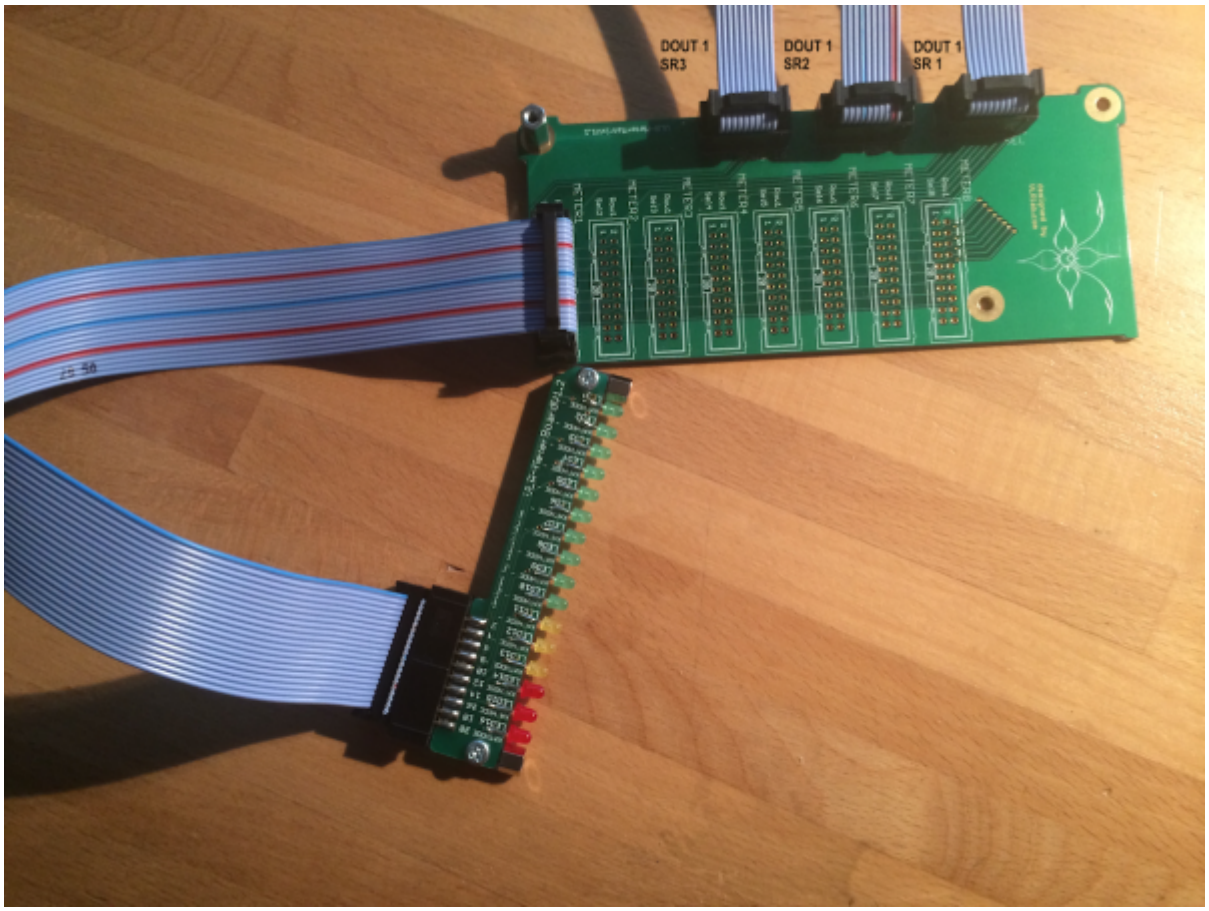
Fadercore

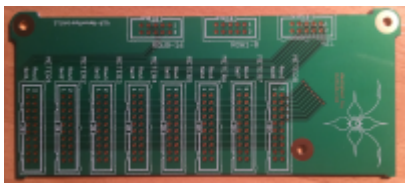
Standard 220mm wide modules

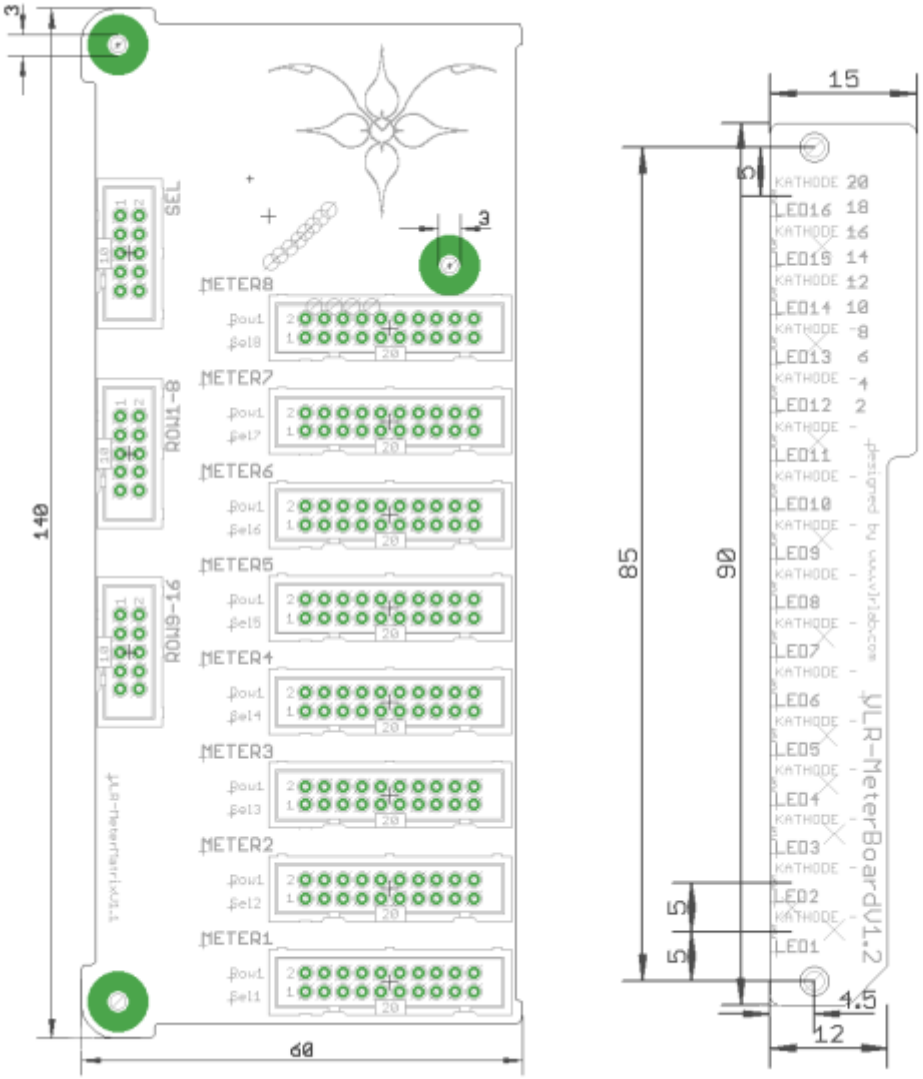
VLR-8x16LEDmeter

A solution to add 8 Meters with 16 LEDs for each Meter. It contains 2 different Types of PCBs one is the LEDmatrix and the other a slim PCB to mount 16LEDs



Eagle Files: https://github.com/novski/Midibox/tree/master/VLR-8x16LEDmeter





BOM

BIll of Material

Allways look for the cheapest seller, the Price may vary heavy!!! And look for Local dealers preferred. http://www.midibox.org/dokuwiki/doku.php?id=where_to_order_components

To make a small and easy to connect matrix over a hole Frontplatte is no fun. Thats why i made myself a better solution. Based on the common DOUT modules it can be connected to 3 SRs.

The Materials: Mouser

- 3x10pin Header, 517-30310-6002
- 6x10pin Sockets, 517-D89110-0131HK
- 16x20pin Header, 517-30320-6002
- 16x20pin Sockets, 517-D89120-0131HK
- 20 Wire Ribbon Cable, 523-135-2801-020FT
- about 80 Green LEDs, 604-WP3A8GD

- about 80 Yellow LEDs, 604-WP3A8YD
- about 80 Red LEDs, 604-WP3A8HD

Project Order Basket on Mouser:
http://www.mouser.com/ProjectManager/ProjectDetail.aspx?AccessID=5ecf7b4949

The PCB is available under: https://www.vlrlab.com/home/18-ledmatrix.html
https://www.vlrlab.com/home/19-meterboard.html

How to get Started

The LEDs are mounted to the Edge of the Meterboard to get a very slim form. That makes it a bit harder to solder them but i guess that no one wont be able to do it. To solder the Header to the Edge there is a wite triangle printed to the PCB on one side. This Triange has to match with the Triangle on the Header.

Prepare the PCB

Well you should now by now how to solder Headers... 🙂

Prepare the Connection

Connect the SEL, Row1-8 & Row9-16 with each a DOUT Header.

Test it in MIOS

I use a Encoder connected directly to a DIN to test. Assuming that the DOUT is the first device on the chain of J8/9 we need to configure it like this:

```
RESET_HW

LCD “%C”
LCD “@(1:1:1)OLED1”

# Test D-OUT LEDmatrix board

DOUT_MATRIX n=1 rows=8 inverted=1 sr_dout_sel1=1 sr_dout_r1=2 sr_dout_r2=3

# Matrix control by a Encoder connected to DIN
ENC n=1 sr=1 pins=0:1 type=detented2

EVENT_ENC id= 1 fwd_id=LED_MATRIX:1 type=CC chn= 1 cc= 24 lcd_pos=1:1:2 label=“^std_enc”
LED_MATRIX_PATTERN=1

LED_MATRIX_PATTERN n= 1 pos= 0 pattern=0000000000000000
```

LED_MATRIX_PATTERN n= 1 pos= 1 pattern=1000000000000000
LED_MATRIX_PATTERN n= 1 pos= 2 pattern=1100000000000000
LED_MATRIX_PATTERN n= 1 pos= 3 pattern=1110000000000000
LED_MATRIX_PATTERN n= 1 pos= 4 pattern=1111000000000000
LED_MATRIX_PATTERN n= 1 pos= 5 pattern=1111100000000000
LED_MATRIX_PATTERN n= 1 pos= 6 pattern=1111110000000000
LED_MATRIX_PATTERN n= 1 pos= 7 pattern=1111111000000000
LED_MATRIX_PATTERN n= 1 pos= M pattern=1111111100000000
LED_MATRIX_PATTERN n= 1 pos= 8 pattern=1111111110000000
LED_MATRIX_PATTERN n= 1 pos= 9 pattern=1111111111000000
LED_MATRIX_PATTERN n= 1 pos=10 pattern=1111111111100000
LED_MATRIX_PATTERN n= 1 pos=11 pattern=1111111111110000
LED_MATRIX_PATTERN n= 1 pos=12 pattern=1111111111111000
LED_MATRIX_PATTERN n= 1 pos=13 pattern=1111111111111100
LED_MATRIX_PATTERN n= 1 pos=14 pattern=1111111111111110
LED_MATRIX_PATTERN n= 1 pos=15 pattern=1111111111111111

Im using my VLR-8oDisp board to show the Values of the encoder. You can change it to any other type of Display-setting... lcd_pos=6:1:5 {6=Display number : 1= X-axis : 5= Y-Axis (row)}

For any Comment or Question: Forum Thread???