PICDEM™ LAB II Development Board

Summary

The PICDEM Lab II Development Board (Part Number DM163046) is a development and teaching platform for use with 8-bit PIC® microcontrollers (MCUs). At its center, a large prototyping breadboard enables users to easily experiment with different values and configurations of analog components for system optimization. Several external connectors allow for user-customizable expansion, while our library of labs and application notes enrich the development experience. The PICDEM Lab II Development Board is also fully compatible with our latest software development environment.

Embedded Development Powerhouse

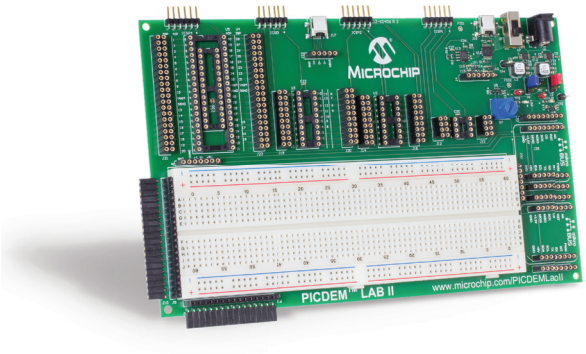
The original PICDEM Lab Development Board has remained one of the most popular development tools for PIC MCUs since its introduction. Microchip has taken this concept and expanded it for 21st century embedded development. The PICDEM Lab II Development Board supports any 8-bit PIC microcontroller (6-, 8-, 14-, 18-, 20-, 28- and 40-pin footprints), and provides an expansive array of connections for programming, I/O, analog and communications interfaces. The PICDEM Lab II Development Board will be a valuable resource to engineers across a broad spectrum of specialties—from analog designers looking to explore the power and flexibility of MCU-based systems to engineering professors seeking a flexible and relevant teaching tool that they can add to their curricula.

Hardware Flexibility Enables Experimentation

In keeping with the original, the PICDEM Lab II Development Board was designed to give you a simple development experience without the hassle and expense of building a custom PCB in the early stages of your project. You can design a system with one or several PIC MCUs, since power and programming connections are replicated across all of the available sockets. Off-chip connections can be made in any manner, and the expansive breadboard provides a convenient area to add analog signal conditioning and drive components to a design. Three separate power supplies give the capability to provide fixed or variable voltage to a system. With several industry-standard interfaces in addition to a system of configurable connectors, the off-board expansion possibilities are abundant.

Share Ideas with Lab

PICDEM Lab II is the perfect tool for sharing and acquiring new design ideas. To spur creativity, Microchip offers a series of labs, complete with bill of materials, user code and application notes. The hardware for the first four labs are included in the box, and others can be obtained from www.microchip.com/PICDEMLabII. Join the Microchip forums, share your ideas and become part of the community!



Connection Points

The PICDEM Lab II Development Board supports a large number of options to easily add functionality to your design, from a simple RS232 interface to Bluetooth® Low Energy.

- **Power Distribution Connectors** – Supply power to other parts of your design using one of the PICDEM Lab II Development Board's on-board power supplies.
- **USB to I²C™** – Use the USB interface for diagnostic or control interfaces without worrying about the specifics of USB communication. USB to I²C conversion is handled automatically.
- **MikroElektronika Click™ Board Support** – Two sockets give you access to nearly 100 inexpensive add-on boards, with capabilities ranging from GPS to alcohol sensing.
- **LCD Module Connector** – A simple 16-pin connector supports a number of standard segment LCD module interfaces.
- **20-pin Add-On Board Connector** – Design your own add-on boards for sensor connectivity or motor drive, and connect them with this simple interface.

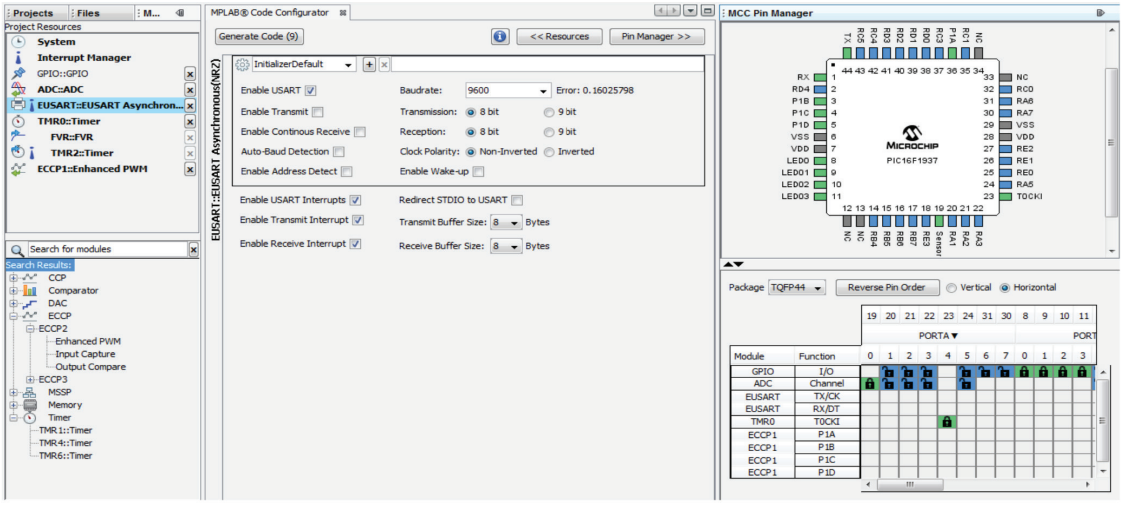
Key Features

- Supports all 8-bit PIC MCUs from 6 to 40 pins
- Programming headers and power connections for all MCU sockets
- Three individual power supplies
  - 5V, 3.3V, variable (1.5–4.5V)
- Large breadboard area for external analog and sensor connections
- External connections for industry-standard communications and expansion interfaces
- Lab hardware and documentation for four labs included in the box

MICROCHIP

Made for MPLAB® Code Configurator

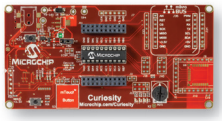
The PICDEM Lab II Development Board seamlessly integrates with MPLAB Code Configurator (MCC) for a modern embedded development experience. MCC is a free software plug-in that bridges our MCUs, development hardware and MPLAB X Integrated Development Environment (IDE). It allows you to generate easily modifiable, production-ready application code for many 8-bit PIC MCUs in just a few mouse clicks. Find out more at www.microchip.com/MCC.



Whether you're an analog engineer looking to add intelligent closed-loop control to your design, or a university professor who desires an extremely versatile teaching platform, the PICDEM Lab II Development Board can fulfill your requirements. Flexible hardware, seamless integration with our latest development environment and a wide array of supporting labs give you the functionality you need and the freedom to innovate.

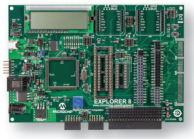
Other Development Hardware for 8-bit PIC Microcontrollers

Curiosity Development Board (DM164137)



The Curiosity Development Board is targeted at first-time users, hobbyists and those seeking a low-cost rapid-prototyping board. The Curiosity Development Board has an on-board programmer/debugger, and can be expanded using any of MikroElektronika's Click boards. Bluetooth Low Energy is also supported when using an optional RN4020 Bluetooth module.

Explorer 8 Development Kit (DM160228)



The Explorer 8 Development Kit is a full-featured development platform. It supports the largest number of 8-bit PIC microcontrollers ranging from 6 to 100 pins, making it the most versatile development board in our lineup. Featuring available Bluetooth expansion, MikroElektronika Click board support, and an expansion header for add-on boards, this kit provides professional users with a comprehensive development experience.

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www.microchip.com/8bit

Visit our web site for additional product information and to locate your local sales office.

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