

# B0550-SCH-01 Rev. D

## STDP4020 (VEGA, DPRx) RD2 with Quad-LVDS Output

PCB# 400-534

| SCHEMATIC                                | SHEET |
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### Layout Notes:

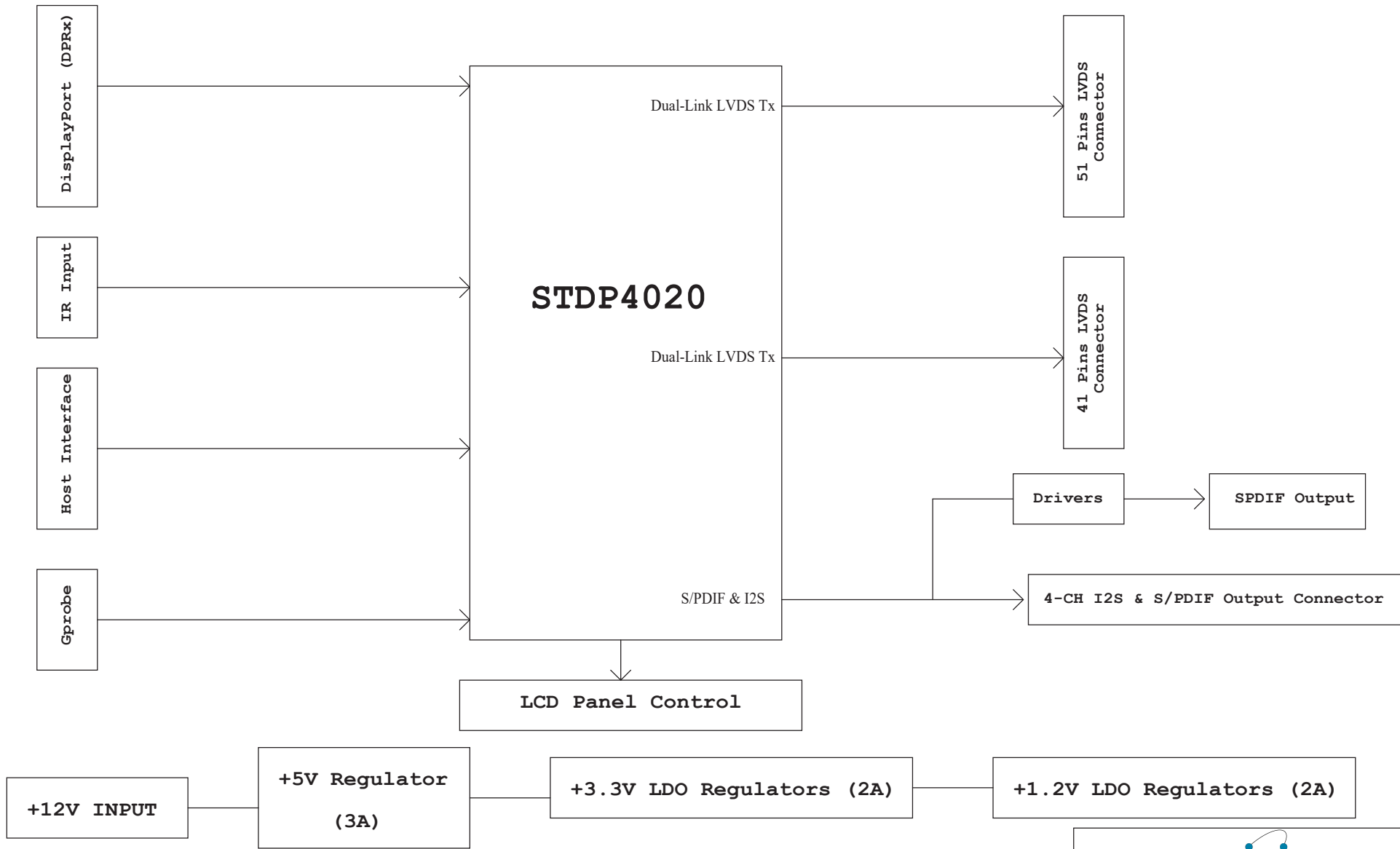
1. 50 ohms impedance on all LVTTTL traces
2. 100 ohms differential impedance on all DP & LVDS trace pairs
2. 4 Layers PCB, \*\*\* Top, GND, PWR, Bottom \*\*\* ,THK = 0.062 inches

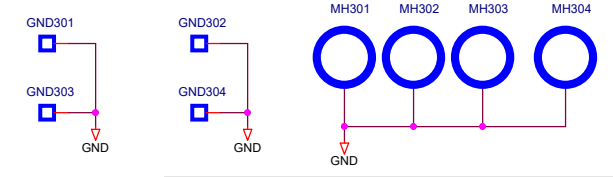
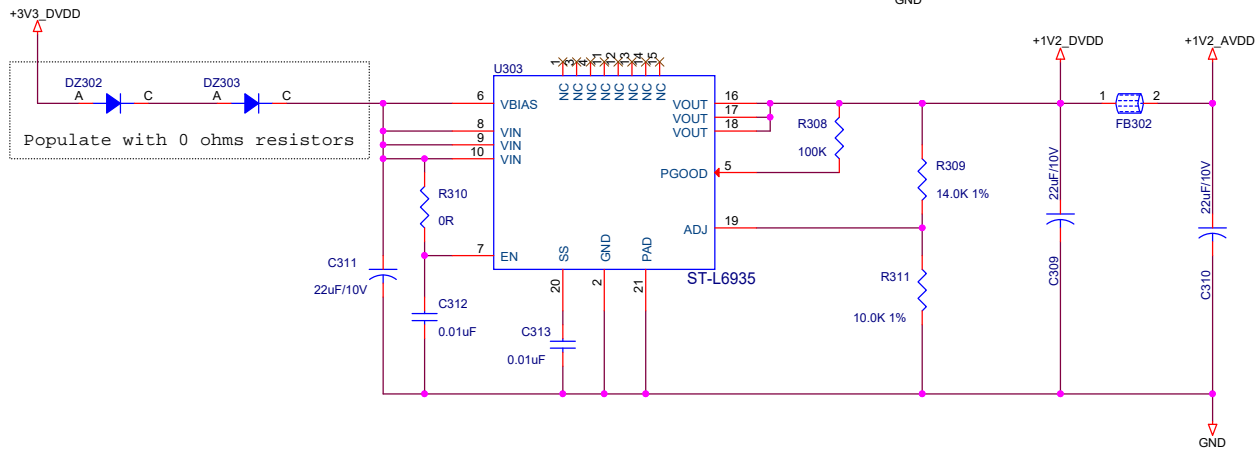
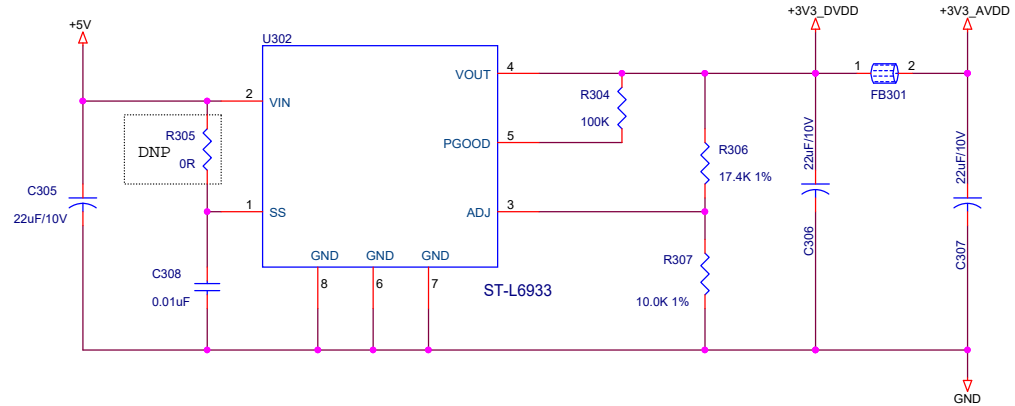
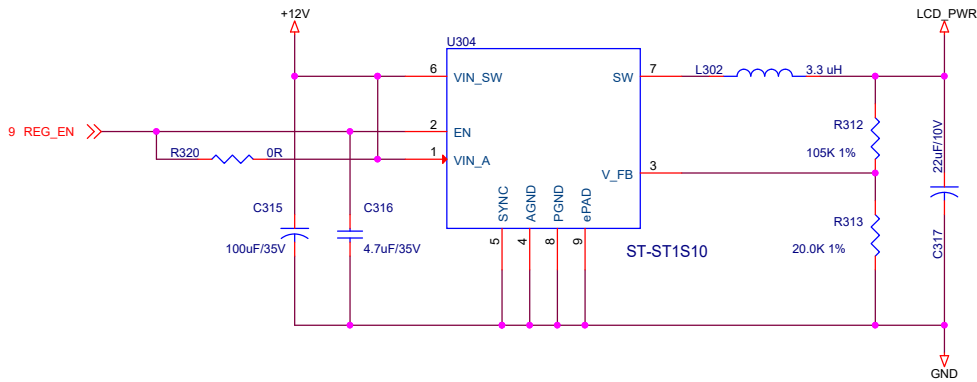
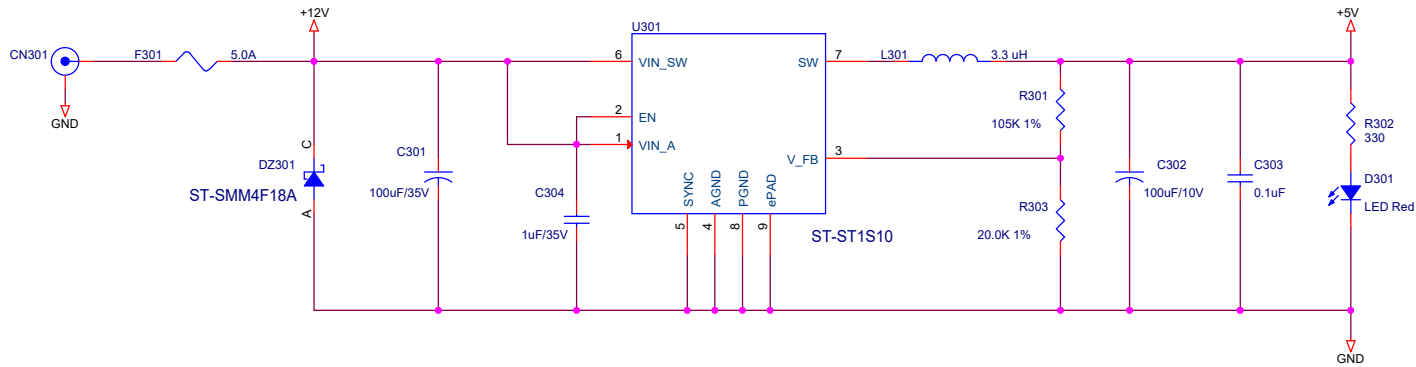
## Revision History

| Date               | Version  | Comments   |
|--------------------|----------|--|
| August 10, 2009    | Rev. A   | Initial schematic.   |
| September 1, 2009  | Rev. A   | Removed R801 (0 ohms resistor)   |
| September 10, 2009 | Rev. A1  | (1) Added pull down resistor (R530) on HPD line<br>(2) Replaced R701 with 240 ohms resistor  |
| Nov. 20, 2009      | Rev. B   | (1) Remapped LVDS signals to CN901 and CN902<br>(2) Added DDC signals and 3D video signal to CN901<br>(3) Assigned GPIO_2 to LCD_ON_OFF, GPIO_5 to 3D VIDEO<br>(4) Added firmware bootstrap configurations |
| Dec. 5, 2009       | Rev. B1  | Added a regulator, U601 as power with LVDS bus   |
| Jan. 5, 2010       | Rev. C   | (1) Changed LVDS pin-assignment of CN901 & CN902<br>(2) Connected Q901 to +12V instead of +3.3V  |
| June 8, 2010       | Rev. D   | Removed all firmware BootStraps  |
| Sept 26, 2014      | Rev. D   | Changed Titleblock and logo to MegaChips   |
| March 13, 2020     | Rev. 03a | Update to Kinetic format.  |

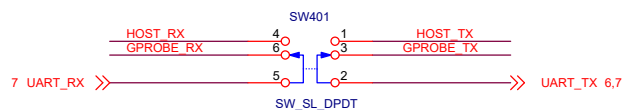
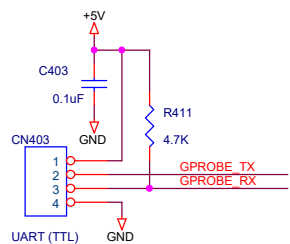
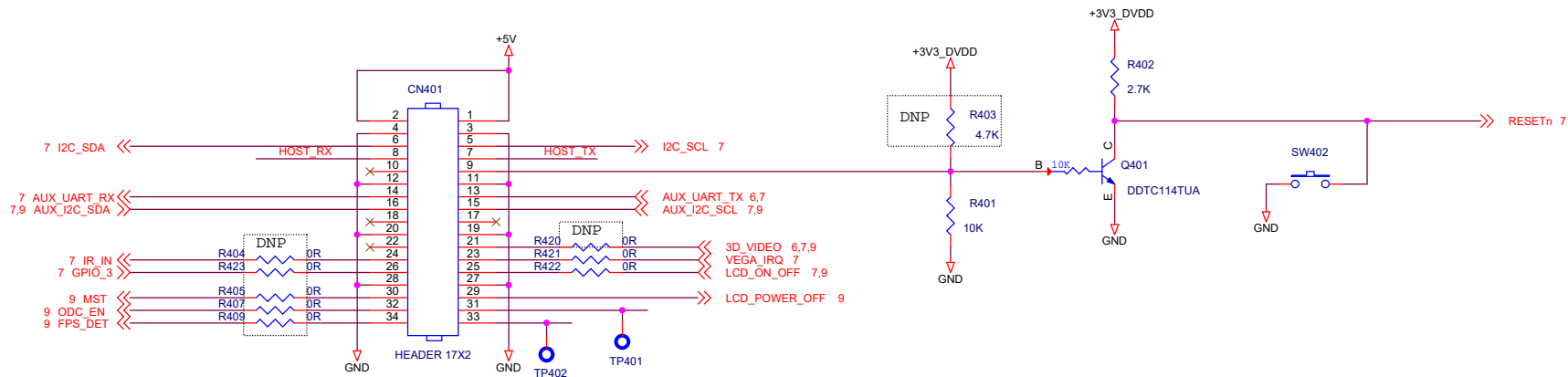


|                              |                                 |              |
|------------------------------|---------------------------------|--------------|
| Title<br><b>01. Contents</b> |                                 |              |
| Size<br>B                    | Document Number<br>B0550-SCH-01 | Rev<br>03a   |
| Date:                        | Friday, March 13, 2020          | Sheet 1 of 9 |

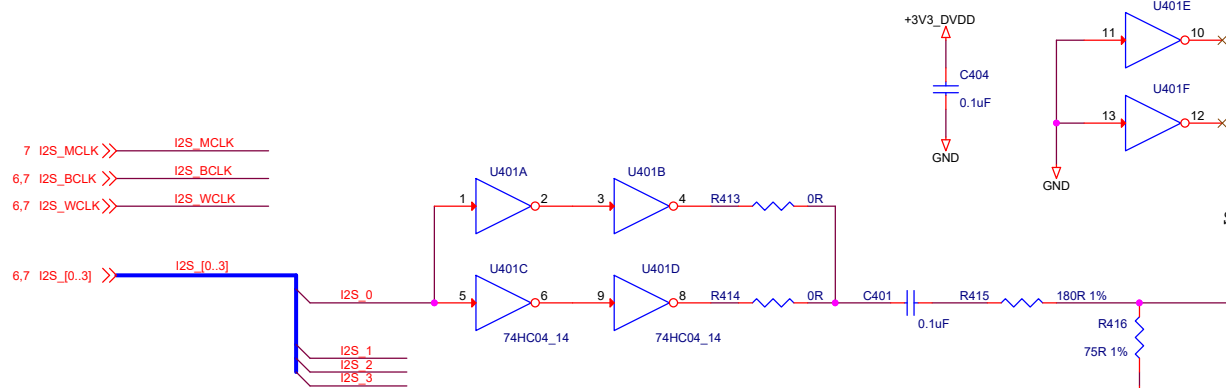




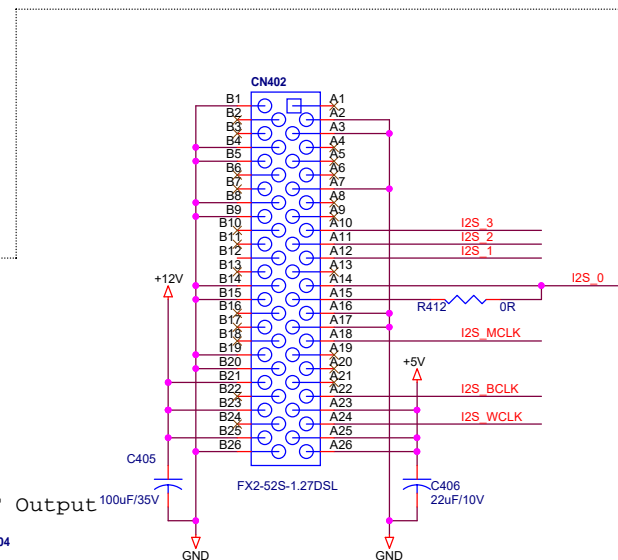
|  |                               |         |
|--|-------------------------------|---------|
|  |                               |         |
| Title: <b>03. Power Supply, Fixed +5V, Adj. +3.3V &amp; Adj. +1.2V</b> |                               |         |
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### Host Control Interface

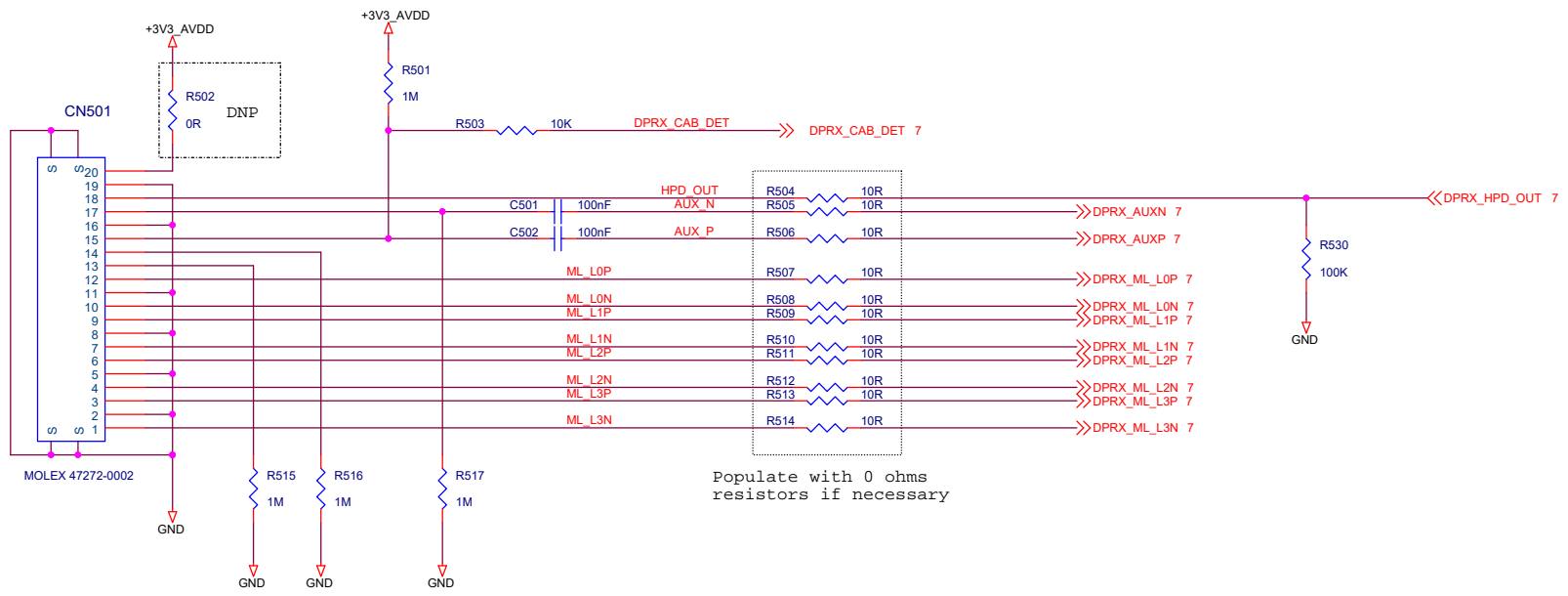


### Audio Output Section (8-CH I2S and S/PDIF)

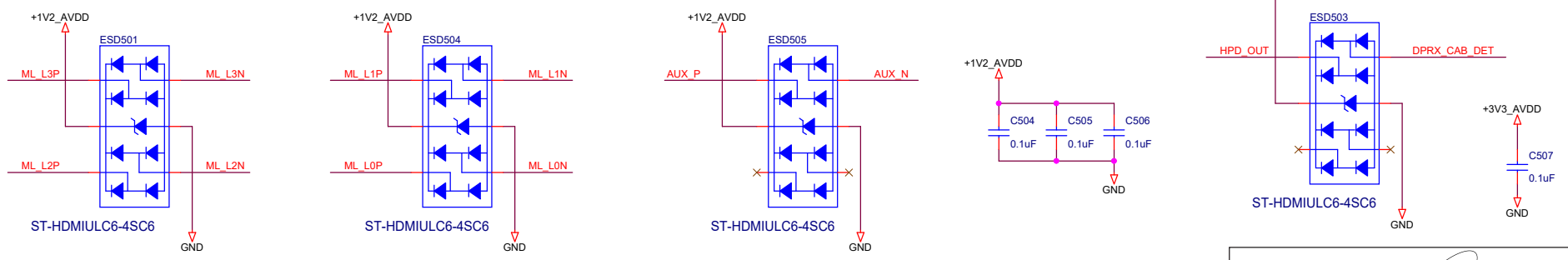


|  |                                 |            |
|--|---------------------------------|------------|
| Title<br><b>04. Host &amp; Audio Interface</b> |                                 |            |
| Size<br>B                                      | Document Number<br>B0550-SCH-01 | Rev<br>03a |
| Date:<br>Friday, March 13, 2020                | Sheet<br>4                      | of<br>9    |

# DPRX



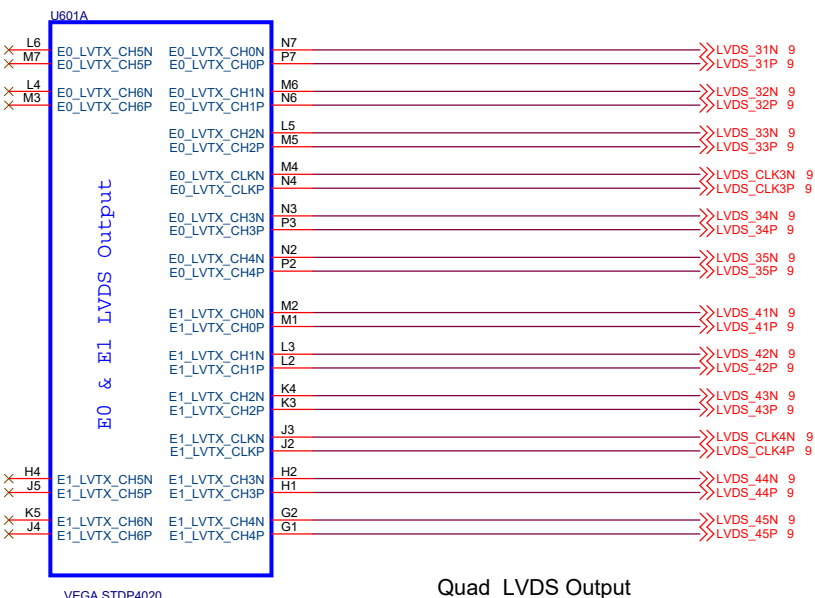
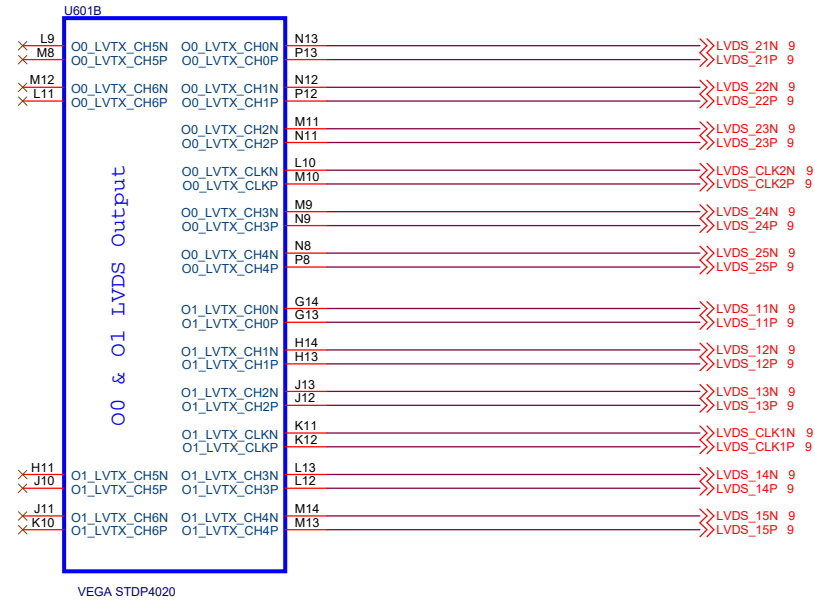
Populate with 0 ohms resistors if necessary



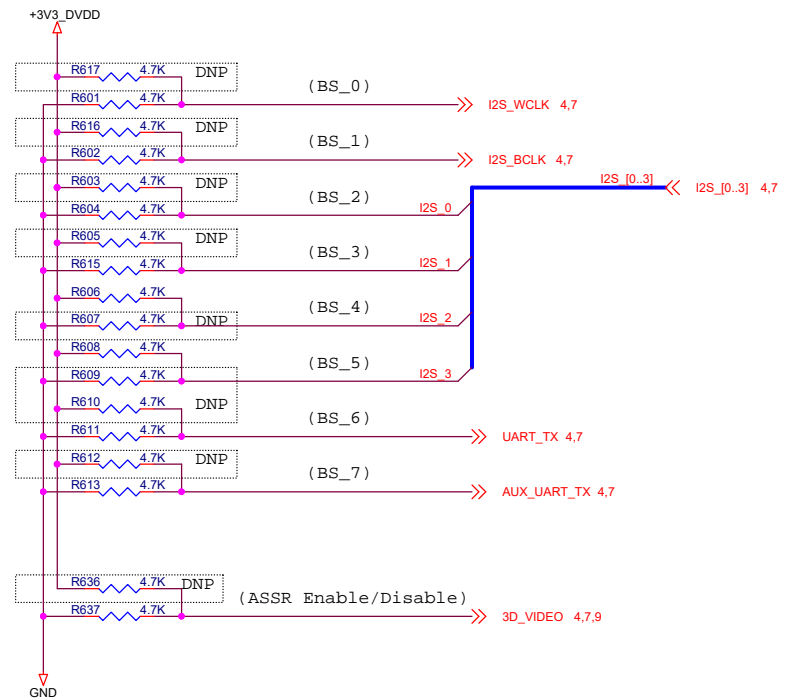
## ESD Protection Diodes



|                    |                        |              |
|--------------------|------------------------|--------------|
| Title              |                        |              |
| 05. DPRx Interface |                        |              |
| Size B             | Document Number        | Rev          |
|                    | B0550-SCH-01           | 03a          |
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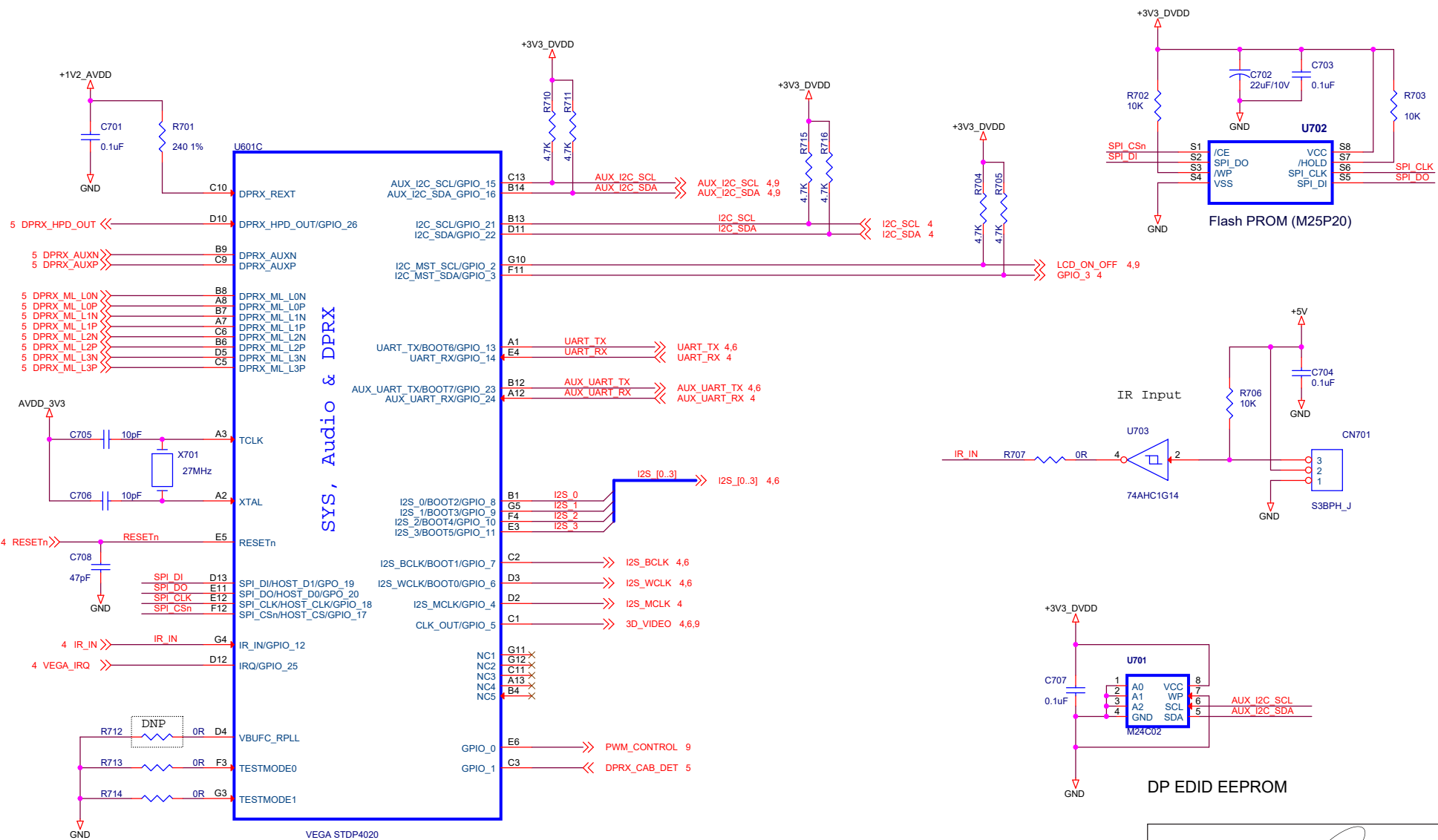


Quad\_LVDS Output

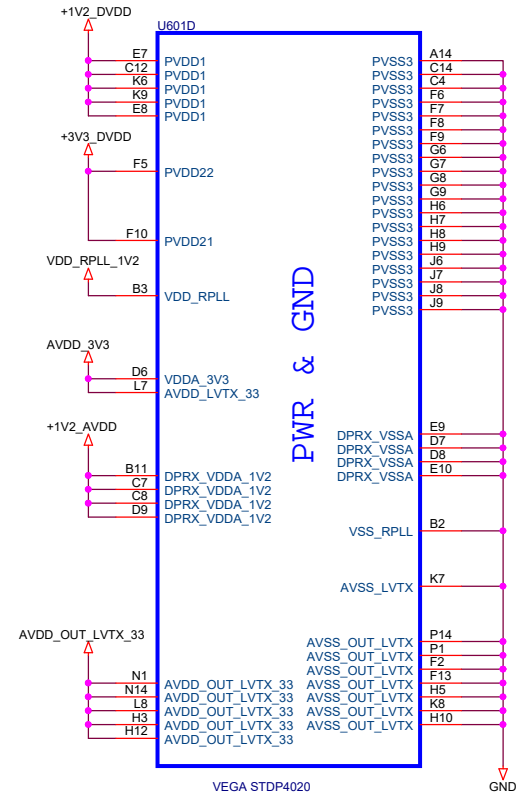
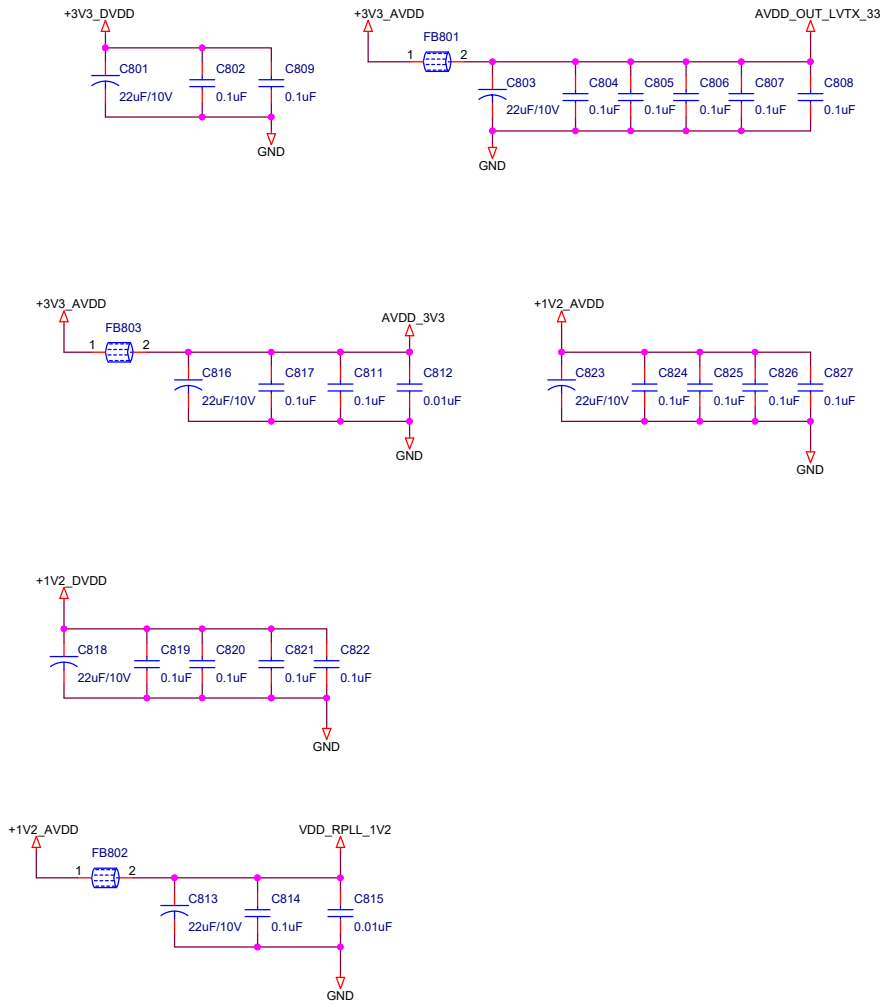


VEGA STDP4020 DPRx BootStraps

|   |                                 |            |
|---|---------------------------------|------------|
|   |                                 |            |
| Title<br><b>06. STDP4020 --- LVDS Output &amp; BootStraps</b> |                                 |            |
| Size<br>B   | Document Number<br>B0550-SCH-01 | Rev<br>03a |
| Date:<br>Friday, March 13, 2020                               | Sheet<br>6                      | of<br>9    |

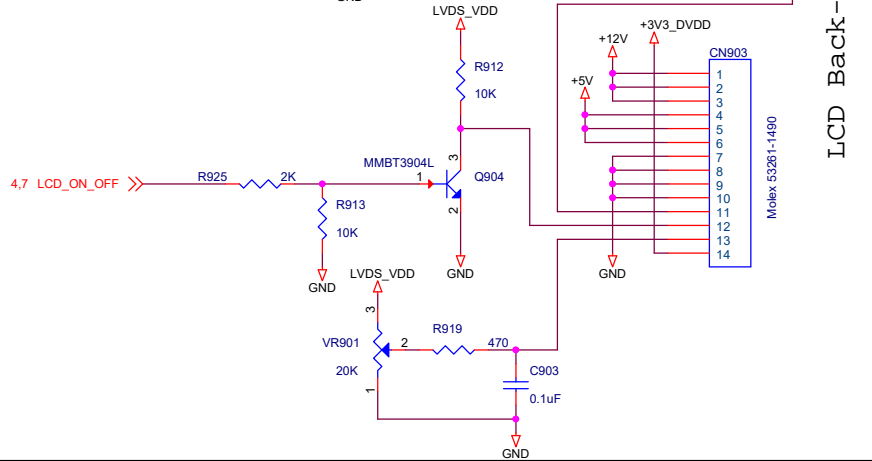
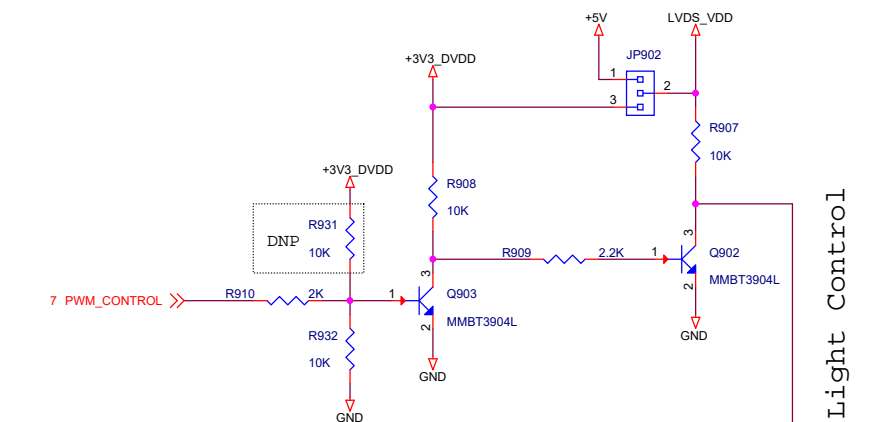
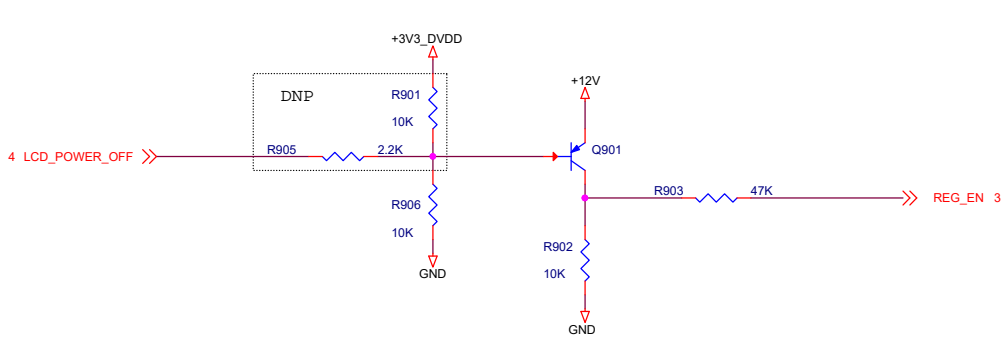


|                                       |                              |              |
|---------------------------------------|------------------------------|--------------|
| Title                                 |                              |              |
| 07. STDP4020 --- System & Accessories |                              |              |
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|                           |                        |              |
|---------------------------|------------------------|--------------|
| Title                     |                        |              |
| 08. STDP4020 -- PWR & GND |                        |              |
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### LCD Back-Light Control

