A special variant of MIOS is available for the PIC18F4620. The usage of this processor is (currently) only required for the next major steps of MIDIbox SEQ (V3) and MIDIbox SID (V2), all other projects are running fine on a PIC18F452.

Biggest advantages of this microcontroller: 64k internal flash (2 times more), 3968 bytes RAM (2.6 times more), 1024 bytes internal EEPROM (4 times more), and hardware compatibility to the PIC18F452 - therefore the same MBHP_CORE module can be used.

But Rev A3 and A4 of the chip contains a silicon bug within the EUSART peripheral, which makes it nearly useless for MIDI applications: zero bytes can be sporadically inserted into the MIDI Out stream (bug has been found during the development of the MBHP_USB_PIC module; meanwhile - after more than one year - Microchip has documented it in the errata sheet)

As a workaround for this issue, a MBHP_IIC_MIDI module can be used with minimal configuration (MIDI Out only). This adds acceptable costs of 5 EUR to the project.

Recently Microchip has released the B4 Silicon, where this Bug seems to be fixed (hasn't been validated by TK yet) - with this version, all problems are gone, and the PIC18F4620 will provide full hardware compatibility! Further informations can be found in this forum article.

There is a small application available at the MIOS Download page which allows you to determine the revision ID (search for “revision_id”)

The PIC18F4620 is almost software compatible to existing MIOS applications. There is a special MIOS version which needs to be uploaded, the major differences are different memory limit checks (e.g. code upload to addresses >= 0x8000 are possible).

For information on developing or converting applications to use the PIC18F4620, please see the page on Application Development