How to use OLIMEX TMS320-P28016 board

Step by step configurations using TI Code Composer Studio

1. Download and install latest version of Code Composer Studio and latest Service Pack from <u>www.ti.com</u> We test our boards with Code_Composer_Studio_v3.3_Build_3.3.38.2_FET with Service Pack – CCS_v3.3_SR6_57.

2. Download and install the XDS100_Beta2_Release

After the installation you have to see two icons on your desktop - Setup CCStudio v3.3 and CCStudio v3.3. You must select a configuration in Setup before starting the Code Composer Studio IDE. Double-click on the Setup CCStudio desktop icon. The System Configuration dialog box appears.

🐌 Code Composer Studio Setup			
File Edit View Help			
System Configuration	Available Connections	Connection Description	TI XDS100pp Emulator
My System	Context Simulator Context Simu	Other 510-Class Emulator Connection Other 560-Class Emulator Connection Other Simulator Connection TI Simulator Connection TI XD5100pp Emulator Connection TI XD5510 Emulator Connection TI XD5560 Emulator, 20-pin Rev-D Cable Connection TI XD5560 Emulator, 20-pin Rev-D Cable Connection	Processor(s) Supported: TMS320C2800
	Factory Boards	Custom Boards 🕋 Create Board	
Save & Quit Remove All	<pre></pre>	dd Multiple	Modify Properties
Drag a device driver to the left to add a board to th	ne system.		,

3. From Create Board tab sellect TI XDS100p Emulator and click Add button to import your selection to My System in System Configuration pane. In the next window type any name in Connection Name field (for example TMS320F28016_emu)and click Next button and then Finish button.

Connection Pro	perties	? 🛛
Connection Name	& Data File Connection Properties	
Connection Name:	TMS320F28016_emu	(TI XDS100pp Emulator)
	Auto-generate board data file	
		Browse
Diagnostic		
Utility: Diagnostic Arguments:		Browse
		Next > Cancel

4. Now you have to select TMS320C2800 DSP type and add it to the your connection name.

🊰 Code Composer Studio Setup 📃 🗖 🔀					
File Edit View Help					
System Configuration	Available Processor Ty	Driver Location	TMS320C2800		
I My System └── III III III III III III III III III	TM5320C2800 BYPASS	C:\CCStudio_v3.3\drivers\tixds28x.dvr	Driver Location: CNCCStudio_v3.3\drivers\tixds28x.dv		
			Driver Revision: 01.00.01		
			Driver Description: C28xx Emulator for Windows 98/2000/ME/NT/XP		
			User Description: None.		
			Processor(s) Supported: TMS320C28xx		
			Capabilities: Single stepping Breakpoint hiding Run profiling Multiple processors Synchronous run Global breakpoints Real-time Rude/polite mode switching RTDX Multiple board support Run from a breakpoint Target Disconnect Emulator Reset		
Save & Quit Remove Remove All	Hactory Boards Here Hac	dd Multiple	Modify Properties		
Drag a device to the left to add to the currently-select	ted board				

In the next window click OK button and

Property	Value
Processor Name	TMS320C2800_0
GEL File	
Master/Slave	N/A
Startup Mode	Stop-mode
Change property value as	necessary in the right column.
Change property value as	necessary in the right column.
Summary	

then click Save and Quit button from System configuration pane. The button will start Code Composer Studio on exit.

Now you have to open, build and load a proper project, for example – a simple blinking led project for Olimex TMS320-P28016 board. You need from the existing board and TMS320 JTAG. The project examples, board and JTAG are available on <u>http://www.olimex.com/dev</u>. More examples are available on the <u>www.ti.com</u> site – sprc191.zip.

After starting Code Composer Studio from Project>Open menu browse to Blinking led project and open it. Connect the JTAG to your LPT port. Plug in the 14 pin female JTAG connector the 14 pin male connector of the TMS320-P28016 board. The project is configured for "Boot to SARAM" operation so that check jumpers on the board and placed it to Boot SARAM position(see jumper table near to the jumpers).

<u> </u>		<u> </u>	/
GPI018	GPI029	_GPI034	BOOT SELECT
너 너 너 너 너 어	나다하다	나 여 나 여 나	FLASH SCI SPI I2C ECAN
Ø	1	0	RAM
Ø	0	1 Ø	

Supply the board with 6-9VDC. Fom Debug menu choose Connect or press ALT+C. "The target is now connected" message has to be appear to the downleft corner. To build project press Build all button. From File menu choose Load program or press CTRL+L. Browse to Blinking_LED\Debug directory and select Blinking_LED.out file. After loading, the project will ready to debug.

