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FM3 FAMILY 32-BIT MICROCONTROLLER ALL SERIES

QUCIK START CROSSWORKS

APPLICATION NOTE





Revision History

Date	Issue
2012-04-24	V1.0; CCa, MWi; 1 st version

This document contains 16 pages.

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1 Introduction

CrossWorks is a trademark of Rowley Associates.

This quick start guide shows briefly how to import Fujitsu FM3 projects to the *CrossWroks for ARM* IDE.



2 Installation & Start-up

INSTALLING AND STARTING SOURCERY CODEBENCH

2.1 Installation

The installer of the *CrossWorks for ARM* comes along with all necessary components. Follow the advices of the installation process.

It can be found in the web at: http://www.rowley.co.uk/arm/index.htm

2.2 Start-up

After installation the CrossWorks is ready to be used. Browse to

<installation path>\Rowley Associates Limited\CrossWorks for ARM 2.2\bin and start \crossstudio.exe

							•	x
	 Rowley Associates Limited 	ossWorks for ARM 2.2 → bin →			- Search bin			Q
File Edit View Tools Help								
Organize 👻 Include in library 💌 Share	with 🔻 New folder					• ==		0
☆ Favorites	^ Name	Date modified	Туре	Size				^
📃 Desktop	Crossload.exe	22.02.2012 04:31	Application	5.816 KB				
🐌 Downloads	crossscript.exe	22.02.2012 04:31	Application	1.220 KB				
🔛 Recent Places	🗶 crossstudio.exe	22.02.2012 04:31	Application	11.128 KB				
	← 🚳 CVSInterface.dll	22.02.2012 04:31	Application extens	47 KB				-

Alternatively choose via start:

All Programs \rightarrow Rowley Associates Limited \rightarrow CrossWorks for ARM2.2 \rightarrow CrossStudio for ARM 2.2





CrossWorks will start.



A license has to be installed or the 30-day trial version can be used for evaluation. Therefore use the *License Manager*.

Too	Is Window Help	
*	Source <u>N</u> avigator	Ctrl+Alt+N
3	Symbol Browser	Ctrl+Alt+Y
	Terminal Emulator	•
	Browser	•
ð	New File Comparison	Ctrl+T, F
	New Binary File Comp	arison
	License Manager	
1	Show Installed Packag	ges
	Package Manager	
	Packages	•
	Downloads Window	
=	Calcpad	Alt+=
	Di <u>s</u> assemble	Ctrl+K, Ctrl+V
	Options	Alt+,

Choose a license method and mail the generated key to rowley's license e-mail address as stated.

icense Manager	8
What do you want to do?	
Evaluation period has finished	Check USB Tokens
+ Evaluate CrossWorks	
Request an activation key to evaluate CrossWorks for	or 30 days
Request Activation After Purchasing	
I have purchased a new or upgrade license and war	nt to start activation of CrossWorks on this machine
Activate CrossWorks	
I have received my activation key for this machine an	nd want to activate CrossWorks
Manage Activations	
I want to manage my installed CrossWorks activatio	ns
Diagnose Problems	
I've been asked to send a license report to help diag	gnose license problems
	Close

After receiving the license key, copy and paste it in the Activate CrossWorks dialog.

License Manager	₹ <mark>₹</mark>
Activate CrossWorks	
Enter activation key:	
Please check your e-mail client's inbox for an activation key.	
# # 1 # 1 # 1 #	
Activation key status: 30 days remaining Click the button below to install the license on your computer	
Instali License	

2.3 Install Fujitsu FM3 packages

2.3.1 Automatic Installation

The following packages must be installed:

- Fujitsu FM3 CPU Support Package:
- CMSIS Support Package:
- Fujitsu SK-FM3-100PMC Board Support Package:
- Fujitsu SK-FM3-64PMC1 Board Support Package:

To install this support packages using CrossStudio:

- 1. Click the *Tools*→*Package Manager* Menu option to open the package manager window.
- 2. Right click on the entries of the above listed packages and select *Install Selected Packages*.
- 3. Click *Next* to take you to the summary page.
- 4. Click *Next* to install the package.
- 5. Click *Finish* to close the package manager window.

2.3.2 Manual Installation



Alternatively this support package can be installed manually.

- 1. Download the following files, containing the packages needed.
 - Fujitsu FM3 CPU Support Package:
 <u>http://www.rowleydownload.co.uk/arm/packages/FM3.hzq</u>
 - CMSIS Support Package:
 http://www.rowleydownload.co.uk/arm/packages/CMSIS_2.hzg
 - Fujitsu SK-FM3-100PMC Board Support Package:
 http://www.rowleydownload.co.uk/arm/packages/Fujitsu SK FM3 100PMC.hzg
 - Fujitsu SK-FM3-64PMC1 Board Support Package:
 <u>http://www.rowleydownload.co.uk/arm/packages/Fujitsu_SK_FM3_64PMC1.hzq</u>
- 2. Open Tools→Packages→Manually Install Packages...



3. Open the path where the files *.hzq were saved, and choose one by one until the **4** of them will be installed.

					\$
Organize 🔻	New folde	r		855	- 1 0
-	<u>^</u>	Name	Date modified	Туре	Size
	. 1	FM3.hzq	13.03.2012 12:50	HZQ File	1.612
		Fujitsu_SK_FM3_64PMC1.hzq	13.03.2012 12:49	HZQ File	
	1000	Fujitsu_SK_FM3_100PMC.hzq	13.03.2012 12:49	HZQ File	1
	E				

After

4.



installing each package a list of "*Installed Packages*" will be shown. Check there that the 4 needed packages are listed.

CrossStudio for ARM		
File Edit View Search Project Build Debug Target VCS Tools Window Help		Welcome 👻 🕏
공급 역대성 D-G-임생 중Q X 학원·X 아·아· 및 왕·	· · · · · · · · · · · · · · · · · · ·	■ 및 M 관련 및 관련 전 관련 전 전 관련 전 등 등 등 · 이 관 및 ·
· · · · · · · · · · · · · · · · · · ·		
Browser		
• • A		4
Support Packages		
Installed Packages		
The following support packages have been installed. Click on the links to get more information on each p	ackage and its contents:	
Package	Version	Status
Fujitsu FM3 CPU Support Package	1.2	Installed
Eulitsu SK-EM3-100PMC Board Support Package	1.0	Installed
Fujitsu SK-FM3-64PMC1 Board Support Package	1.0	Installed
To install, update and remove packages: • Choose Tools > Package Manager.		
		Show All Packages



3 Opening an existing Fujitsu Code Project

ABSTRACT

3.1 Packages

To open the Projects contained in the installed packages, follow the next steps.

1. Go to $Help \rightarrow Contents$



2. A window called "Contents" will be opened.

- Go to "Fujitsu SK-FM3-XXPMCx Board Support Package".
- Go to Solution Files→SK-FM3-xxPMCx Samples Solution



3. A window about opening the solution file will appear. Click OK.



Chan	ige solutio	n?			
ou selected	a solution file	. Continue and	load 'SK-FM3-1	.00PMC Samp	les Solution'

4. A *"Project Explorer"* window will show the different containing projects. To Build one of the projects, right-click over, and chose *"Build"*





5. The output window will show if the project was build successfully or it found errors.

Output Show: Transcript * 🐐 🍾 Tasks *	¥ 10
Building "uart" in configuration "THUMB Debug" 5 targets in 0.1s Completed 46 targets/s	ОК
Build complete Completed 1 projects in 0.1s 9 projects/s 9 projects/s	OK
Builds the selected project element using the active configuration	



4 Debugging

QUICK GUIDE HOW TO START A DEBUG SESSION

4.1 Starting debugging

To start debugging, first a Target (debugging device) must be chosen.

1. Go to *Target* \rightarrow *Targets*



2. The window of targets will appear. Select e.g. Segger J-Link.





3. To start debugging, go to $Debug \rightarrow Go$

Det	bug	Target	VCS	Tools	Window	н
1	Go				FS	
1 ²	Bre	a <u>k</u>			Ctrl+.	
1	≦to	p			Shift+F5	
83	Bes	tart		Ctrl	• Shift + F5	
	Tog	igl <u>e</u> Break	point		F9	
	Bre	akpoints				•
	Swi	tch <u>D</u> ebu	g Mode	8	Ctrl+F11	
ell.	Step	p Into			F11	
Ç#	Ste	p Qver			F10	
(73)	Ste	p Oyt			Shift+F11	
-3	Rur	1 To Curso	36		Ctrl+F10	
83	Aut	o Step			Alt+F11	
£3	Set	Next Stat	ement		Shift+F10	
14	Sho	w Next St	tatemen	t	Alt+*	
66	Qui	ick Watch	u.		Shift+F9	
	Loc	als		ି	trl+Alt+L	
3	Çali	Stack		0	trl+Alt+S	
	Thr	eads		C	trl+Alt+H	
1	Dis	assembly			Ctrl+F12	
	Oth	er Windo	wws		3	•
	Ogt	tions				

4. A set point can be set (toggled) just by simple clicking next to the number of line on the program. The symbol of set point will appear.



- 5. The debug controls during the active debug are:
- 1) continue execution
- 2) stop
- 3) step into
- 4) step over
- 5) step out





4.2 RAM/ROM Debugging

The memory place, where the user can debug his application depends on the build settings. There are two reasonable places to debug: RAM or ROM (Flash). The first method allows a (small) application to run completely in the RAM area, which means, that there is no Flash programming needed. The second always reprograms the Flash for a debug session.

This can be adjusted in the Project Manager, accessible via Configuration \rightarrow View: Properties and browsing to the project itself. Then Build Options \rightarrow Section Placement adjusts RAM or Flash build.

roject: Seting: Seting: Popert devolue() Project Dependencies None Popert devolue() Project Dependencies None Project Macros None Project StargetsDir)/FM3/propertyGroups.xml RaM Plash Flash From timer_interrupt > THUMB RAM Plash Pl	ew: Properties	All • Grouping: Categorize	*		Configuration:	ve: THUMB RAM
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	Solution 'SK-FM3-100PMC Samples'	Property			Inherited From	In Configuration
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		Project Depe Project Macr Property Gro Section Place	os ups File ement	None \$(TargetsDir) Flash (From) RAM)/FM3/propertyGro timer_interrupt > THUMB	ups.xml RAM