iBOB PROM Burning / Programming.

Mekhala V. Muley & Irappa M. Halagali. https://casper.berkeley.edu/memos/ibob_prom_proc.pdf Date : 11 / 02 / 2012.

• Set iBOB J15 to jumper across Pins 3 and 4 (middle row) and leave all others unjumpered.

• Start iMPACT. Create a new .ipf project and save with any name in any directory (ie., the directory with your bit file).

- In Operation Mode Selection choose Prepare Configuration Files
- In Prepare Configuration Files choose PROM File
- In Prepare PROM Files, use the following options:

Target: Xilinx PROM PROM file Format: MCS Checksum Fill Value: FF PROM File Name: any Location: any

Untitled [Configuration Mode] - iMPACT	Final Sector Sec	
Boundary-Scan Slave Serial Selec	ctMAP Desktop Configuration	
Pren-		
FICPO		
	I want to target a :	
	• Xilinx PROM	
	C Generic Parallel PROM	
	PROM File Format	
	MCS O TEK O UFP ('C' format)	
	O EXO O HEX O BIN O ISC	
	Swap Bits	
	Checksum Fill Value (2 Hex Digit): FFI	!
// *** BATCH CMD : setP // *** BATCH CMD : setP	PROM File Name: pocketspec	
// *** BATCH CMD : setP // *** BATCH CMD : setP	Location: Z:\projects\pocketspec_1ghz\pockets Browse	
// *** BATCH CMD : setP		
// *** BATCH CMD : setP		
// *** BATCH CMD : setP		
// *** BATCH CMD : setP // *** BATCH CMD : setP		
// *** BATCH CMD : setP // *** BATCH CMD : setP		
// *** BATCH CMD : setP // *** BATCH CMD : setP		
// *** BATCH CMD : setP		
// *** BATCH CMD : setP	< Back Next > Cancel Help	
For Help, press F1	File Generation Mode Prom Formatter	

• In Specify Xilinx PROM Device:

Deselect Auto Select PROM Deselect Enable Revisioning Deselect Enable Compression Select PROM XCF / XCF32P and click "Add"

• In Add Device File, click "Add" and select your .bit file. iMPACT will give a warning about changing the startup clock; which isn't a cause for concern. Decline any offers to add other design files to the Data Stream. Click "Finish" and generate the PROM file. The xcf32p device should show about 56% full.

• Once the file generation finishes, close and restart iMPACT. Cancel when it asks about opening or creating a project.

• Initialize the JTAG chain.

• Assign the .mcs file you just created to the xcf32p device in the JTAG chain. Cancel or bypass when asked about a configuration file for the xc2vp50.

• Right-click on the xcf32p and select Program.

Untitled [Configuration Mode] -	
File Edit View Mode Operations	Dutput Debug Help
] D 🗀 🖬 % 🖻 🖻 😫 🛱	※ # == ≑ ≑ ⇔ 抽 导 №
Boundary-Scan Slave Serial	SelectMAP Desktop Configuration
	File Generation Summary
<pre>// *** BATCH CMD : set // *** BATCH CMD : set</pre>	You have entered following information PROM Type: Xilinx PROM File Format: mos FILValue: FF PROM Filename: pocketspec Number of PROMs: 1 Position Part Name 0 xcf32p Click 'Next' to add device file. About the second s
For Help, press F1	File Generation Mode Prom Formatter

• In the Program Options popup:

Select Erase Before Programming Select Verify Select Pulse Prog Select Load FPGA Select Parallel Mode

Untitled [Configuration Mode] - iMPACT					_ 🗆 🗙
File Edit View Mode Operations Output Deb	ug Help				
🗅 🚄 🔛 👗 🖻 💼 📴 👹 👹 🚼	88 🛱 🖽 🛱 🗮 🔘 🛅	≣ ş № ?			
Boundary-Scan Slave Serial SelectM	AP Deskton Configuration	1			
, , , , , , , , , , , , , , , , , , , ,	-				
	Durana Orbiara	2			
	Program options		_		
	🔽 Erase Before Programming	Functional Test			
	Verify	🔲 On-The-Fly Program			
xcf32p xc2vp50	Read Protect				
pocketspec.mcs File ?	Write Protect				
TDO	Virtex-II	PROM			
Deeding Tr (Viling (ICE2 1) (gint	✓ Pulse PROG	Load FPGA			
INFO: iMPACT: 501 - '1': Added I	Convertients	Parallel Mode			
		Use D4 for CF			
'2': : Manufacturer's ID =Xili	Program Key				
INFO: iMPACT: 1777 - Popding T: (Vilian (ISE7 li (vof			1		
INFO: iMPACT: 501 - '1': Added I	PRUM/CoolKunner-II Userco	de (8 Hex Digits)			
	FFFFF	FFF			
done.					
Validating chain Boundary_scan chain validated	TXPLA UES: Enter up to	13 characters			
PROGRESS_END - End Operation.					
Elapsed time = 2 sec. Device #1 selected	J				
xcf32p_fs48					
xcf32p_vo48 // *** BATCH_CMD : setAttribut	OK Cano	el Help	"xcf32p"		
// *** BATCH CMD : setAttribut			"Z:\projec	ots\pocket	tspec_1ghz
'l': Loading file 'Z:\projects' done.	-pocketspec_rgnz ·pocke			s'	
INFO: iMPACT: 1835 - Loading CFI	file Z:\projects\pocl	etspec_1ghz\pocket	tspec∖bit_fi	les\pocket	tspec.cfi
Device #2 selected	th device default sett	ing.			
Device #1 selected					
Device #1 selected					
For Help, press F1	Configuration	Mode Boundary-Scan	Parallel IV	lpt1	5 MHz //.

- Click OK to begin burning the PROM.
- When PROM flashing finishes, close iMPACT and turn off IBOB.
- Set IBOB J15 to jumper across pins 5 and 6 (lowest row) and leave all others unjumpered in J15.