

Since version mios\_v1\_5b [MIOS](#) has supported 4-bit mode for HD44780 compatible displays

Usually this mode isn't needed, but some displays have been internally configured for 4-bit operation and don't have all the necessary connections for full 8-bit operation or You might have some other reason to try this mode out.

To configure [MIOS](#) application to use 4-bit CLCD mode, changes need to be made to the application:

First locate

'**USER\_Init**' section of the source files <sup>1)</sup>

Then add to its own section just below the 'USER\_Init' <sup>2)</sup>:

;; use a CLCD, E input of first CLCD at D.7, E of second CLCD @C.4

```

;; using the 4-bit interface:
;; -> connect MBHP_CORE:J15:D7-D4 of the core module to D7-D4 of the
LCD
;; -> left MBHP_CORE:J15:D3-D0 of the core module open!
;; -> tie D3-D0 of the LCD to ground
movlw 0x37 | 0x80 ; E1: D.7, 4bit interface
movwf MIOS_PARAMETER1
movlw 0x24 | 0x80 ; E2: C.4, 4bit interface
movwf MIOS_PARAMETER2
movlw 0x00 ; LCD type 0
call MIOS_LCD_TypeSet''

```

Then you have to Compile the modified application.

See the comments <sup>3)</sup> in the code for how to connect the display to the core. In the display side, having the datasheet for it helps a lot.

More: [MIOS function reference](#)

<sup>1)</sup>

usually in 'main.asm', in MB\_SID 'sid\_init.inc'

<sup>2)</sup>

Don't add it in between the initialization commands or you can break something this way

<sup>3)</sup>

marked with ;; in the beginning of the line

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