How build the Hex File for PIC16F628A PLL Controller Pastorcici Robert - 2013 (SA7025)



First step: Open MPLAB, choose Project Wizard

Step 2: Select PIC16F628A

MPLAB IDE v8.53			
File Edit View Project D	ebugger Programmer	Tools Configure	Window Help
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Project Wizard			
Step One: Select a device			ı چ
	Device:		
	PIC16F628A	~	
	< Back	Next > C	ancel Help

Step 3: Select Hi-Tech Compiler

MPLAB IDE v8.53
File Edit View Project Debugger Programmer Tools Configure Window Help
Project Wizard
Step Two: Select a language toolsuite
Active Toolsuite: HI-TECH Universal ToolSuite
Location
C:\Program Files\HI-TECH Software\PICC\9.70\bin\picc.exe Browse
Store tool locations in project
Help! My Suite Isn't Listed! Show all installed toolsuites
< Back Next > Cancel Help

Step 4: Choose the Location for Project

MPLAB IDE v8.53
ile Edit View Project Debugger Programmer Tools Configure Window Help
Project Wizard
Step Three: Create a new project, or reconfigure the active project?
Create New Project File
C:\Documents and Settings\Y04HFU\Desktop\SA7025\SA7025 Browse
C Reconfigure Active Project
O Make changes without saving
Save changes to existing project file
O Save changes to another project file
Browse
<pre></pre>

Step 5: Click NEXT





SA7025 - 1	MPLAB IDE v8.53 - SA7025.mcw	
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i microwire		
File name:	microwire Open	
Files of type:	Source (*.c;*.as)	



Open Header Files (.h)

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Look in: C) Source LM	×2324-54	,7025	• 6	1	•		
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Look in:	Source LM	×2324-SA	17025					
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Select: SA7025 chip = 1, It is a Universal Software for LMX/SA PLL chips Modify values for E, D, C, B, A registers.

Construction Construction<	File Edit	View Project	Debugger Progr	ammer Tools (Configure W	indow H	Help			
<pre>/// LDC2324 // -= 111111111111111 =- // 170 typedef unsigned char Bit_t; //Select chip: Bdefine LMC2324 // -= 1)</pre>) 🗳 🕻	🐰 🖿 🛱	1 🗿 👭 🍅 .	🖉 🛼 🤶 🗍	Debug	✓ d [*]	e 🛛	🖏 🖬 🛈		
<pre>typedef unsigned char Bit_t; //Select chip: fdefine LMX2324 fif (LMX2324 == 1) // - select this chip 0 - no fif (LMX2324 == 1) //// - select this chip 0 - no fdefine WORD_LENCTH LEX2324 ///////////////////////////////////</pre>		//////////////////////////////////////	//////////////////////////////////////	1111 =- 0		(1111)	(111			
<pre>//Select chip: #define LMX232 fif (LHX2324 == 1)</pre>	ty	ypedef unsig	med char Bit_	t;						
<pre>////////////////////////////////////</pre>	/. #! #:	/Select chip define LMX23 define SA702 if (LMX2324	9: 324 25 == 1)	0 //1 - 1 //1 -	select th: select th:	is chig is chig	0 - n 0 - n	0		
<pre>#elif (SA7025 == 1) ///////////////////////////////////</pre>	//////////////////////////////////////	//////////////////////////////////////	LENGTH LENGTH REG[WORD_LEN REG[WORD_LEN	LMX2324 /// LMX2324 /// //////msb //////1 1 18 //7 6 JGTH] = (0,0, JGTH] = (1,0, ///////////////////////////////////	//////////////////////////////////////	////// 1 0 0 0 9 8 1.1.1, 0,0,0,0,	////// 0 0 0 7 6 5 1,0,0, .0,1,0,	//////////////////////////////////////	(/ (/))); .); (/	
<pre>####################################</pre>	#	elif (SA7025	5 == 1)							
#else #error "NO SELECTED CHIP!!!"	// // // # cc cc cc cc cc //	define WORD onst Bit_t P onst Bit_t I onst Bit_t I onst Bit_t C onst Bit_t S onst Bit_t S	LENGTH LENGTH REG[WORD_LEN REG[WORD_LEN REG[WORD_LEN REG[WORD_LEN REG[WORD_LEN REG[WORD_LEN	<pre>////////////////////////////////////</pre>	//////////////////////////////////////	////// 1 1 1 6 5 4 ,0,0,0, ,0,0,1, ,0,1,0, ,0,0,0, ,0,0,0, ,0,0,0, //////	////// 1 1 1 3 2 1 .0,0,0, .1,0,0, .1,1,1, .1,1,1, .0,1,0, ///////	//////////////////////////////////////	//////sb 0 0 0 0 0 5 4 3 2 0,0,0,0,0 0,1,0,0,0 0,0,0,0,0 0,1,1,0,1 0,1,1,0,1	///// first 0 0 1 0 ,0,0}; ,1,0}; ,0,0}; ,1,0}; ,0,0}; /////
#error "NO SELECTED CHIP!!!"	#	else				1995-0340348				NUX THE
	#	error "NO SH	LECTED CHIP!!	1.						

Open TRF2050.exe (TRF2050 is compatible with SA7025) Select VCO Frequency, Reference Oscillator... For more details see *TRF Evaluation Board.pdf*

C:\DOCUME~1\Y04HFU\Desktop\TRF	205~1\trf205	j0.exe	- 🗆 🗙
UCO Freq (MHz) Prsclr PR (1,2) 64/65/72 Frctnl Numerator NF (0-7) Frctnl Modulus FMOD (0,1) mod-8 Main Chrgpmp I CN (0-255) Rfrnc Select SM (0-3) REF Phase Detector Freq (kHz)	Phase-locke 404.000 2 0 1 60 0 200.000	ed Loop #1====================================	21 4 3 1 7 7500 25.000
======================================	y Phase-loo 45.120 0 200.000	:ked Loop #2====================================	1 188
Main Divider Enbl EM (0,1) ONAux Divider Enbl EA (0,1) OFFDevice Mode ALT (0,1) SA7025Device Test T (0-3)F1-F2:EDIT PLL #1-#2F8:LOAD FILEF9:SAUE FI	===Device== 1 0 1 1 IT DEVICE LE	Refrnc Freq (MHz) (0-30) Reference Count NR (0-4095) A-word mode LONG (0,1) 24 Synthesizer Status F5:VIEW BIT MAP F7:SE F10:SEND TO DEVICE C	20.000 100 0 Locked LECT PORT TL-Q:QUIT

Here is the binary word for E, D, C, B, A registers. LSB is FIRST IN (see datasheet) Sequence E=>D=>C=>B=>A

CIV	C	:W0	CUN	1E~1	NY0	4HF	UVD	eskt	op\	TRF	205	- 1 \t	rf2C)50.	exe											×
AØ B C D E	#	ir MSI 23 0 1 1 1 1	22 0 0 1	21 NF- 0 1 1	20 0 1 0 1	19 0	18 0	17 0	16 Ø	15	14 -NM1 -NA	13 	12 (11 :N	10	9	8 	7 PA -S	6 N C M	5 M3 K EM	4 -S	3 -C A-	2 NI L- EA	Las L' 1 12 -P FM	LG [
AØ B C D E		23 0 1 1 1	22 0 0 1	21 0 1 1	20 0 1 0 1	19 0 0 0	18 0 0 0	17 0 0 0	16 0 0 0	15 0 1 0	14 0 1 0	13 0 1 1 0	12 1 1 0	11 0 1 0	10 1 1 1 0	9 0 0 0	8 1 0 0	7 0 1 0	6 1 0 0	5 1 0 1 0	4 1 0 0	3 0 0 0	2 1 0 0		0 0 0 0 1	
ESU	-1	REIU	JKN	10	TH J		TENU	J																		

<u>Carefully</u> Copy the new values from TRF2050.exe to Header File The E, D, C, B, A are reversed! In reality the E register is first word sent to SA7025.



Edit View	Project	Debugger	Programmer	Tools	Configure	Window	Help			
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Congratulations...Now build the HEX File ③

Open the Project folder, here you have the Hex File. The uC must be programmed with this file.



73's de YO4HFU