

Explorer 8 Development Kit

Summary

The Explorer 8 Development Kit (part number DM160228) is a full-featured development board and platform for 8-bit PIC® microcontrollers. This kit is a versatile development solution, featuring several options for external sensors, off-board communication and human interface. Additionally, it offers ample room for expansion, making it an excellent solution for developers and engineers looking for a tool with the largest number of supported 8-bit PIC MCUs.

Enterprise-Class 8-bit Development

The Explorer 8 Development Kit is the latest offering in a long line of enterprise-class tools for 8-bit PIC microcontrollers. The board is an evolution of the popular PIC18 Explorer Board, and has been updated to take advantage of our most modern features including:

- On-chip Core Independent Peripherals
- Compatibility with all PIC MCUs
- 8-, 14-, 20-, 28-, 40/44-, 64- and 80-pin footprints

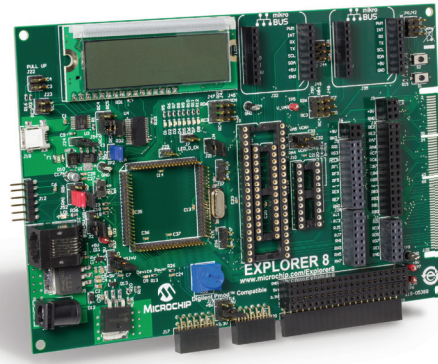
With the Explorer 8 Development Kit, you can have a single development platform that allows you to update a legacy design while supporting our newest MCU offerings.

All-in-One Solution

Microchip designed the Explorer 8 Development Kit to be your main tool for 8-bit development with support for a wide variety of functions. On-board components enable easy development of human interface, power conversion, Internet of Things (IoT), battery charging and other applications using a powerful 8-bit PIC microcontroller. Additionally, the Explorer 8 Development Kit also has a large capacity for expansion. Two Digilent Pmod™ interfaces, two MikroElektronika Click™ board sockets and two custom expansion headers allow you to quickly adapt as your development needs change. The Explorer 8 Development Kit supports several program and debug solutions including the PICKIT™ 3, ICD 3 and MPLAB® REAL ICE™ In-Circuit Emulator.

Explore New Ideas

As with all of our modern development platforms, the Explorer 8 Development Kit is designed to use the internet as a conduit for design ideas. To that end, we provide application and code examples for many new 8-bit PIC MCUs on our website in order to energize your creativity. Code examples and application schematics can be found at www.microchip.com/Explorer8.



Connection Points

The Explorer 8 Development Kit supports several options to easily add functionality to your design.

- *Micro USB to I²C or Serial* – Use the USB interface for diagnostic or control interfaces. USB to I²C/serial conversion is handled automatically.
- *MikroElektronika Click Board Support* – Two sockets provide access to nearly 100 add-on boards, with capabilities ranging from GPS to alcohol sensing.
- *Digilent Pmod Support* – Two 12-pin interfaces provide access to expansion boards with options for communications, sensing and power conversion capability.
- *Multiple Expansion Options* – A legacy expansion header for PICTail™ daughter card connectivity and a 120-pin edge connector enable you to expand the Explorer 8 Development Kit's capability to suit your needs.
- *20-pin Add-On Board Connector* – Design your own add-on boards for sensor interface or motor drive, and connect them with this simple header.

Key Features

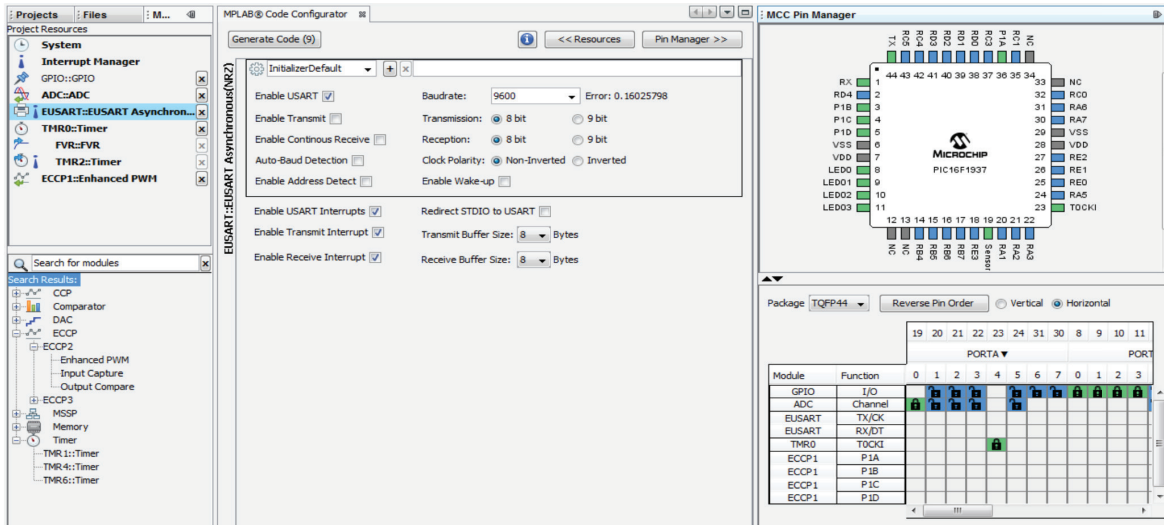
- Supports all 8-bit PIC microcontrollers from 8 to 80 pins
- Programming headers and power connections for all MCU sockets
- Three individual power supplies
 - 5V, 3.3V, variable (1.5–4.5V)
- 16 × 2 character LCD module
- External connections for industry-standard communications and expansion interfaces
- RS232 and Bluetooth® Low Energy interfaces
- Push button switches for device reset and user-defined inputs



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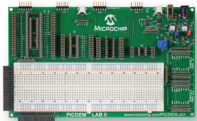
Made for MPLAB Code Configurator

The Explorer 8 Development Kit 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.



Other Development Hardware for 8-bit PIC Microcontrollers

PICDEM™ Lab II Development Board (DM1636046)



The PICDEM Lab II Development Board is an update to the popular PICDEM Lab Development Board. Its extreme flexibility and available peripherals make it an excellent choice for those

designing power supplies, motor drive circuits or other analog-intensive systems.

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.



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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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