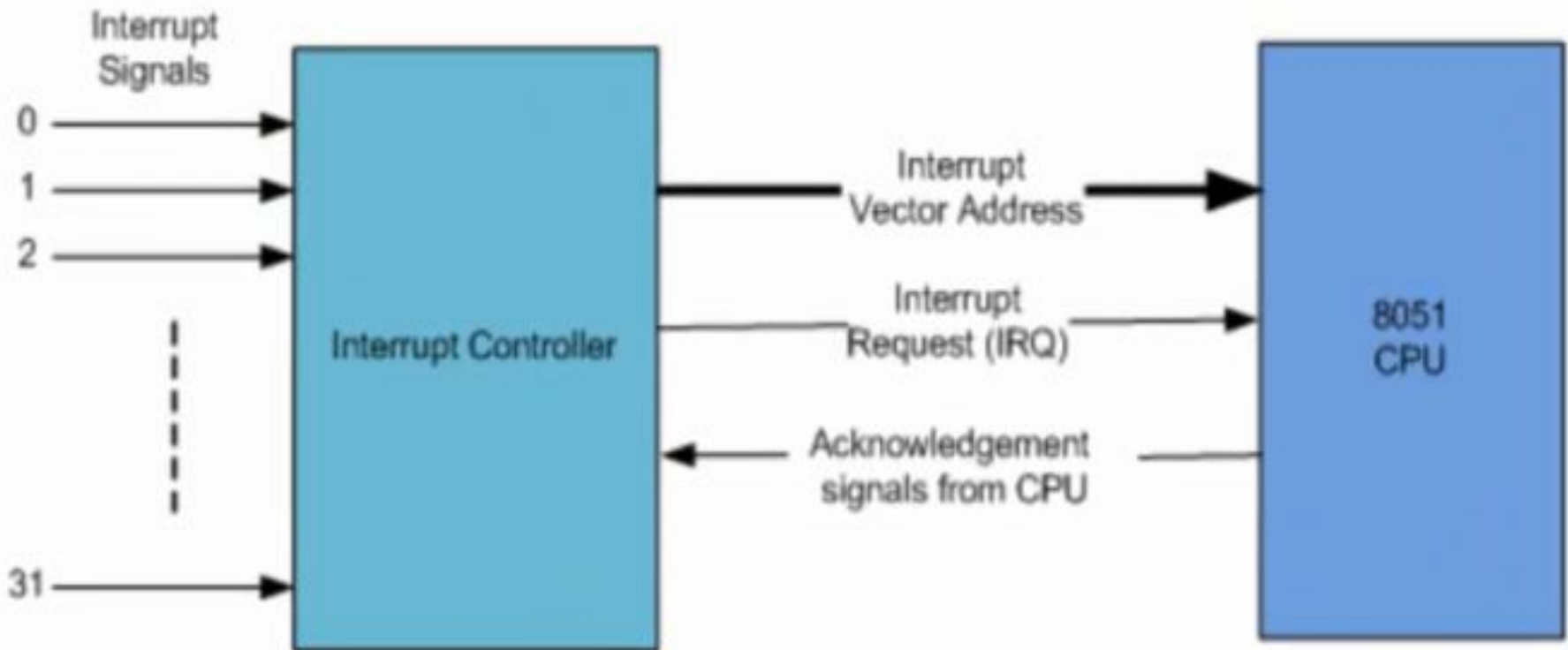
PWM

Output	May Be Hidden	Description
tc	N	The terminal count output is '1' when the period counter is equal to zero. In normal operation this output will be '1' for a single cycle where the counter is reloaded with period. If the PWM is stopped with the period counter equal to zero then this signal will remain high until the period counter is no longer zero. This output is synchronized to the block clock input of the component.
interrupt	Y	The interrupt output is the logical OR of the group of possible interrupt sources. This signal will go high while any of the enabled interrupt sources are true. The interrupt output shall remain asserted until the Status Register is read out by the software. In order to receive subsequent interrupts, the interrupt shall be cleared by reading the Status Register using the PWM_ReadStatusRegister() API. The interrupt output is not visible if the Use Interrupt parameter is not set. This allows the status register to be removed for resource optimization as necessary.
pwm/pwm1	Y	The pwm or pwm1 output is the first or only pulse width modulated output. This signal is defined by PWM Mode, compare modes(s), and compare value(s) as indicated in waveforms in the Configure dialog. When the instance is configured in one output, Dual Edged, Hardware Select, Center Aligned, or Dither PWM Modes, then the output "pwm" is visible. Otherwise the output "pwm1" is visible with "pwm2" the other pulse width signal. This output is synchronized to the block clock input of the component.

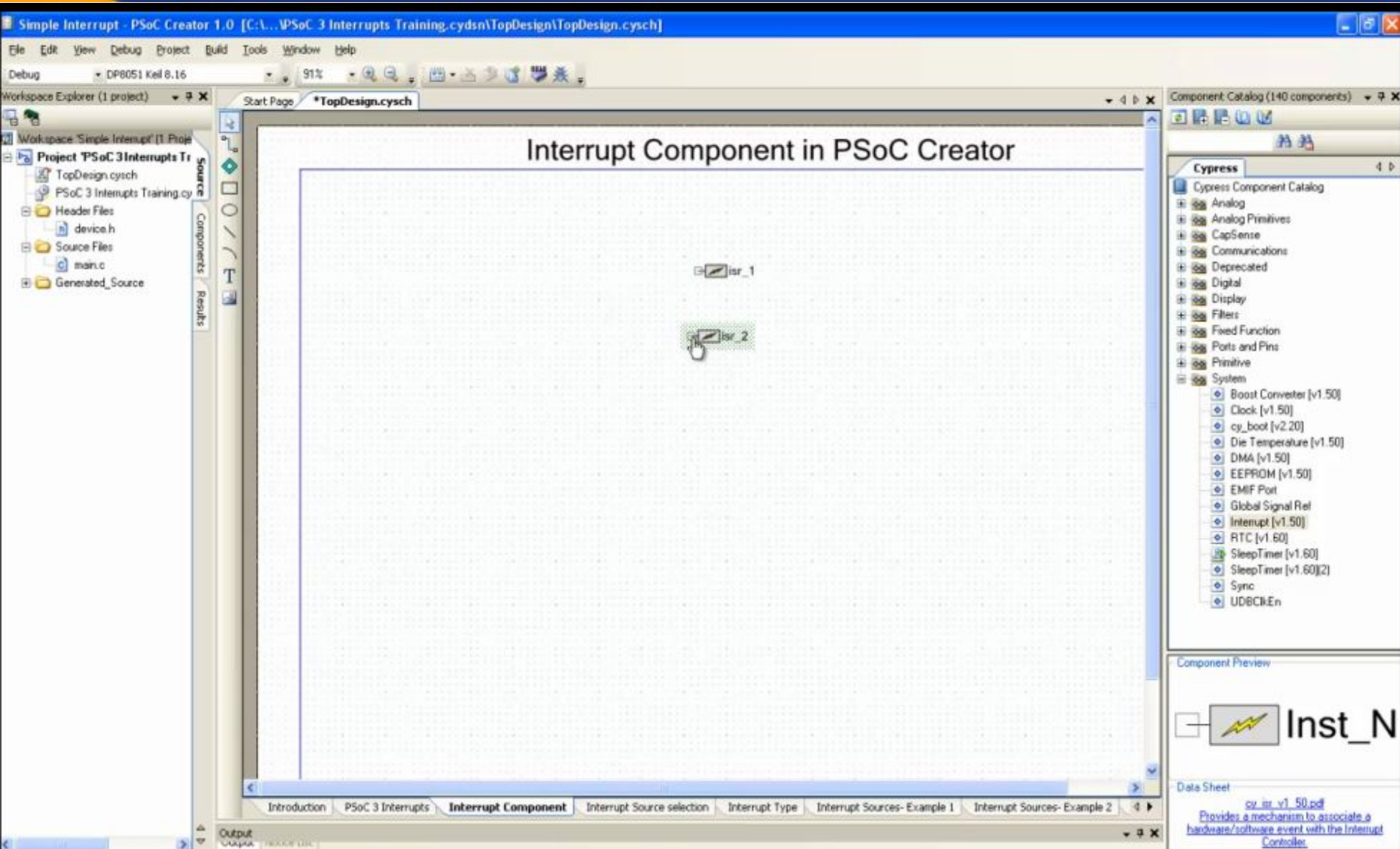


Interrupts

PSoC 3

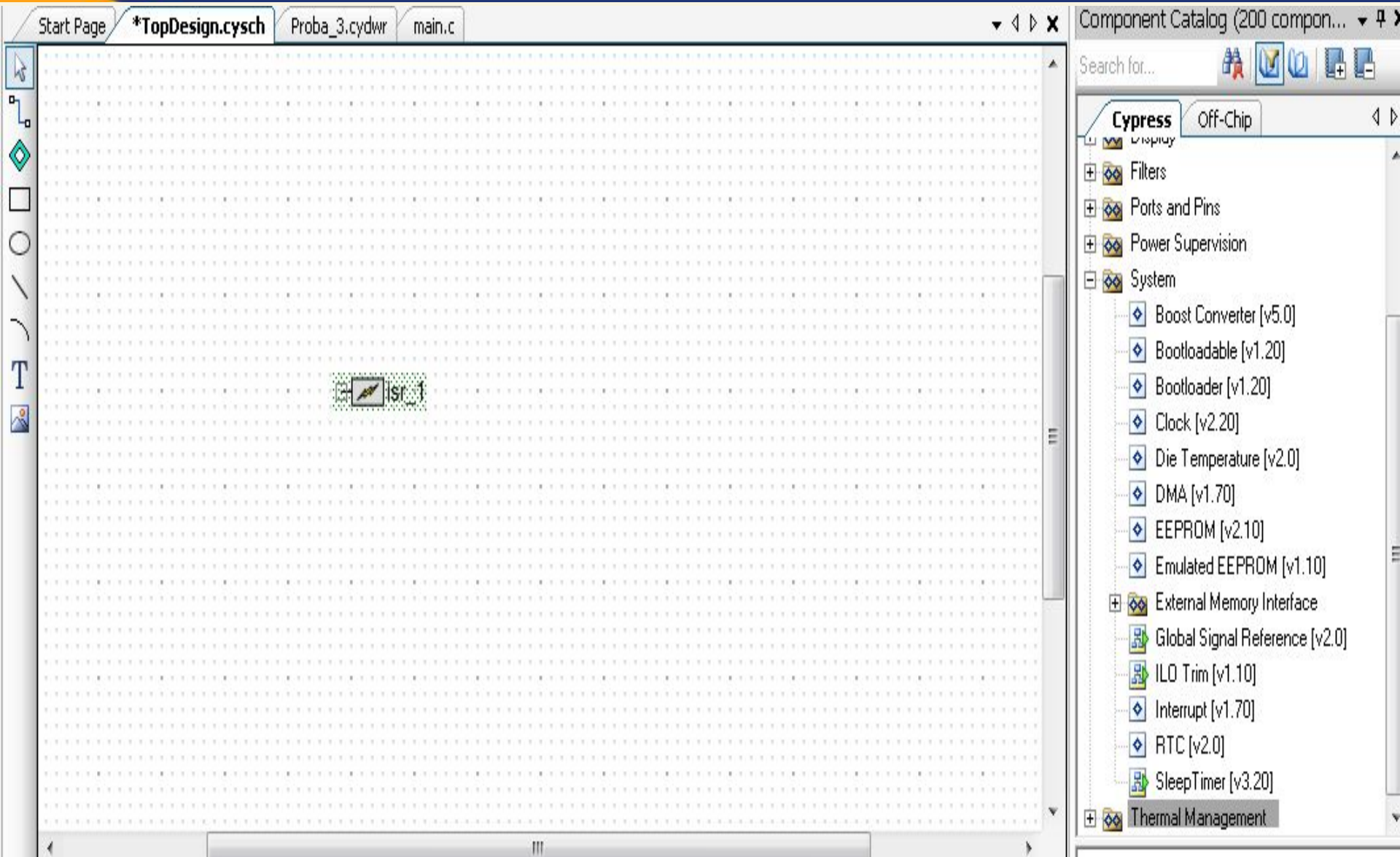


Interrupts

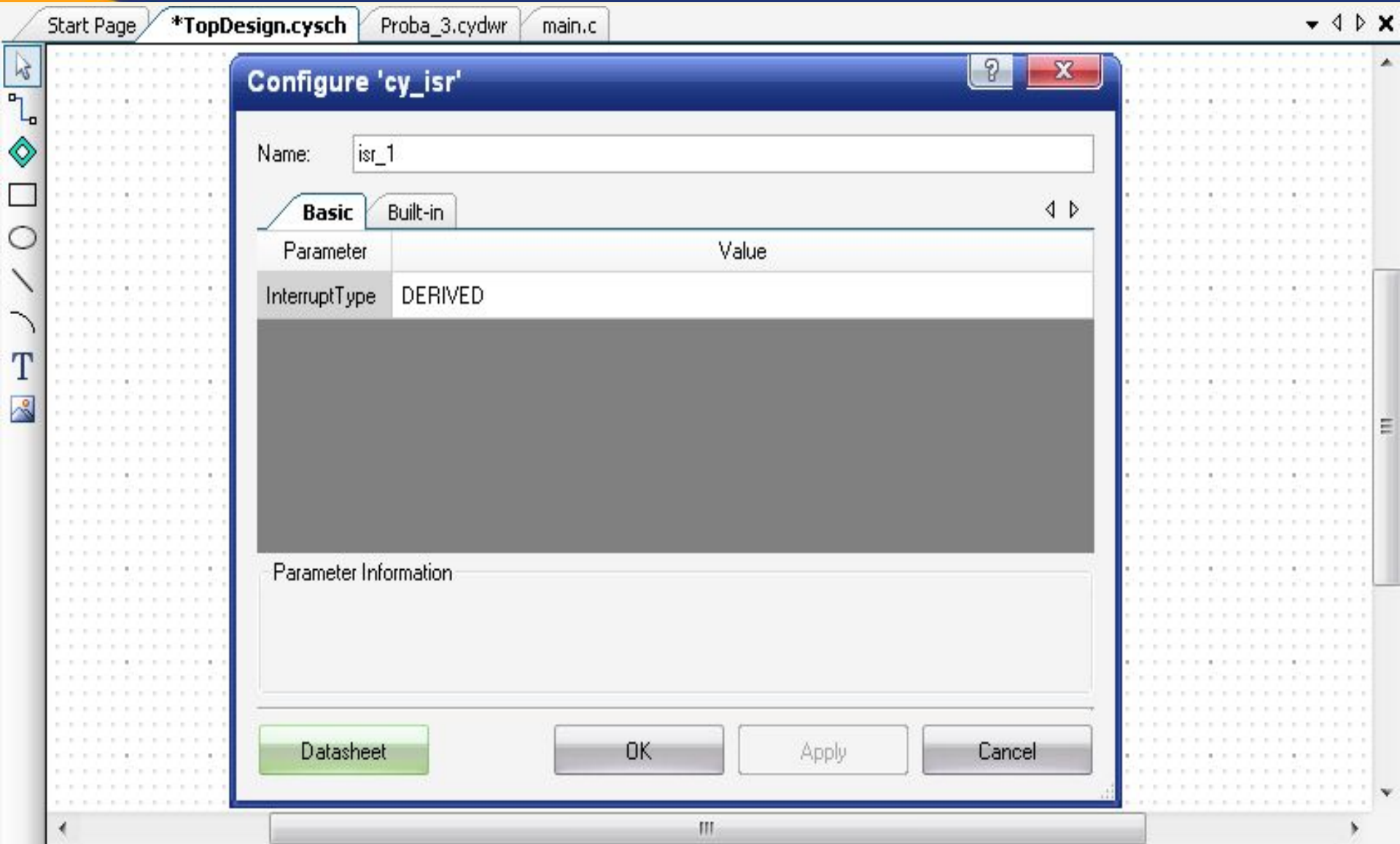


The screenshot displays the PSoC Creator 1.0 interface. The main workspace is titled "Interrupt Component in PSoC Creator" and shows a grid with two interrupt component icons labeled "isr_1" and "isr_2". A mouse cursor is hovering over the "isr_2" icon. The left sidebar shows the "Workspace Explorer" with a project named "Simple Interrupt" and a file tree containing "TopDesign.cysch", "PSoc 3 Interrupts Training.cy", "Header Files", "device.h", "Source Files", "main.c", and "Generated_Source". The right sidebar shows the "Component Catalog" with a list of components under the "Cypress" category, including "Analog", "Analog Primitives", "CapSense", "Communications", "Deprecated", "Digital", "Display", "Filters", "Fixed Function", "Ports and Pins", "Primitive", and "System". The "System" category is expanded, showing components like "Boost Converter [v1.50]", "Clock [v1.50]", "cy_boot [v2.20]", "Die Temperature [v1.50]", "DMA [v1.50]", "EEPROM [v1.50]", "EMIF Port", "Global Signal Rel", "Interrupt [v1.50]", "RTC [v1.60]", "SleepTimer [v1.60]", "SleepTimer [v1.60][2]", "Sync", and "UDbCKEn". The bottom status bar shows the "Interrupt Component" tab selected, with other tabs like "Introduction", "PSoc 3 Interrupts", "Interrupt Source selection", "Interrupt Type", "Interrupt Sources- Example 1", and "Interrupt Sources- Example 2". The "Component Preview" pane on the right shows a lightning bolt icon and the text "Inst_N". The "Data Sheet" pane at the bottom right provides a link to the "cy_isr_v1_50.pdf" data sheet, which describes the mechanism for associating a hardware/software event with the Interrupt Controller.

Interrupts



The screenshot displays the Cypress PSoC Designer IDE interface. The top window shows the project files: **Start Page**, ***TopDesign.cysch**, **Proba_3.cydwr**, and **main.c**. The main workspace is a schematic diagram with a grid background. A component labeled **ISR_1** is placed on the grid. On the right side, the **Component Catalog** is open, showing a list of components under the **Cypress** tab. The components are organized into categories: **Filters**, **Ports and Pins**, **Power Supervision**, and **System**. The **System** category is expanded, showing a list of components including **Boost Converter [v5.0]**, **Bootloadable [v1.20]**, **Bootloader [v1.20]**, **Clock [v2.20]**, **Die Temperature [v2.0]**, **DMA [v1.70]**, **EEPROM [v2.10]**, **Emulated EEPROM [v1.10]**, **External Memory Interface**, **Global Signal Reference [v2.0]**, **ILO Trim [v1.10]**, **Interrupt [v1.70]**, **RTC [v2.0]**, **SleepTimer [v3.20]**, and **Thermal Management**. The **Interrupt [v1.70]** component is highlighted.



Start Page *TopDesign.cysch Proba_3.cydwr main.c

Configure 'cy_isr'

Name:

Basic Built-in

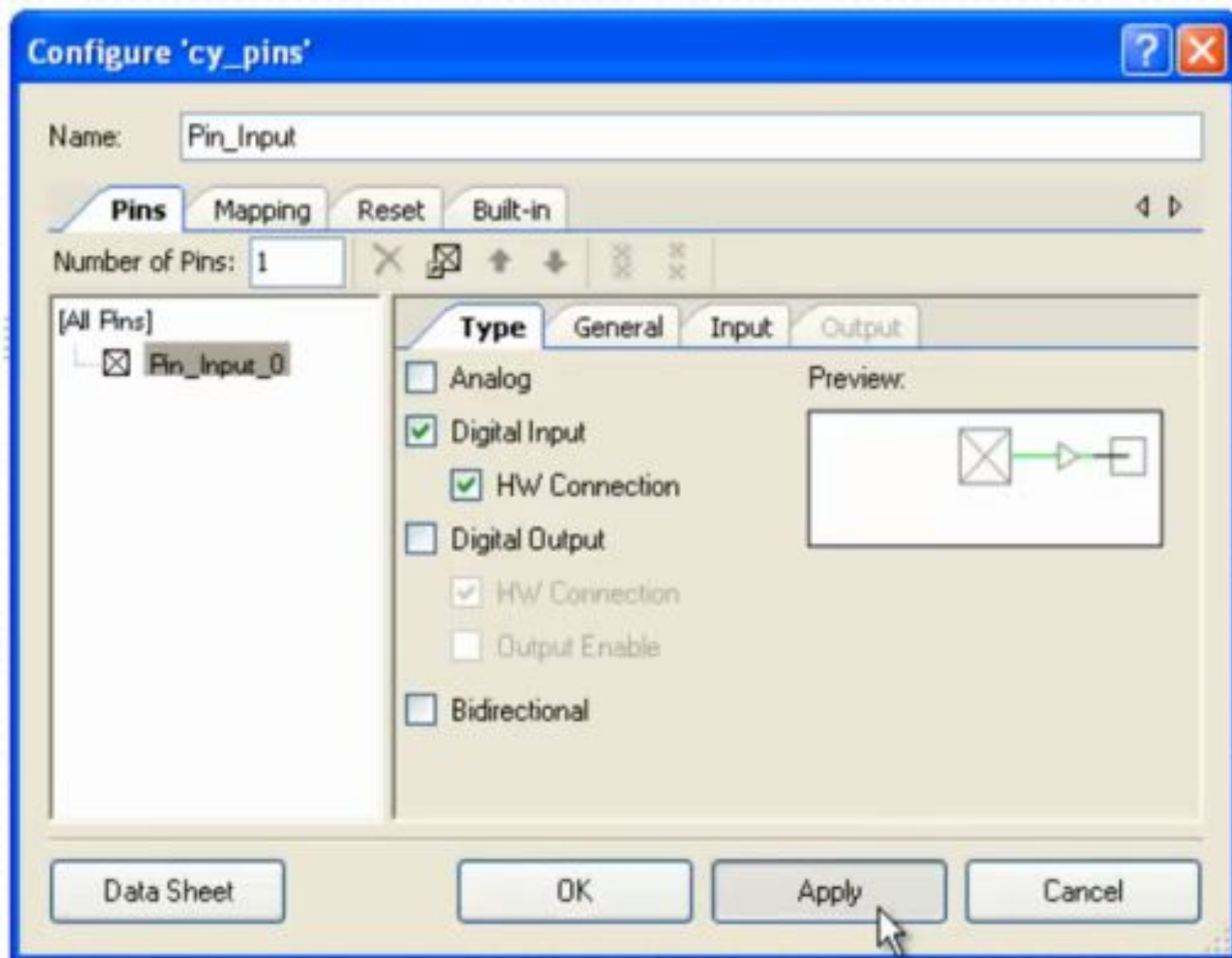
Parameter	Value
InterruptType	RISING_EDGE

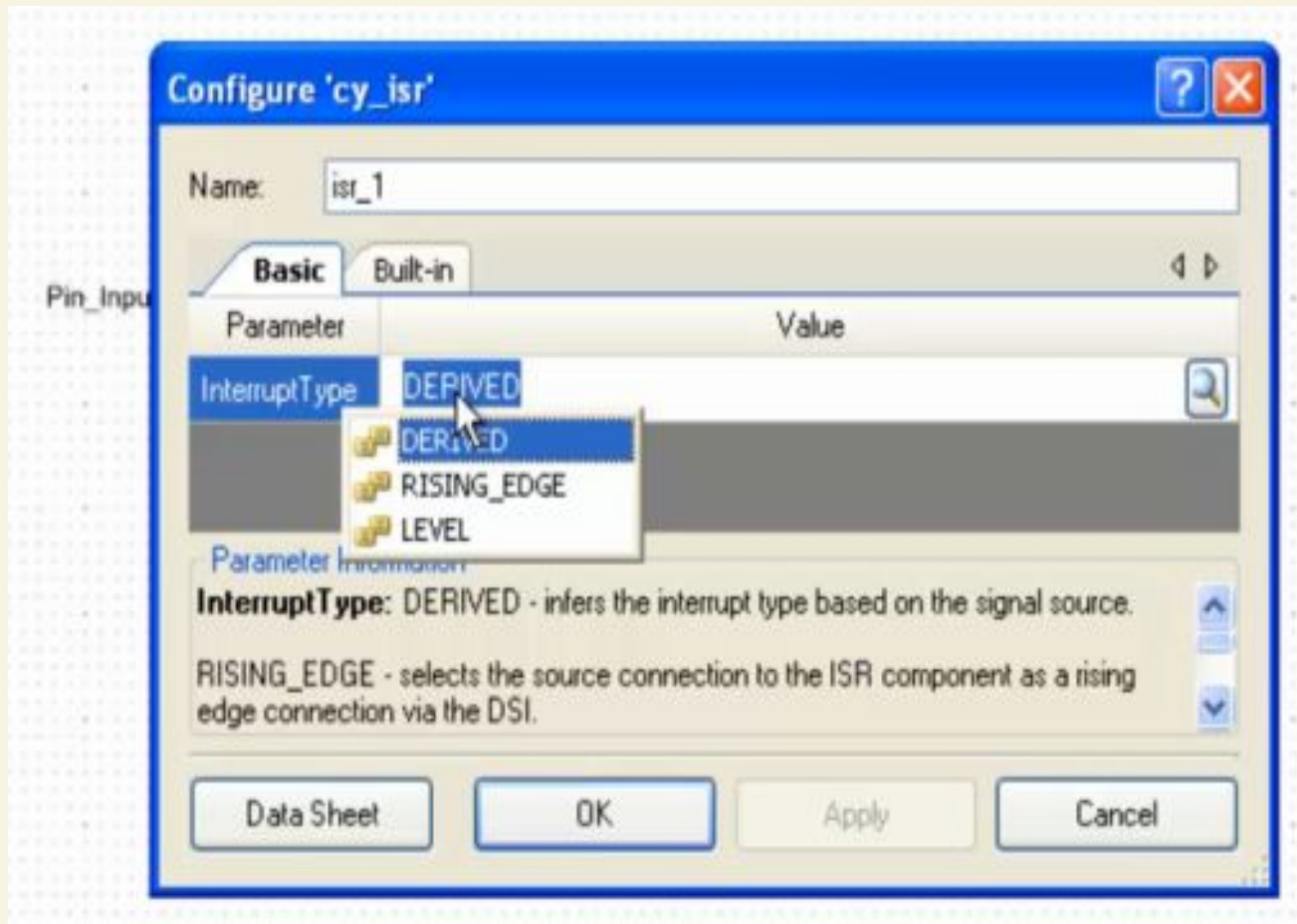
Parameter Information

InterruptType: DERIVED - infers the interrupt type based on the signal source.

RISING_EDGE - selects the source connection to the ISR component as a rising edge connection via the DSI.

Datasheet OK Apply Cancel





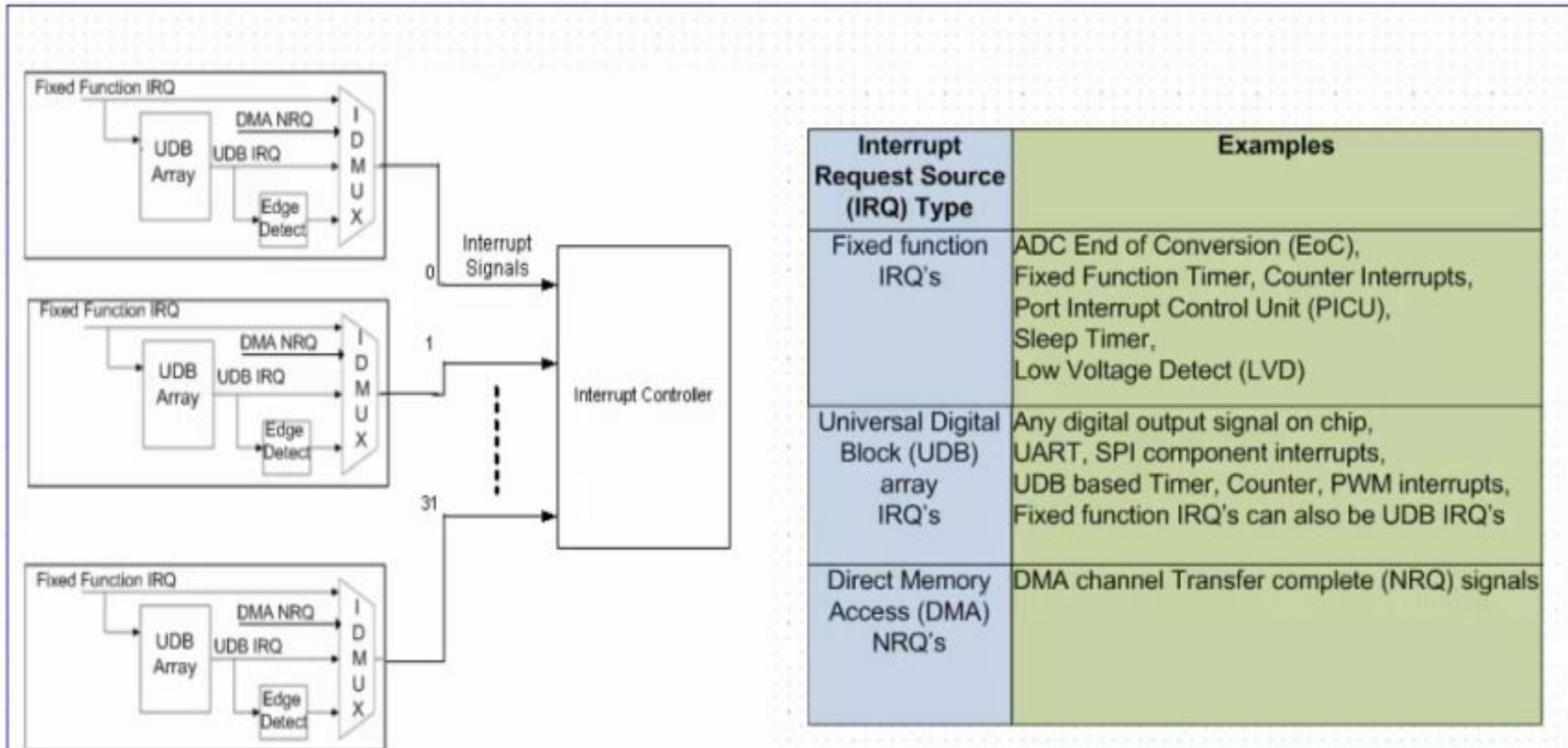
Interrupts

Pin_Input    isr_1



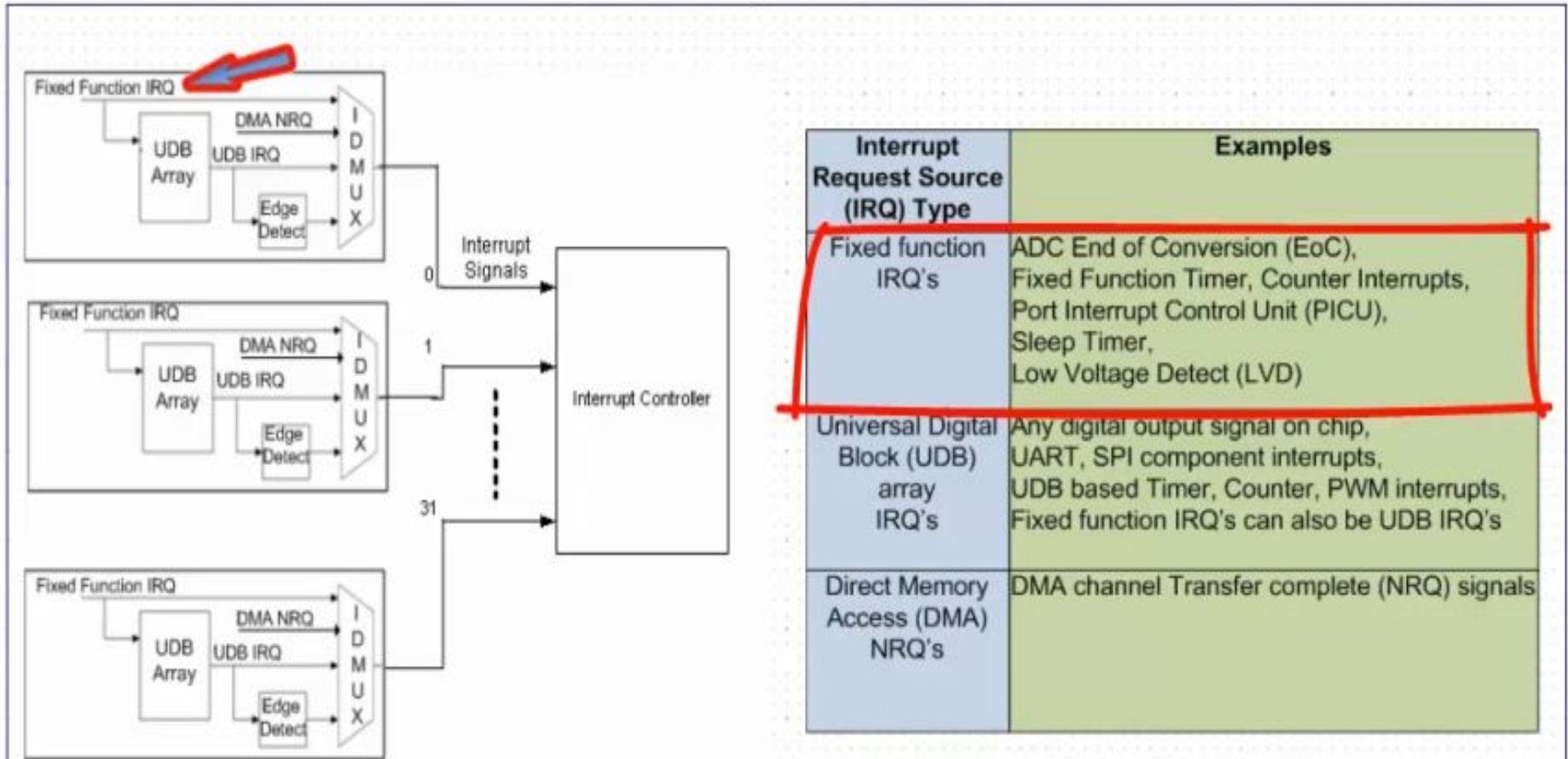
Interrupts

Interrupt Sources



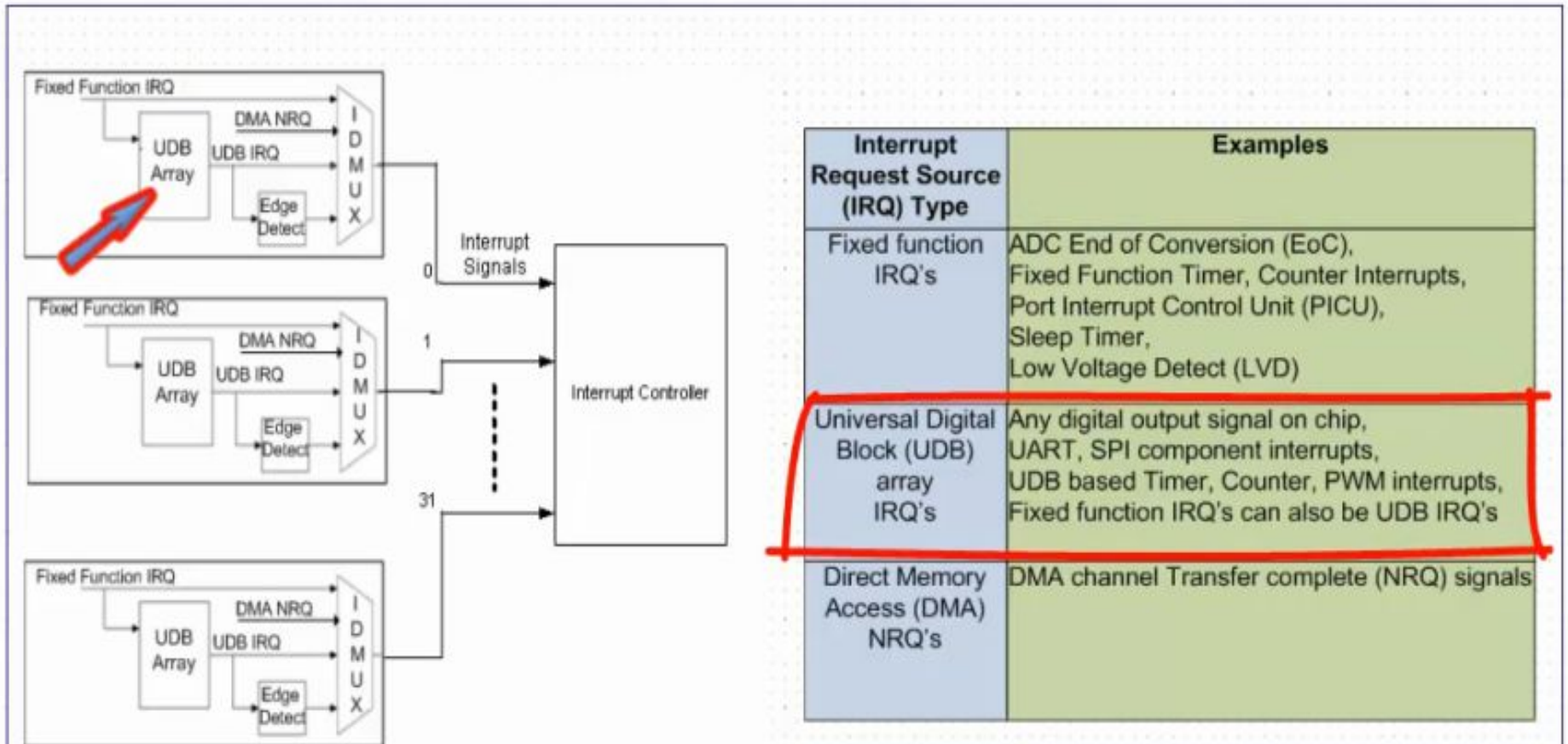
Interrupts

Interrupt Sources



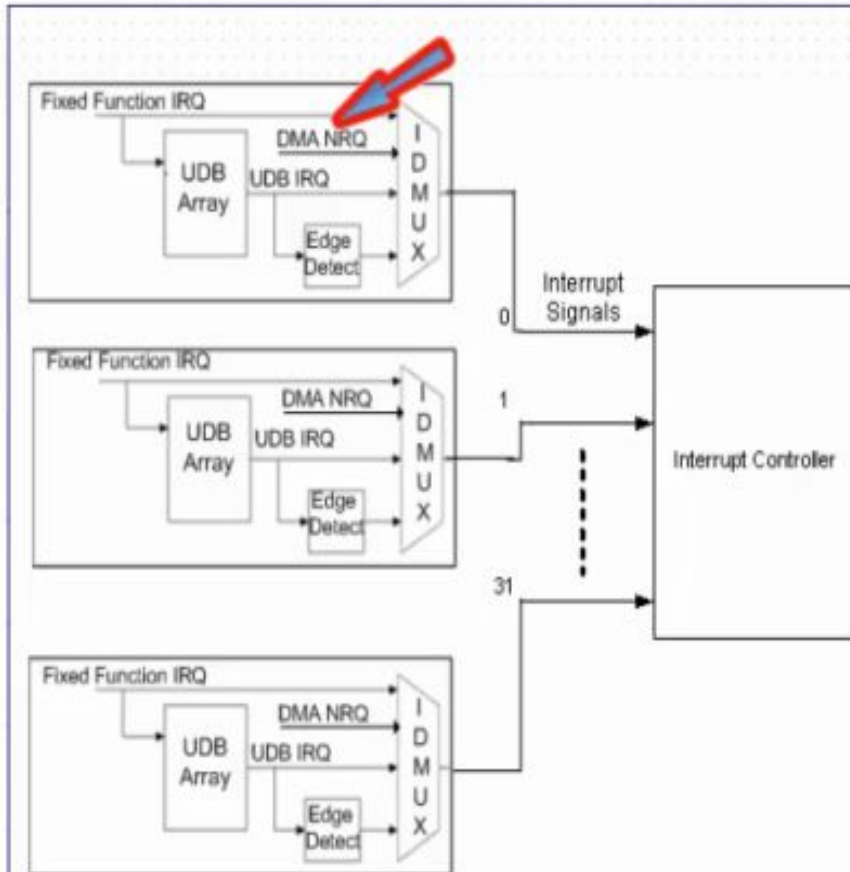
Interrupts

Interrupt Sources



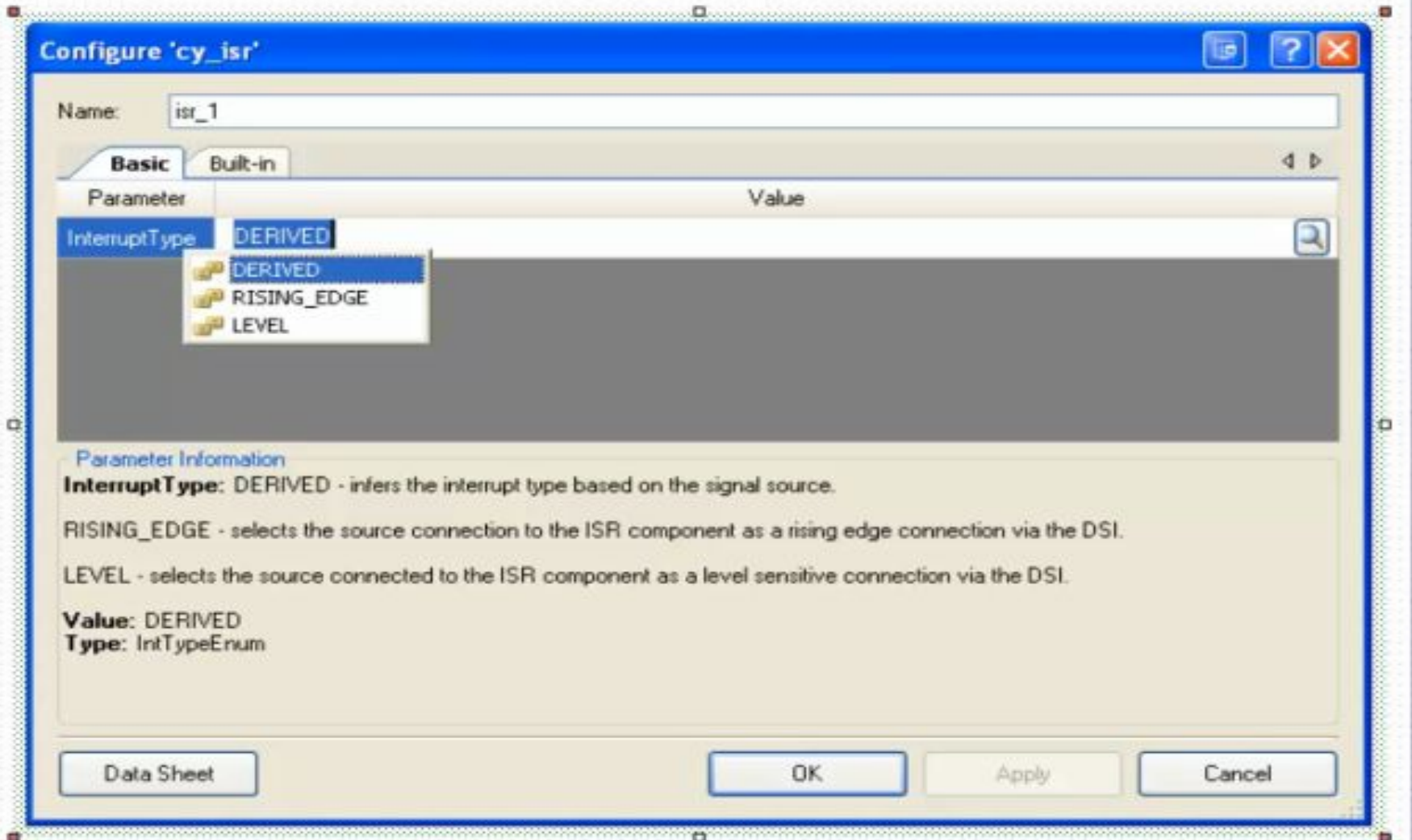
Interrupts

Interrupt Sources



Interrupt Request Source (IRQ) Type	Examples
Fixed function IRQ's	ADC End of Conversion (EoC), Fixed Function Timer, Counter Interrupts, Port Interrupt Control Unit (PICU), Sleep Timer, Low Voltage Detect (LVD)
Universal Digital Block (UDB) array IRQ's	Any digital output signal on chip, UART, SPI component interrupts, UDB based Timer, Counter, PWM interrupts, Fixed function IRQ's can also be UDB IRQ's
Direct Memory Access (DMA) NRQ's	DMA channel Transfer complete (NRQ) signals

Interrupt Type selection



The screenshot shows the 'Configure 'cy_isr'' dialog box. The 'Name' field is set to 'isr_1'. The 'Basic' tab is selected. The 'InterruptType' parameter is highlighted, and a dropdown menu is open showing three options: 'DERIVED' (selected), 'RISING_EDGE', and 'LEVEL'. The 'Value' column is empty. The 'Parameter Information' section provides details for the selected 'DERIVED' type.

Parameter	Value
InterruptType	DERIVED

Parameter Information

InterruptType: DERIVED - infers the interrupt type based on the signal source.

RISING_EDGE - selects the source connection to the ISR component as a rising edge connection via the DSI.

LEVEL - selects the source connected to the ISR component as a level sensitive connection via the DSI.

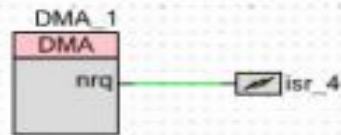
Value: DERIVED
Type: IntTypeEnum

Buttons: Data Sheet, OK, Apply, Cancel

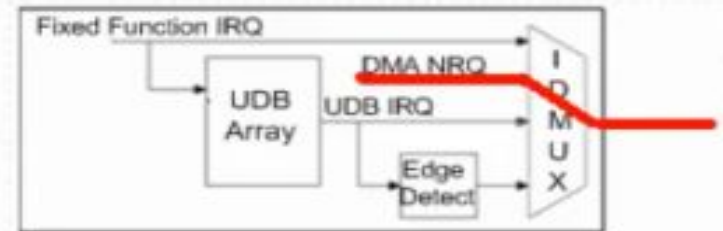
Interrupts

Interrupt Sources

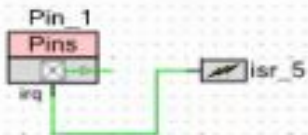
1.) DMA nrq Interrupt



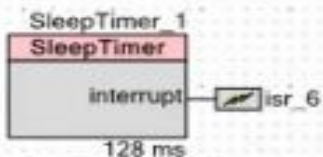
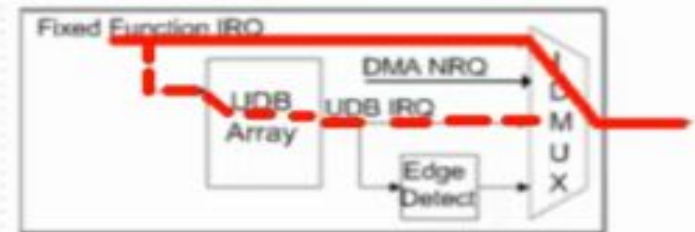
Derived



2.) Fixed Function Interrupts

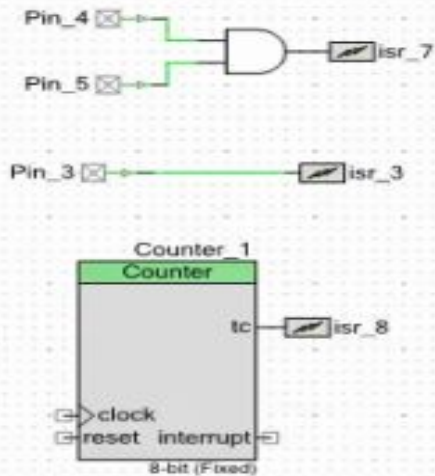


Derived

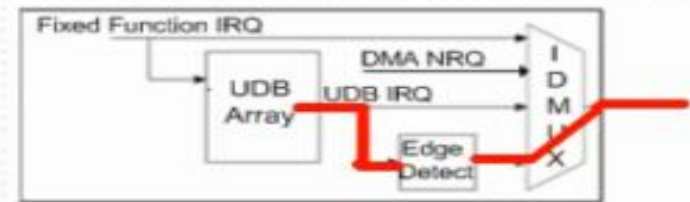


Interrupts

3.) Edge Triggered Interrupts



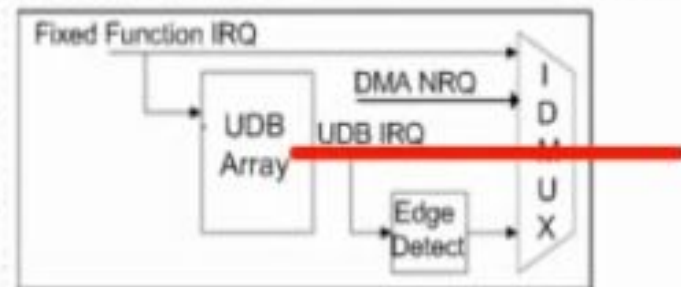
Derived
(or)
Rising Edge



4.) Level Interrupt



Level



PSoC Creator 2.1

File Edit View Debug Project Build Tools Window Help

Workspace Explorer

Source Components Datasheets Results

Start Page

PSoC® Creator™

Recent Projects

- HelloWorld_Blinky01.cywrk
- CapSense_CSD_Design01...
- CapSense_CSD_Design01...
- CharLCD_CustomFont01.c...
- CharLCD_CustomFont01.c...

Create New Project...

Open Existing Project...

Getting Started

- PSoC Creator Start Page
- Quick Start Guide
- Intro to PSoC
- Intro to PSoC Creator
- PSoC Creator Training
- Help Tutorials
- Getting Started With PSoC 3
- Getting Started With PSoC 5

Examples and Kits

- Find Example Project...
- No Kit Packages Installed

简体中文 日本語 한국어 English

PSoC Creator News and Information

Happy Lunar New Year!

Posted on 02/11/2013

Gong Xi Fa Cai! As many of my friends and colleagues are celebrating the New Year and welcoming in the year of the water snake, I wanted to take a minute and wish you all well. May the New Year bring each of you prosperity, good luck and a new PSoC design.

[Read More](#)

Tips + Tricks: Menu Customization

Posted on 01/24/2013

Did you know you can create a customized menu in PSoC® Creator? Right click in a blank area of the top menu and select customize from the

Notice List

0 Errors 0 Warnings

De... File Error L

Output

Show output from: All

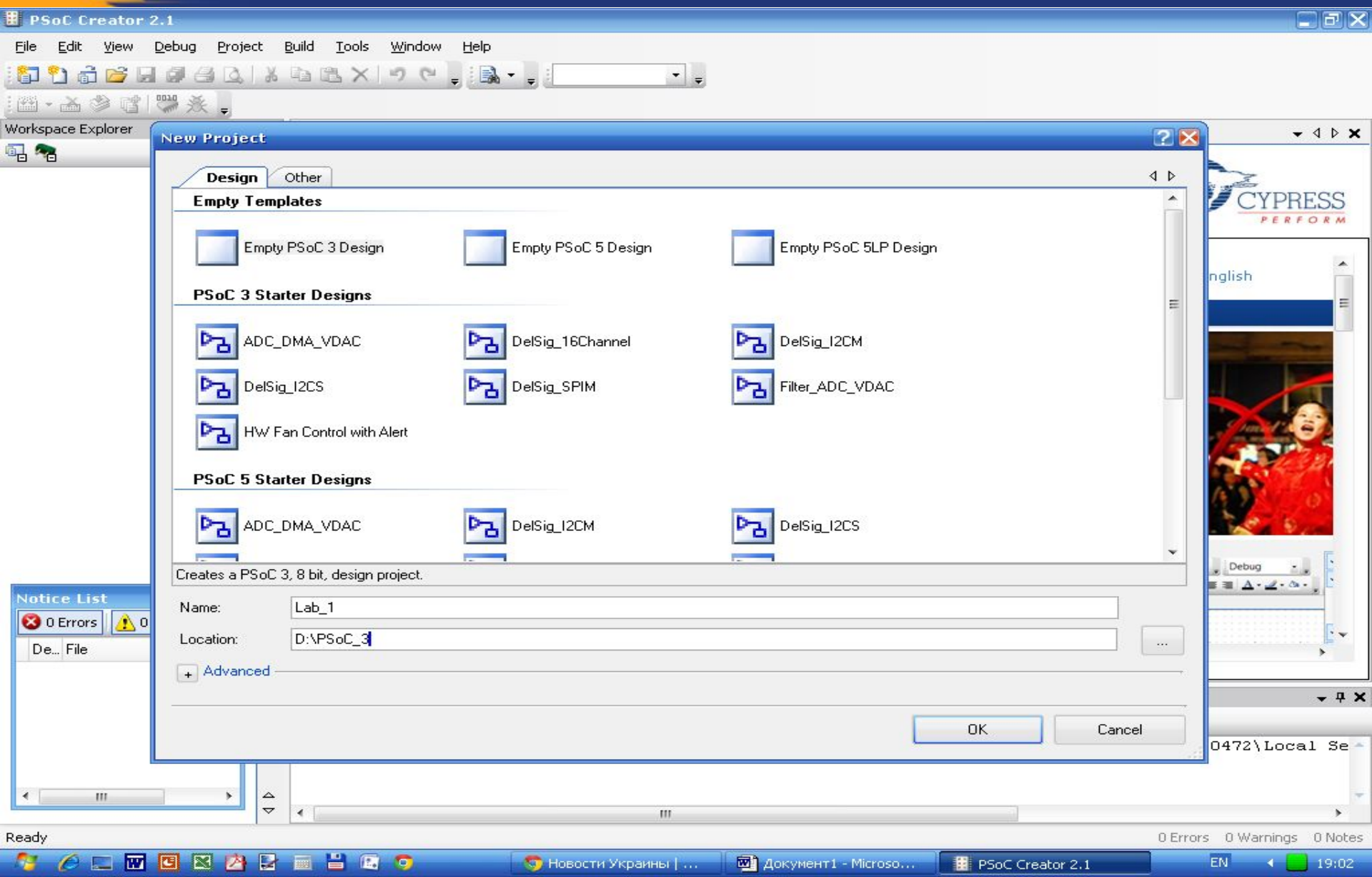
Log file for this session is located at: C:\Documents and Settings\Admin.MICROSOFT-7D0472\Local Se

Ready

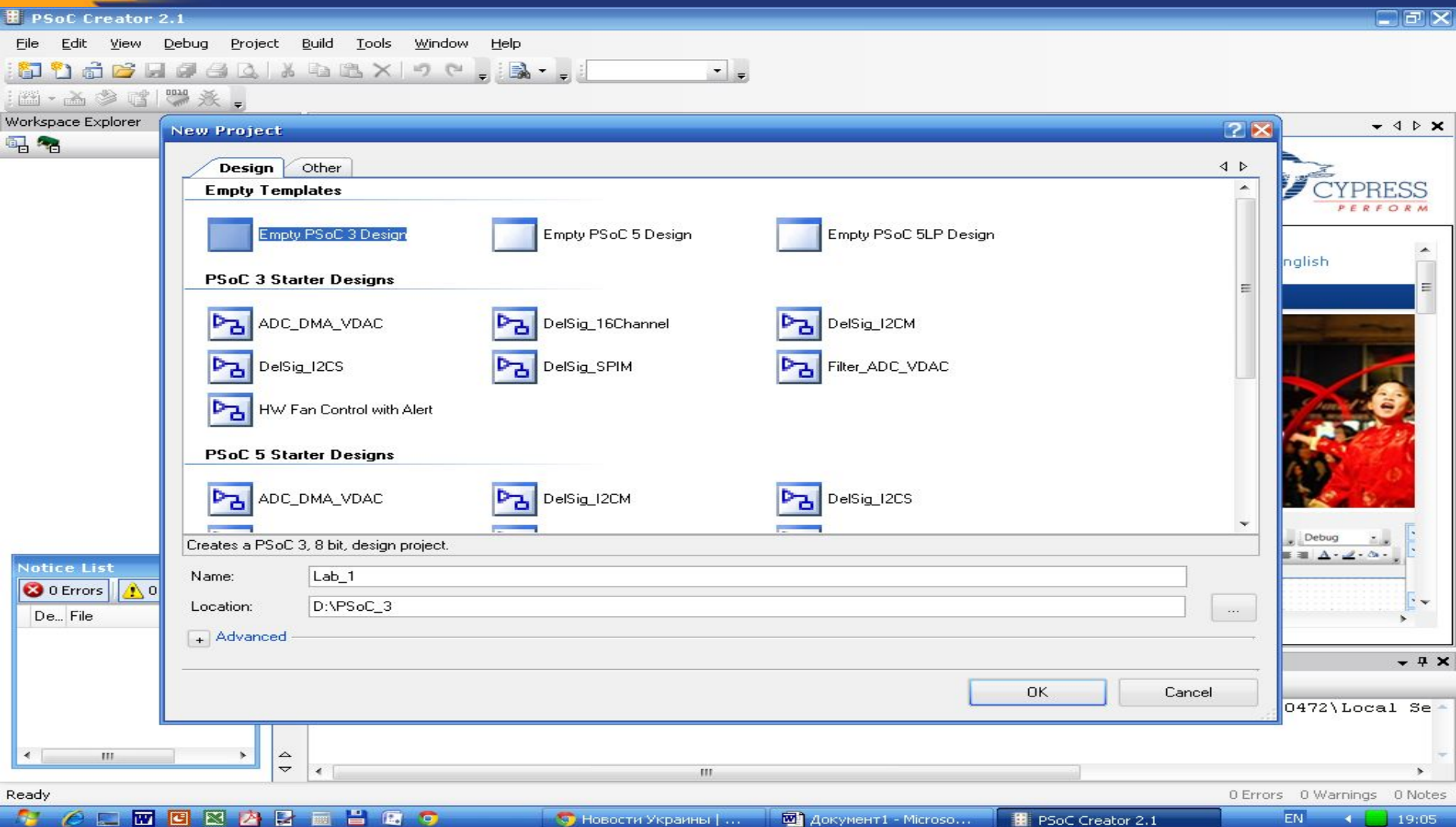
0 Errors 0 Warnings 0 Notes

Новости Украины | ... Документ1 - Microso... PSoC Creator 2.1 EN 18:57

File – New - Projekt



Empty PSoC 3 Design



The screenshot shows the PSoC Creator 2.1 application window. The 'New Project' dialog box is open, displaying various design templates. The 'Design' tab is selected, showing 'Empty Templates' and 'PSoC 3 Starter Designs'. The 'Empty PSoc 3 Design' template is highlighted. The 'Name' field is set to 'Lab_1' and the 'Location' is 'D:\PSoC_3'. The 'Advanced' button is visible at the bottom of the dialog. The background shows the main workspace with a 'Workspace Explorer' on the left and a 'Notice List' at the bottom left. The taskbar at the bottom indicates the system is ready with 0 errors, 0 warnings, and 0 notes. The time is 19:05.

PSoc Creator 2.1

File Edit View Debug Project Build Tools Window Help

Workspace Explorer

New Project

Design Other

Empty Templates

- Empty PSoc 3 Design
- Empty PSoc 5 Design
- Empty PSoc 5LP Design

PSoC 3 Starter Designs

- ADC_DMA_VDAC
- DelSig_I2CS
- HW Fan Control with Alert
- DelSig_16Channel
- DelSig_SPIM
- DelSig_I2CM
- Filter_ADC_VDAC

PSoC 5 Starter Designs

- ADC_DMA_VDAC
- DelSig_I2CM
- DelSig_I2CS

Creates a PSoC 3, 8 bit, design project.

Name: Lab_1

Location: D:\PSoC_3

+ Advanced

OK Cancel

Notice List

0 Errors 0 Warnings 0 Notes

De... File

Ready

0 Errors 0 Warnings 0 Notes

EN 19:05



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\A_MyFirstInterruptProject.cydsn\TopDesign\TopDesign...

File Edit View Debug Project Build Tools Window Help

104% Debug

Microsoft Sans Serif 10

Workspace Explorer

Project 'A_MyFirstInterrupt' (4 Projects)

- TopDesign.cysch
- A_MyFirstInterruptProject.c
- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoC3
 - cy_boot
 - CyBootAsmKeil
 - CyDmac.c
 - CyDmac.h
 - CyFlash.c
 - CyFlash.h
 - CyLib.c
 - CyLib.h
 - cymem.a51
 - cyupinc.h

Source Components Datasheets Results

TopDesign.cysch

main.c isr_1.c

LCD

Character LCD

Timer_1

Timer

tc interrupt

isr_1

timer_clock 1 kHz

0

clock reset

16-bit (UDB)

LED1

Page 1

Output

Show output from: All

Protecting...

Verify Checksum...

Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013

Notice List

0 Errors 0 Warnings

De... File

Ready

0 Errors 0 Warnings 2 Notes

Component Catalog

Concept Cypress

- PrISM [v2.10]
- PRS [v2.10]
- PwM [v2.20]
- Quadrature De
- Shift Register
- Timer [v2.30]
- Logic
- Registers
 - Control Register
 - Status Register
- Display
 - Character LCD [v1]
 - Graphic LCD 8-bit
 - Graphic LCD 16-b
 - Graphic LCD Cont
 - Graphic LCD Cont
 - Graphic LCD Para
 - Resistive Touch [v
 - Segment LCD - St
 - Segment LCD [v3.
- Filters

Component Preview

Inst N

Character LCD

Datasheet

Character LCD Component

Configure LCD

Lab_1 - PSoC Creator 2.1 [D:\PSOC_3\Lab_1\Lab_1.cysdn\TopDesign\TopDesign.cysch]

File Edit View Debug Project Build Tools Window Help

Microsoft Sans Serif 10 B I U

Workspace Explorer (1 project)

Workspace 'Lab_1' (1 Projects)

Project 'Lab_1' [CY8C3866]

TopDesign.cysch

Lab_1.cydwr

Header Files

device.h

Source Files

main.c

Start Page *TopDesign.cysch

Configure 'CharLCD'

Name: LCD_Char

General Built-in

Parameters

LCD Custom Character Set

☒ None

☐ Vertical Bargraph

☐ Horizontal Bargraph

☐ User Defined

☒ Include ASCII to Number Conversion Routines

Custom Character Editor

Datasheet OK Apply Cancel

Page 1

Output

Show output from: All

Log file for this session is located at: C:\Documents and Settings\Admin

Component Catalog (174 co...)

Concept Cypress

Cypress Component Catalog

Analog

ADC

Amplifiers

Analog MUX

Comparator [v1.90]

DAC

Manual Routing

Mixer [v1.91]

Sample/Track and Hold

VRef [v1.60]

CapSense

Communications

Digital

Display

Character LCD [v1.70]

Graphic LCD 8-bit Paralle

Graphic LCD 16-bit Paralle

Graphic LCD Controller I

Graphic LCD Controller I

Graphic LCD Parallel Int

Resistive Touch [v1.10]

Component Preview

Inst N

Character LCD

Datasheet

Ready

{X=295,Y=131}

0 Errors 0 Warnings 0 Notes

Новости Украины | ...

Do_Present_1.doc - ...

PSOC Creator 2.1

EN

19:25

Lab_1 - PSoC Creator 2.1 [D:\PSoC_3\Lab_1\Lab_1.cysdn\main.c]

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (1 project)

Workspace 'Lab_1' (1 Projects)

Project 'Lab_1' [CY8C3866]

TopDesign.cysch

Lab_1.cydwr

Header Files

device.h

Source Files

main.c

Source

Components

Datasheets

Results

Start Page *TopDesign.cysch main.c

```

1  /* =====
2  *
3  * Copyright YOUR COMPANY, THE YEAR
4  * All Rights Reserved
5  * UNPUBLISHED, LICENSED SOFTWARE.
6  *
7  * CONFIDENTIAL AND PROPRIETARY INFORMATION
8  * WHICH IS THE PROPERTY OF your company.
9  *
10 * =====
11 */
12 #include <device.h>
13
14 void main()
15 {
16     /* Place your initialization/startup code here (e.g. MyInst_Start()) */
17
18     /* CyGlobalIntEnable; */ /* Uncomment this line to enable global interrupts. */
19     for (;;)
20     {
21         /* Place your application code here. */
22     }
23 }
24
25 /* [] END OF FILE */
26

```

Notice List

0 Errors 0 Warnings

De... File Error L

Output

Show output from: All

Log file for this session is located at: C:\Documents and Settings\Admin.MICROSOFT-7D0472\Local Se

Ln 1 Col 1 INS 0 Errors 0 Warnings 0 Notes

Ready

Новости Украины | ... Do_Present_1.doc - ... Lab_1 - PSoC Creator... EN 19:28

Lab_1 - PSoC Creator 2.1 [D:\PSoC_3\Lab_1\Lab_1.cydsn\Lab_1.cydw] File Edit View Debug Project Build Tools Window Help

37% Debug

Workspace Explorer (1 project)

- Workspace 'Lab_1' (1 Projects)
 - Project 'Lab_1' [CY8C3866]
 - TopDesign.cysch
 - Lab_1.cydw
 - Header Files
 - device.h
 - Source Files
 - main.c

Source Components Datasheets Results

Start Page TopDesign.cysch main.c Lab_1.cydw

CY8C3866AXI-040 100-TQFP

Alias	Name	Port	Pin	Lock
	\LCD_Char:LCDPort[6:0]\			
	P0[6:0]	IDAC: H		
	P0[7:1]	IDAC: H		
	P2[6:0]			
	P2[7:1]			
	P3[6:0]	OpAmp: c		
	P3[7:1]	OpAmp: c		
	P4[6:0]			
	P4[7:1]			
	P5[6:0]			

LCD_Char_LCDPort_6 - Digital
LCD_Char_LCDPort_5 - Digital
LCD_Char_LCDPort_4 - Digital

Notice List

0 Errors 0 Warnings

De... File Error L

Output

Show output from: All

Log file for this session is located at: C:\Documents and Settings\Admin.MICROSOFT-7D0472\Local Se

Pins Analog Clocks Interrupts DMA System Directives Flash Security

Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\A_MyFirstInterruptProject.cydsn\TopDesign\TopDesign...

File Edit View Debug Project Build Tools Window Help

Microsoft Sans Serif 10

Workspace Explorer

Project 'A_MyFirstInterrupt' (4 Projects)

- TopDesign.cysch
- A_MyFirstInterruptProject.c
- Header Files
- Source Files
- Generated_Source
- PSoC3
- cy_boot
- CyBootAsmKeil
- CyDmac.c
- CyDmac.h
- CyFlash.c
- CyFlash.h
- CyLib.c
- CyLib.h
- cymem.a51
- cyupin.h

Source Components Datasheets Results

Start Page A_MyFirstInte...tProject.cydw TopDesign.cysch main.c isr_1.c

Configure 'Timer'

Name: Timer_1

Configure Built-in

Resolution: ☐ 8-Bit ☒ 16-Bit ☐ 24-Bit ☐ 32-Bit

Implementation: ☐ Fixed Function ☒ UDB

Period: 1000 Max **Period = 1s**

Trigger Mode: None

Capture Mode: None

☐ Enable Capture Counter 2

Enable Mode: Software Only

Run Mode: Continuous

Interrupts: ☒ On TC ☐ On Capture [1-4] 1

Datasheet OK Apply Cancel

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...

Verify Checksum...

Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013

Component Catalog

Concept Cypress

- PrISM [v2.10]
- PRS [v2.10]
- PwM [v2.20]
- Quadrature De
- Shift Register
- Timer [v2.30]
- Logic
- Registers
- Control Regist
- Status Registe
- Display
- Character LCD [v1
- Graphic LCD 8-b
- Graphic LCD 16-b
- Graphic LCD Cont
- Graphic LCD Cont
- Graphic LCD Para
- ResistiveTouch [v
- Segment LCD - St
- Segment LCD [v3.

Component Preview

Inst. N

Character LCD

Datasheet

Character LCD Component

Ready {X=659,Y=498} 0 Errors 0 Warnings 2 Notes

Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\A_MyFirstInterruptProject.cydsn\TopDesign\TopDesign...

File Edit View Debug Project Build Tools Window Help

Microsoft Sans Serif 10 B I U

Workspace Explorer

Workspace 'AN54460' (4 Projects)

Project 'A_MyFirstInterrupt'

TopDesign.cysch

A_MyFirstInterruptProject.c

Header Files

device.h

Source Files

main.c

Generated_Source

PSoC3

cy_boot

CyBootAsmKeil

CyDmac.c

CyDmac.h

CyFlash.c

CyFlash.h

CyLib.c

CyLib.h

cymem.a51

cyupine.h

Source Components Datasheets Results

Start Page A_MyFirstInte...tProject.cydw *TopDesign.cysch main.c isr_1.c

Configure 'cy_clock'

Name: timer_clock

Configure Clock Advanced Built-in

Clock Type: ☒ New ☐ Existing

Source: <Auto>

Specify: ☒ Frequency 1 kHz

☒ Tolerance: - 5% + 5%

Summary

API Generated: Yes

Uses Clock Tree Resource: Yes

By default, all clocks are marked as 'start on reset'. The setting can be changed in the Design Wide Resources editor.

Datasheet OK Apply Cancel

Component Catalog

Concept Cypress

Functions

Counter [v2.20]

CRC [v2.20]

Debounce

Glitch Filter [v2.20]

PrISM [v2.10]

PRS [v2.10]

PWM [v2.20]

Quadrature De

Shift Register

Timer [v2.30]

Logic

Registers

Control Register

Status Register

Display

Character LCD [v1.20]

Graphic LCD 8-bit

Graphic LCD 16-bit

Graphic LCD Cont

Graphic LCD Cont

Component Preview

Datasheet

8, 16, 24 or 32-bit Timer

Output

Show output from: All

Protecting...

Verify Checksum...

Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013

Ready {X=545,Y=481} 0 Errors 0 Warnings 2 Notes

Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\A_MyFirstInterruptProject.cydsn\TopDesign\TopDesign...

File Edit View Debug Project Build Tools Window Help

Microsoft Sans Serif 10

Workspace Explorer

Project 'A_MyFirstInterrupt' (4 Projects)

- TopDesign.cysch
- A_MyFirstInterruptProject.c
- Header Files
- Source Files
- main.c
- Generated_Source
- PSoC3
- cy_boot
- CyBootAsmKeil
- CyDmac.c
- CyDmac.h
- CyFlash.c
- CyFlash.h
- CyLib.c
- CyLib.h
- cymem.a51
- cyupm.h

Source Components Datasheets Results

Start Page A_MyFirstInte...tProject.cydw *TopDesign.cysch main.c isr_1.c

Configure 'cy_isr'

Name: isr_1

Basic Built-in

Parameter	Value
InterruptType	LEVEL

Parameter Information

Datasheet OK Apply Cancel

Output

Show output from: All

```
Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013
```

Notice List

0 Errors 0 Warnings

De... File

Component Catalog

Concept Cypress

- Digital Bidirectional
- Digital Input Pin [v]
- Digital Output Pin
- Power Supervision
- System
- Boost Converter [v]
- Bootloadable
- Bootloader
- Clock [v1.70]
- Die Temperature [v1.60]
- DMA [v1.60]
- EEPROM [v2.0]
- External Memory I
- Global Signal Refe
- Interrupt [v1.60]
- RTC [v1.70]
- SleepTimer [v3.10]
- Sync
- UDBClkEn
- Thermal Management

Component Preview

Datasheet

8, 16, 24 or 32-bit Timer

Ready

0 Errors 0 Warnings 2 Notes

Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\A_MyFirstInterruptProject.cydsn\TopDesign\TopDesign...

File Edit View Debug Project Build Tools Window Help

Microsoft Sans Serif 10

Workspace Explorer

Project 'A_MyFirstInterrupt' (4 Projects)

- TopDesign.cysch
- A_MyFirstInterruptProject.c
- Header Files
- Source Files
- main.c
- Generated_Source
- PSoC3
 - cy_boot
 - CyBootAsmKeil
 - CyDmac.c
 - CyDmac.h
 - CyFlash.c
 - CyFlash.h
 - CyLib.c
 - CyLib.h
 - cymem.a51
 - cyupins.h

Source Components Datasheets Results

Configure 'cy_pins'

Name: LED1

Pins Mapping Reset Built-in

Number of Pins: 1

[All Pins]

LED1_0

Type General Input Output

☐ Analog
☐ Digital Input
☒ Digital Output
☐ Bidirectional
☐ Show Annotation Terminal

Preview:

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013

Notice List

0 Errors 0 Warnings

De... File

Component Catalog

Concept Cypress

- Digital Bidirectional
- Digital Input Pin [v]
- Digital Output Pin
- Power Supervision
- System
 - Boost Converter [v]
 - Bootloadable
 - Bootloader
 - Clock [v1.70]
 - Die Temperature [v]
 - DMA [v1.60]
 - EEPROM [v2.0]
 - External Memory I
 - Global Signal Refe
 - Interrupt [v1.60]
 - RTC [v1.70]
 - SleepTimer [v3.10]
 - Sync
 - UDBClkEn
 - Thermal Management

Component Preview

Datasheet

8, 16, 24 or 32-bit Timer

Ready {X=470,Y=312} 0 Errors 0 Warnings 2 Notes



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...A_MyFirstInterruptProject.cydsn\A_MyFirstInterruptProject.cy...

File Edit View Debug Project Build Tools Window Help

39% Debug

Workspace Explorer

Workspace 'AN54460' (4 Projects)

- Project 'A_MyFirstInterrupt'
- TopDesign.cysch
- A_MyFirstInterruptProject.c
- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoC3
 - cy_boot
 - CyBootAsmKeil
 - CyDmac.c
 - CyDmac.h
 - CyFlash.c
 - CyFlash.h
 - CyLib.c
 - CyLib.h
 - cymem.a51
 - cyupb.h

Source Components Datasheets Results

Start Page A_MyFirstIn...oject.cydw *TopDesign.cysch main.c isr_1.c

Diagram showing CY8C3866AXI-040 100-TQFP package with pins and components.

Alias	Name	Port	Pin
	\LCD:LCDPort[6:0]\	P2[6:0]	95..99,1..2
	LED1	P0[0] OpAmp:out	71

Notice List

- 0 Errors
- 0 Warnings

Output

Show output from: All

```
Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AXI-040' was successfully programmed at 03/18/2013 05:06:14.
```

Ready

0 Errors 0 Warnings 2 Notes



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\AN54460\A_MyFirstInterruptProject.cydsn\main.c]

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer

Project 'A_MyFirstInterrupt' (4 Projects)

- TopDesign.cysch
- A_MyFirstInterruptProject.c
- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoC3
 - cy_boot
 - CyBootAsmKeil
 - CyDmac.c
 - CyDmac.h
 - CyFlash.c
 - CyFlash.h
 - CyLib.c
 - CyLib.h
 - cymem.a51
 - cyupinc.h

Source Components Datasheets Results

```
1  /* =====
2  * Copyright YOUR COMPANY, THE YEAR
3  * All Rights Reserved
4  * UNPUBLISHED, LICENSED SOFTWARE.
5  * CONFIDENTIAL AND PROPRIETARY INFORMATION
6  * WHICH IS THE PROPERTY OF your company.
7  *
8  * =====
9  */
10 #include <device.h>
11
12 /* Global variable defined in Timer ISR file isr_1.c */
13 extern volatile uint8 toggle_flag;
14
15 void main()
16 {
17     CYGlobalIntEnable; /* Enable global interrupts. */
18
19     /* Initialize, start components */
20     Timer_1_Start();
21     isr_1_Start();
22     LCD_Start();
23     LCD_Position(0,2);
24     LCD_PrintString("My Name");
25 }
```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 5 Col 2 INS 0 Errors 0 Warnings 2 Notes

AN54460 - PSoC ... Microsoft PowerP...

EN 5:27

Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\AN54460\A_MyFirstInterruptProject.cydsn\main.c]

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer

Workspace 'AN54460' (4 Projects)

Project 'A_MyFirstInterrupt'

TopDesign.cysch

A_MyFirstInterruptProject.c

Header Files

device.h

Source Files

main.c

Generated_Source

PSoC3

cy_boot

CyBootAsmKeil

CyDmac.c

CyDmac.h

CyFlash.c

CyFlash.h

CyLib.c

CyLib.h

cymem.a51

cyup.h

Source

Components

Datasheets

Results

```

18
19  /* Initialize, start components */
20  Timer_1_Start();
21  isr_1_Start();
22  LCD_Start();
23  LCD_Position(0,2);
24  LCD_PrintString("My Name");
25
26  for(;;)
27  {
28      /* Check if flag is set in ISR */
29      if(toggle_flag == 1)
30      {
31          /* Toggle the LED1 pin */
32          LED1_Write(~LED1_ReadDataReg());
33
34          /* Clear the flag */
35          toggle_flag = 0;
36      }
37  }
38
39
40  /* [] END OF FILE */
41

```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...

Verify Checksum...

Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 5 Col 2 INS 0 Errors 0 Warnings 2 Notes



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\B_PiculInterruptProject.cydsn\Generated_Source\PSoc...

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (4 ...)

- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoc3
 - cy_boot
 - isr_1
 - isr_1.c
 - isr_1.h
 - LCD
 - LCD.c
 - LCD.h
 - LCD_PM
 - LCD_LCDP1
 - LCD_LCD
 - LCD_LCD
 - LCD_LCD
 - LED1
 - LED1.c

Source Components Datasheets Results

```
1 /*****  
2 * File Name: isr_1.c  
3 * Version 1.60  
4 *  
5 * Description:  
6 *   API for controlling the state of an interrupt.  
7 *  
8 *  
9 * Note:  
10 *  
11 *****/  
12 * Copyright 2008-2010, Cypress Semiconductor Corporation. All rights reserved.  
13 * You may use this file only in accordance with the license, terms, conditions,  
14 * disclaimers, and limitations in the end user license agreement accompanying  
15 * the software package with which this file was provided.  
16 *****/  
17  
18 #include <CYDEVICE.H>  
19 #include <CYDEVICE_TRM.H>  
20 #include <CYLIB.H>  
21 #include <isr_1.H>  
22  
23  
24 /*****
```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 9 Col 1 INS 0 Errors 0 Warnings 2 Notes



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\B_PiculInterruptProject.cydsn\Generated_Source\PSoc...

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (4 ...)

- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoc3
 - cy_boot
 - isr_1
 - isr_1.c
 - isr_1.h
 - LCD
 - LCD.c
 - LCD.h
 - LCD_Pt
 - LCD_LCDP
 - LCD_LCD
 - LCD_LCD
 - LCD_LCD
 - LED1
 - LED1.c

Source Components Datasheets Results

```
25 /*****
26  * Place your includes, defines and code here
27  *****/
28 /* `#START isr_1_intc` */
29 /* `#END` */
30 /*****
31  * Function Name: isr_1_Start
32  *****/
33  * Summary:
34  * Set up the interrupt and enable it.
35  * Parameters:
36  * void.
37  * Return:
38  * void.
39  *****/
40 void isr_1_Start(void)
41 {
42     /* For all we know the interrupt is active. */
43     isr_1_Disable();
44
45     /* Set the ISR to point to the isr_1 Interrupt. */
46     isr_1_SetVector(isr_1_Interrupt);
47
48     /* Set the priority. */
49     isr_1_SetPriority(isr_1_INTTC_PRIOR_NUMBER);
```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 39 Col 1 INS 0 Errors 0 Warnings 2 Notes



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\B_PiculInterruptProject.cydsn\Generated_Source\PSoc...

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (4 ...)

- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoc3
 - cy_boot
 - isr_1
 - isr_1.c
 - isr_1.h
 - LCD
 - LCD.c
 - LCD.h
 - LCD_Pt
 - LCD_LCDP
 - LCD_LCD
 - LCD_LCD
 - LCD_LCD
 - LED1
 - LED1.c

Source Components Datasheets Results

```
50
51     /* Enable it. */
52     isr_1_Enable();
53 }
54 /*****
55  * Function Name: isr_1_StartEx
56  *****/
57  * Summary:
58  * Set up the interrupt and enable it.
59  * Parameters:
60  * address: Address of the ISR to set in the interrupt vector table.
61  * Return:
62  * void.
63  *****/
64 void isr_1_StartEx(cyisraddress address)
65 {
66     /* For all we know the interrupt is active. */
67     isr_1_Disable();
68
69     /* Set the ISR to point to the isr_1 Interrupt. */
70     isr_1_SetVector(address);
71
72     /* Set the priority. */
73     isr_1_SetPriority(isr_1_INTC_PRIOR_NUMBER);
74 }
```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 63 Col 1 INS 0 Errors 0 Warnings 2 Notes



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\B_PiculInterruptProject.cydsn\Generated_Source\PSoc...

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (4 ...)

- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoc3
 - cy_boot
 - isr_1
 - isr_1.c
 - isr_1.h
 - LCD
 - LCD.c
 - LCD.h
 - LCD_Pt
 - LCD_LCDP1
 - LCD_LC
 - LCD_LC
 - LCD_LC
 - LED1
 - LED1.c

Source Components Datasheets Results

```
74
75     /* Enable it. */
76     isr_1_Enable();
77 }
78
79 /*****
80  * Function Name: isr_1_Stop
81  *****/
82  * Summary:
83  *   Disables and removes the interrupt.
84  *
85  * Parameters:
86  *
87  *
88  * Return:
89  *   void.
90  *
91  *****/
92 void isr_1_Stop(void)
93 {
94     /* Disable this interrupt. */
95     isr_1_Disable();
96 }
97
98 /*****
```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 63 Col 1 INS 0 Errors 0 Warnings 2 Notes



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\B_PiculInterruptProject.cydsn\Generated_Source\PSoc...

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (4 ...)

- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoc3
 - cy_boot
 - isr_1
 - isr_1.c
 - isr_1.h
 - LCD
 - LCD.c
 - LCD.h
 - LCD_Pt
 - LCD_LCDP
 - LCD_LCD
 - LCD_LCD
 - LCD_LCD
 - LED1
 - LED1.c

Source Components Datasheets Results

```
98 /*****
99 * Function Name: isr_1_Interrupt
100 *****/
101 * Summary:
102 *   The default Interrupt Service Routine for isr_1.
103 *   Add custom code between the coments to keep the next version of this file
104 *   from over writting your code.
105 * Parameters:
106 * Return:
107 *   void.
108 *****/
109 CY_ISR(isr_1_Interrupt)
110 {
111     /* Place your Interrupt code here. */
112     /* `#START isr_1_Interrupt` */
113
114     /* `#END` */
115
116     /* PSoC3 ES1, ES2 RTC ISR PATCH */
117     #if(CYDEV_CHIP_FAMILY_USED == CYDEV_CHIP_FAMILY_PSOC3)
118         #if((CYDEV_CHIP_REVISION_USED <= CYDEV_CHIP_REVISION_3A_ES2) && (isr_1_ES2_PATCH))
119             isr_1_ISR_PATCH();
120         #endif
121     #endif
122 }
```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 108 Col 1 INS 0 Errors 0 Warnings 2 Notes

Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\B_PiculInterruptProject.cydsn\Generated_Source\PSoc3\...

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (4 ...)

- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoc3
 - cy_boot
 - isr_1
 - isr_1.c
 - isr_1.h
 - LCD
 - LCD.c
 - LCD.h
 - LCD_Pt
 - LCD_LCDP
 - LCD_LCD
 - LCD_LCD
 - LCD_LCD
 - LED1
 - LED1.c

Source Components Datasheets Results

```

124 /*****
125 * Function Name: isr_1_SetVector
126 *****/
127 * Summary:
128 *   Change the ISR vector for the Interrupt. Note calling isr_1_Start
129 *   will override any effect this method would have had. To set the vector before
130 *   the component has been started use isr_1_StartEx instead.
131 * Parameters:
132 *   address: Address of the ISR to set in the interrupt vector table.
133 * Return:
134 *   void.
135 *****/
136 void isr_1_SetVector(cyisraddress address)
137 {
138     CY_SET_REG16(isr_1_INTC_VECTOR, (uint16) address);
139 }
140
141 /*****
142 * Function Name: isr_1_GetVector
143 *****/
144 * Summary:
145 *   Gets the "address" of the current ISR vector for the Interrupt.
146 * Parameters:
147 *   void.
148 *
  
```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 146 Col 1 INS 0 Errors 0 Warnings 2 Notes



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\B_PiculInterruptProject.cydsn\Generated_Source\PSoc...

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (4 ...)

- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoc3
 - cy_boot
 - isr_1
 - isr_1.c
 - isr_1.h
 - LCD
 - LCD.c
 - LCD.h
 - LCD_PM
 - LCD_LCDP1
 - LCD_LCD
 - LCD_LCD
 - LCD_LCD
 - LED1
 - LED1.c

Source Components Datasheets Results

```
146 * Parameters:
147 * void.
148 * Return:
149 * Address of the ISR in the interrupt vector table.
150 *****/
151 cyisraddress isr_1_GetVector(void)
152 {
153     return (cyisraddress) CY_GET_REG16(isr_1_INTC_VECTOR);
154 }
155
156 /*****
157 * Function Name: isr_1_SetPriority
158 *****
159 * Summary:
160 * Sets the Priority of the Interrupt. Note calling isr_1_Start
161 * or isr_1_StartEx will override any effect this method would have had.
162 * This method should only be called after isr_1_Start or
163 * isr_1_StartEx has been called. To set the initial
164 * priority for the component use the cydwr file in the tool.
165 * Parameters:
166 * priority: Priority of the interrupt. 0 - 7, 0 being the highest.
167 * Return:
168 * void.
169 *
170 *****/
```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 169 Col 1 INS 0 Errors 0 Warnings 2 Notes

Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\B_PiculInterruptProject.cydsn\Generated_Source\PSoc...

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (4 ...)

- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoc3
 - cy_boot
 - isr_1
 - isr_1.c
 - isr_1.h
 - LCD
 - LCD.c
 - LCD.h
 - LCD_Pt
 - LCD_LCDP
 - LCD_LCD
 - LCD_LCD
 - LCD_LCD
 - LED1
 - LED1.c

Source Components Datasheets Results

```

170 /*****
171 void isr_1_SetPriority(uint8 priority)
172 {
173     *isr_1_INTC_PRIOR = priority << 5;
174 }
175
176 /*****
177 * Function Name: isr_1_GetPriority
178 *****/
179 * Summary:
180 * Gets the Priority of the Interrupt.
181 * Parameters:
182 * void.
183 * Return:
184 * Priority of the interrupt. 0 - 7, 0 being the highest.
185 *****/
186 uint8 isr_1_GetPriority(void)
187 {
188     uint8 priority;
189
190     priority = *isr_1_INTC_PRIOR >> 5;
191
192     return priority;
193 }
194
  
```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 185 Col 1 INS 0 Errors 0 Warnings 2 Notes



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\B_PiculInterruptProject.cydsn\Generated_Source\PSoc...

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (4 ...)

- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoc3
 - cy_boot
 - isr_1
 - isr_1.c
 - isr_1.h
 - LCD
 - LCD.c
 - LCD.h
 - LCD_Pt
 - LCD_LCDP1
 - LCD_LC
 - LCD_LC
 - LCD_LC
 - LED1
 - LED1.c

Source Components Datasheets Results

```
196 /*****
197 * Function Name: isr_1_Enable
198 *****/
199 * Summary:
200 *   Enables the interrupt.
201 * Parameters:
202 *   void.
203 * Return:
204 *   void.
205 *****/
206 void isr_1_Enable(void)
207 {
208     /* Enable the general interrupt. */
209     *isr_1_INTC_SET_EN = isr_1__INTC_MASK;
210 }
211 /*****
212 * Function Name: isr_1_GetState
213 *****/
214 * Summary:
215 *   Gets the state (enabled, disabled) of the Interrupt.
216 * Parameters:
217 *   void.
218 * Return:
219 *   1 if enabled, 0 if disabled.
220 *****/
```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 211 Col 1 INS 0 Errors 0 Warnings 2 Notes



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\B_PiculInterruptProject.cydsn\Generated_Source\PSoc...

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (4 ...)

- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoc3
 - cy_boot
 - isr_1
 - isr_1.c
 - isr_1.h
 - LCD
 - LCD.c
 - LCD.h
 - LCD_Pt
 - LCD_LCDP
 - LCD_LCD
 - LCD_LCD
 - LCD_LCD
 - LED1
 - LED1.c

Source Components Datasheets Results

```
220 /*****
221 uint8 isr_1_GetState(void)
222 {
223     /* Get the state of the general interrupt. */
224     return (*isr_1_INTC_SET_EN & isr_1__INTC_MASK) ? 1:0;
225 }
226
227 /*****
228 * Function Name: isr_1_Disable
229 *****/
230 * Summary:
231 *   Disables the Interrupt.
232 * Parameters:
233 *   void.
234 * Return:
235 *   void.
236 *
237 *****/
238 void isr_1_Disable(void)
239 {
240     /* Disable the general interrupt. */
241     *isr_1_INTC_CLR_EN = isr_1__INTC_MASK;
242 }
243
244 /*****
```

Notice List

0 Errors 0 Warnings

De... File

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 211 Col 1 INS 0 Errors 0 Warnings 2 Notes



Lab_4 Interrupts

AN54460 - PSoC Creator 2.1 [D:\...\AN54460\B_PiculInterruptProject.cydsn\Generated_Source\PSoc...

File Edit View Debug Project Build Tools Window Help

Debug

Workspace Explorer (4 ...)

- Header Files
 - device.h
- Source Files
 - main.c
- Generated_Source
 - PSoc3
 - cy_boot
 - isr_1
 - isr_1.c
 - isr_1.h
 - LCD
 - LCD.c
 - LCD.h
 - LCD_PH
 - LCD_LCDP
 - LCD_LC
 - LCD_LC
 - LCD_LC
 - LED1

Source Components Datasheets Results

```
246 *****
247 * Summary:
248 * Causes the Interrupt to enter the pending state, a software method of
249 * generating the interrupt.
250 * Parameters:
251 * void.
252 * Return:
253 * void.
254 *****/
255 void isr_1_SetPending(void)
256 {
257     *isr_1_INTC_SET_PD = isr_1__INTC_MASK;
258 }
259
260 /*****
261 * Function Name: isr_1_ClearPending
262 *****
263 * Summary:
264 * Clears a pending interrupt.
265 * Parameters:
266 * void.
267 * Return:
268 * void.
269 *
270 *****/
```

Notice List

0 Errors 0 Warnings

De... File

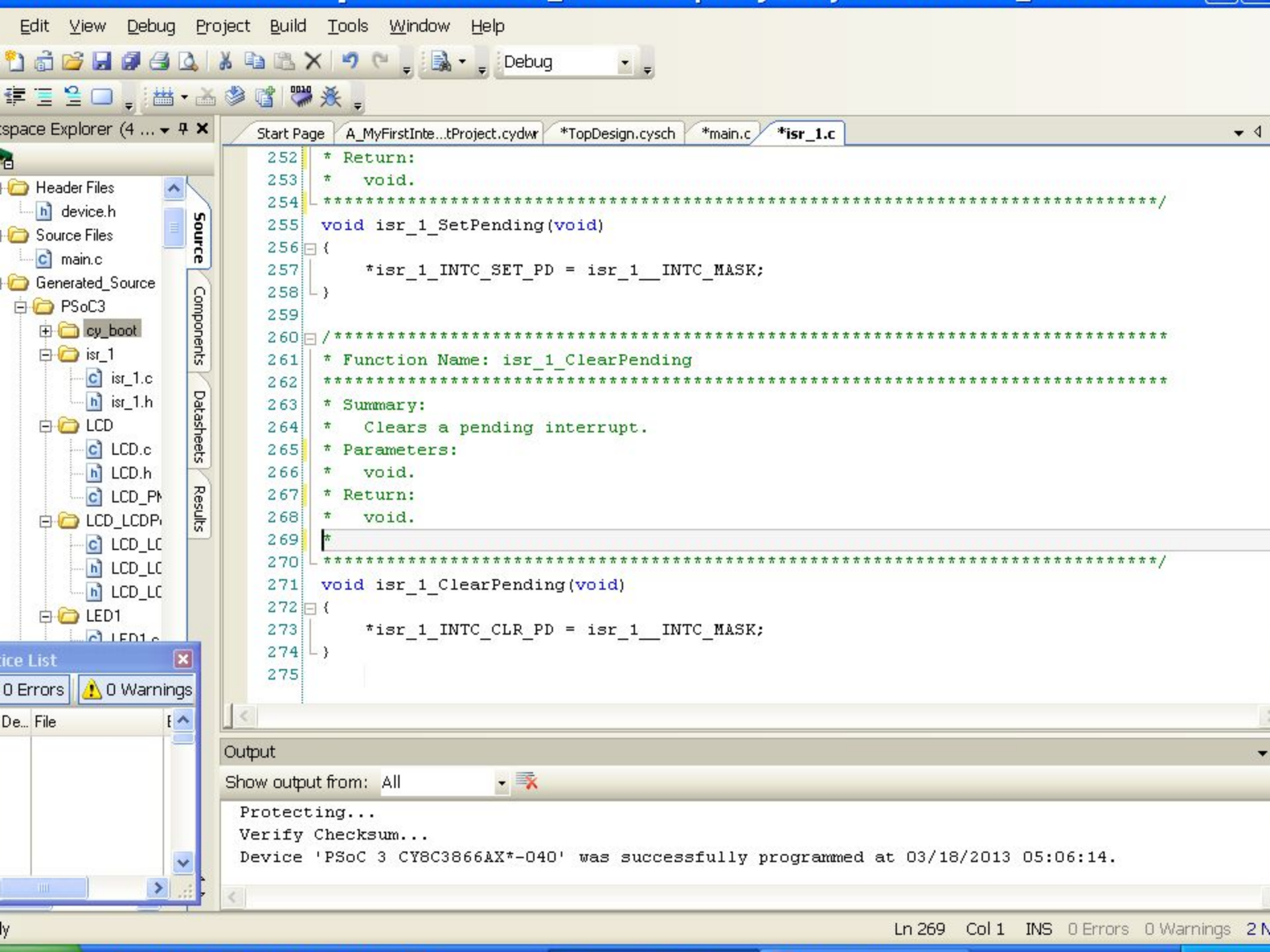
Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

Ready

Ln 269 Col 1 INS 0 Errors 0 Warnings 2 Notes



Header Files
device.h
Source Files
main.c
Generated_Source
PSoC3
cy_boot
isr_1
isr_1.c
isr_1.h
LCD
LCD.c
LCD.h
LCD_PM
LCD_LCDP
LCD_LC
LCD_LC
LED1
LED1.c

Source

Components

Datasheets

Results

Device List

0 Errors 0 Warnings

De... File

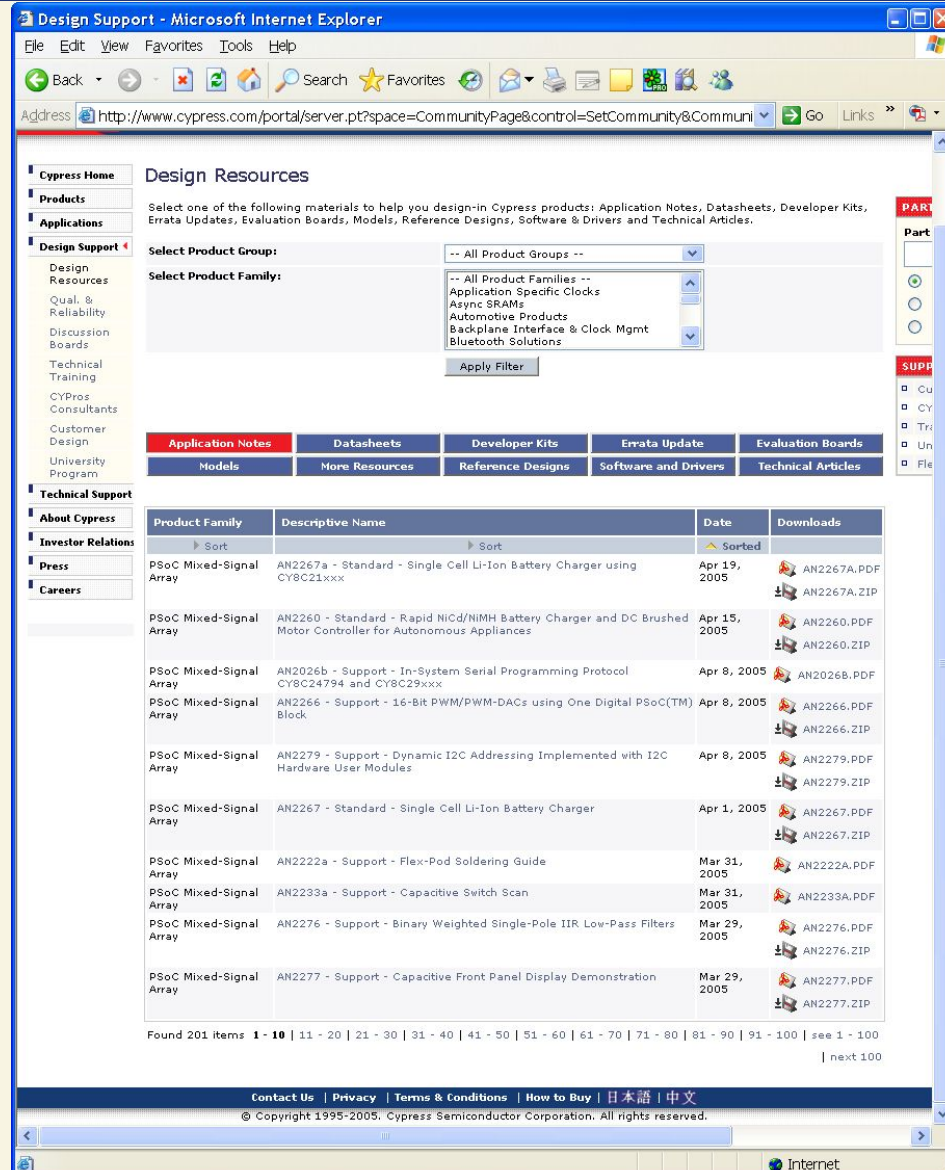
```
252 * Return:
253 * void.
254 *****/
255 void isr_1_SetPending(void)
256 {
257     *isr_1_INTC_SET_PD = isr_1__INTC_MASK;
258 }
259
260 /*****/
261 * Function Name: isr_1_ClearPending
262 *****/
263 * Summary:
264 * Clears a pending interrupt.
265 * Parameters:
266 * void.
267 * Return:
268 * void.
269
270 /*****/
271 void isr_1_ClearPending(void)
272 {
273     *isr_1_INTC_CLR_PD = isr_1__INTC_MASK;
274 }
275
```

Output

Show output from: All

Protecting...
Verify Checksum...
Device 'PSoC 3 CY8C3866AX*-040' was successfully programmed at 03/18/2013 05:06:14.

На сайті фірми
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області
застосування
мікроконтролерів
PSoC.



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Backplane Interface & Clock Mgmt
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Application Notes	Datasheets	Developer Kits	Errata Update	Evaluation Boards
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PSoC Mixed-Signal Array	AN2260 - Standard - Rapid NiCd/NiMH Battery Charger and DC Brushed Motor Controller for Autonomous Appliances	Apr 15, 2005	AN2260.PDF AN2260.ZIP	
PSoC Mixed-Signal Array	AN2026b - Support - In-System Serial Programming Protocol CY8C24794 and CY8C29xxx	Apr 8, 2005	AN2026B.PDF	
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PSoC Mixed-Signal Array	AN2276 - Support - Binary Weighted Single-Pole IIR Low-Pass Filters	Mar 29, 2005	AN2276.PDF AN2276.ZIP	
PSoC Mixed-Signal Array	AN2277 - Support - Capacitive Front Panel Display Demonstration	Mar 29, 2005	AN2277.PDF AN2277.ZIP	

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Мікропроцесорна техніка

(лекція 4, кінець)

Благітко Б.Я.

2019 р.

