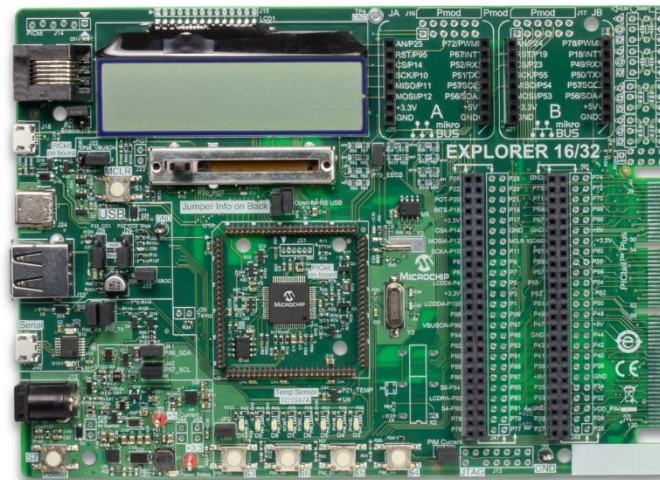




Part Number	Description
DM240001-2	Explorer 16/32 Development Board



Overview

The Explorer 16/32 Development Board is a flexible and convenient development, demonstration and testing platform for 16-bit PIC24 MCUs, dsPIC[®] DSCs and 32-bit PIC32 MCUs from Microchip Technology. It features all the necessary hardware to begin developing and debugging a complete embedded application. The board accepts Processor Plug-In Modules (PIMs) designed for the Explorer 16 or Explorer 16/32 development board for easy device swapping. In addition to the hardware features provided by the board, hardware expansion is possible through the use of PICtail™ Plus daughter cards and mikroBUS™ accessory boards. Coupled with the integrated PICKit™-On-Board (PKOB), MPLAB ICD 3 In-Circuit Debugger or MPLAB REAL ICE™ real-time emulation and debug facilities enable faster evaluation and prototyping of application.

Explorer 16/32 Development Board offers only the main board, giving the option to customize the other necessary components. Choose PIM of your choice based on MCUs and DSCs under consideration from wide range of Processor Plug-In Modules. This board is optimal for customers migrating from Classic Explorer 16 to new Explorer 16/32 platform, while all the necessary additional components like Processor Plug-In Modules and PICtail™ Plus Daughter Boards are already available.

Backwards Compatibility

Explorer 16/32 Development Board is completely backwards compatible with the Classic Explorer 16 Development Board (DM240001 and DM240002) and its associated ecosystem that include:

- Processor Plug-In Modules (PIMs)
- PICTail™ Plus Daughter Boards
- Code Examples, Prototypes and Software Libraries developed on Classic Explorer 16 development Board

Use all of existing codes, libraries, prototypes, PIMs and the PICTail Plus daughter cards interfaced via side PICTail Plus connector directly. Re-use the PICTail Plus daughter cards interfaced via vertical PICTail Plus connector using additional PICTail Plus Expansion Board (AC240100).

Getting Started

- Read the Explorer 16/32 User's Manual (available at Documentation and Software section of this page)
- Download the free MPLAB X IDE
- Download the suitable MPLAB XC Compiler
- Download and unzip the appropriate firmware demo code (available at Documentation & Software section of this page)

Features

- 100 pin Plug-In Module (PIM) socket, supporting a wide variety of 16-bit and 32-bit PIC® MCUs and dsPIC® DSCs
- Power supply
 - USB Power through PICKit™-On-Board (PKOB), USB Type-C™ or USB-Serial Converter
 - 9-15V DC Power Supply
- On board USB to UART/I2C™ adapter for data exchange with PC/Mac/Linux based host
- USB Type-C™ (host/device) and Type-A (host) support for applications using USB microcontroller
- Hardware functionality extension by attaching accessory boards via
 - PICTail™ Plus interface
 - 2x MikroElektronika mikroBUS™ interface
 - 2x Digilent Pmod™ footprint
- Alpha-numeric 16 x 2 LCD display, 8x User LEDs, 4x Push Buttons, 10k potentiometer
- Microchip's TC1047A high accuracy, analog output temperature sensor
- Programmer/Debugger
 - Integrated USB programmer/debugger - PICKit™-On-Board (PKOB)
 - Interfaces to MPLAB ICD 3, MPLAB REAL ICE™, PICKit™ 3
- Support for all the existing and new PICTail™ Plus Daughter Cards
 - Interface PICTail™ Plus Daughter Cards connected via side PICTail™ Plus connector directly
 - Interface PICTail™ Plus Daughter Cards connected via vertical PICTail™ Plus connector through additional accessory - PICTail™ Plus Expansion Board

Package Contents

Explorer 16/32 main development board