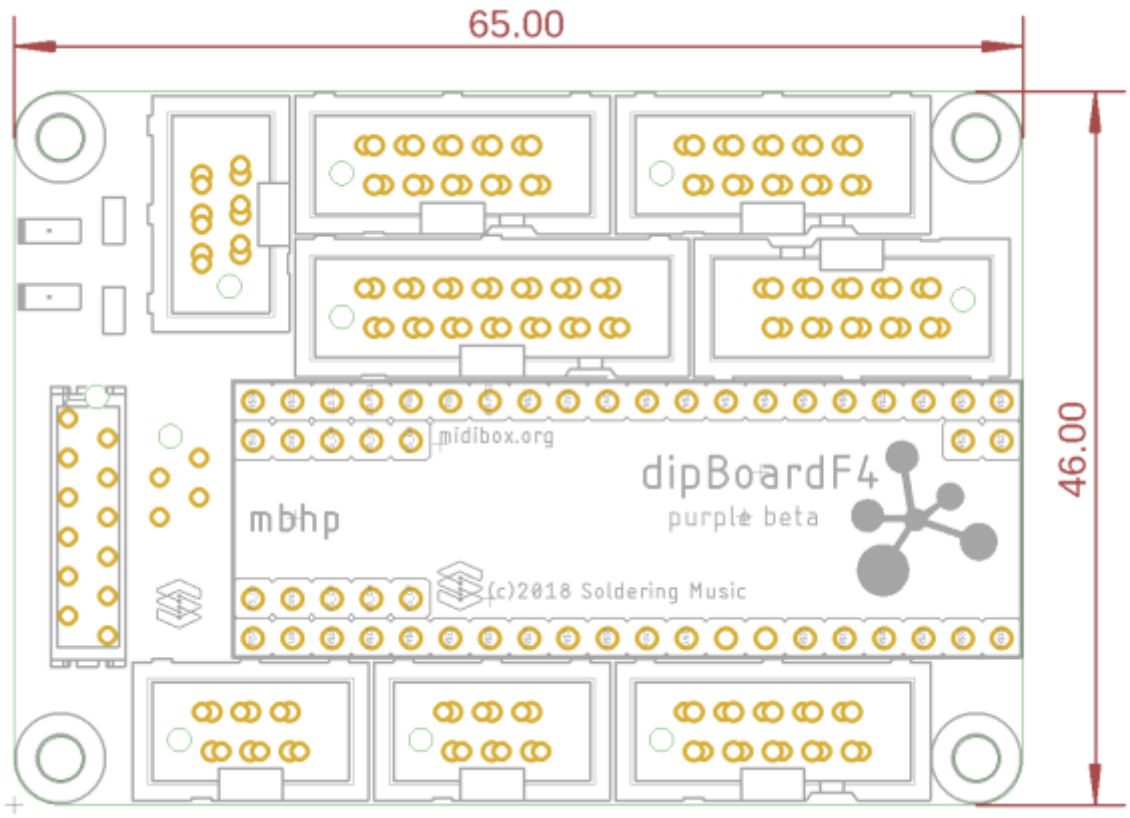
# dipBoardF4

MIDIbox Hardware Platform extension for dipCoreF4.

## Features

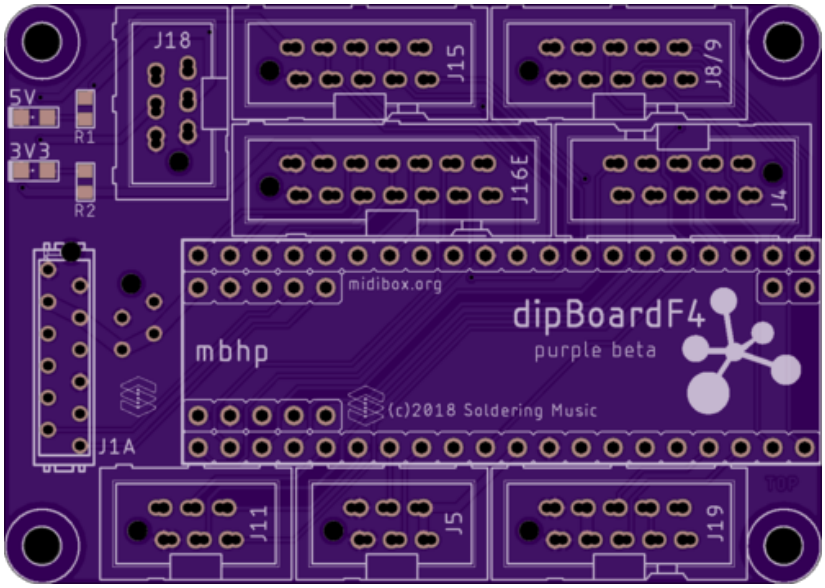
- Very small size 65x46mm(less than your credit card).
- Very low profile.
- Your application board can be stacked on bottom with 'Micro-match' connectors.
- The dipCoreF4 can be installed on the two side.
- Provides all the most important features and ports for regular mbhp.

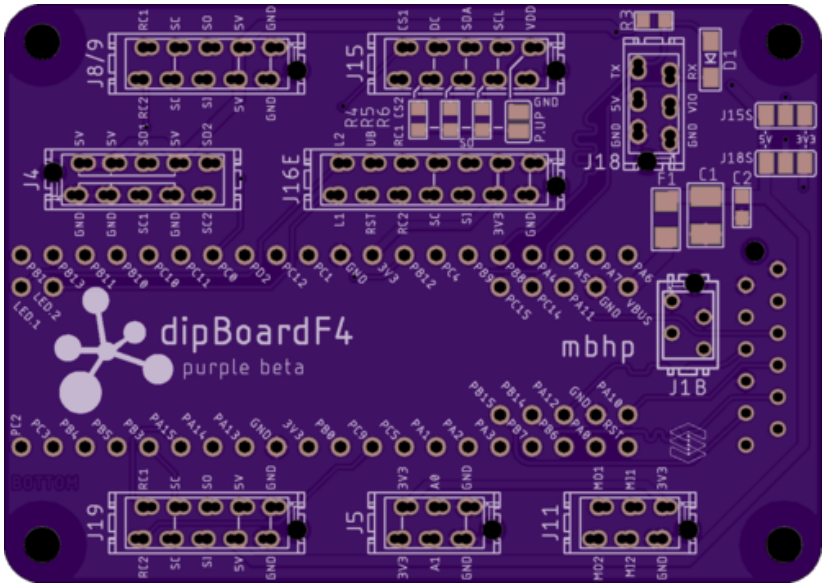
## Dimension




# PCB

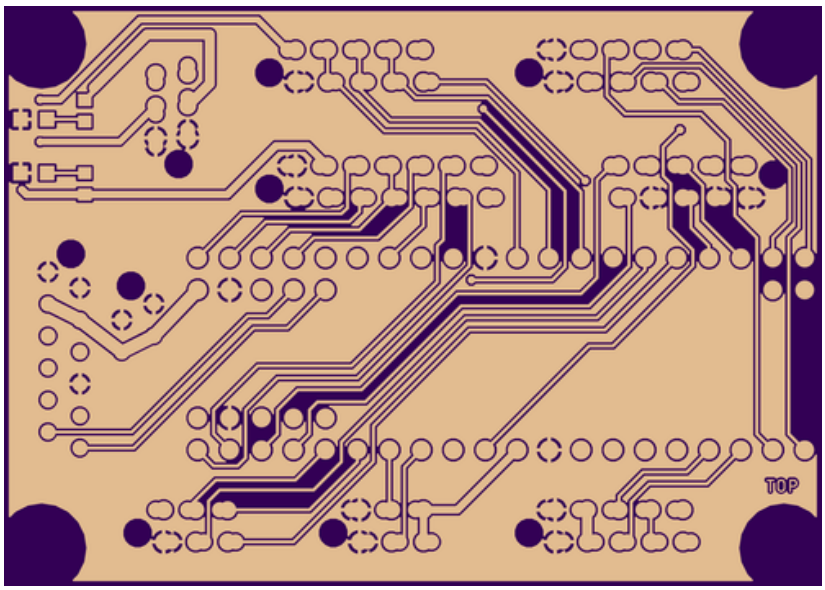
2 layers PCB design.
Fits 2 layer mostly common design rules.



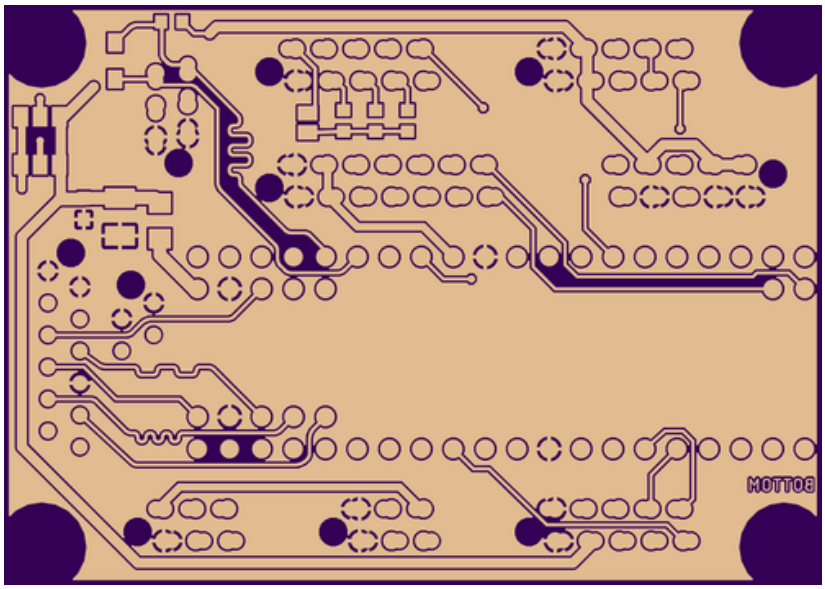




- min. drill 10mil
- min. width 6mil

## Top copper



Bottom



# BOM

version 1. Mouser BOM:toDo

| Qty | Value | Package | Parts | Mouser | Reichelt | Conrad | LCSC | Notes |
|---|---|---|---|---|---|---|---|---|
| **Resistors** | | | | | | | | |
| 2 | 680R 5% | 0603 | R1, R2 | 667-ERJ-PA3J681V | | | C103784 | Depends on Leds |
| 4 | 1K 5% | 0603 | R3, R4, R5, R6 | 755-ESR03EZPJ102 | | | C253329 | R3 if you use CAN without transceiver |
| **PTC fuses, resettable thermistors** | | | | | | | | |
| 1 | 1206L150THWR | 1206 | F1 | 576-1206L150THWR | | | C261956 | |
| **Capacitors** | | | | | | | | |
| 1 | 100n | 0603 | C2 | 80-C0603C104Z3V | | | C1688 | |
| 1 | 47u Tantalum | SMC_B(1210) | C1 | 74-TMCMB1C476MTRF | | | C112105 | |
| **Diode** | | | | | | | | |
| 1 | 1N4148WS | SOD323-W | D1 | 512-1N4148WS | | | C108805 | Only if you use CAN without transceiver |
| **LEDs** | | | | | | | | |
| 2 | – | 0805 | 5V, 3V3 | 755-SML-H12U8TT86C | | | C72037 | |
| **dipCoreF4 socket** | | | | | | | | |
| 2 | 1×20 | low profile female | | 517-929870-01-20-RA | | C9811 | | for pads 1 to 40 |
| 2 | 1×5 | low profile female | | 517-929870-01-05-RA | | | no need | for pads 41 to 50 |
| 1 | 1×2 | low profile female | | 517-929870-01-02-RA | | | C9811 | for pads 51 to 52 |
| **Connector** | | | | | | | | |

| Qty | Value | Package | Parts | Mouser | Reichelt | Conrad | LCSC | Notes |
|---|---|---|---|---|---|---|---|---|
| **Resistors** | | | | | | | | |
| 1 | micro-match 2×6 | Female | J1A | 571-8-215079-2 or 571-1-2178710-2 (value line) | | | | Place on top |
| **3 options available for PORTs connectors(depends on you app.)** | | | | | | | | |
| **Option 1 - Regular Shrouded Headers** | | | | | | | | |
| 3 | 2×3 | Male | J5, J11, J18 | 710-61200621621 | | | | Place on top |
| 4 | 2×5 | Male | J4, J8/9, J15, J19 | 710-61201021621 | | | | Place on top |
| 1 | 2×7 | Male | J16E | 710-61201421621 | | | | Place on top |
| **Option 2 - Stacking Micro-Match Connector** | | | | | | | | |
| 1 | 2×2 | Female | J1B | 571-7-215079-4 or 571-2178710-4 (value line) | | | | Place on bottom |
| 3 | 2×3 | Female | J5, J11, J18 | 571-215079-6 or 571-2178710-6 (value line) | | | | Place on bottom |
| 4 | 2×5 | Female | J4, J8/9, J15, J19 | 571-12150790 or 571-1-2178710-0(value line) | | | | Place on bottom |
| 1 | 2×7 | Female | J16E | 571-8-215079-4 or 571-1-2178710-4 (value line) | | | | Place on bottom |
| **Option 3 - Micro-Match Paddle Board for low profile connector** | | | | | | | | |
| 3 | 2×3 | IDC | J5, J11, J18 | 571-7-215570-6 | | | | Place on top |
| 4 | 2×5 | IDC | J4, J8/9, J15, J19 | 571-1-215570-0 | | | | Place on top |
| 1 | 2×7 | IDC | J16E | 571-8-215570-4 | | | | Place on top |

# Ports and features.

toDo

# Compatible/stack-able boards options

- All uCapps mbhp modules are compatibles.
- USB, SD-Card, External Power and MCAN modules are available.
- M16 Interface, stack-able, to connect on a SPI port, provides 16 MIDI IO and 48 GPIO 😎

For any questions, informations or observations do not hesitate to contact me (Forum). Antichambre.

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Last update: **2018/11/03 01:49**