



Ikea TRÅDFRI Gateway Teardown

Ikea's Smart Lightning line just got a new addition, a gateway that connects Ikea's smart bulbs to your local network.

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 **TOOLS:**

- Heat Gun (1)
- Metal Spudger (1)
- Mako Driver Kit - 64 Precision Bits (1)

Step 1 — Ikea TRÅDFRI Gateway Teardown



(i) The Gateway I'm tearing down today came from the Ikea Gateway Kit, which includes the Gateway, two bulbs, a remote, a USB A to Micro-B cable, a Ethernet cable and a 5V @ 1A charger.

Step 2



(i) The Gateway has 3 status LEDs:

- Network
- Internet
- Power

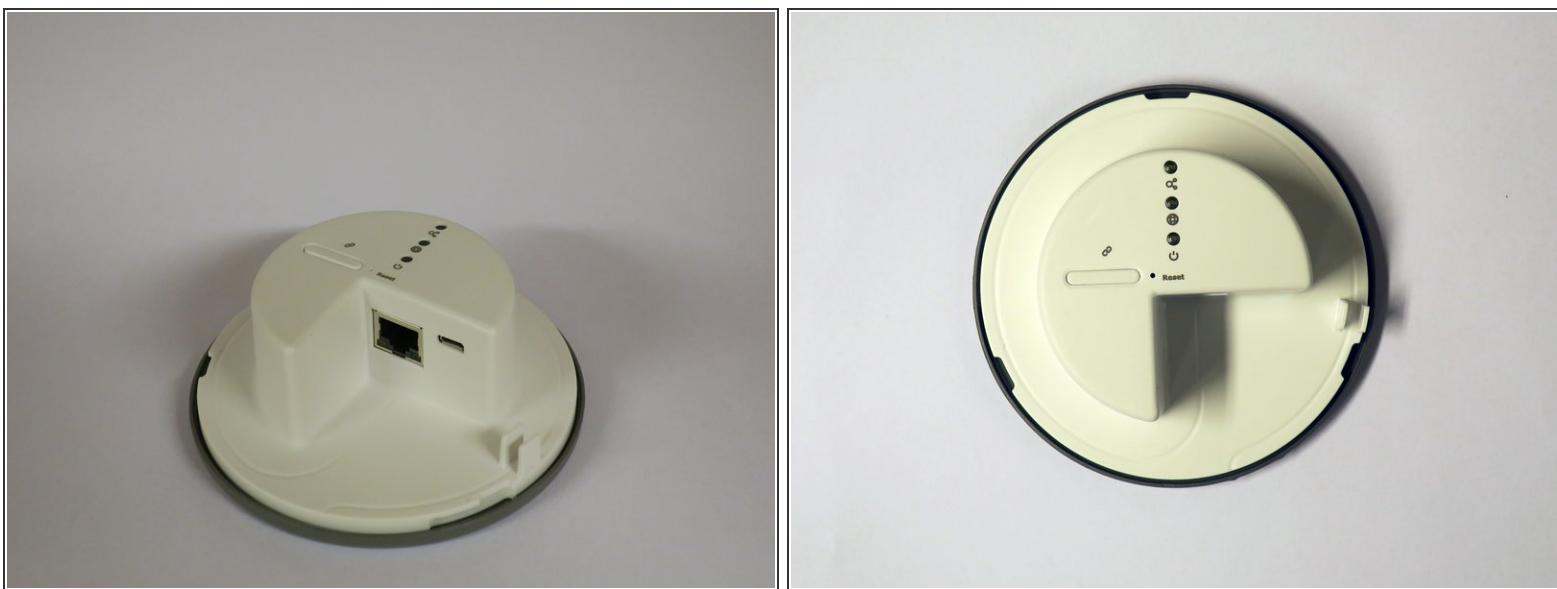
(i) The cables fit neatly inside the plastic case.

Step 3



- The top part of the Gateway easily comes off after you twist it slightly counter-clockwise.
- There are two helpful markers on the side of the Gateway, when the top marker matches the bottom left marker, the top is locked, when it matches the bottom right marker, the top is unlocked.

Step 4



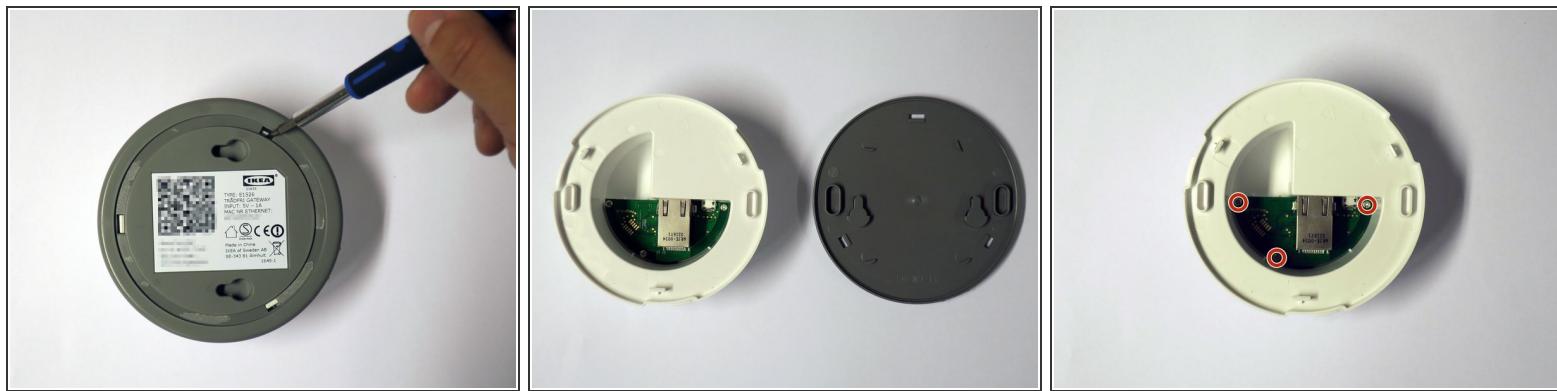
ⓘ Closer look at the base.

Step 5



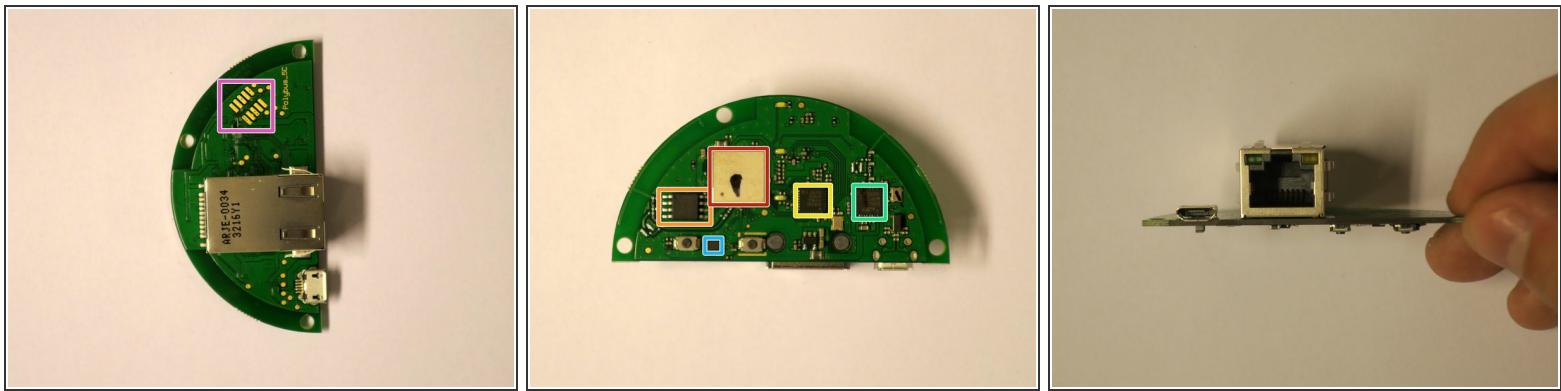
- We flip the base and we see a sticker with the Ethernet MAC address and QR code used during the setup.
- But not screws!
- Let's heat up the rubber ring slightly to soften the glue and remove the ring.
- Voilà, plastic tabs.

Step 6



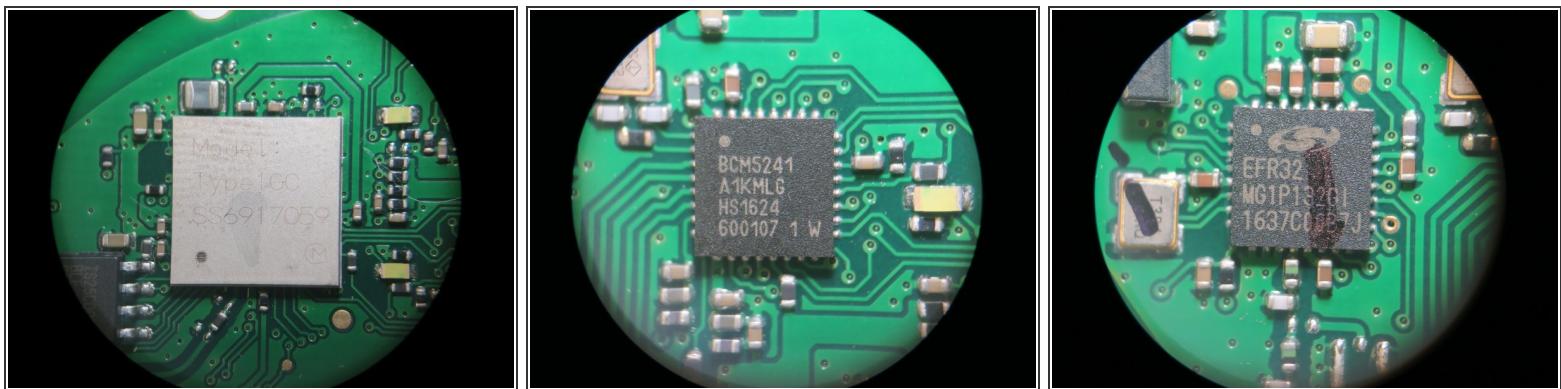
- We pry the 3 tabs and we see...
- A tiny PCB!
- Wow, that is one tiny PCB.
- The PCB is held in place by 3 Phillips head screws.

Step 7



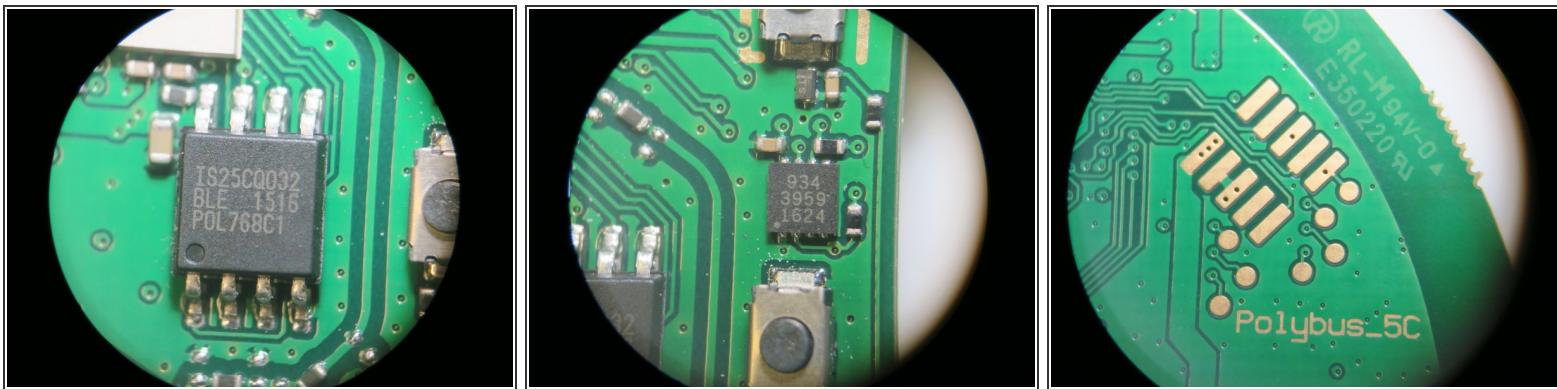
- A mysterious unpopulated footprint, can I hear "debug connector"?
- ISSI [IS25CQ032](#) 32 Mbit Quad-SPI Flash
- Murata [Type1GC](#) 2.4GHz & 5GHz Wi-Fi Module
 - *(i)* The module includes the Cypress [BCM43907](#) Wireless System SoC
- Broadcom [BCM5241](#) Fast Ethernet Transceiver
- Silicon Labs Mighty Gecko EFR32MG1P132GI Zigbee and Thread Multiprotocol SoC
 - *(i)* Seems to be the same SoC as the one used in the Ikea bulbs.
- 934 3959 1624 - With the recent announcement that the gateway will work with Apple's HomeKit, it's possible this is the MFi chip

Step 8



- *(i)* A closer look at the Wi-Fi/Ethernet/Zigbee parts.

Step 9



(i) Another look at the other parts.

Step 10



(i) This concludes the teardown.

(i) As a bonus, I include a shot of the USB charger and the remote, which I won't be tearing down today.