

# STELLAx4



## 4x 8Bit Soundchips/TIA's on a 10x10cm PCB,

controlled from a STM32F4 Microcontroller [dipcoref4](#), based on [Antichambre's TIA Module](#), with [AD9833's](#) as External programmable Clock, the Frequency-range is expanded...

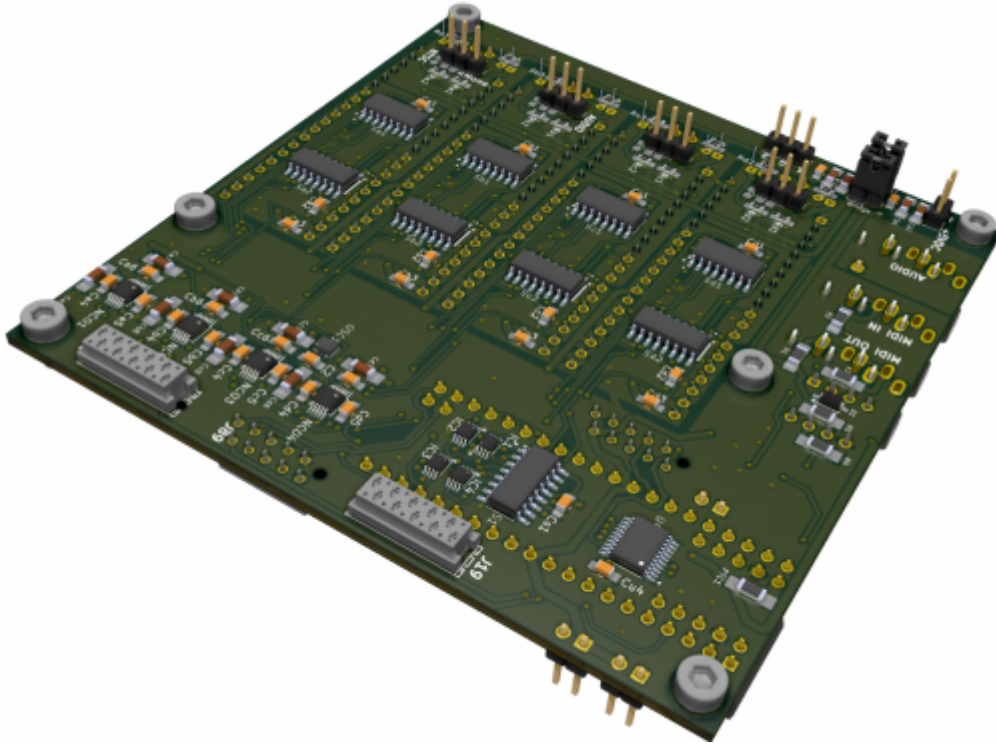
**The Board acts a Motherboard**, for

- 4x Soundchip... AND:

also like the [stm32f4\\_module](#) it provides:

- Midi-IO - 1x IN, 1x OUT > 3,5Jacks/TRS
- $\mu$ SD-Card - 2 Save Patches
- $\mu$ Controller-Socket - 2 Plug the [dipcore\\_f4](#) in, ask [antichambre](#) to get one!
- J19>[AoutNG](#) - to connect VCF or VCAs...
- J8/9>[DOUT](#) & [DIN](#) - 4 the UI
- J15 (JLCD1) which handle from Stock 4x SPI-Displays (SSD1306), - 4 the UI
- J1>chain a nother STELLAx4 as "SLAVE" to it, to expand polyphony

ready for Pick and Place



-all SMD-Parts are on one SIDE and are presoldered..

## Features

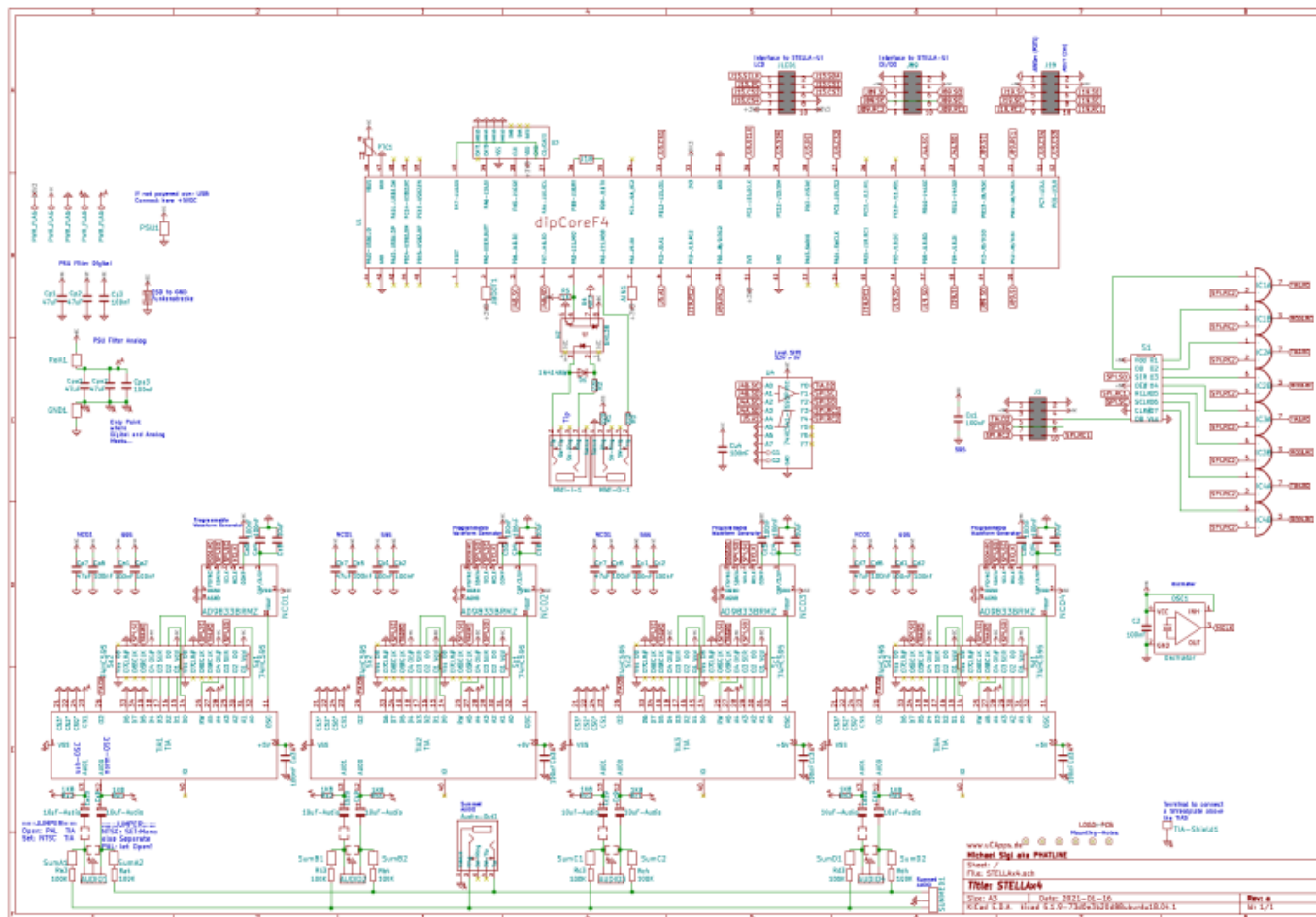
- \* Summed or Individual Audio-Outs, selectable via normal Jumpers
- \* NTSC or PAL > select via SMD-Solder-Jumper
- \* User-Interface is C-Language-Programmable

## Hardware Requirements

- [dipcoref4](#)
- 4 x [TIA/STELLA](#) [PAL or NTSC...]
- Soldering Iron - with a Dip that can Handle Thruhole-Parts, solder Paste...
- 5V from Mini-USB-Plug, or 5V at a 2Pin-Header connected to example a Eurorack Power Source (+5VDC!)
- dont forget Midi TRS Cables

## Schematic

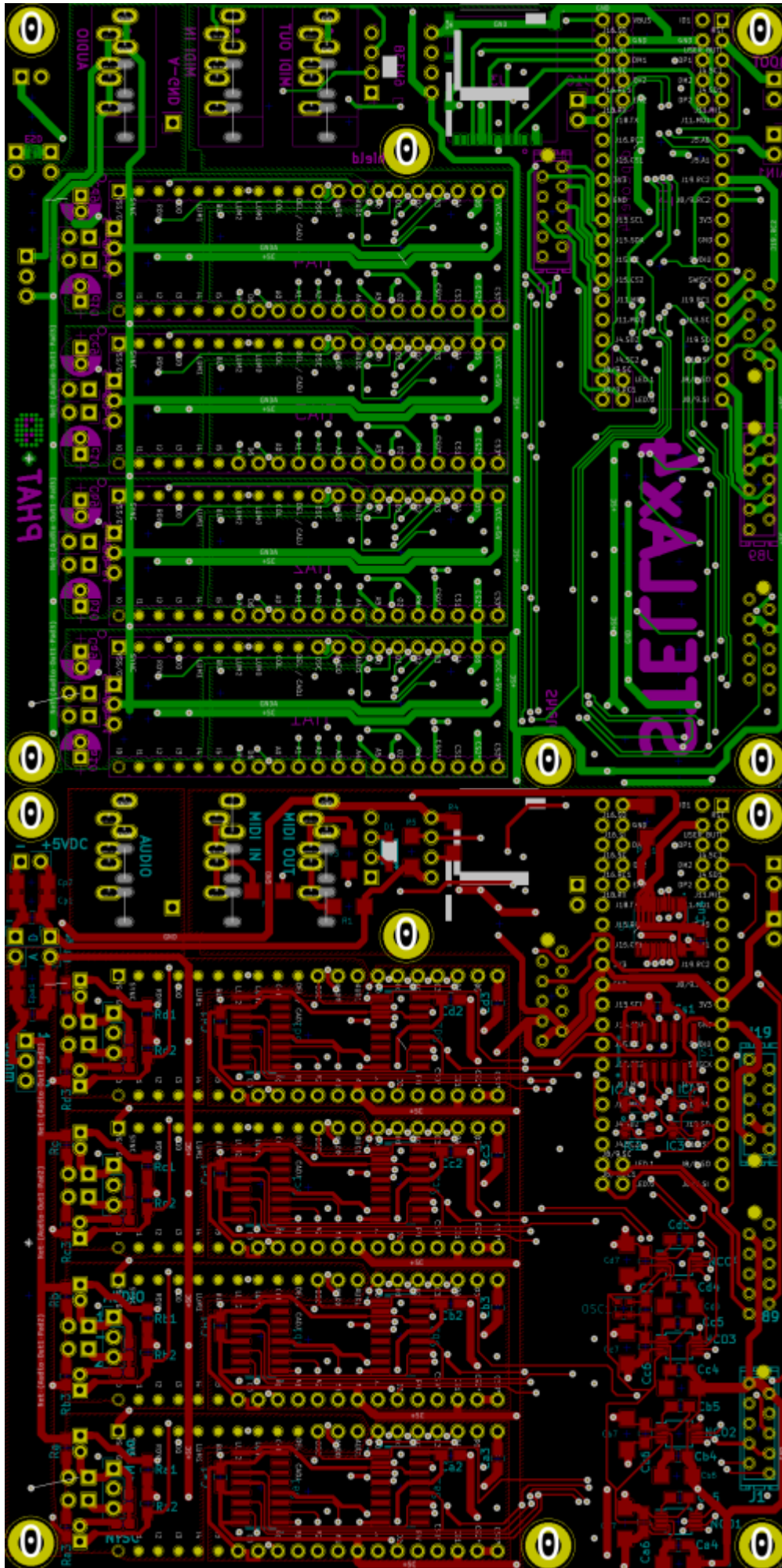
[stellax4-schematic.pdf](#)



# Building

The Design is optimized for Pick and Place > all SMD Parts are on the Top-PCB  
The Rest is Thruhole > easy

now waiting for Presoldered PCBs





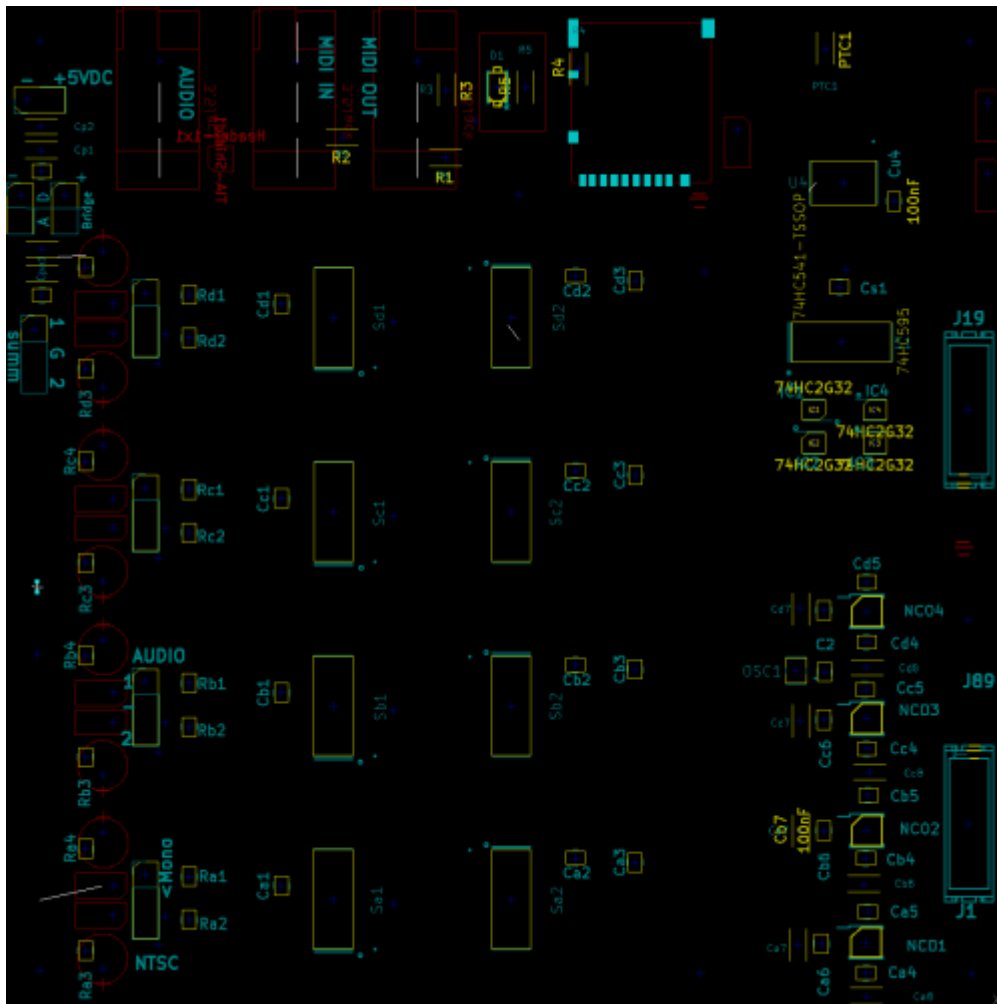
647-UFG1H100MDM|8  
 649-68000-220HLF|3  
 151-8010-E|10  
 571-1-2178710-0|4  
 490-SJ1-3535NG|3  
 575-1104764041001000|4  
 200-CES12001TS|3  
 512-6N138M|1  
 575-1104730841001000|1  
 798-DM3AT-SF-PEJM5|1  
 474-COM-15107|1

for prototyping i ordered:

**490-SJ1-3535NG-GR** instead of **490-SJ1-3535NG** because it is out of stock - so **GREEN sockets** for now!

Comment	Designator	Mouser Part Nr
Header-1x3	AUDIO1,SUMMED1,AUDIO2,AUDIO3,AUDIO4	Includet in „Header 1x2“
10uF-Audio	Ca9,Cb9,Cc9,Cd9,Ca10,Cb10,Cc10,Cd10	647-UFG1H100MDM
Header-1x2-JUMPER / HEADER	GND1,Rail1,SumA1,SumC1,SumD1,SumA2,SumC2,SumD2,SumB2,JBOOT1,AIN1,PSU1,J18	649-68000-220HLF
Header-1x2-JUMPER	GND1,Rail1,SumA1,SumC1,SumD1,SumA2,SumC2,SumD2,SumB2	151-8010-E
Header-2x5-Micromatch	JLCD1,J1,J19,J89	571-1-2178710-0
3.5Jack	Midi-I-1,Midi-O-1	490-SJ1-3535NG
TIA	TIA1,TIA2,TIA3,TIA4	575-1104764041001000
Socket for DIPCOREF4_52P	U1	200-CES12001TS
6N138	U2	512-6N138M
Socket for 6N138	U2	575-1104730841001000
uSD_DM3ATDM3AT	U3	798-DM3AT-SF-PEJM5
uSD CARD	sparkfun 1GB	474-COM-15107

## PART Locations



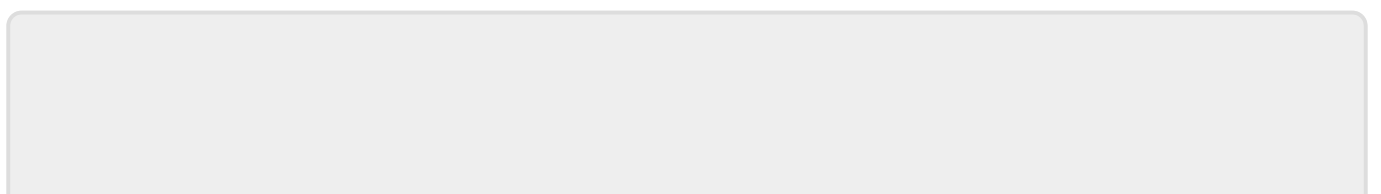
# To Do

- waiting for christmas
- UI-PCBs
- Debugging First Version

# Community users working on it

- **Phatline** = PCB & Schematic, UI-Programming, Documentation...
- **antichambre** = Schematic, Porting 8>32Bit, Programming...

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



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Last update: **2021/01/16 16:19**