

Getting Started with C2000 SysConfig

GUI-Based Configuration Tool for C2000 MCUs

A Deeper Look Into SysConfig

SysConfig Is Easy to Incorporate Into Projects

- Examples within C2000Ware SDK already support SysConfig
 - Can import these as the foundation of new projects
- SysConfig easily builds on top of existing projects
 - As easy as adding a `.syscfg` file and a few lines of code
 - Not necessary to start over from scratch

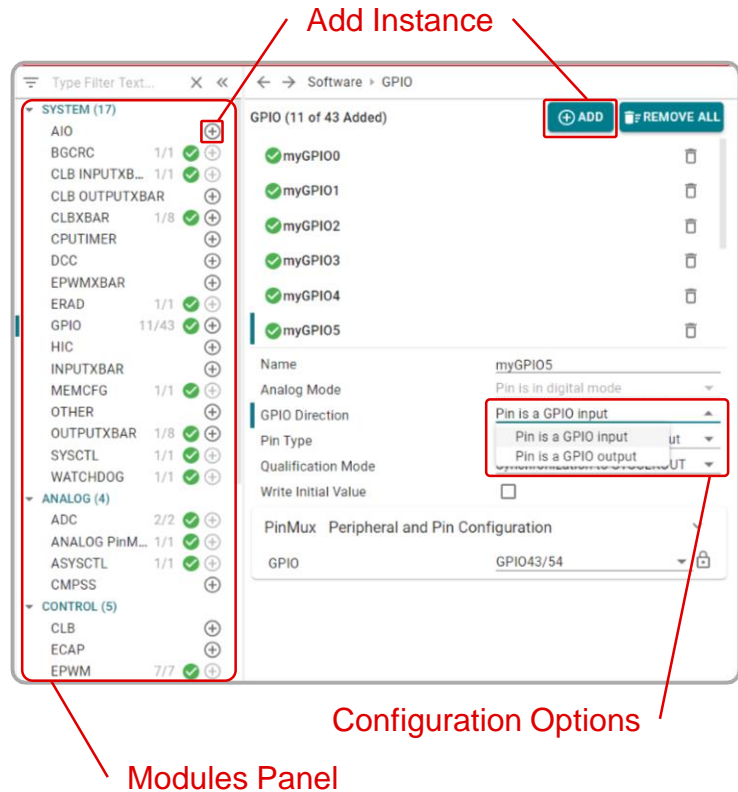


C2000Ware



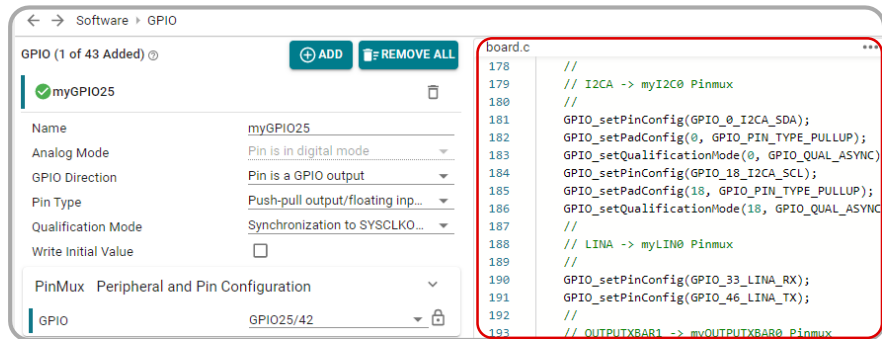
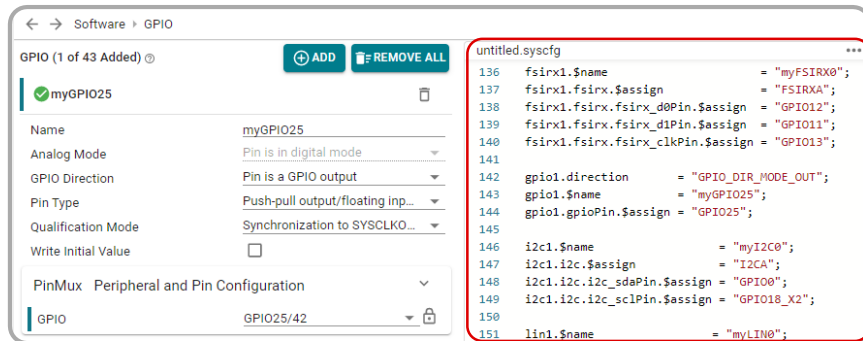
SysConfig Can Configure All Device Peripherals

- Available peripherals for current device show up on **Modules Panel**
 - Modules Panel allows you to see all device peripherals at a glance
 - Add instances of each peripheral by clicking “+” icon
- Each peripheral has many **initialization & configuration options**
 - Able to have exact same peripheral configuration as with DriverLib or bitfield
- SysConfig has built-in calculators



SysConfig Script and Code Generation

- SysConfig settings are stored in a `.syscfg` file
 - Changes are automatically made to script file and interpreted by SysConfig GUI
 - Can view configurations in text editor



- SysConfig automatically generates configuration code that device uses
 - `board.c` contains all initialization code
 - `board.h` contains function prototypes and aliases for module
- Use `Board_init()` function to import initialization code into project

Configuration Validation and Error Detection

- SysConfig provides **automated configuration validation**
 - All changes made to configuration options are continually validated
 - Validated at both peripheral-level and device-level
 - Ensures proper device setup
- Errors in peripheral initialization are displayed in **Problems Panel**
 - Major errors prevent building of code
 - Warnings can be manually suppressed

ADC (2 of 2 Added)

Name	myADC0
ADC Instance	ADCC ✖ The ADC Instance used. Duplicates: ADCC_BASE
ADC Clock Prescaler	ADCCCLK = (input clock) / 1.0
High Priority Mode SOCs	Round robin mode is used for all
SOC Configurations Start of Conversion Configurations	
✖ ADC INT Configurations Interrupt Configurations	
ADC Interrupt Pulse Mode	Occurs at the end of the acquisition window
ADC Interrupt Cycle Offset	1194684 ✖ Interrupt cycle offset must be between 0 and 0xFFFF
Enable ADC Interrupts	ADCINT1 Interrupt
INT1	ADC Interrupt 1

Improper Configurations

Click (i) to show Problems

Summary of Errors

Location	Details
✖ myADC1	The ADC Instance used. Duplicates: ADCC_BASE
✖ myGPIO25	Resource conflict
✖ myCLB0	This CLB input is only applicable for CLB 2
✖ myADC0	The ADC Instance used. Duplicates: ADCC_BASE
✖ myADC0	Interrupt cycle offset must be between 0 and 0xFFFF

Helpful SysConfig Resources

- Test out [SysConfig in the Cloud](#)
- Download [Standalone SysConfig Tool](#)
- Learning Material
 - Application Report: [C2000 SysConfig](#)
 - SysConfig Training Module and Hands-On Lab in [C2000 Academy](#)
 - [Speed Up Development With C2000™ Real-Time MCUs Using SysConfig](#)
 - [C2000 SysConfig Software Guide](#)

Check Video Description for Additional Resources