Auto power-on implementation based on OEM Product Design Guide

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Ray10

Hi,

Glad to be here and keep using Nvidia products.

I am currently working on an IC circuit as shown in OEM Product Design Guide Page 16 (Option 2 supervisor IC) to enable the auto power-on function.
I find out that the CHARGER_PRSNT# is connected to port J27 from some previous TX1 posts. However, I still cannot locate the VIN_PWR_BAD# on the devkit board. Anyone knows about that?

Thanks in advance,

Posted 03/16/2017 12:36 AM #1

Trumany

There is schematic of carrier board in download center. Pin B8 of main connector J13 is the VIN_PWR_BAD_L, do you mean this?

Posted 03/16/2017 02:45 AM #2

Ray10

Should be.

Thanks, Trumany!

Posted 03/16/2017 02:55 AM #3

Trumany

Answer Accepted by Original Poster

Hi Ray,

Jetson TX2 includes circuitry on the module to support Auto-Power-On. This allows the platform to power on when VDD_IN is first powered, instead of waiting for a power button press. In order to enable this feature, the CHARGER_PRSNT# pin should be tied to GND (which can be done by installing a 0ohm resistor at R313 near the Charge Control receptacle).

So there are four options to meet this requirement and allow Auto-Power-On are described:

- **Built-in Auto-Power-On circuit: Not available on Jetson TX1.**
- Microcontroller: Recommended if a microcontroller is already being used to control power-on.
- Supervisor IC: Using a supervisor IC and related discrete devices to meet the sequencing requirements.
- Discrete Circuit: Circuit using only discrete devices to meet the sequencing requirements.

These info will be included in latest OEM DG in download center.

Posted 03/17/2017 02:51 AM #4

Ray10

Hi Trumany,

This seems like a much easier solution. My TX2 will arrive next Monday and I will definitely try this built-in circuit first. I haven't got my unit yet so I have a question. Do I need to replace the original R313 with an 0 ohm resistor or there is nothing soldered in that spot?

Thanks again! Support from Nvidia is so awesome!

Ray

Posted 03/17/2017 03:01 AM #5

Trumany

Nothing soldered, only need to put an 0 ohm resister there.

Posted 03/17/2017 03:12 AM #6

Ray10

Hi Trumany,

My TX2 just arrived today. Could you help me locate the R313?
Some crops from the official guide are as follows and there are two candidate spots near J27 but I couldn't figure out which one is for R313.
https://www.dropbox.com/s/d7req8xl6cklccl/J27.PNG?dl=0
https://www.dropbox.com/s/1rdurwyvonn5lge/J27_2.PNG?dl=0
Also, what is the size of that resistor? I feel it is 0402 in imperial code.

Thanks a lot!

Posted 03/20/2017 11:15 PM #7

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Trumany

The down-most one in your picture is R313. It is 0402 as schematic says.

Posted 03/21/2017 02:27 AM #8

Ray10

Thanks!

Posted 03/21/2017 02:31 AM #9

cosa0481

Hi, I'm looking at the schematic for R313 but I can't tell which resistor is R313 on the TX2 board layout. I see two NS (No Stuff?) resistor spots starting at the arrow for the 'J27' writing on the board. The upper resistor spot is aligned with part of the arrow just above the 'J27' writing and the lower resistor spot is aligned with 'J' in the 'J27' writing. Which one of these spots is R313? Is the other spot R271?

Posted 06/13/2017 05:35 PM #10

Trumany

The one aligned with 'J' is R313, another one is R271.

Posted 06/14/2017 03:59 AM #11

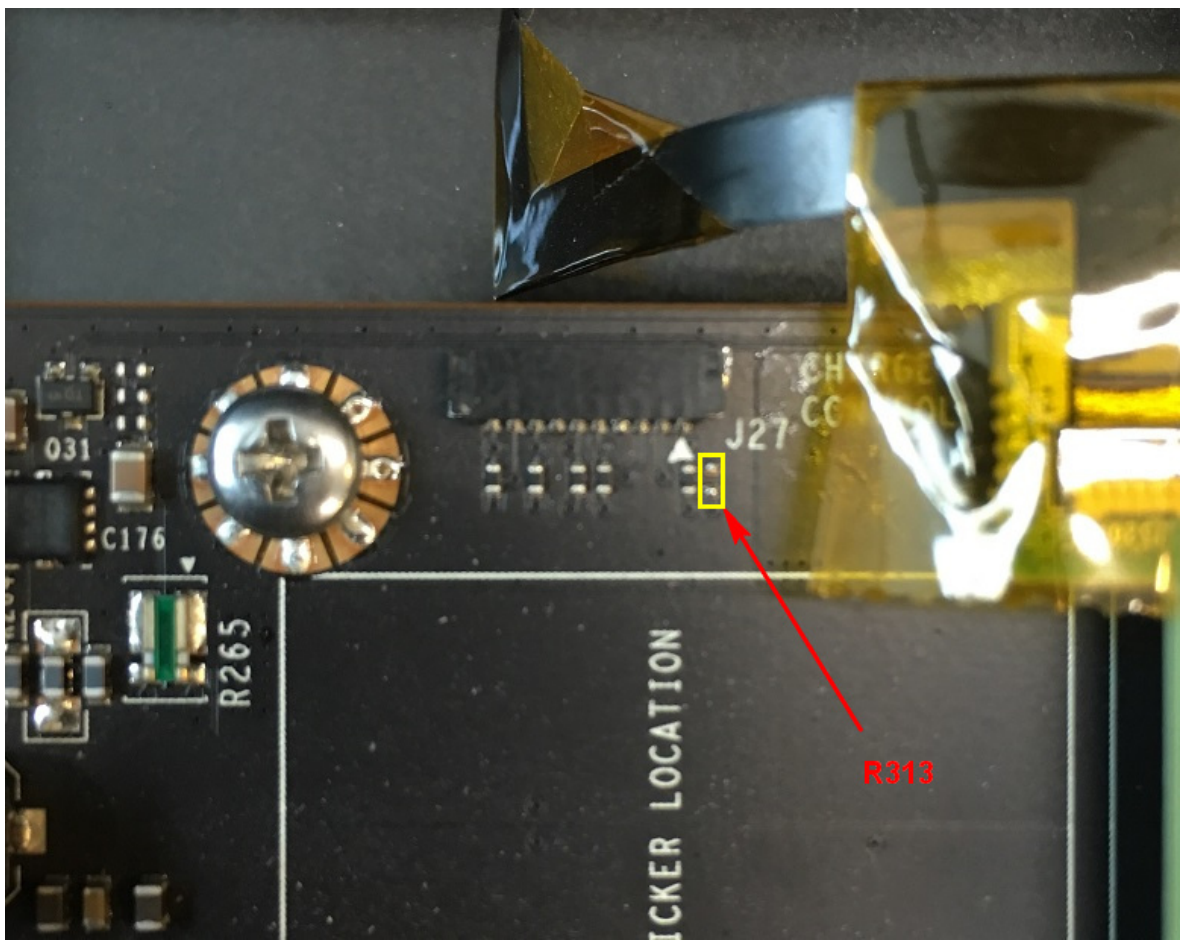
BillHoover

Could you provide a picture or otherwise clearly identify where R313 is located? On my TX2 board I don't see any notation that shows where it is. I also can't find mention of this in any of the official documentation.
Thanks.

Posted 10/11/2017 03:53 AM #12

Trumany

Please find the chars of 'J27' on carrier board first.



Posted 10/11/2017 04:28 AM #13

BillHoover

Thanks. Works like a charm.

Posted 10/12/2017 10:18 PM #14

chivas_regal

Thank you so much for posting the picture. I was also looking for auto power on.

I could not open CAD files as don't have that softwares.

Posted 10/13/2017 03:08 AM #15

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