

# MPLAB® PICKit™ 3 Debug Express

## In-Circuit Debugging Basics

Microchip's MPLAB PICKit 3 In-Circuit Debugger/Programmer uses in-circuit debugging logic incorporated into each chip with Flash memory to provide a low-cost hardware debugger and programmer. In-circuit debugging offers these benefits:

- Low cost
- Minimum of additional hardware needed for debug
- No expensive sockets or adapters required
- Production and post-production products can be re-flashed with firmware updates

The PICKit 3 Debug Express includes PICKit 3 debug programmer, the 44-pin demo board with a PIC18F45K20 microcontroller, all cables and a CD that includes the following:

- MPLAB C for PIC18 Microcontrollers
- PICKit 3 User's Guide
- A series of 12 lessons on assembly programming that cover I/O, A/D converters, timers, interrupts and data tables (all source code files are provided)
- A debugging tutorial on using the PICKit 3 as a debugger with the MPLAB IDE
- A FREE CCS compiler for the PIC18F45K20 (2k Word Program Limit)
- HI-TECH PICC™ LITE C Compiler
- Microchip's MPLAB IDE software for a complete code development environment

## All-in-one Debugger/Programmer Solution for Flash Products

The MPLAB PICKit 3 allows debugging and programming of PIC® and dsPIC® Flash microcontrollers at a most affordable price point using the powerful graphical user interface of the MPLAB Integrated Development Environment (IDE). The MPLAB PICKit 3 is connected to the design engineer's PC using a full speed USB interface and can be connected to the target via a Microchip debug (RJ-11) connector (compatible with MPLAB ICD 2/3 and MPLAB REAL ICETM). The connector uses two device I/O pins and the reset line to implement in-circuit debugging and In-Circuit Serial Programming™.



## Features

- USB (full-speed 2 Mbit interface to host PC)
- Real-time execution
- Built-in over voltage/short circuit monitor
- Firmware upgradable from PC/web download
- Totally enclosed debugger/programmer unit
- Supports low voltage to 2.0 volts (2.0 to 6.0 range)
- Supplies up to 30 ma to power small designs
- Diagnostic LEDs (Power, Busy, Error)
- Read/Write program and data memory of microcontroller
- Erase of program memory space with verification
- Freeze-peripherals at breakpoint



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## Products Supported

The MPLAB® PICkit 3 currently supports most PIC® and dsPIC® Flash microcontrollers. A review of the release notes located in MPLAB IDE is recommended for the most current list of supported parts. As new device firmware becomes available, free downloads are available at [www.microchip.com](http://www.microchip.com).

## Host System Requirements

- PC-compatible system with an Intel Pentium® class or higher processor, or equivalent
- CD-ROM drive
- Available USB port
- Microsoft Windows® 2000, Windows XP® or Windows Vista®

### Part Numbers and Ordering Information MPLAB® PICkit 3 Debug Express and Accessories

Part Number	Description	Availability
DV164131	MPLAB® PICkit 3 Debug Express	Now
AC164110	RJ-11 to ICSP™ Adapter	Now

### Development Tools from Microchip

Part Number	Development Tool	Description
DV164035	MPLAB ICD 3 In-Circuit Debugger	High-performance Debugger for Flash DSC and MCU devices
SW006011	MPLAB C Compiler for PIC18 MCUs	C Compiler for PIC18CXXX MCUs
SW006012	MPLAB C Compiler for PIC24 MCUs and dsPIC® DSCs	C Compiler for dsPIC30F MCUs
SW006015	MPLAB C Compiler for PIC32 MCUs	C Compiler for PIC32 MCUs
DV007004	MPLAB PM3 Universal Device Programmer	Full-featured Modular Device Programmer
DM240001	Explorer 16 Development Board	Modular Development System for 16-bit MCUs
DV244005	MPLAB REAL ICE™ Probe Kit	High-speed Emulator for Flash DSC and MCU devices
DM320001	PIC32 Starter Kit	Starter Kit for High-performance PIC32 MCU family
DM240011	MPLAB Starter Kit for PIC24F	Starter Kit for PIC24F MCU family
DM330011	MPLAB Starter Kit for dsPIC DSC	Starter Kit for dsPIC DSC devices



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[www.microchip.com/developmenttools](http://www.microchip.com/developmenttools)

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