



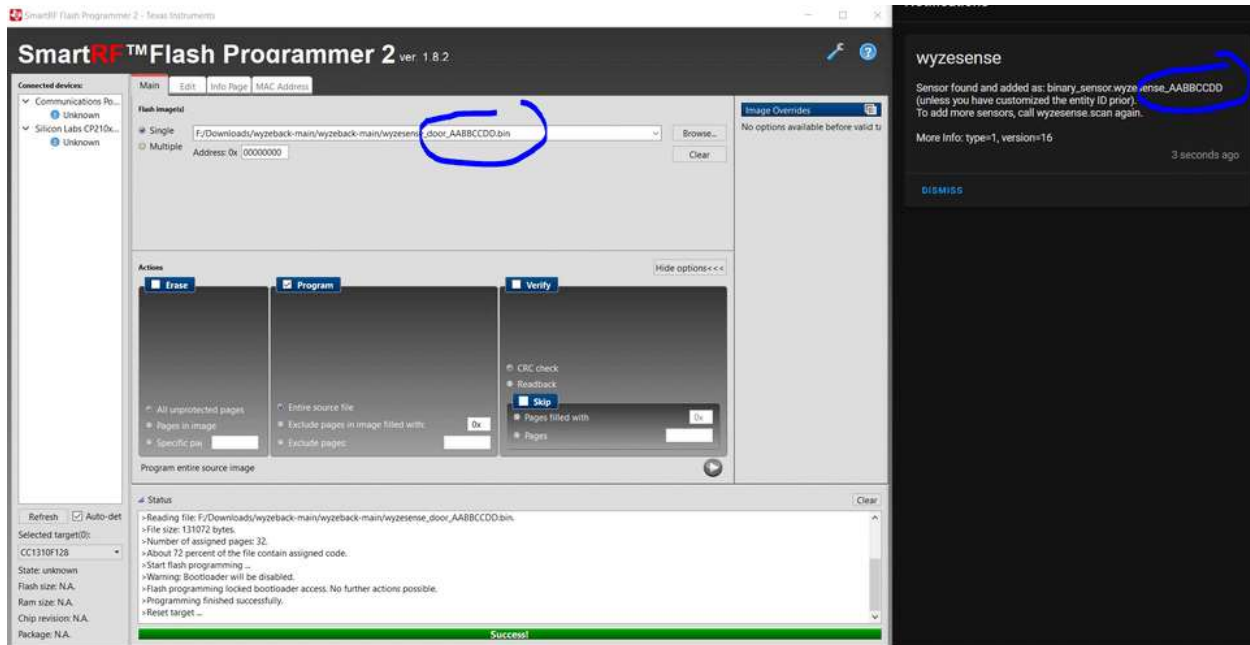
[r/homeassistant](#)

.Posted by

[u/vendo232](#)

2 years ago

[SOLVED] - 5\$ fix to WYZE sense sensors dropping MAC address when battery level drops.



36 Comments

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level 1

[vendo232](#)

OP · 2 yr. ago

I used a generic CP2102-based USB to serial adapter from eBay. Any 3.3v-level serial/UART adapter/device should be OK.

Connect GND from the serial adapter.

Short the RX pad on the sensor to GND. This triggers the bootloader.

Connect 3.3v from the serial adapter.

Remove the RX pad to GND short.

LED should be solid red. If it isn't, then this method will not work.

Connect the TX/RX from the serial adapter to the "T"-marked TX pad and the RX pad next to it.

Downloads and install Flash Programmer2 from TI.

Flash Programmer 2 (select the serial port, then CC1310F128)

USB Adapter : https://www.amazon.com/HiLetgo-CP2102-Converter-Adapter-Downloader/dp/B00LODGRV8?ref=ast_sto_dp

Firmware: <https://github.com/sycophantic/wyzeback>

You can also backup your own firmware using this tool and command

```
cc2538-bs1.py -p com10 -r -l 131072 backup.bin
```

credit goes to Mr. Null from WYZE forum



level 2

[Roxian2021](#)

·7 mo. ago

Hi, I'm new here but I bumped into this thread with dead Wyze sensors issue and I would like to give it a try. I a few sensors that went dead and Wyze no longer sell or support this product. Just wondering if you don't mind to give a step by step process? Specially the loading of the firmware using the TI Flash Programmer. What needed to change in the line code, setting, etc. Thanks in advance!

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level 3

[vendo232](#)

OP·7 mo. ago

my advice would be to move to ZigBee, buy these door sensors 4\$ each.

<https://www.ebay.com/itm/203254885008?epid=9018320900&hash=item2f52ef6a90:g:xvYAAOSw1LVgCVb1&amdata=enc%3AAQAHAAAA4jXcGo4DEjqTpoKzjxz0%2BjVziddTtL6p13XQ0R3mxDgKhxwR7uIjE7jN02LOfTTbxbDfdt3WqypdUPCYcrMSFGtvMjcwRz1qEhaGFLfudN2h97Gsj9xIspKQ2NWqkny8hQRGzOMGuV0fG8fRN6NtCcPr%2BQ7n%2BcARIKpT8EjwVVe%2FfvjEg8Zmj%2BqdYQ5xbDSQluxWSnQ8GL9obSI9nEoGTfjKuy2U3boGIs70rEB9bIGIKvylxZxq0n7nkrSnHZZi1%2BTPasw1fNQBWvIiT%2BZYZTrTEovr3iLq5zBB%2BbD4Axn%7Ctkp%3ABFBM9u2Qmj1h>

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level 2

[aross1976](#)

[·2 yr. ago](#) · edited 2 yr. ago

OK I got the FW patched for my motion sensor

I got my FTDI board, and set it to 3.3v logic

I installed the TI flasher program

I can see it detect my FTDI board

I can not find a pin out for the test pads on the motion sensor though

there are 2 pads diagonal from one another in the corner of the board ,one labeled "T" and one labeled "R" and one other pad looks like it is labeled M4

<https://i.postimg.cc/k4V4X06W/Screenshot-20220104-162926.png>

so I went under the assumption that the pad labeled "T" was the TX and the pin labeled "R" was the RX

I soldered a JST connector onto the "T" and "R" pads (so I can unplug it and have a connector case I need to reflash it again)

however when I tried to put it into bootloader mode by grounding the pad labeled "R"

the red light did not come on solid ,(it says in your instructions that you need to ground the RX pin) , so then I tried to ground the pad labeled "T" at power up instead this worked and the red light came on solid so it looks like in your picture the pad labeled "T" is the TX but on mine the when I ground the pin labeled "T" on power up it puts it into bootloader mode so then I connected up the TX and RX to the pads and tried to flash the board but it will not get detected in the flash programmer program I have tried it a bunch or times and I tried reversing the TX and RX connections and I get no luck either way , the programs says to try changing the baud rate but I can not find any setting for changing the baud rate , in setting there are only 2 options and both are checked should the "use 2 wire JTAG" option be checked? ,because it is

maybe I soldered to the wrong pads?

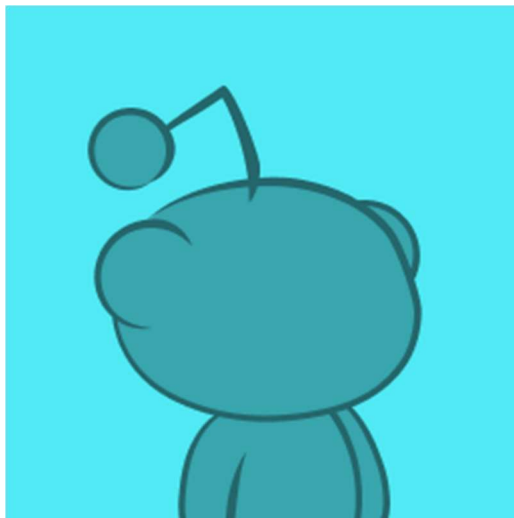
I assume the "T" pad is one of the right pads either TX or RX , but maybe the one labeled "R" is not the right pad , neither TX nor RX and is in fact some unused pad?

any ideas as to why this is not working , or which other pad to try?

I guess my assumption that T= TX and R= RX was wrong then

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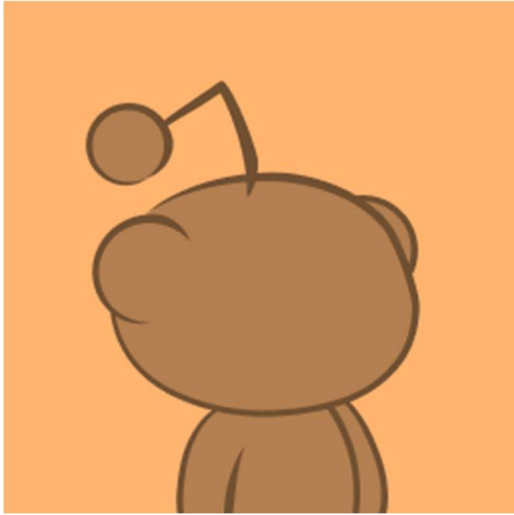
[arquidromo](#)

·8 mo. ago

Hi Aross, do you still have your motion and door v1 sensors working?

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level 2

[prazy4real](#)
[·2 yr. ago](#)

sent you a PM. if would be great if you could help with my question. Thanks!

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level 3

[vendo232](#)
[OP·2 yr. ago](#)

Hi, I am traveling. You need to connect Tx to Rx and Rx to Tx, once device is Transmitting (Tx) and the other will be Receiving (Rx) hope it helps

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level 4

[vendo232](#)

[OP](#) · 2 yr. ago

also when you will be flashing DO NOT LOCK bootloader otherwise it will be your one and last flash to the device.

this is only possible on devices which have unlocked bootloader

so not ALL devices will work not sure I mentioned it

good luck and check Zigbee sensors from Sonoff as a replacement

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level 5

[prazy4real](#)

[·2 yr. ago](#)

Thanks for your quick response. I appreciate it. I was thinking about moving away from wyze sense as it is obsolete but debating if I should get RF sensor or zigbee sensor as RF has longer range. I've both RF and Zigbee bridges up and running.

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level 6

[OrionTheTitan](#)

[·1 yr. ago](#)

Did you ever get this working on your motion sensors? Mine don't seem to want to talk to the FTDI serial programmer either.

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level 1

[flickerkuu](#)

·2 yr. ago

Saved my sensors, I knew someone would come through some day. Probably too dumb to pull it off though. I can solder though, and already have a programmer...

I don't understand where you get the mac address to reprogram it with.

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[vendo232](#)

OP·2 yr. ago

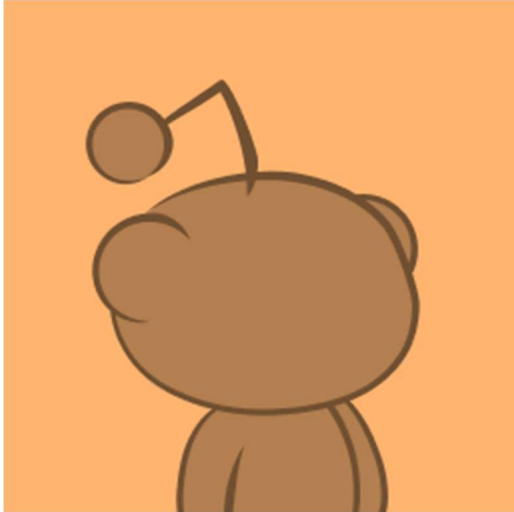
Hi, the MAC is listed on the back of your sensor, the part where the glue foam is there you can find MAC address, is it veeey small text, take a picture with phone and zoom in.

Them open the fw in HEX editor andnreplace AABBCDD with your MAC

Good luck, and remember there is a way all the time!

4

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[_5had0w](#)
[·8 mo. ago](#)

What do you mean replace it with MAC?

Are you talking about the "00000" in your screen shot being changed to mac address or renaming the .bin file?

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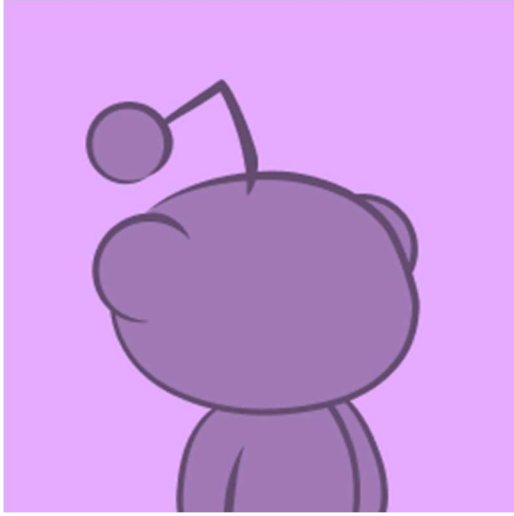
[vendo232](#)

[OP](#) · 8 mo. ago

Open the bin file in HEX editor and replace dummy MAC "AABB..." To the original MAC or you can also made up your own MAC as long as it will be unique sequence in your setup.

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level 1

[Wwalltt](#)

· 2 yr. ago

Just rinse, wash and repeat and re-flash the sensor everytime the battery needs to be replaced?

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level 2

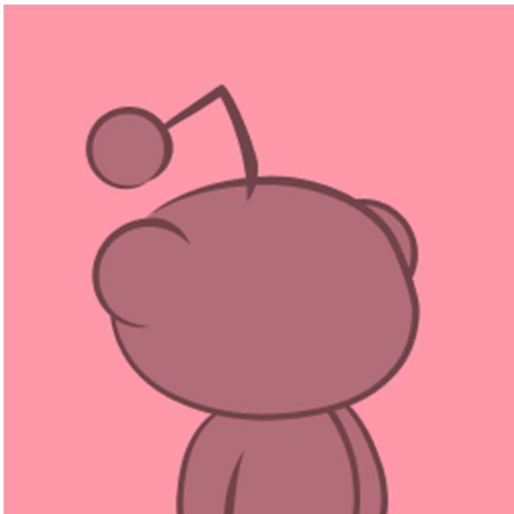
[vendo232](#)

[OP](#) · 2 yr. ago

Or set your self a reminder and replace all your wyze batteries every 6 months

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level 3

[I Usually Need Help](#)

[·2 yr. ago](#)

I've had a couple die when changing a not-dead battery. I'm done with the damn things.

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level 3

[InternationalNebula7](#)

[·1 yr. ago](#)

To fully clarify: is this a permanent fix or a repeat every time it dies?

Software recommendations for the flash Ubuntu 21.10 (with the recommended generic CP2102-based USB to serial adapter)? Considering flashing some ESP Tuya plugs with ESPhome while I'm at it.

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[vendo232](#)

[OP·1 yr. ago](#)

It is not permanent due to poor Wyze design.

If you lock bootloader during flashing it will be your last flash.

If your sensor has already locked bootloader this hack will not work , and if your sensor lost MAC is a trash.

I do not know if TI has Linux app.

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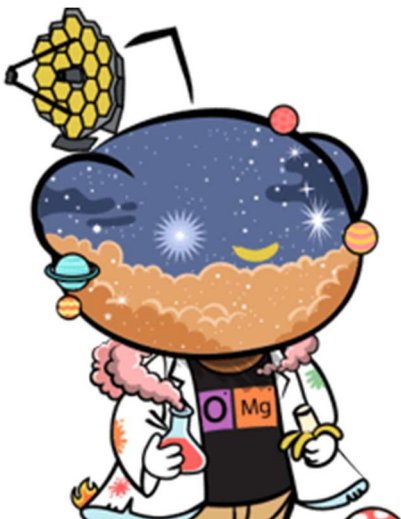
[Whoisdecoy](#)

[·1 yr. ago](#)

You can now change a variable and the mac is saved in flash to persist power loss. see github and the like

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level 2

[DopeBoogie](#)

[·2 yr. ago](#)

If you change the batteries *before* they are sufficiently depleted they won't brick on you. Maybe when you change them, change the battery quickly so it spends as little time as possible without a battery in it, but some of mine I've had since the beta shipment and they still work just fine several battery replacements later. The ones that have died on me spent quite a bit more than a few days with dead batteries before I tried to replace them.

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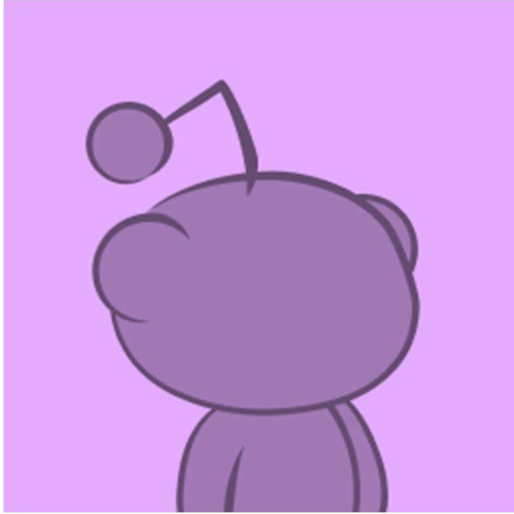
[IKROWN1](#)

[·2 yr. ago](#)

I don't see why so many people are bashing this fix. You did the work for wyze as seems to be the norm for this company. They throw out broken products and wait for the community to create fixes. Meanwhile the people that do the work for them get bashed for it.

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level 2

[Wwalltt](#)

·2 yr. ago

I think the bashing is mainly for the brain dead original design.

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level 3

[IKROWN1](#)

·2 yr. ago

I mean wyze can honestly be bashed for pretty much every product they've released. The wyze watch has problems syncing with fit and apparently didn't even ship with advertised features. The scale I have will give me a ~10lbs difference between every time you step on it (yes even on a tile floor completely flat). The window/door v1 sensors break when the battery dies, the v2 sensors report status when they want to from what a friend showed me. The v3 cams were

promised rtsp firmware and that's been a shit show as well with multiple different user made mods and hacks to diy.

Maybe their vacuum works I won't buy 1 to try it though. I wouldn't recommend these devices to someone I hate. I kinda felt bad selling my wyze stuff to some guy on the wyze forums cause I'm sure he's kicking himself in the ass on that one.

I kept 1 camera just because I didn't have an immediate replacement setup for the camera. Here we are a year later and still no rtsp firmware and to make matters worse you have wyze willing to screw their own customers over and rate limit the api for their own devices just to force people into their plus cloud services instead of using the hacked methods.

This company is pure scum.

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[Hathalud](#)

[·2 yr. ago](#)

If you read the update from the developer on the Wyze HA integration, it was justified for them to block it.... Given the amount of data being pulled through their connections was enormous and disproportionate to the number of users utilizing the integration vs paying customers or even free customers not using the integration. I don't doubt that they want more subscriptions sold, but those of us this into home automation are not their target demographics. Bandwidth at a certain point isn't free for companies and they have to pay for it.

Putting the situation into a metaphor, if your business was a restaurant and you made money selling food and drinks, but a small group of people were constantly in your restaurant drinking water for free in such great quantities constantly that your water bill was ridiculously high, you would take action too.

Don't get me wrong, I am not in love with Wyze. I have one Wyzacam v2 and won't be buying from them again because of the rtsp issue and it freezing frequently unless I reboot the camera daily. But I do believe in being reasonable about justified circumstances. Checkout the repo for more extensive details from the horse's mouth on why they blocked it.

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level 5

[IKROWN1](#)

[·2 yr. ago](#)

They can literally say anything they want to way. I'm sure you might be taken back to hear something so crazy but it's not like it would be the first time wyze has openly lied.

As for your metaphor you should at least try and make it represent the situation at hand.

Wyze asked us to buy their new soup at their restaurant. Now after placing the order and being required to pay up front for it the company decides to just give me the ingredients to make the soup but not the finished product. So I walk over to the open source restaurant down the street and hand him the ingredients. They make the soup for me then wyze gets all pissed off and butt hurt that I wouldn't just pay their chefs extra money to make the soup I already paid them to make.

People aren't coming off the streets with their cameras from other companies and sucking up wyze resources. No sir. They're trying to get the pieces of shit wyze promised to actually work in some fashion.

More like your paying customers are in the back trying to fix your water fountain for you. While you actively keep trying to sabotage them.

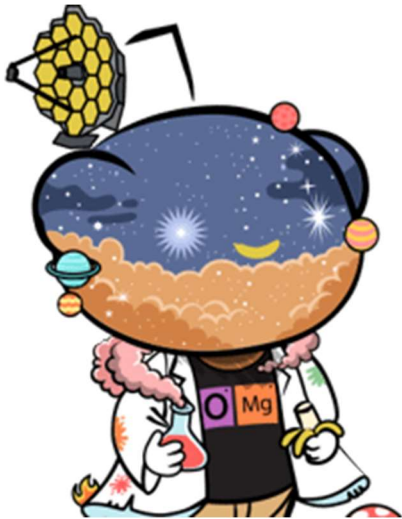
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level 5
[aross1976](#)
[·2 yr. ago](#)

No problem with them limiting their API access from HA
but the way they handled the wyze sense issues was very shady
I really do like this company a lot and have supported them from the beginning and they have
been really good to for the most part
but this just was not handled right at all, they could have at least pushed urgent notifications
through the app about the brown out issue
fuck I get a shit ton of ad pop ups now urging me to buy the wyze flashlight or the wyze dildo
or whatever their latest gadget du jour is
If they can push ads when I try to open my live feeds or view events (which just started fairly
recently) they could have issued a big red warning popup to just sense users about the battery
issue
By all rights this could result in a class action suit
but I really would not want to see that happen because aside from me wanting them to
succeed because I have bunch of cams that rely on their servers
they really have been pretty good about things aside from this
but they really should be seeking a lawsuit against TI for their faulty chip
I wonder what the disclosure was from them when they commissioned the device and order
them ,unless that was handled by xiaomi



level 1

[DopeBoogie](#)

[·2 yr. ago](#)

Oooo fun! I will definitely be trying this! Glad I kept my dead Wyze sensors!

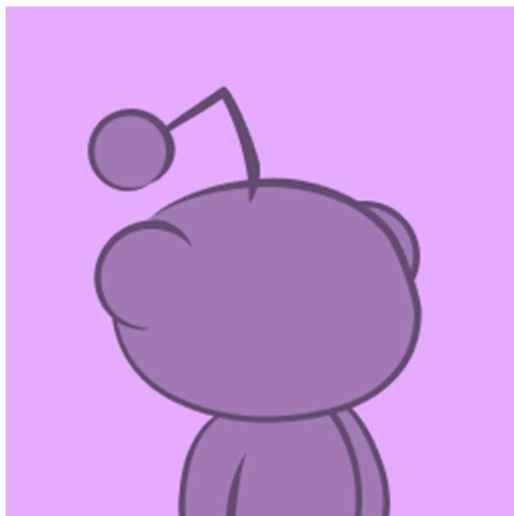
I get the whole "why bother?" attitude that others have expressed, but these things are the best and cheapest I've ever found for contact/motion sensors.

I've been working up to replacing mine too but I'll keep using them if I can rather than spend at least \$15/ea for a simple contact sensor.. I don't intend to get any more doors/windows in the best future so if my Wyze set can cover them all I'm not jumping to spend hundreds of dollars replacing them with another brand.

I'm still salty that they discontinued them, there isn't anything else on the market that competes for the price.

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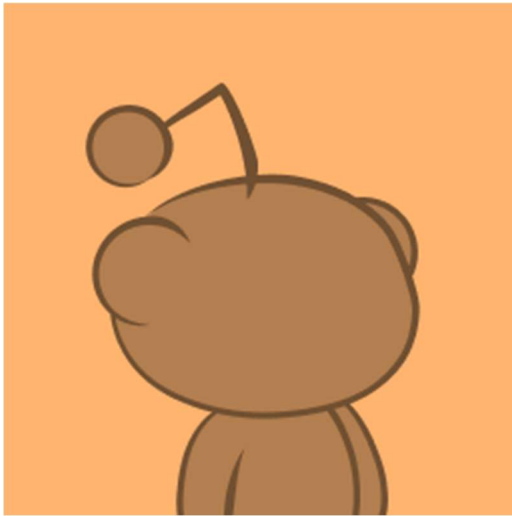
[rclipc](#)

[·2 yr. ago](#)

I have 10 Wyze sensors that don't work. I don't know what the f*ck you're talking about. I'm right where I was 2 minutes ago.

6

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level 1

[diito](#)

[·2 yr. ago](#)

The wyzeback fix has been around for awhile now. While I'm glad someone published it I don't see much of a point to using it. They aren't making these anymore. Most owners, like myself, have moved on to other sensors. Even if I had kept the Wyze sensors I'd not being willing to deal with the hassle of taking my sensors apart all the time to keep fixing them. On top of that these were never super reliable, that's only going to get worse as the integration is no longer maintained and the chances of anyone picking that up only shrink as time goes on.

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[vendo232](#)

[OP](#) · [2 yr. ago](#) · edited 2 yr. ago

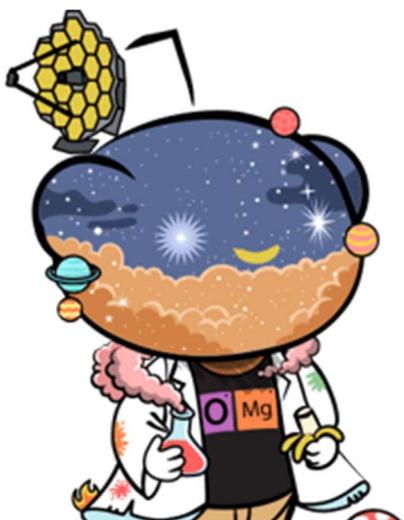
I moved away as well, moving to zigbee from sonoff.

But if I can fix something I will and now you can too.

Wyzeback requires 40\$ board this can be done with something we all have around a 5\$ board.

6

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[DopeBoogie](#)

[2 yr. ago](#) · edited 2 yr. ago

Mine are actually super reliable!

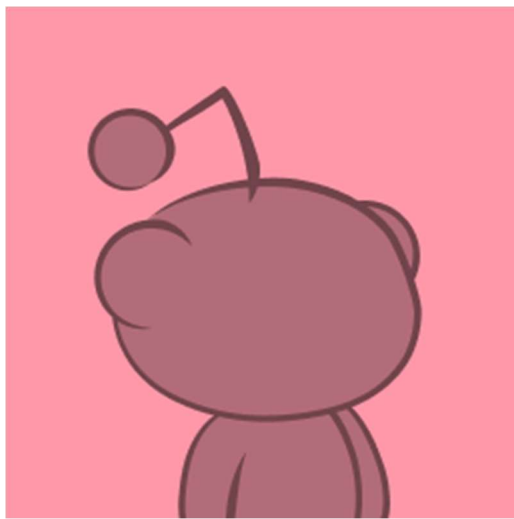
We'll see how it goes with the integration not being maintained anymore. I don't expect the communication between the receiver and the sensors to change much considering Wyze is no

longer selling them or actively developing for them. I think the only thing worth being concerned about is future breaking changes in HA that make the integration stop working. However there are already several forks that *are* being actively developed so I suspect someone will manage to keep it working for us.

I think the general consensus among the people using them in HA still is to phase them out for something like zigbee but the reality is that is a pretty expensive prospect for a lot of us and personally I appreciate the ability to continue using mine while I can rather than spend hundreds of dollars replacing them with uglier, more-expensive alternatives.

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[Drysandplace](#)

[·2 yr. ago](#)

You can count me in the why bother column. Its a piece of crap with poor range thats always going off line and the fix isn't permanent. To keep it from bricking again you'll have to spend more for batteries than you paid for the sensors to start with.

-3

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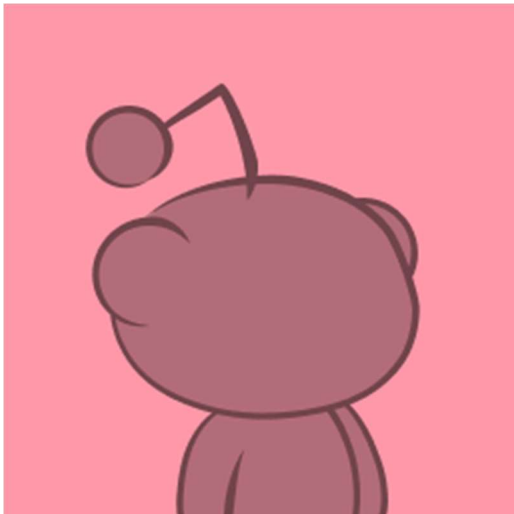
[vendo232](#)

[OP](#) · 2 yr. ago

Let me add you to a column " pointless comments " . You feel pain from being treated unfairly by Wyze? So do many of us, grow up and move on.

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level 3

[Drysandplace](#)

[·2 yr. ago](#)

Thinking that resurrecting a V1 sensor is beating a dead horse is not juvenile. It's the opinion that after all your time and effort you haven't improved a device that wasn't that good to start with.

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