

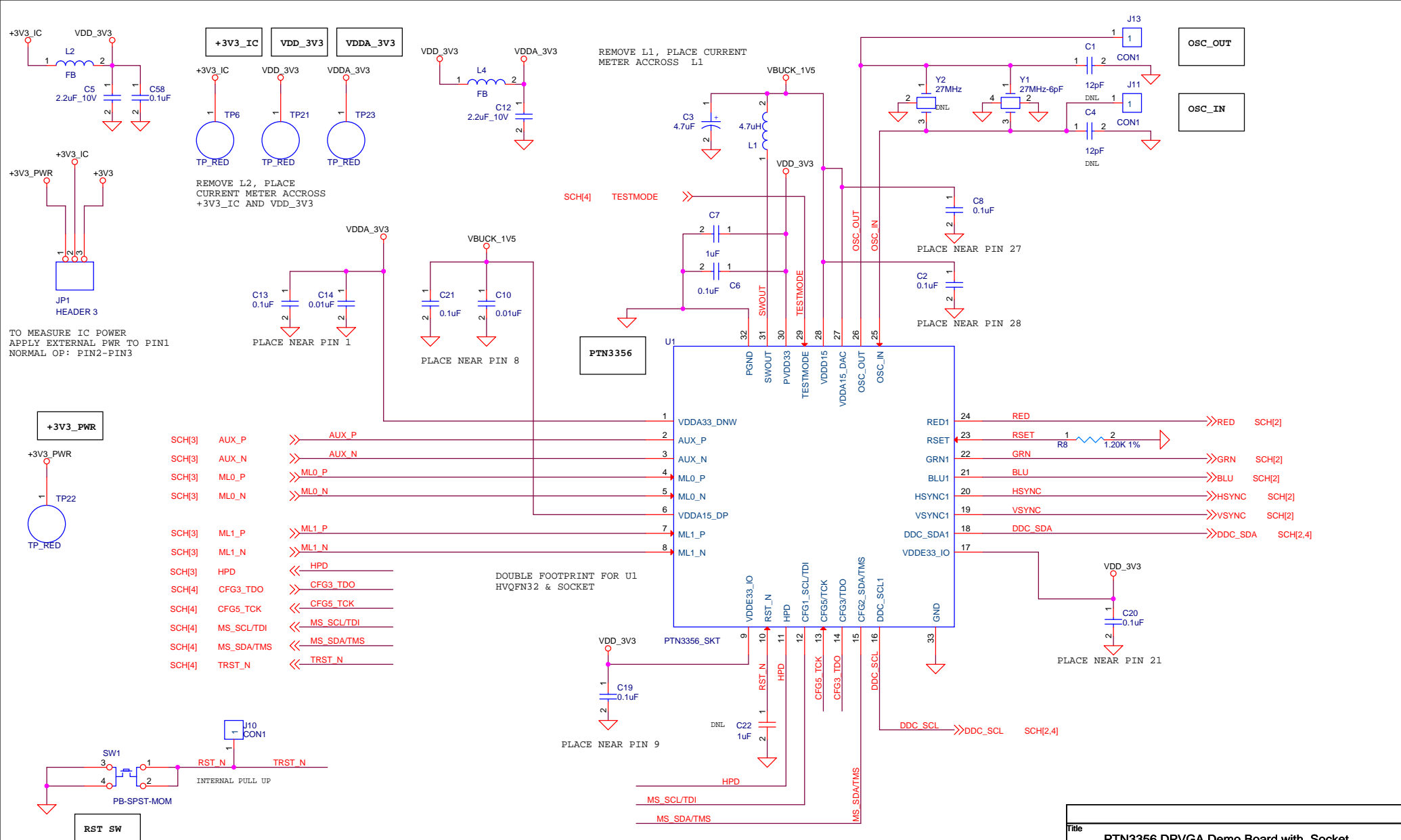
# PTN3356 Evaluation and Application Board Rev. 0.10

REVISION HISTORY :

- 
- 0.1 June 10, 2014
    - Base on PTN3355\_ONLY\_REV14.DSN
  - 0.2 July 16, 2014
    - BOM changes due to long lead time items, LEDs
  - 0.3 July 17, 2014
    - Change USB J12
  - 0.4 July 17, 2014
    - Change U1 to Johnstech ROL 100A Series
    - Change U4 to TI part
  - 0.5 July 21, 2014
    - Change D10, D13, D14 signal names
    - Swap U2, D6 to un-twist H/V sync
    - change U2 to SSOP
    - Add TP23, TP24
  - 0.6 July 22, 2014
    - Remove D12
  - 0.7 July 22, 2014
    - Remove U3 and caps around it.
  - 0.8 July 23, 2014
    - Add AC caps for DP lanes
  - 0.9 July 24, 2014
    - Correct DP signal name
  - 0.10 Aug. 04, 2014
    - U4 library is wrong
    - Re-work U4 connection

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4	DP & Power
5	JTAG & CONFIG

<b>NXP Semiconductors</b>		
411 E. Plumeria Drive, San Jose, CA 95134		
Title <b>INDEX</b>		
Document Name <b>PTN3356 DPVGA</b>		
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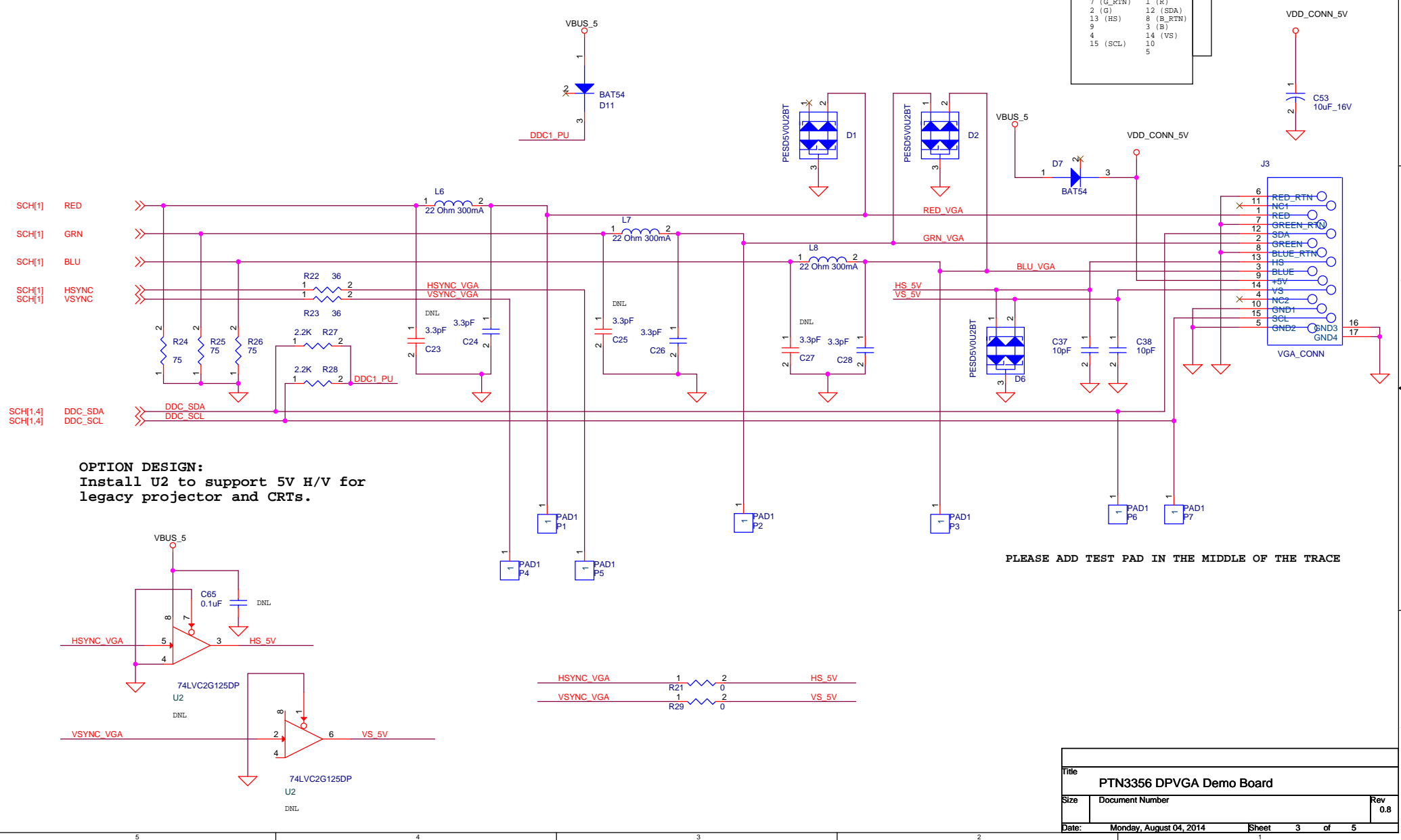


- SCH[3] AUX\_P >> AUX\_P
- SCH[3] AUX\_N >> AUX\_N
- SCH[3] ML0\_P >> ML0\_P
- SCH[3] ML0\_N >> ML0\_N
- SCH[3] ML1\_P >> ML1\_P
- SCH[3] ML1\_N >> ML1\_N
- SCH[3] HPD << HPD
- SCH[4] CFG3\_TDO >> CFG3\_TDO
- SCH[4] CFG5\_TCK << CFG5\_TCK
- SCH[4] MS\_SCL/TDI << MS\_SCL/TDI
- SCH[4] MS\_SDA/TMS << MS\_SDA/TMS
- SCH[4] TRST\_N << TRST\_N

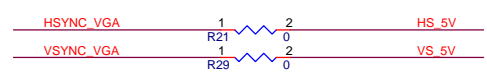
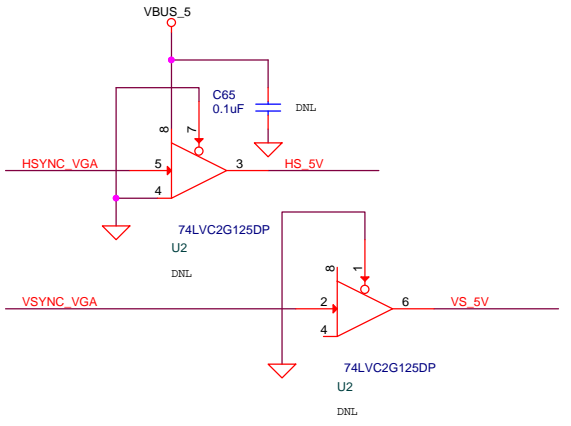
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PTN3356 DPVGA Demo Board with Socket		
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VGA PIN ASSIGNMENT ON PCB (BOTTOM SIDE):

BACK ROW	FRONT ROW
11 (G_RTIN)	6 (R_RTIN)
7 (G)	1 (R)
2 (S)	12 (SDA)
13 (HS)	8 (B_RTIN)
9	3 (B)
4	14 (VS)
15 (SCL)	10
	5

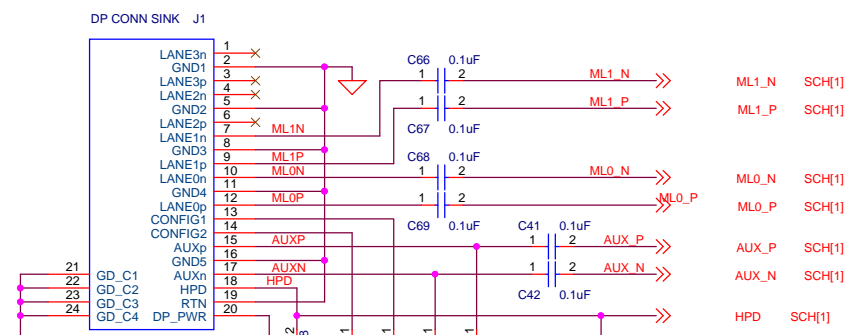


**OPTION DESIGN:**  
Install U2 to support 5V H/V for legacy projector and CRTs.



PLEASE ADD TEST PAD IN THE MIDDLE OF THE TRACE

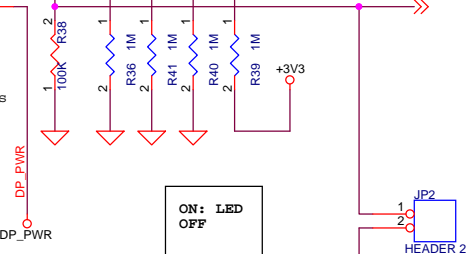
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- ML1\_N SCH[1]
- ML1\_P SCH[1]
- ML0\_N SCH[1]
- ML0\_P SCH[1]
- AUX\_P SCH[1]
- AUX\_N SCH[1]
- HPD SCH[1]

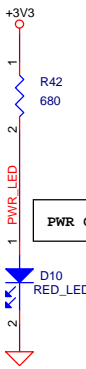
**DP-RECEPTACLE**

HPD pull-down is integrated into silicon (400K)



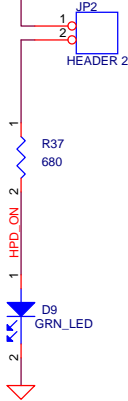
**ON: LED  
OFF**

JUMPER ON TO TURN ON LED  
JUMPER OFF TO MEASURE POWER CONSUMPTION



**PWR ON**

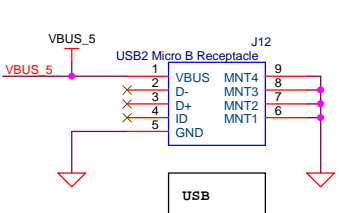
**HPD LED ON**



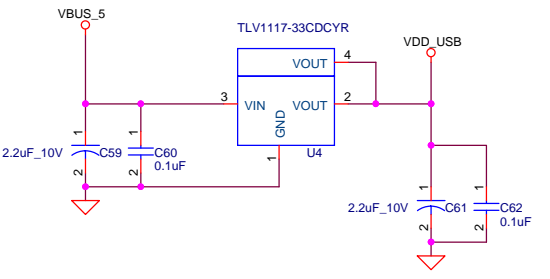
**USB 5V**



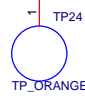
**USB 3V3**



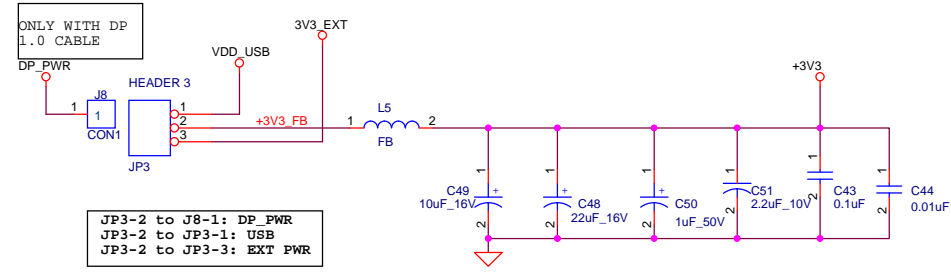
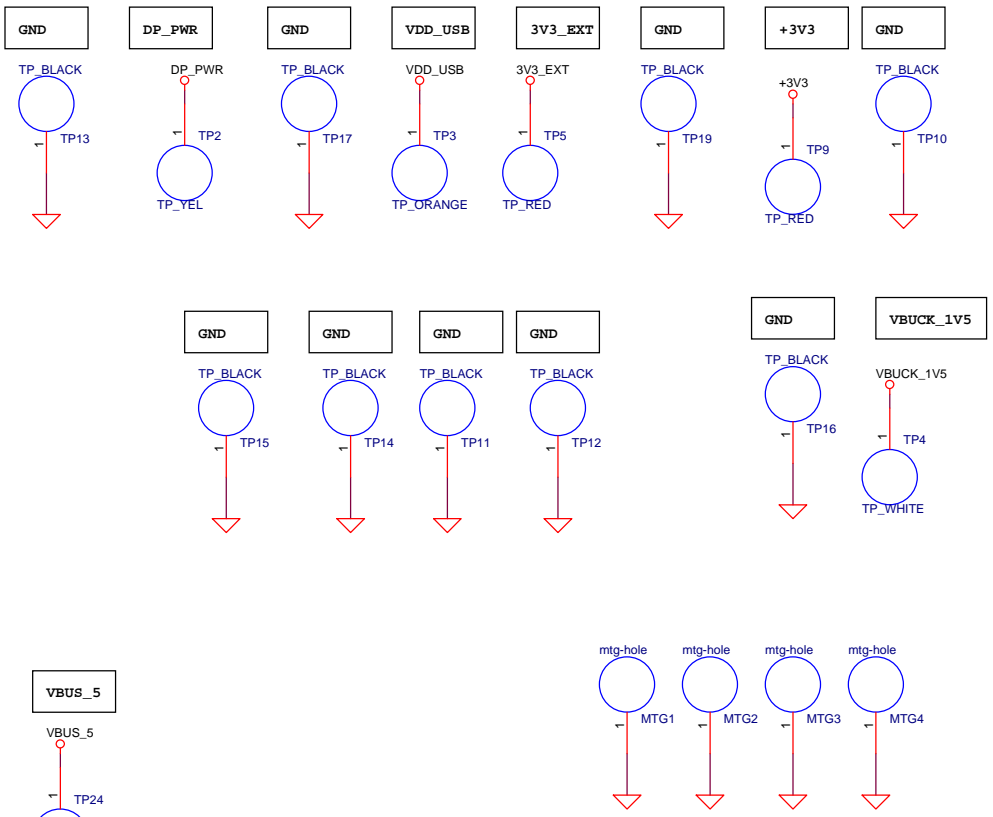
**USB**



**VBUS\_5**



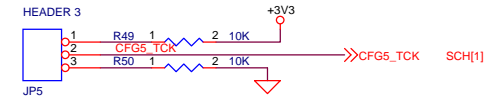
**TP\_ORANGE**



ONLY WITH DP 1.0 CABLE  
 JP3-2 to J8-1: DP\_PWR  
 JP3-2 to JP3-1: USB  
 JP3-2 to JP3-3: EXT PWR

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PTN3356 DPVGA Demo Board		
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HI  
CFG5/TCK  
LO



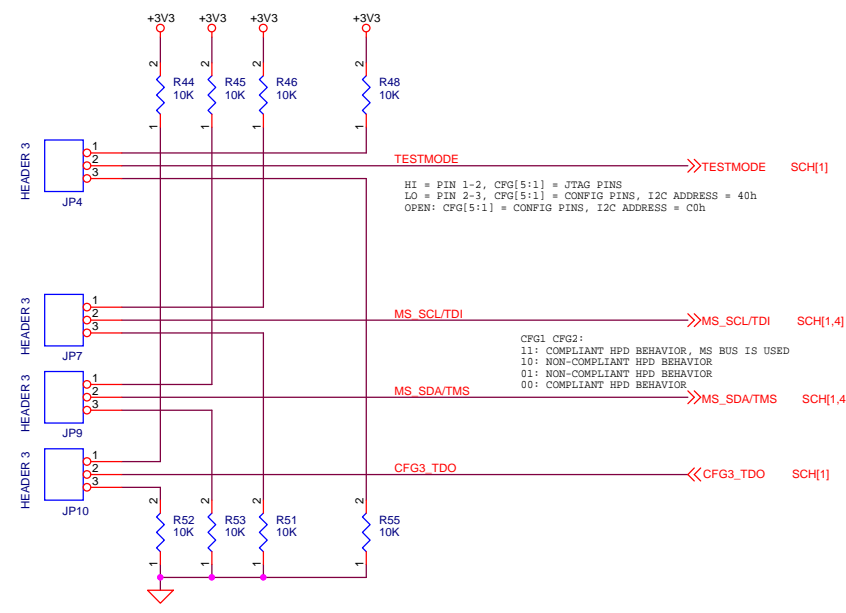
JUMPER 1-2, HIGH, 24 MHZ XTAL IS USED  
OPEN: 27 MHZ XTAL IS USED  
JUMPER 2-3, LOW, 25 MHZ XTAL IS USED

HI  
TESTMODE  
LO

HI  
CFG1-MS\_SCL/TDI  
LO

HI  
CFG2-MS\_SDA/TMS  
LO

HI  
CFG3-SPARE  
LO

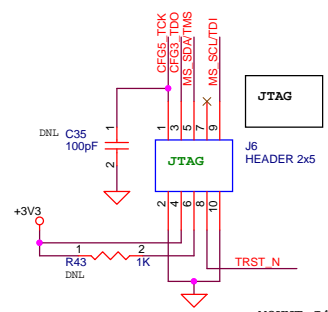
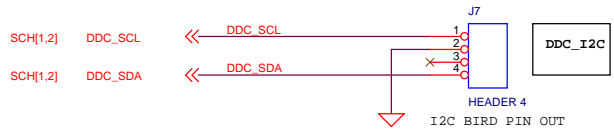
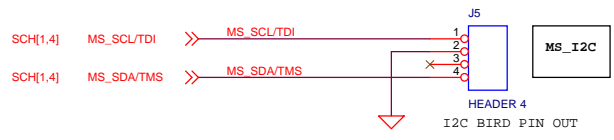


HI = PIN 1-2, CFG[5:1] = JTAG PINS  
LO = PIN 2-3, CFG[5:1] = CONFIG PINS, I2C ADDRESS = 40h  
OPEN: CFG[5:1] = CONFIG PINS, I2C ADDRESS = C0h

CFG1 CFG2:  
11: COMPLIANT HPD BEHAVIOR, MS BUS IS USED  
10: NON-COMPLIANT HPD BEHAVIOR  
01: NON-COMPLIANT HPD BEHAVIOR  
00: COMPLIANT HPD BEHAVIOR

SCH[1] TRST\_N >> TRST\_N

FOR PTN3356 WITH FLASH ONLY



MOUNT J4 ON THE  
TOP SIDE WITH  
RIGHT ANGLE  
CONNECTOR

Title		
PTN33356 CONFIG AND JTAG		
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