

2025 Configurable Logic Design Challenge

Think Outside the Blocks



Getting Started Guide

1. Download Our Software Toolchain



MPLAB® X IDE

Configure, develop, debug and qualify embedded designs



MPLAB XC8 Compiler

Optimize the code on your 8-bit PIC® or AVR® microcontroller (MCU) design



MPLAB Code Configurator (MCC)

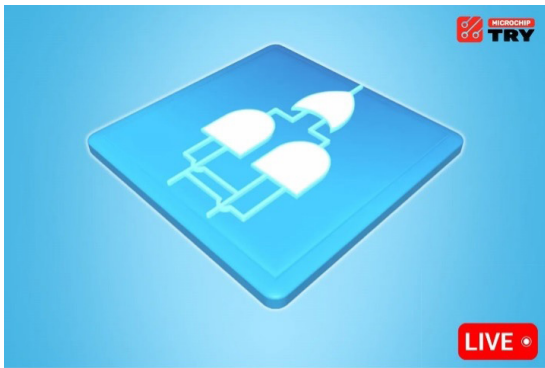
Generate code seamlessly and configure effortlessly

Watch our [short video](#) for step-by-step instructions on how to download these tools.

2. Learn How to Use MPLAB X IDE

Follow this [simple example](#) to get familiar with MPLAB X IDE.

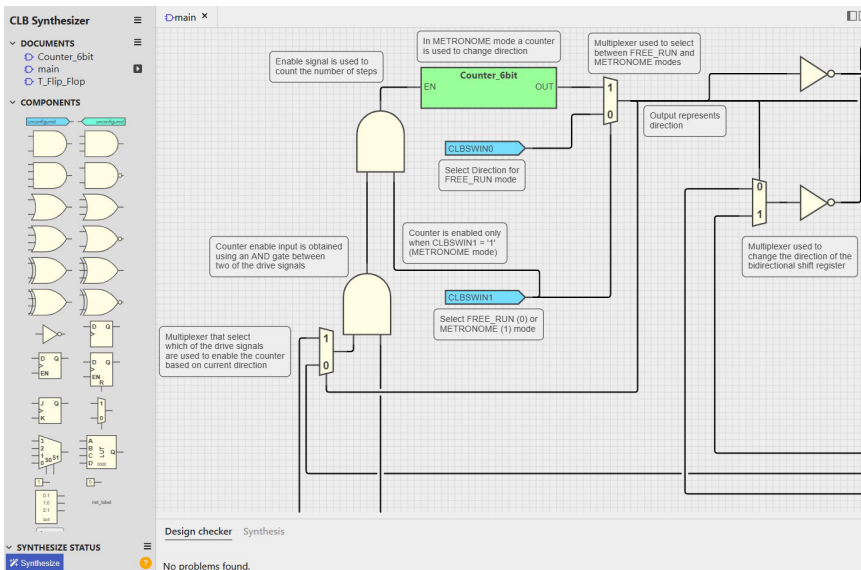
3. Get Started With the Configurable Logic Block (CLB)



The CLB is a reconfigurable digital logic module, similar to a small FPGA, integrated into the MCU. Watch our [overview video](#) or visit the [CLB web page](#) to learn how the CLB simplifies logic design and enhances system flexibility through dynamic reconfiguration capabilities. If you're ready to see the CLB in action, [try it now](#) using Microchip Try.

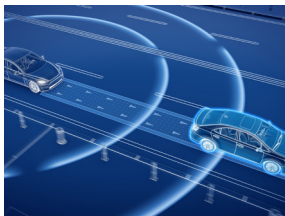
4. Learn How to Use the CLB Synthesizer

The CLB Synthesizer is a graphical CLB configuration tool integrated into MPLAB Code Configurator (MCC) for increased development speed and convenience. Watch our [CLB Synthesizer video](#) or start [exploring the tool](#) now.



5. Get Inspired: CLB Examples

Explore our CLB examples and check out the [CLB tips and tricks](#) created by our experts to take your design to the next level.



Zero-Software Ultrasonic Distance Sensing



Zero-Software eDice



Build a Tachometer



Now you are ready to unleash your creativity with the CLB. Don't miss out on the chance to win big by participating in our 2025 Configurable Design Challenge and "thinking outside the blocks". Abstract submissions open February 25, 2025.