# Brooklyn Board by Silica Architech Documentation

Release .0

Silica

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Silica Brooklyn Board is useful system to evaluate MAXIM Pmod device and is designed for use with Freescale TWR-K70F120M tower system This software release is working on Kinetis K70 devices but not under MQX rtos

A further revision working with MQX rtos will be relased soon.

You can find and download TWR-K70 documentation by clicking:

http://www.freescale.com/webapp/sps/site/prod\_summary.jsp?code=TWR-K70F120M&tid=m32TWR Developement software used is CodeWarrior MCU v10.3 Special Edition.

This application is free downlodable from Freescale site. Go to: http://www.freescale.com/webapp/sps/site/prod\_summary.jsp?code=CW-MCU10&fpsp=1&tab=Design\_Tools\_Tab

and select "offline" package. (note that download can take much time ...)

We suggest you to read the Quick Start Guide to setup your evaluation system

#### Quick start guide

This guide explains how to use this application and provides an overview of on the structure of the project firmware

## CHAPTER 1

### Installing Codewarrior on WIN7 or WIN8

 $Double \ click \ on \ `CW_MCU_v10.3\_b121211\_SE\_Offline.exe' \ that \ you \ have \ downloded \ first, \ and \ follow \ installation \ istruction.$ 

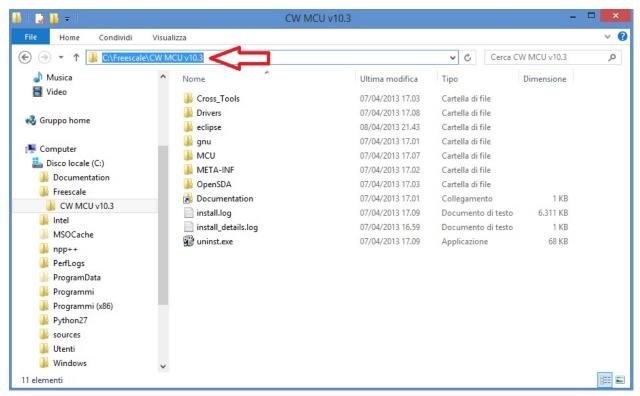
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Desktop	🛃 7z920-x64.msi	07/04/2013 22.42	Pacchetto di Wind.	1.345 KB	
🐌 Download	avira_free_antivirus_it.exe	08/04/2013 23.00	Applicazione	110.405 KB	
📃 Risorse recenti	CW_MCU_v10.3_b121211_SE_Offline.exe	10/04/2013 10.43	Applicazione	1.267.642 KB	
	🌆 install-tl.zip	09/04/2013 21.43	Cartella compressa	17.627 KB	
潯 Raccolte	npp.6.3.2.bin.7z	08/04/2013 21.36	File 7Z	3.296 KB	
🖻 📑 Documenti	💐 wlsetup-web.exe	07/04/2013 23.00	Applicazione	1.215 KB	
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Quick start guide for Codewarrior install can be found at http://cache.freescale.com/files/soft\_dev\_tools/doc/ quick\_ref\_guide/MCU\_QS.pdf?fpsp=1

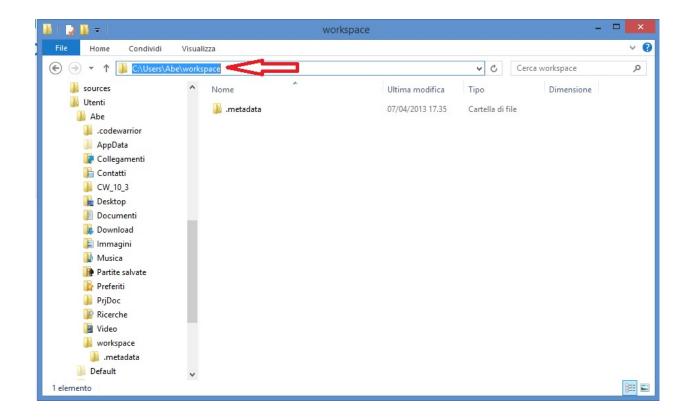
When setup ask for MCU type, select almost Kinetis as show below, then press NEXT button

CodeWarrior Development Studio for Mic	rocontrollers 🗕 🗆 💌					
Choose Components Choose which features of CodeWarrior Development Stu you want to install.	idio for Microcontrollers v 10.3 🦻					
Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.						
Select components to install: ColdFire BSS Vinetis Oprivva/PX S12Z S08/RS08						
Space required: 2.1GB Position your mouse ov description.	ver a component to see its					
Freescale Semiconductor, Inc						
< Bac	ck Next > Cancel					

If you have Windows7 or Windows8 (32 or 64 bit) Codewarrior will install into "Freescale\CW MCU v10.3" folder on the root of your system HDD.



and create a default work folder named workspace in the path C:\Users\ your\_user\_name \workspace



make sure that setup have been installed Jungo Driver. See your system configuration (righ-click on Computer -> Properties -> Device Manager)

if you have any troubles about, read Codewarrior install Guide

<b>#</b>	Gestione dispositivi	- • ×
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▷ Schermi > □ Tastiere		
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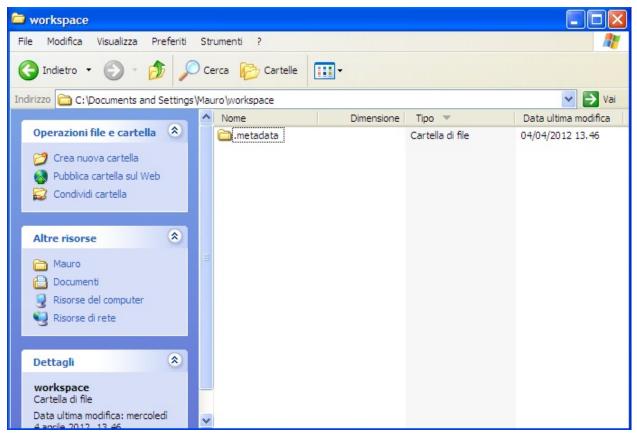
#### **Codewarrior on WINXP**

For WinXP, after installation, you have:

• installation folder

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	META-INF		Cartella di file	12/04/2013 15.16
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Risorse di rete				
Dettagli 🛞				

· default work folder



• Jungo driver:

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E Scherm	🕀 🧐 Schermi	

# CHAPTER 2

### Firmware details

Brookling Board firmware comes from original Maxim Maxim Zenboard Platform project revision 1.6, by using the file listed above.

### Main project files from Maxim

- MaximPmod.c
- menu.c.
- maximDeviceSpecificUtilities.c
- platform.c
- utilities.c

and related include files

- MaximPmod.h
- menu.h
- maximDeviceSpecificUtilities.h
- platform.h
- utilities.h
- platform\_config.h

You can find all this file in the "Source" folder of the project

### **General include files**

• xbasic\_types.h

- xgpio.h
- xgpio\_l.h
- xiic\_l.h
- xil\_assert.h
- xil\_cache.h
- xil\_io.h
- xil\_types.h
- xparameters.h
- xparameters\_ps.h
- xpseudo\_asm.h
- xpseudo\_asm\_gcc.h
- xreg\_cortex9.h
- xspi.h
- xspi\_i.h
- xspi\_l.h
- xstatus.h
- xuartlite.h
- xuartlite\_i.h
- xuartlite\_l.h
- xuartps\_hw.h

You can find all this file in the "Source\x\_files" folder of the project

File Home Condividi \	/isualizza			~
-) -> - ↑ 🌗 > Abe > wor	kspace → Pmod1_6 → Sources	s → x_files	✓ 🖒 Cerca x_files	م
Nome	Ultima modifica	Тіро	Dimensione	
xbasic_types.h	15/10/2012 12.49	File H	10 KB	
xgpio.h	15/10/2012 12.49	File H	9 KB	
xgpio_l.h	15/10/2012 12.49	File H	9 KB	
xiic_l.h	15/10/2012 12.49	File H	23 KB	
xil_assert.h	15/10/2012 12.49	File H	8 KB	
xil_cache.h	15/10/2012 12.49	File H	4 KB	
xil_io.h	15/10/2012 12.49	File H	9 KB	
xil_types.h	15/10/2012 12.49	File H	5 KB	
xparameters.h	15/10/2012 12.49	File H	20 KB	
xparameters_ps.h	15/10/2012 12.49	File H	13 KB	
xpseudo_asm.h	15/10/2012 12.49	File H	3 KB	
xpseudo_asm_gcc.h	15/10/2012 12.49	File H	6 KB	
xreg_cortexa9.h	15/10/2012 12.49	File H	22 KB	
xspi.h	15/10/2012 12.49	File H	35 KB	
xspi_l.h	15/10/2012 12.49	File H	13 KB	
xstatus.h	15/10/2012 12.49	File H	20 KB	
xuartlite.h	15/10/2012 12.49	File H	12 KB	
xuartlite_i.h	15/10/2012 12.49	File H	6 KB	
xuartlite_I.h	15/10/2012 12.49	File H	12 KB	
xuartps_hw.h	15/10/2012 12.49	File H	16 KB	

#### Main Project files added

In source folder you find application specific files:

- ProcessorEspert.c (containing Main())
- Events.c
- driver.c (low-level function replacement)

and include files

- MaxFuncRedefinition.h (start menu function redifinition)
- Events.h

This project is developed under Codewarrior 10.3 using Processor Expert tools. You can also find two folders, one named "Generated\_Code" and second named "PE\_code"

The first one contain auto-generated file that depend on Logical Device component inside Processor Expert Components, and may rebuild each occurence (when a device settings modification has been made)

The second contains file one-time generated by Processor Expert and "freezed" in this folder. No modification can be invoked by Processor Expert.

CodeWarrior Projects 🛛	- 6
📲 🞝 🔁 🕞 🤹 🔎 File Nam	ne T
File Name	Build
⊿ 🚝 Pmod1_6 : FLASH	
b 🗱 Binaries	
> >> Documentation	
🖻 🔁 FLASH	
> 🗁 Generated_Code	
> > PE_code	_
N ProcessorExpert.pe	
➢ Project_Headers	
Project_Settings	
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SaAnalysispointsManager.apconfig	
Sources	
driver.c	~
Events.c	~
b Events.h	~
MaxFuncRedifinition.h	~
maximDeviceSpecificUtilities.c	~
maximDeviceSpecificUtilities.h	~
maximPMOD.c	~
maximPMOD.h	~
menu.c	~
b In menu.h	~
b platform_config.h	~
platform.c	~
b platform.h	~
ProcessorExpert.c	~
utilities.c	~
b utilities.h	~
> > x_files	

Detailed documentation of firmware can be downloaded ..... link

## CHAPTER 3

#### Firmware changes

1 - added include file MaxFuncRedefinition.h at the top of MaximPmod.c file. This file must be the first to be included in the list.

```
#include "MaxFuncRedifinition.h" <----
#include <stdio.h>
#include "platform.h"
#include "menu.h"
#include "utilities.h"
#include "maximDeviceSpecificUtilities.h"
#include "maximPMOD.h"
#define MAJOR_REVISION 1
#define MINOR_REVISION 6
```

2 - renamed main() function inside MaximPmod.c file with new name main\_pmod().

```
<----
int main_pmod()
/ * *
* \brief
             Main() function for Analog Essentials example program.
* \par
              Details
              This function allows you to set and initializes the FPGA and hardware,
→which will appear in the main menu by
              HyperTerminal, which will send the demo of individual programs to the
→basic module.
*
* \param
              None
*
* \retval
              Always TRUE
*/
{
      // Variables for the main() function
      u8 uchInput=0;
      int nMenuState=0;
```

```
int i=0;
char tempString[256];
```

3 - commented function led\_knight\_rider inside MaximPmod.c file to obtain application fast start.

4 - changed costant definition ABOUT\_ONE\_SECOND inside MaximPmod.h file as follow:

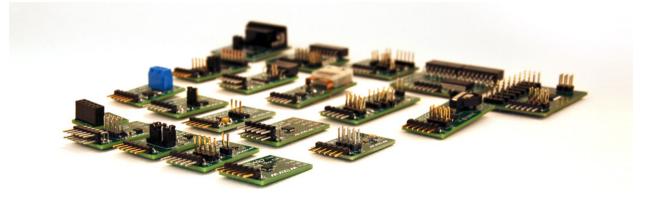
```
#define ABOUT_ONE_SECOND 74067512/8/3 <----
//#define ABOUT_ONE_SECOND 74067512 //!< approx 1 second delay when used as_
argument with function delay(numberCyclesToDelay)
// Update this if uBlaze/Zynq CPU core frequency is changed, or if the external_
memory timing changes.
// Although emprirically tested to 1.0000003 seconds, it is not meant to be used for_
precise timing purposes</pre>
```

NOTE: All these changes are tested on revision 1.6 of Maxim project files and need to be checked on further new revisions

## CHAPTER 4

#### More about Pmod

Maxim Analog Essential Collection is a collection of plug-in peripheral modules (Pmod) You can find more informations visiting Maxim Analog Essential Collection site



#### Important notice

At the date of issue of this review, Maxim Zenboard Platform Project files are available on version 1.6, and don't support MAX14850 Pmod module. As a result this version, that use original files from Maxim project, is not able to emulate this device.



#### **Emulation of MAX3232**

This device is a RS232 converter, and require 2 serial channel (each one connected to terminal software) for full test. The first one is used for commands and the second one must be connected, for complete testing purpose, to MAX3232 Pmod serial connector (by standard modem cable).

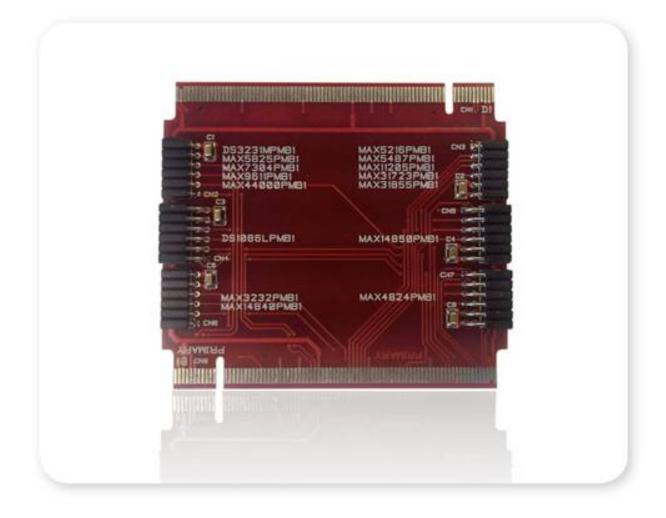


# CHAPTER 5

## Quick start guide

### Hardware requirements

- Tower system for Kinetis K70F120M (with TWR-SER expansion)
- Mini USB type-B cable
- Silica BrooklynBoard
- PC with at least one RS232 serial port and terminal software (two serial port for MAX3232 emulation)
- RS232 DB9 serial cable (modem type)
- Maxim Analog Essential Collection



#### Software requirements

- CodeWarrior MCU v10.3 Special Edition (download here).
- Brooklyn Board application firmware for TWR-K70F120M system (download here ....)

#### Hardware setup

• Assemble tower system TWR-K70F120M and Brooklin Board as in figure below.



Don't care slot position, but be careful to connect Primary and Secondary connector properly. Take care at reference signed near PCI board connectors.



• Plug a Pmod Device (i.e. DS3231M Real Time Clock) inside properly connector.



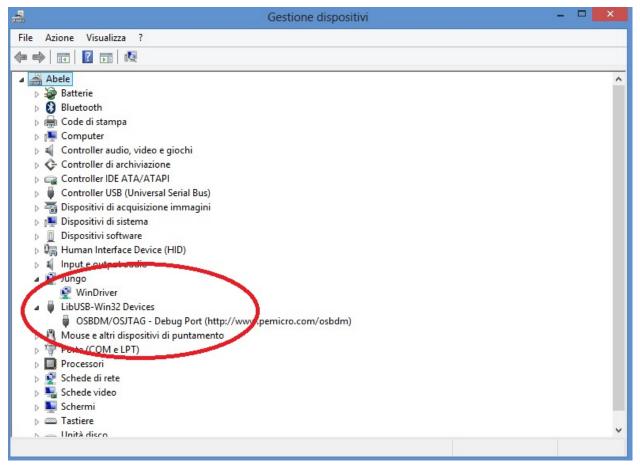
-> Be careful to see device reference next to connector. Each connector is designed for one or more devices and

#### will only accept dedicated modules.

• Plug Mini USB type-B cable into Cpu Board plug and connect to PC with Codewarrior. TWR power led will on



• If you see device tab, you will find OSBDM/OSJTAG debug port

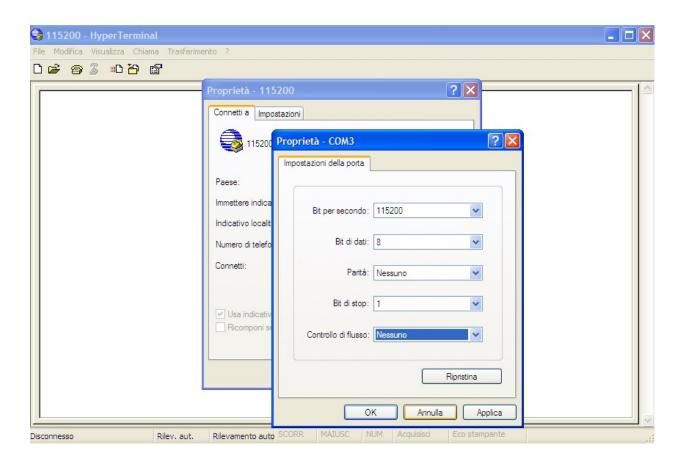


- plug the standard serial DB9 cable into serial connector on Tower System
- connect serial cable to terminal PC (equipped with terminal SW)



• On your terminal PC setup COMx parameter:

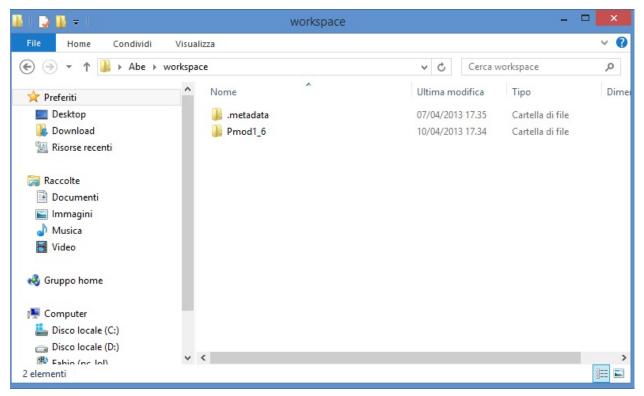
speed = 115200 baud data with = 8 parity = none stop bit = 1 flow control = none



Now you are ready for install FW project.

### **Brooklyn Board FW setup**

• Extract from Pmod1\_6.zip the folder Pmod1\_6 and place it into Codewarrior default workspace



• start Codewarrior. Select "workspace" as in default window and click OK.

<b>9</b>	Workspace Launcher			×
Select a workspace				
CodeWarrior Development S Choose a workspace folder t	tudio stores your projects in a folder called a workspace. o use for this session.			
Workspace: C:\Users\Abe\v	vorkspace	~	Browse	
<u>U</u> se this as the default and	l do not ask again OK		Cancel	

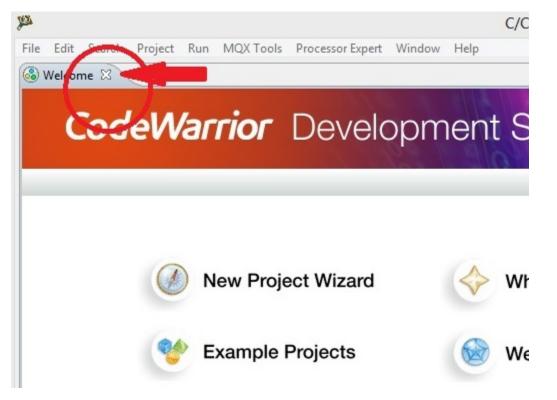
Now we could see the welcome window of Codewarrior Developement Suite

	r <b>rior</b> Develop	mont Studio	
COUEVVal	nor Develop	ment Studio	
	New Project Wizard	What's New Product Release Notes	
٠	Example Projects	Web Resources Service Packs, Updates, Patches	
	Go to Workbench	Tutorials	
<i>Freeso</i>			
CodeWa			

maybe will open firewall popup as below

File Edit Search Project Run MQX Tools Processor Expert Wind	C/C++ - CodeWarrior Development Studio	- • ×
Welcome ≅ CodeWarrior Develope		
New Project Wizard Example Projects	Avviso di sicurezza Windows	
Go to Workbench	Windows Firewall ha bloccato alcune funzionalità di civide.exe in tutte le reti pubbliche e private.         Image: State of the s	
<b>freescale</b> CodeWarrior	Ret pubbliche, ad esempio in aeroporti e Internet café (scelta non consigliata perché il livello di sicurezza di queste reti è spesso insufficiente o del tutto assente)  Rischi dell'autorizzazione di apo attraverso un firewal  Consenti accesso Annulla	v
□ □		

- close the welcome window by clicking 'X' in the Welcome tab



Now we can see the Codewarrior main window

<b>p</b>		C/C++ - CodeWarrior Development Studio	- 🗆 🗙
File Edit Search Project Run MQ	X Tools Pro	xcessor Expert Window Help	
📑 🕶 🗔 🗟 🛸 🍕 🕶 🕼	ctive)	▼ 義  恭 ▼  タ ▼  日 ▼ 印 ▼ ゆ マ ウ ▼	C/C++
🗖 CodeWarrior Projects 🛛	- 0		- 0
🔡 📮 📄 😓 🔑 File Name			
File Name Build			
		🖹 Problems 🖄 📮 Console 🔗 Search	
		0 items	
		Description	Resource
	\$ <b>~ - -</b>		
	Build/De ^		
🚵 Import project 🐔	Build (		
📑 Import example project 🛒	Clean ( Debug		
	Settings		
	Project : Build se		
197 115	Build se Debug : v		
<	>	<	>
•			

Codewarrior is ready to import the project

#### Pmod FIRMWARE IMPORT

P					C/C++ - CodeWar
File	Edit Search Project Run	MQX Tools Pro	ocessor Expert	Window Help	
	New Open Path Open File	Alt+Shift+N ► Ctrl+Shift+A		☆ • 🔗 •	
	Close Close All	Ctrl+W Ctrl+Shift+W			
	Save Save As	Ctrl+S			
ŧ.	Save All Revert	Ctrl+Shift+S	_		
	Move Rename	F2			
8	Refresh	F5			
	Convert Line Delimiters To	•			
۵	Print	Ctrl+P			
	Switch Workspace Restart	×			
2	Import				
4	Export				
	Properties	Alt+Enter			
	Exit				- x.
	Commander 🛿		Problems	😂 📮 Conso	le
-	Project Creation	▼ Build/De	0 items	*	
	Import project	🔦 Build (	Description		R
		🛒 Clean (			
	Import MCU executable file	🏇 Debug			
	🕆 New MCU project	- Cottings			

• Select File -> Import and click

• in the next tab select "Existing Project into Workspace" and click "NEXT"

jes	Import	- 🗆 🗙
Select Create new projects	from an archive file or directory.	Ľ
☐ File Syst □ Preferen ▷ ఊ C/C++ ▷ ఊ CodeWarrio	Eile Projects into Workspace em aces or t Development Environment xpert	
?	< Back Next > Finis	sh Cancel

• in the next window make the following step

1 - click on **Brouse** button.

- 2 select folder "Pmod1\_6" as below.
- 3 click on OK button.

<u>8</u>	Import – – ×
Import Projects Select a directory to search for e	xisting Eclipse projects.
Select root directory:     Select archive file:     Projects:	Browse Browse
	Select All
	Cerca cartella
Copy projects into workspace Working sets Add project to working sets Working sets:	Video workspace
? < Back	Crea nuova cartella OK Annulla

- select checkbox "Pmod1\_6(C:\User\ *my\_foder\_name* \workspace\Pmod1\_6) and "Copy projects into workspace"
- click "Finish"

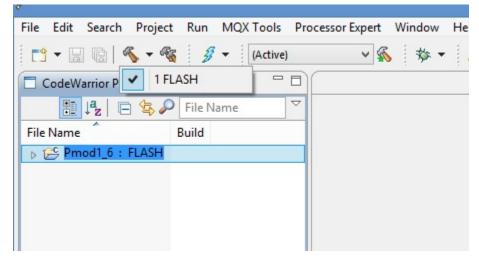
<b>p</b>	Import	- 🗆 🗙
Import Projects Select a directory to se	arch for existing Eclipse projects.	
<ul> <li>Select root directory:</li> <li>Select archive file:</li> </ul>	C:\Users\Abe\workspace\Pmod1_6	Browse
Projects:		
✓ Pmod1_6 (C:\U	sers\Abe\workspace\Pmod1_6)	Select All
		Deselect All
		Refresh
Copy projects into w Working sets Add project to wo Working sets:		Select
?	< Back Next > Finish	Cancel

#### How to build Brooklyn Board FW

• see Codewarrior Project tab an selec the project "Pmod1\_6", right-clik over, select "Clean Project" an clik

<b>P</b>		C/C++ - CodeWarrior Develop
File Edit Search Project Run M	AQX Tools Processor Expert Window Help	
📑 • 🖬 🖻 🔦 • 🍇 💈 •	(Active) 🗸 🐝 🕶 🔗 .	• 2 • 2 • 4 • 4 • 4
CodeWarrior Projects 🛛		
🔠 📮 🖃 🔄 🖉 File Nan	ne 🗸	
File Name Build	New	
Pmod1_6 : FLASH	Go Into	
	Open in New Window	
	Preprocess	
	Disassemble	
	Index •	1
	Build Configurations	1
	Make Targets	1
	Build Project	
	Clean Project	
D	Copy Ctrl+C	
	Paste Ctrl+V	
×	Delete	Search
	Move	Search
	Rename	

when process finish, see at hammer icon and click right arrow: in the tab you can see "1 FLASH" checked



now click single-hammer icon to build entire project

<u>ه</u>	Build Project			×
Building project				
Building : GP_di.c'				
Always run in background				
	Run in Background	Cancel	Details >>	

See the "problems" tab. There are 2 warnings derived from original project. They have no functionallity effects.

💽 Problems 🛛 📮 Console 🔗 Se	arch	
0 errors, 2 warnings, 0 others		
Description		Resource
🔺 💧 Warnings (2 items)		
😘 implicit declaration of functio	on 'read' [-Wimplicit-function-declaration]	utilities.c
🔈 variable 'a' set but not used [-	Wunused-but-set-variable]	utilities.c

see the bug icon and click right arrow, select "Debug configurations" and click

	C/C++ - CodeWarrior Developme	nt Studio
ools Processor Expert Wi	ndow Help	
Active) 🗸 🐔	\$\$ ▼ <b>/                                 </b>	
	(no launch history)	
	Debug As	
	Debug Configurations	
	Organize Favorites	

Debug Configurations tab will open

<b>P</b>	Debug Configurations		×
Create, manage, and run con	figurations		Ť.
Image: Symplectic sympl	<ul> <li>Configure launch settings from this dialog:</li> <li>Press the 'New' button to create a configuration of the selected type.</li> <li>Press the 'Duplicate' button to copy the selected configuration.</li> <li>Press the 'Delete' button to remove the selected configuration.</li> <li>Press the 'Iter' button to configure filtering options.</li> <li>Edit or view an existing configuration by selecting it.</li> <li>Configure launch perspective settings from the <u>'Perspectives'</u> preference page.</li> </ul>		
Filter matched 6 of 6 items Filter by Project: Pmod1_6			
•		Debug	Close

expand Codewarrior Download, select "Pmod1\_FLASH\_PnE U-Multilink" an click. Now we see

به ۱	Debu	g Configurations			×
Create, manage, and run config Download an application to a target, th					Ť.
Ype filter text         €         CodeWarrior Attach         €         CodeWarrior Connect         ๔         CodeWarrior Download         €         Pmod1_FLASH_PnE U-Mult         €         Launch Group	Name:       Pmod1_FLASH_PnE U-MultiLink         Main       Arguments         Main       Arguments         C/C++ application         Project:       Pmod1_6         Application:       FLASH/Pmod1.elf         Build (if required) before launching         Build configuration:       Use Active         Select configuration using 'C/C++ Application'         © Enable auto build       © Disable auto build         Use workspace settings       Configure Workspace Settings			Profile Browse Variables	
< > Filter matched 6 of 6 items Filter by Project: Pmod1_6	Connection Connection: - Pmod1_FLASH	PnE U-MultiLink	v) [	Edit Apply	New
0				Debug	Close

click on "Debug" button and wait

maybe will open firewall popup as below

<b>@</b>	1	Avviso di sicurezza Windows	×		
Windows Firewall ha bloccato alcune funzionalità di questa app					
Windows Firewall h le reti pubbliche e p		ne funzionalità di Integrated Development Environment in tutte			
	Nome:	Integrated Development Environment			
	Autore:	Freescale Semiconductor, Inc.			
Percorso: C:\freescale\cw mcu v10.3\mcu\bin\de.exe					
Consenti a Integra	ted Developme	nt Environment di comunicare su queste reti:			
✓ <u>R</u> eti private,	, ad esempio un	a rete domestica o aziendale			
Reti pubbliche, ad esempio in aeroporti e Internet café (scelta non consigliata perché il livello di sicurezza di queste reti è spesso insufficiente o del tutto assente)					
Rischi dell'autorizzazione di app attraverso un firewall					
Consenti accesso Annulla					

if yes, left-clik on enable access and proceed

during firmware download this tab will open

	anna an Churd	io
CPROGARM Programmer - Version 1.14.00.03 - [Status Window]	×	
Abort http://www.pem	icro.com	
Loading programming algorithm Done. CMD>EM	^	rs 💊 Breakpoints 🚺 N Value
Erasing. Module has been erased.		
Initializing. Initialized.		
;version 1.02, 11/30/2011, Copyright P&E Microcomputer Systems, www.pemicro.com [mk_1024k_n_pflash0_pflash1]		
;device freescale, mk70fn1m0, 1x32x256k, desc=pflash		
;begin_cs device=\$00000000, length=\$00100000, ram=\$20000000		Disassembly 🕅
Loading programming algorithm	_	No debug context
Running programming script		
ete		

and when download finish you see the main debug windows of Codewarrior

Debug - Pmod1_6/Sources/Proce	essorExpert.c - CodeWarrio	r Development Studio	- • ×		
File Edit Search Project Run MQXTools RTCS MQX PEMicro Window Help					
🗂 • 🔚 🐚 🔦 • 🍓 🤌 🦸 • 🏘 • 🔗 • 灯 • 🌚 • 🏷 • 수 • 수 •			😭 🅸 Debug 🔤 C/C+		
🅸 Debug 🕅 📃 🗖	🕪= Variables 🛛 🔣 👯 Registers) 🗞 Breakpoints 🚺 Memory 🛋 Modules 🗧				
- 🖗 M 🜒 🕒 N 🕹 🗷 👁 .e 🤜 🖬 🛒 🖑 🕮 🖉 - 🖡 🐌 🗸	Z → ₩ ⊟ 🕅 ▼ # ₩ 📑 Š				
Pmod1_FLASH_PnE U-MultiLink [CodeWarrior Download]	Name Value		Location		
ARM Processors, Pmod1.elf (Suspended)	🕅 init flag	0x0	0x1fff0689		
🝿 Thread [ID: 0x0] (Suspended: Signal 'Halt' received. Description: User halted thread.)	FIFO buff	0x1fff0640	0x1fff0640		
2 main() ProcessorExpert.c:54 0x00000f44	(x) fifo_in_read	0x1	0x1fff0000		
1_thumb_startup() _arm_start.c:279 0x0000c484	(x <sup>p</sup> FIFO_pointer	0x0	0x1fff04ee		
C:\Users\Abe\workspace\Pmod1_6\FLASH\Pmod1.elf (4/11/13 10:25 AM)	<		· · · · · · · · · · · · · · · · · · ·		
			-		
			· · · · · · · · · · · · · · · · · · ·		
	<		>		
ProcessorExpert.c 🕅	-	Disassembly 🛛	- [		
50	,	Enter location	here 🗸 👔 👔 🕵 📑 🖆		
51/*lint -save -e970 Disable MISRA rule (6.3) checking. */		54 {			
52 int main(void)		<pre>&gt; 00000f44: push {r7,lr}</pre>			
53/*lint -restore Enable MISRA rule (6.3) checking. */		00000f46: add r7,sp,#0			
54 ( 55 /* Write your local variable definition here */		59 PE_low_level	_init();		
55 /* write your local variable definition here */			vel_init (0xd28c); 0x0000d28c		
57		64 main_pmod();			
58 /*** Processor Expert internal initialization. DON'T REMOVE THIS C	CODE!!! ***/	00000f4c: bl main_pmod 75 for(::){}	1 (0x60a0) ; 0x000060a0		
59 PE_low_level_init();		75 for(;;){} 00000f50: b main+0xc	(0xf50) ; 0x00000f50		
60 /*** End of Processor Expert internal initialization.	***/	00000f52: nop	, 0x00000130		
61 62 /* Write your code here */		XIic Recv:			
62 /* Write your code here */		· · · · · · · · · · · · · · · · · · ·	×		
	7				
🜢 Commander 🛿 👘 🐨 🖓 🔛 Problems 📮 Console 🕄		<b>=</b> ×	💥   🕞 🚮 🗲 🚝   🛃 🖵 🕇 🗖 🕶 🗖 '		
Project Creation     ▼ Build/Debug     ▼ Settings     ARM Processors, Pmod1.elf					
Import project K Build (All) 🔯 Project s					
📑 Import example project 🛒 Clean (All) 🐁 Build set					
🚵 Import MCU executable file 🕸 Debug 🚳 Debug s					
😭 New MCU project					
😭 New MQX-Lite project					
c > <			>		

to start program you can press "F8" or click on Icon red-circled in image above

#### NOTE: for full Codewarrior functionallity please refer to Freescale Official Guide

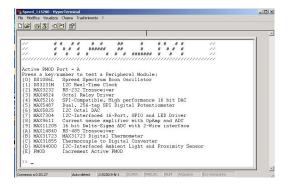
download here Codewarrior Guide

### **Running Brooklyn Board FW**

When you start program, in terminal window you can see for few seconds this screen

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ision 1		s for the Avne	t Zedboard	
19100	/1.0			

and after you can see the main menu



Now select device menu (typing selection key in the terminal window) and follow menu option to test device.

It is strongly recommended to change or insert Pmod Modules when Tower System is off (without power). Then, turn off the power by disconnecting the Mini USB B-type cable, remove device (if present) and insert new module in properly connector.

Turn on the power by plug the Mini USB B-type cable. The program will restart. Follow same steps used before to test new device

We also suggest you to see documentation Maxim Pmod-Compatible Plug-In Peripheral Modules for any specific further detail.

• search

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