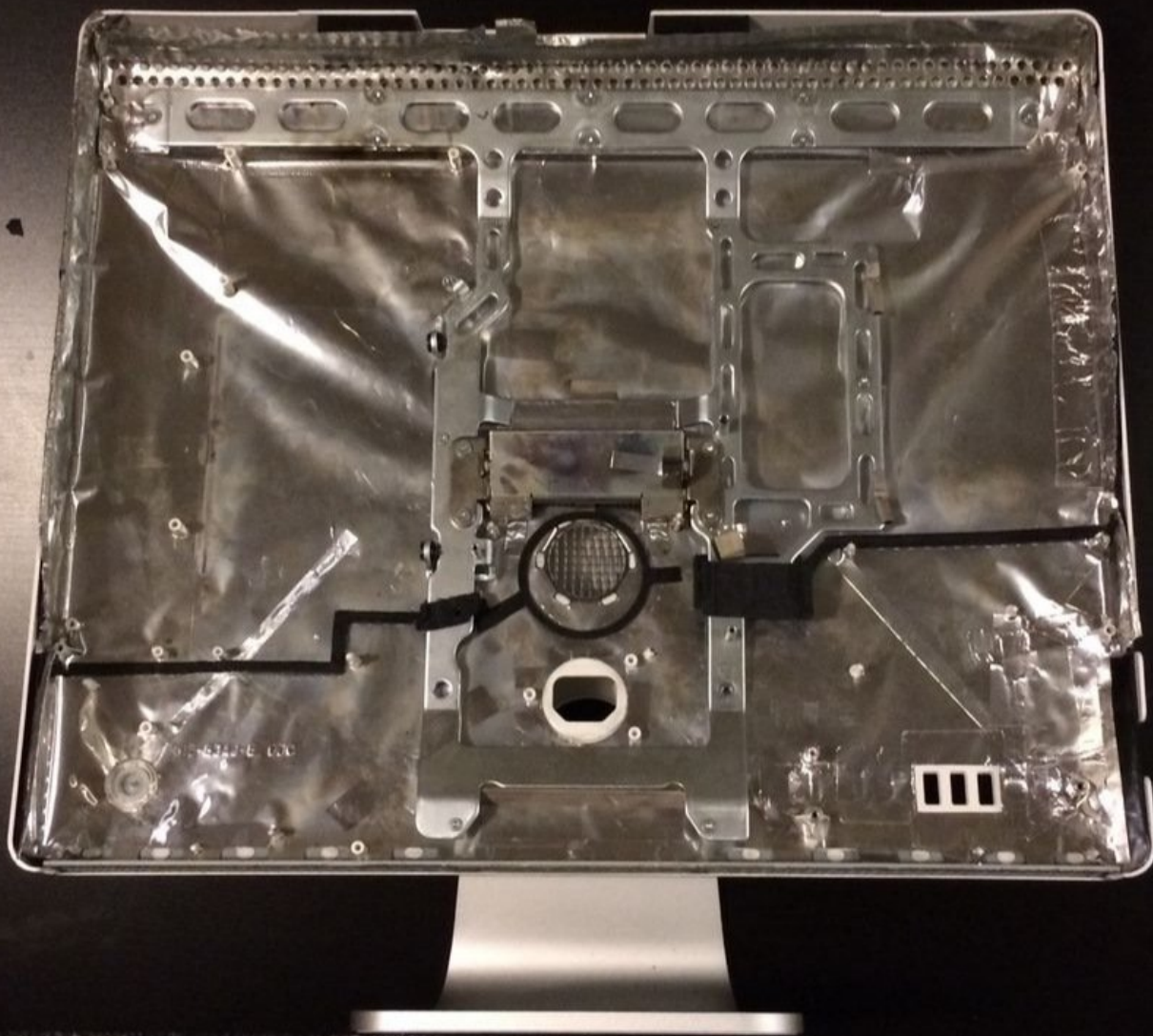




How to turn a iMac Intel into an External Monitor

I had a 2006 Intel iMac that died and instead of consigning it to the bin, I aimed to turn it into an external monitor.

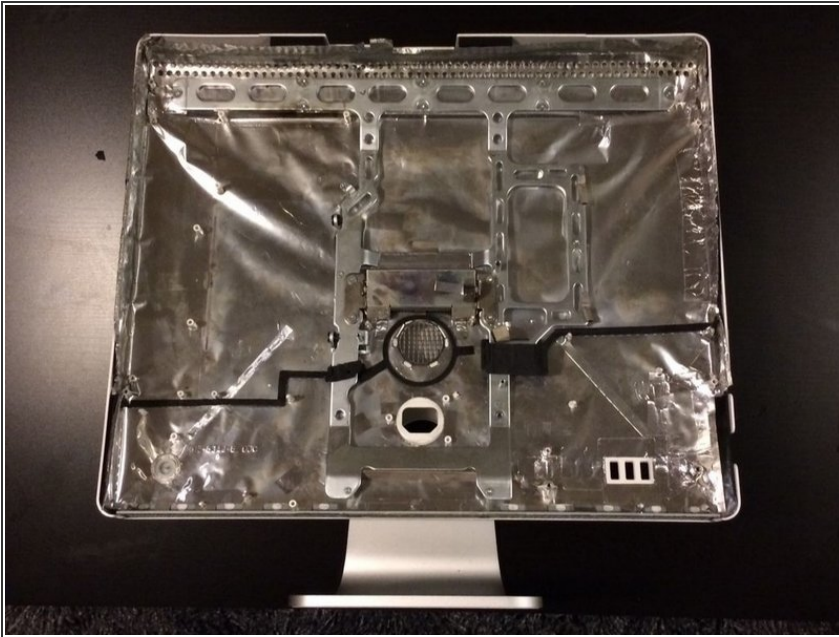
Written By: Michael



INTRODUCTION

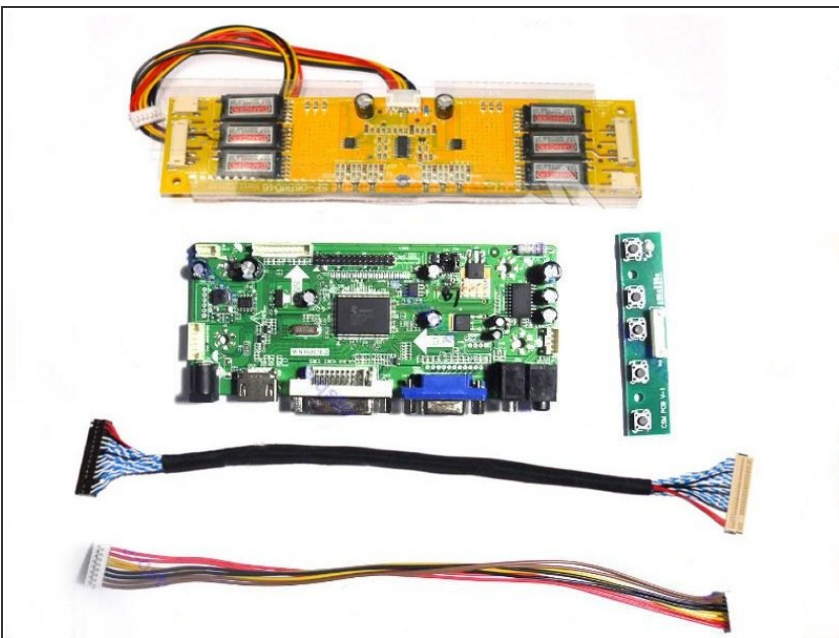
I had a 2006 Intel iMac that died (logic board / graphics card failure) and instead of consigning it to the bin, I aimed to turn it both an external monitor for my screen-less 2009 MacBook Pro (LCD driver failure, failing battery) and any HDMI device I wanted. I had seen this done with G5 iMacs, but never with Intel ones, which use different display types, so decided to have a go!

Step 1 — Gut the iMac



- Firstly, I completely gutted the iMac, safely keeping the LCD screen to one side. I also repaired any torn EMI shielding and shielded all holes, with the exception of the power in, vent above this. (I also left the 3x USB ports free to fit a USB hub, but this didn't work great, so ended up being removed).

Step 2 — Find a LCD display driver board

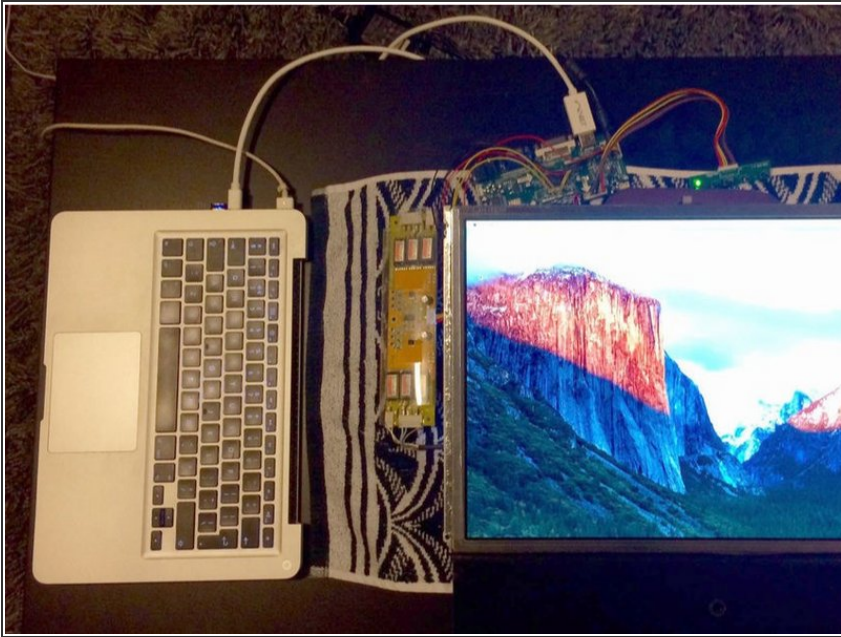


- I next found out that my screen was a Samsung LTM201M1-L01 and after scouring eBay with this model number, I managed to find a display driver for this screen from eBay - just search for your screen model number

- My LCD driver board has VGA, DVI and HDMI in and is powered by a 12V 4A external PSU - the eBay

seller also sold PSUs, but I had one kicking about from another LCD screen.

Step 3 — Test driver board



- Before assembling it all, it is worth testing the driver board works fine - I had some issues with the Mini Display port to HDMI cable I bought, so returned this and bought a 1M Mini Display port to DVI cable instead which worked fine.
- I also bought a 1M white HDMI cable to have as an extra input cable for everything else and a 0.5 Metre 2.1mm DC Barrel Extension Cable, to allow me to connect and disconnect the PSU from outside the case.

Step 4 — Assemble! - Part 2



- The various mounting posts inside the iMac were not suitable, so I purchased some PCB self-adhesive mounting posts (9.5mm) to mount the driver board, inverter and controller board.
- To ensure the mounting posts were mounted correctly, I cut squares out of the EMI shielding before attaching the posts to the inner of the iMac casing. I also drilled holes for the power / adjustment board, so the buttons could be accessed from the rear of the machine.
- From here it was a just a matter of attaching the boards to the PCB posts, hooking up the various cables and feeding through them through the former power in cut-out. I also insulated under the LCD driver board, as it was a bare circuit board. The inverter came contained within a clear plastic case.
- As with the original setup, the LVDS cable and bottom inverter cables could only be attached with the screen in place.

Step 5 — Complete!



- I then reassembled the iMac, attaching the screen, repairing EMI tape then putting the front on! It now works perfectly with the Mini DisplayPort output of my screen-less MacBook Pro and I have an available HDMI cable to attach any other device.
- The only thing that was not changeable was the CCFL brightness, but using Shades preference pane solves this satisfactorily for me.

Step 6 — Bonus stage - rear mount MacBook



- To keep everything neat, and as I had a separate keyboard and Magic Mouse, I also wanted to rear mount the Macbook - I created a mount from wood in a similar style to the AluRack, mounting onto the cable hole on the iMac stand - perfect!

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