STM8 e.z.t.









XYZSILICASTM8LCE!A







The faster and simpler way to use the Examples in the STM8 library (Rel.1.1.1) is to create a new folder copying inside the STM example file. In the following slide you will see how to do it:





Just start with the following assumptions:

We will write code using **COSMIC** C Compiler 16KFree and **STM** IDE

We assume that STM libraties have been extracted in the directory: ...\STM8SFWLib111\FWLib

We assume that working directory is: ...\STM8S208_ADC





Now copy directories ...\STM8SFWLib111\FWLib



Into our working directory ...\STM8S208_ADC





STEP n.1

Our starting example is: ADC2_ContinuousConversion

You can find it in the following directory:

...\STM8SFWLib111\FWLib\examples\ADC2\ADC2_ContinuousConversion





STEP n.2

From directoty: ...\STM8SFWLib111\FWLib\examples\ADC2\ADC2_ContinuousConversion

Copy the following files : File Edit View Favorites Tools Help main.c 😋 Back 🝷 🕥 🕤 🍺 · • • • Polders 💭 Search 📗 main.h Address 🛅 C:\ESEMPI-SW\STM8-Examples\STM8S208_ADC\project х Name 🔺 stm8s_conf.h Folders 🚞 RIDE 🗄 🚞 EasyWEB_OK_MCB-STR9 stm8s_it.h STVD 🗄 🚞 ENRICO 🔄 main.c 🖃 🚞 ESEMPI-SW stm8s it.c 逋 🕅 main.h 🖃 🚞 STM8-Examples 💼 stm8s_conf.h 🚞 DOC Generica 🔄 stm8s_it.c 🗄 🚞 ModuloVM STM8S207 RX 📺 stm8s it.h 🗄 🚞 RAD-A080 STM85208 ADC 🗉 🚞 library 🖃 🚞 project 🖃 🧰 RIDE 🚞 Debug Into our working directory: 🖽 🚞 STVD

...STM8S208_ADC\STM8SFWLib\FWLib\project

STEP n.3

Now run ST Visual Develop

ST Visual Develop

Just open our project clicking on **File** and then **Open Workspace**.

Project to load will be in the directory you can see below.

...\STM8S208_ADC\project\STVD\Cosmic

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B	Op <u>e</u> n	Text F	ile	Ct	rl+0	11	
Ē	Close	Text F	ile	Ctr	I+F4	11	
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	Save	<u>A</u> ll Tex	t Files			11	
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STEP n.3/cont.

Once that project is open you should have a video as it is here beside

We are using the following demo board:

SILICA-STM8/128-EVAL that includes *STM8S208* device, so we can delete the following directory:

stm8s207/105/103/903







STEP n.4

Now you have to expand folder **stm8s208** adding the following two files:

stm8s_gpio.c

stm8s_adc2.c

To do this please right click on **Source Files** and select **Add Files to Folder...**

(see example).



STEP n.4/cont.

go in the following directoty:

...\STM8S208_ADC\library\src

And select files like the example below, then click OPEN



STEP n.5

Now Compile the project clicking on this icon

You should get 0 errors and 0 warnings as the example below.







STEP n.5/cont.

To check application we just have to enter in the DEBUG mode.

If it is the first use of the debug You should select the HW tool you Want to use

To do this click on **Debug instrument** and select **Target Settings** In the new window select **Swim Rlink** (see example beside)







To enter in DEBUG you have to click on the following icon:



If everything is OK you should see that turning potentiometer on the eval board leds will switch on in sequence.





STEP n.6

The main available Commands in Debug mode are:



STEP n.6/Cont.

Watch Variables

Select variable you want to watch Then right click on **Quickwatch**

QuickWatch ?X						
Expression:	Recalculate					
Conversion_Value	Add Watch					
Variable	Value	Туре	Address	Close		
Conversio	219	unsign	0x0	Standard		

/* Private typedef	
/* Private define -	
u16 Conversion_Val	- - -
/* Private function	λ Cu <u>t</u>
/* Private function	Ba Cobh
	🔁 Paste
- /++	M Eind
+ Shrief ADC2 Con	<mark>ക്ക്</mark> QuickWatch
* @par Parameters	Open Document
* None * @retval	₩ <u>Ξ</u> <u>G</u> o To
* None	Go To <u>D</u> isassembly
*/	Go To Next Line <u>W</u> ith Code
	Go to Definition Of "Conversion_Value"
nain.c	🗢 Go To PC
	🖑 Insert/Remove Breakpoint
•••	M En <u>a</u> ble/Disable Breakpoint
W\STM8-Examples\STM8S2	*{} <u>R</u> un To Cursor
	🛱 Set PC
	Advanced

click *AddWatch*, a new window with variables will appare.



CΔ

STEP n.6/Cont.

Vatch Variables On Fly If you want to wath variable content in real time You have to click on the variable and select: ReadWrite On Fly

Variables box will change color and variables values will change in real time

UΓ











BreakPoint

To insert a breakpoint Move on the interested Code line. Left click with mouse beside line label. A red marker will appare , Indicating that Breakpoint Is set.

STM8S208MB STM SWIM - project.stw* - [Debug] - stm8s208.elf - [stm8s_it.c] 🖆 File Edit View Project Build Debug Debug instrument Tools Window Help X 🖻 🖻 - 1 🗎 🚅 💼 M 0 0 2 \$ \$ 66 - 🖉 🖽 👗 8 0° 40 40 49 69 Debug stm8s208 D 🚯 品 Workspace 593 #else /* RAISONANCE */ project.stw 594 void ADC2 IRQHandler(void) interrupt 22 📷 stm8s208 595 #endif /* COSMIC */ 📄 Library 596 白{ 🖻 💮 🔄 Source Files 597 stm8s_adc2.c 598 /* Get converted value */ 🖈 stm8s_gpio.c 599 Conversion Value = ADC2 GetConversionValue(); 📩 main.c 600 🚼 stm8 interrupt vect 601 if (Conversion Value == 0x0) stm8s_it.c 602 External Dependencies 603 GPIO_WriteLow(LEDS_PORT, (LED1_PIN |LED2_PIN |LED 🐻 stm8s207 604 🐻 stm8s105 605 else if ((Conversion Value <= OxFF) && (Conversion Va 👘 stm8s103 606 stm8= 607 GPIO WriteHigh(LEDS PORT, LED1 PIN); GPIO_WriteLow(LEDS_PORT, LED3_PIN|LED2_PIN|LED4_P 608 609 610 else if ((Conversion Value >= 0x100) && (Conversion V 611 612 GPIO WriteHigh(LEDS PORT, LED2 PIN|LED1 PIN); GPIO WriteLow(LEDS PORT, LED3 PIN|LED4 PIN); 613 614





IMPORTANT NOTES

It is very important to check the following files configuration: stm8s.h stm8s_conf.h Follwing you will see a brief explaination of the two files.





stm8s.h

Il file stm8s.h defines the *MCU* we want to use in our project. Please check rows from 44 as reported below.

#if !defined (STM8S208) && !defined (STM8S207) && !defined (STM8S105) &&
!defined (STM8S103) && !defined (STM8S903)
/* #define STM8S208 */
#define STM8S207
/* #define STM8S105 */
/* #define STM8S103 */
/* #define STM8S903 */
#endif

If you want to use another MCU model (ex. STM32F207) just remove comment from the interested line (see the line in bold)





stm8s_conf.h

file stm8s_conf.h enbles *all peripheral we want to use* and specify clock frequency.

Perpheral enable should be done removing comment on the interested peripheral. It is also important to include enabled peripheral source files in our Project:







ST-MCU

http://www.st.com/mcu/index.html

STM8S

http://www.st.com/mcu/inchtml-pages-stm8s.html

Documents and files for family STM8S

http://www.st.com/mcu/modules.php?name=mcu&file=familiesdocs&FAM=113

STM8L

http://www.st.com/mcu/inchtml-pages-stm8l.html

Documents and files for family STM8L

http://www.st.com/mcu/familiesdocs-120.html

Touch sensing software suite

http://www.st.com/mcu/inchtml-pages-touch_sense_sw_lib.html

MCU Training & Seminars

http://www.st.com/mcu/inchtml-pages-mcu_train.html

STM8 examples:

http://emcu.altervista.org/