

** Power Down Mode
 1V1_SERDES_DSI : 140mA
 1V8_SERDES_DSI : 19mA

Artwork 시 IC와 근접 배치
 (Bypass CAP 은 낮은 용량 부터 IC Pin 에 근접 배치)

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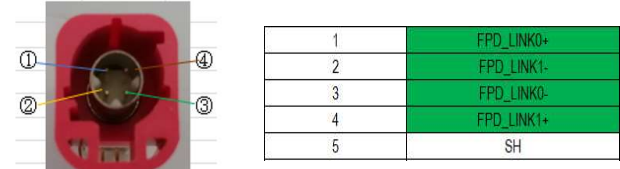
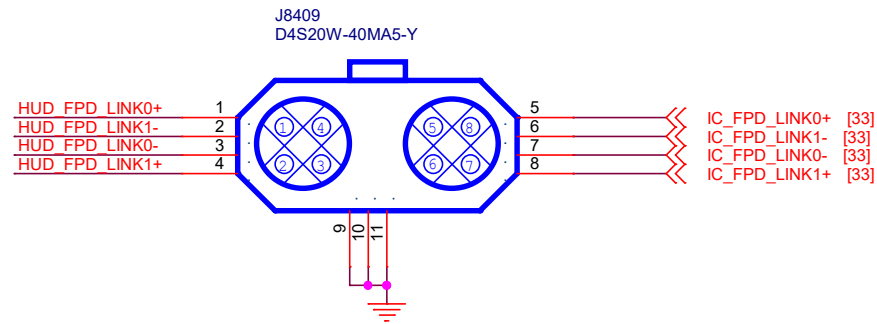
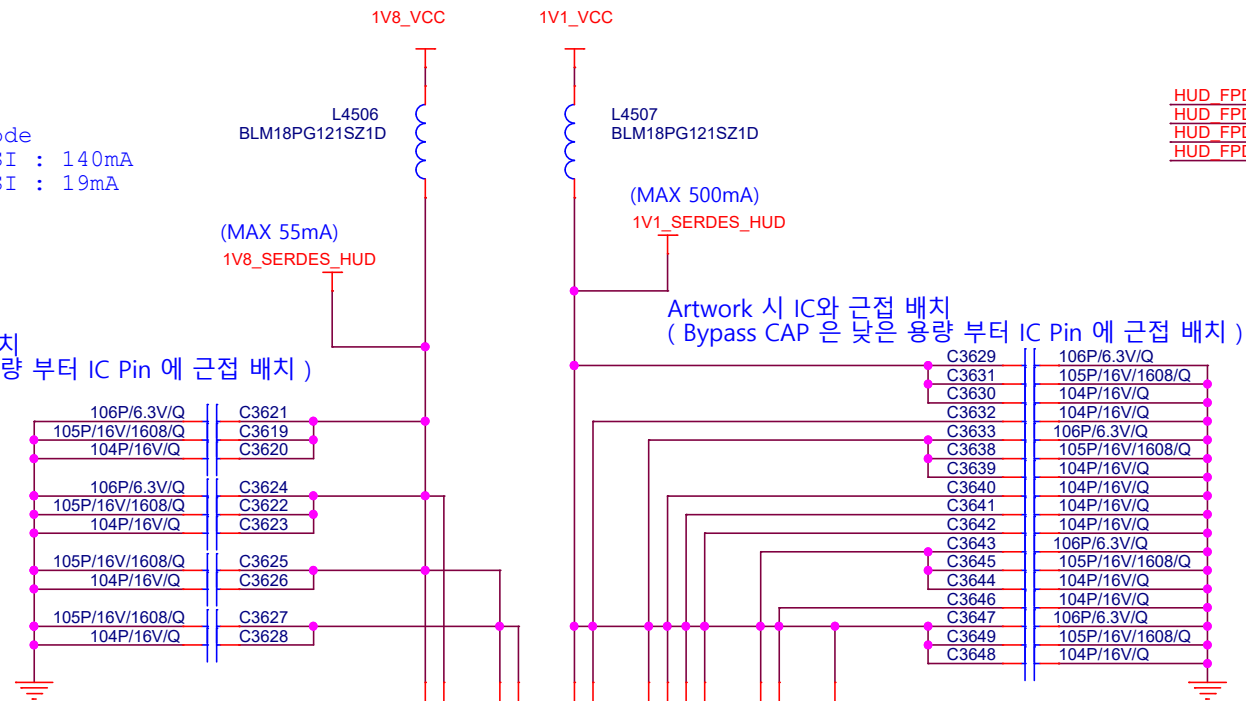


Table 8-9. Strap Configuration MODE_SEL0

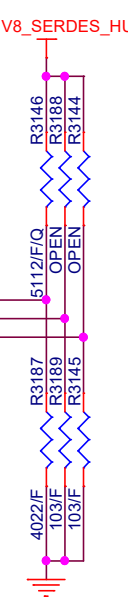
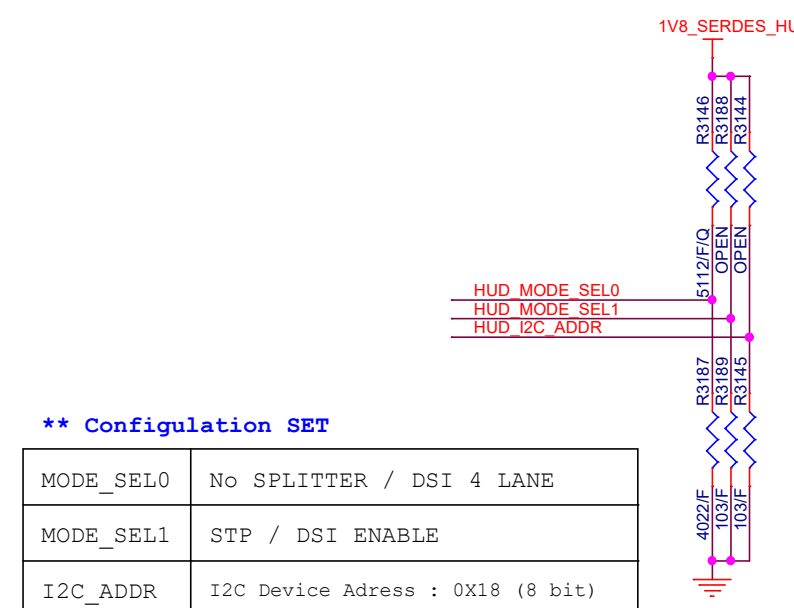
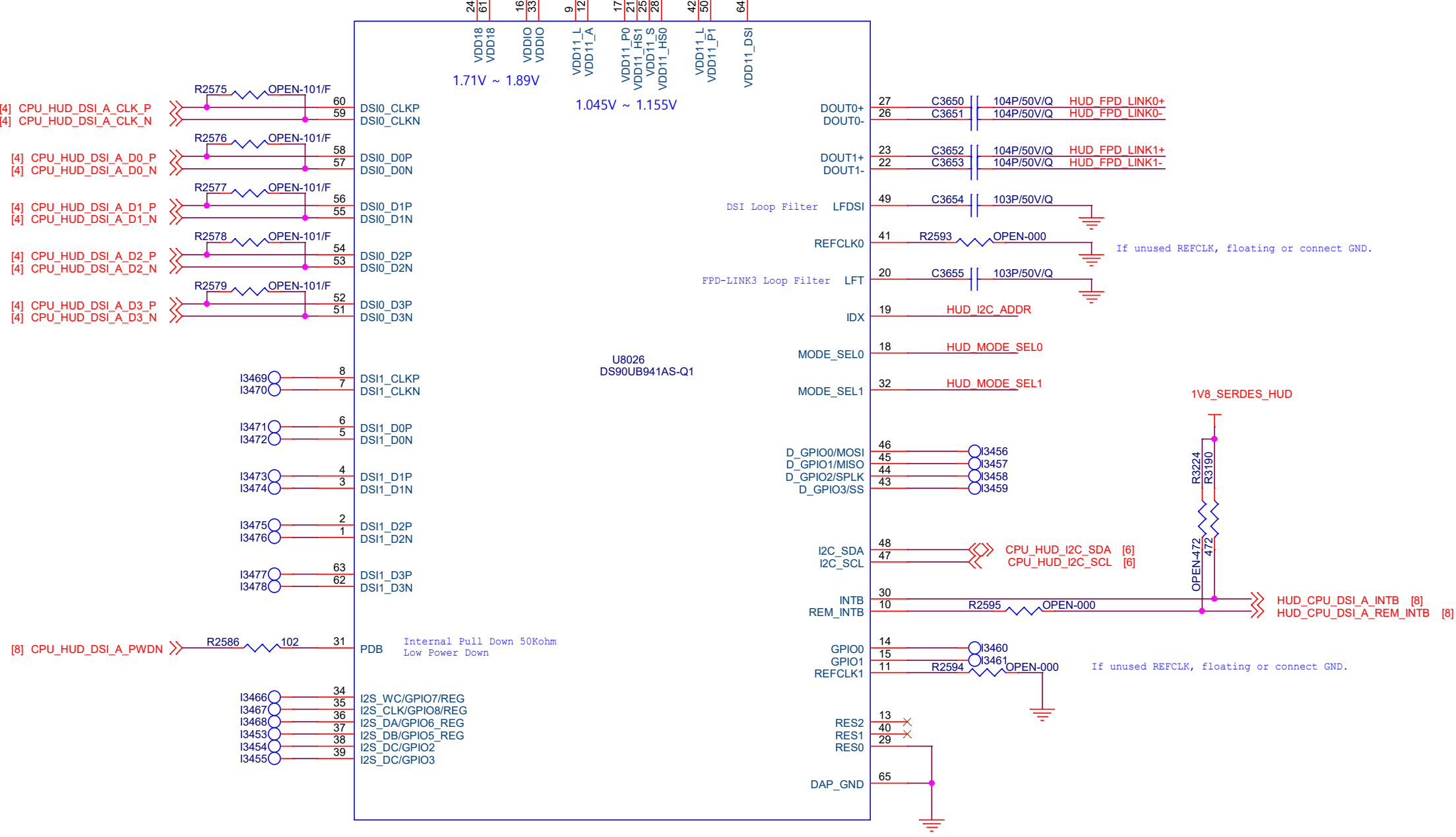
MODE NO.	V _{DSI} VOLTAGE			V _{DSI} TARGET VOLTAGE	SUGGESTED STRAP RESISTORS (1% TOL)		SPLITTER	DSI LANES
	V _{MIN}	V _{TYP}	V _{MAX}		R ₁ (KΩ)	R ₂ (KΩ)		
0	0	0	0.126 × V _(VDD18)	0	OPEN	10.0	0	1
1	0.179 × V _(VDD18)	0.211 × V _(VDD18)	0.244 × V _(VDD18)	0.380	73.2	20.0	0	2
2	0.286 × V _(VDD18)	0.325 × V _(VDD18)	0.364 × V _(VDD18)	0.585	60.4	30.1	0	3
3	0.404 × V _(VDD18)	0.441 × V _(VDD18)	0.472 × V _(VDD18)	0.794	51.1	40.2	0	4
4	0.526 × V _(VDD18)	0.556 × V _(VDD18)	0.590 × V _(VDD18)	1.001	40.2	51.1	1	1
5	0.643 × V _(VDD18)	0.673 × V _(VDD18)	0.708 × V _(VDD18)	1.211	30.1	61.9	1	2
6	0.763 × V _(VDD18)	0.790 × V _(VDD18)	0.825 × V _(VDD18)	1.421	18.7	71.5	1	3
7	0.880 × V _(VDD18)	V _(VDD18)	V _(VDD18)	1.8	10.0	OPEN	1	4

Table 8-10. Strap Configuration MODE_SEL1

MODE NO.	V _{DSI} VOLTAGE			V _{DSI} TARGET VOLTAGE	SUGGESTED STRAP RESISTORS (1% TOL)		CLOCK	COAX	DISABLE DSI
	V _{MIN}	V _{TYP}	V _{MAX}		R ₁ (KΩ)	R ₂ (KΩ)			
0	0	0	0.126 × V _(VDD18)	0	OPEN	10.0	1	0	0
1	0.179 × V _(VDD18)	0.211 × V _(VDD18)	0.244 × V _(VDD18)	0.380	73.2	20.0	1	0	1
2	0.286 × V _(VDD18)	0.325 × V _(VDD18)	0.364 × V _(VDD18)	0.585	60.4	30.1	1	1	0
3	0.404 × V _(VDD18)	0.441 × V _(VDD18)	0.472 × V _(VDD18)	0.794	51.1	40.2	1	1	1
4	0.526 × V _(VDD18)	0.556 × V _(VDD18)	0.590 × V _(VDD18)	1.001	40.2	51.1	0	0	0
5	0.643 × V _(VDD18)	0.673 × V _(VDD18)	0.708 × V _(VDD18)	1.211	30.1	61.9	0	0	1
6	0.763 × V _(VDD18)	0.790 × V _(VDD18)	0.825 × V _(VDD18)	1.421	18.7	71.5	0	1	0
7	0.880 × V _(VDD18)	V _(VDD18)	V _(VDD18)	1.8	10.0	OPEN	0	1	1

Table 8-12. Serial Control Bus Addresses for IDX

NO.	V _{DSI} VOLTAGE RANGE			V _{DSI} TARGET VOLTAGE	SUGGESTED STRAP RESISTORS (1% TOL)		ASSIGNED I2C ADDRESS	
	V _{MIN}	V _{TYP}	V _{MAX}		R ₁ (KΩ)	R ₂ (KΩ)	7-BIT	8-BIT
0	0	0	0.135 × V _(VDD18)	0	OPEN	10.0	0x0C	0x18
1	0.176 × V _(VDD18)	0.213 × V _(VDD18)	0.247 × V _(VDD18)	0.380	73.2	20.0	0x0E	0x1C
2	0.289 × V _(VDD18)	0.327 × V _(VDD18)	0.363 × V _(VDD18)	0.589	60.4	30.1	0x10	0x20
3	0.407 × V _(VDD18)	0.441 × V _(VDD18)	0.467 × V _(VDD18)	0.793	51.1	40.2	0x12	0x24
4	0.526 × V _(VDD18)	0.555 × V _(VDD18)	0.584 × V _(VDD18)	0.999	40.2	51.1	0x14	0x28
5	0.640 × V _(VDD18)	0.671 × V _(VDD18)	0.701 × V _(VDD18)	1.208	30.1	61.9	0x16	0x2C
6	0.757 × V _(VDD18)	0.787 × V _(VDD18)	0.814 × V _(VDD18)	1.417	18.7	71.5	0x18	0x30
7	0.877 × V _(VDD18)	V _(VDD18)	V _(VDD18)	1.8	10	OPEN	0x1A	0x34



** Power Down Mode
 1V1_SERDES_DSI : 140mA
 1V8_SERDES_DSI : 19mA

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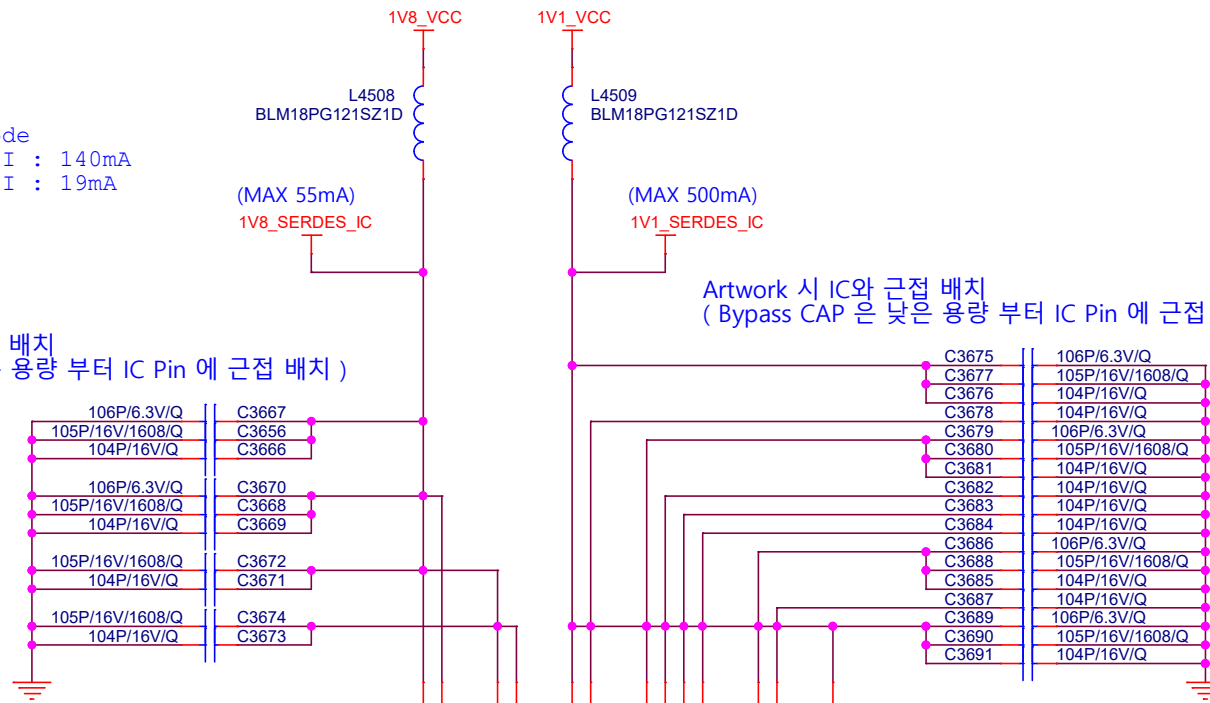


Table 8-8. MODE_SEL[1:0] Settings

MODE	SETTING	FUNCTION
DSI LANES	00	1 Lane
	01	2 Lanes
	10	3 Lanes
	11	4 Lanes
SPLITTER Mode	0	Normal operation.
	1	Split video (odd/even) to each FPD-Link III output port.
DISABLE DSI	0	DSI inputs enabled.
	1	DSI inputs disabled. This is a recommended strap option as any configuration of DSI inputs needs to be done while the inputs are disabled.
COAX Mode	0	Enable FPD-Link III for twisted pair cabling.
	1	Enable FPD-Link III for coaxial cabling.
CLOCK Mode	0	FPD-Link III is generated from external oscillator provided to REFCLK pin(s). The DSI clock may be continuous or discontinuous.
	1	FPD-Link III is generated from DSI clock. The DSI clock has to be continuous.

Table 8-9. Strap Configuration MODE_SEL0

MODE NO.	V _{DSI} VOLTAGE			V _{DSI} TARGET VOLTAGE	SUGGESTED STRAP RESISTORS (1% TOL)		SPLITTER	DSI LANES
	V _{MIN}	V _{TYP}	V _{MAX}		R ₁ (kΩ)	R ₂ (kΩ)		
0	0	0	0.126 × V _(VDD18)	0	OPEN	10.0	0	1
1	0.179 × V _(VDD18)	0.211 × V _(VDD18)	0.244 × V _(VDD18)	0.380	73.2	20.0	0	2
2	0.286 × V _(VDD18)	0.325 × V _(VDD18)	0.364 × V _(VDD18)	0.585	60.4	30.1	0	3
3	0.404 × V _(VDD18)	0.441 × V _(VDD18)	0.472 × V _(VDD18)	0.794	51.1	40.2	0	4
4	0.526 × V _(VDD18)	0.556 × V _(VDD18)	0.590 × V _(VDD18)	1.001	40.2	51.1	1	1
5	0.643 × V _(VDD18)	0.673 × V _(VDD18)	0.708 × V _(VDD18)	1.211	30.1	61.9	1	2
6	0.763 × V _(VDD18)	0.790 × V _(VDD18)	0.825 × V _(VDD18)	1.421	18.7	71.5	1	3
7	0.880 × V _(VDD18)	V _(VDD18)	V _(VDD18)	1.8	10.0	OPEN	1	4

Table 8-10. Strap Configuration MODE_SEL1

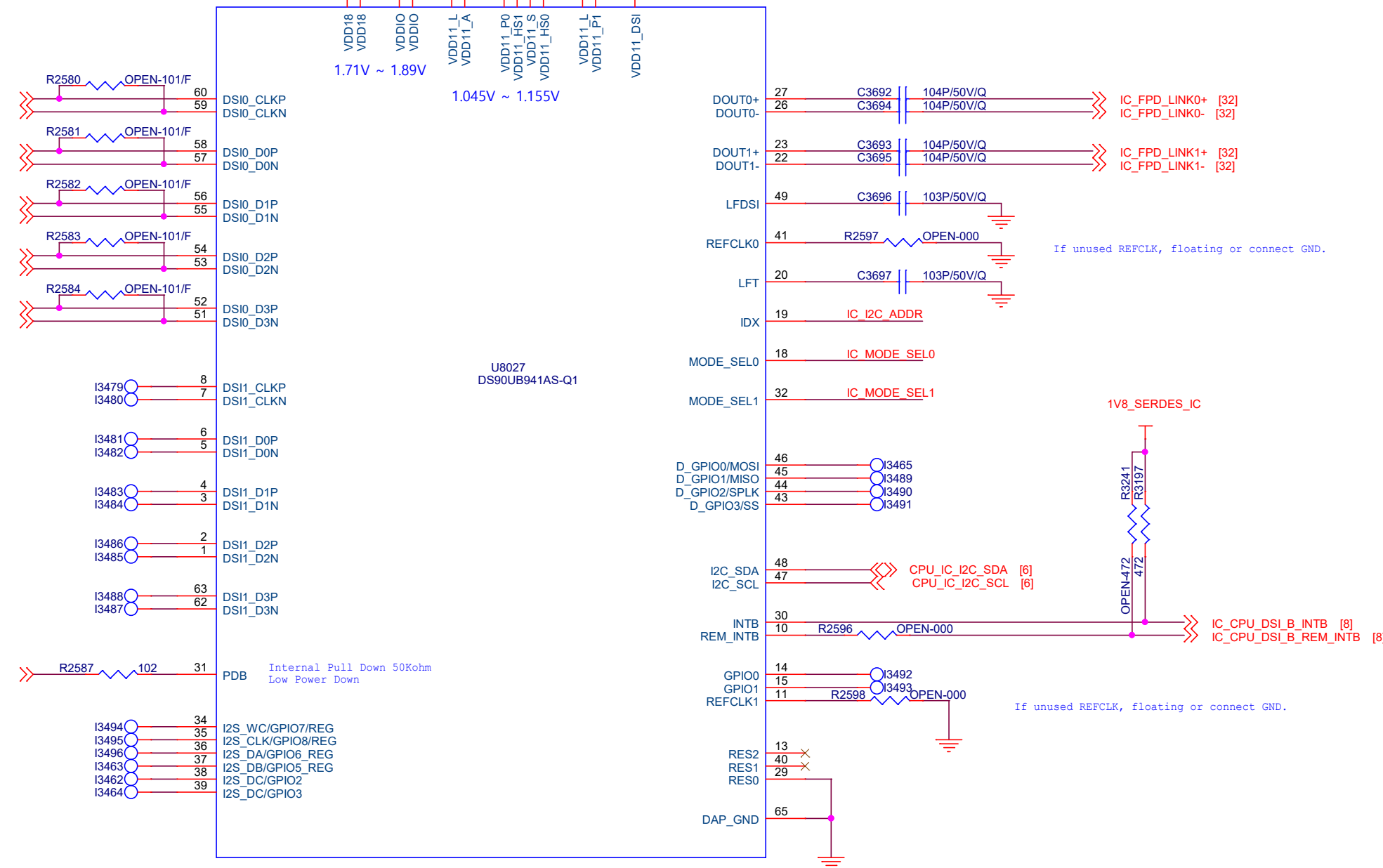
MODE NO.	V _{DSI} VOLTAGE			V _{DSI} TARGET VOLTAGE	SUGGESTED STRAP RESISTORS (1% TOL)		CLOCK	COAX	DISABLE DSI
	V _{MIN}	V _{TYP}	V _{MAX}		R ₁ (kΩ)	R ₂ (kΩ)			
0	0	0	0.126 × V _(VDD18)	0	OPEN	10.0	1	0	0
1	0.179 × V _(VDD18)	0.211 × V _(VDD18)	0.244 × V _(VDD18)	0.380	73.2	20.0	1	0	1
2	0.286 × V _(VDD18)	0.325 × V _(VDD18)	0.364 × V _(VDD18)	0.585	60.4	30.1	1	1	0
3	0.404 × V _(VDD18)	0.441 × V _(VDD18)	0.472 × V _(VDD18)	0.794	51.1	40.2	1	1	1
4	0.526 × V _(VDD18)	0.556 × V _(VDD18)	0.590 × V _(VDD18)	1.001	40.2	51.1	0	0	0
5	0.643 × V _(VDD18)	0.673 × V _(VDD18)	0.708 × V _(VDD18)	1.211	30.1	61.9	0	0	1
6	0.763 × V _(VDD18)	0.790 × V _(VDD18)	0.825 × V _(VDD18)	1.421	18.7	71.5	0	1	0
7	0.880 × V _(VDD18)	V _(VDD18)	V _(VDD18)	1.8	10.0	OPEN	0	1	1

Table 8-12. Serial Control Bus Addresses for IDX

NO.	V _{DSI} VOLTAGE RANGE			V _{DSI} TARGET VOLTAGE	SUGGESTED STRAP RESISTORS (1% TOL)		ASSIGNED I2C ADDRESS	
	V _{MIN}	V _{TYP}	V _{MAX}		R ₁ (kΩ)	R ₂ (kΩ)	7-BIT	8-BIT
0	0	0	0.135 × V _(VDD18)	0	OPEN	10.0	0x0C	0x18
1	0.176 × V _(VDD18)	0.213 × V _(VDD18)	0.247 × V _(VDD18)	0.384	73.2	20.0	0x0E	0x1C
2	0.289 × V _(VDD18)	0.327 × V _(VDD18)	0.363 × V _(VDD18)	0.589	60.4	30.1	0x10	0x20
3	0.407 × V _(VDD18)	0.441 × V _(VDD18)	0.467 × V _(VDD18)	0.793	51.1	40.2	0x12	0x24
4	0.526 × V _(VDD18)	0.555 × V _(VDD18)	0.584 × V _(VDD18)	0.999	40.2	51.1	0x14	0x28
5	0.640 × V _(VDD18)	0.671 × V _(VDD18)	0.701 × V _(VDD18)	1.208	30.1	61.9	0x16	0x2C
6	0.757 × V _(VDD18)	0.787 × V _(VDD18)	0.814 × V _(VDD18)	1.417	18.7	71.5	0x18	0x30
7	0.877 × V _(VDD18)	V _(VDD18)	V _(VDD18)	1.8	10	OPEN	0x1A	0x34

- [4] CPU_IC_DSI_B_CLK_P
- [4] CPU_IC_DSI_B_CLK_N
- [4] CPU_IC_DSI_B_D0_P
- [4] CPU_IC_DSI_B_D0_N
- [4] CPU_IC_DSI_B_D1_P
- [4] CPU_IC_DSI_B_D1_N
- [4] CPU_IC_DSI_B_D2_P
- [4] CPU_IC_DSI_B_D2_N
- [4] CPU_IC_DSI_B_D3_P
- [4] CPU_IC_DSI_B_D3_N

- [8] CPU_IC_DSI_B_PWDN

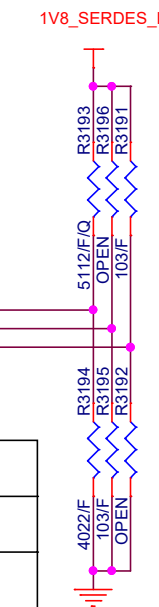


If unused REFCLK, floating or connect GND.

If unused REFCLK, floating or connect GND.

**** Configuration SET**

MODE_SEL0	No SPLITTER / DSI 4 LANE
MODE_SEL1	STP / DSI ENABLE
I2C_ADDR	I2C Device Address : 0X34 (8 bit)



Power Down Mode
 1V2_SERDES_DVB-T2 : 30mA
 3V3_SERDES_DVB-T2 : 8mA
 1V8_SERDES_VDDIO : 0.3mA

Table 10. Serial Control Bus Addresses for IDx

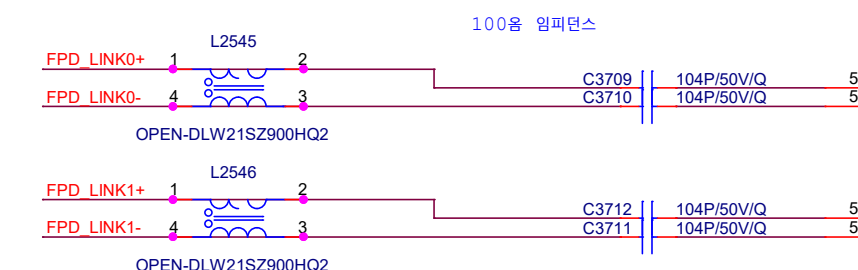
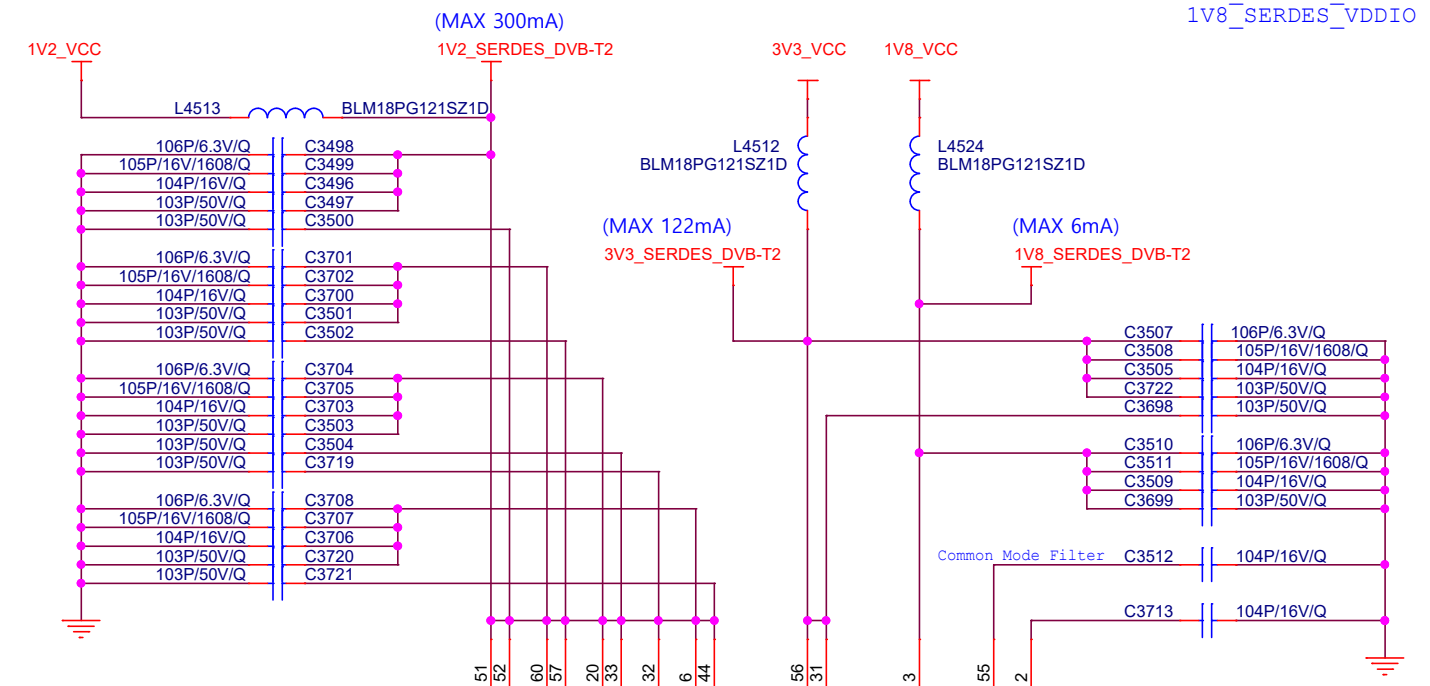
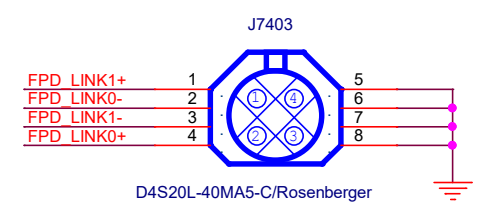
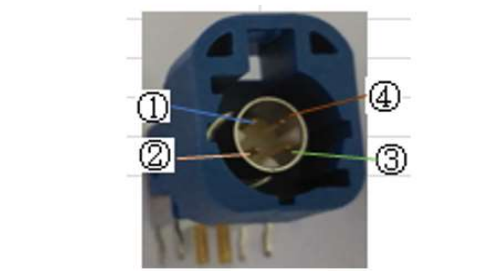
NO.	V _{IDx} VOLTAGE	V _{IDx} TARGET VOLTAGE	SUGGESTED STRAP RESISTORS (1% TOLERANCE)		PRIMARY ASSIGNED I2C ADDRESS	
			R ₁ (kΩ)	R ₂ (kΩ)	7-BIT	8-BIT
0	0	0	Open	10	0x2C	0x58
1	0.169 × V _(VDD33)	0.559	73.2	15	0x2E	0x5C
2	0.230 × V _(VDD33)	0.757	66.5	20	0x30	0x60
3	0.295 × V _(VDD33)	0.974	59	24.9	0x32	0x64
4	0.376 × V _(VDD33)	1.241	49.9	30.1	0x34	0x68
5	0.466 × V _(VDD33)	1.538	46.4	40.2	0x36	0x6C
6	0.556 × V _(VDD33)	1.835	40.2	49.9	0x38	0x70
7	0.801 × V _(VDD33)	2.642	18.7	75	0x3C	0x78

Table 7. Configuration Select (MODE_SEL0)

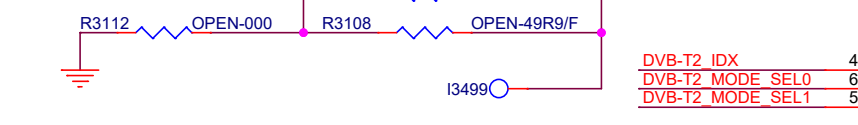
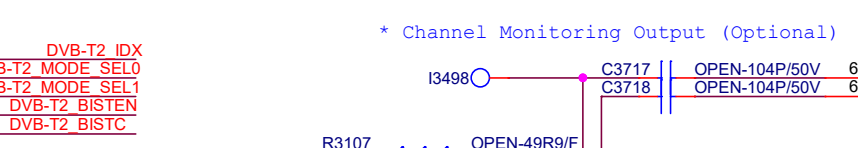
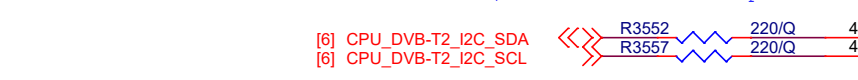
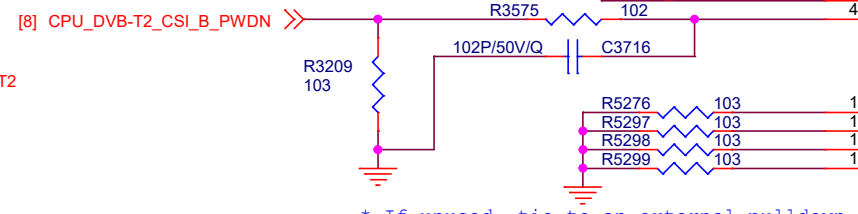
NO.	V _{MODE} VOLTAGE	V _{MODE} TARGET VOLTAGE	SUGGESTED STRAP RESISTORS (1% TOLERANCE)		OUTPUT MODE
			R ₁ (kΩ)	R ₂ (kΩ)	
0	0	0	Open	10	4 data lanes, 1 CSI port active (determined by MODE_SEL1 CSI_SEL bit)
1	0.169 × V _(VDD33)	0.559	73.2	15	4 data lanes, Both CSI ports active (overrides MODE_SEL1)
2	0.230 × V _(VDD33)	0.757	66.5	20	2 data lanes, 1 CSI port active (determined by MODE_SEL1 CSI_SEL bit)
3	0.295 × V _(VDD33)	0.974	59	24.9	2 data lanes, Both CSI ports active (overrides MODE_SEL1)
4	0.376 × V _(VDD33)	1.241	49.9	30.1	RESERVED
5	0.466 × V _(VDD33)	1.538	46.4	40.2	RESERVED
6	0.556 × V _(VDD33)	1.835	40.2	49.9	RESERVED
7	0.801 × V _(VDD33)	2.642	18.7	75	RESERVED

Table 8. Configuration Select (MODE_SEL1)

NO.	V _{MODE} VOLTAGE	V _{MODE} TARGET VOLTAGE	SUGGESTED STRAP RESISTORS (1% TOLERANCE)		CSI_SEL (CSI PORT)	HIGH-SPEED BACK CHANNEL	INPUT MODE
			R ₁ (kΩ)	R ₂ (kΩ)			
0	0	0	Open	10	CSI0	5 Mbps	STP
1	0.169 × V _(VDD33)	0.559	73.2	15	CSI0	5 Mbps	Coax
2	0.230 × V _(VDD33)	0.757	66.5	20	CSI0	20 Mbps	STP
3	0.295 × V _(VDD33)	0.974	59	24.9	CSI0	20 Mbps	Coax
4	0.376 × V _(VDD33)	1.241	49.9	30.1	CSI1	5 Mbps	STP
5	0.466 × V _(VDD33)	1.538	46.4	40.2	CSI1	5 Mbps	Coax
6	0.556 × V _(VDD33)	1.835	40.2	49.9	CSI1	20 Mbps	STP
7	0.801 × V _(VDD33)	2.642	18.7	75	CSI1	20 Mbps	Coax

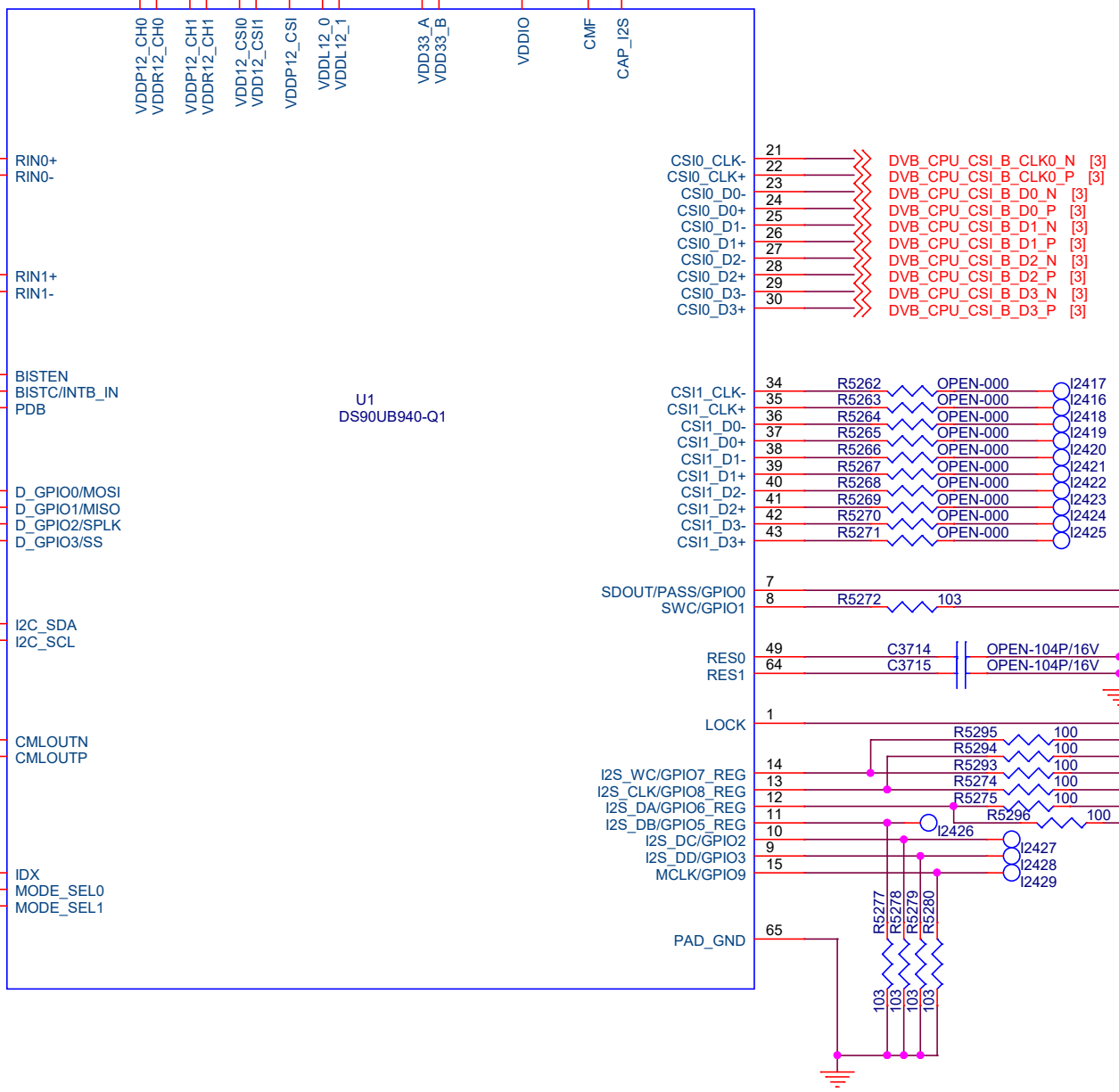


* BIST : Built-In Self Test, High Active
 BISTC : 0-PCLK / 1-33MHz



**** Configuration SET**

CFG0	I2C Device Address : 0X58
SEL0	4 Data Lanes, 1CSI Port
SEL1	STP 20Mbps



* Error Detect (1:No Error, 0: Error)
 DVB-T2_CPU_PASS [3]

* PLL Lock Detect (1:Lock, 0: Unlock)
 DVB-T2_CPU_LOCK [3]

DVT-T2_DSP_I2S_LRCK [43]
 DVT-T2_DSP_I2S_BCLK [43]
 DVB-T2_CPU_I2S_LRCK [2]
 DVB-T2_CPU_I2S_BCLK [2]
 DVT-T2_DSP_I2S_DOUT [2]