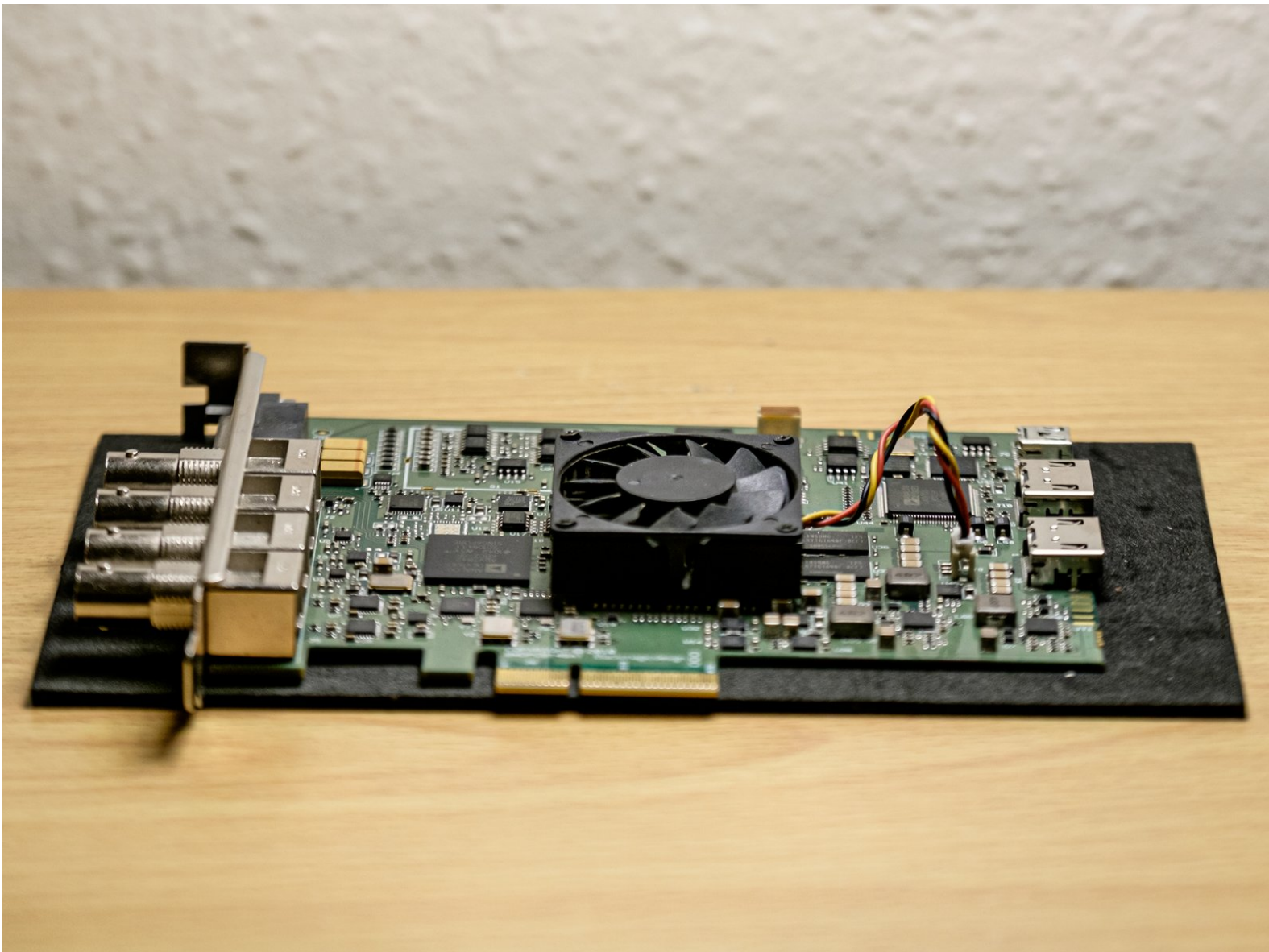




# DeckLink HD Extreme 3D+ Fan Replacement

Replace the very loud fan of the DeckLink HD Extreme 3D+ board. You will need to get some replacement stuff though. No soldering!

Written By: Simeon



# INTRODUCTION

Thanks for checking on this short guide how I solved and replaced the super noisy fan of the quite old DeckLink HD Extreme 3D+ Card from Blackmagic.

I wanted to find a solution without soldering, and here it is.

Took me about a week until I had everything together that I needed. Time for research not included.

I am sure one could do this much nicer. But I don't look at it all the time so I don't mind if there is a lot of cable around or the fan does not sit perfectly aligned. So be sure to be as precise as you like and see this more as an inspiration.

You will need quite a few things:

- Replacement Fan which is silent of course!
- Maybe a small fan grill to add to the top.
- New screws (M2)
- 3Pin 1.5 ZH 1,5mm Mini Micro JST
- Isolation tape.

## Fan

### Technical data of my replacement fan:

Size 40 mm

Thickness 10 mm

Mounting hole spacing 32,5 mm

Rotational speed 4500 RPM $\pm$  10%

Airflow 8,26 m<sup>3</sup>/h

Noise 14,9 dB (A)

Bearing FDB (Fluid Dynamic Bearing) Cable length 30 cm Connector 3Pin

Power 6,5~12V DC / 0,02A ~ 0,05A / 0,13W ~ 0,6W

### Original fan:

COFAN F-4008L 12B

DC12V 0.10A

## JST

The JST is the small white connector. On the board is a 3Pin 1.5 ZH 1,5mm Mini Micro JST. I bought some after i measured aproximatley and they did fit.

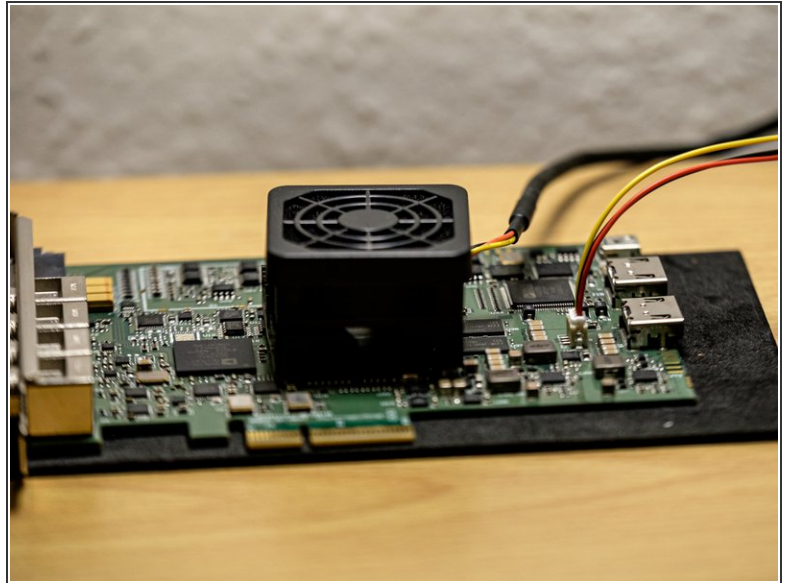
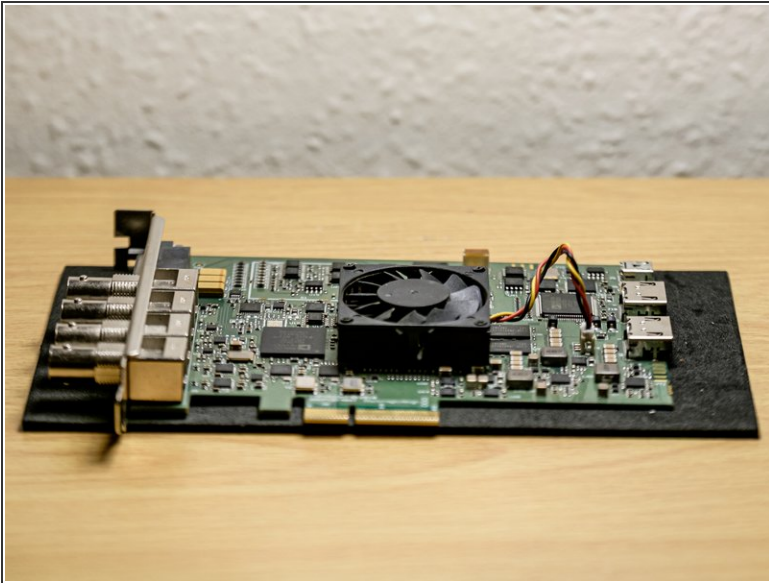
## M2 screws

I went to a local shop to get the right size for the fan. But it is definatly a M2 because the fan is screwed to the cooler underneath. In my case I took 2cm screw length but 16mm would have been enough.

Just do an online search where to buy this stuff.

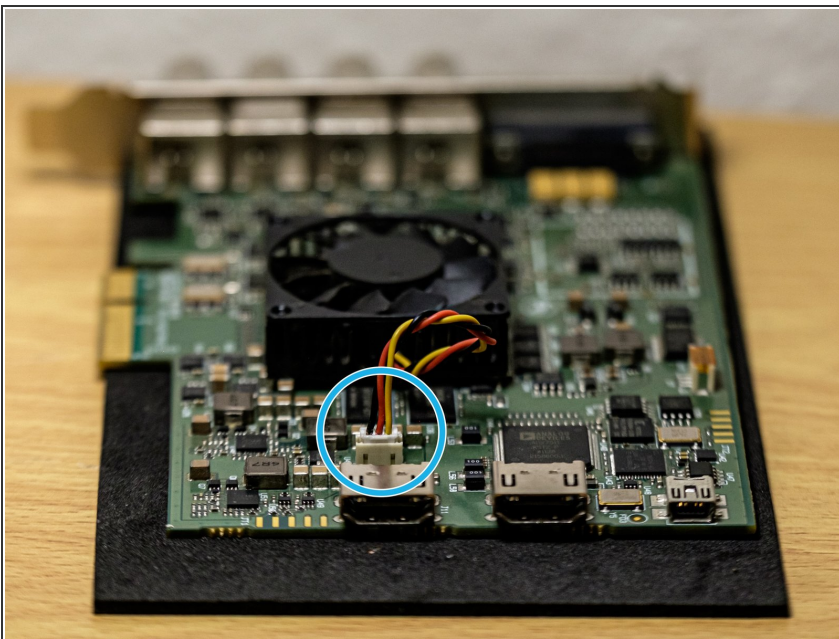
Have fun!

## Step 1 — Before and after



- Original fan.
- Replaced fan. 40mm square.

## Step 2 — Connector

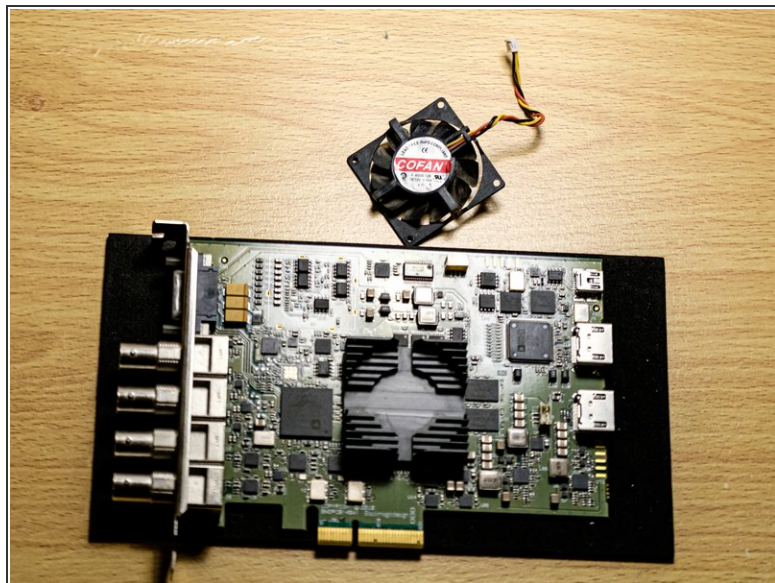
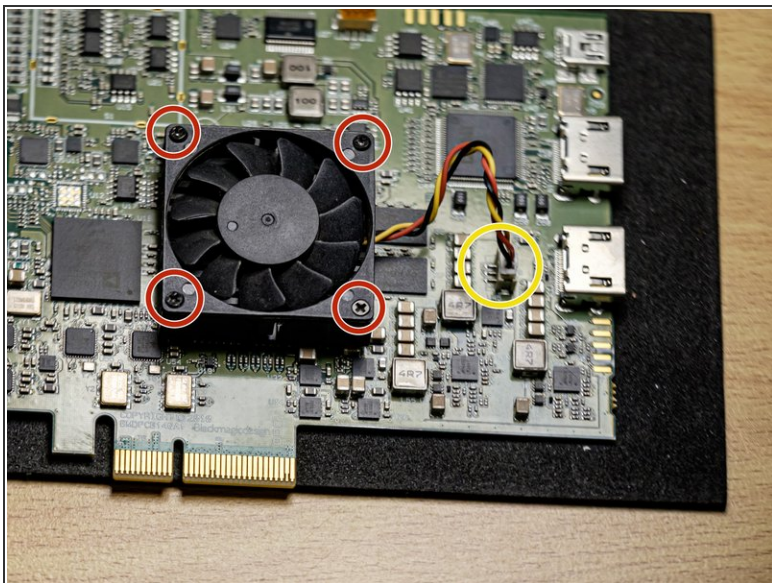


- Remember the cable colors at the connector and which position they are!

**⚠ WARNING:** Be carefull here. I did choose to trial and error to find the solution. But you might break your PC or the board.

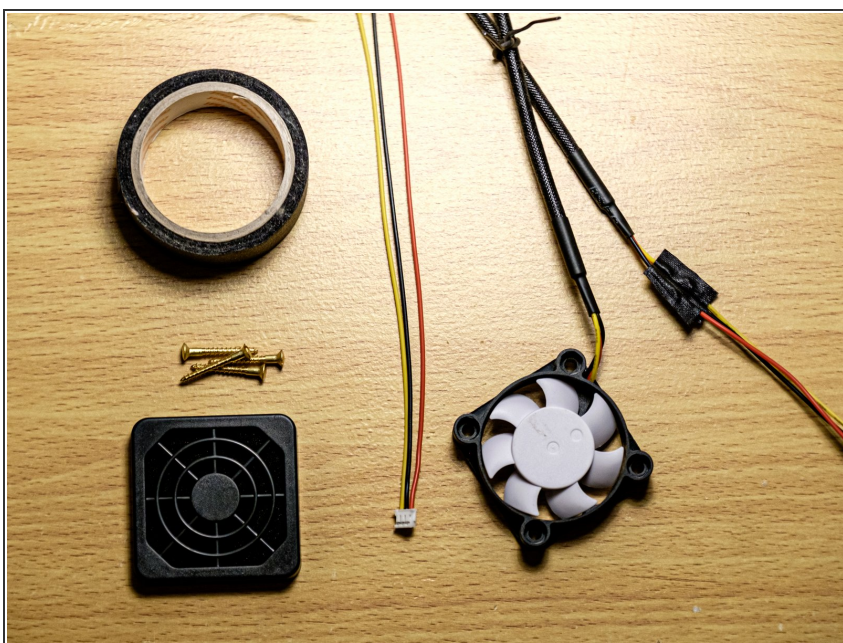


## Step 3 — Take off the fan



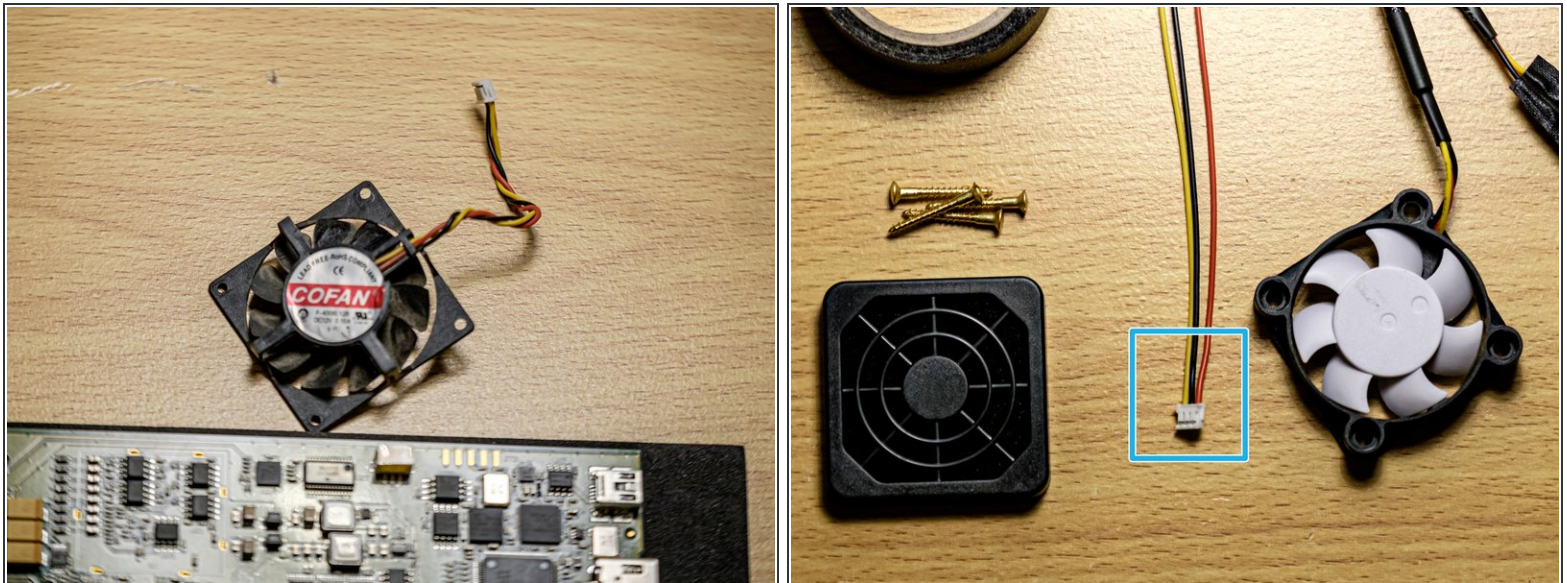
- Take out these 4 screws.
- Disconnect the micro JST.

## Step 4 — Replacement parts



- Get all your replacement parts around.

## Step 5



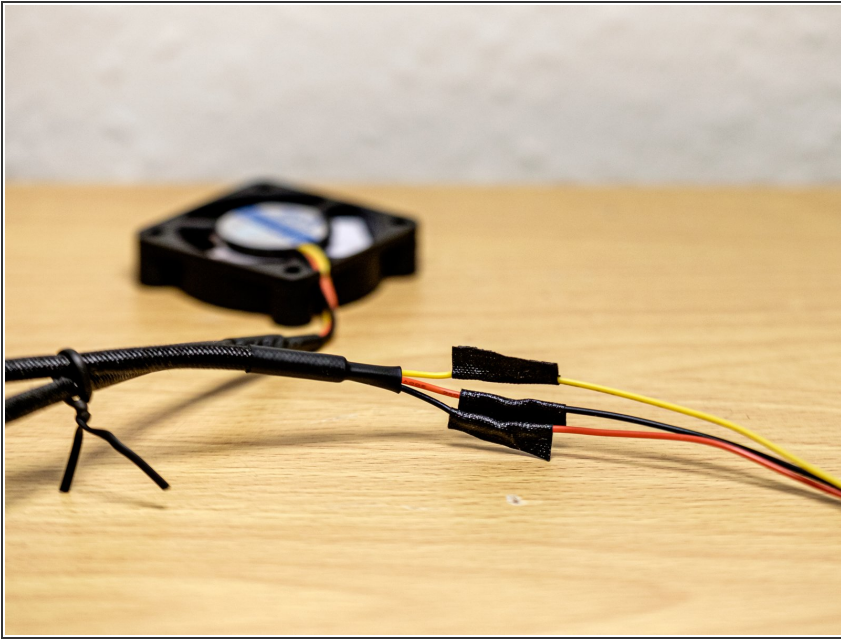
- My replacement JST came in a different color order.
- I assumed the fan I bought would have the same colored connection as the original one. Result: positive.
- So I did switch the black with the red color. But be sure to check which cable colors your JSTs come with and which order they have.

**⚠ Check step 2: Remember the connection order. You might break something.**

- The connectors have to match with the board. Otherwise the fan is spinning the wrong direction.

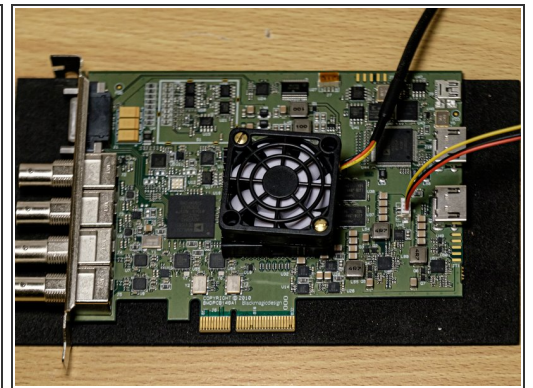
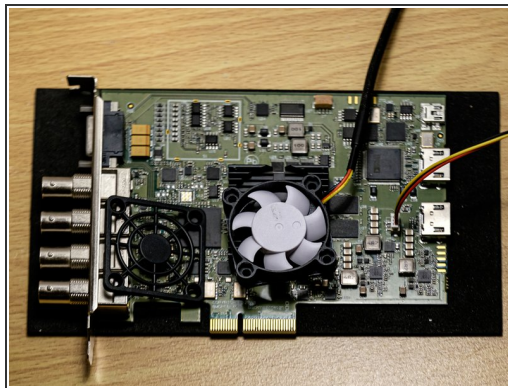
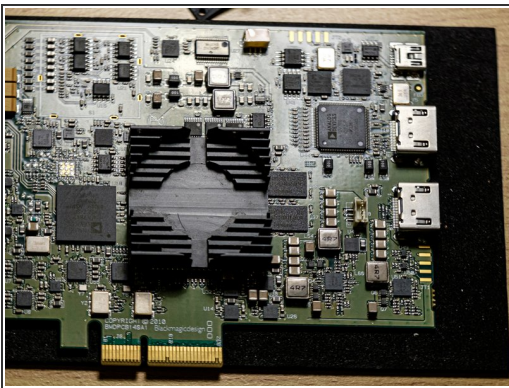


## Step 6 — Isolate the connection



- Be sure to isolate the connection.

## Step 7 — Bring on the fan



- Tighten the fan carefully.

**⚠ Make sure it sits well and is tight! Otherwise you get movement noise.**

**i** I know, mine isn't perfectly aligned. But it does work for me.

To reassemble your device, follow these instructions in reverse order.