Tutorial

USB AVR Programmer

In this tutorial, you will how to use the USB AVR Programmer for programming your xBoard[™] MINI AVR development board.

Step I

Connect the USB Programmer to your PCs USB port. Make sure you connect it to that USB port in you installed it during its installation. Wait for a "ding" sound from PC. Now the programmer is installed correctly. The **GREEN LED** will glow to show programmer is ready.

Note

If windows says "USB Device not recognized" make sure the USB cables are not broken.

Note

If windows says "New hardware found" you have connected the programmer to a different port than which you have installed. Or you have not yet installed the programmer ! Please see installation instruction in this CD.

Note

Please disconnect the Programmer after programming to ensure that your computer is safe.

Step II

Goto the directory/folder in which you have copied "avrdude" and start the avrdudegui.exe in that folder. You will get a screen similar to the image shown below.

≥ avrdude gui v0	.2.0				
Location of avrdude:	i i i i i i i i i i i i i i i i i i i			2	
avrdude				GiveIO Driver	
-C Location of alterna	te configuration			Install	
ſ				Remove	
-p Device:	-c Programmer:	-P Port:		Status	
ATmega8	usbasp	lpt1 💉			
Flash					
Write	Read	Verify		Format:	
C: \Avinash \My Proje	cts\LEDblink\default		Autodetect 🖌		
EEPROM				Frank	
		Uventy		Format:	
eeprominex			(111)	Autodetect	
Low Fuse	ligh Fuse	ock Fuse Extende	d Fuse	Signature	
Write	Write	Write Write	e 🗌 Write	Write	
Read L	Read	Read Read	Read	Read	
0x [00]	0x [00]				
Options			-E Exitmode	11/4	
□ -D Disable auto erase for flash □ -q Disable process bar output ☑ -e Perform a chip erase □ -t Terminal mode ☑ -F Verify the device signature □ -v Enable verbose output □ -n Don't write to the device □ -V Disable verify check			tput Reset	Vcc	
			No reset		
			Cycle counte	Cycle counter	
			-y erase o	-y erase cycle counter	
Command line:					
avrdude" -p m8 -c usb	asp -P lpt1 -U flash:	w:"C:\Avinash\My Projects\ ↓	.EDblink\default\LEDblink.	hex": Execute	
Output:					

avrdude-gui program screen-shot.

The software is very easy to use. Actually it is a front-end for a popular command line tool called avrdude.

Make the following settings.

- Device: Select the appropriate AVR microcontroller you are using. In this case use Atmega8
- Programmer: "usbasp"
- Port: This option is not important for USB programming leave it anything.
- Flash: Select the hex file you want to program by clicking browse button. make sure "write" and "verify" options are selected. Leave the format as "Autodetect"
- EEPROM: If you want to program the on-chip EEPROM select a file here.
- Options:
 - Select
 - Perform a chip erase.

• Verify the device signature.

Now connect the programmer to xBoard MINI via the ISP connector.



ISP Connector on xBoard[™] MINI



Connecting the programmer and the xBoard[™] MINI

Next connect the power supply to xBoard and switch it on.Now every thing is set, click "Execute" to burn the device. While burning the **RED LED** will glow indicating BUSY state. If everything is setup properly, you will get the following message.

avraude gui vu				الكر تحا
location of avrdude:				
avrdude			vero briver	
-C Location of alterna	te configuration			Install
				Remove
-p Device:	-c Programmer:	-P Port:		Status
ATmega8515 💌	usbasp	Y lpti Y		
Flash				
Vrite Vrite	Read	Verify	Fo	rmat:
C: \Avinash \My Proje	ects\LEDblink\defaul	A	utodetect 🛛	
EEDDOM				
	Read	Verify	Fr	rmat:
eeprom.hex				utodetect
			(300)	
Read 0x 00	Read 0x 00	Read Read 0x 00 0x 00	Read 0x 00000000	0x 000000
Options			-E Exitmode	
□ -D Disable auto erase for flash □ -q Disable process bar output ✓ -e Perform a chip erase □ -t Terminal mode ✓ -F Verify the device signature □ -v Enable verbose output □ -n Don't write to the device □ -V Disable verify check			Reset	Vcc
			No reset	No Vcc
			Cycle counter	
			-y erase cycle	to:
Command line:				
avrdude" -p m8515 -c	usbasp -P lpt1 -U fl	ash:w:"C:\Avinash\My Projects\LE	EDblink\default\LEDblink.h	Execute
Dutput:				
vrdude: reading on-c	hip flash data:			
eading #######	*******	******	########## 1009	6 0.03s
vrdude: verifying vrdude: 130 bytes of	f flash verified			2

Success !!!

Now your chip is programmed successfully. Please disconnect the programmer from the target and your PC.

Note

For troubleshooting please see troubleshooting.pdf in the help folder in the CD.

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