Start a New Empty Project for MSPM0 with Sysconfig

- 1. It is recommended to import empty project in SDK, which is quite easy to maintain for user. If user want to build a new project, please refer to below steps.
- 2. Create a new CCS project



3. Add MSPM0 SDK & Sysconfig tool to project

Properties for Start_New	_Empty_Project	— 🗆 X
type filter text	General	⇔ ▼ ⇔ ₹ §
 Resource General Build ✓ Arm Compiler 	Configuration: Debug [Active]	✓ Manage Configurations
Processor Option Optimization	Image:	
Include Options	SysConfig [1.15.0]	2 Add
Predefined Symbols > Advanced Option	****MSPM0 SDK [1.0.0.04]	Edit
> Arm Linker		Remove
Arm Hex Utility [Disa Arm Obicopy Utility		Up
> Debug		Down
		Details
< >		
③ Show advanced setting	gs 3 Apply and	d Close Cancel

4. Add include search path for the project

Properties for Start_New	v_Empty_Project	- 🗆 X
type filter text	Include Options	
 > Resource General > Build > Arm Compiler 	Configuration: Debug [Active]	Manage Configurations
Processor Option Optimization	🍄 Add directory path	× 2 ସେବ ହାହା
Predefined Symbo	Directory:	😚 Select Variable — 🗆 🗙
 Arm Linker Arm Hex Utility (Disc 	3 Workspace Variables	Defined variables for build-configuration 'Debug':
Arm Objcopy Utility > Debug Variable Extension Choose extension to > @ .metadata > @ docs > @ examples > @ kernel © source > @ third_party > @ ti > @ tools	6	Name Type Value CDTVersion String 7.4.100.202201122357 CG_CLEAN_CMD String DEL /F CG_TOOL_CLANG File C/t/t/css1230/ccs/tools/compiler/ti-cgt-armllv CG_TOOL_CLANG File C/t/t/css1230/ccs/tools/compiler/ti-cgt-armllv CG_TOOL_CLANG File C/t/t/css1230/ccs/tools/compiler/ti-cgt-armllv CG_TOOL_NCLUDE_P Direc C/ti/ccs1230/ccs/tools/compiler/ti-cgt-armllv CG_TOOL_ROOT File C/ti/ccs1230/ccs/tools/compiler/ti-cgt-armllv CG_TOOL_SEARCH PA Direc C/ti/ccs1230/ccs/tools/compiler/ti-cgt-armllv CG_TOOL_SEARCH PA Direc C/ti/ccs1230/ccs/tools/compiler/ti-cgt-armllv CG_TOOL_SEARCH PA Direc C/ti/ccs1230/ccs/tools/compiler/ti-cgt-armllv CG_TOOL_SEARCH PA Direc C/ti/css1230/ccs/tools/compiler/ti-cgt-armllv COM_TI_MSPM0_SDK File C/ti/mspm0_sdk_1_00_0_04 COM_TI_MSPM0_SDK File C/ti/mspm0_sdk_1_0_0_0_04/.metadata/prod CommonProgramFiles String C/Program Files/Common Files CommonProgramFiles String
		© OK Extend Cancel
_peric GEL ⑦ 7	OK Cancel	Image: Image

There are three search paths should be the added manually, refers to following instruction:

Properties for Start_New	v_Empty_Project	– 🗆 X
type filter text	Include Options	
 Resource General Build Arm Compiler 	Configuration: Debug [Active]	V Manage Configurations
Processor Option Optimization Include Options Predefined Symbol > Arm Linker Arm Hex Utility [Disa Arm Objcopy Utility > Debug	Add dir to #include search path (-!) \${SYSCONFIG_TOOL_INCLUDE_PATH} = \$(COM_TI_MSPM0_SDK_INCLUDE_PATH) = \$(CG_TOOL_INCLUDE_PATH) = \$(COM_TI_MSPM0_SDK_INSTALL_DIR)/source/third_party/CMSIS/Core/Include = \$(COM_TI_MSPM0_SDK_INSTALL_DIR)/source = \$(PROJECT_ROOT)/Debug =	 記 室 51 全
< >		
③ Show advanced setting	<u>igs</u>	Apply and Close Cancel

Note: \${COM_TI_MSPM0_SDK_INSTALL_DIR} is a relative file path, it is equal to the absolute file path of your SDK installation. See the details in Variables window: COM_TI_MSPM0_SDK_... Path C:/ti/mspm0_sdk_1_00_00_04

5. Add link file search path for the project (the method refers to step 3):

Properties for Start_New	_Empty_Project			\times
type filter text	File Search Path		¢ •	⇔ ▼ 8
 Resource General Build SysConfig 	Configuration: Debug [Active]	Manag	ge Configur	ations
 Arm Compiler Arm Linker Basic Options 	Include library file or command file as input (library, -l) \$(SYSCONFIG_TOOL_LIBRARIES) = \$(COM_TLMSDMLSDK_LIBRARIES) =		2 1	😭 है। 🏨
File Search Path Advanced Option Arm Hex Utility [Disa Arm Obicopy Utility	C:\ti\ccs1230\ccs\tools\compiler\ti-cgt-armllvm_2.1.3.LTS\lib\libc.a \$(COM_TI_MSPM0_SDK_INSTALL_DIR)/source/ti/driverlib/lib/ticlang/m0p/mspm0l11xc_l13xx/driverlib.a =			
> Debug	Add <dir> to library search path (search_path, -i) \$[SYSCONFIG_TOOL_LIBRARY_PATH] = \$(COM_TI_MSPM0_SDK_LIBRARY_PATH] = \$(CG_TOOL_SEARCH_PATH] =</dir>		2	월 등 <u>8</u>
	 End reread library group (end-group) Search libraries in priority order (priority, -priority) Reread libraries; resolve backward references (reread_libs, -x) Begin reread library group; resolve backward references (start-group) Disable automatic RTS selection (disable, auto_rts) 			
③ Show advanced setting	as Apply and	d Close	Canc	el

6. Add Sysconfig file to project

Note: open a new blank .syscfg file will cause errors, because it has no information for setting up.



type inter text	Basic Options	\$ •
Resource		
✓ Build	Configuration: Debug [Active]	✓ Manage Configu
 SysConfig Basic Options 		
Output		D. (
Miscellaneous	Root system config meta data file in a product or SDK (-s,product) \$(SYSCONFIG TOOL SYSCONFIG MANIFEST) =	२ . स
	\$(COM_TI_MSPM0_SDK_SYSCONFIG_MANIFEST) ==	
	Name of the based / b _ based)	
	Name of the during on defined in the case SOC data (d. during)	
	Name of the device as defined in the core SOC data (-d,device) MSPM0L130X	
	Name of the neckage as defined in the same SOC date (n _ neckage)	
	Name of the package as defined in the core SOC data (-p,package)	
	Name of the package as defined in the core SOC data (-p,package) VQFN-32(RHB) Name of the part as defined in the core SOC data (-r,part) Image: Content of the part as defined in the core SOC data (-r,part)	
	Name of the package as defined in the core SOC data (-p,package) VQFN-32(RHB) Name of the part as defined in the core SOC data (-r,part) VQFN-32(RHB) Name of the context (core name or 'system') to target (-e,context) VQFN-32(RHB)	
	Name of the package as defined in the core SOC data (-p,package) VQFN-32(RHB) Name of the part as defined in the core SOC data (-r,part)	Restore Defaults Ap

6.e Click on "Apply and Close", then open the xx.syscfg file, and you can find it open normally.

7. Add .cmd file & startup file for the device

Project Explorer ×	8871 - 0	🖻 main.c ×	😚 Add files	to Start_New_Empty_Project				×		
 Start_New_Empt Ø Generated Sou 	New	>	$\leftarrow \rightarrow \cdot$	$\begin{array}{c} \leftarrow \rightarrow & \checkmark \uparrow \blacksquare & < mspm0_sdk_1_00_00_04 \Rightarrow source \Rightarrow ti \Rightarrow devices \Rightarrow msp \Rightarrow m0p \Rightarrow & \checkmark \\ \\ Organize \bullet & New folder \end{array}$				✓ ບ		
	Show In Show in Local Terminal Add Files	Alt+Shift+W >	Organize •							
		Ctrl+C Ctrl+V Delete >	" <u> </u>	Name	Date modified	Туре	Size			
> 🗟 main.c	Paste			🧯 linker_files	4/12/2023 10:07 AM	File folder				
> is startup mspm	× Delete			startup_system_files	4/12/2023 10:07 AM	File folder				
Start_New_Emp	Refactor			🞽 mspm0g110x.h	3/3/2023 5:55 AM	H File	58 KB			
	Source			🞽 mspm0g150x.h	3/3/2023 5:55 AM	H File	61 KB			
	Popamo	62		🞽 mspm0g310x.h	3/3/2023 5:55 AM	H File	60 KB			
	hendrie	FE		📔 mspm0g350x.h	3/3/2023 5:55 AM	H File	63 KB			
	Import Export Show Build Settings Build Project Clean Project Rebuild Project Close Project	2		🞽 mspm0l110x.h	3/3/2023 5:55 AM	H File	30 KB			
				📓 mspm0l130x.h	3/3/2023 5:55 AM	H File	32 KB			
				₩ mspm0l134x.h	3/3/2023 5:55 AM	H File	31 KB			
		F5								
	Build Targets Index Build Configurations	>								
	 Debug As Restore from Local History Team Compare With 	>	<u>م</u>	File name: mspm0l110x.h			✓ *.* Open	Cancel		
	Properties	Alt+Enter								

Open the folder and find the correct file for the current device.

8. Finally, you should find you project similarly to the below:



And then, you can compile successfully.

9. Some issues clarification

a. Modify the package or device has no effect.



Check it whether have device or package information in .syscfg file property, delete it if has.

