How to use ICC11 with Adapt11, MicroCore11, MicroStamp11 and Adapt11C24DX

This document will show how to use ICC11 with Technological Arts' HC11 product. It will use the already provided "Hello World" Example by ImageCraft.

Getting Started:

Open ICC11 IDE as shown.



Open existing projects:

Click on Project menu – Open as shown.

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	Manual Sort Browser Window			
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ICC11 will open an explorer window to help locate <hello.prj> It can be found at ICC11 examples.11



To select, click on hello.prj then press the *Open* button.

Open Project		<u>? ×</u>
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hello.prj		
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Note that the IDE changed to include vectors.c and hello.c in Project pane.

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Note that hello.c contains the actual C code to display the Hello World message. Vector.c contains the start of the program.

Compiler Options:

The target will be generalized to E2 Single Chip Mode. This is applicable even for HC11 with external memory.

ImageCraft IDE for ICC11 (STANDARD)		
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Make Project F Rebuild All S	shift+F9 Download	hello.c
Add File(s) S Add Topmost Opened File Remove Selected File(s)	Shift+F11 Bootstrap Mode	Documents
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To change click on Project menu – Options then Target tab as shown

Click on Target Tab to change Device Configuration. In this example, E2 Single Chip Mode is selected. This simply means that the memory resources are in certain locations. It is up to the user to select other modules that has larger memory.

Compiler Options Paths Compiler Target Config Salvo	×			
Device Configuration E2 Single Chip Mode Memory Addresses Program Memory 0xF800 Data Memory 0x0 Stack Pointer 0xFF	PRINTF Version Small (int only, no modifier) Clong (+ long, and modifiers) Cloat (full function) Additional Lib.			
Advanced Other Options No Startup/Lib Non-default Startup				
OK Cancel Set As Default Load Default <u>H</u> elp				

Compile/Build/Make the C code:

To compile select Project menu then Make Project as shown.



Note that there are no errors shown. Next step is programming the S-record into the HC11.

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hello.c		Project Browser
* 2) t * you * you * 3) t * crys * crys * corn * */ #includ main() (set put) /* Act: * ROM * rego */ #if 0 int put y #if 0 int put fendif icc Done.	<pre>he default output function writes to the SCI port. If are using BUFFALO, uncomment the code below. he setbaud function uses constants assuming 8 MHZ cal. If your system is different, you must write the her value to the BAUD register. e.g. BAUD = 0x30; // 0x30 is 9600 baud for 8Mhz clock e <hcl1.h> baud (BAUD9600); s("Hello World\n"); // cate this ONLY if you are using BUFFALO. Using the coutine will cause the character to be output cdless of the port used. // change to 1 to activate thar(char c) ("tba\n"); // BUFFALO expects the char in A ("jsr 0xFFAF"); iw -o hello -LC:\iccl1\lib\ -btext:0xF800 -bdata:0x0 -dinit_sp // </hcl1.h></pre>	HELLO Files Vectors.c Fiello.c Headers Documents
18: 6	C:\icc11\examples.11\hello.c C:\icc11\examples.11\	hello.prj S19

Programming:

In this example, ICC11 is used to program the HC11. Microload can also be used but in this example it is the IC11.

Select Terminal menu then Show Terminal Window as shown.



Note that the IDE will change to show Terminal Window.

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File Edit Search View Project RCS Tools Terminal Help	
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C:\icc11\examples.11\hel	lo.prj S19

To make to COM active press the Open Com Port button in the middle of the IDE. Once pressed, the button will change to message Close Com Port. This means that the PC serial port is open to communicate with the HC11.

Programming Options:

There are other type of memory options, external or internal. Click on Tools – Environment Options then Bootstrap Programming tab to see Memory type, etc..

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File Edit Search View Project RCS	Tools Terminal Help	_	
	Environment Options	ERR	
	 Editor and Print Options 		Project Browser
	Configure Tool	while:	
	Run		
		Browse	vectors.c
			hello.c
		<u>D</u> ownload!	Documents
		Bootstrap Mode	_
		Close <u>C</u> om Port	
		Show Editors	
icc11w -o hello -	LC:\icc11\lib\ -btex	xt:0xF800 -bdata:0x0 -dinit_sp 🔺	
Done.			
		-	
T	erminal Window	C:\icc11\examples.11\he	lo.prj S19

One can see the memory type options. Select the correct memory target. In this example it is External EEPROM.

Environment Options	\mathbf{X}		
Preferences Terminal Bootstrap Programming			
Memory Type Internal EEPROM (non-Miniboard) Internal EEPROM (Miniboard) External EEPROM External RAM Bulk Erese Internal EEPROM (Config: F5)			
Bootload Baudrate Image: Constant of the standard standard (1200 baud) Image: Constant of the standard standa			
OK Cancel <u>H</u> elp			

Connect the serial cable to PC and to the target. Set boot switch to boot and power up module. In the middle of the IDE is the Browse button. Click button to locate *hello.s19* record as shown. Press *Open* button to accept selection.

Open	?	×
Look in: [) examples.11 💽 🖛 🗈 💣 🎟 -	
hello.s19 MC11DEM MS11DEM	0.s19 0.s19	
File name:	hello.s19 Open]
Files of type:	s19 (*.s19) Cancel	
	Open as read-only	

To program the Bootstrap Mode needs to checked mark. Press Download button to initiate program as shown. A progress bar will be displayed as the file is being uploaded to module. At the bottom window a message Done is shown to indicate file transfer is finished.

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File Edit Search View Project RCS Tools Terminal Help		
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	Download File: C:\icc11\examples.11\hello.s19	Project Browser
Hello World	<u>B</u> rowse <u>D</u> ownload Bootstrap Mode	Files F
Loading bootstrap program into internal sync'ing with bootstrap program Programming user program C:\icc11\examp Please WaitDone	1 RAM at 1200 baud, bootstrap fi. ples.11\hello.s19 at 9600 baud	
Terminal Window	C:\icc11\examples.11\hel	lo.pri S19 //

Move write protect switch to *Prot* and *Boot/Run* switch to Run mode. Press the RESET button and the message Hello World will appear.

This concludes a basic demonstration of ICC11 with programming any HC11 product.