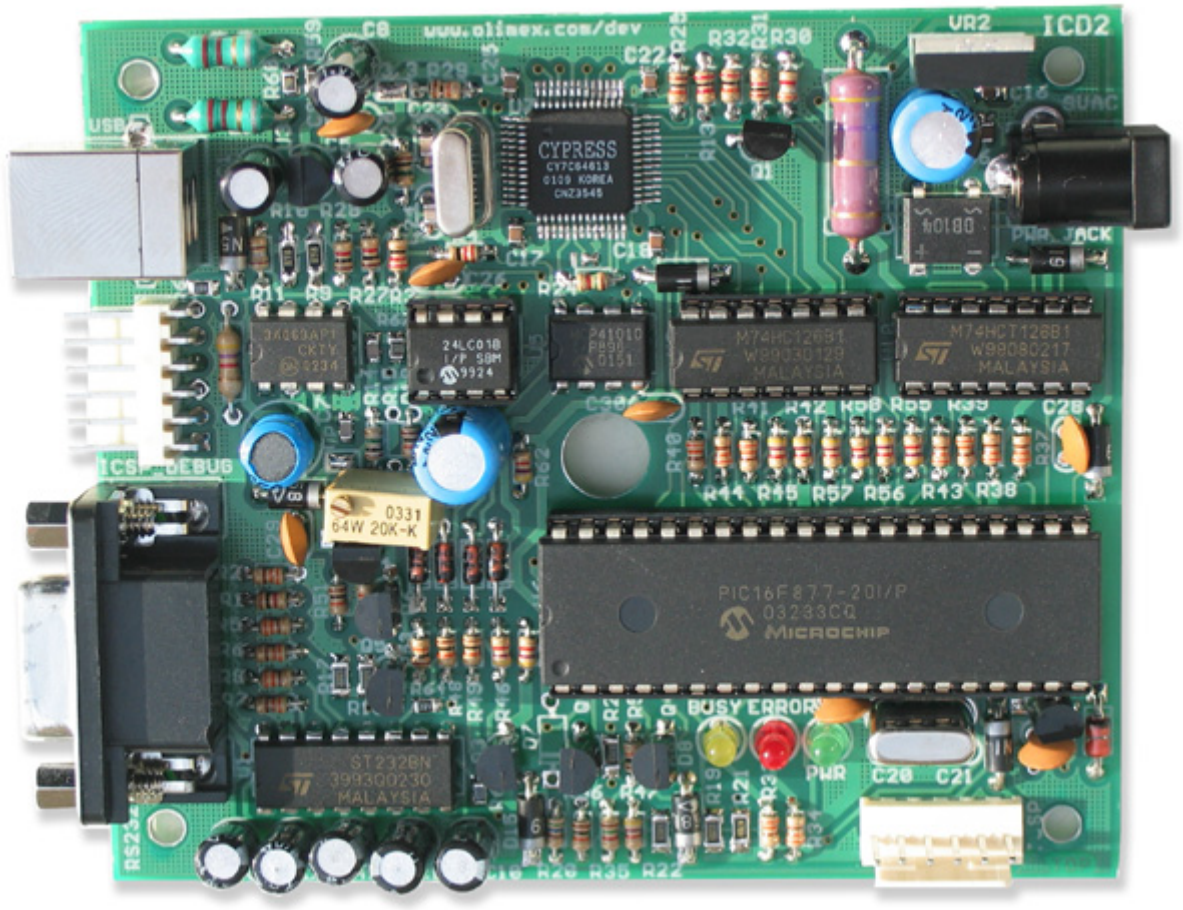
PIC-ICD2 PIC MICROCONTROLLER IN-CIRCUIT DEBUGGER AND PROGRAMMER



INFO:

PIC-ICD2 debugger and programmer is completely replacement of Microchip's original MPBA-ICD2 and with it you can do everything you can do with the original MPLAB-ICD2. PIC-ICD2 is a low cost, real-time debugger and programmer for selected PIC® MCUs and dsPIC® DSCs. Programs can be downloaded, executed in real time and examined in detail with the debug functions of MPLAB. Set watch variables and breakpoints from symbolic labels in C or assembly source code, and single step through C source lines or into assembly code. PIC-ICD2 can also be used as a development programmer for supported MCUs. The secret behind In Circuit Debugging is two dedicated hardware lines (microcontroller pins used only during debugging mode) that control In Circuit Serial Programming™ (ICSP™) of the device and, afterwards, debugging through proprietary, on-chip firmware. The ICD 2 debug features are built into the microcontroller and activated by programming the debug code into the target processor. There is some shared overhead expense that includes one stack level, some general purpose file registers and a small area of program memory.

FEATURES:

- USB (Full Speed 2 M bits/s) interface to host PC
- Real time background debugging
- MPLAB IDE GUI (latest release available for free download from Microchip's web site)
- Built in over-voltage/short circuit monitor
- Firmware upgradeable from PC
- Light plastic enclosure

- Supports low voltage to 2.0 volts. (2.0 to 6.0 range)
- Diagnostic LEDz (Power, Busy, Error)
- Reading/Writing memory space and EEDATA areas of target microcontroller
- Programs configuration bits
- Erase of program memory space with verification
- Peripheral freeze-on-halt stops timers at breakpoints

HARDWARE:

PIC ICSP connector (top view)

SOFTWARE:

MPLAB-IDE - you can download the latest version from Microchip's web site

FAQ:

Q: What's the difference between PIC-ICD2 and MPLAB-ICD2?
A: There is no functional difference between them and PIC-ICD2 is 100% compatible to MPLAB-ICD2. The only difference is the ICSP connector - Microchip uses RJ45 phone jack connector, we use 0.1" step connector

Q: Why on PIC-ICD2 there are teo ICSP connectors, which one I should use?
A: You should use the connector labeled ICSP-DEBUG next to USB connector, the other ICSP connector (down right on the picture) is the connector which we use to load PIC-ICD2 firmware and diagnostic the PIC-ICD2 during production tests.

Q: What should I know when connect PIC-ICD2 to target board.
A: It's very important your target PIC MCLR to not be connected directly to VCC! During the programming/debugging MCLR goes as high as 13VDC and if your target MCLR is connected directly to target VCC you will blow either PIC-ICD2 either your target board. Use always 10K pullup resistor from MCLR to VCC.

Q: What should I know when work PIC-ICD2 and RS232 port .
A: COM port should be set with HARDWARE FLOW CONTROL and FIFO buffers DISABLED!

Q: I'm on very low budged. What is the difference between PIC-ICD2 and PIC-ICD2-TINY?
A: There are two major differences between PIC-ICD2 and PIC-ICD2-TINY: 1. TINY have only RS232 port and works slower than PIC-ICD2; 2. TINY have fixed 13VDC Vpp while PIC-ICD2 have variable voltage Vpp, some new PIC microcontrollers have max.limit of 12.5V for Vpp and diode drop circuit should be used if you work with TINY

ORDERING CODES:

PIC-ICD2 completely assembled and tested + ICSP cable