

# MIOS LCD Offsets

Some words by TK in response to [this question](#):

The display offsets are handled by MIOS in a way which allows to use the same cursor positions on any kind of LCD. With MIOS\_LCD\_YAddressSet the LCD specific cursor offsets are mapped to the MIOS specific cursor offsets.

**64 characters (0x40) are reserved for each line**, up to 4 lines are (natively) supported:

1st line begins at 0x00

2nd line begins at 0x40

3rd line begins at 0x80

4th line begins at 0xc0

And these lines have to be mapped to the real address offsets of your LCD - this can normally be found in the datasheet, the most common cases are documented in the functional description of MIOS\_LCD\_YAddressSet: [http://www.ucapps.de/mios\\_fun.html#MIOS\\_LCD\\_YAddressSet](http://www.ucapps.de/mios_fun.html#MIOS_LCD_YAddressSet)

For a 2x40 following settings are working:

Y0: 0x00

Y1: 0x40

Y2: doesn't matter (\*)

Y3: doesn't matter (\*)

(\*) note: if a value between 0x80...0xff is specified here, it is assumed that the 3rd and 4th line is mapped to a second LCD

Centering the screen just means to add additional offsets to these addresses, e.g. let's say you've a 2x40 display, but only 16 columns are used, this means that you need to add 12 to each offset:

Y0: 0x00 + (40-16)/2

Y1: 0x40 + (40-16)/2

Y2: doesn't matter (\*)

Y3: doesn't matter (\*)

Thats how MIOS supports LCDs.

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