3DO Nozzle Cam mount for Prusa I3 MK3 - improved version!

Clamikra

VIEW IN BROWSER

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Summary

Now with better light (3W pearl LED) and improved camera angle. New camera housing

| 1.08 hrs	1 pcs	0.15 mm	0.40 mm	PET	7 g	Prusa MK3S/S+ & MMU2S

3D Printers > 3D Printers - Upgrades

Tags: cameramount   nozzlecam   3do

I recently upgraded my former model of the gorgeous 3DO HiRes Nozzlecam with Sony video chip .

These are the improvements:

- Changed camera angle to center nozzle in picture
- Better lighting with brighter 3W pearl 4000K LED
- Body now made of two parts with pass marks for easier printing

Only the camera mount is changed over the previous model. PCB box, box mount and lid are the same and have not been touched. For assembly and general information see the original design.
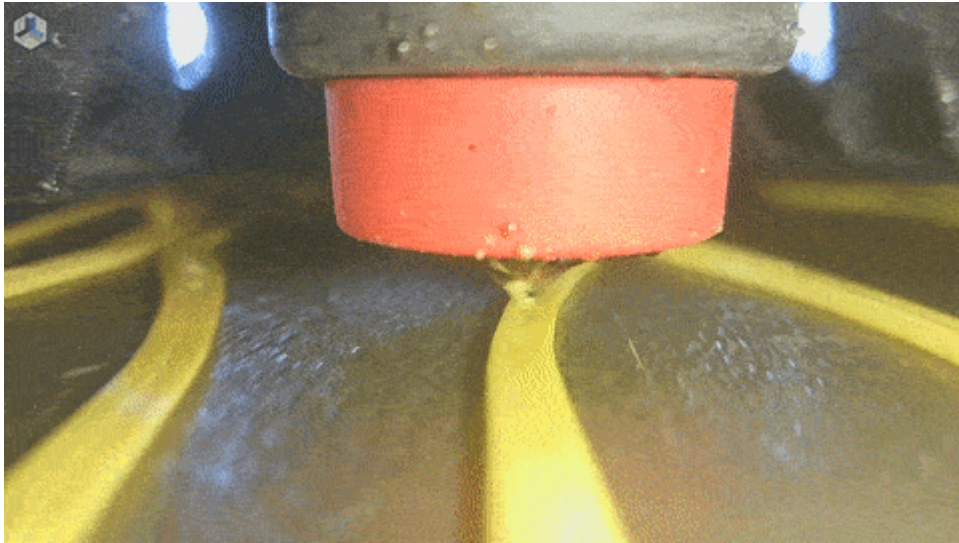
The LED is a 3,7 Volt pearl cob led (like this one). You should choose the 'natural white' variant with 4000K because it gives the best natural light. With 5V power supply (taken from Einsy Rambo board) you need a 80-90 Ohm pre-resistor to drive the LED. The resistor is soldered directly to the + contact of the LED and isolated with shrink tube.

The Camera housing now is made of two parts (Part A and part B) that snap together with two pass marks. Print quality is better and stronger this way. Still no supports needed. I put them together with a drop of superglue.

After assembling camera mount and PCB Case and securing all cables you can adjust the focus of the cam by loosening the screw next to the cam and pushing the mount a bit for- or backwards So that the focus sits excactly in the tip of the nozzle.

Someone asked me: "why not build it with two leds?" That's because the mount must not be too wide or it will interfere with the frame of the Prusa i3. There is just not enough room for two LEDs when mounting the camera this way.

Printed in Prusament PETG (no supports needed).

The assembly is a bit tricky so please refer to my instructions and be extremely careful when handling the camera or the PCB.
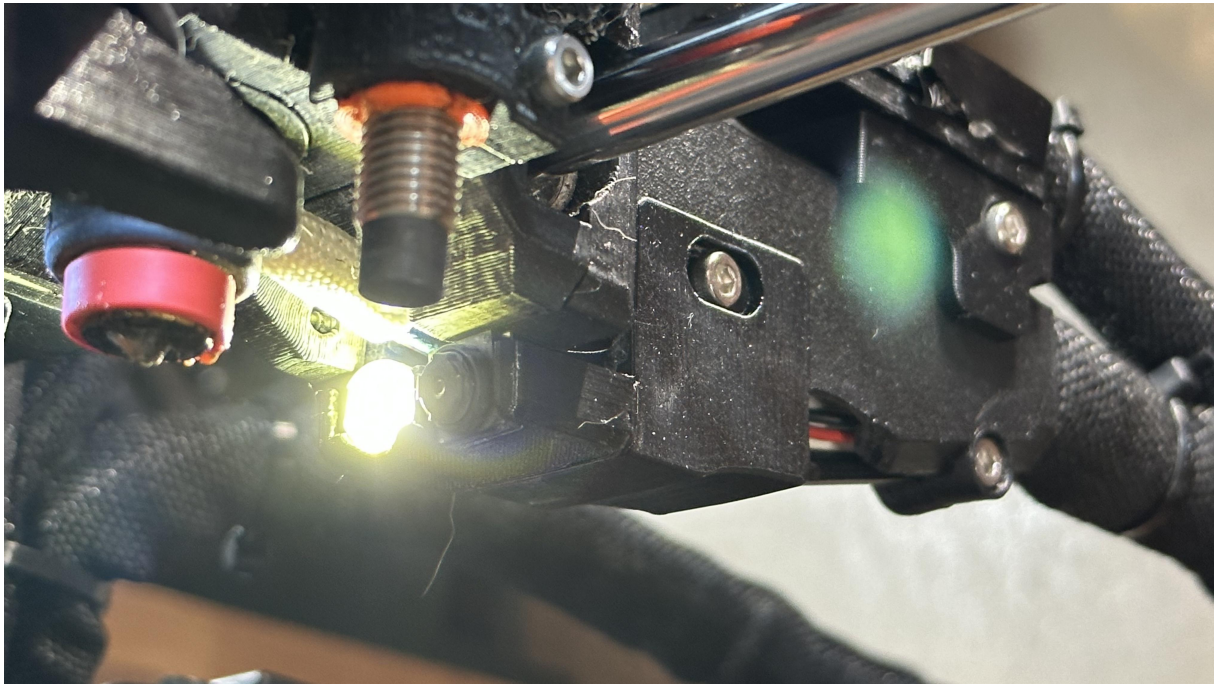
I now am completely content with the design and enjoy the macro-pictures of the nozzle while printing. It was quite a long developing process and a had to pay for some of my mistakes in the beginning (breaking more than one 3DO cameras ... had to buy new ones). At 3DO they must be wondering what I am doing with all those cameras :-)

Update (Comment):
@SpartanFPV_40710 reminded me, that it is not the stock x-axis cable support, that my camera holder is mounted on. I almost forgot I upgraded this part. So before adding my camera mount upgrade the x-axis cable support with this model: https://www.printables.com/de/model/139656-prusa-i3-mk3-x-axis-cable-holder-roomy-revo-editio . That is the one I have installed a long time ago and it is a great improvement anyway.

This remix is based on

3DO
Nozzle
Camera
Mount
for Prusa
i3
MK3S+

3DO Nozzle Camera Mount for Prusa i3 MK3S+

by Clamikra

Model files

nozzle-cam-3do-4k-v13-led-pearl-ab.stl

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nozzle-cam-3do-4k-v13-led-pearl-a.stl

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nozzle-cam-3do-4k-v13-led-pearl-a.3mf

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nozzle-cam-3do-4k-v13-led-pearl-b.stl

Print files

nozzle-cam-3do-4k-v13-led-pearl-ab-print_015mm_petg… .gcode
⊛ PET   ⬇ 0.40 mm   ≡ 0.15 mm   🕐 1.08 hrs   ⚖ 7 g   🖶 Prusa MK3S/S+ & MMU2S

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