



Actiontec Q1000 Teardown

Actiontec Q1000 Modem Teardown on August 23, 2013.

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INTRODUCTION

This teardown is a working [Actiontec Q1000 Modem](#), sold by Qwest as a Qwest Q1000.

TOOLS:

- [Pro Tech Toolkit](#) (1)
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Step 1 — Actiontec Q1000 Teardown



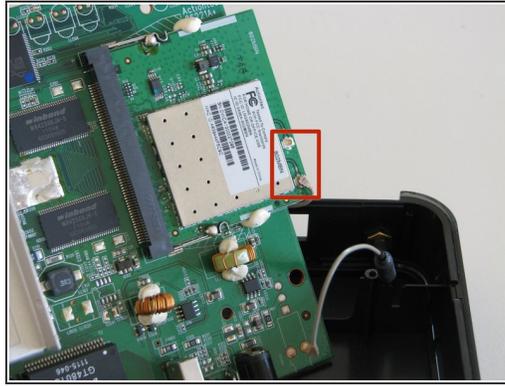
- The Qwest Q1000 modem, made by Actiontec.
- Port side with antennas detached.
 - DSL and Phone in ports
 - 4 Ethernet ports
 - USB port, reset button, and power jack
- Not a screw in sight.

Step 2



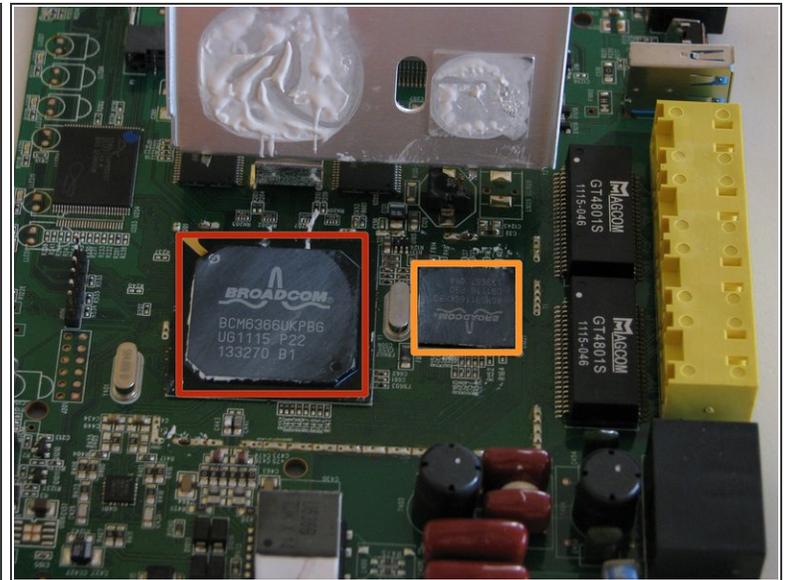
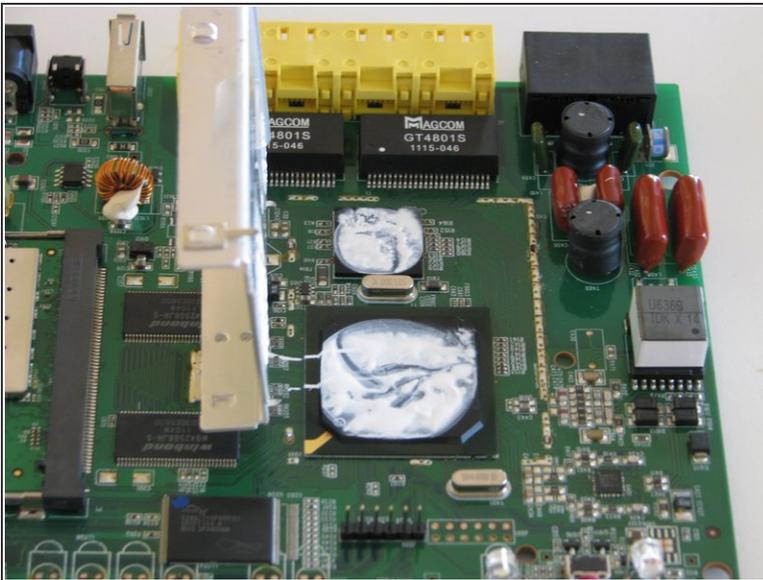
- As usual, the rubber feet are hiding screws!

Step 3



- Nothing really to see here...
- Remove the 2 antenna wires from the wifi card. One is also taped to the back of the board.
- The circuit board is finally free!

Step 4



- Looks like someone was generous with the thermal paste.
- Underneath the cover:
 - Broadcom BCM6366
 - Broadcom BCM53115

Step 5



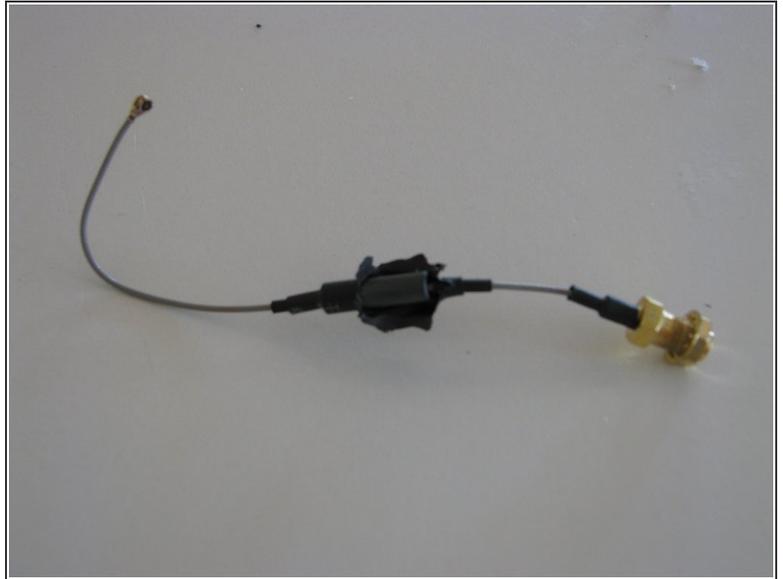
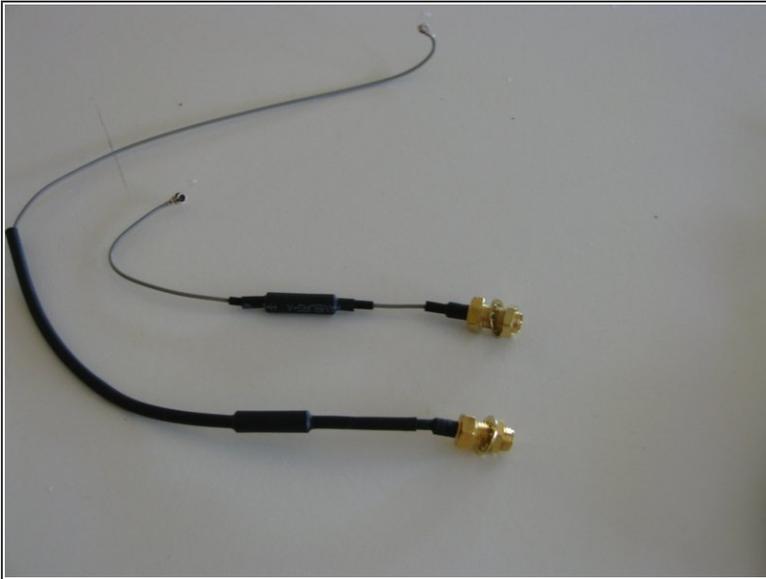
- The Wi-Fi card lets down its shield...
- The chip is a BCM4322.

Step 6



- The inside of the top case.
- The antenna connectors are screwed onto the case.

Step 7



- The antenna connectors have gold-plated coax connectors and standard Wi-Fi antenna connectors.
- What's underneath the heat-shrink? A ferrite bead to minimize interference.

Step 8



- Testing out the light pipe with an LED throwie...
- The light pipe takes light from tiny surface-mount LEDs on the motherboard and refracts it to the panel.
- Here are all the LEDs:
 - 8 of the LEDs that work with the light pipe
 - One more surface mount LED
 - A white LED for illuminating the Qwest logo
 - A dual-color (red/green) LED for the WPS status indicator.

Step 9



- The empty shell that once held a DSL modem.
- The 2 detachable Wi-Fi antennas. Nothing to tear down here!

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Step 10

Repairability Score:

8/10

- Repairability score: 8/10
- The entire device is held together with only 4 screws.
- The Wi-Fi antenna connectors are screwed in and the cables are not soldered to the board.
- The antennas are replaceable as well.
- The heat sink is soldered in place, making removal difficult.
- The Wi-Fi card is soldered in and held in place with silicon adhesive, making it impossible to remove without damaging the card or the device.