

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 Rev3 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.

The [MBHP\\_IIC\\_MIDI](#) module can be omitted, if the application doesn't rely on the MIDI Out port, e.g. if it is only used during code upload (e.g. MIDibox SID V3 without slaves). But if you are unsure, consider the usage of the workaround.

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  $\geq 0x8000$  are possible).

For information on developing or converting applications to use the PIC18F4620, please see [the page on Application Development](#)

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