

Date: 2019-09-04 Author: Ian Rash Index: #1

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This time I got a camera that had less features than the VStarCam, from a company called Besder. The exact model is IP20H1.



Just looking at the Amazon page, the advertisement promises a couple things.

- 1080p video
- POE powered
- Onvif
- IR day/night switch
- Motion Detection

It doesn't have any movement, speaker, or microphone capabilities.

Opening up the device we can get a clearer look inside.

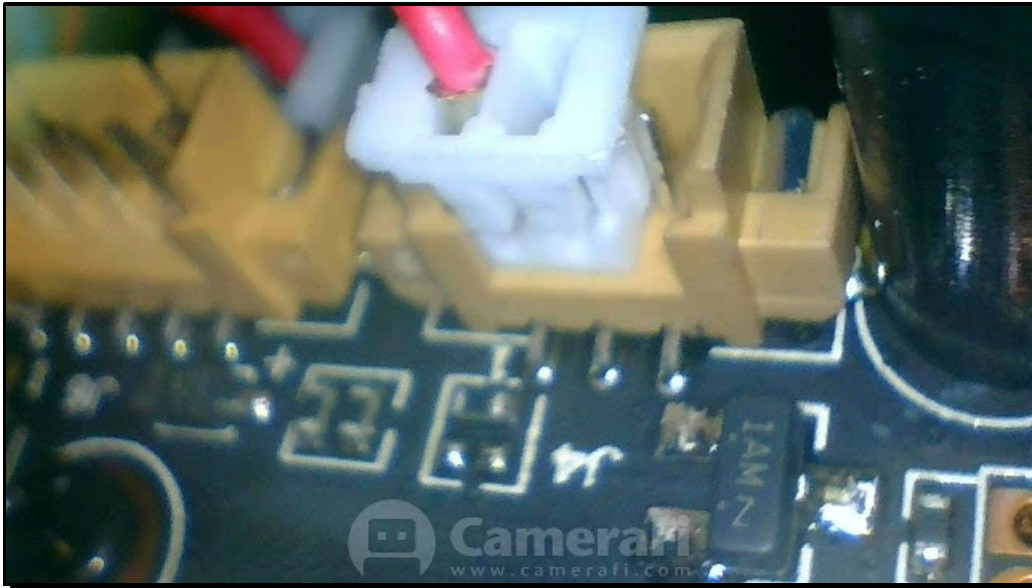


The camera head is on an up-down swivel, while the entire base rotates around. Kind of neat. Some screws and we can detach the camera head from the body.



Right away we can see 4 wire connectors. The longest one is the Ethernet cable in. As for the red and black one, that is connected to the IR LED to power. The red and blue one I'm guessing would be to help force on the IR, and the single red wire is the day light sensor, pure guess though on which are which.

An interesting note, the single red wire jumper is actually wedged into a three pin socket, you can see what I'm talking about in this picture.



There is also a free jumper, who knows what it might do. My guess is a potential UART, or motor control but honestly I don't know.

The processor, yet again, is a HI3516, a common IP camera SoC.

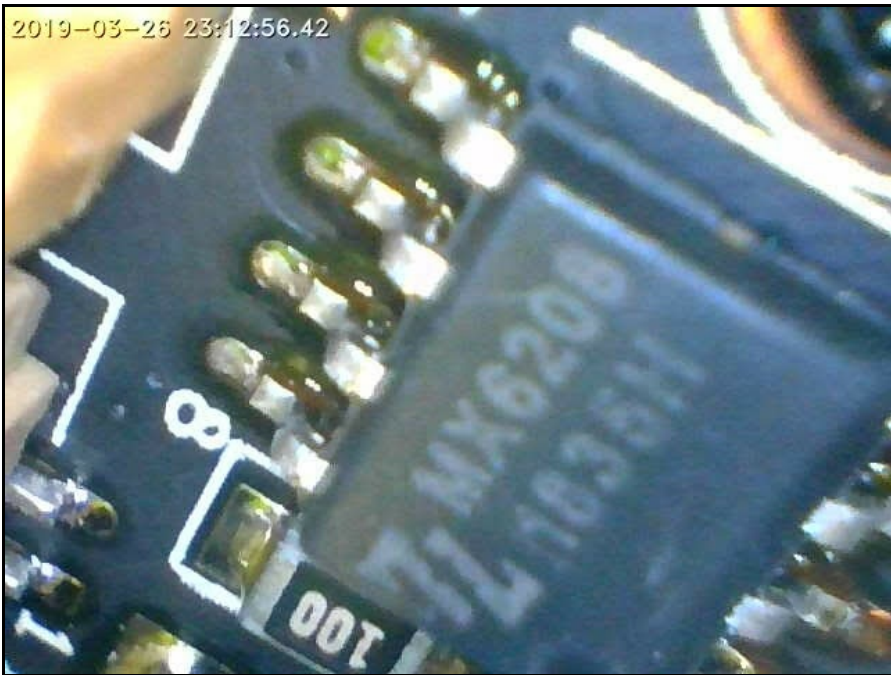


Looking around the board we can also see a number of interesting ICs, using google we can find out what they do.

Here is some close up looks at some of the chips and markings on the PCB.

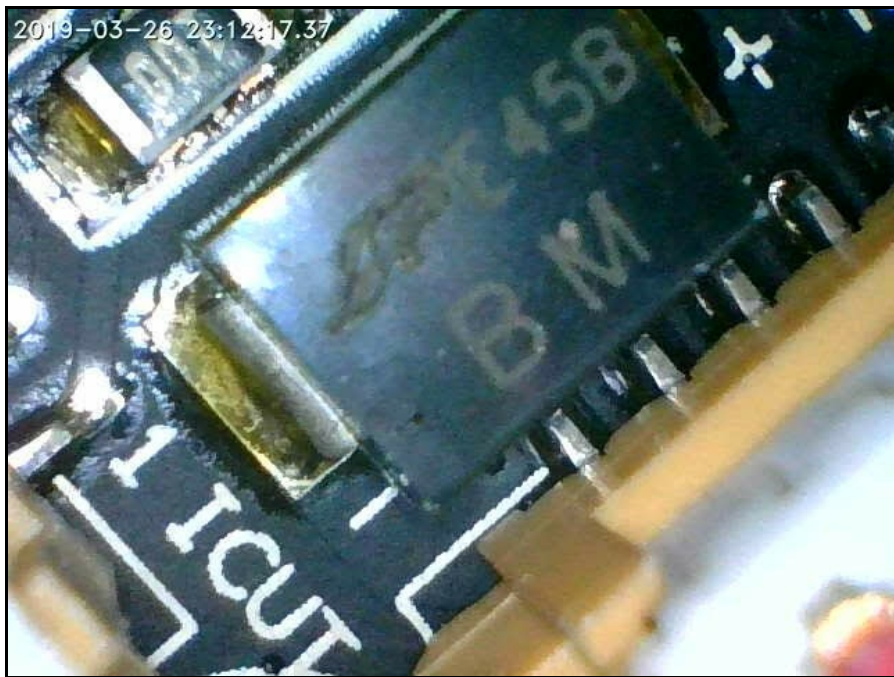


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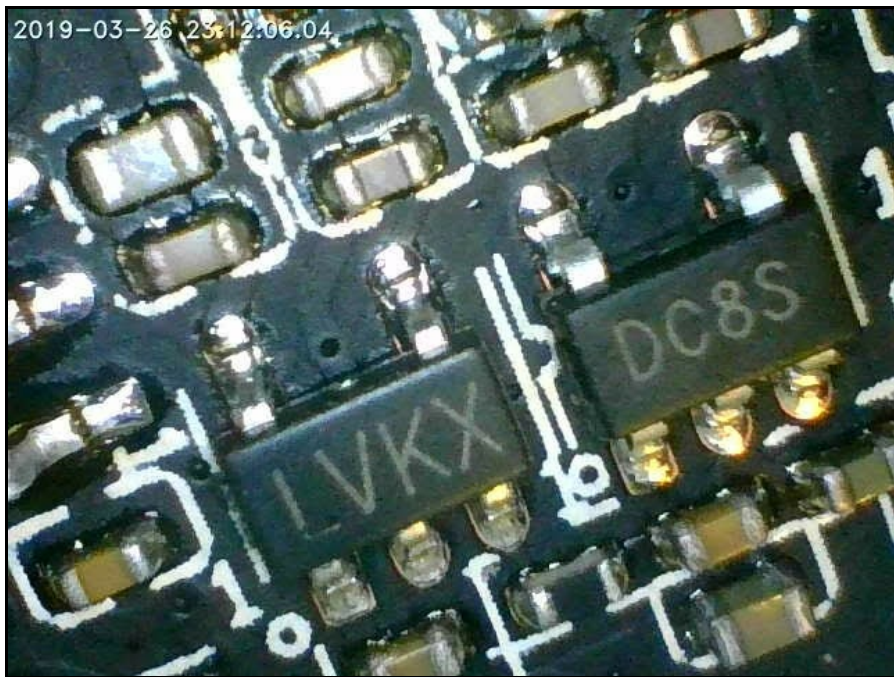


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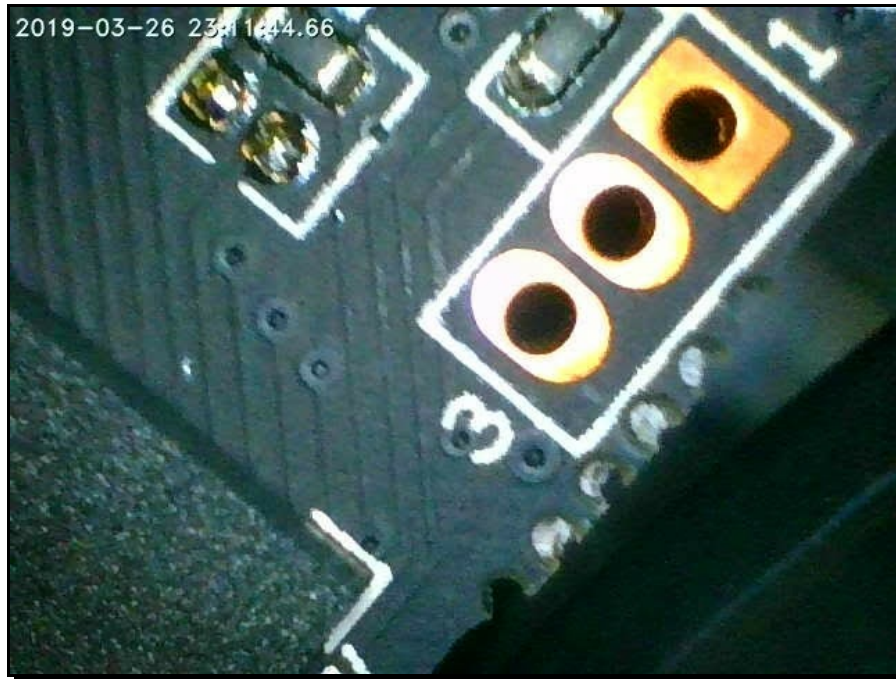


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Honestly I'm no hardware expert, but I did recently pick up a FT232H I've been wanting to learn with. I'd really like to be able to pull the firmware directly off the device, right from the Winbond chip. Also, I'd love to try and unbrick my VStarCam, and maybe even figure out how to write my own total firmware conversion!

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TAGGED SKILLS:

 Security Research  Hardware Security  Reverse Engineering