How to use OLIMEX TMX320-P28027 board

Download and install latest version of Code Composer Studio v4.x from www.ti.com.

After the installation has finished, you can run Code Composer Studio (CCS).

First you have to select your workspace directory by pressing "Browse..." button:

🕸 Workspa	ace Launcher 🛛 🔀
Select a w	orkspace
Code Compos Choose a wo	ser Studio stores your projects in a folder called a workspace. Aspace folder to use for this session.
workspace:	C: (Documents and Settings (user (My Documents (workspace)
Use this a	s the default and do not ask again

Select Workspace Directory	? 🗙
Select the workspace directory to use.	
🗉 🚞 Program Files	
🖃 🧰 TMS320-P28027-Blinking_LED_CCS4	
🕀 🧰 .metadata	
🗄 🧰 ~SupportFiles	
🗉 🔂 TMS320-P28027_test	
🗉 🛅 WINDOWS	~
Folder: TM5320-P28027_test	
Make New Folder	OK Cancel



Press "OK" button and wait for a while, until CCS is loading:



After the CCS opens, you have to Import Existing CCS/CCE Eclipse Project:

😵 C/C++ - Code Compo	ser Studio (Licensed)				×
File Edit View Navigate	Project Target Tools Scripts Window	Help	_		
i 🖪 🖆 🖻 😤 🛞 -	Build Active Project	Ctrl+Shift+P	> -	😭 🛅 C/C++	
C/C++ Projects 🗙	Rebuild Active Project	Alt+Shift+P	- 8	🗄 Outline 🖾 🗖 E	ןנ
(b) (c)	Import Existing CCS/CCE Eclipse Proj	ect		An outline is not available.	
	😭 Import Legacy CCSv3.3 Project				
	🔜 Build All	Ctrl+B			
	🖏 Rebuild All	Alt+B			
	Clean Selected File(s)				
	Exclude File(s) from Build				
	Active Build Configuration	Þ			
	Build Project Build Working Set	•			
	Clean				
	Build Automatically				
	Link Files to Active Project				
	Add Files to Active Project				
	Properties				

Browse the project directory and after that press "Finish" button:

🕸 Import CCS Eclipse Projects 🛛 🔀				
Select Existing CCS Eclipse Project Select a directory to search for existing CCS Eclipse projects.				
 Select search-directory: Select archive file: Discovered projects: 	C:\TMS320-P28027-Blinking_LED_CC	Browse		
🔽 💼 TM5320-P28027		Select All Deselect All Refresh		
☐ <u>C</u> opy projects into workspace				
0	<u>E</u> inish	Cancel		



After you have imported existing project you can build it:





If everything is correct, in "Problems" tab, number of errors will be zero:



Now you have to plug-in Programmer/Debugger TMS320-JTAG-USB-V2 to your computer and wait until windows install the drivers automatically.



Click on the Debug Active Project button, or from menu Target select - Debug Active Project:



First, CCS will ask you for a target configuration:



Here press "Yes" button.

💱 New Ta	rget Configuration	\mathbf{X}
Target Co Create a ne	onfiguration w Target Configuration file.	
File name:	NewTargetConfiguration.ccxml	
🗌 Use shi	ared location	
Location:	/TM5320-P28027	Workspace
?		Finish Cancel

Here you can select the location of your new target configuration.

Straight C/C++ - NewTargetConfiguration.ccxm	ıl - Code Composer Studio (Licensed)			
<u>Eile E</u> dit <u>V</u> iew <u>N</u> avigate Project Target <u>T</u> o	ols Scripts <u>W</u> indow <u>H</u> elp			
🔛 🗁 🗟 😂 🗞 × 🎋 • 🚱 ×	i 👺 i 🖋 i 🖢 - 🖏 - 🍫 ↔ - ↔ -	😰 🏇 Debug 🕫 C/C++		
C/C++ Projects 🖹 Target Confi 🛛 🖵 🗖	Main.c 🕄 *NewTargetConfiguration.ccxml 🗙	🗖 🗖 💭 Cheat Sheets 🔀 🛛 📮 🏹 🗖		
C/C++ Projects	Main.c * New Target Configuration.ccxml × Basic General Setup This section describes the general configuration about the target. Connection Texas Instruments XD5100v2 USB Emulator Spectrum Digital D5K-EWN-e2dsp onboard USB Emulator Spectrum Digital D5K-EWN-e2dsp onboard USB Emulator Spectrum Digital XD5560V2 STM LNB Emulator 	Advanced Setup Advanced Setup Target Configuration Save Save Save Save Configuration Target Configuration Save Configuration Save Configuration Save Configuration Save Configuration Save Configuration Save Configuration Config		
	Texas Instruments XDS100v1 USB Emulator	 select the project/folder you want to assign this configuration. Do not show this again Do not show this again Disable all cheatsheets 		
	Basic Advanced Source			
	C-Build [TMS320-P28027] C-Build [TMS320-P28027] C-Build [TMS320-P28027] C-Build of configuration TMS320-P28027_FLASH for project TMS320-P28027 **** C:\Program Files\Texas	> Create/Update Simple Target Configuration		
Click the New button to create a new target configuration file. Click <u>here</u> to hide this message.	Instruments\ccsv4\utils\gmake\g make -k all gmake: Nothing to be done for			
. □ ◆				

In "Connection" field, select "Texas Instruments XDS100v2 USB Emulator"

After that for Device select TMS320F28027:



Press "Save" button to save this configuration.



Finally, you can debug your project:

😵 C/C++ - NewTargetConfiguration.ccxml - Code Composer Studio (Licensed)	
File Edit View Navigate Project Target Tools Scripts Window Help	
i 🗒 🗠 🗟 🍇 છ × i <u>‡≉ • i 9₂ × i 9₂ i ⋪</u> i ½ × ⅔ × ७ ↔ →	😰 🏇 Debug 🛅 C/C++
📅 C/C++ Projects 🗙 Target % Debug Active Project 🛛 🕄 NewTargetConfiguration.ccxml 🖄	🖺 Cheat Sheets 💥 📒 🍯 🗖 🗖
🦕 🚓 🍇 Launch TI Debugger	Set Up Target Configuration
E 😂 TM5320-P28027 [A 🍖 1 TM5320-P28027	Set op Target Configuration
etup Advanced Setup	 Introduction
h describes the general configuration about the target.	You have opened the System Setup Editor to create a new target configuration or to
Bergalov, Construction and Constructin and Construction and Construction and Construction and Construct	modify an existing target configuration.
B Eg D572002_CUD24artoralit.asin B E Ep D57202_CuDatVariableDefs.c Device type filter text	Target configuration now uses a flexible
B DSP280x_Sci.c Save Configuration	XML schema that helps Texas Instruments and developers define the specific details.
B Sp280x_usDelay.asm	Instead of using the registry, Code
₩ main.c	Composer uses a hierarchy of related XML files to define a connection and board/device
This20F28020	combination. Since the target configurations
	copied, and displayed.
F28027_RAM.CMD [Excluded from Bu TM5320F28023	Target configurations can be assigned to
INS320F28026 INS320F28027 INS320F28027	individual projects. These projects
- 16 TM5320-P28027.pjt TM5320F28030	automatically use the assigned configurations. When you create a new
S marces.m	configuration, you can store them in the
Birts2800 mlib	User Defined folder (by default) or browse to select the project/folder you want to assign
	this configuration.
	X Do not show this again
Basic Advanced Source	Oisable all cheatsheets
	Click to Begin
	Create/Update Simple Target Configuration
**** Build of configuration	
THS320_P28027_FLASH for project	
THS320-P28027 ****	
Chill Program Editory Toring	
C:program rites/texas Instruments/ccsys/utils/cmake/g	
make -k all	
Comake. Nothing to be done for	

New window will appear with Progress Information:

Progress Information			
тм5320-Р28027			
Loading program 'TMS320-P28027.out' ouments XDS100v2 USB Emulator_0/C28xx'			
⊖ Erasing Flash Sectors.			
Erasing Flash Sectors.: Erasingtor_0/C28xx)(Cannot be canceled)			
😑 Loading 🗧			
Loading: Program: C:\TMS320-P2XDS100v2 USB Emulator_0/C28xx)			
Saving Device information (Finished)			
Cancel << Details			

After this operation has finished, you can enjoy your project applications by using the toolbar shortcuts shown with the red arrow on the picture below:

😚 Debug - Main.c - Code Composer Studio (Licensed)					
File Edit View Navigate Project Target Tools Scripts Window Help					
: 🖫 👜 🗟 🍇 : 💂 🎭 😃 🙋 : 🎦 : 🏂 + : 🥵 + : 🦻 : 🥓 : 🖓 : 🖓 : 🖓 + 🏷 <-> →				ıg 📴 C/C++	
🏇 Debug 🛛 🔶 🍇 🕪 マ 🕕 幅 マ 🔍 👁 🖎 👁 📌 🐇 🍫 マ 🔗 🖂 🍸 🗖	🕅= Local (1) 🙁 Watch 📄 🦃 🖓 🖓 🔒 📑 🏹 🖓 🗖				
TMS320-P28027 [TMS320_P28027_FLASH] - Texas Instruments XDS100v2 USB Emulator_0/C28xx [F	Name	Value	Address	Туре	
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □					
0 main() at Main.c:62 0x3f62d0					
I_args_main() at args_main.c:43 0x3f6412 I zargs_main() at args_main.c:43 0x3f6412 I zargs_main() at args_main.c:43 0x3f6412					
Texas Instruments XD5100v2 USB Emulator_0/C28xx: CIO (3:22:25 PM)					
	<			>	
Main.c × 🕄 NewTargetConfiguration.ccxml				- 8	
57				~	
58 //					
59 // INITIALISATION - General					
61	61				
62 DeviceInit(); // Device Life support & GPIO mux setting	igs				
64 // Only used if running from FLASH					
65 // Note that the variable FLASH is defined by the compiler with -d FLASH					
66 // (see TwoChannelBuck.pjt file)					
67 #lree ritical code and Flash setup code to RAM					
69 // The RamfuncsLoadStart, RamfuncsLoadEnd, and RamfuncsRunStart					
70 // symbols are created by the linker. Refer to the linker files.					
72					
73 // Call Flash Initialization to setup flash waitstates					
74 // This function must reside in RAM				✓	
				>	
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