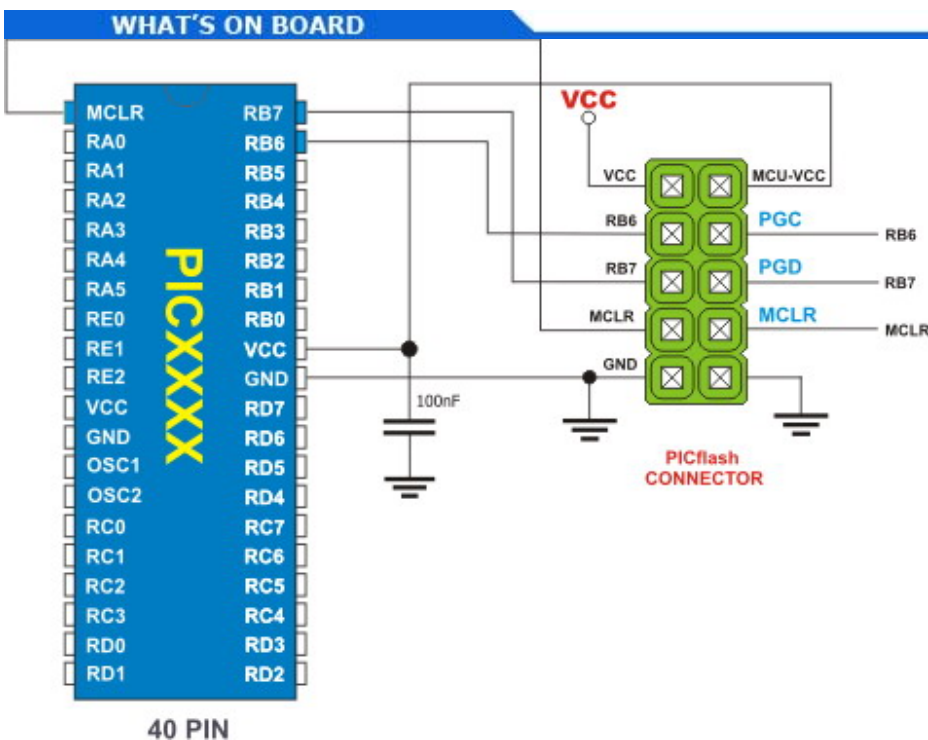


PICFlash with mikroCD support is a programmer and in-circuit debugger for the Microchip's **FLASH** microcontroller family.

2in1 HARDWARE
IN-CIRCUIT
DEBUGGER
DEVELOPMENT
SYSTEM USB 2.0
ON-BOARD
PROGRAMMER

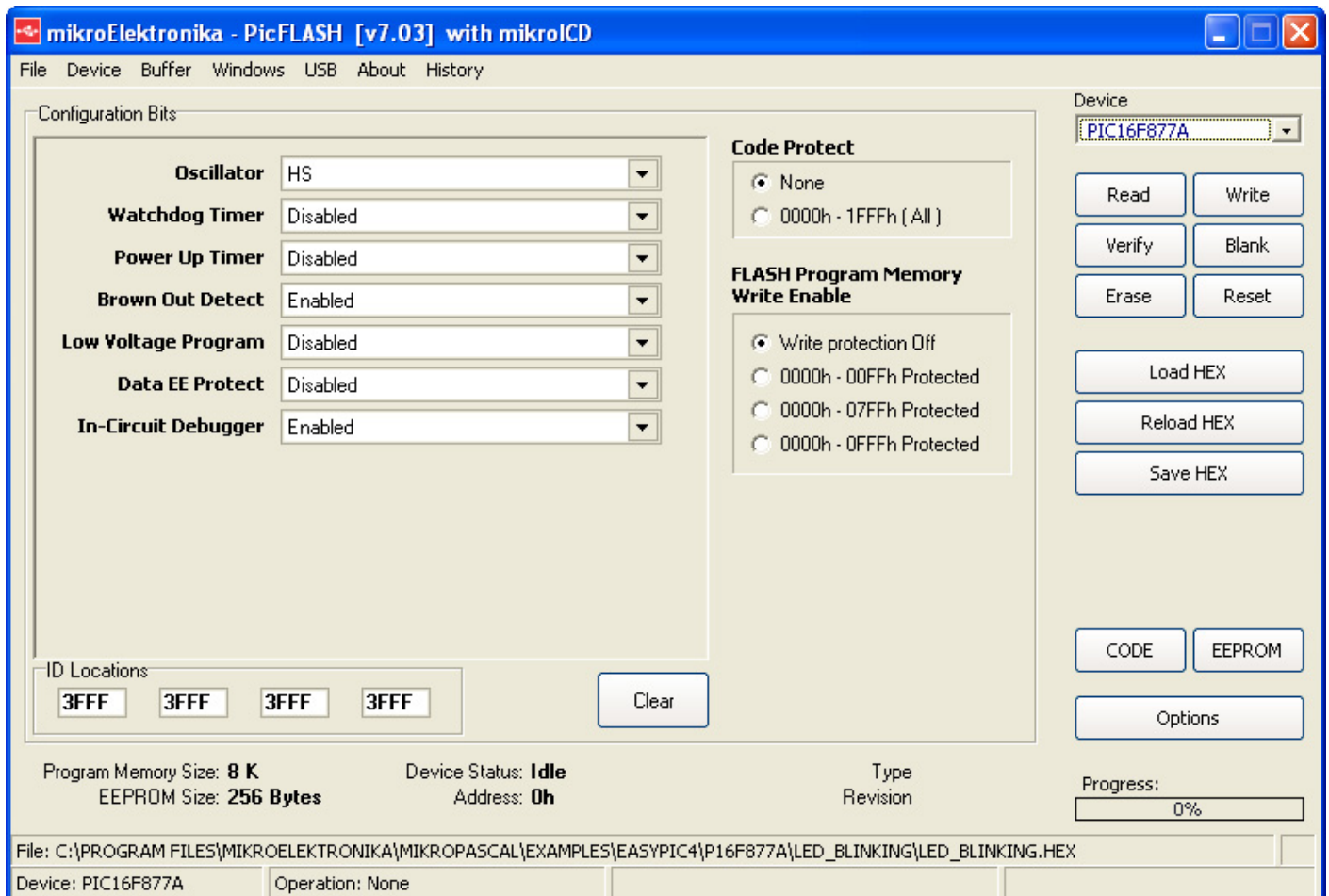
Our latest PICFlash with mikroCD support Programmer is driven and powered from a **single USB port** on your computer. No additional **AC power** adapter is needed. The programmer is **recognized** by Windows, which simplifies driver **installation**. The programmer board is specifically designed for **In-Circuit Serial Programming (ICSP)**. There are marks on programmer which describes connections to the microcontroller, operation modes, and some other useful notes..



When connected to a device or a development system, it becomes IN-SYSTEM programmer.

When plugged in ZIF socket, it becomes a standard programmer. You can order optional ZIF socket, used only for high volume production.

One of the possibilities for connecting PICFlash to a microcontroller is via an **IDC10 connector**. Look at the picture on the right side. All you have to do is to put one 2x5 connector between microcontroller and other parts of the board. Inserting PICFlash connector you will be able to program **PIC In System**.



2 in 1 Development Tool - USB 2.0 on-board programmer - PICFlash + mikro ICD : mikro ICD is a highly effective tool for Real-Time debugging on a hardware level. The ICD debugger enables you to execute a mikroC/mikroPascal/mikroBasic program on a host PIC microcontroller and view variable values, Special Function Registers (SFR), memory and EEPROM as the program is running. Also there is **PICFlash USB 2.0** – an ultra fast USB 2.0 programmer for fast MCU programming. Continuing its tradition as the fastest PIC programmer on the market, the new PICFlash with mikroICD now supports more PIC MCUs giving the developer a wider choice of PIC MCU for further prototype development.

The microcontroller is connected to the PICFlash programmer via 5 lines, two of which are +5V and GND. Unlike programmers whose operation is based on bootloads (and which need to give away part of their memory to a bootloader program) PICFlash programs the microcontroller externally so that the entire memory is available for the programmer. PIC microcontrollers can be programmed with 5V and 12.5 V. If programmed with 5V, RB3 pin can not be used for anything else except for programming, so that one pin of the microcontroller is not available for an application. PICFlash programs with 12.5V generated through a supply pump from the supply voltage (+5V) thus leaving the RB3 pin free. Connection to the computer is made via the serial port, so PICFlash programmer **can work on all** computers.

Keyboard Shortcuts

New version of software includes a number of shortcuts which facilitate programming:

- **Alt-E** Erase
- **Alt-B** Blank check
- **Alt-W** Write
- **Alt-V** Verify
- **Alt-R** Read
- **Alt-D** Change MCU
- **Ctrl-S** Save
- **Ctrl-O** Open (Load)
- **Ctrl-R** Reload

Command Line

Alternatively, you can use the PICflash programmer from the command line. It will allow you to use PICflash from some other software, compiler etc. Here are the command line parameters:

- **-w** Write to PIC
- **-v** Verify
- **-r** Read from PIC
- **-e** Erase PIC
- **-p** PIC name (for example P16F877A, P18F452...)
- **-f** Filename (use " as delimiters)
- **-b** Check if PIC flash is blank
- **-Q** Terminate after programming
- **-Uon** Force Code protection
- **-Uoff** Force Code unprotect

Examples:

```
picflash2.exe -w -pP16F877A -v -f"C:\somefile.hex"
```

This will **program** the PIC using C:\somefile.hex and it will verify the write.

```
picflash2.exe -r -pP16F877A.
```

This will **read** the PIC contents into on screen buffer.

```
picflash2.exe -e -pP16F877A
```

This will **erase** the PIC.