Curiosity Development Boards

Summary

Your next embedded design idea has a new home. Our Curiosity Development Boards offer a cost-effective, fully integrated microcontroller (MCU) development platform targeted at first-time users, makers and those seeking a feature-rich rapid prototyping board. Designed from the ground up to take full advantage of Microchip's MPLAB® X and MPLAB Xpress Integrated Development Environments, the Curiosity platform includes an integrated programmer/debugger and requires no additional hardware to get started. There are several Curiosity Development Boards to choose from, supporting 8-, 16- and 32-bit PIC® MCUs and 16-bit dsPIC33 DSCs.



Your Tool for Function Enablement

The Curiosity Development Boards are the perfect platforms to harness the power of modern 8-, 16- and 32-bit PIC MCUs and 16-bit dsPIC33 DSCs. Their layout and external connections offer unparalleled access to the advanced peripherals on many newer PIC MCUs and dsPIC33 DSCs. These peripherals enable you to integrate various system functions onto a single MCU, simplifying your design and keeping system power consumption and BOM cost low.

Internet of Things (IoT) Ready

Do you have an IoT design idea? These Development Boards can help you make your IoT design idea a reality. Out of the box, these boards offer several options for user interface—including physical switches, mTouch® capacitive sensing and on-board potentiometers. A full complement of accessory boards is available via the MikroElectronika mikroBUS™ interface footprint. In addition, some members of the Curiosity Development Board family include Wi-Fi® and Bluetooth® connectivity.

Share Your Curiosity

Do you need a few ideas on architecting your next design? The Curiosity Development Boards are the perfect tools for sharing and acquiring new design ideas. To spur creativity, Microchip offers a series of examples, complete with bill of materials, user code and application notes. These helpful design tips can be found at www.microchip.com/curiosity. We also encourage you to join the Microchip forums, share your ideas and become part of the community.

Key Features

The Curiosity Development Boards give you more value for your money. They can be operated as an all-in-one development platform, or you can customize them to suit your individual needs.

- One development platform that supports 8-, 16- and 32-bit PIC® MCUs and 16-bit dsPIC33 DSCs
- Integrated programmer/debugger with USB interface
- Integrates seamlessly with MPLAB X IDE, MPLAB Code Configurator and MPLAB Harmony
- Various user interface options: mTouch buttons, analog potentiometer, physical switches and RGB LEDs
- mikroBUS support with hundreds of MikroElectronika add-on click boards™ available

Compatible with MPLAB Xpress IDE

Getting started with your Curiosity Development Board is easy. Navigate to the MPLAB Xpress Cloud-based IDE to begin developing your project at http://mplabxpress.microchip.com.

MPLAB Xpress contains the most popular features of our award-winning MPLAB X IDE. This simplified and distilled application is a faithful reproduction of our desktop-based program that allows an easy transition between the two environments. MPLAB Xpress is a perfect starting point for new users of PIC MCUs—with no downloads, no machine configuration and no waiting to get started on your system development.

8-bit

Curiosity Development Board (DM164137)

The original Curiosity Development Board continues to be one of our most popular development boards. The Curiosity Development Board is designed to support 8-, 14- and 20-pin 8-bit PIC MCUs with low-voltage programming capability.

Curiosity High Pin Count Development Board (DM164136)

The Curiosity High Pin Count (HPC) Development Board supports 8-bit PIC MCUs in an expanded range of pin counts. With two DIP sockets on board, the Curiosity HPC Development Board is designed for development with 28- and 40-pin PIC MCUs with low-voltage programming capability.

16-bit

PIC24F Curiosity Development Board (DM240004)

The PIC24F Curiosity Board is a low-cost development platform with an integrated programmer and debugger and offers easy expandability with a mikroBUS interface to utilize click boards for customizing your application. This board features the PIC24FJ-128GA204 eXtreme Low Power (XLP) device.

PIC24FJ256GA7 Curiosity Development Board (DM240016)

The PIC24FJ256GA7 Curiosity Development Board is a low-cost platform with an integrated programmer and debugger and offers easy expandability with two mikroBUS interfaces to utilize click boards™ for customizing your application. This board features the PIC24FJ256GA705 eXtreme Low Power (XLP), low-cost device with a rich set of peripherals to evaluate the PIC24FJ256GA705 family.

dsPIC33CH Curiosity Development Board (DM330028-2) and dsPIC33CK Curiosity Development Board (DM330030)

dsPIC33CH and dsPIC33CK Curiosity Development Boards are cost-effective development and demonstration platforms for the dsPIC33CH family of dual-core and the dsPIC33CK family of single-core high performance digital signal controllers respectively. These boards include an integrated programmer/debugger and require no additional hardware, making it a perfect starting point to explore the dual-core and the single-core DSCs. They also feature configurable Switch Mode Power Supply (SMPS) test circuit and provide two mikroBUS interfaces for hardware expansion.

32-bit

Curiosity PIC32MZEF Development Board (DM320104)

The Curiosity PIC32MZEF Development Board is a fully integrated 32-bit development platform featuring the high-performance PIC32MZ EF Series (PIC32MZ2048FM) MCU with 2 MB Flash, 512 KB RAM, integrated FPU, crypto accelerator and excellent connectivity options including an integrated MRF24WN0MA Wi-Fi module.

Curiosity PIC32MX470 Development Board (DM320103)

The Curiosity PIC32MX470 Development Board highlights the capabilities of PIC32MX MCUs (PIC32MX470512H) with 120 MHz clock speed, an on-chip full-speed USB interface and multiple expansion options. In addition to the standard mikroBUS sockets, this board has a footprint for the BM64 Bluetooth Module for Bluetooth audio and Bluetooth Low Energy application development.

Curiosity PIC32MM Development Board (DM320101)

The Curiosity PIC32MM Development Board features the new XLP PIC32MM "GPL" family (PIC32MM0064GPL036) of low-cost MCUs. This board is a simple and easy-to-use platform that facilitates quick PIC32MM evaluation, experimentation and application prototyping. Due to its eXtreme Low Power, low cost and expansion capabilities, this board is ideal for developing battery-operated applications, portable medical monitoring devices and IoT sensor nodes.

Curiosity PIC32MM USB Development Board (DM320107)

The PIC32MM USB Curiosity Development Board features the new eXtreme Low Power (XLP), PIC32MM “GPM” family of low cost microcontrollers. This board is a simple and easy to use platform that facilitates quick PIC32MM GPM evaluation, experimentation and application prototyping. The board features 2 MikroElektronika mikroBUS™ expansion interfaces that gives the user access to add-on click boards™, a USB micro B connector for USB device applications and two X32 Interfaces that facilitates access to the PIC32 Audio Codec Daughter Card making this an ideal evaluation board for audio noise cancellation, USB headphones, hi-resolution audio, Bluetooth audio and other general purpose applications.

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