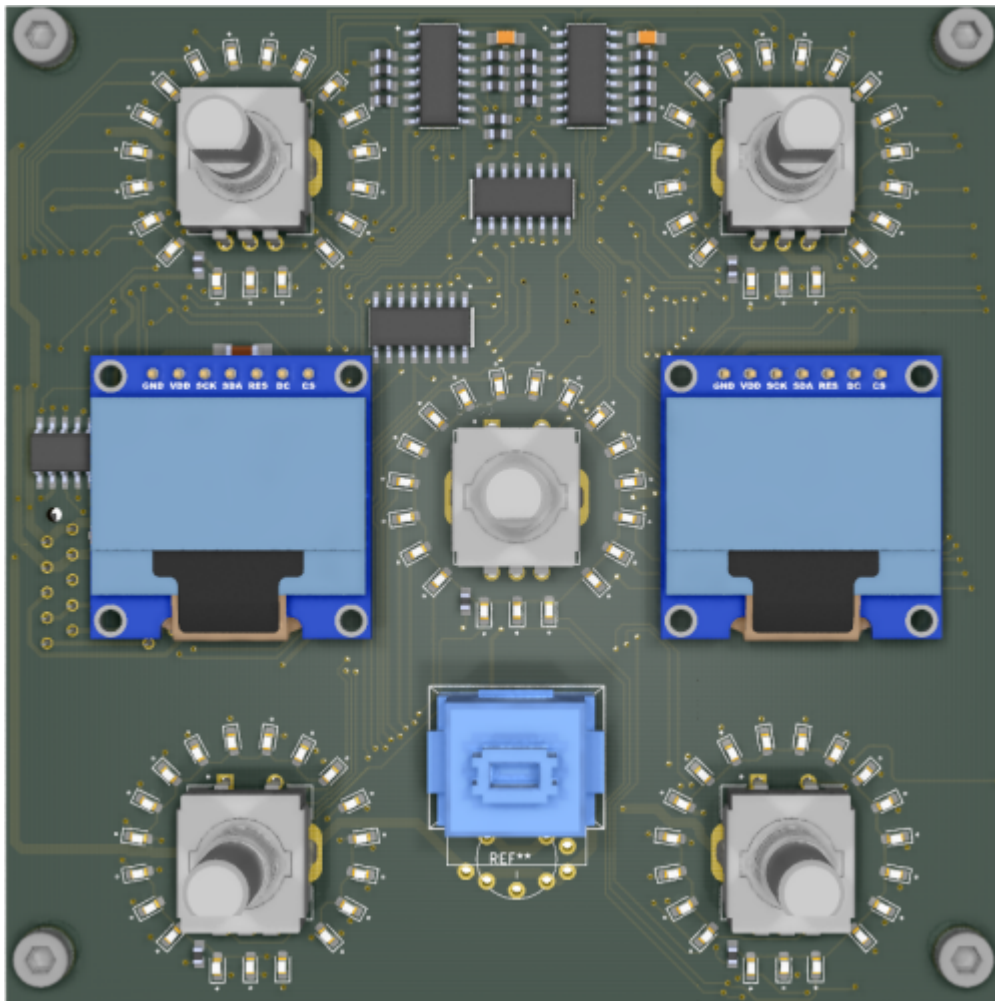


LRE5-LCD2



- * 5 Encoders
 - * 5 Ledrings
 - * 5 ENC-Switches
 - * 5 3LEDS for ENC-Switches
 - * 1 Shift-Switch
 - * 2 1306 7Pin- OLED-LCDs
- controlled from a STM32F4 Microcontroller [dipcoref4,CV1](#)
build for CV1 as UI-Expansion-PCB.

ready for Pick and Place



-all Parts except the ULN-Driver-ICs are on the Top-Side, and are presoldered..

Hardware Requirements

- [CV1](#) or other MIO32 Cores
- Soldering Iron - with a Dip that can Handle Thruhole-Parts, solder Paste...
- dont forget the Micromatch connectors, and Ribbon cables

Schematic

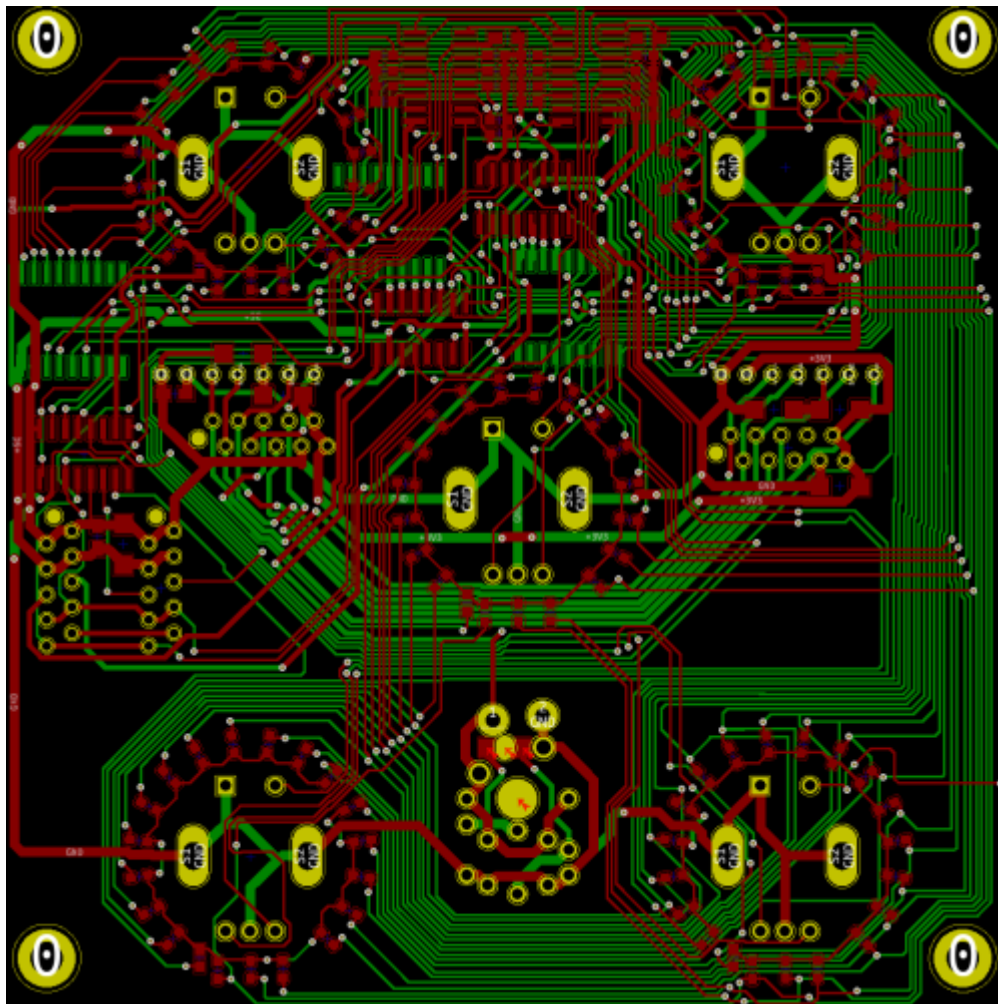
[Ire5-lcd2-schematic.pdf](#)



Building

The Design is optimized for Pick and Place > almost all SMD Parts are on the Top-PCB
The Rest is Thruhole > easy, the ULN Driver are SMD and has to be handsolderd

now waiting for Presoldered PCBs



BOM LCSC

these are the parts which must be handsoldered

| Comment | Designator | Footprint | LCSC Part Number | Lot |
|------------------|-----------------------|----------------|------------------|-----|
| ULN2003ADRW | Q1-Q3 | SOIC-18_300mil | C9683 | 3 |
| PEC11R-4015F-S24 | ENC1-ENC5 | tht | C143789 | 5 |
| Micromatch-2x5 | LCDi1,LCDo1,Ji89,Jo89 | tht | C590954 | 4 |
| Switch | S1 | tht | C273513 | 1 |

S1 can be stuffed with: Matias, CherryMX, MEC-3FTH9, TL1265

BOM AliExpress

[2xSSD1306-7Pin](#)

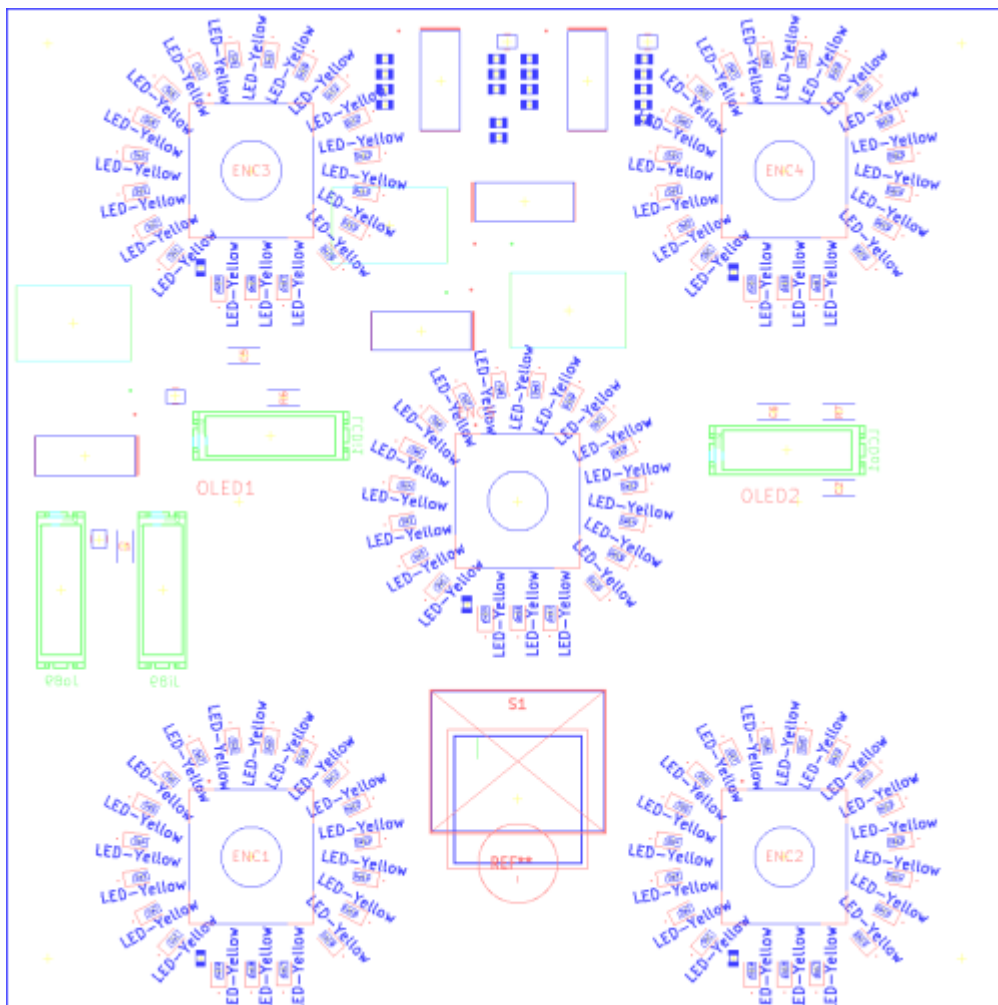
BOM LCSC

these are the parts which are presoldered by the Pick and Place Machine

| Comment | Designator | Footprint | LCSC Part Number |
|------------|--|-----------|------------------|
| 47uF | C1,C2 | 1206 | C96123 |
| 100nF | C3,C4,C7,C8 | 0805 | C49678 |
| 10uF | C5,C6 | 1206 | C13585 |
| LED-Yellow | Da1,Db1,Dc1,De1,De1-Da19,Db19,Dc19,Dd19,De19 | 0603 | C72038 |
| 180 | R1-R5 | 0603 | C22828 |
| 1K | R6,R7 | 1206 | C4410 |
| 10k | R8-R25 | 0603 | C25804 |
| 74HC595 | U1-U3 | SOIC-16 | C5947 |
| 74HC165 | U4,U5 | SOIC-16 | C5613 |

+ Ribbon Cables for example (MOUSER):
710-63911015521CAB|1

PART Locations



To Do

waiting for christmas

Community users working on it

- **Phatline** = PCB & Schematic, UI-Programming, Documentation...

Just let a Private message on the forum to user already involved.

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