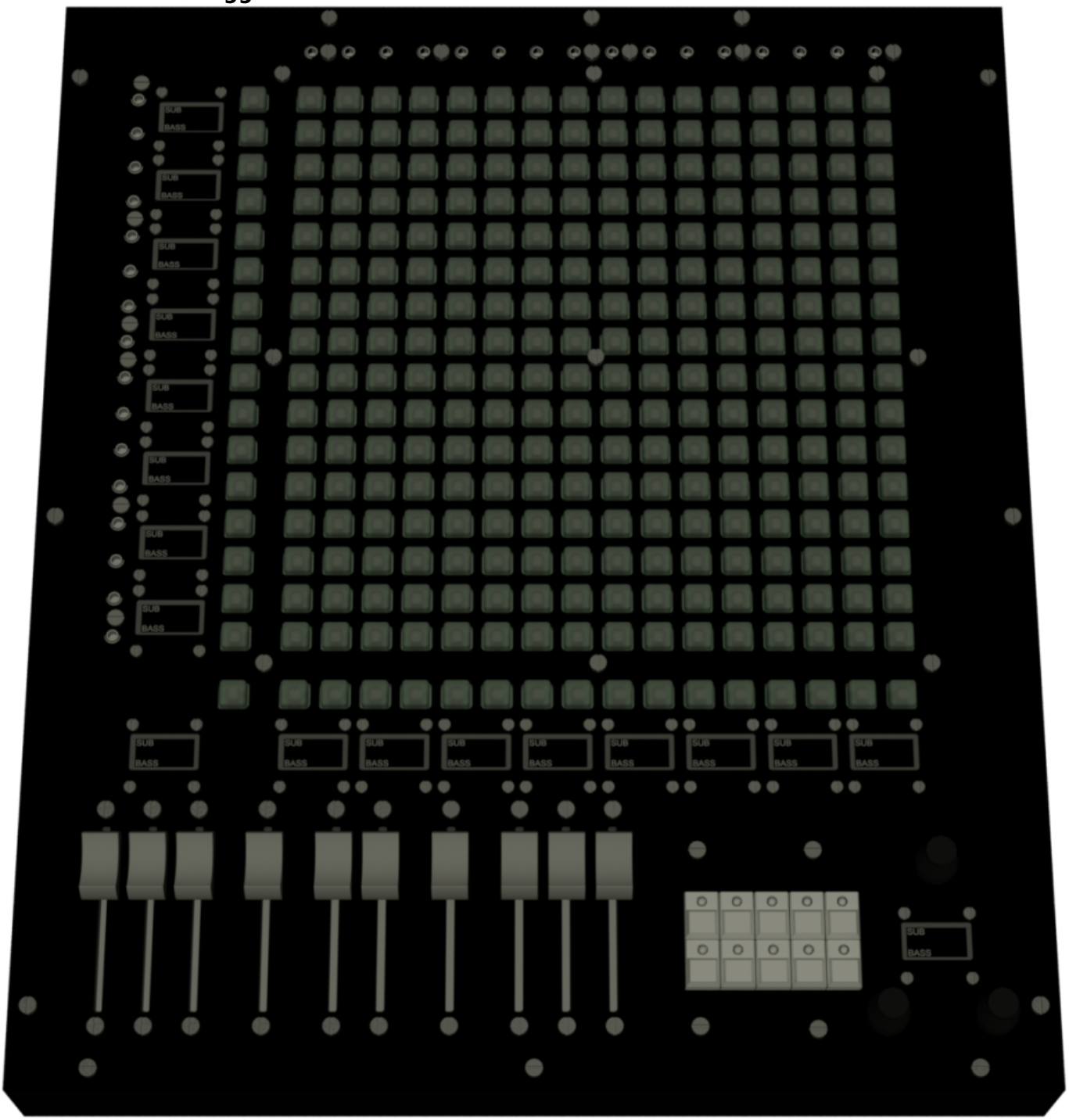
TriggerMatrix V5

first renders off Triggermatrix V5

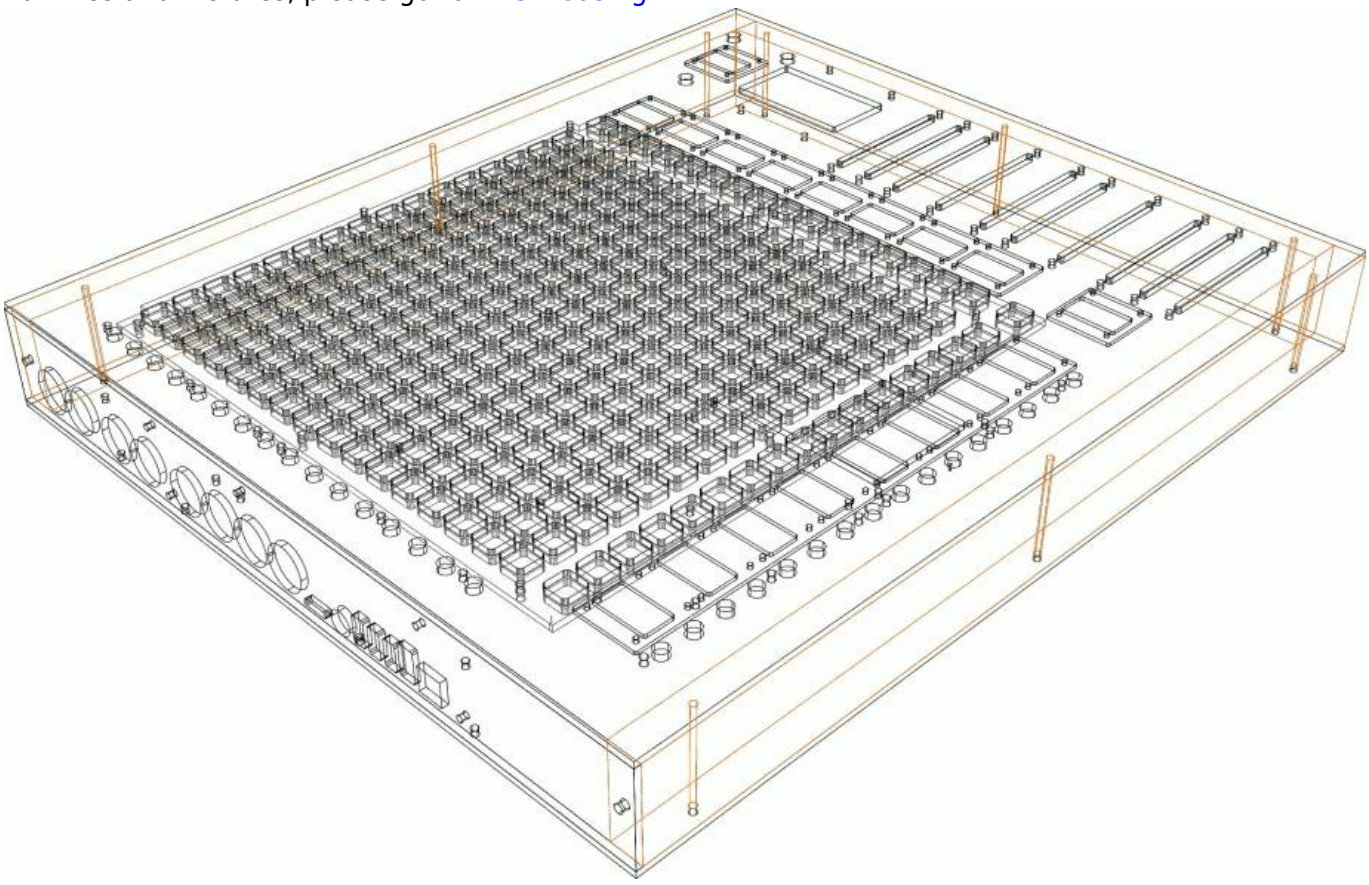


TM-V5 uses custom PCBs
17 Screens now driven by the Display driver PCB
So the Matrix-Cells get names now in X and Y view
Trigger-Output on 5V Level (before it was all midi only)
Trigger-Input on 3V, 5V or Mic-Preamp-Level
The whole Device will be a bigger because of Extra Screens and because of 2×16 3.5 Trigger JAcks…



Housing and Panels

For Files and Pictures, please go to TM5-Housing



Software

You can Triggermatrix as Remote Device to controll ableton live (Launch RedBox + MidiClip Editor)
blm_sysex_protocoll.zip
tm5-blm.zip
blm_source.zip
blm_sysex_protocoll.zip
tm5-remote-script.zip
u can use the BLM_Sourcecode, to make a simular Controller (without all that Triggermatrix Code), so if you want to upgrade an original Midibox BLM16x16+X with a stm32 then this will help
https://youtu.be/mR7-vK331D8

BOM + common Components

Order from Reichelt:
10x 10K Lin, Faders
8x Fader-Knob, BLACK
2x Fader-Knob, WHITE
1x 26Pole Wire

Order from other Sources:
17x OLED-Displays 128x64px 0,96"
144x M2 Nuts
72x M2 Discs
3x Encoder Knob
1x Micro-SD-Card, which is not Hi-Capacity, eg take 4 or 8GB Cards!
17x Leiterplatten Montageblock aka Standoffs
1x 0.5m Micro-USB-Cable this will be cut at the USB-A Side off the Cable, and then soldered to the USB-B Port off the Core4Disc-Board

M2 Screws

* 72 x 7-5-8mm (Displays) for example 100x 8mm
I ordered all screws in black at: https://minischrauben.com/

M3 Screws

— i buy more, so its cheaper, but you may order smaller quantitiys
* 20 x 3,5 - 4mm for example 1000x
* 14 x 8,5mm > for example 100x 10mm
* 13 x 14,5mm for example 100x 16mm
* 19 x 17,25mm for example 100x 20mm
* 8 x 54mm - if not accessable you may drill the Panel to 4mm: 8x 60mm M4 Screws

* you will also need 8x M4 Nuts when using M4 screews...
* optional 10 x 6mm for example 100x 6mm
* optional 3mm Discs for example 100x Discs
* lots off M3 Nuts for example 1000x

Other Screws

* 2x Woodscreews 15-20mm for example 50x 20mm

PCB + their Components

- TM5-GateInput Levelshifter 5V>3V and Preamp for Gate/Trigger-Input
- TM5-codeblock Menuesection
- TM5-Gate-Board 3,5 Jack Boards for 16 + 16 Gates
- TM5-DinDoutGate Module for UI and Gates
- Core4Disc CoreBoard for STM32F407VGT6 Discovery Boards, with some onboard Peripheral
- Core4DiscMidiEx Midi-Expansion Board for Core4Disc
- DisplayDriver-SMD Display Driver for 18x SSD1306 7Pin Displays
- BLM16x16V2 16×16 Button Led Matrix

Complete BOM for Boards above

copy following list into this mouser.com-Link

```
595-SN74LVC1G17DBVR|12
80-C0805C104M5R|32
710-860010273011|1
863-BAT54LT1G|34
595-SN74HC595DR|15
595-SN74HC165DT|5
710-61201021621|2
863-BC818-40LT1G|34
660-RK73B2ATTD102J|34
660-RK73B2ATTD103J|75
603-RC0805JR-13220RL|40
660-RK73H2ATTD56R0F|40
604-APTR3216ZGC|300
604-APTR3216QBC/D|300
833-1N4148WL2-TP|150
652-PEC11R-4015F-S24|3
649-1012937890401BLF|1
517-30310-6002|5
571-1-2178710-0|4
490-SJ1-3535NG|32
667-ERJ-P06J102V|32
495-TSR2-2450|1
```

538-67068-8000|1
583-1N5818-T|1
649-1012938390801ALF|1
806-KCDX-5S-S2|4
511-STM32F407G-DISC1|1
490-PJ-079BH|1
611-1101M2S4AV2BE2|3
538-89485-8000|1
649-75869-232LF|1
806-KCDX-5S-S2|4
660-RK73B2BTTD221J|2
710-61200823021|22

Order from Reichelt:
10x Button
20x M3 5mm long Spacer
6x Micromatch-connector 10pin
32x Jumper
21x 2x5Pin FeMale 2,54mm Header
2x 2x25Pin Female 2,54mm Heades
3x 1x20Pin Male 2,54mm Header
1x 2x10Pin Male 2,54mm Header
4x 2x4Pin Female 2,54mm Header
19x Female Pinheader 1x7pin

Community users working on it

- **Phatline** = Programming, Documentation, Hardware-Prototype, Testing, Jamin...

Getting Involved ?

Just let a Private message on the forum to user already involved.
or join the forum: Triggermatrix 5

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