JETSON-TK1 CASE

Tony von Ruden Copyright **May 30, 2015**

Figure 1: The assembled case.

1.0 Introduction

This document describes a 3D Printed enclosure I designed for Nvidia's Jetson-TK1 Development Kit. It is derived from my Portable Personal Cluster Computer (P2C2) case. It is only 5 ½" square, however, so unlike my P2C2 case, it can be printed on most 3D printers made today.

The case holds not only the Jetson-TK1 board, but a 2 ½" SATA drive too. It is also possible to install a circuit board of your own design inside the case. The case features external Power, Reset, and Force Recovery buttons, as well as power and disk access LEDs.

I hope you build one!

2.0 What You Will Need to Build the Jetson-TK1 Case

2.1 Printed Parts

I have listed the printed parts required in Section 4.1

2.2 Purchased Parts

I have listed the parts I purchased, where to buy them, and the prices in Section 4.2.

3.0 Assembly

3.1 Screws

Use 12 flat-headed screws to assemble the case. I used small sheet metal screws (about ½" long), but 4-40 or 3mm screws work as well.

3.2 Wiring

Wire up the LEDS and push-button switches per Figures 2 and 3.

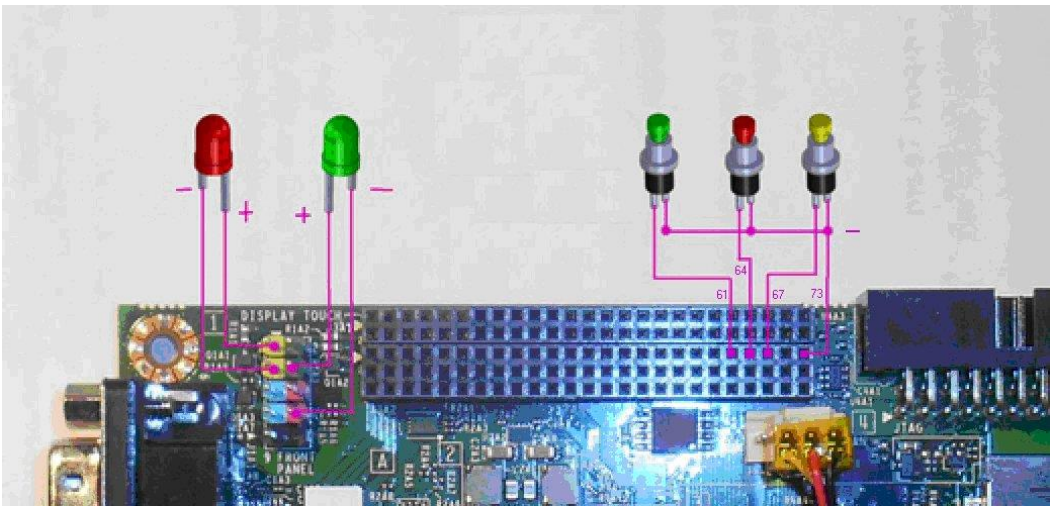


Figure 2. Wiring Diagram

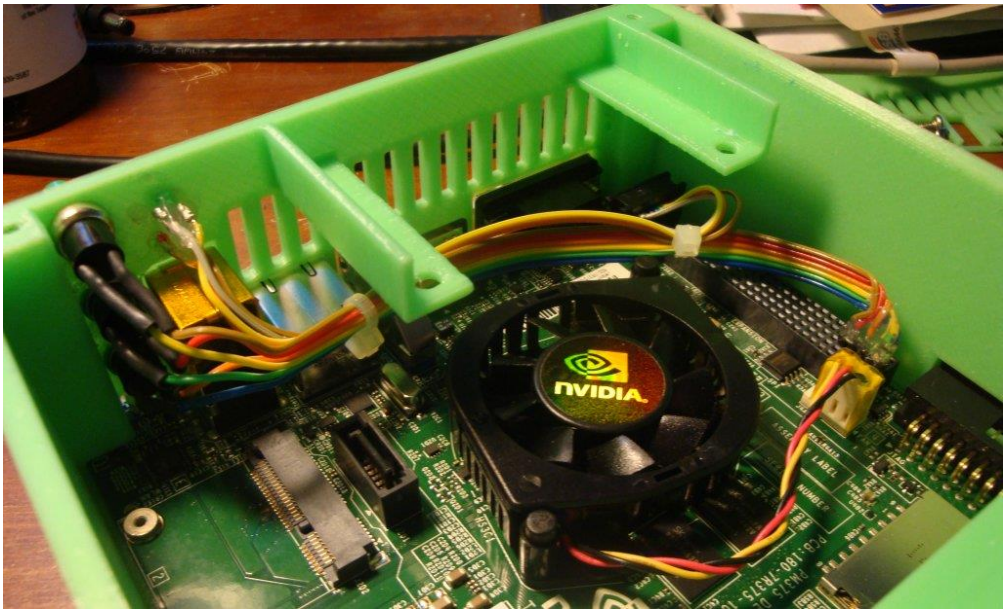


Figure 3. All Wired Up.

3.3 2 ½" Drive and/or PCB Installation

Suspend a 2 ½” drive from the brackets provided, if desired, per Figure 4.

There is room to install a custom PCB above the drive, too.

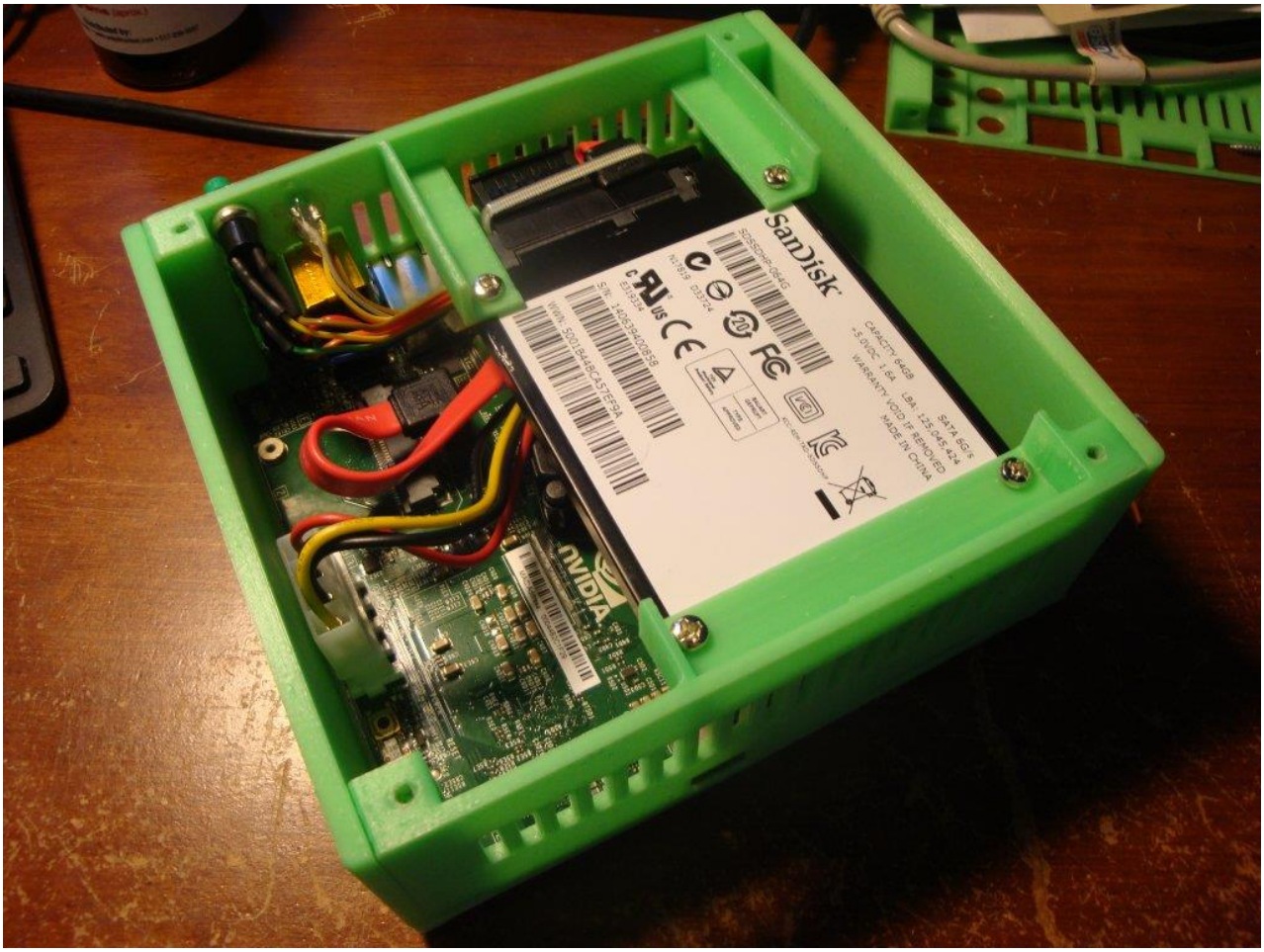
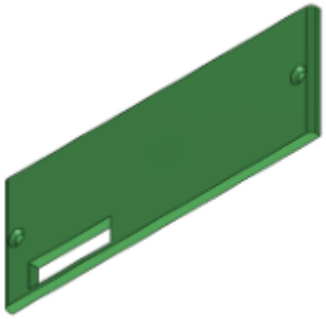


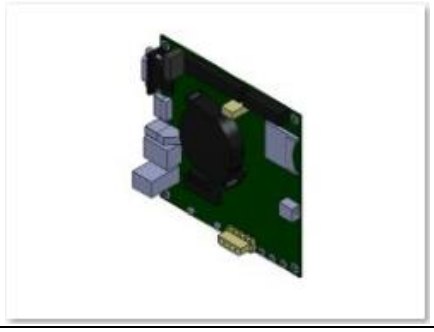
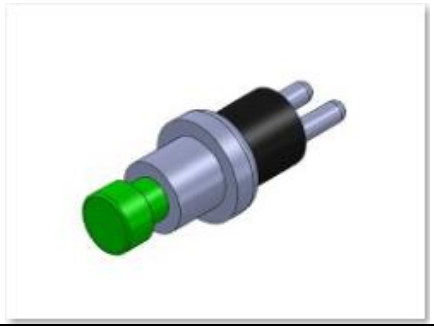
Figure 4. With SATA Solid State Drive (SSD) Installed.

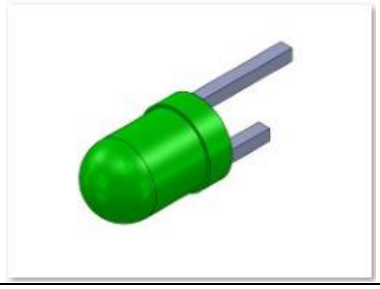
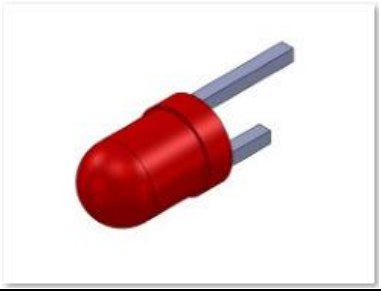
4.0 Parts List

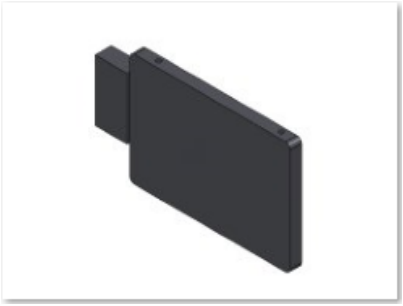
4.1 Printed Parts

4.1.1  JETSON_CASE_BOTTOM.STL	4.1.2  JETSON_CASE_TOP.STL
4.1.3  JETSON_CASE_FRONT.STL	4.1.4  JETSON_CASE_BACK.STL
4.1.5  JETSON_CASE_LEFT.STL	4.1.6  JETSON_CASE_RIGHT.STL

4.2 Purchased Parts

4.2.1 	NVIDIA JETSON-TK1 Development Kit Quantity 8 @ $192.00 each http://www.newegg.com/Product/Product.aspx?Item=N82E16813190005&cm_re=JETSON-TK1-_-13-190-005-_-Product
4.2.2 	Green Momentary Pushbutton Switch Quantity 8 @ $0.95 each https://www.sparkfun.com/products/11993
4.2.3 	Red Momentary Pushbutton Switch Quantity 8 @ $0.95 each https://www.sparkfun.com/products/11992
4.2.4 	Yellow Momentary Pushbutton Switch Quantity 8 @ $0.95 each https://www.sparkfun.com/products/11995

4.2.5 	Green 3mm LED Quantity 8 @ $.35 each https://www.sparkfun.com/products/9650
4.2.6 	Red 3mm LED Quantity 8 @ $.35 each https://www.sparkfun.com/products/533
4.2.7 	10 conductor Ribbon Cable 15 ft. @ $4.95 https://www.sparkfun.com/products/10647
4.2.8 	Ribbon Crimp Connector - 10-pin (2x5, Female) 10 @ $0.50 each https://www.sparkfun.com/products/10650
4.2.9 	2mm 10-pin header (Cut Each Piece in Half –> 5 pins) Quantity 5 @ $0.95 each https://www.sparkfun.com/products/10112

4.2.10 	Samsung 850 Pro 2.5” Solid State Drives 512 Gigabytes: Quantity 1 @ $319.99 128 Gigabytes: Quantity 7 @ $109.99 each http://www.newegg.com/Product/Product.aspx?Item=9SIA3FA2EV1099&cm_re=MZ-7ke512bw-_-20-147-361-_-Product
4.2.11 	6”” 4 Pin Molex to SATA Power Cable Adapter Quantity 8 @ $1.99 each http://www.amazon.com/gp/product/B00009YFTI/ref=oh_aui_detailpage_o03_s01?ie=UTF8&psc=1
4.2.12 	SATA III 6.0 Gbps Cable, 6 Inch, Right Angle Quantity 8 @ $6.99 each http://www.amazon.com/gp/product/B00K1JGU40/ref=oh_aui_detailpage_o03_s02?ie=UTF8&psc=1