



# Garmin Forerunner 735XT Teardown

Teardown of the glued forerunner series

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## INTRODUCTION

Garmin's latest forerunner revision provide a good feature set to compete with other fitness watches.

In following other manufacturers, a glued front technique has now been adopted by Garmin.

The unit featured here developed a fault, in under two years of active use.

Support from Garmin quoted a £100 fee to replace the device out of warranty (approximately a third of the cost of the device).

Instead of paying this, let's dive into a teardown and share some information instead.



### TOOLS:

- [T6 Torx Screwdriver](#) (1)
  - [Spudger](#) (1)
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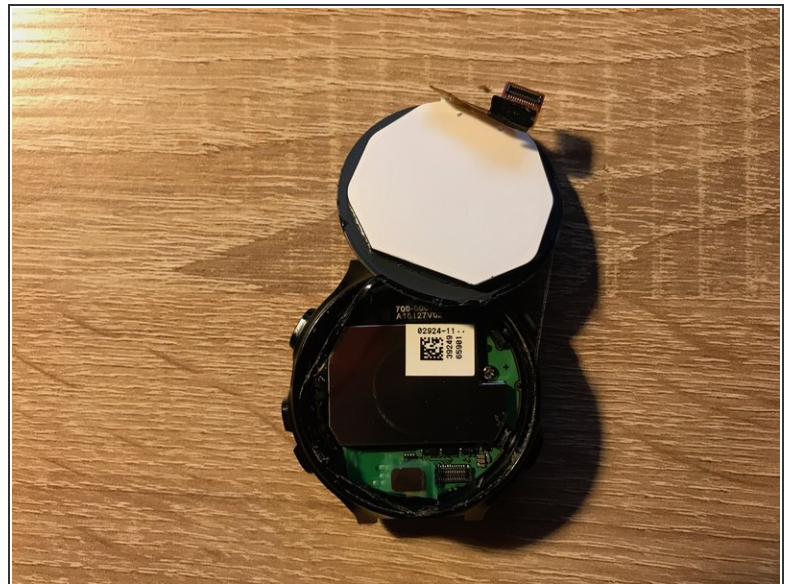


## Step 1 — Garmin Forerunner 735XT Teardown



- The strapless 735xt, the straps are secured by two T6 screws on each side.

## Step 2 — Prise off the front



- The front is glued
- Use an iFixit Spudger to prise around the glue. It's not necessary to use a heat gun here.



### Step 3 — Carefully remove the screen



- Once the screen moves, carefully remove the ribbon connector and the screen.

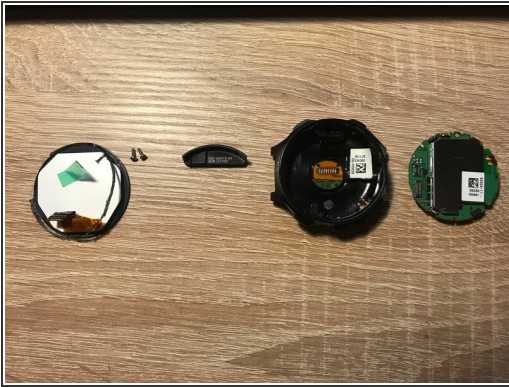
### Step 4 — Remove the main board



- Two T6 screws hold the mainboard to the body.
- The main board will move from where the Spudger is inserted.
- Remove the green protective tape and disconnect the second ribbon cable before proceeding.

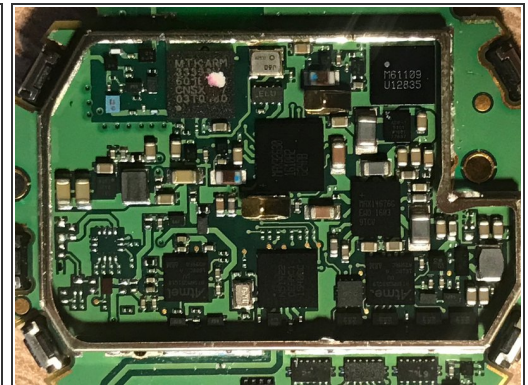
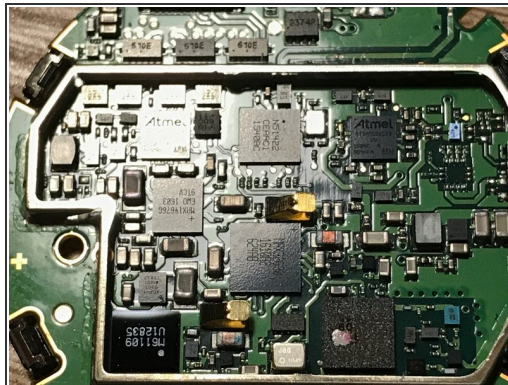
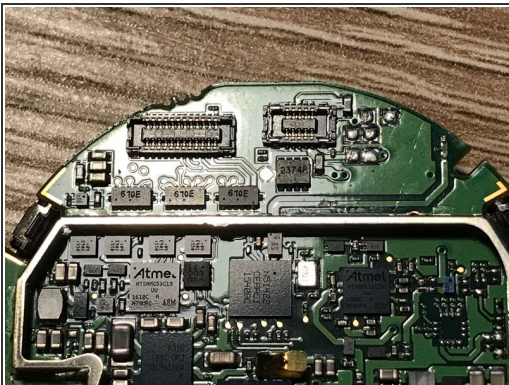


## Step 5 — Disassembled



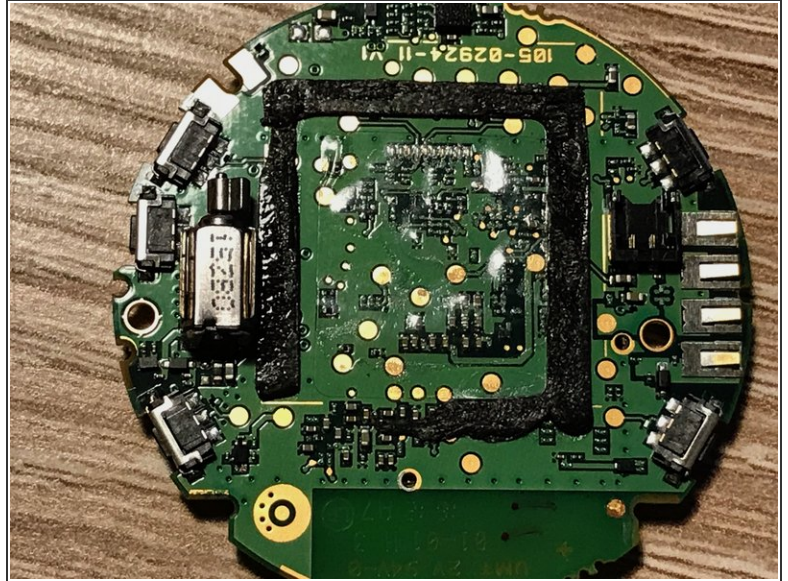
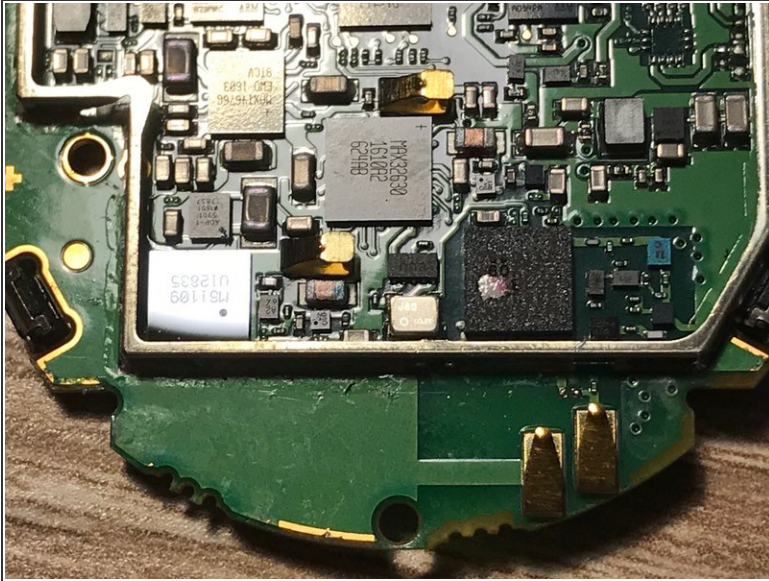
- The unit will now be disassembled
- Unplug the battery by lifting up the connector from the bottom.
- Further disassembly and analysis to follow...

## Step 6 — Closeup



- GNSS receiver looks like MediaTek MT3333 with external amplifier+filter+chip antenna. And ARM7 CPU.
- The watch has at least 3 Cortex-M4 microcontrollers, not counting Ant+ or GNSS chips! Microchip ATSAMG51, ATSAMG53 and MAX32360
- nRF51422 contains ANT+ and Bluetooth LE functionality. And Cortex-M0 CPU to run these.

## Step 7 — Further closeup



- Insert wisdom here.