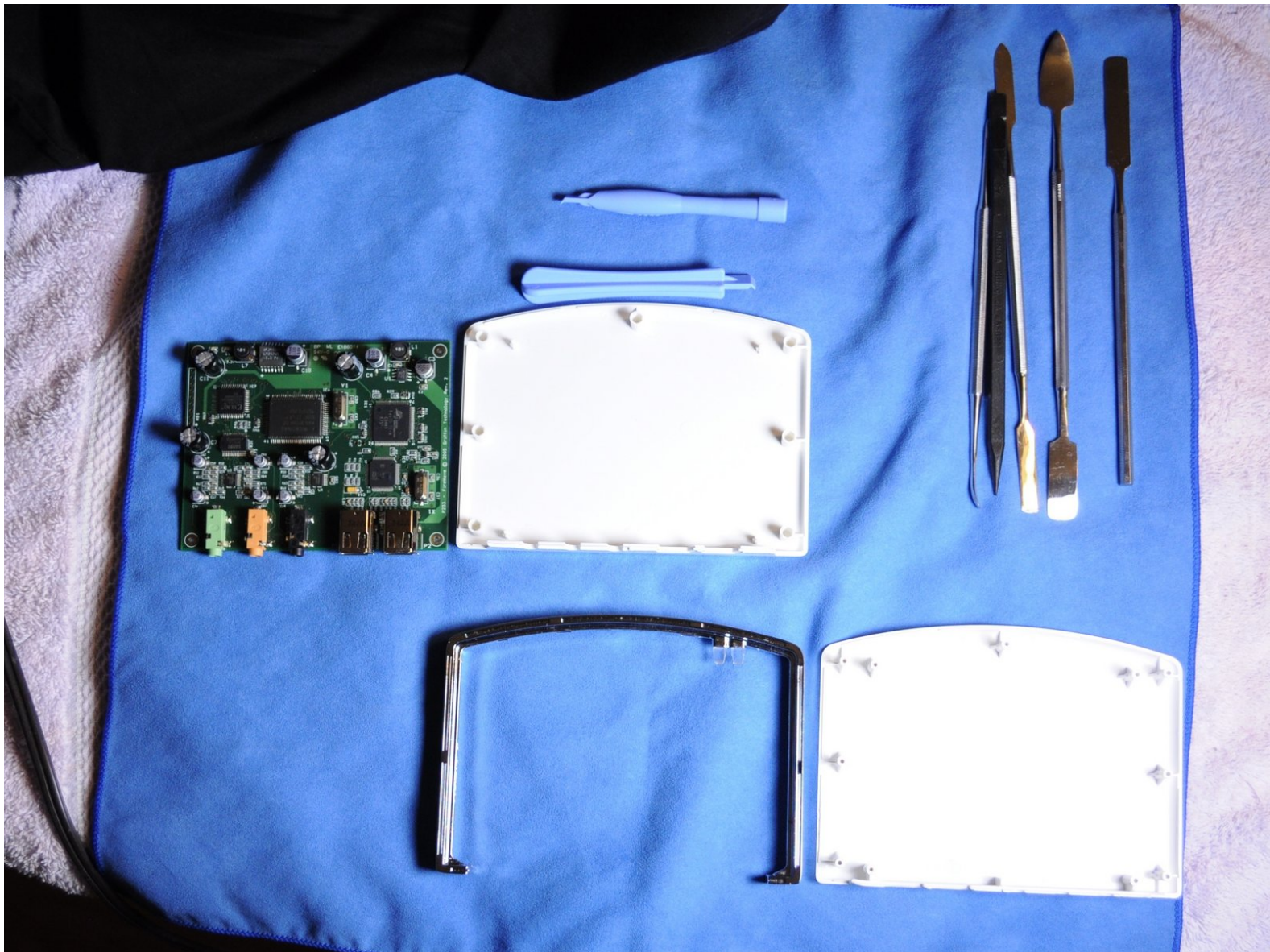




Griffin FireWave Teardown

The FireWave is a third party 5.1 sound-card for the mac. it uses a Fire Wire bus to communicate.

Written By: WiseGeek



INTRODUCTION

The FireWave is a device that is, essentially, an external FireWire soundcard made by Griffin Technology as a third party accessory for Apple Inc.'s line of personal computers.

FireWave uses the FireWire (IEEE 1394) port of the Mac as an audio output to its Dolby Digital sound processing hardware, effectively acting as an external soundcard.

Griffin Technology's product website explains that FireWave uses the Dolby processors to allow the user to connect a 5.1 surround sound system. Speakers are then connected directly to FireWave's speaker terminals (three female 1/8" stereo connectors). Many different sound setups and configurations are possible, using a combination of Griffin's included FireWave software and Apple's "Audio MIDI Setup" utility.

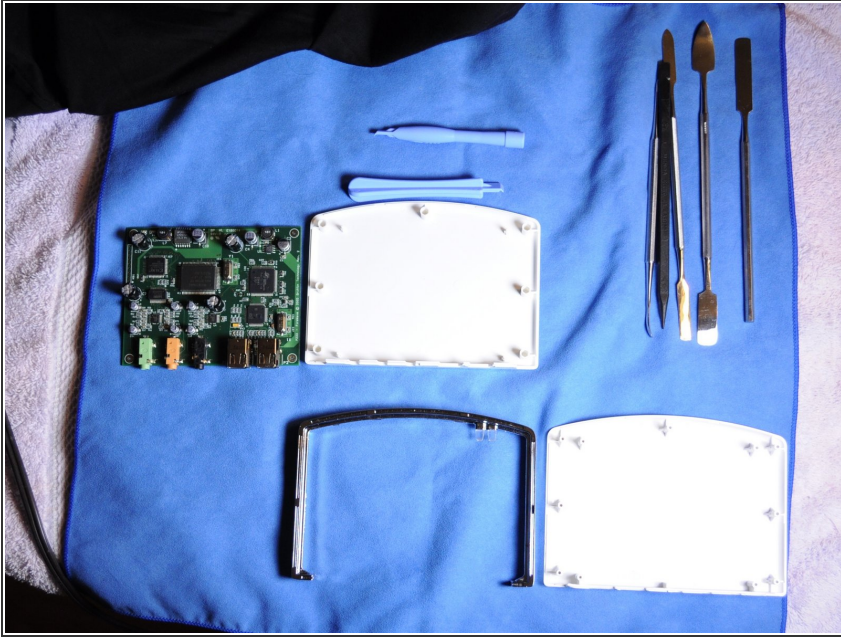
Sadly, Griffin Technology's website lists the Griffin FireWave as a discontinued item.



TOOLS:

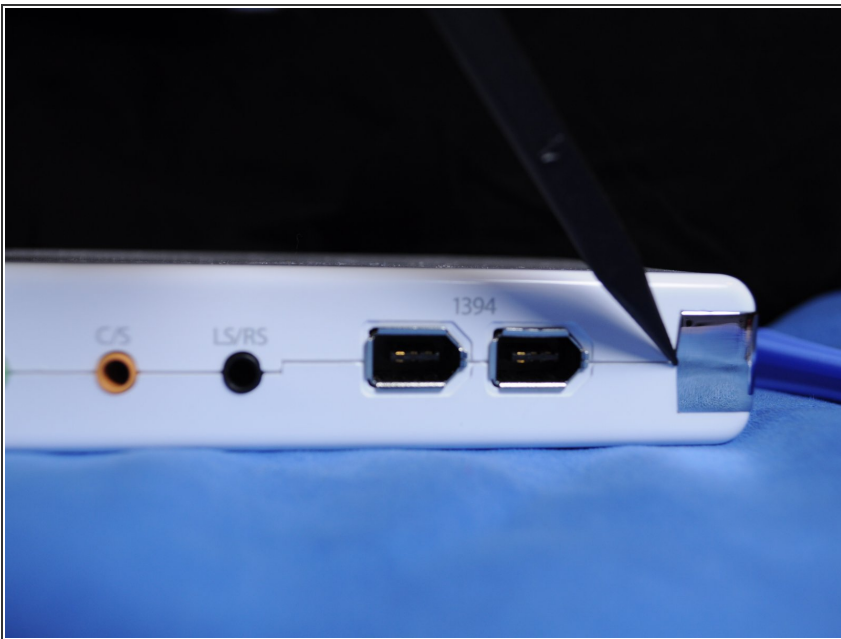
- [Metal Spudger Set](#) (1)
 - [iFixit Opening Tool](#) (1)
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Step 1 — Griffin FireWave Teardown



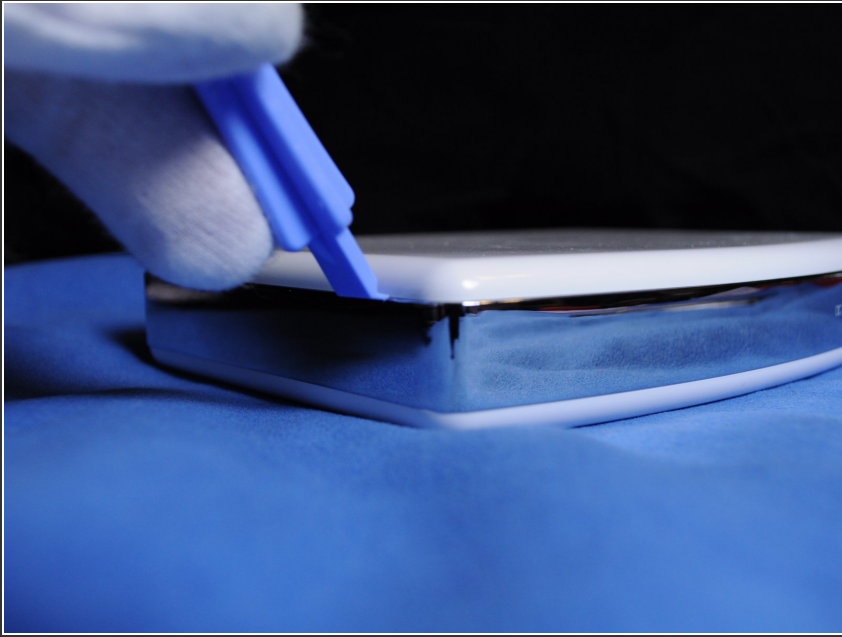
- The Fire Wave case snaps together, which means its a pain to take apart without damaging the cosmetic appearance.
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Step 2



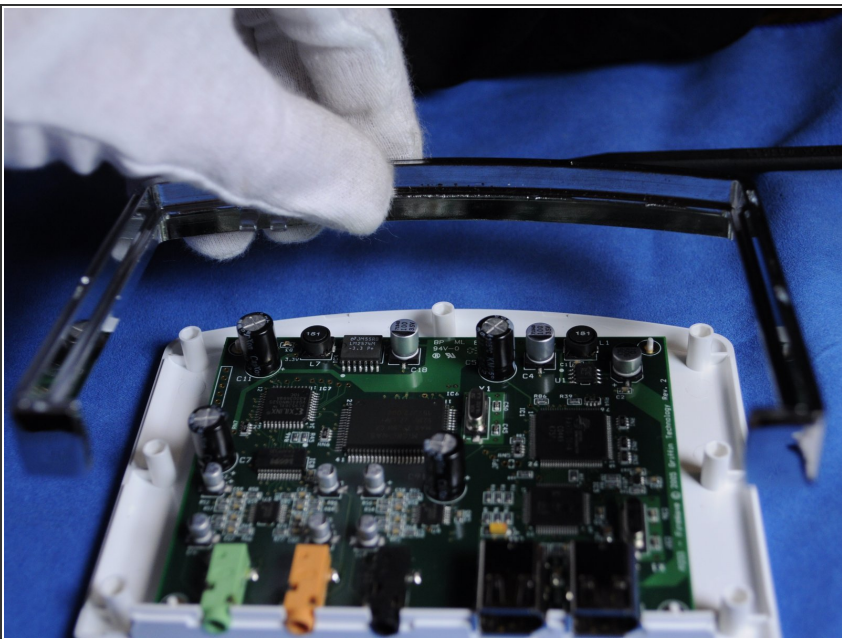
- The best place to start is the right side, where the fire wire ports are located.

Step 3



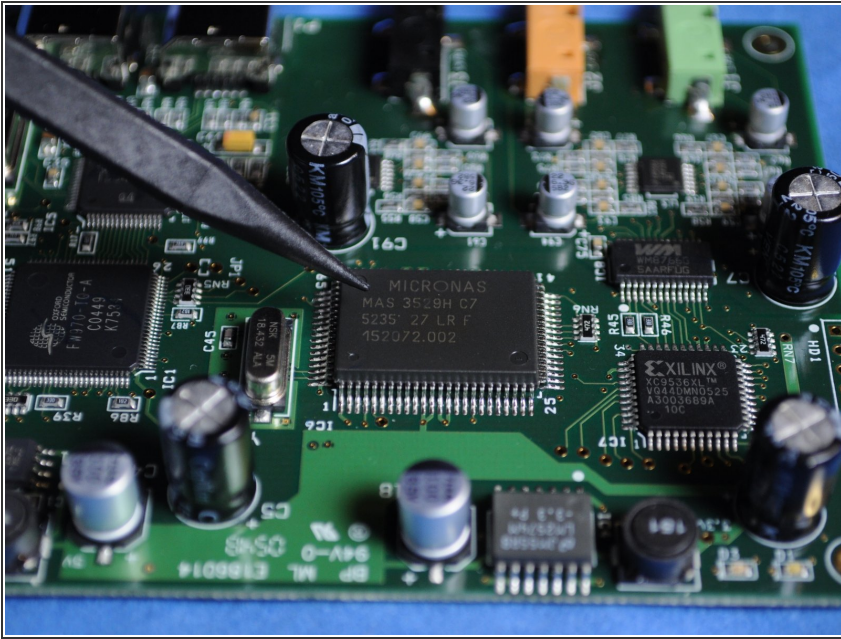
- Once I got it started it was pretty easy from there, using the plastic spudger.

Step 4



- Ok now that its open lets have a look inside.
- The board is pretty simplistic, no heat-sinks or fans of the sort.

Step 5



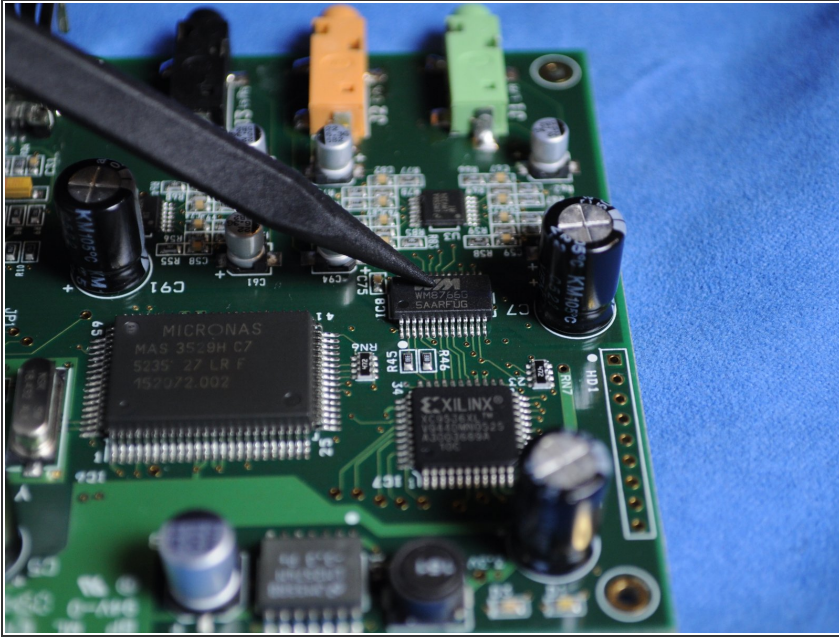
Here we have the Micronas MAS 3529H Dolby Digital and Mpeg2 Layer 2 Audio Decoder. Its the heart of the sound card, without it, there would be no 5.1. Dolby labs made a contract with Micronas to manufacture these chips under specifications.

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The MAS 3529H decoder IC acts as a complete implementation of 5.1 DTS and Dolby Digital/Pro Logic II decoders. On the chip's 8-channel output an Lt/Rt or Lo/Ro downmix is available simultaneously to the multi-channel audio for recording or headphone usage.

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Step 6



- The second chip is the Wolfson Microelectronics WM8766G. This semiconductor is a 24-bit 192kHz 6-channel DAC used in many home theater devices such as receivers and dvd/blu-ray players.
- The chip right below it is the Xilinx XC9536XL High Performance CPLD (Complex Programmable Logic Device). It works with the Wolfson chip to calculate delay time of the center and surround speakers.

Step 7



- The front of the device has two lights that indicate power and if the dolby chip is active or not.
- Thats about it for this teardown. I still use my firewave today, it works great for watching DVD's and such.

To reassemble your device, follow these instructions in reverse order.