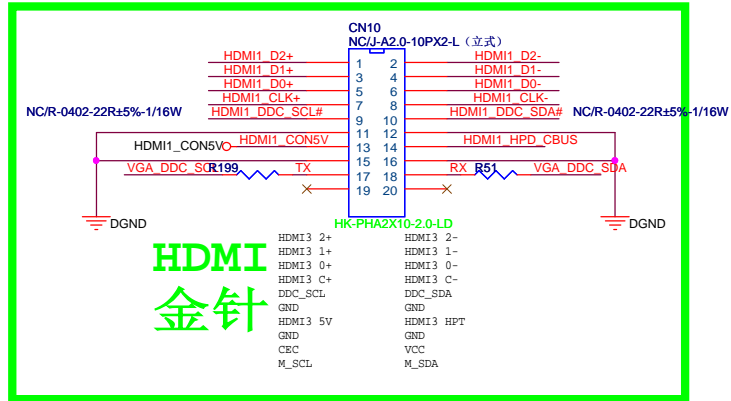
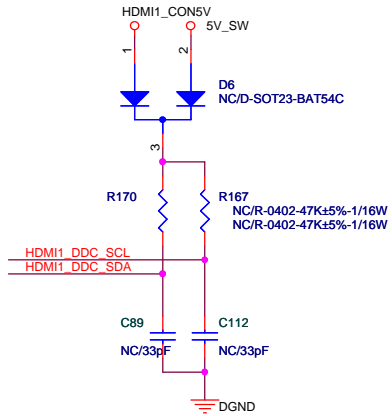


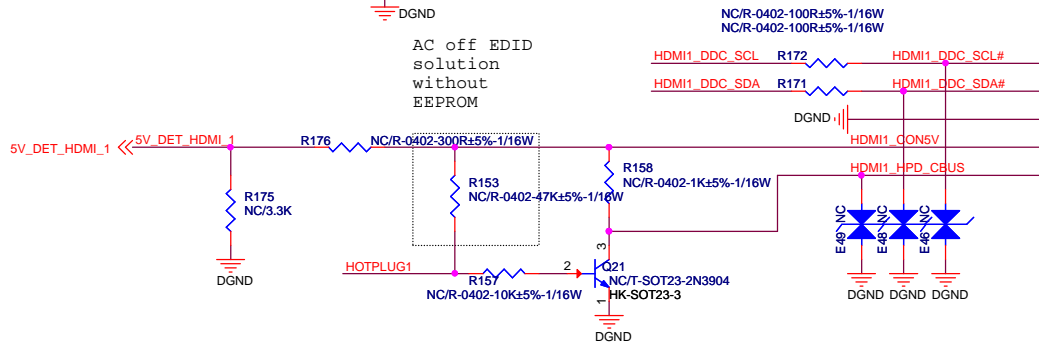
Title		
<Title>		
Size	Document Number	Rev
B	<Doc>	<Rev Code>
Date:	Friday, January 12, 2018	Sheet 1 of 1

HDMI1\_D2+ << HDMI1\_D2+  
 HDMI1\_D2- << HDMI1\_D2-  
 HDMI1\_D1+ << HDMI1\_D1+  
 HDMI1\_D1- << HDMI1\_D1-  
 HDMI1\_D0+ << HDMI1\_D0+  
 HDMI1\_D0- << HDMI1\_D0-  
 HDMI1\_CLK+ << HDMI1\_CLK+  
 HDMI1\_CLK- << HDMI1\_CLK-  
 HDMI1\_DDC\_SCL << HDMI1\_DDC\_SCL  
 HDMI1\_DDC\_SDA << HDMI1\_DDC\_SDA  
 HOTPLUG1 << HOTPLUG1  
 5V\_DET\_HDMI\_1 << 5V\_DET\_HDMI\_1

[3] VGA\_DDC\_SDA << VGA\_DDC\_SDA  
 [3] VGA\_DDC\_SCL << VGA\_DDC\_SCL



HDMI  
金针



AC off EDID  
solution  
without  
EEPROM

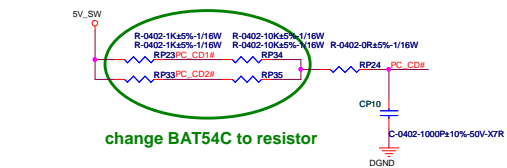
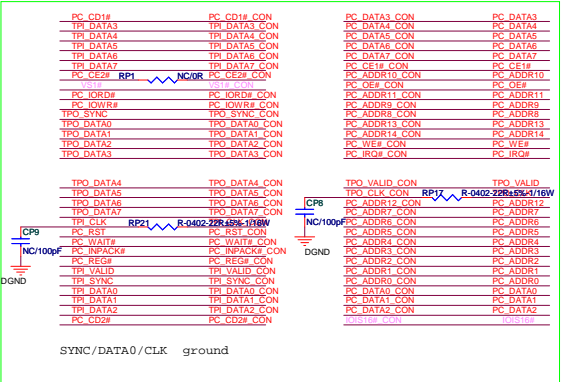
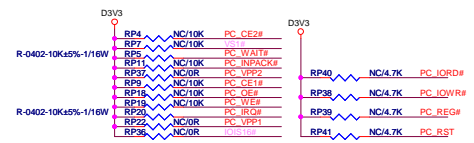
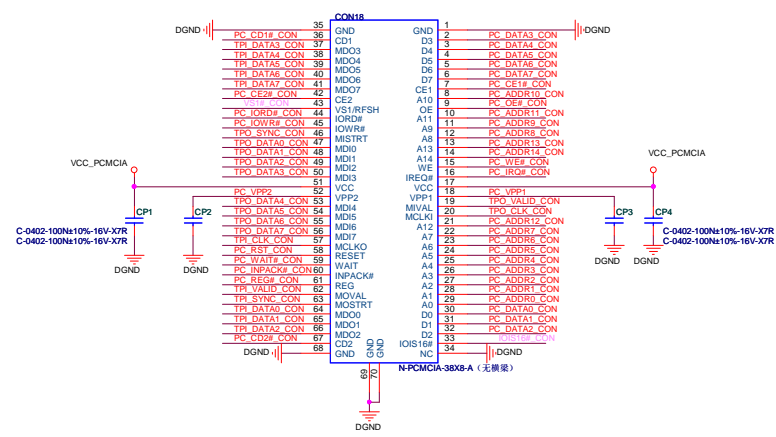
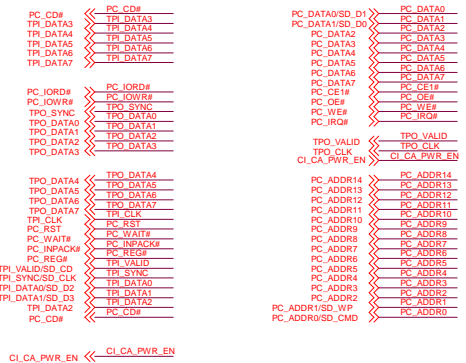
Make on board  
HDMI1

Title		
<Title>		
Size	Document Number	Rev
B	<Doc>	<Rev Code>
Date:	Saturday, January 06, 2018	Sheet 1 of 1



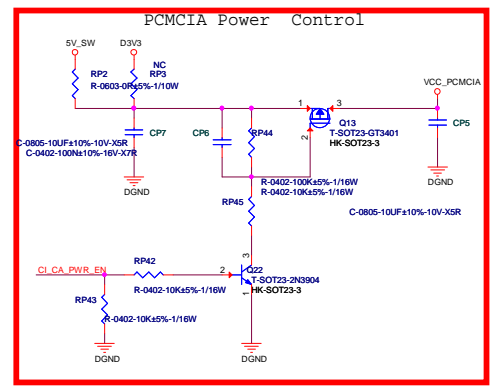
Mark on board  
PC CARD

TPO : From Scalar (From demod for Europe)  
TPI : To Scalar  
PC : To Scalar

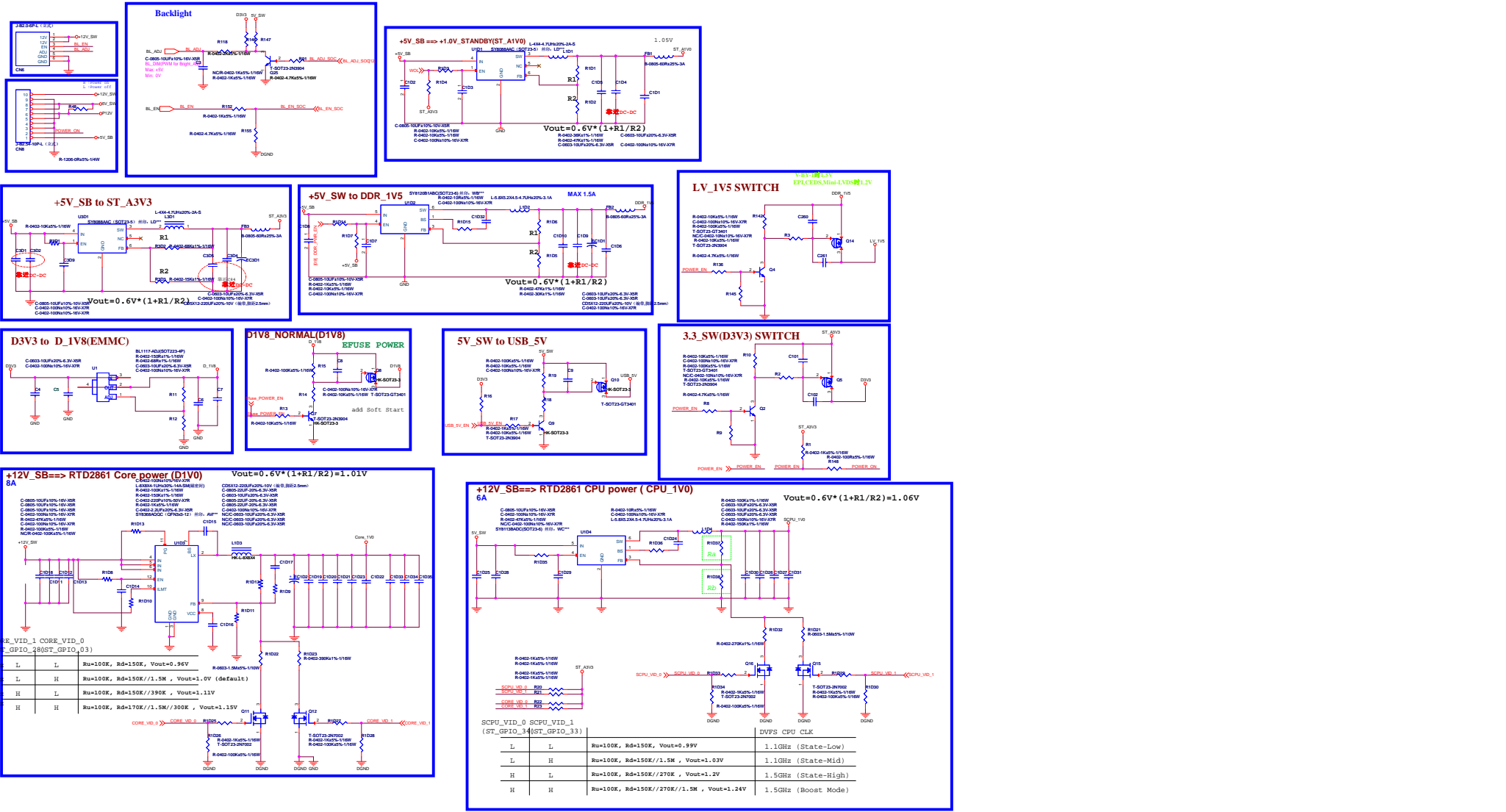


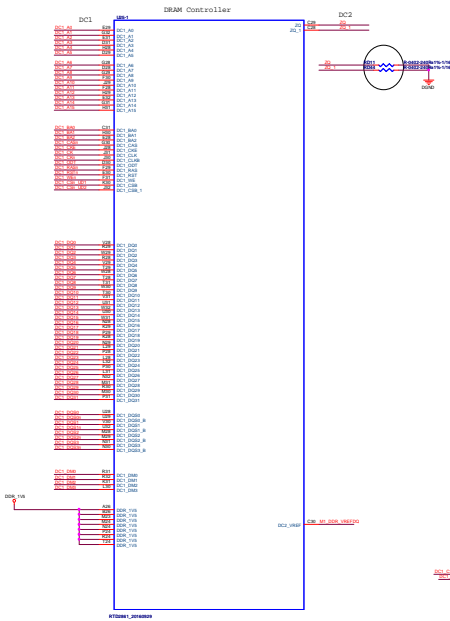
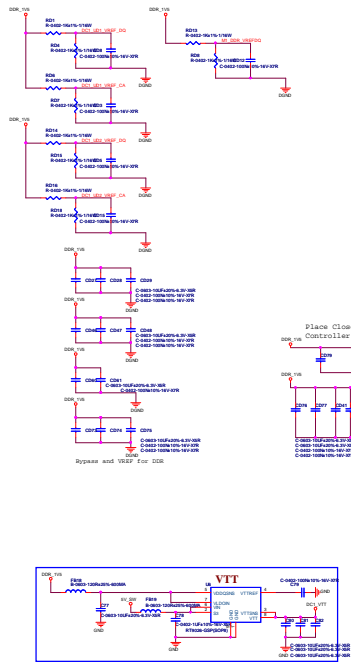
change BAT54C to resistor

PC_CD1#	PC_CD2#	PC_CD#
GND	GND	0V
GND	NC	2.38V
NC	GND	2.38V
NC	NC	5V

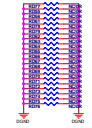
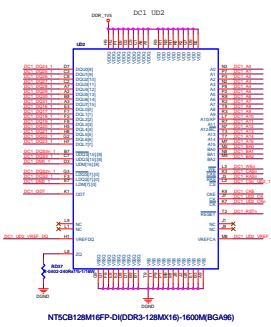
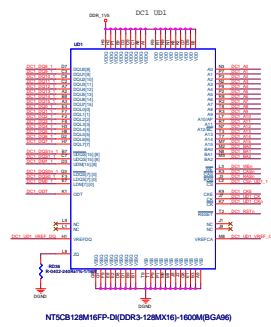
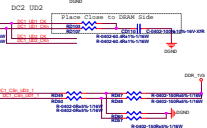
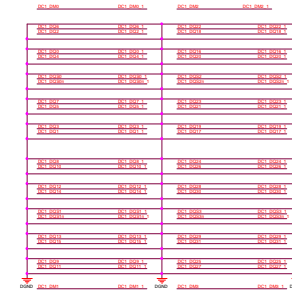
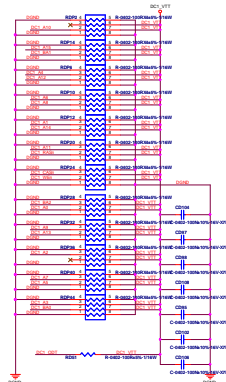


Title	<Title>
Size	<Document Number>
Rev	<Rev Code>
Date	Saturday, January 05, 2018
Sheet	1 of 1





T-Branch Termination For DC1

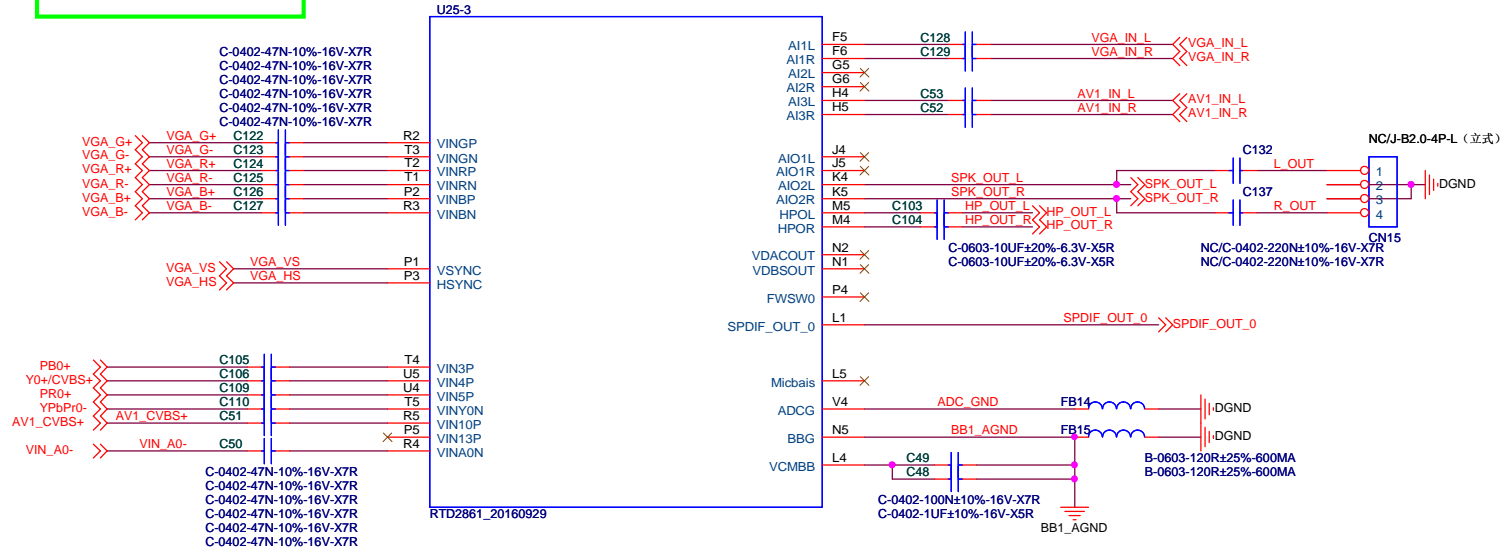




**From Main Chip**

Y0+/CVBS+ << Y0+/CVBS+  
 PB0+ << PB0+  
 PR0+ << PR0+  
 YPbPr0- << YPbPr0-

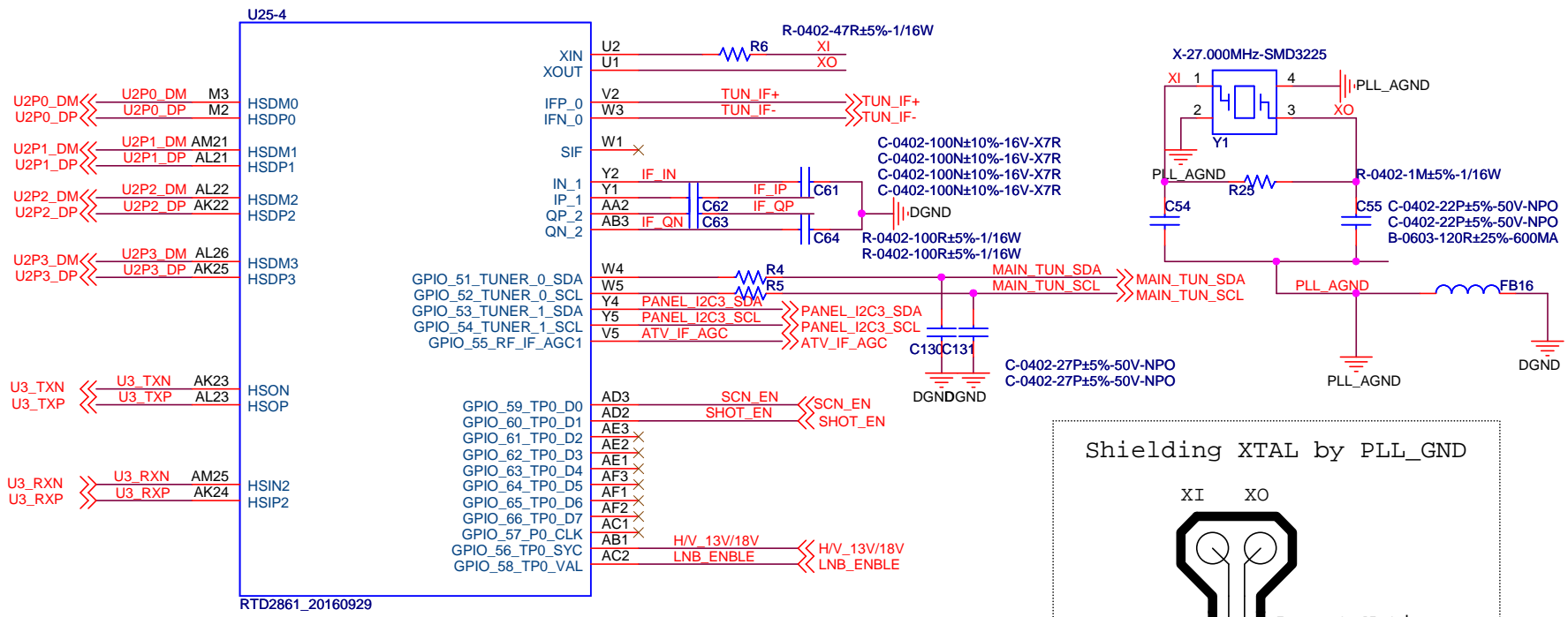
C-0402-2.2UF±20%-6.3V-X5R  
 C-0402-2.2UF±20%-6.3V-X5R  
 C-0402-2.2UF±20%-6.3V-X5R  
 C-0402-2.2UF±20%-6.3V-X5R



Title		
RTD29xx Demo Board		
Size	Document Number	Rev
B	CHIP-RGB/AV/Audio	1.0
Date:	Monday, November 27, 2017	Sheet 5 of 31



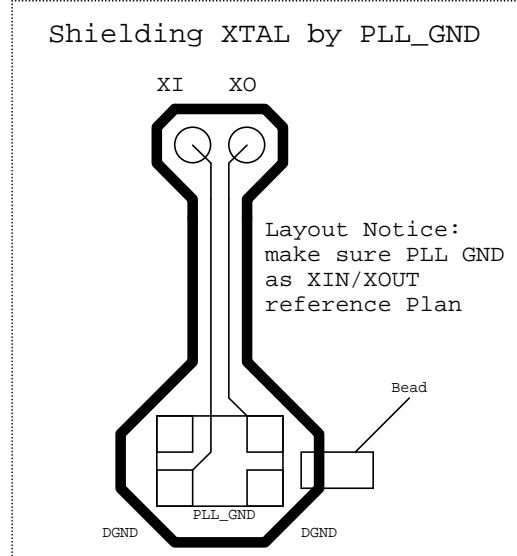
[22] IF\_QP << IF\_QP  
 [22] IF\_IP << IF\_IP



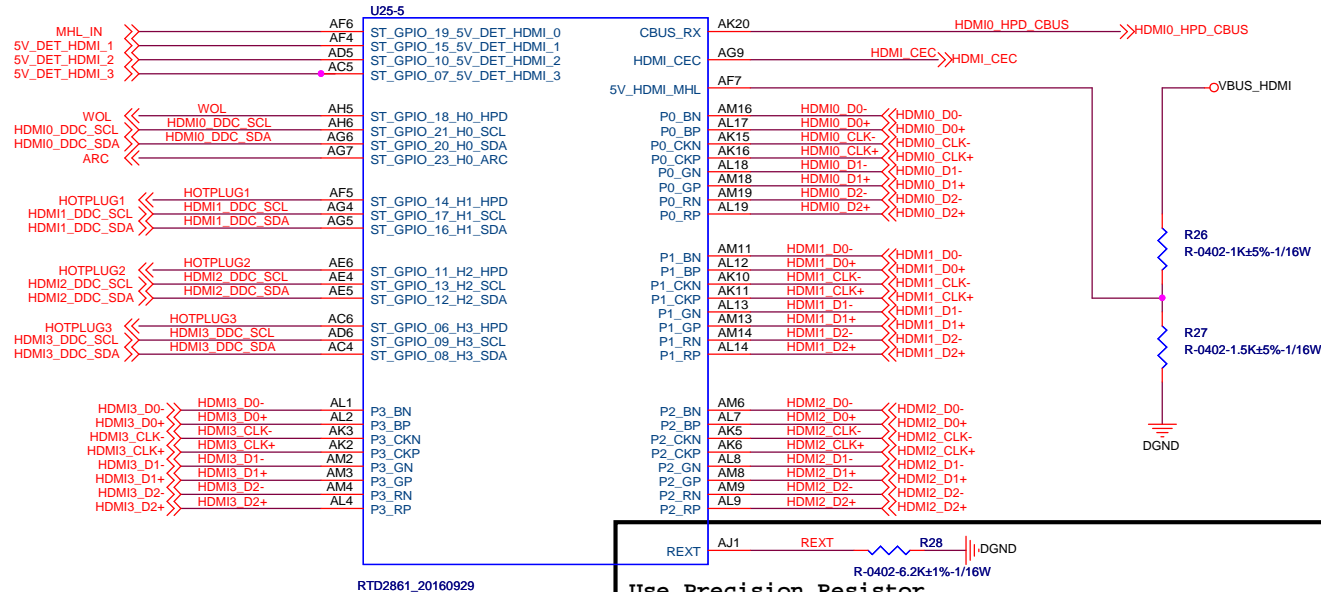
GPIO\_51\_TUNER\_0\_SDA  
 GPIO\_52\_TUNER\_0\_SCL  
 GPIO\_53\_TUNER\_1\_SDA  
 GPIO\_54\_TUNER\_1\_SCL  
 GPIO\_55\_RF\_IF\_AGC1

GPIO\_59\_TP0\_D0  
 GPIO\_60\_TP0\_D1  
 GPIO\_61\_TP0\_D2  
 GPIO\_62\_TP0\_D3  
 GPIO\_63\_TP0\_D4  
 GPIO\_64\_TP0\_D5  
 GPIO\_65\_TP0\_D6  
 GPIO\_66\_TP0\_D7  
 GPIO\_57\_P0\_CLK  
 GPIO\_56\_TP0\_SYC  
 GPIO\_58\_TP0\_VAL

FOR BOE 4K miniLVDS  
 GPIO\_56 -> TCON\_5 -> POL2  
 GPIO\_70 -> TCON\_15 -> POL1  
 GPIO\_63 -> TCON\_36 -> TP1  
 GPIO\_57 -> TCON\_29 -> STV1  
 GPIO\_60 -> TCON\_26 -> CPV1  
 GPIO\_58 -> TCON\_21 -> OE1  
 GPIO\_62 -> TCON\_33 -> XAO  
 GPIO\_00 -> TCON\_0 -> STV2  
 GPIO\_01 -> TCON\_10 -> OE2  
 GPIO\_02 -> TCON\_20 -> TP2



Title		
RTD29xx Demo Board		
Size	Document Number	Rev
A4	CHIP-USB/IFD	
Date:	Tuesday, December 26, 2017	Sheet 6 of 31

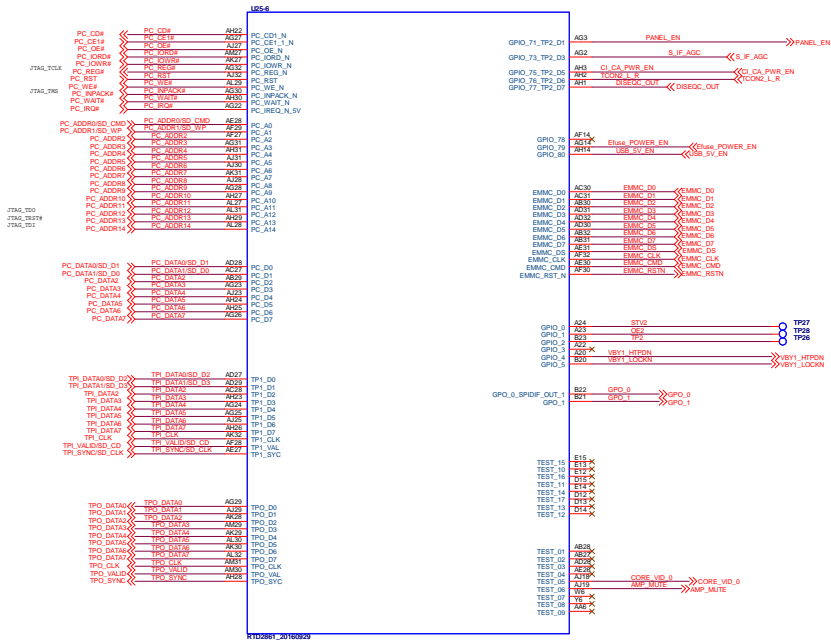
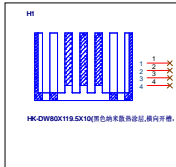
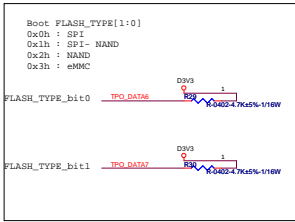


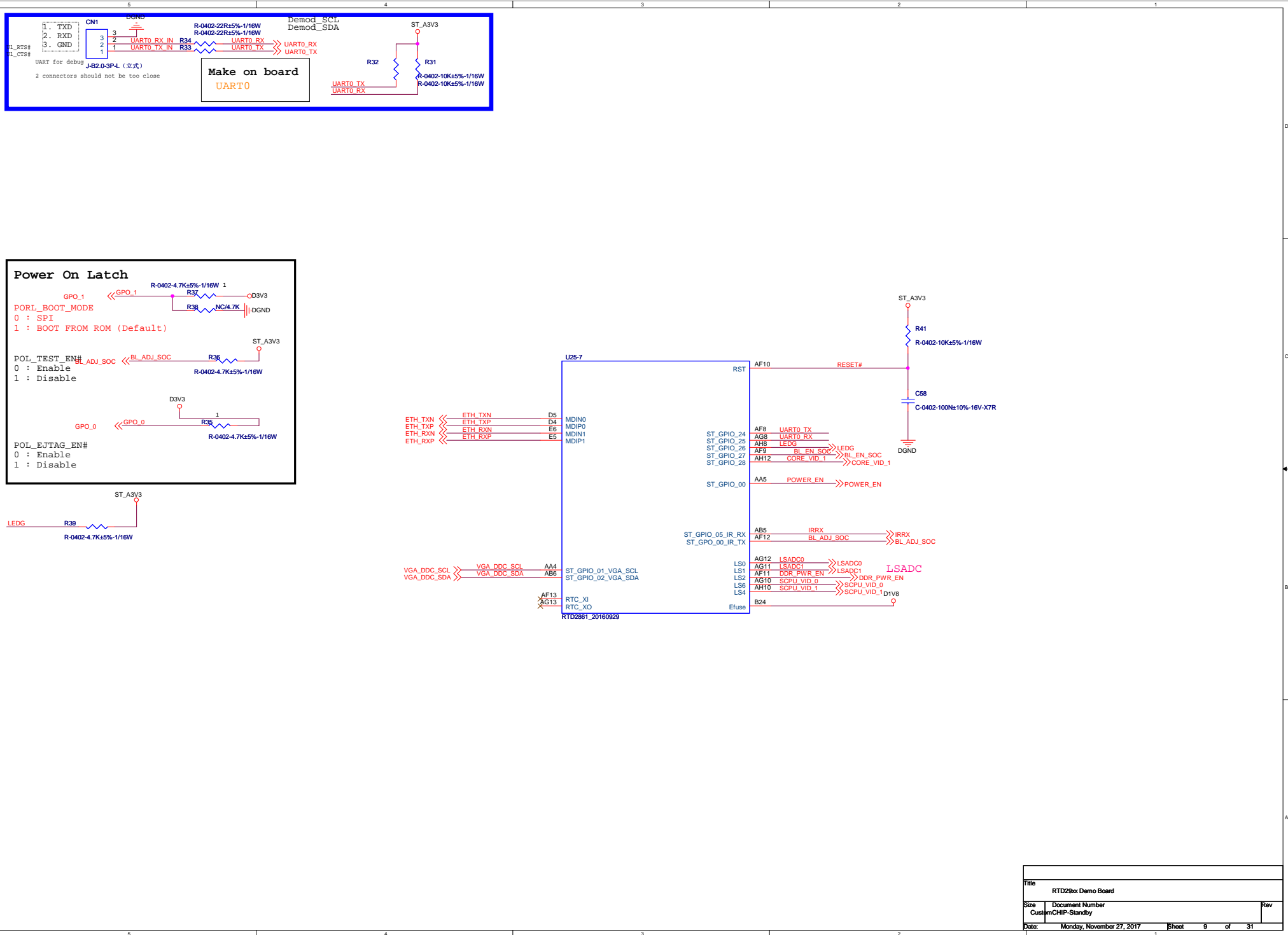
REXT AJ1 REXT R28 DGND  
R-0402-6.2K±1%-1/16W

**Use Precision Resistor  
6.2K ohm close to the SOC and GNDshielding the Ball AJ1 trace.**

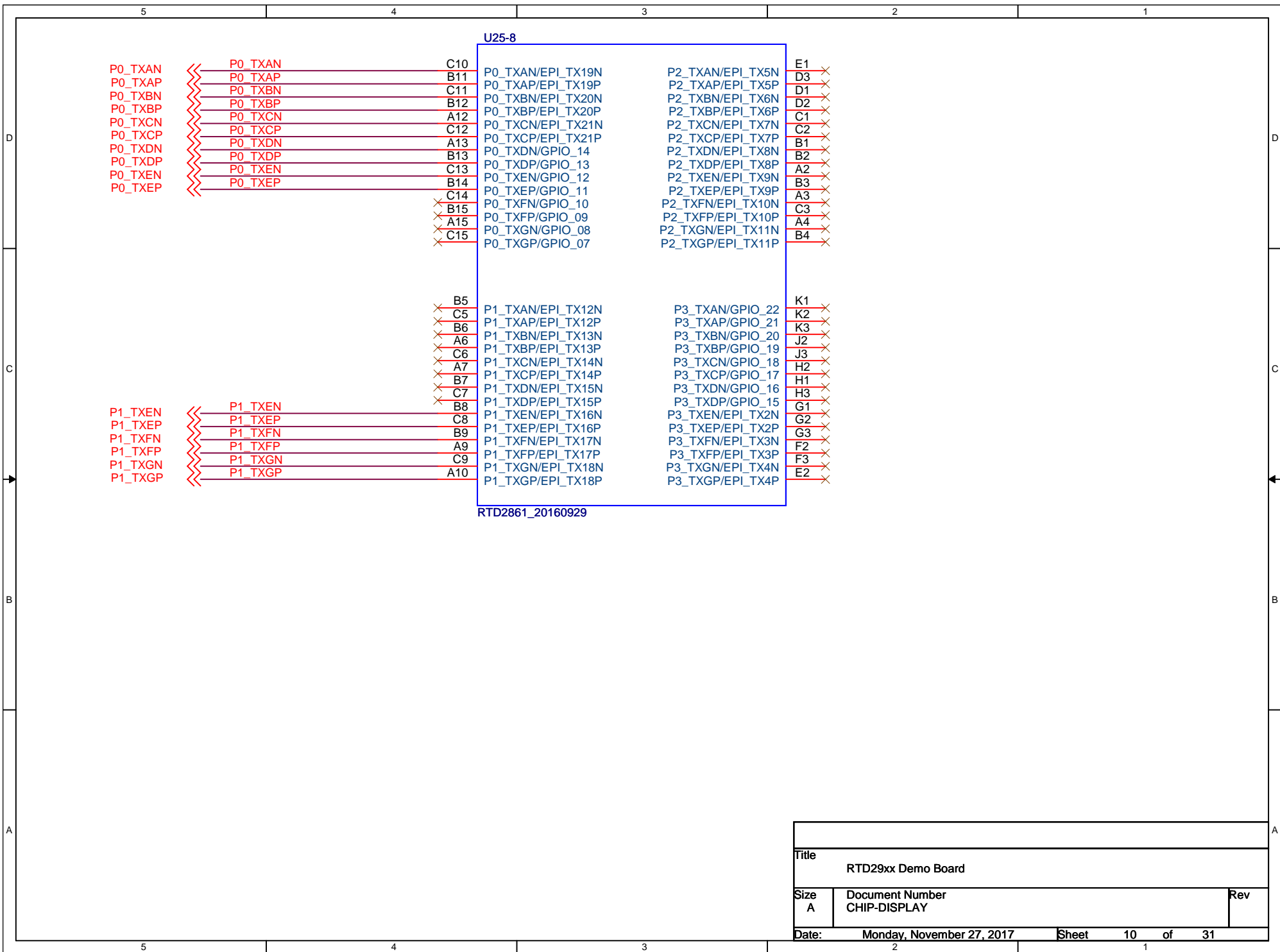
DGND

Title		
RTD29xx Demo Board		
Size	Document Number	Rev
B	CHIP-HDMI	
Date:	Monday, November 27, 2017	Sheet 7 of 31

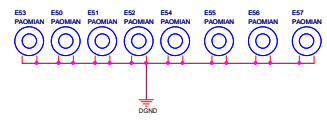
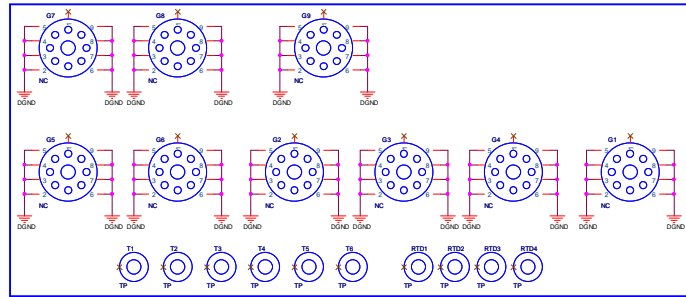
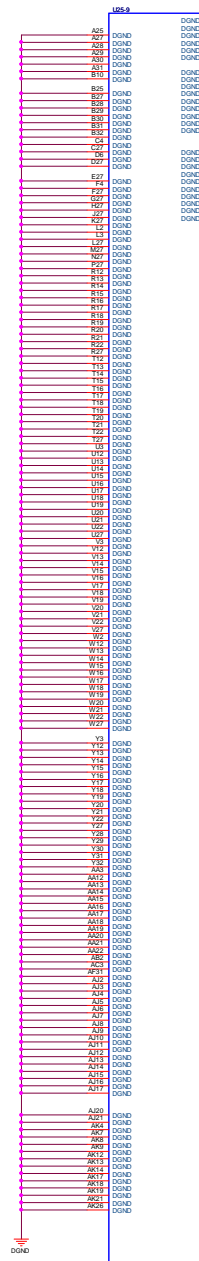




Title		
RTD2861 Demo Board		
Size	Document Number	Rev
Custom	CHIP-Standby	
Date:	Monday, November 27, 2017	Sheet 9 of 31



Title		
RTD29xx Demo Board		
Size	Document Number	Rev
A	CHIP-DISPLAY	
Date:	Monday, November 27, 2017	Sheet 10 of 31

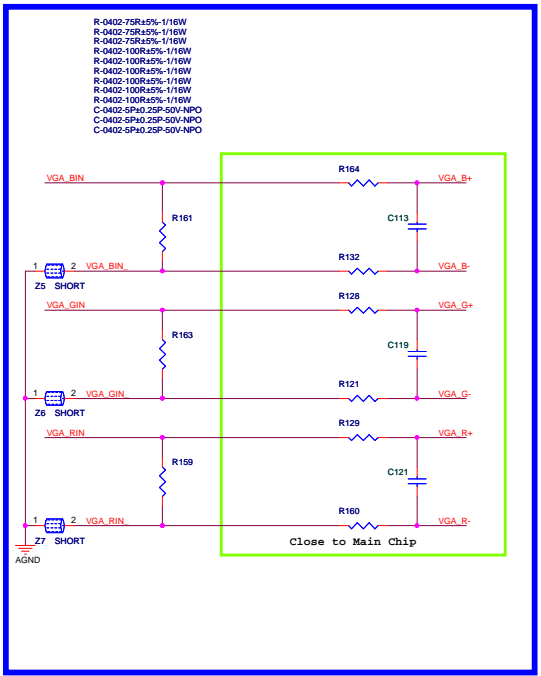
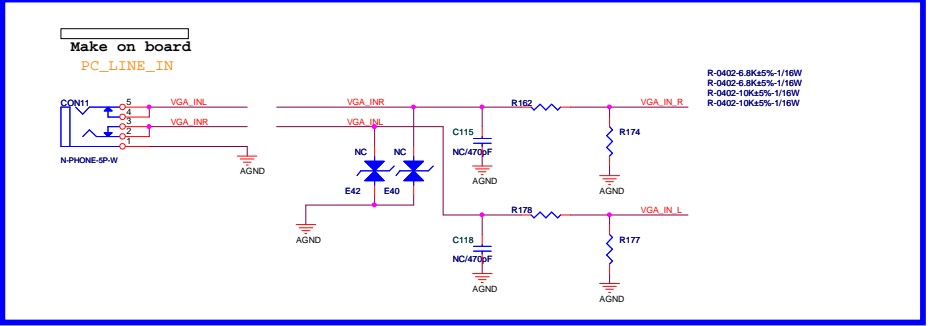
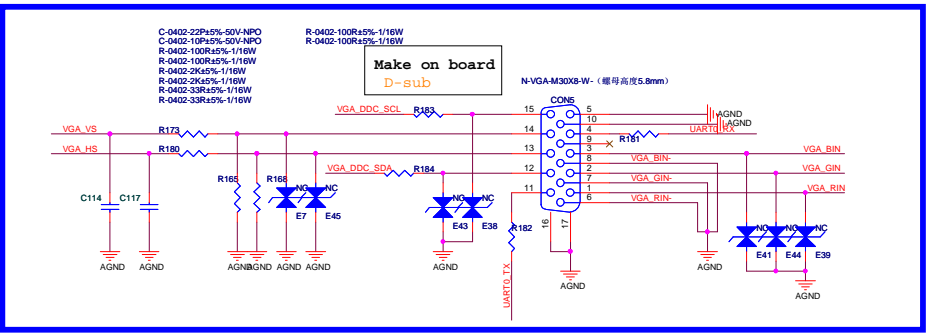
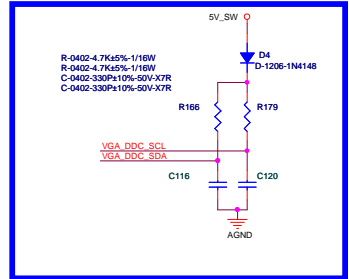


File	RTD000 Demo Board
Sheet	11 of 31
Revision	1
Date	Monday, November 22, 2017



**From Main Chip**

- [3] VGA\_B+ <-> VGA\_B+
- [3] VGA\_B- <-> VGA\_B-
- [3] VGA\_G+ <-> VGA\_G+
- [3] VGA\_G- <-> VGA\_G-
- [3] VGA\_R+ <-> VGA\_R+
- [3] VGA\_R- <-> VGA\_R-
- [3] VGA\_HS <-> VGA\_HS
- [3] VGA\_VS <-> VGA\_VS
- [3,5] VGA\_DDC\_SCL <-> VGA\_DDC\_SCL
- [3,5] VGA\_DDC\_SDA <-> VGA\_DDC\_SDA
- [3] VGA\_IN\_L <-> VGA\_IN\_L
- [3] VGA\_IN\_R <-> VGA\_IN\_R
- [3] UART0\_RX <-> UART0\_RX
- [3] UART0\_TX <-> UART0\_TX

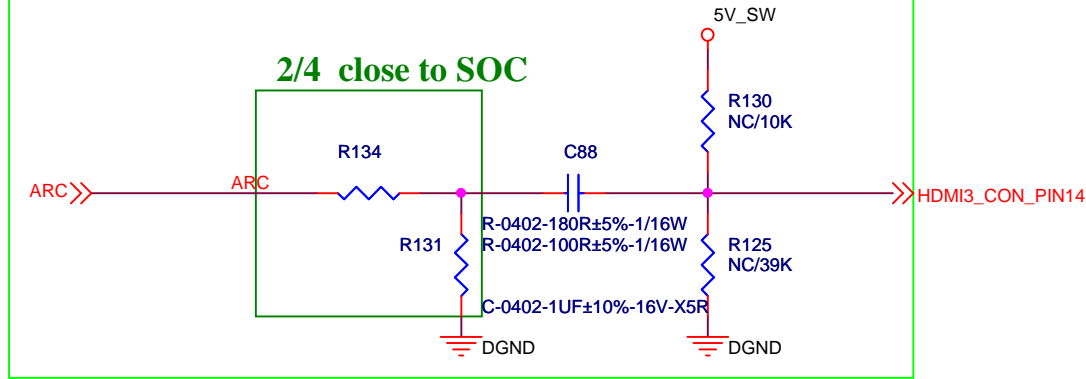


Title		
RTD290 Demo Board		
Size	Document Number	Rev
C	AV00/AUD_OUT	1.0
Date:	Saturday, January 06, 2018	Sheet 13 of 31



# SPDIF\_0 one signal for two ball out

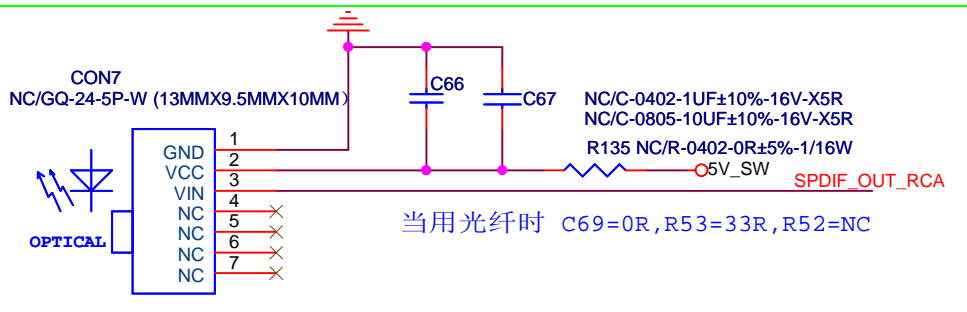
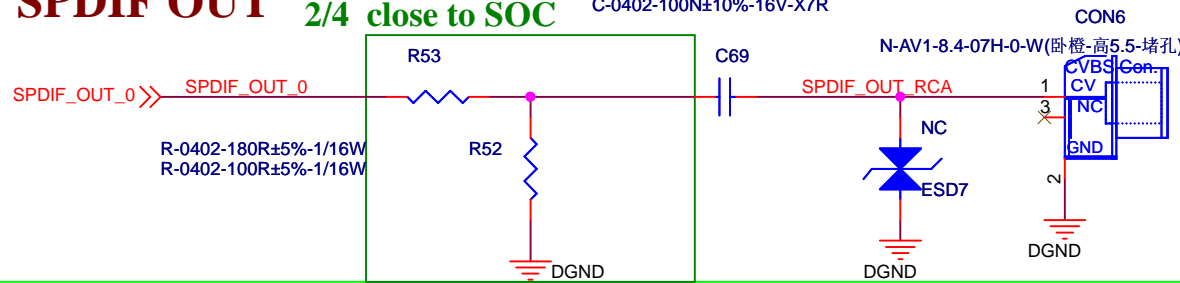
## HDMI 1.4 ARC Fun.



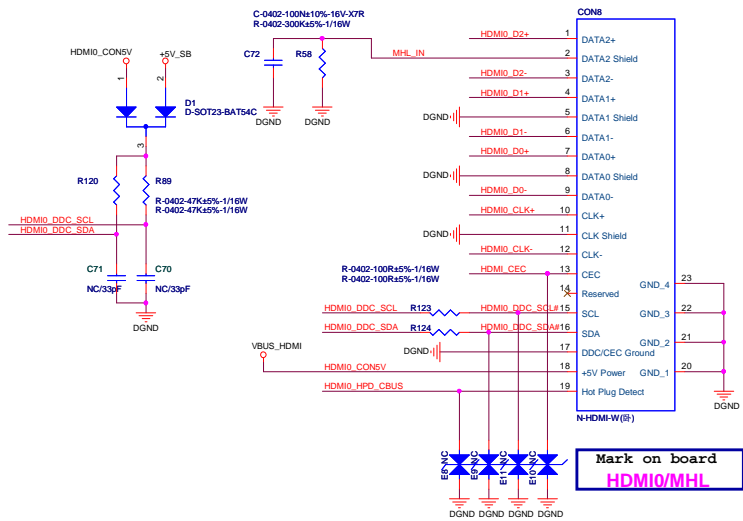
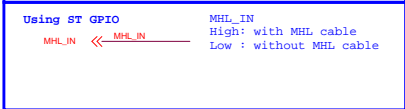
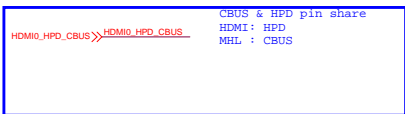
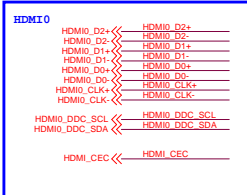
## SPDIF OUT

2/4 close to SOC

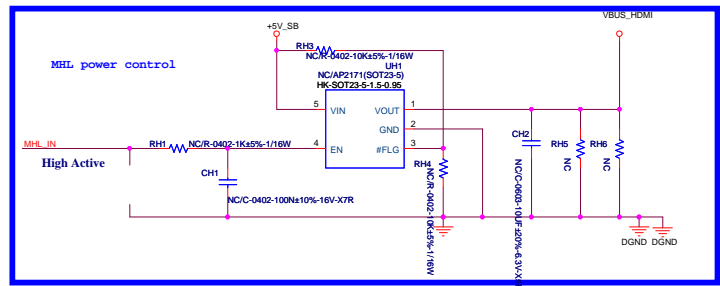
C-0402-100N±10%-16V-X7R



Title		
RTD29xx Demo Board		
Size	Document Number	Rev
A	CHIP-SPDIF OUT	1.0
Date:	Saturday, January 06, 2018	Sheet 14 of 31



Mark on board  
**HDMI0/MHL**



**MHL Impedance (D0+/D0-)**

Differential mode = 100R ± 15%  
Common mode = 30R ± 6R

**2-Layer PCB**

GND	4mil	D0+	4mil	GND	4mil	D0-	4mil	GND
>10mil		12mil		5mil		12mil		>10mil

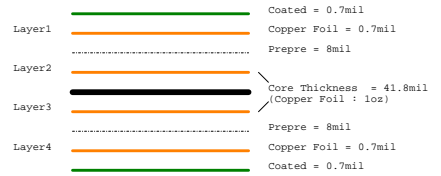
**2-Layer PCB stack**



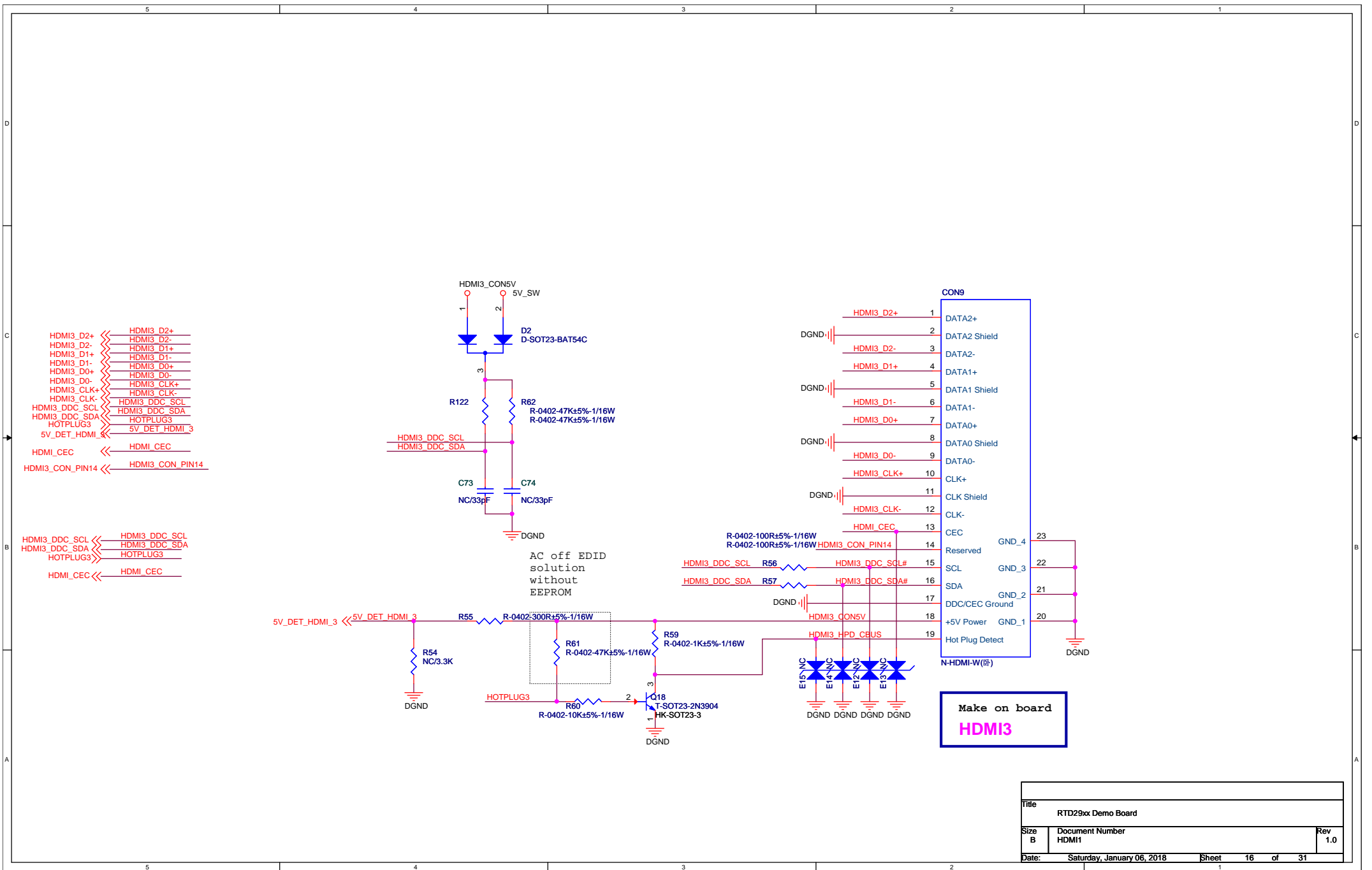
**4-Layer PCB**

GND	8mil	D0+	7mil	D0-	8mil	GND		
>10mil		5mil		5mil		>10mil		

**4-Layer PCB stack**

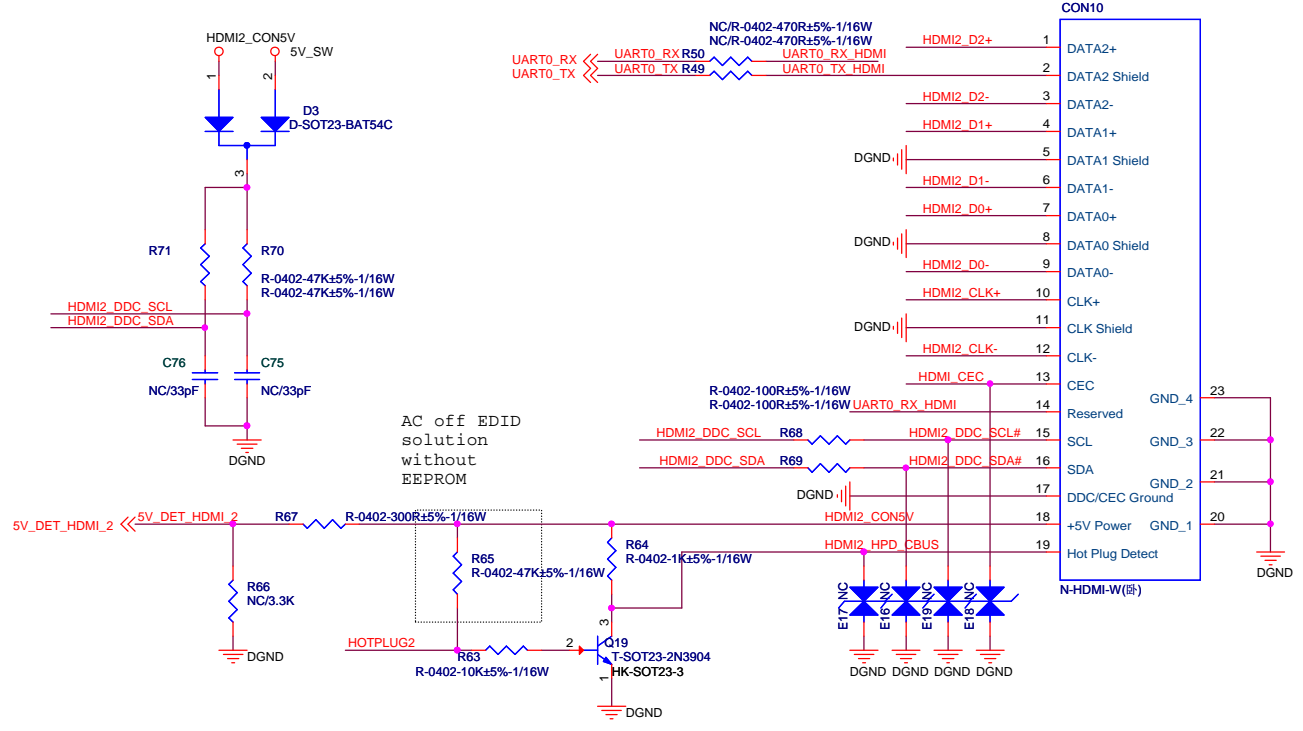


Title	RTD290 Demo Board		
Size	Document Number	Rev	1.0
C	HDMI0/MHL		
Date:	Saturday, January 06, 2018	Sheet	16 of 31

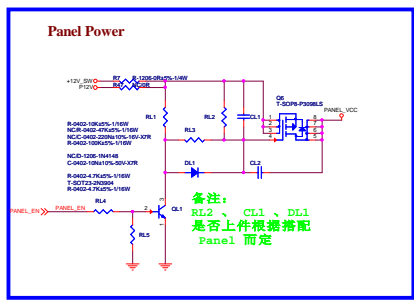
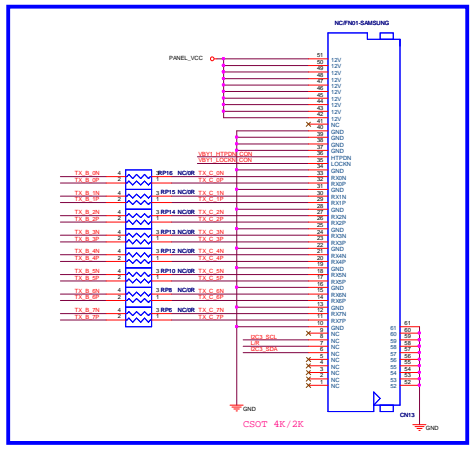
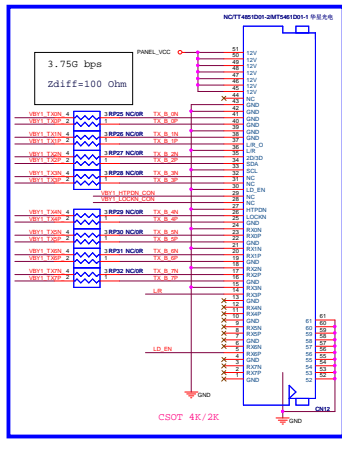
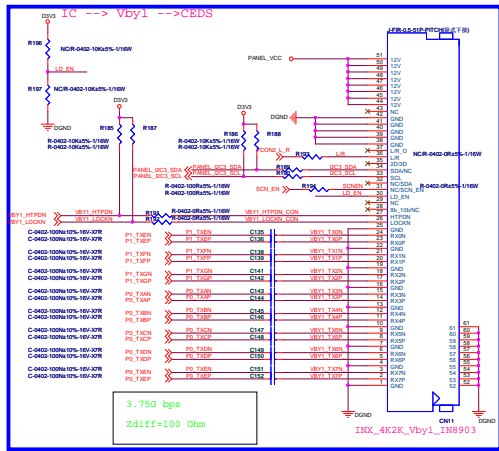


Title		
RTD29xx Demo Board		
Size	Document Number	Rev
B	HDMI1	1.0
Date:	Saturday, January 06, 2018	Sheet 16 of 31

HDMI2	
HDMI2_D2+	HDMI2_D2+
HDMI2_D2-	HDMI2_D2-
HDMI2_D1+	HDMI2_D1+
HDMI2_D1-	HDMI2_D1-
HDMI2_D0+	HDMI2_D0+
HDMI2_D0-	HDMI2_D0-
HDMI2_CLK+	HDMI2_CLK+
HDMI2_CLK-	HDMI2_CLK-
HDMI2_DDC_SCL	HDMI2_DDC_SCL
HDMI2_DDC_SDA	HDMI2_DDC_SDA
HOTPLUG2	HOTPLUG2
HDMI_CEC	HDMI_CEC



Title		
RTD29xx Demo Board		
Size	Document Number	Rev
B	HDMI2	1.0
Date:	Wednesday, April 25, 2018	Sheet 17 of 31



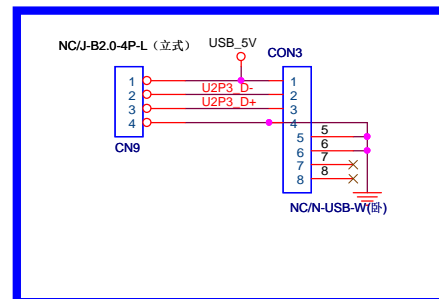
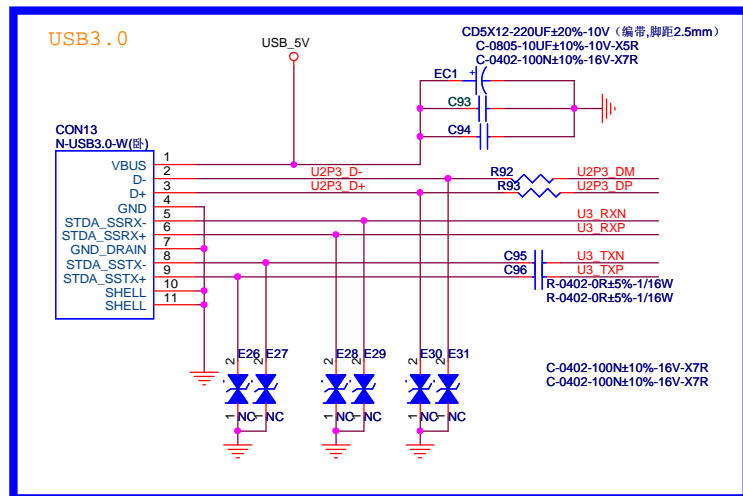




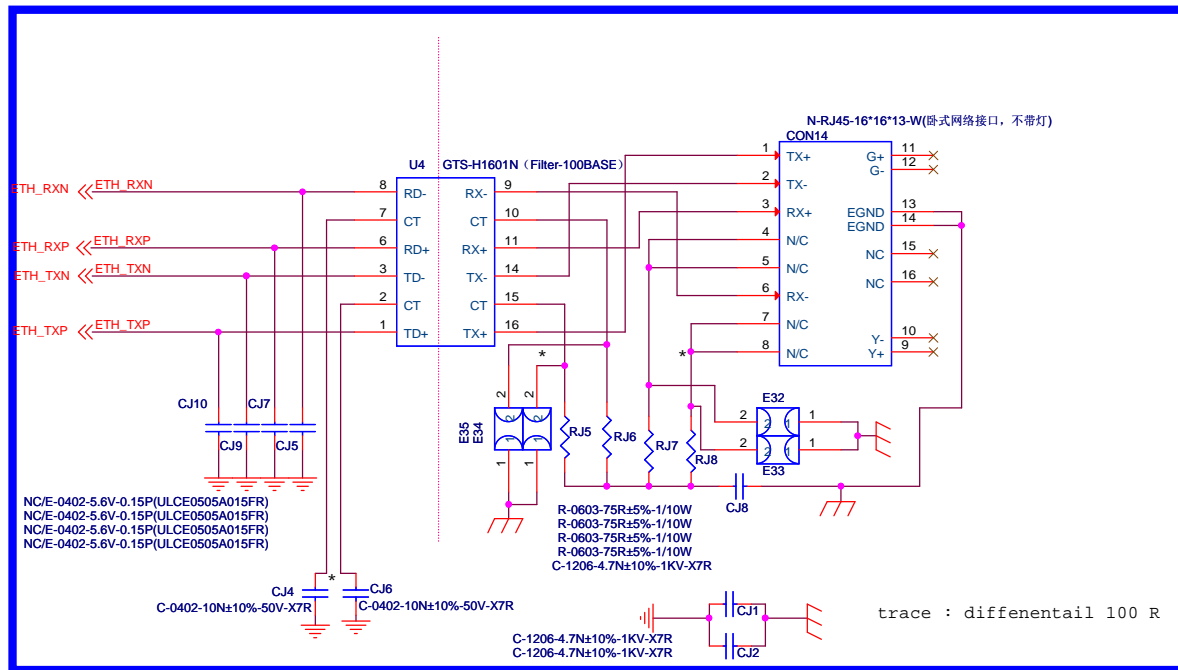




U2P3\_DM <-> U2P3\_DM  
 U2P3\_DP <-> U2P3\_DP  
 U3\_TXN <-> U3\_TXN  
 U3\_TXP <-> U3\_TXP  
 U3\_RXN <-> U3\_RXN  
 U3\_RXP <-> U3\_RXP



Title		
RTD299x Demo Board		
Size	Document Number	Rev
B	USB_3.0_TYPE C	1.0
Date:	Wednesday, May 23, 2018	Sheet 25 of 31

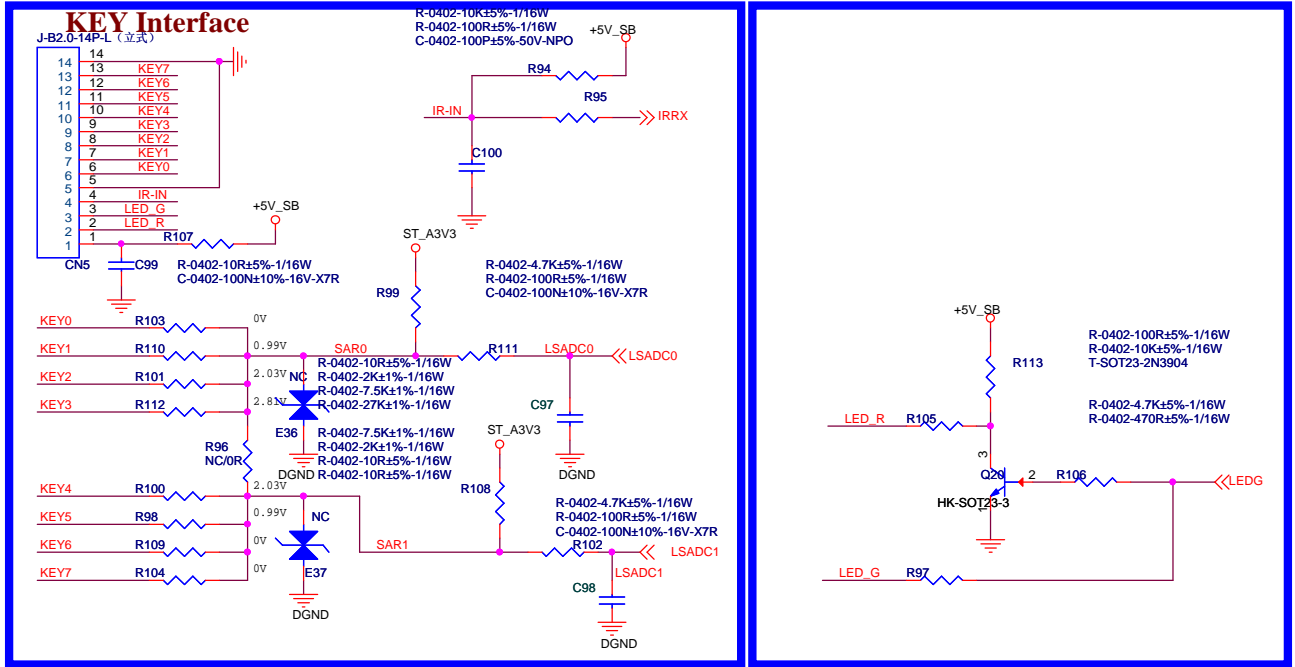


Title		
RTD299x Demo Board		
Size	Document Number	Rev
B	Giga Bit Ethernet	1.0
Date:	Saturday, January 06, 2018	Sheet 26 of 31



From Main Chip

LSADC0 << LSADC0  
 LSADC1 << LSADC1  
 IRRX << IRRX  
 LEDG >> LEDG



Title		
RTD299x Demo Board		
Size	Document Number	Rev
B	Key/LED/IrDA	
Date:	Saturday, January 06, 2018	Sheet 28 of 31