

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 ICE™). 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.

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

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

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