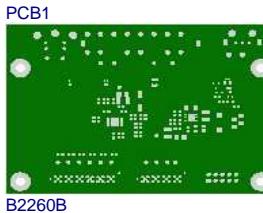


96BOARDS_STiH410_SCHEMATICS

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- Page02: 02_BLOCK_DIAGRAM
- Page03: 03_DDR_LMI0
- Page04: 04_CPU_SYSTEM
- Page05: 05_ESATA
- Page06: 06_USB
- Page07: 07_HDMI
- Page08: 08_NO_AUDIO_VIDEO
- Page09: 09_CPU_DIG_POWER
- Page10: 10_CPU_DIG_DECOUPLING
- Page11: 11_BOARD_POWER_SUPPLY
- Page12: 12_POWER_SUPPLY_LMI
- Page13: 13_PIO0_TO_PIO5_SBC
- Page14: 14_PIO10_TO_PIO20
- Page15: 15_PIO30_TO_PIO35
- Page16: 16_Memory&security
- Page17: 17_WIFI/Bluetooth
- Page18: 18 RTL8211
- Page19: 19_LEVEL_SHIFTER
- Page20: 20_EXPANSION_CONNECTOR
- Page21: 21_LEGAL DISCLAIMER



PCB1
XXXXY-AABBCC
12345678-123
HW_LABEL_SERIAL_NUMBER

HW2
XXXXY-AABBCC
12345678-123
HW_LABEL_MAC_ADDRESS

Version History

PCB	SCH
A01	A01: Original Ver A

	Board Title	B2260B STiH410_HDK	CONFIDENTIAL AND PROPRIETARY INFORMATION
Sheet Title	Contents		This drawing and the information herein, is not to be used or copied without the prior written permission of STMicroelectronics.
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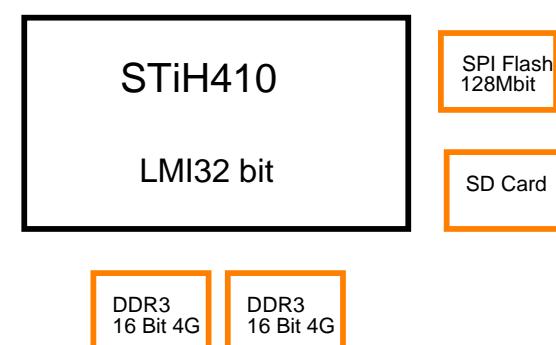
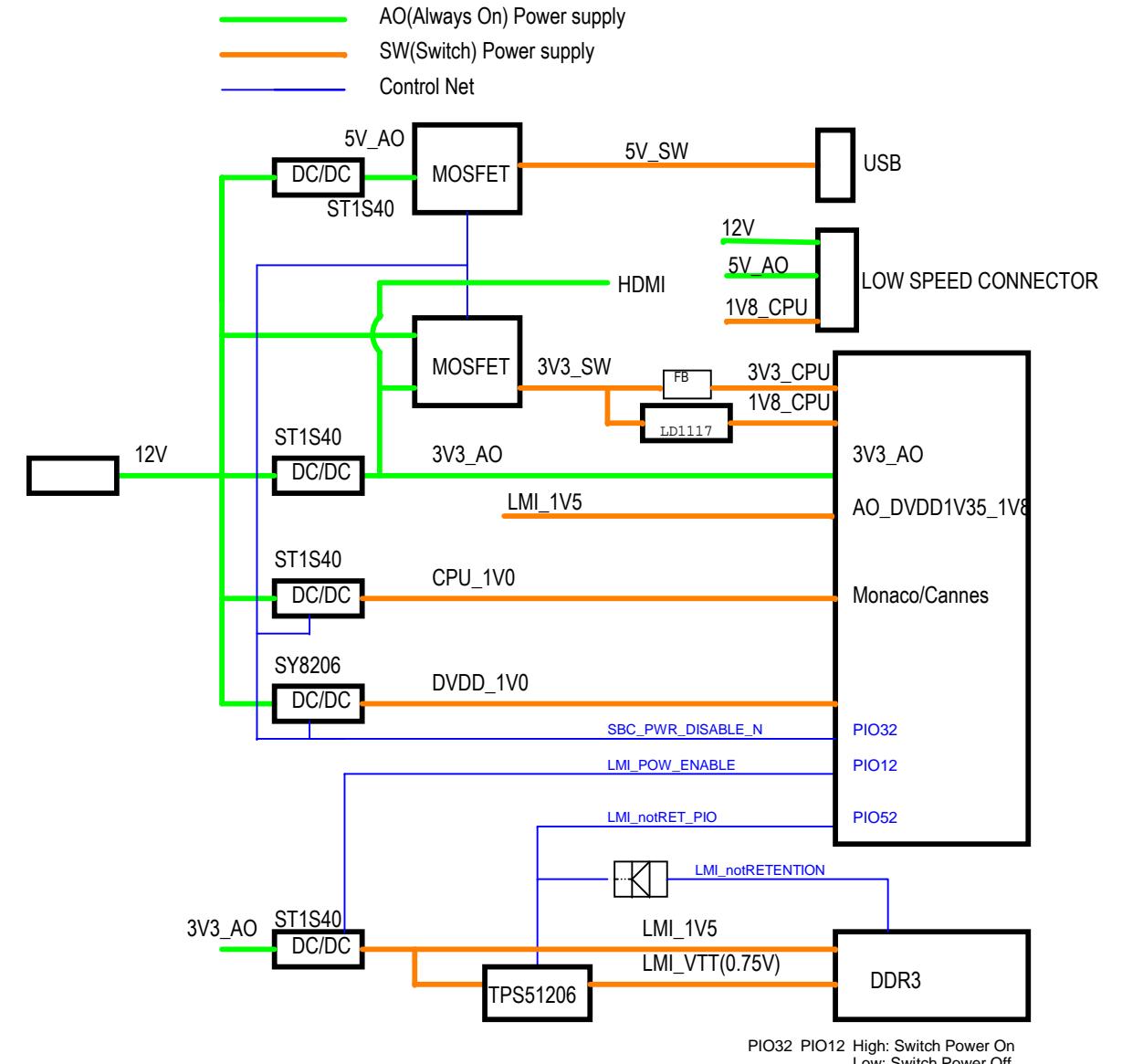
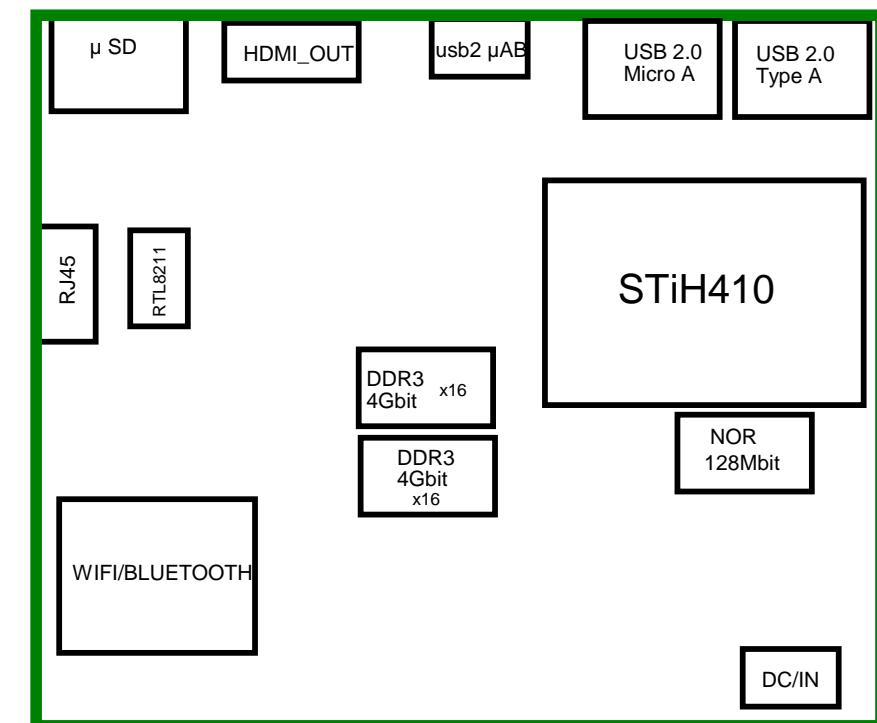
Impedance Control

PCB Thickness		6 mils		9 mils		6 mils	
Top	L1						0.33 oz + Plating (Total 1 oz)
GND	L2	3313	3.728Mil				1 oz
Power	L3	Core	48.441.Mil				1 oz
Bottom	L4	3313	3.728Mil				0.33 oz + Plating (Total 1 oz)
Prepreg Top/Layer2 & bottom/Layer3		Material:= 3313 --> EpsilonR 3.9		FR4 S1141		60.697 mils (1.54 mm)	
Width	internal space	external space	Z0	Zdiff	Comments		
5 Mils			56R		Normal DDR ADD/CMD/DATA		
4 Mils			60R				
5 Mils	5 Mils	>10 Mils	56R	100R	DDR_CLK/Diff		
6 Mils	9 Mils	>30 Mils (60)	54R	97R	HDMI,SATA,Ethernet		
7 Mils	8 Mils	>30 Mils	49R	88R	USB		

Note: This impedance control status base on PCB stack material:FR4 S1141

Note:
HW design ready (or not ready) for advanced security rules on boards - please contact HW for more details and contact your Advanced Security vendors for update rules to be applied on your final design

B2260A BLOCK DIAGRAM



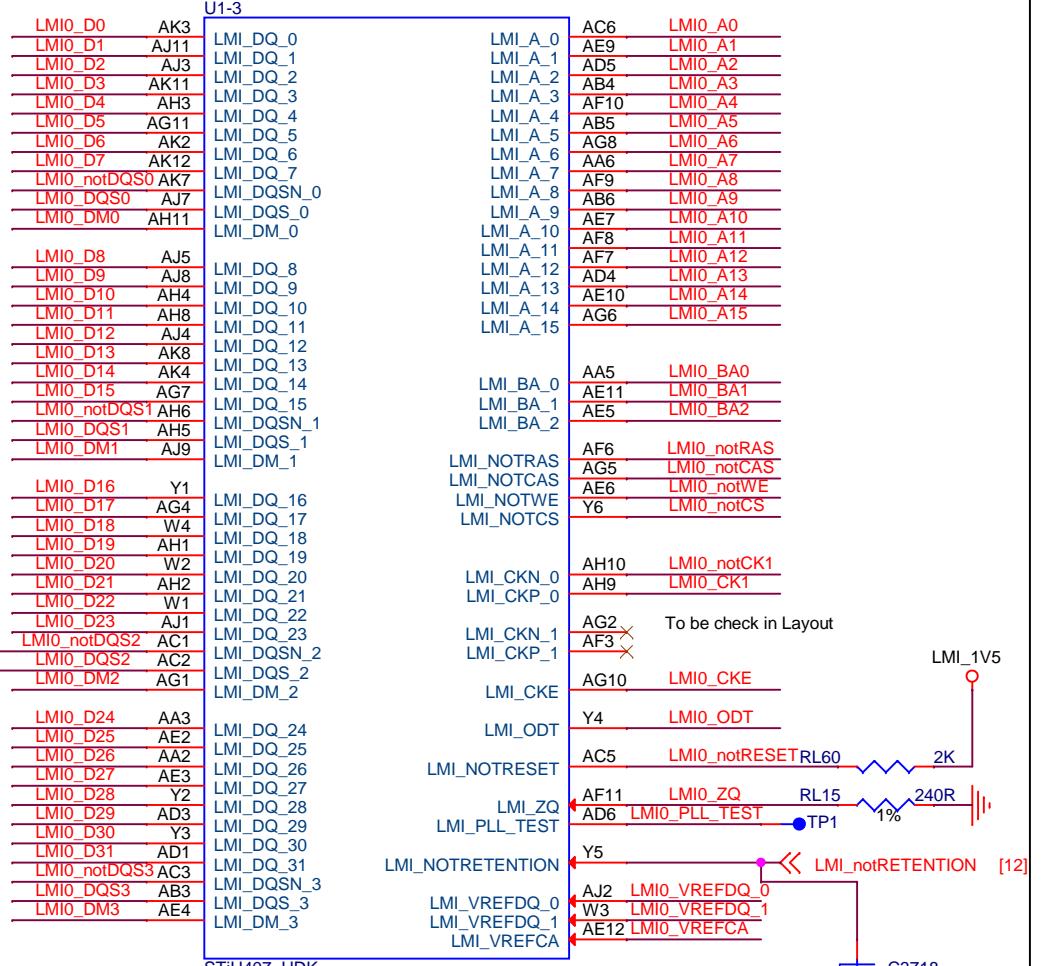
Board Title B2169A STiH305_HDK

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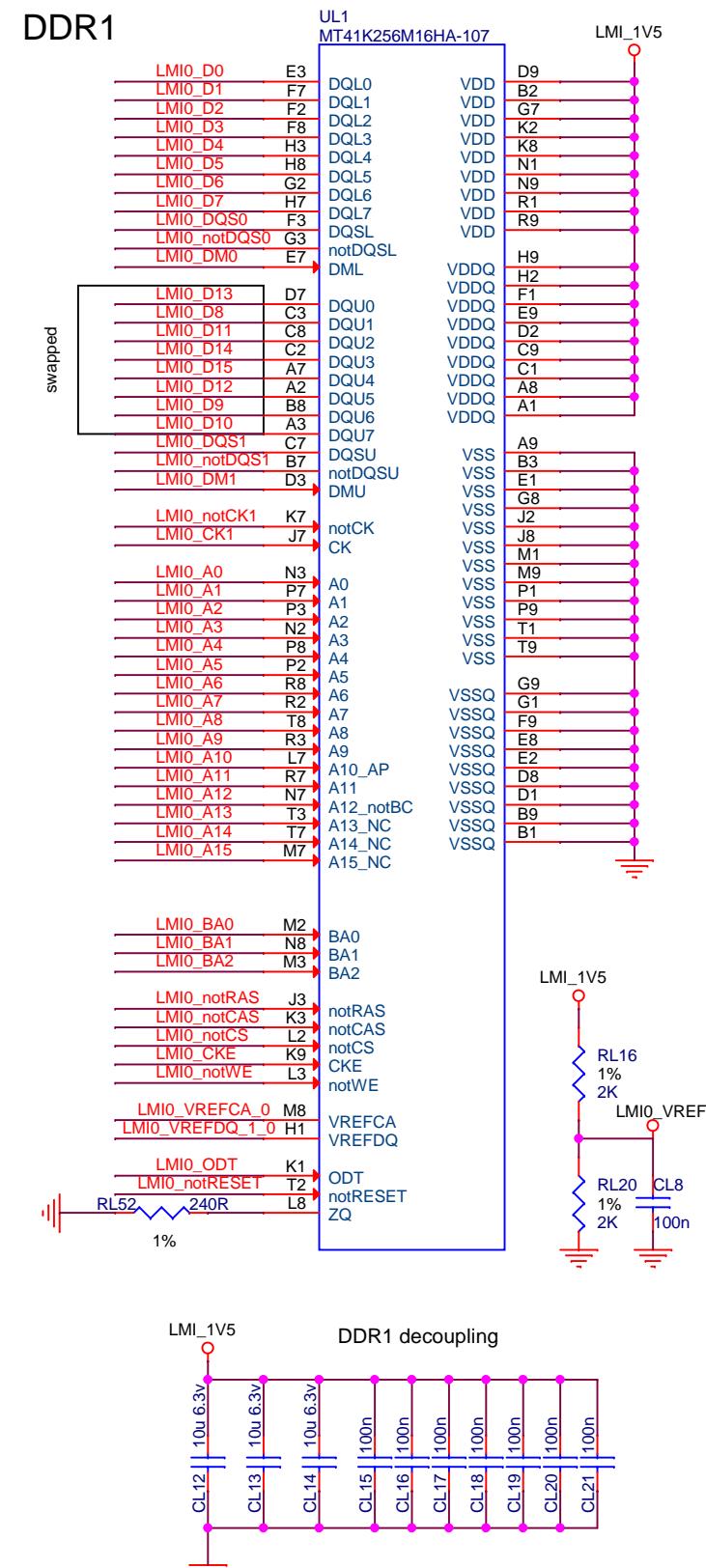
Sheet Title Block Diagram

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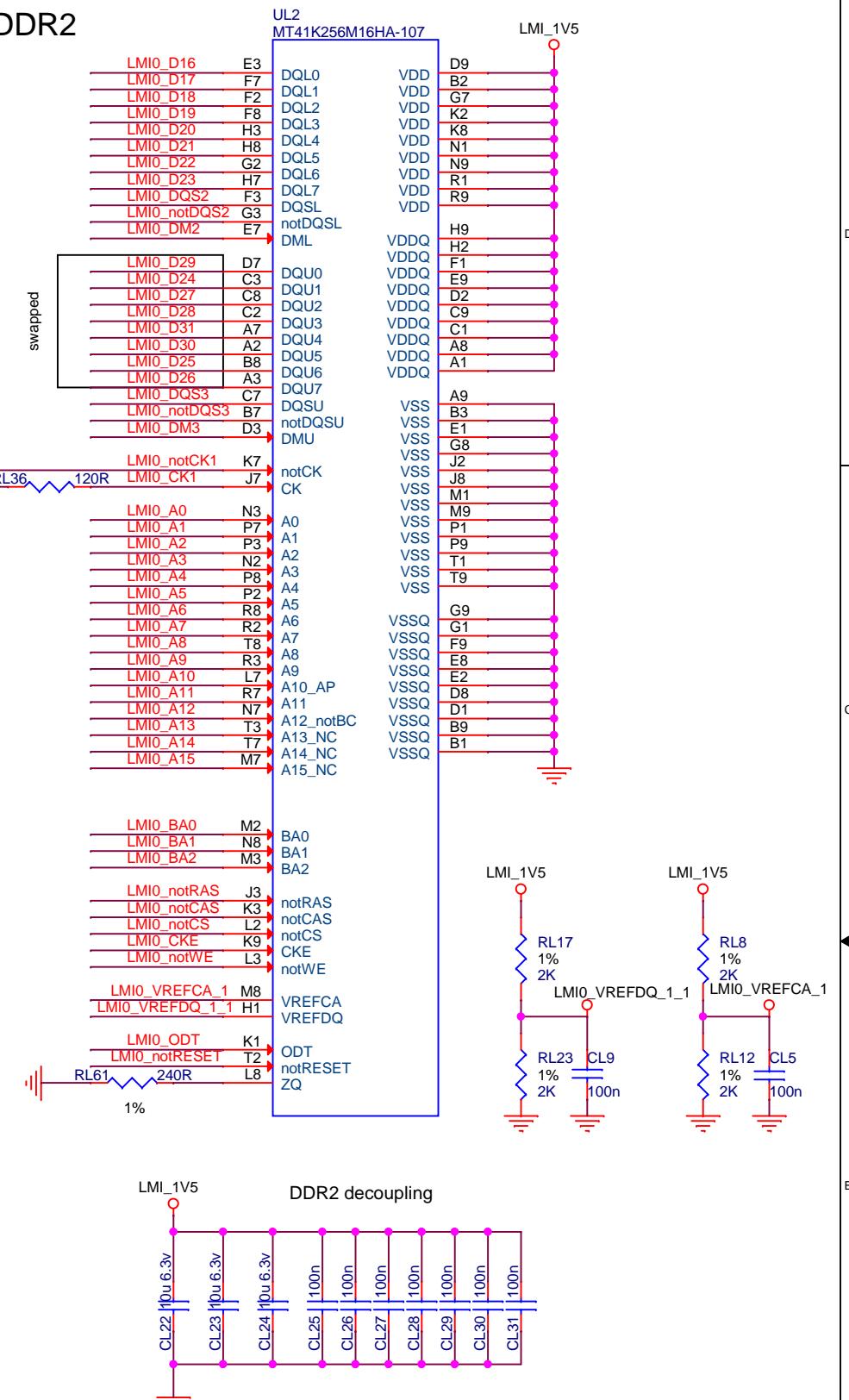
CPU - LMI INTERFACE - DDR



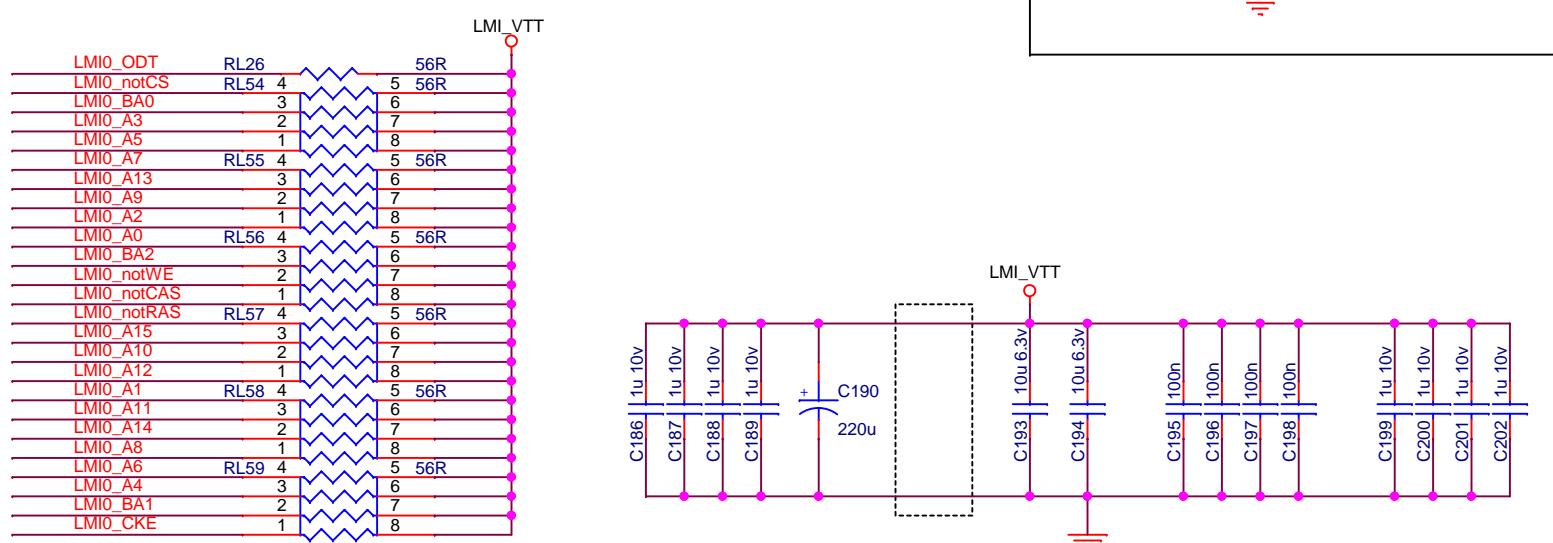
DDR1



DDR2

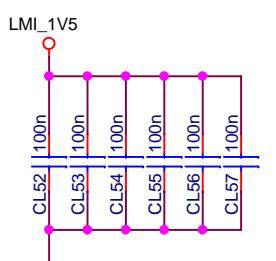


DDR TERMINAISON VTT and VTT decap

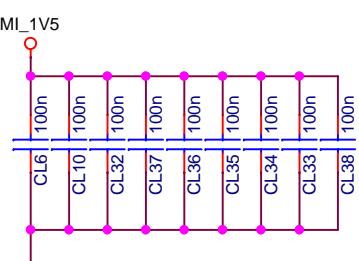


LMI BUS DECAP

Put in in around LMI AC trace for return current Proposal



Place CAP close to the via on DQ and A/C



Board Title B2260B STiH410_HDK

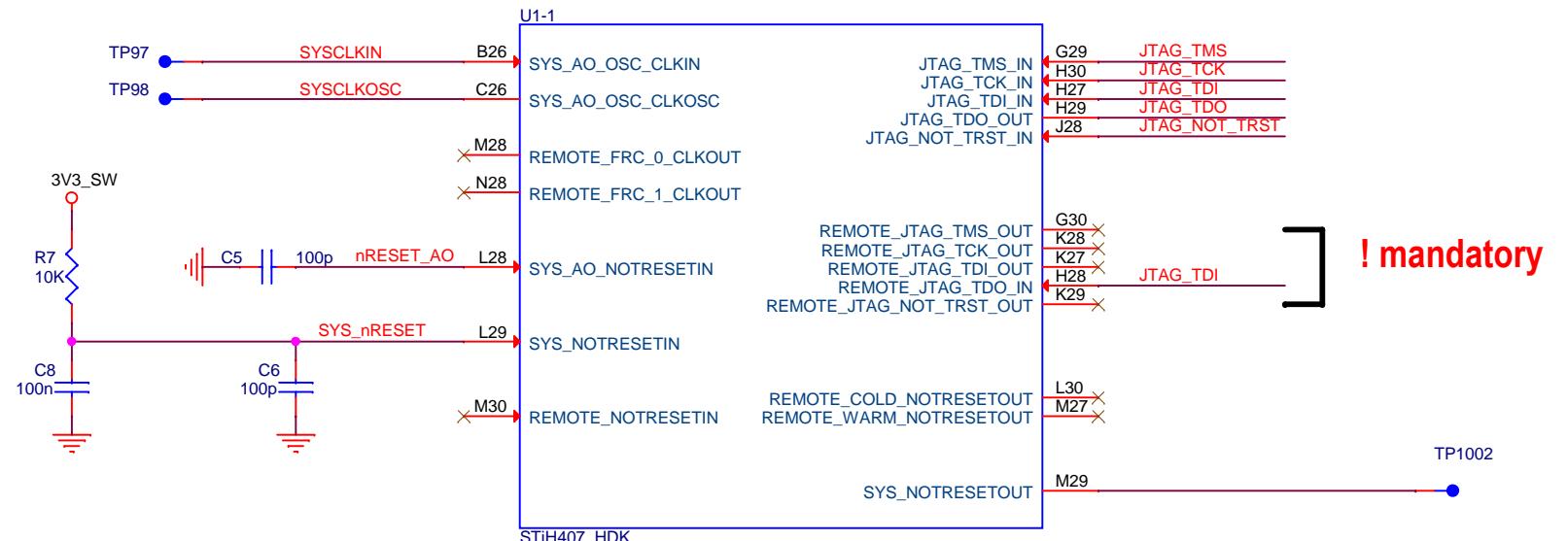
Sheet Title LMI0 Interface

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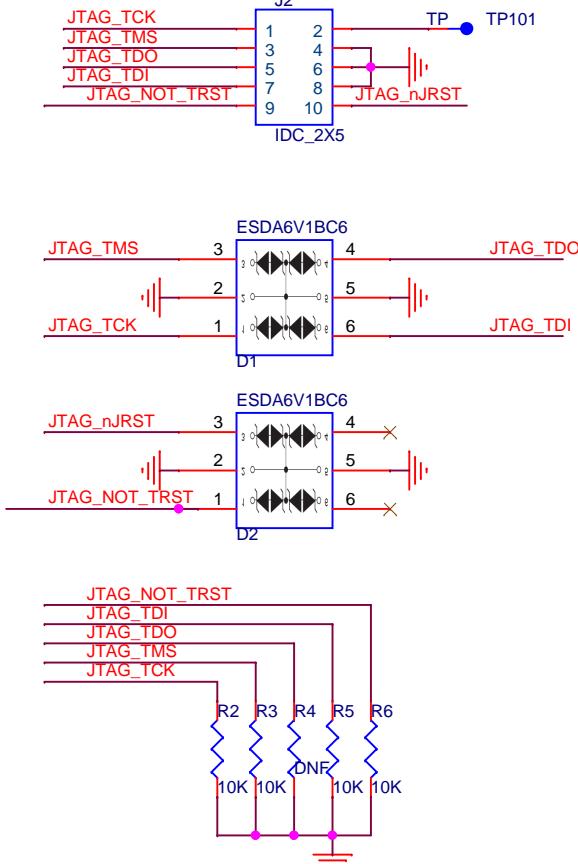
CPU - SYSTEM



MASTER CLK: The SATA oscillator provides reference clock for SATA and also for the complete SoC

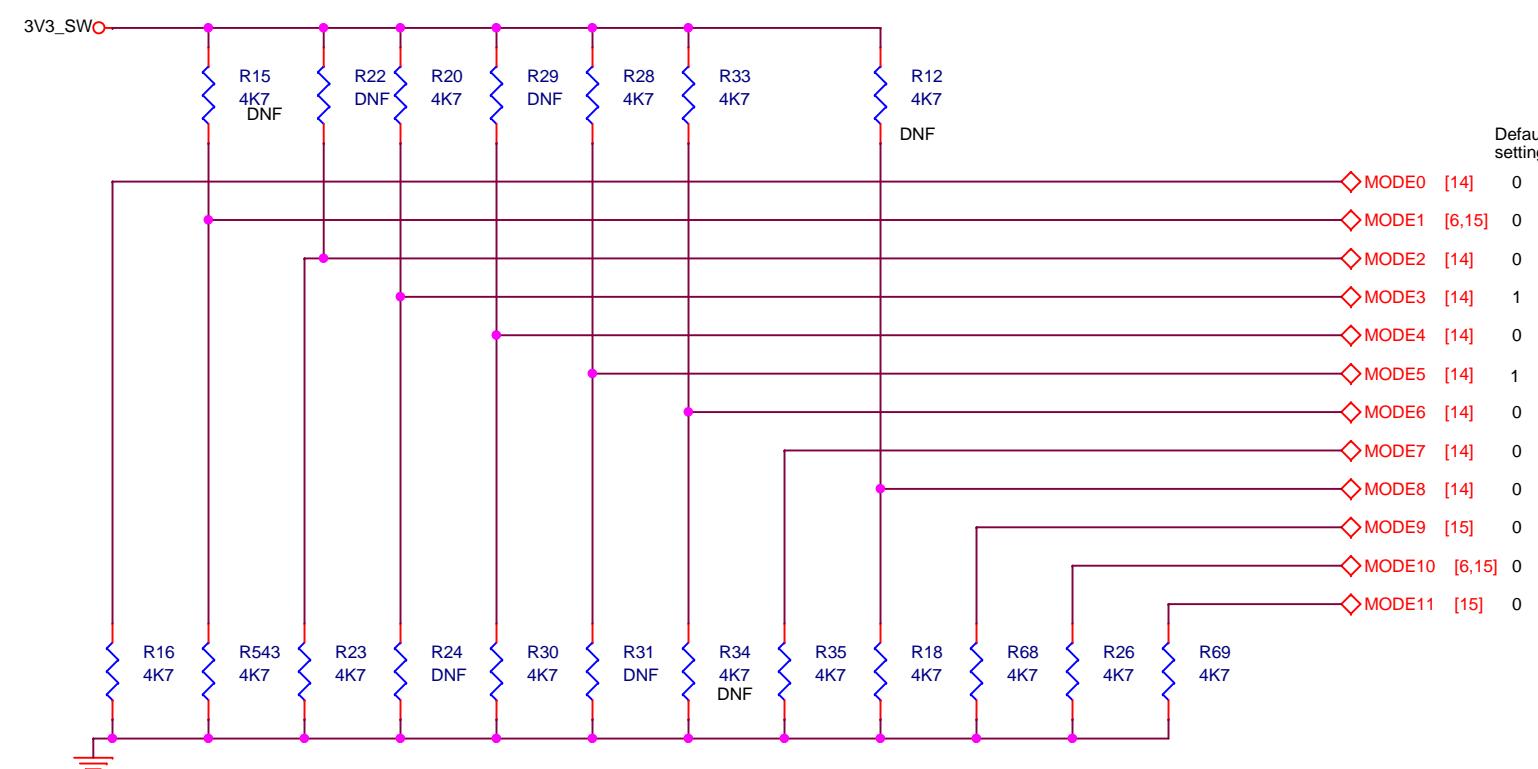
JTAG DEBUG

Matching the "1" marked on the board to the red -stripe on the cable

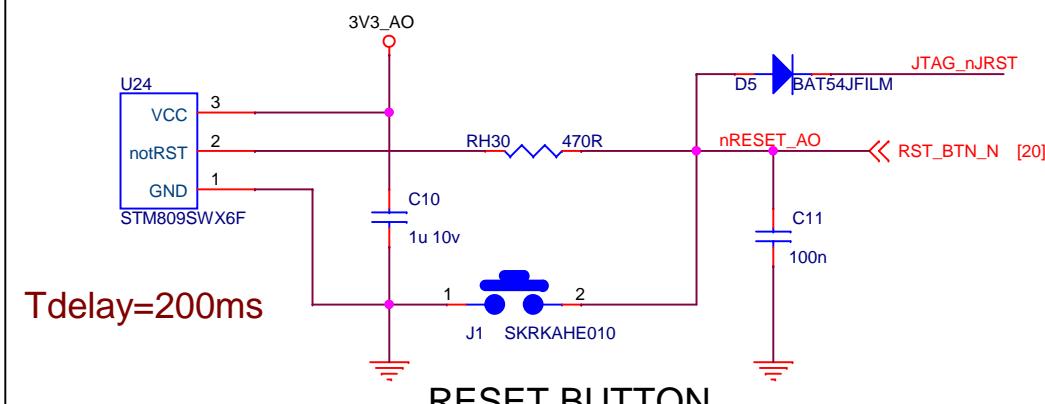


BOOT MODE SELECTION

Mode[6:2] = xxxxx -> TBC SPI NOR clock divider
ratio 2 or 4 or eMMC config for SD ?

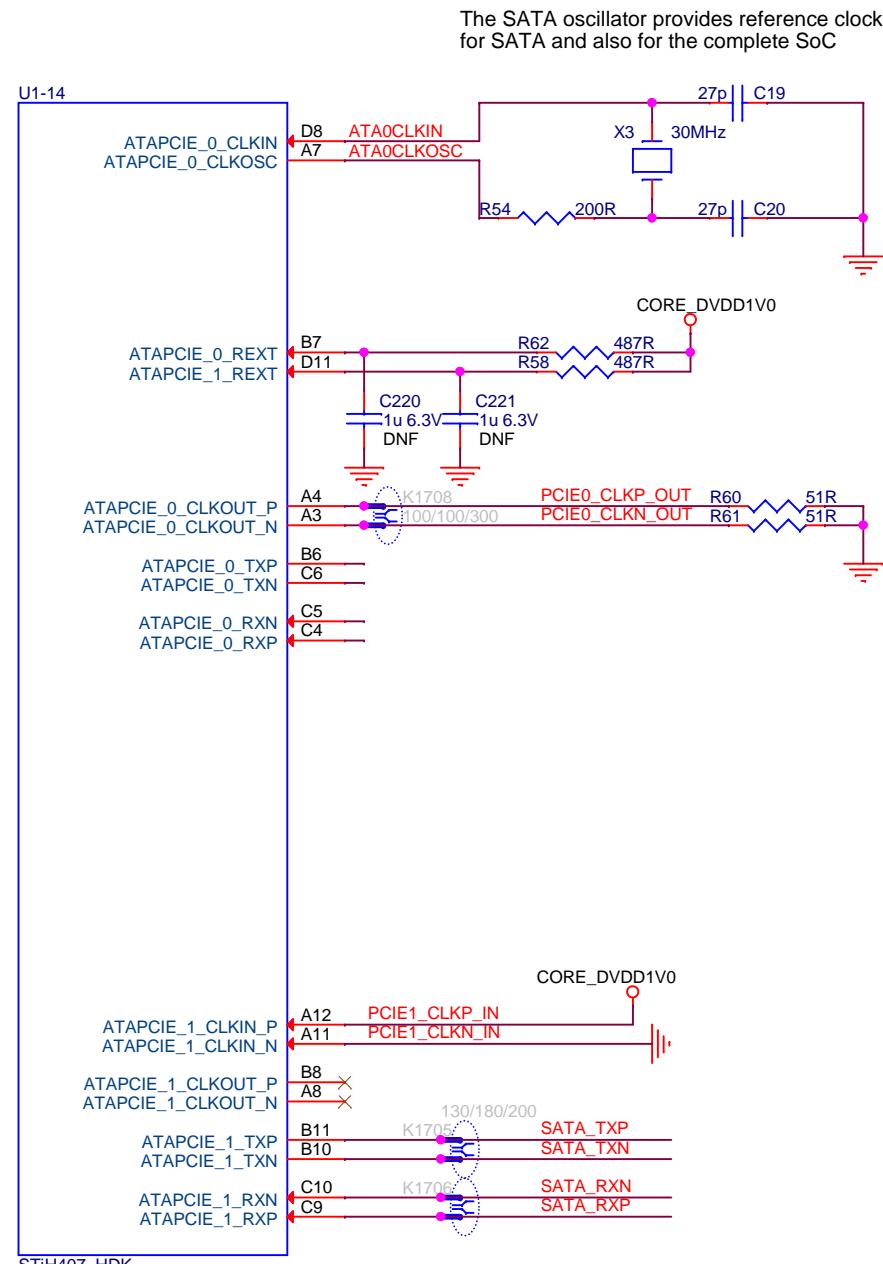


RESET



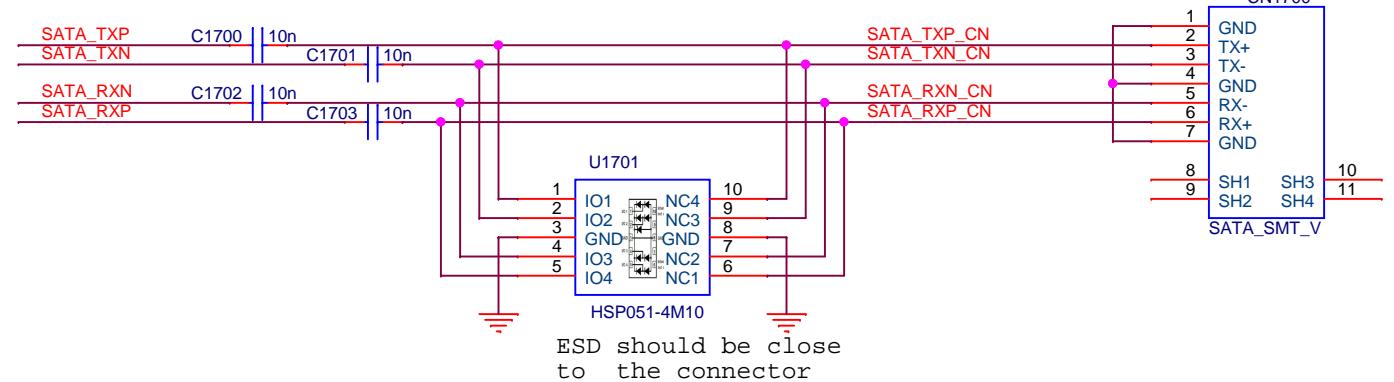
CPU - PCIe & SATA INTERFACE

PCIe CONNECTOR



SATA CONNECTOR

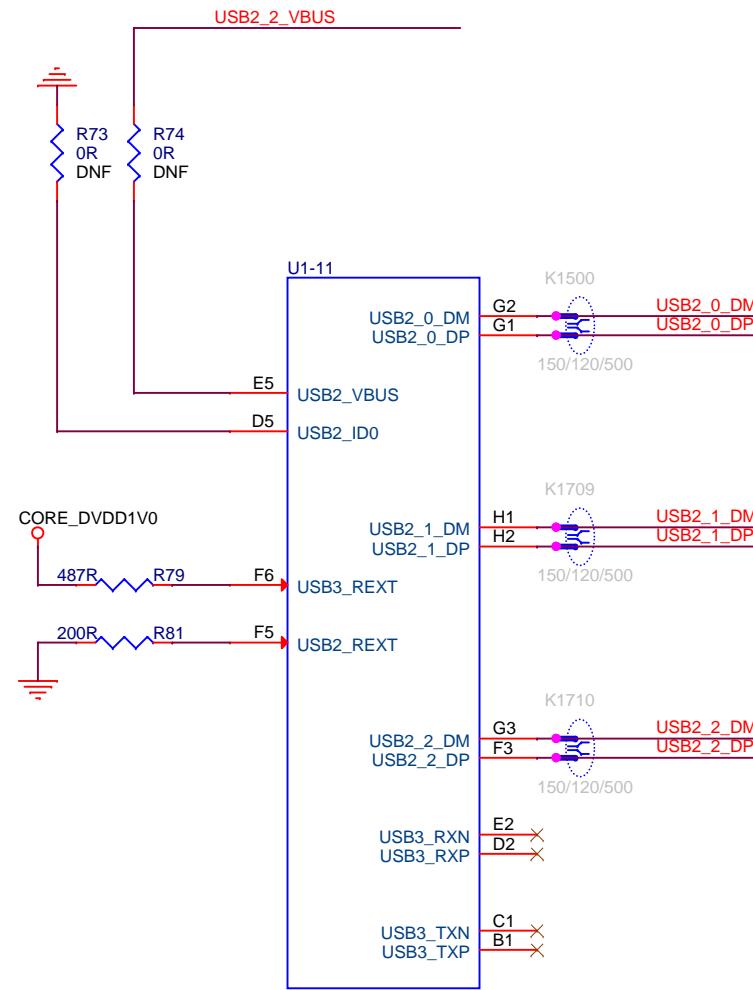
Capacitors should be close to ESD protection



PCIe

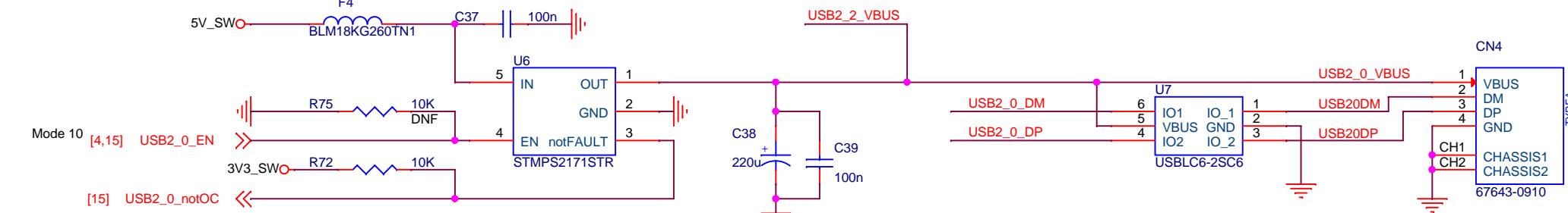
1V5 PCIE PWR

CPU - USB



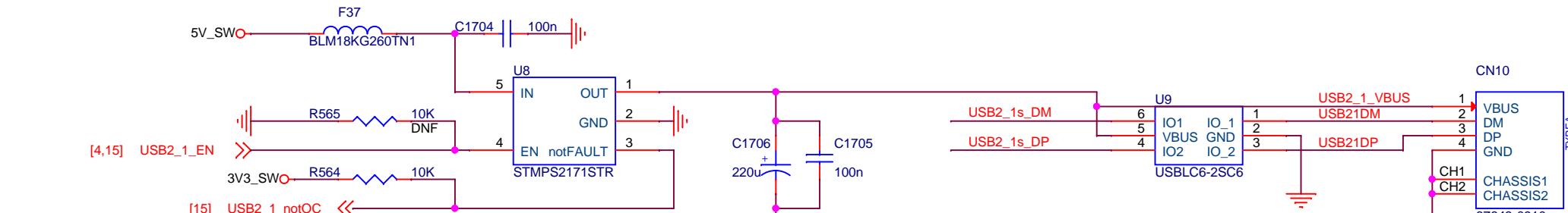
USB_PORT_A_CONNECTOR_TYPE_A

5V / 1A



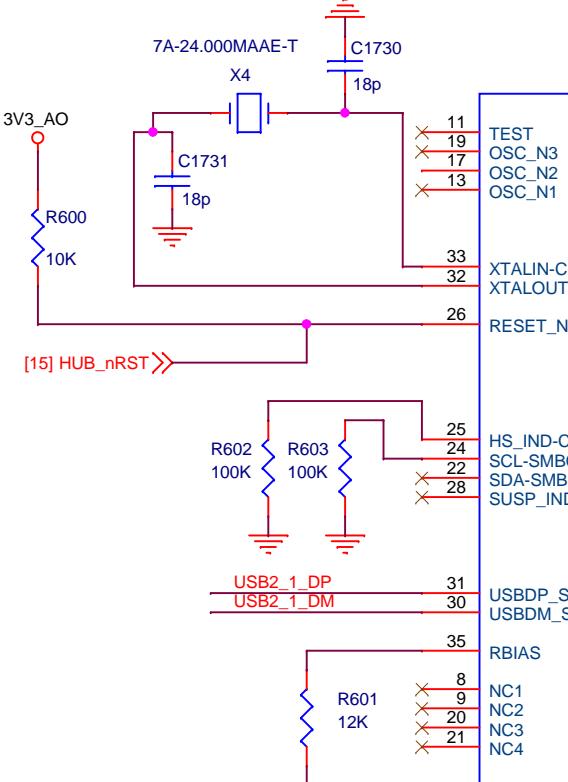
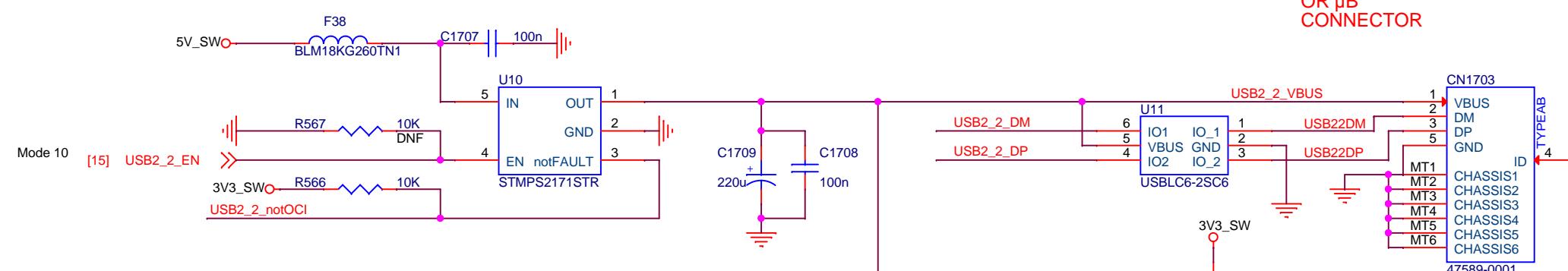
USB_PORT_B_CONNECTOR_TYPE_A

5V / 1A

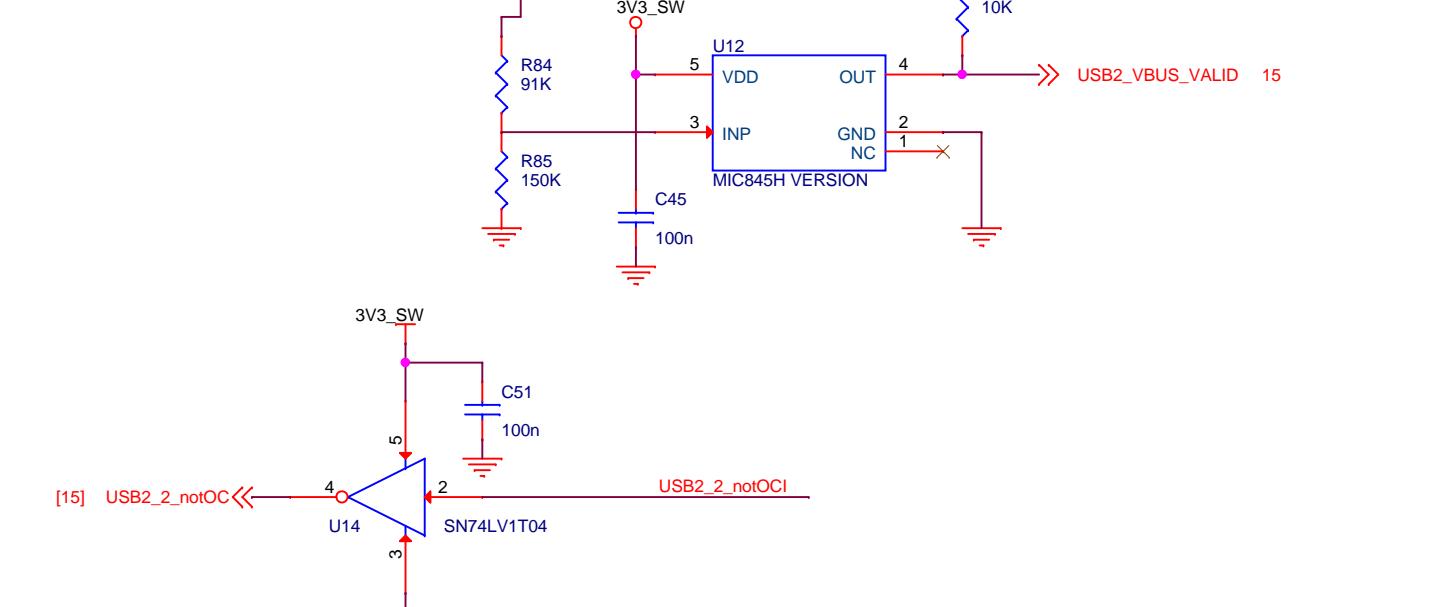
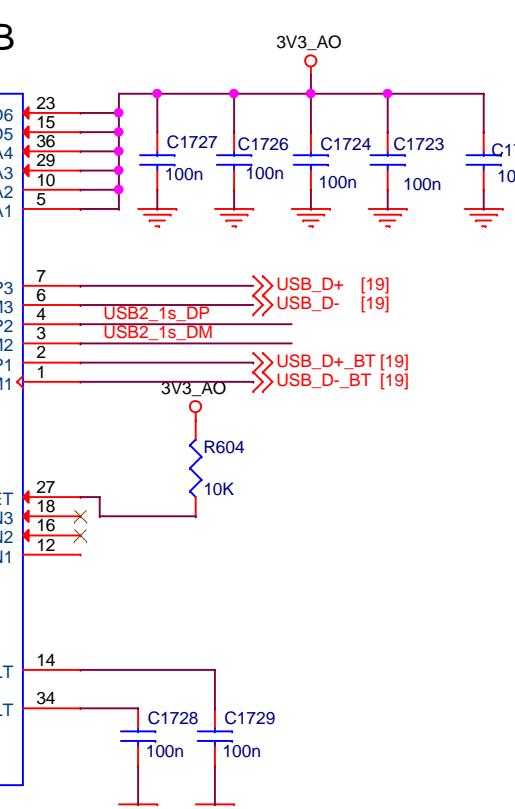


USB_PORT_2_CONNECTOR_TYPE_μAB

5V / 1A



USB - HUB



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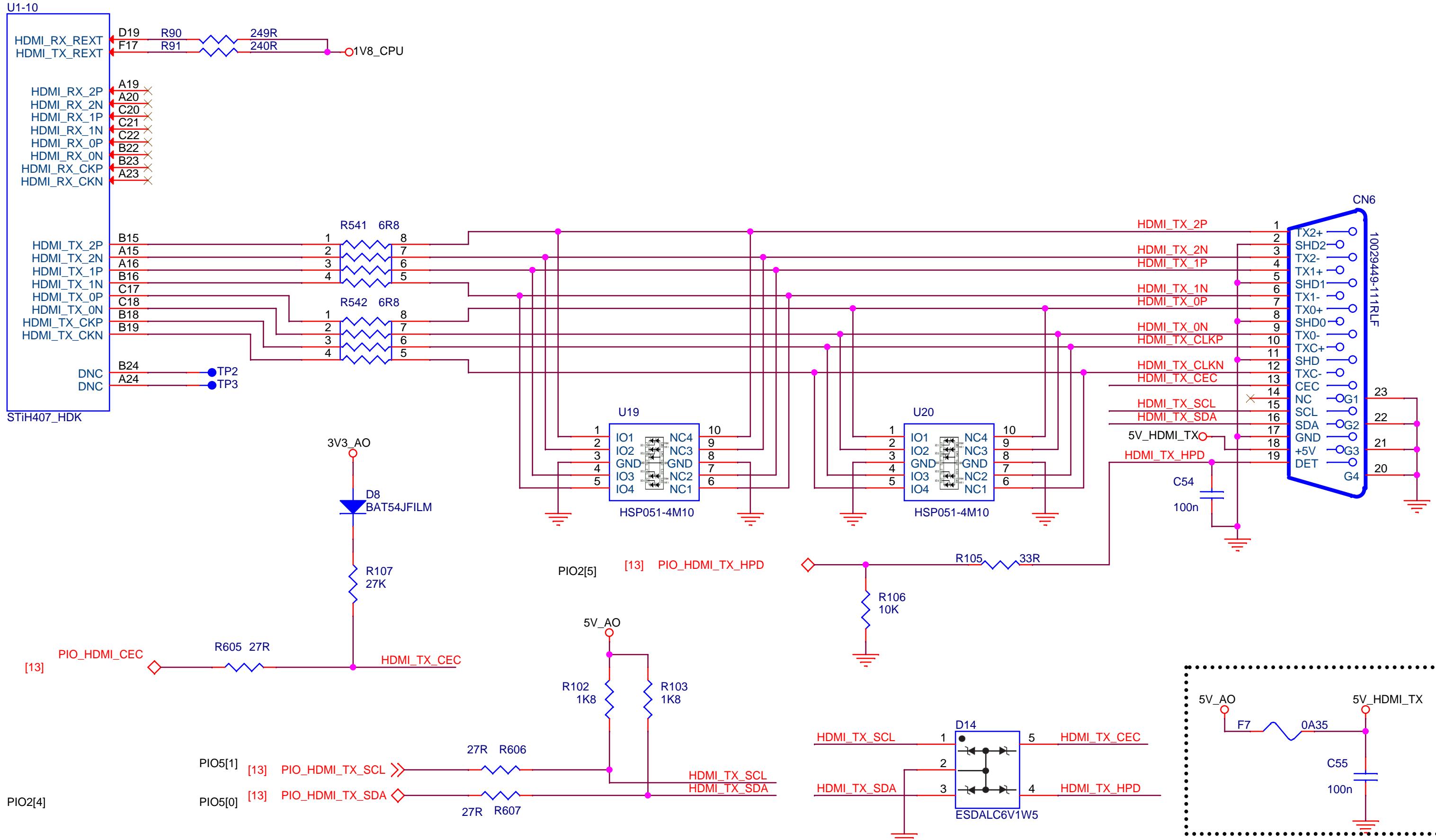
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Sheet Title USB Interfaces

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CPU - HDMI



Board T

B2260B STiH410_HDK

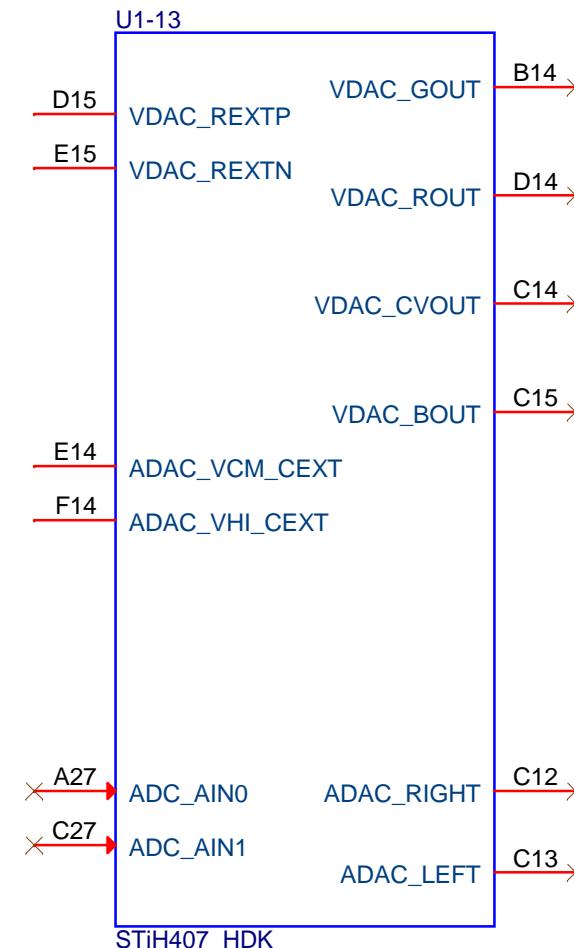
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Sheet T

HDMI Interface

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CPU - AUDIO



Board Title

B2260B STiH410_HDK

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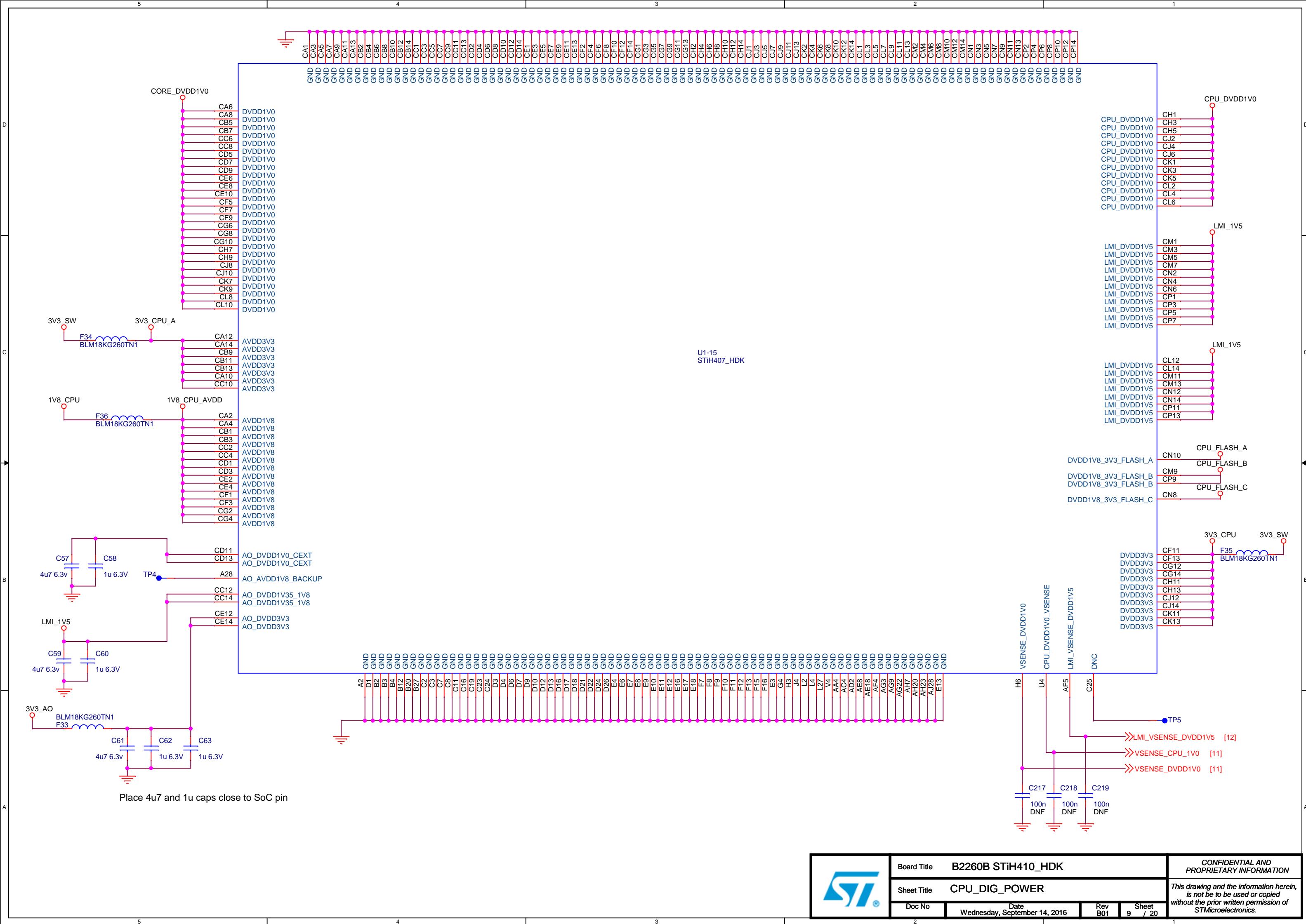
Sheet Title

Analog Audio and Video

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Board Title **B2260B STiH410_HDK**

Sheet Title **CPU_DIG_POWER**

Doc No

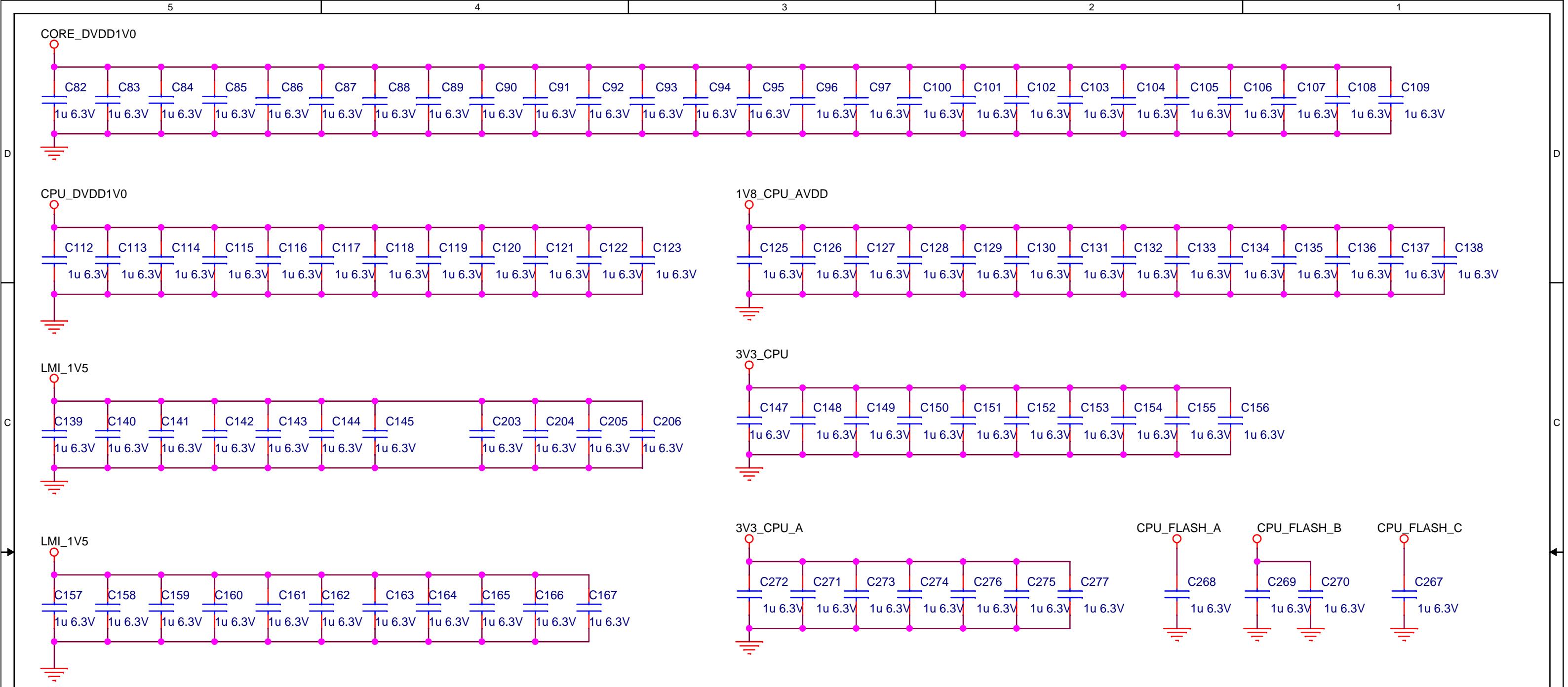
Date Wednesday, September 14, 2016

Rev B01

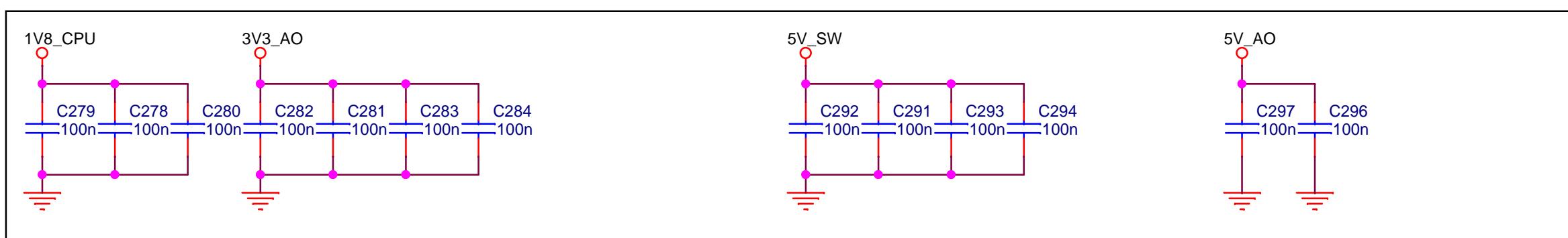
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Decoupling capacitors located along long power supply distribution lines



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Sheet Title SOC Digital Power Decoupling

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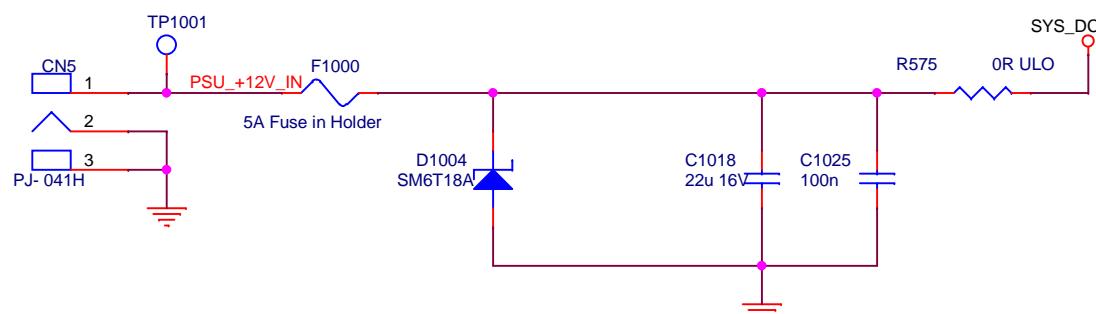
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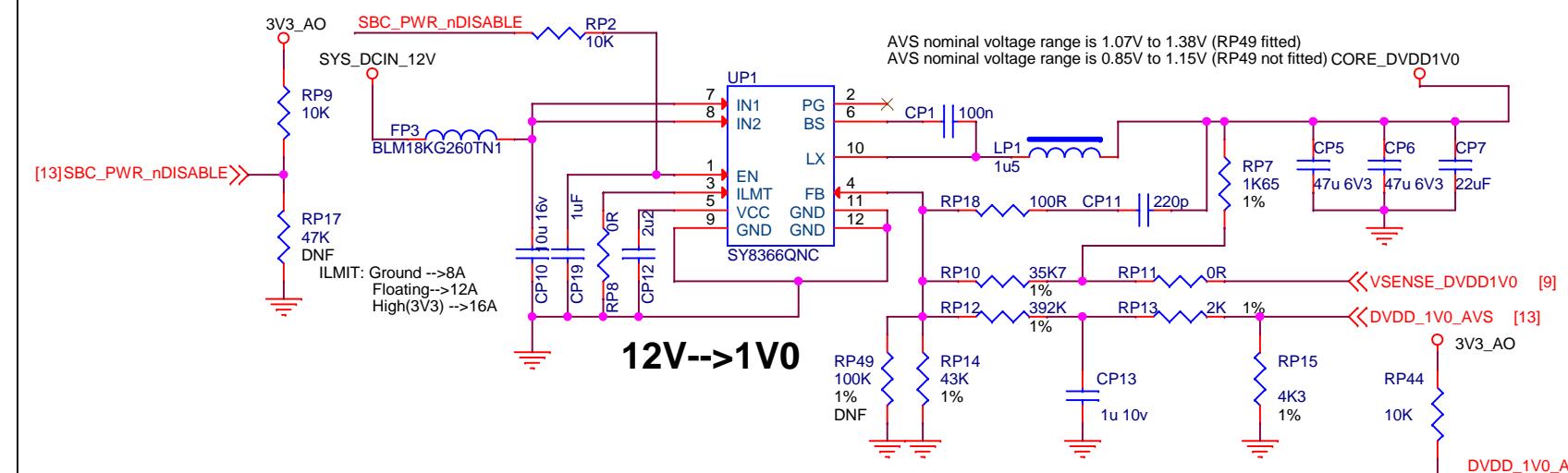
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SYS_DCIN 8V to 18V / 3A

+12VDC IN

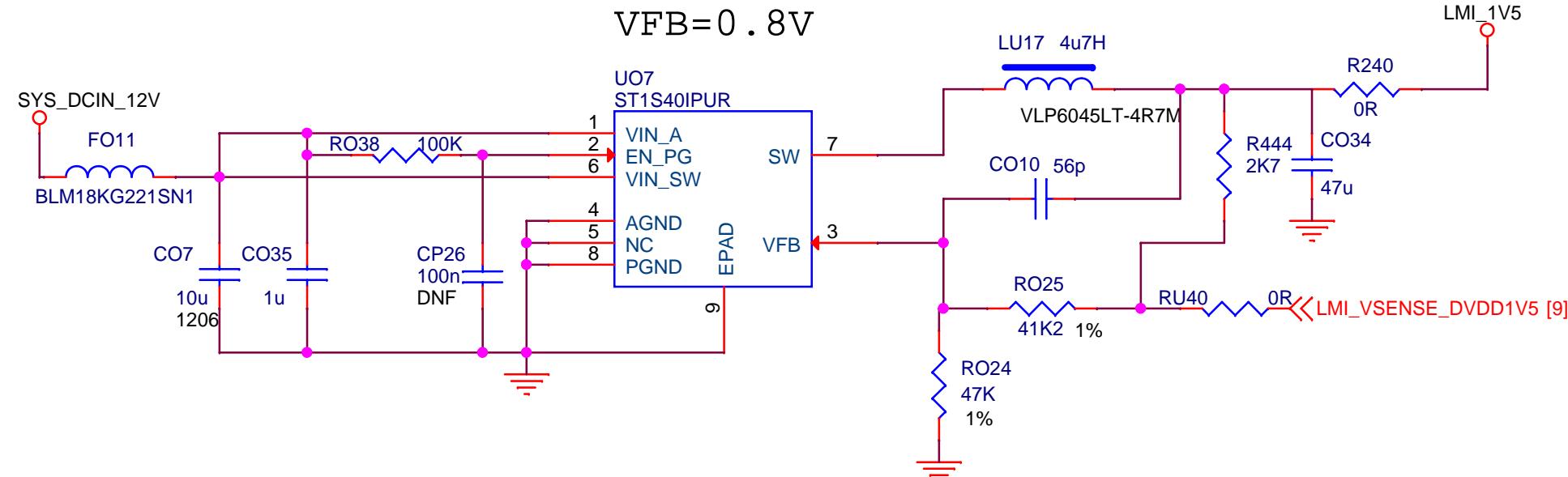


CORE&CPU_DVDD1V0 / 6A

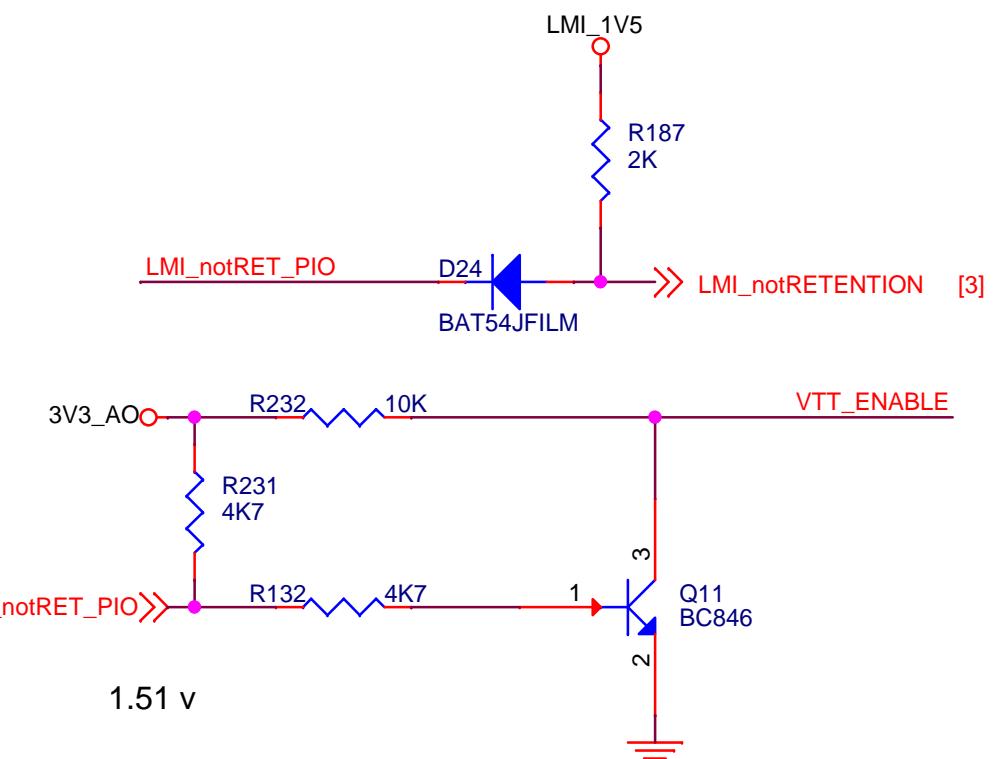


POWER SUPPLY LMI_1V5 / 2A

12V--->1.5V

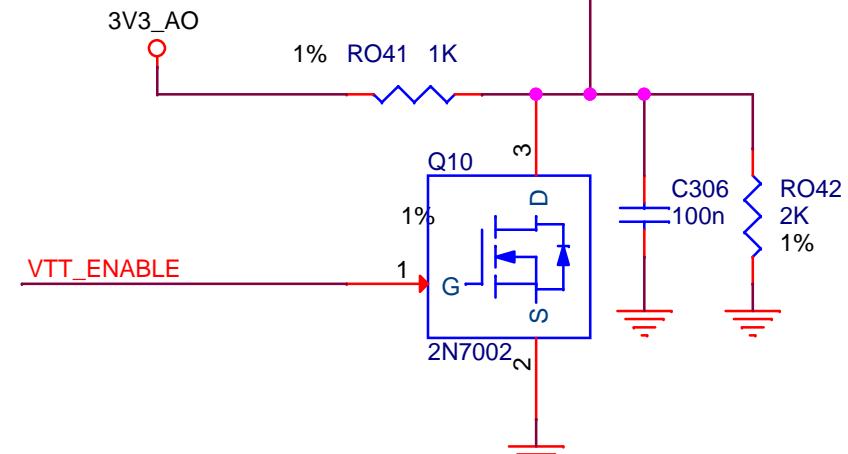
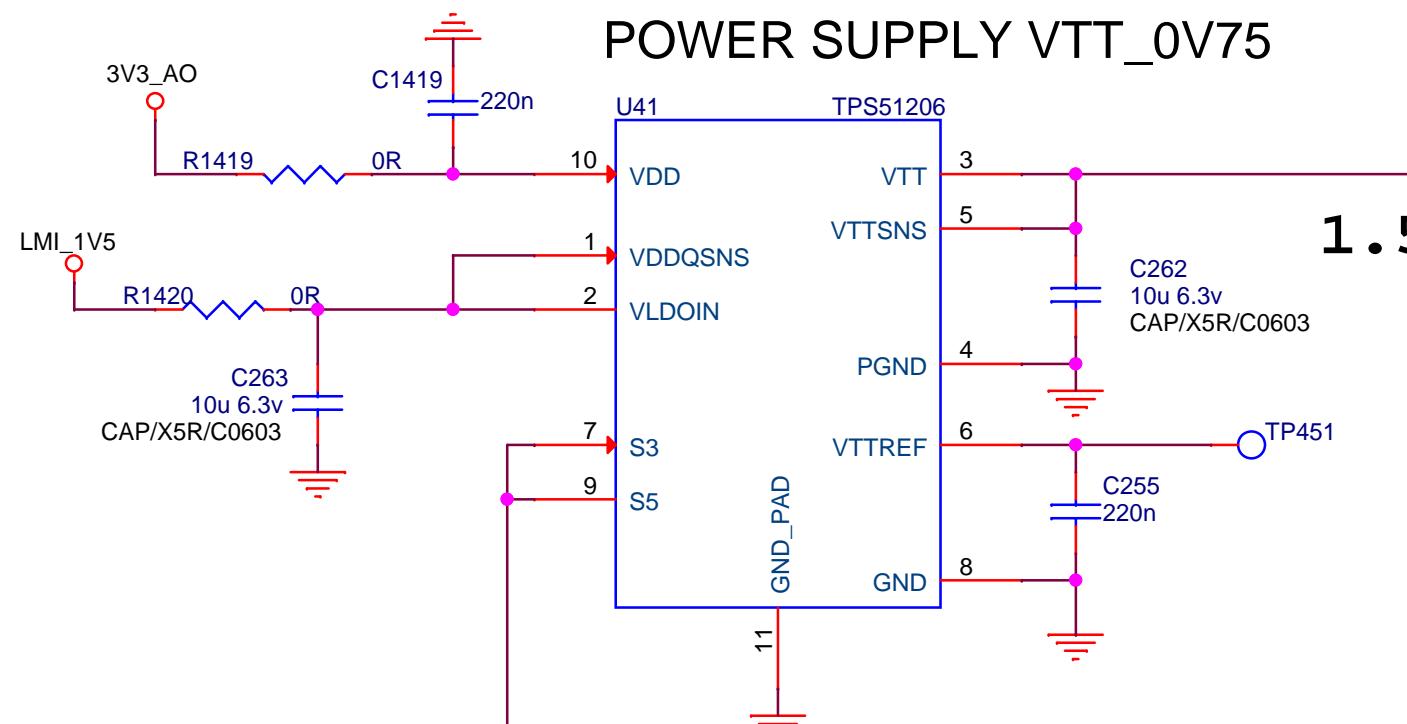


LMI_notRETENTION



POWER SUPPLY VTT_0V75

1.5V--->0.75V



Board Title

B2260B STiH410_HDK

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Sheet Title

LMI Power Supply Regulators

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CPU_GPIO_BANK[5:0]

U1-4

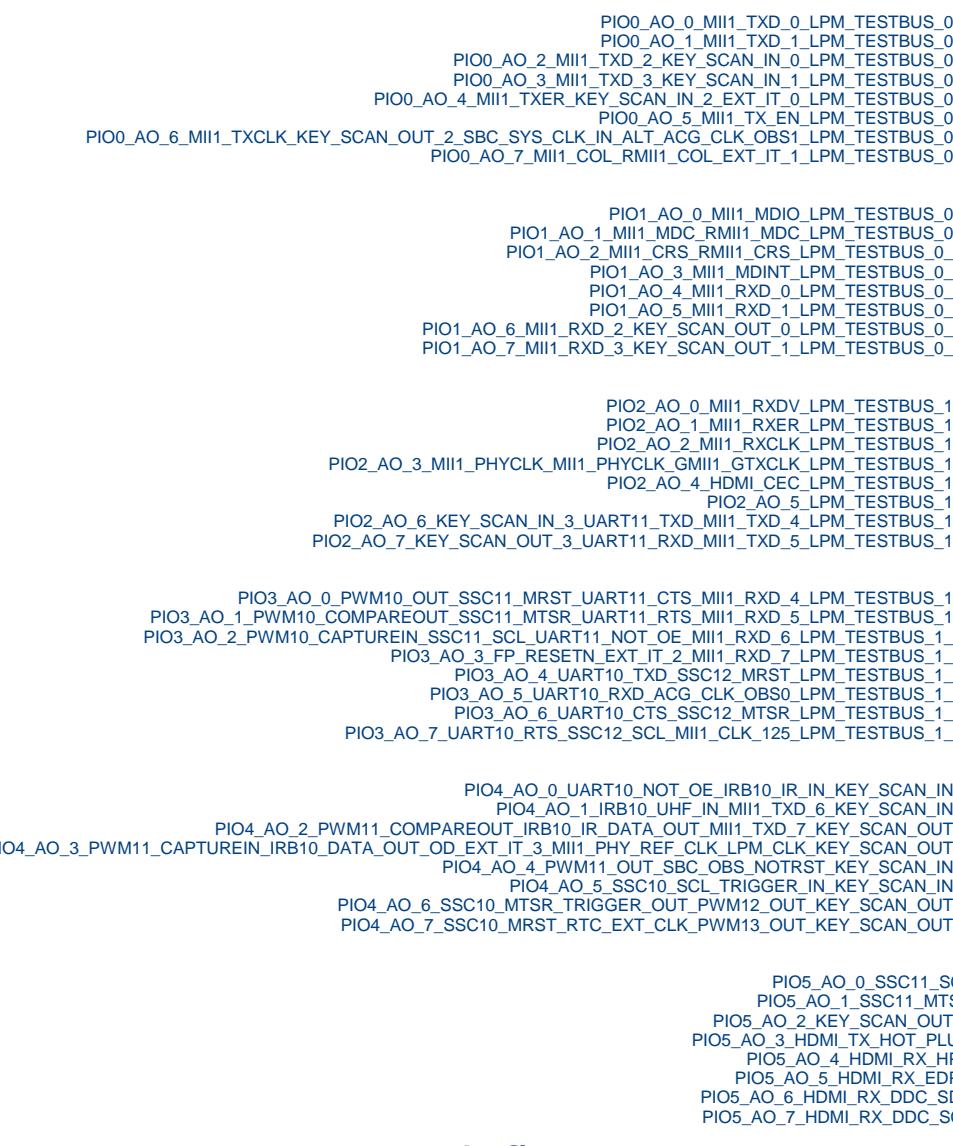
E

D

C

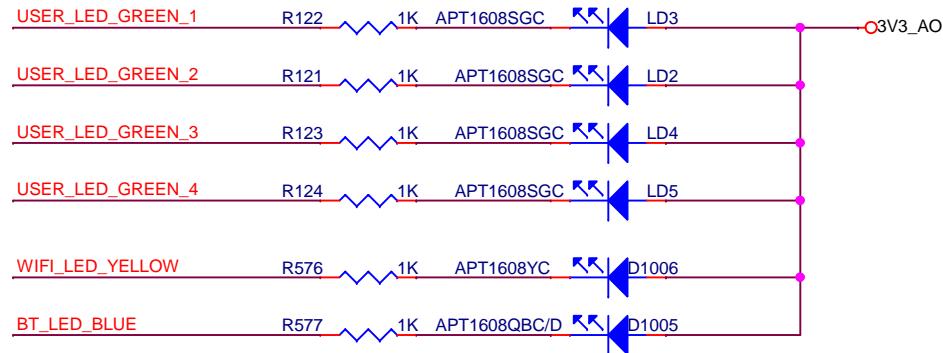
A

STiH407_HDK



SBC

USER LED



Board Title B2260B STiH410_HDK

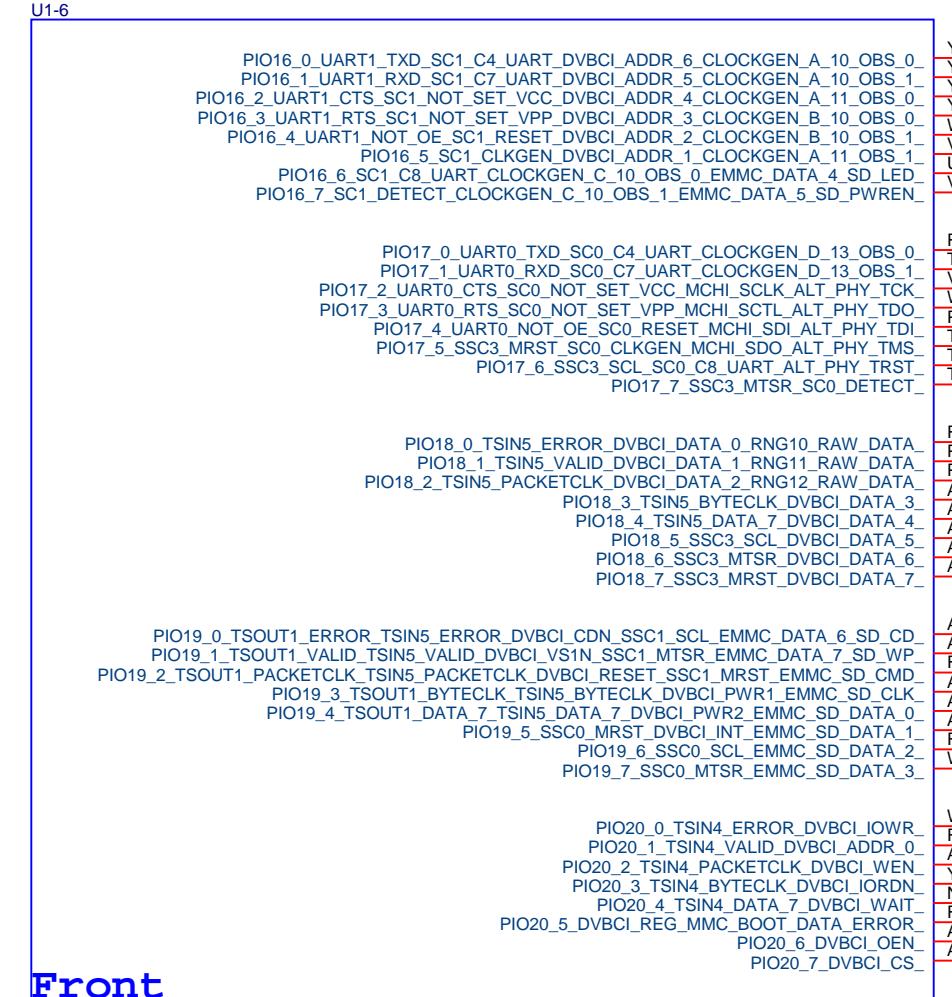
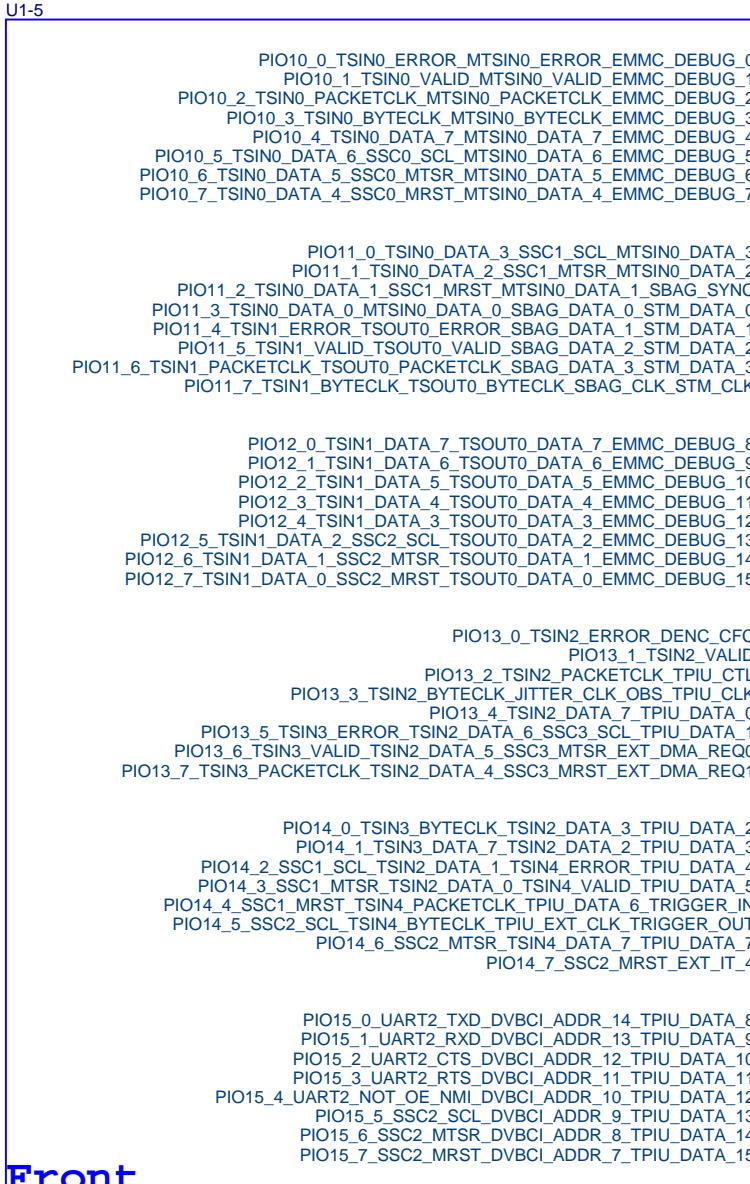
Sheet Title 13_PIO0_TO_PIO5_SBC

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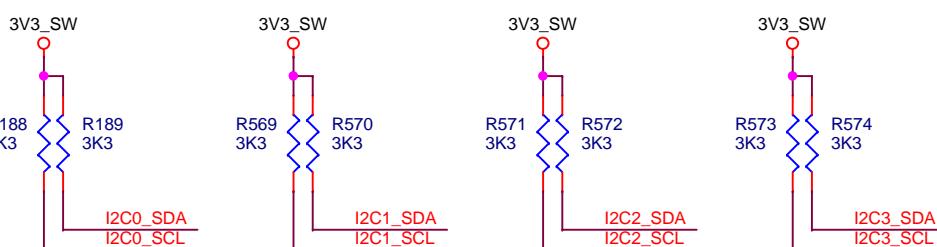
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CPU_GPIO_BANK[20:10]



I2C PULL-UP



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Sheet Title 14_PIO10_TO_PIO20

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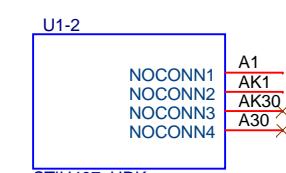
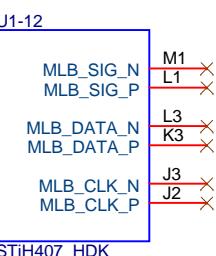
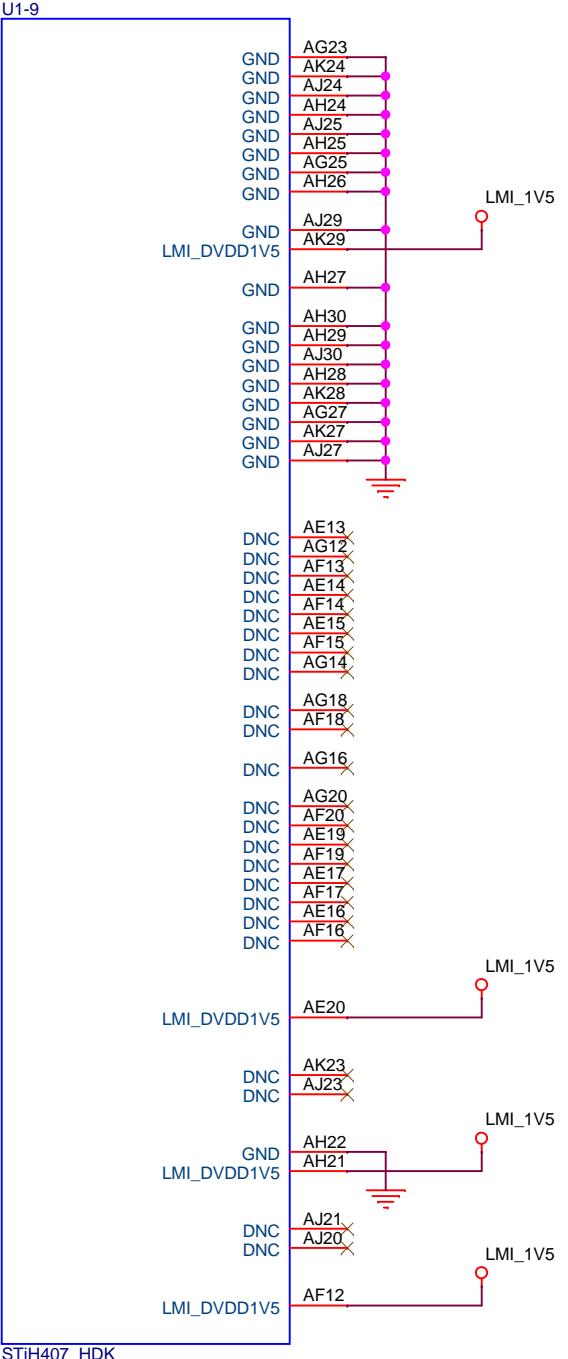
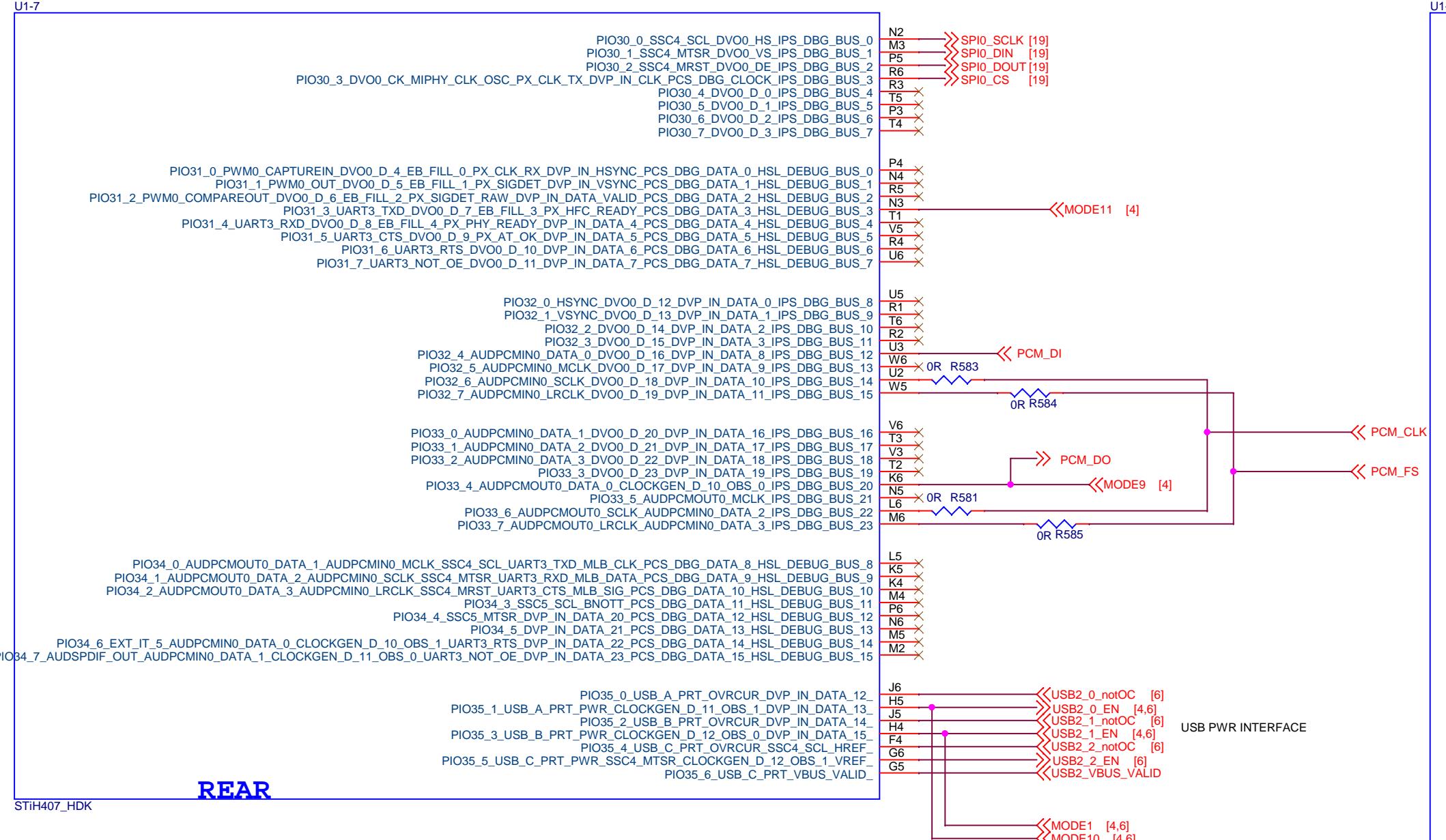
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CPU_GPIO_BANK[35:30]



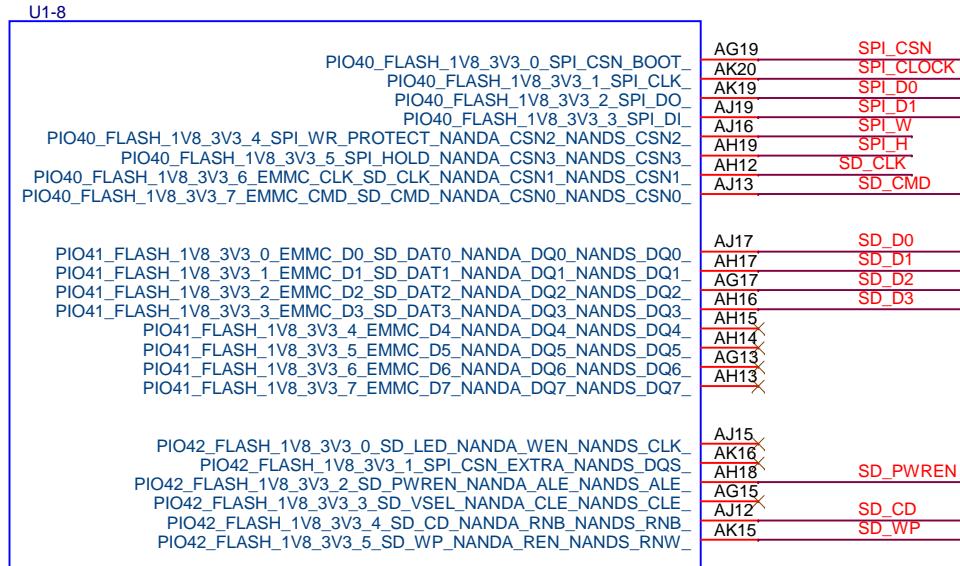
Board Title B2260B STiH410_HDK

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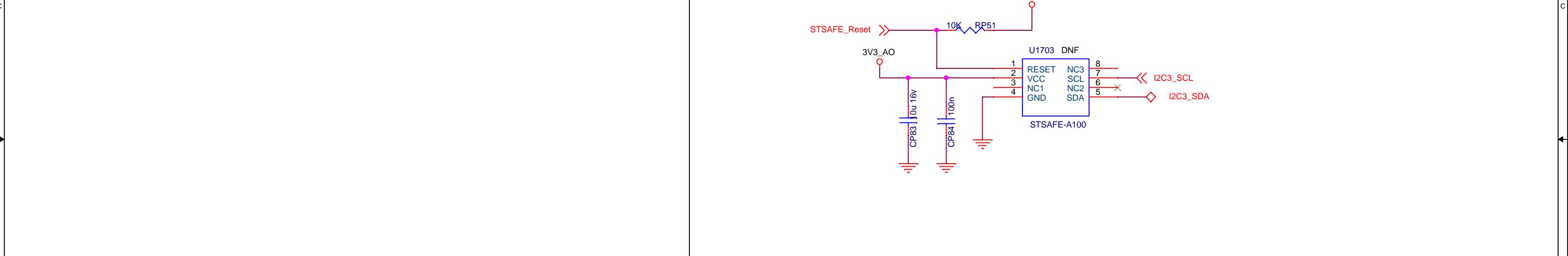
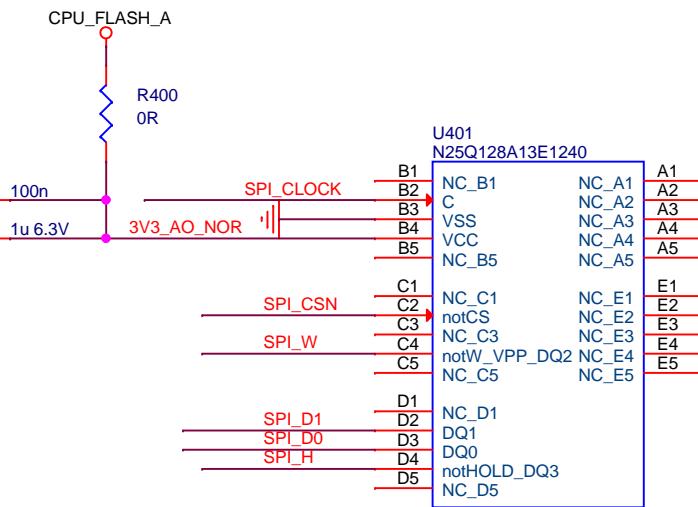
Sheet Title 15 PIO30 TO PIO35

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CPU_MEMORY_INTERFACE



SPI_NOR_INTERFACE



ESD Protection for SD, should be place closed to SD connector



Board Title B2260B STiH410_HDK

Sheet Title Memory_Security

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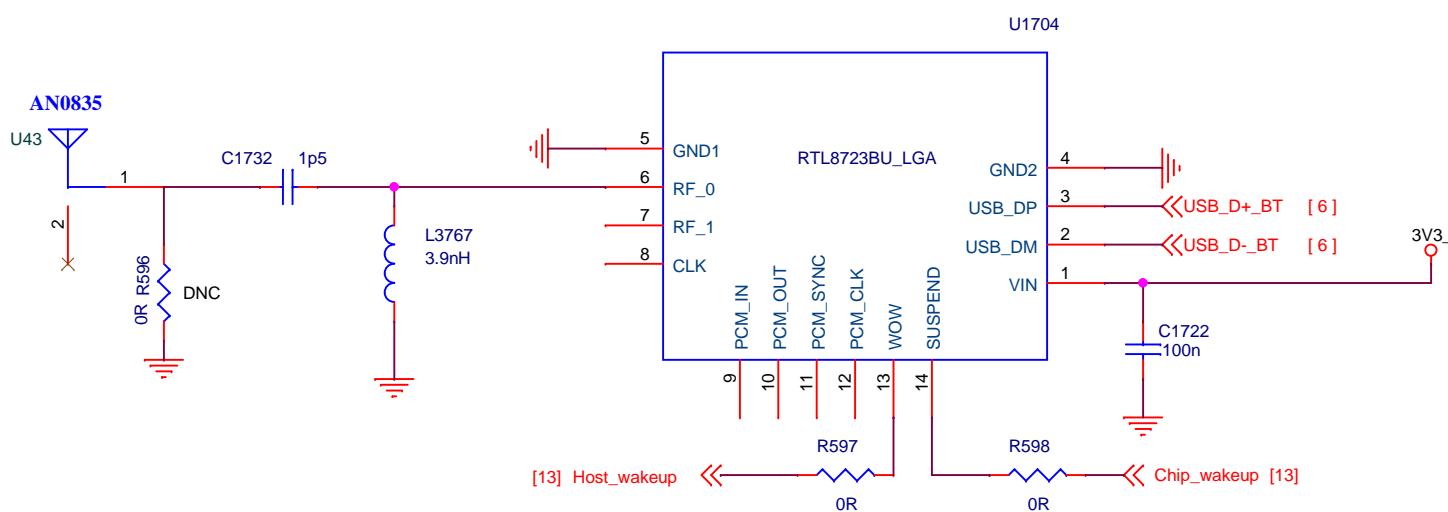
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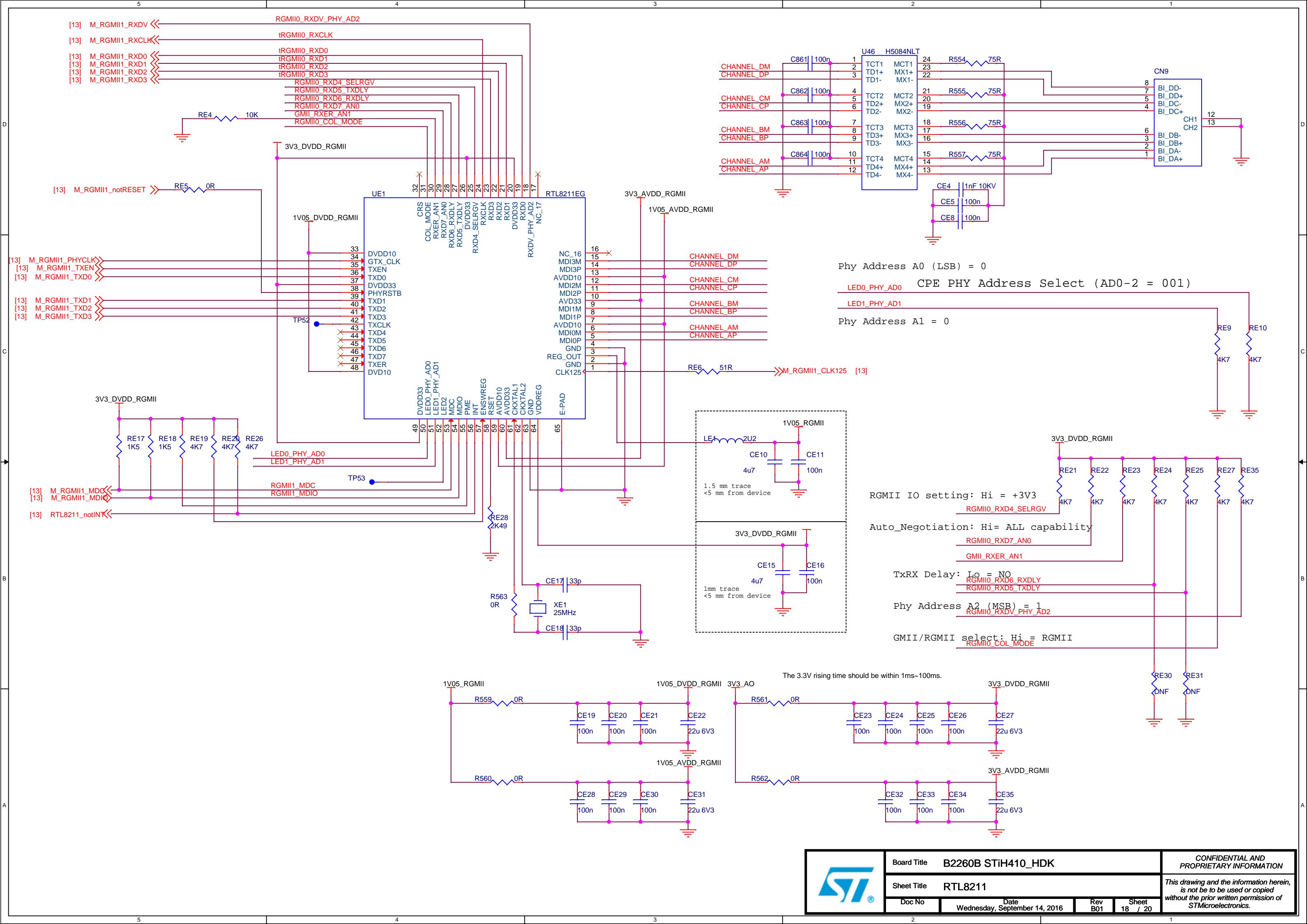
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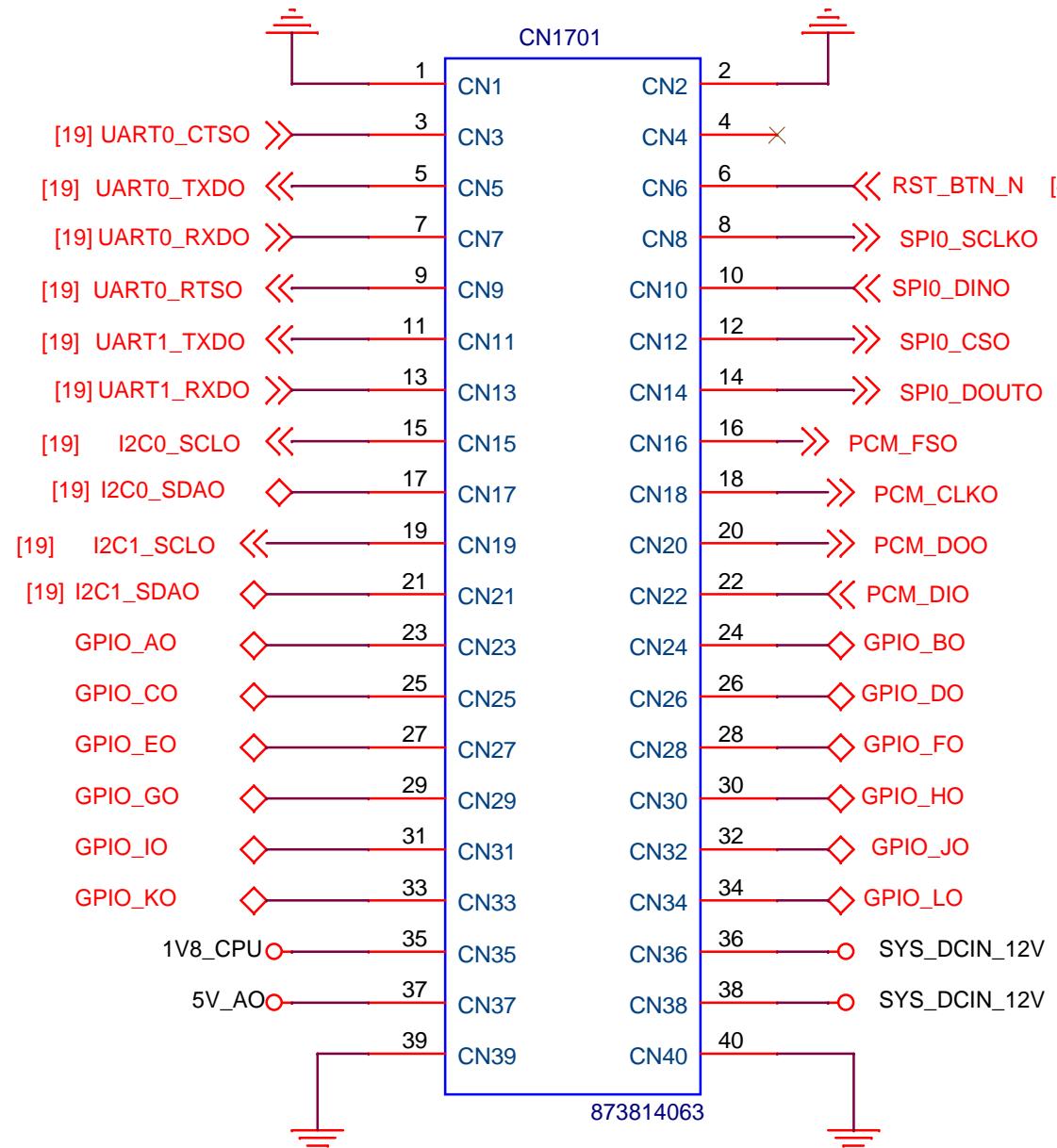
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WIFI / BT INTERFACE

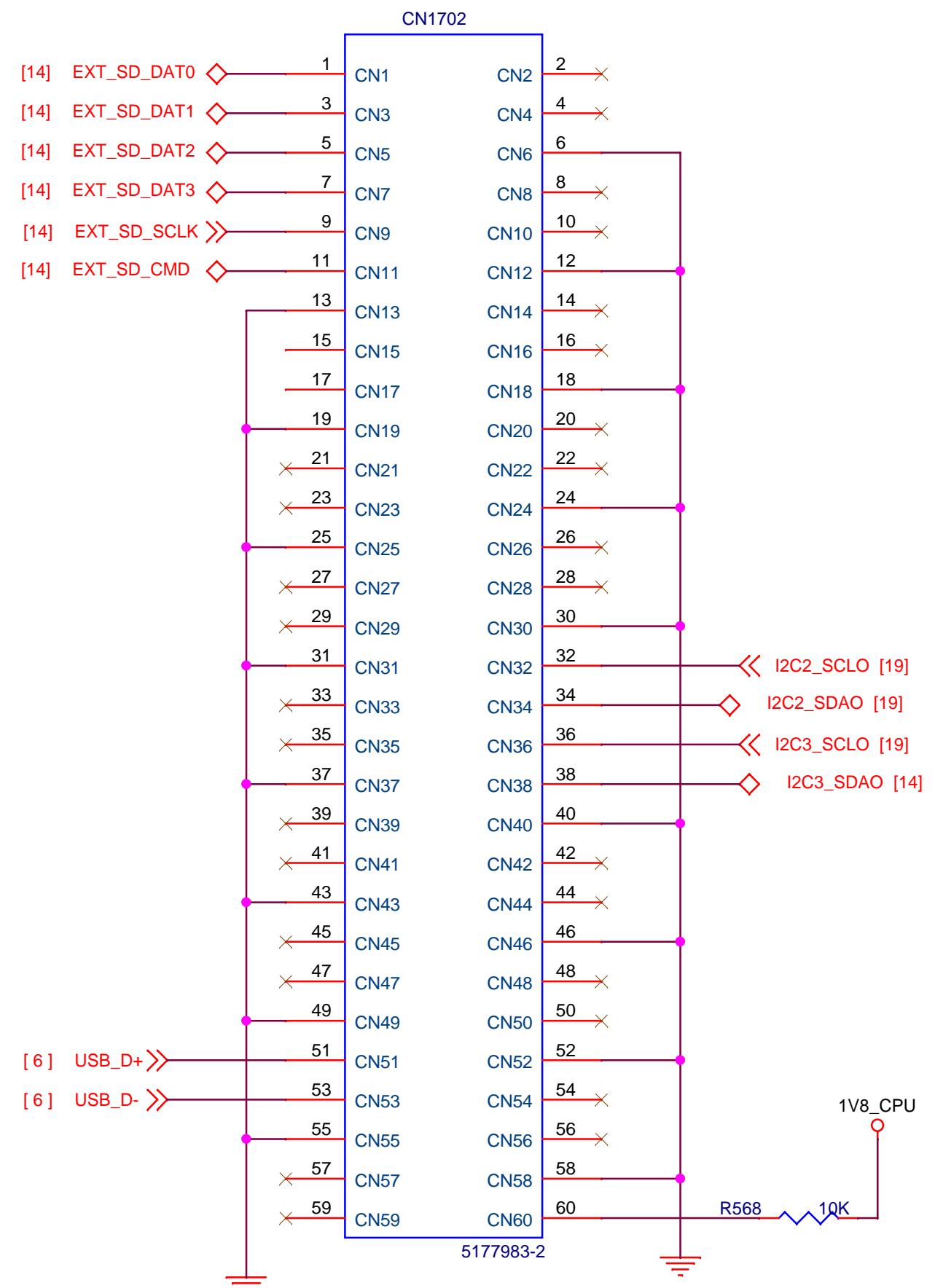




LOW SPEED EXPANSION CONNECTOR



HIGH SPEED EXPANSION CONNECTOR



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Sheet Title 20_EXPANSION_CONNECTOR

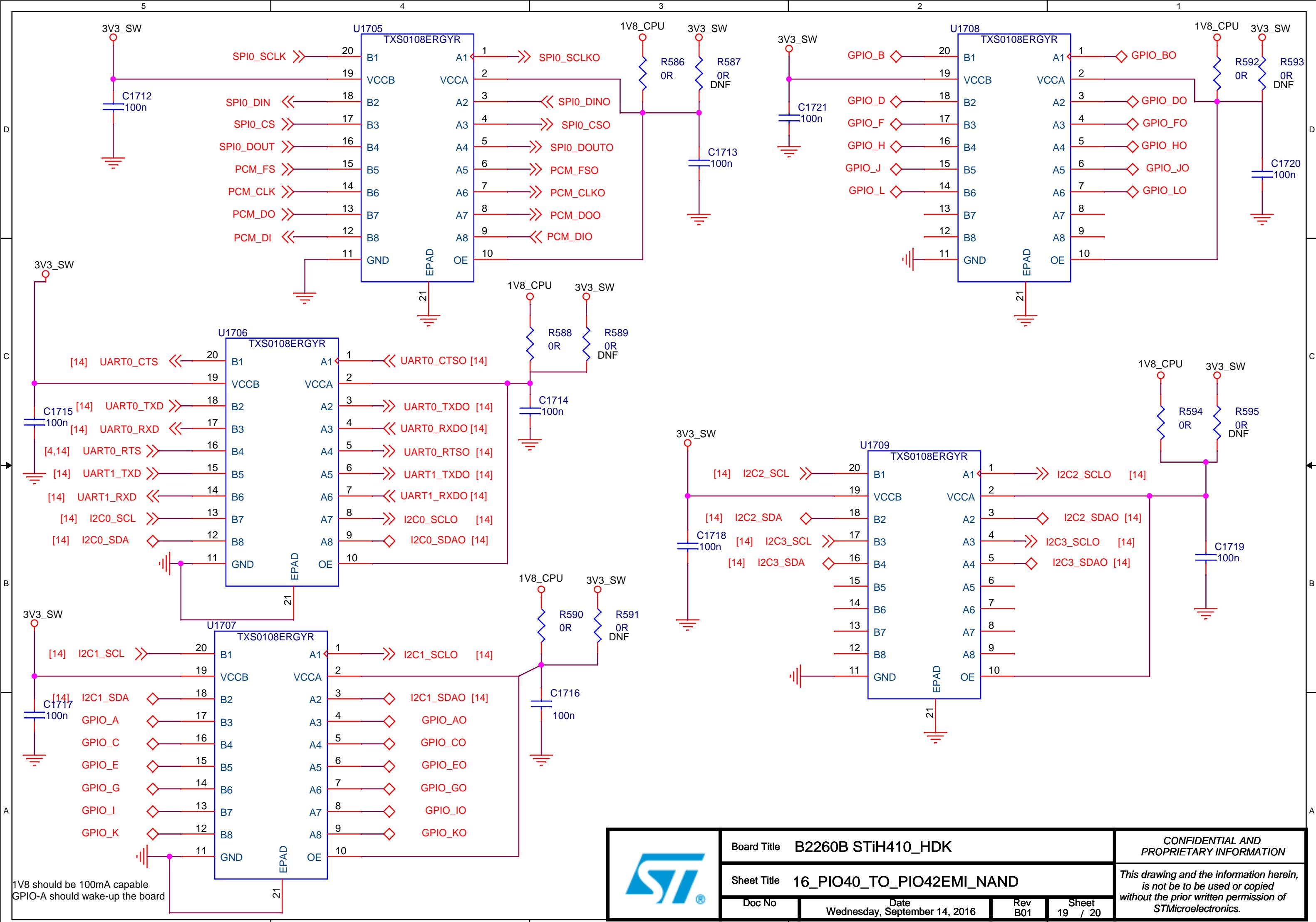
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1V8 should be 100mA capable

GPIO-A should wake-up the board

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