

Schematic: reComputer RK3576 Module

Revision History

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16	eMMC/EEPROM/RTC/Flash
17	HDMI TX
18	WIFI/BT-SDIO+UART_1T1R
19	Gigabit Ethernet
20	BTB-200Pin

VER	DATE	REVISION	DESCRIPTION
v0.9	01/04/2026	reComputer_RK3576_ Module	Initial Version.
v1.0	07/01/2026	reComputer_RK3576_ Module	1.J56_PIN94,PIN96 Change to B17,B18 and Remove ADC. 2.J56_PIN49,PIN101 Change to B22,B20. 3.J56_PIN80,PIN82 Change to 1A14,B15. 4.Adjust the layout slightly according to the ME.

Memory Config

DDR		eMMC	
4GB	R600 R0201 1% 0R	R597 R0201 1% 0R	32GB
8GB	R601 R0201 1% 0R DNP	R598 R0201 1% 0R DNP	64GB
/	R602 R0201 1% 0R DNP	R599 R0201 1% 0R DNP	128GB

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https://www.seeedstudio.com

Title: reComputer RK3576 Module

Size: A3

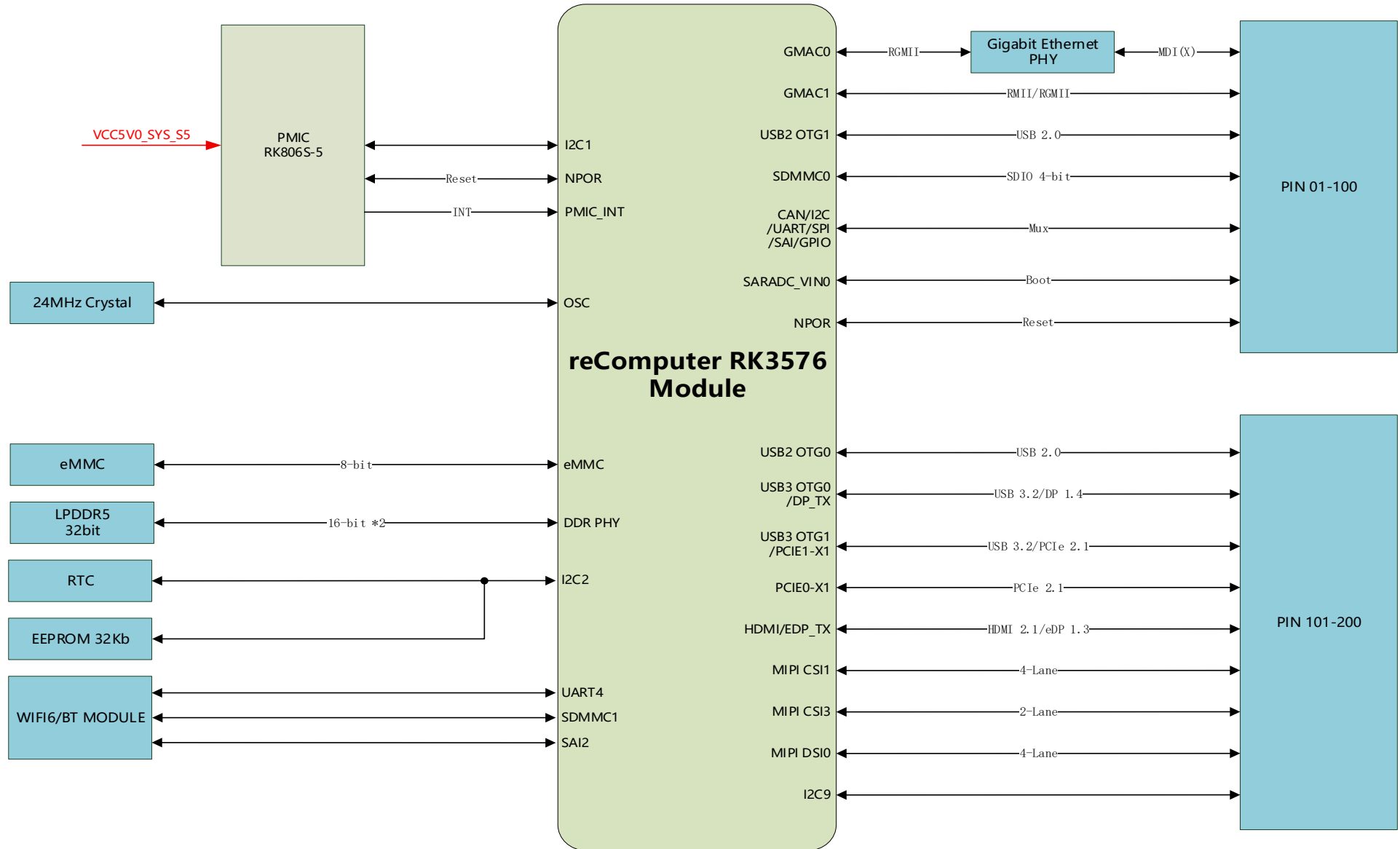
Document Number: 01 Table of Contents

Rev: v1.0

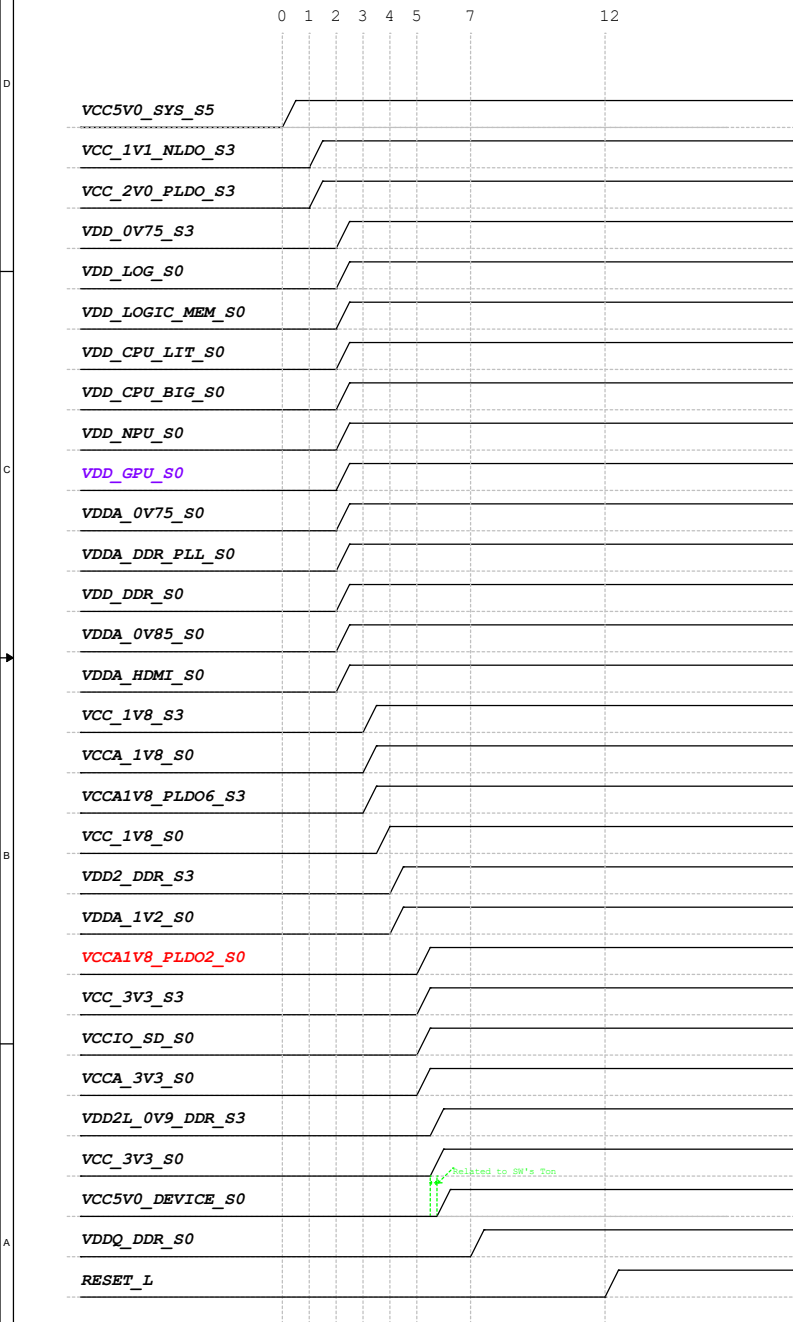
Date: Friday, July 10, 2026

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Block Diagram



Power Sequence



Power description

Power Supply	PMIC Channel	Supply Limit	Power Name	Time Slot	Default Voltage	Default ON/OFF	Work Voltage	Peak Current	Sleep Current
VCC5V0_SYS_S5	RK806_BUCK1	6.5A	VDD_CPU_BIG_S0	Slot:2	0.85V	ON	DVFS	TBD	TBD
VCC5V0_SYS_S5	RK806_BUCK2	5A	VDD_NPU_S0	Slot:2	0.75V	ON	DVFS	TBD	TBD
VCC5V0_SYS_S5	RK806_BUCK3	5A	VDD_CPU_LIT_S0	Slot:2	0.85V	ON	DVFS	TBD	TBD
VCC5V0_SYS_S5	RK806_BUCK4	5A	VCC_3V3_S3	Slot:5	3.3V	ON	3.3V	TBD	TBD
VCC5V0_SYS_S5	RK806_BUCK5	3A	VDD_GPU_S0	Slot:2	ADJ FB=0.5V	ON	DVFS	TBD	TBD
VCC5V0_SYS_S5	RK806_BUCK6	3A	VDDQ_DDR_S0	Slot:7	ADJ FB=0.5V	ON	0.61V-LP4/4x 0.51V-LP5	TBD	TBD
VCC5V0_SYS_S5	RK806_BUCK7	3A	VDD_LOGIC_S0 VDD_LOGIC_MEM_S0	Slot:2	0.75V	ON	0.75V	TBD	TBD
VCC5V0_SYS_S5	RK806_BUCK8	3A	VCC_1V8_S3	Slot:3	1.8V	ON	1.8V	TBD	TBD
VCC5V0_SYS_S5	RK806_BUCK9	3A	VDD2_DDR_S3	Slot:4	ADJ FB=0.5V	ON	1.1V-LP4/4x 1.05V-LP5	TBD	TBD
VCC5V0_SYS_S5	RK806_BUCK10	3A	VDD_DDR_S0	Slot:2	0.85V	ON	0.85V DVFS	TBD	TBD
VCC_2V0_PLDO	RK806_PLDO1	0.5A	VCCA_1V8_S0	Slot:3	1.8V	ON	1.8V	TBD	TBD
	RK806_PLDO2	0.3A	VCCA1V8_PLDO2_S0	Slot:5	1.8V	ON	1.8V	TBD	TBD
	RK806_PLDO3	0.3A	VDDA_1V2_S0	Slot:4	1.2V	ON	1.2V	TBD	TBD
VCC5V0_SYS_S5	RK806_PLDO4	0.5A	VCCA_3V3_S0	Slot:5	3.0V	ON	3.3V	TBD	TBD
	RK806_PLDO5	0.3A	VCCIO_SD_S0	Slot:5	3.3V	ON	3.3V	TBD	TBD
VCC5V0_SYS_S5	RK806_PLDO6	0.3A	VCCA1V8_PLDO6_S3	Slot:3	1.8V	ON	1.8V	TBD	TBD
VCC_1V1_NLDO	RK806_NLDO1	0.3A	VDD_0V75_S3	Slot:2	0.75V	ON	0.75V	TBD	TBD
	RK806_NLDO2	0.3A	VDDA_DDR_PLL_S0	Slot:2	0.85V	ON	0.85V DVFS	TBD	TBD
	RK806_NLDO3	0.5A	VDDA_HDMI_S0	Slot:2	0.75V	ON	0.8375V	TBD	TBD
VCC_1V1_NLDO	RK806_NLDO4	0.5A	VDDA_0V85_S0	Slot:2	0.85V	ON	0.85V	TBD	TBD
	RK806_NLDO5	0.3A	VDDA_0V75_S0	Slot:2	0.75V	ON	0.75V	TBD	TBD
	RK806_RESETh								
VCC5V0_SYS_S5	EXT BUCK	2A	VDD2L_0V9_DDR_S3	Slot:5A	0.9V	ON	0.9V	TBD	TBD
VCC5V0_SYS_S5	EXT BUCK	2A	VCC_2V0_PLDO_S3	Slot:1	2.1V	ON	2.0V	TBD	TBD
VCC5V0_SYS_S5	EXT BUCK	2A	VCC_1V1_NLDO_S3	Slot:1	1.1V	ON	1.1V	TBD	TBD
VCC12V_DCIN	EXT BUCK	5A	VCC5V0_SYS_S5	Slot:0	5.0V	ON	5.0V	TBD	TBD
VCC12V_DCIN	EXT BUCK	3A	VCC5V0_DEVICE_S0	Slot:5A	5.2V	ON	5.2V	TBD	TBD
VCC_3V3_S3	SWITCH	2A	VCC_3V3_S0	Slot:5A	3.3V	ON	3.3V	TBD	TBD
VCC_1V8_S3	SWITCH	2A	VCC_1V8_S0	Slot:3A	1.8V	ON	1.8V	TBD	TBD

Note:

The power suffix S0, S3 or S5 means:
S5: Keep power on during power down
S3: Keep power on during sleeping
S0: Power off during sleeping

Note:

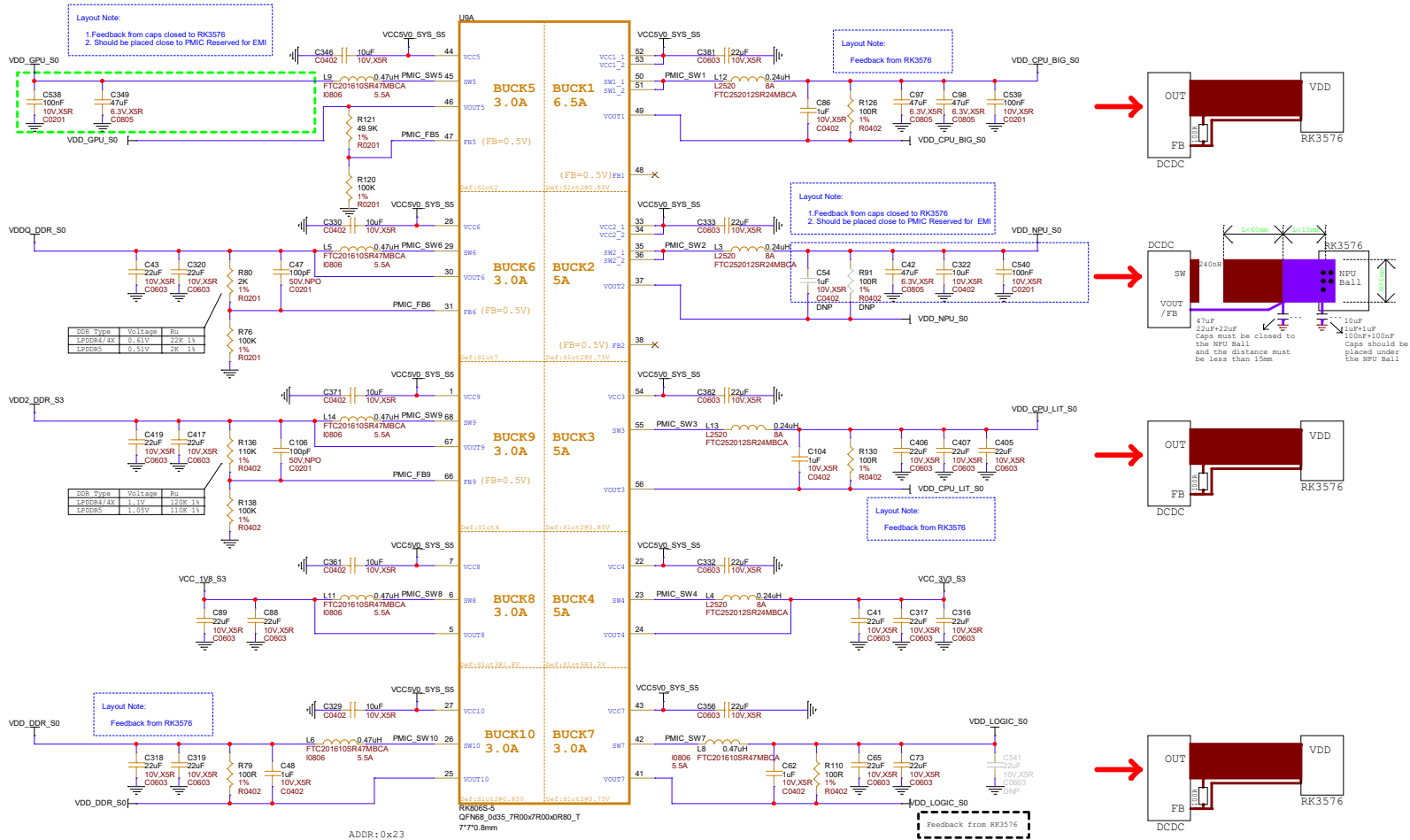
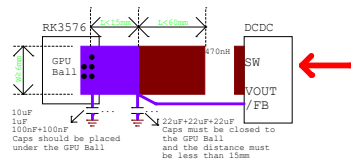
Peripherals connected to the GPIO of SOC need to consider the leakage between the GPIO of SOC and the Peripherals. It is recommended to power on both the Peripherals's power supply and the SOC's GPIO power supply simultaneously.

IO Power Domain Map

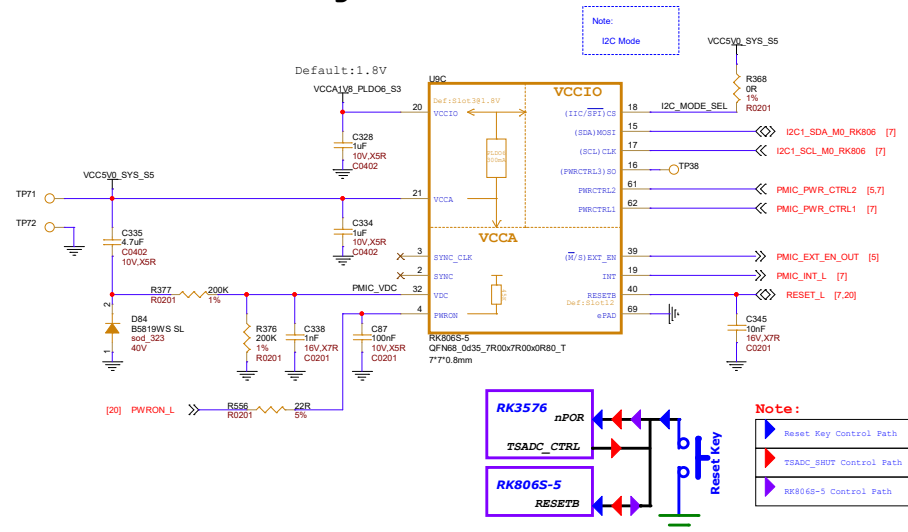
IO Domain	Pin Num	Support IO Voltage	Supply Power Pin Name	Power Source	Operating Voltage
PMUIO0	Pin 2K11	1.8V Only	PMUIO0_VCC1V8	VCC_1V8	1.8V
PMUIO1	Pin 1U20	1.8V or 3.3V	PMUIO1_VCC	VCC_1V8 VCC_3V3	3.3V
VCCIO0	Pin 1J20	1.8V Only	VCCIO0_VCC1V8	VCC_1V8	1.8V
VCCIO1	Pin 2A8	1.8V or 3.3V	VCCIO1_VCC	VCC_1V8 VCC_3V3	1.8V/3.3V
VCCIO2	Pin 2A2	1.8V or 3.3V	VCCIO2_VCC	VCC_1V8 VCC_3V3	3.3V
VCCIO3	Pin 2B10	1.8V or 3.3V	VCCIO3_VCC	VCC_1V8 VCC_3V3	1.8V
VCCIO4	Pin 2A7	1.8V or 3.3V	VCCIO4_VCC	VCC_1V8 VCC_3V3	3.3V
VCCIO5	Pin 2A4/2A5	1.8V or 3.3V	VCCIO5_VCC	VCC_1V8 VCC_3V3	1.8V
VCCIO6	Pin 2N3	1.8V or 3.3V	VCCIO6_VCC	VCC_1V8 VCC_3V3	3.3V
VCCIO7	Pin 2M3	1.2V or 1.8V	VCCIO7_VCC	VCC_1V2 VCC_1V8	1.2V

IO Type	Operating Voltage
1.8V Only	VCCIO*_VCC1V8=1.8V
1.2V or 1.8V	VCCIO*_VCC=1.2V or 1.8V
1.8V or 3.3V	VCCIO*_VCC=1.8V or 3.3V

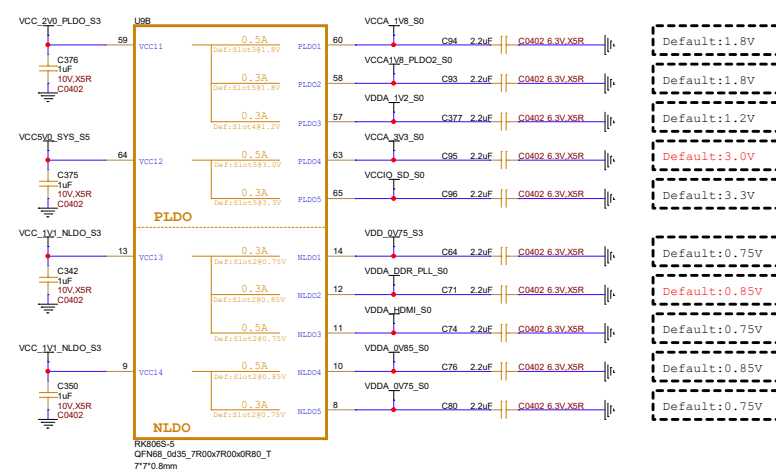
PMIC RK806S-5 BUCK



PMIC RK806S-5 Managerment

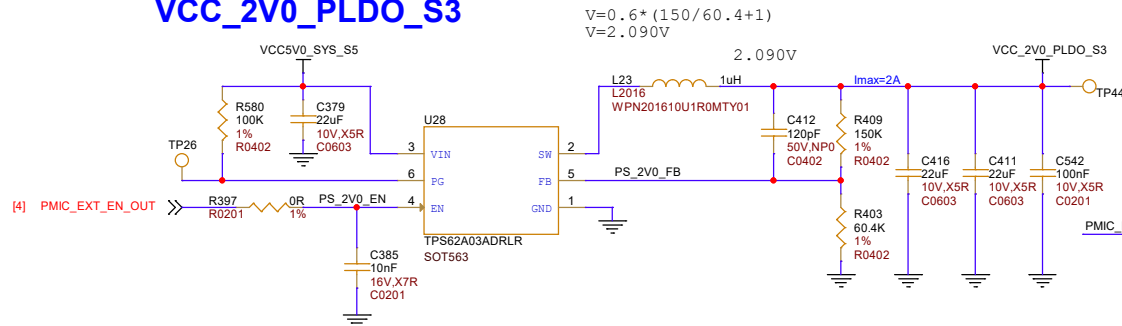


PMIC RK806S-5 LDO

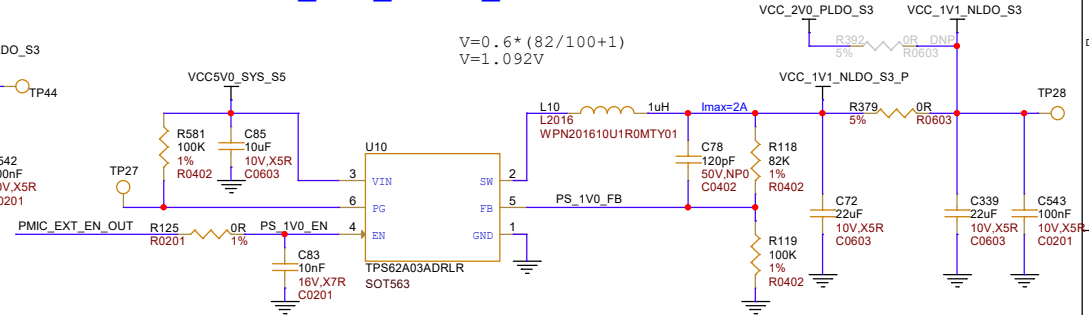


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Size: A2	Document Number:	04 Power-PMIC RK306S-5	Rev: v1.0
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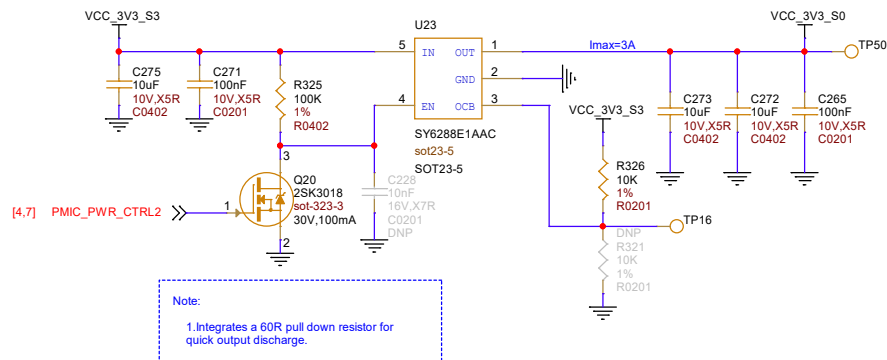
VCC_2V0_PLDO_S3



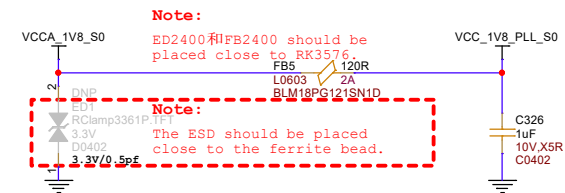
VCC_1V1_NLDO_S3



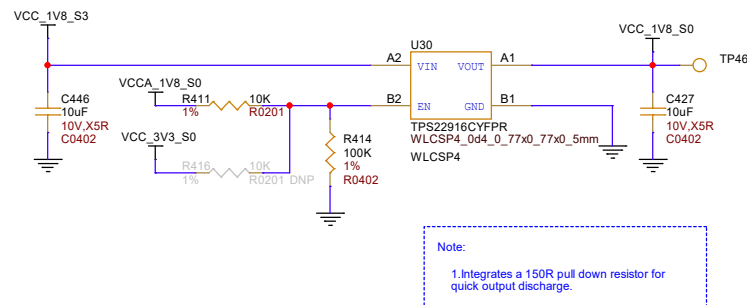
VCC_3V3_S0



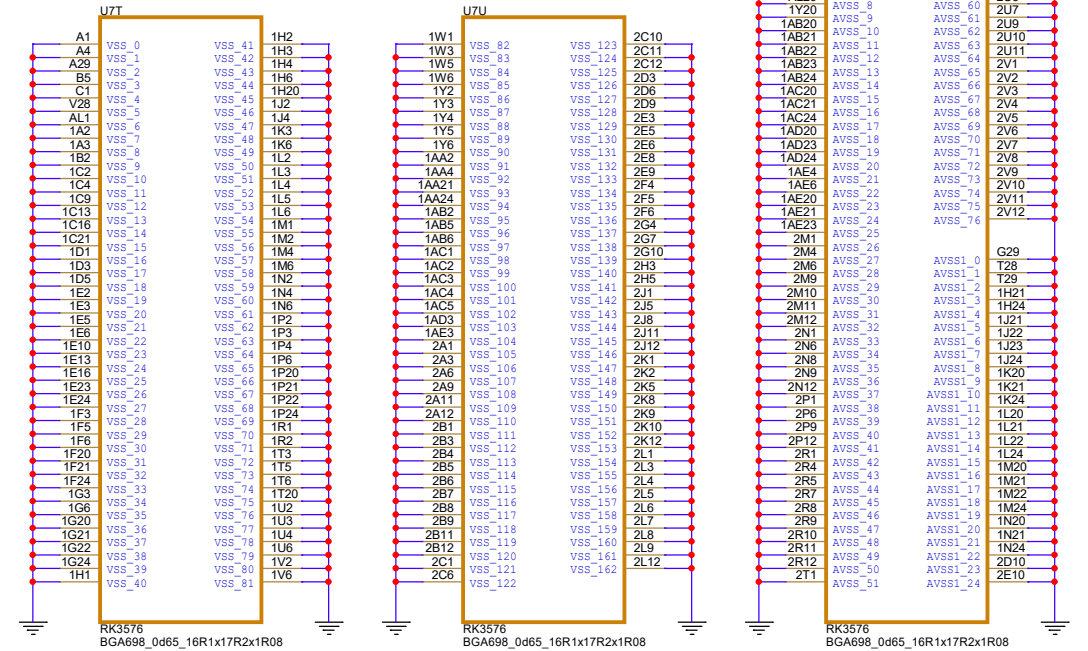
VCC_1V8_PLL_S0



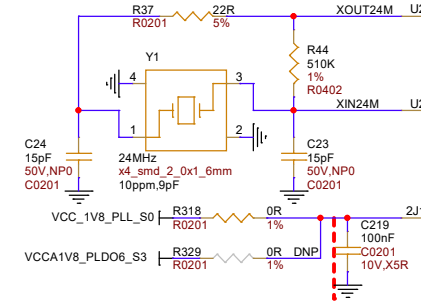
VCC_1V8_S0



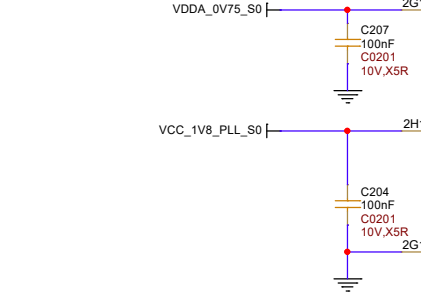
RK3576_T/U/V (GND)



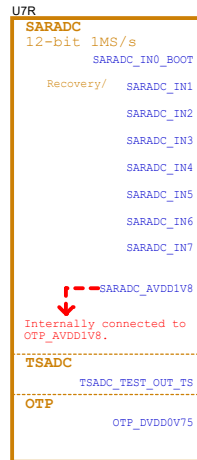
RK3576_E (PMUIO0/1)



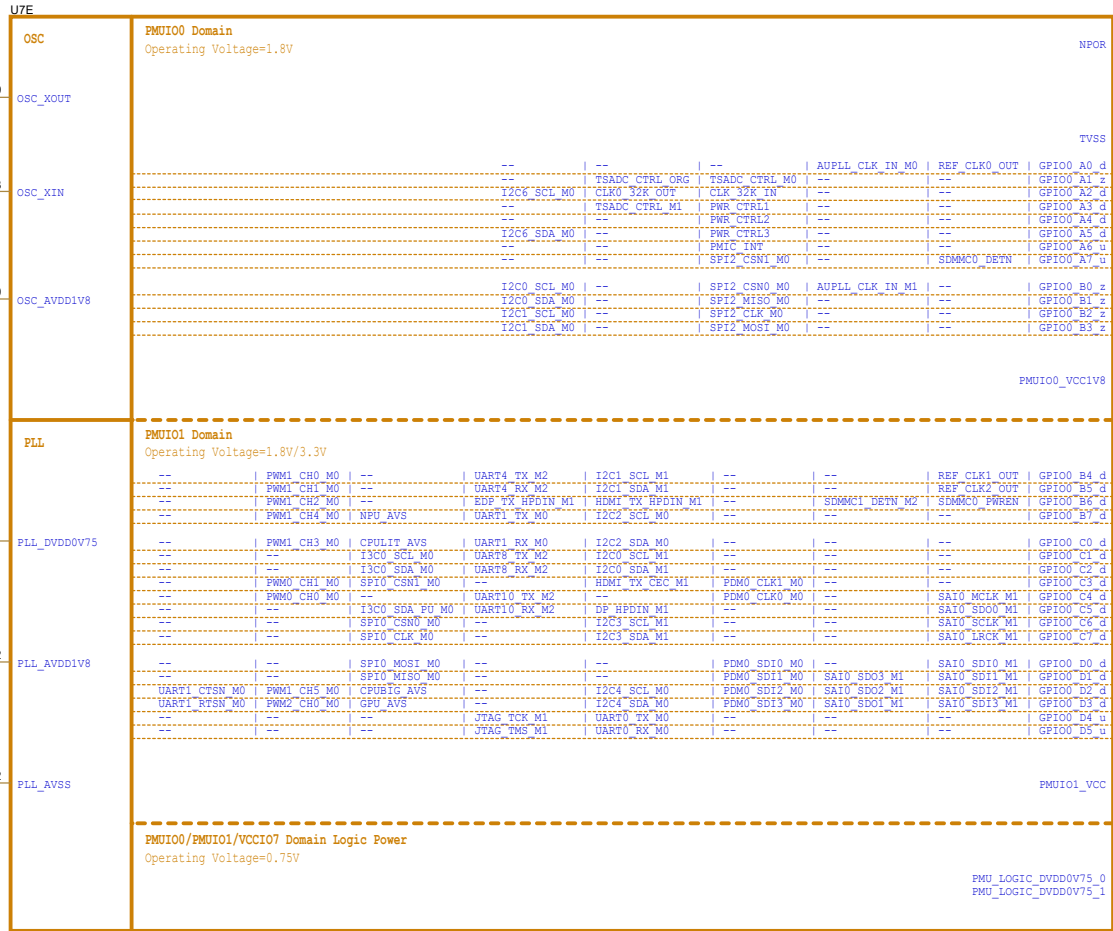
Note:
When the following functions are required,
OSC AVDD1V8 must remain powered.
1. PMU MCU is required;
2. USB wake-up function;
3. IR wake-up function.



RK3576_R (SARADC)

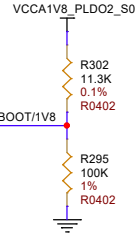


RK3576
BGA698_0d65_16R1x17R2x1R08



RK3576
BGA698_0d65_16R1x17R2x1R08

Note:
Config10: EMMC->SDMMC0->USB



VCCA1V8_PLD02_S0

SARADC_VIN0_BOOT/1V8

R302 11.3K 0.1% R0402

R295 100K 1% R0402

SDMMC0_DET_L pull-up to VCC 1V8_S3

R585 R0201 1% DNP

Q21 CJ1012 SOT_523 20V 500mA

SDMMC0_DET_H [20]

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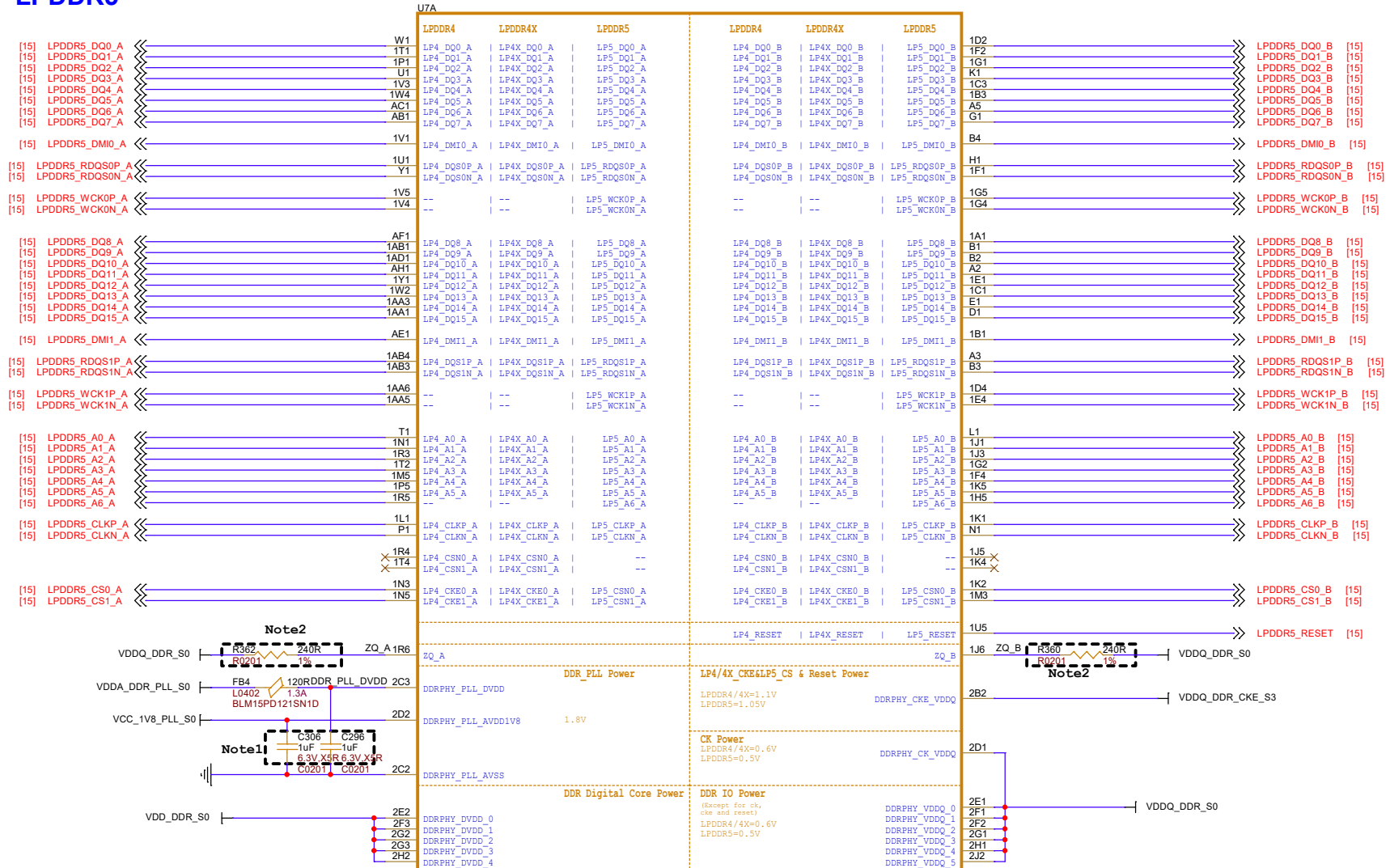
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Size: **A3** Document Number: **07 RK3576-OSC/PLL/PMUIO/SARADC** Rev: **v1.0**

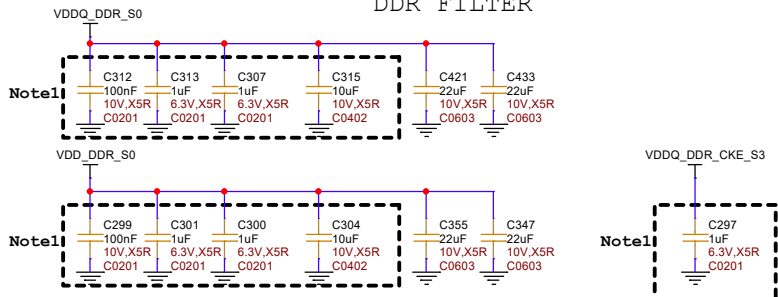
Date: **Friday, July 10, 2026** Sheet: **7 of 20**

RK3576_A(DDRPHY)

LPDDR5



DDR FILTER



Note:

- (1) Power Sequence: VDD-VDDQ_CKE-VDDQ
- (2) Hold power of DDRPHY_CKE_VDDQ during retention times.

Note1:

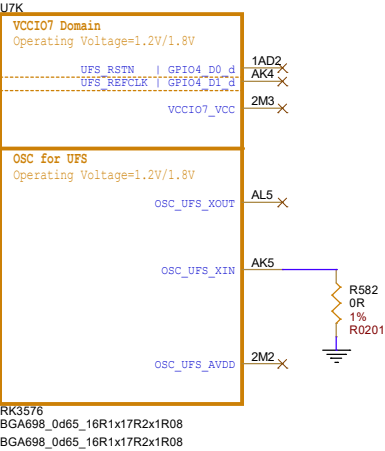
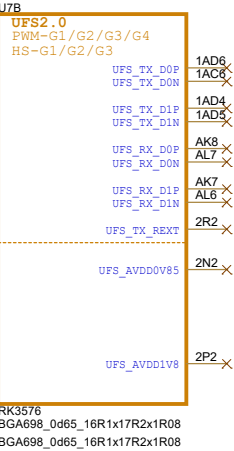
Caps in the red line dotted box should be placed under the U1000 package

Note2:

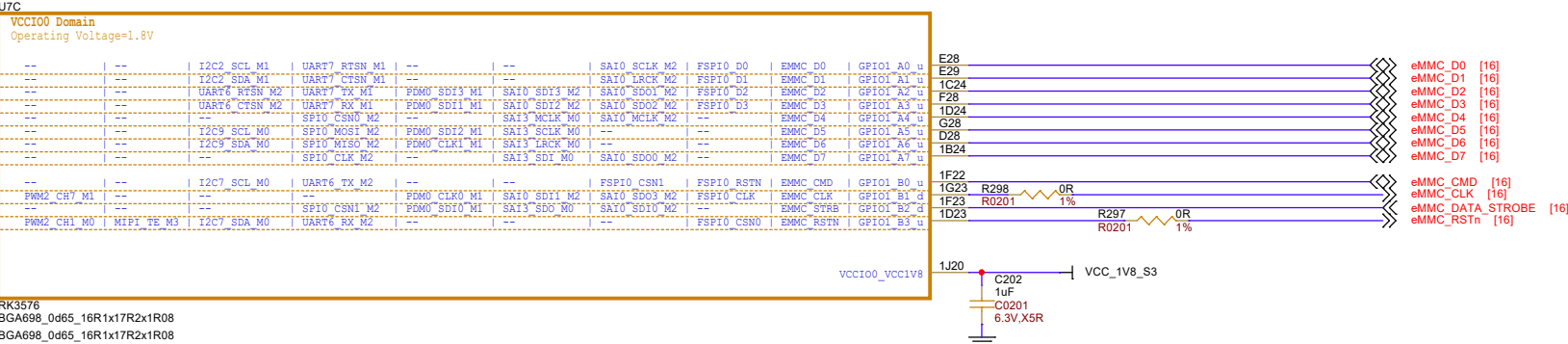
Resistors in the red line dotted box should be placed under the U1000 package

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Size: A3	Document Number:	08 RK3576-DDR PHY	Rev: v1.0
Date: Friday, July 10, 2026		Sheet: 8 of 20	

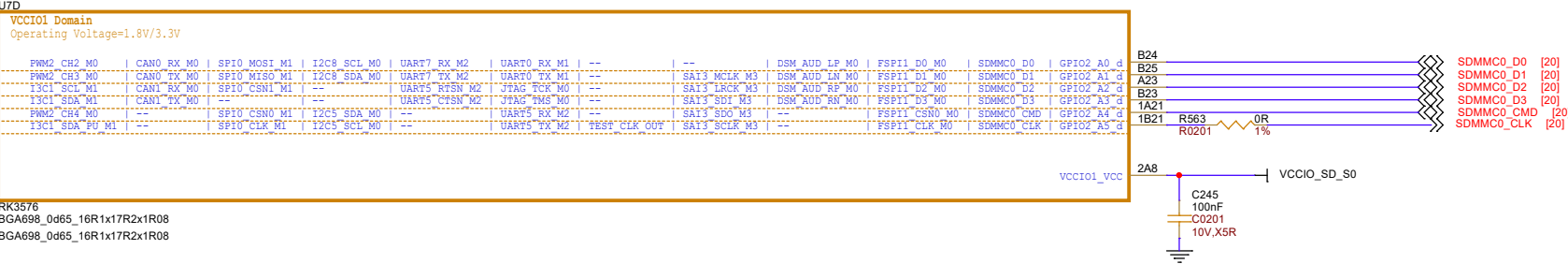
RK3576_B (UFS2.0)



RK3576_C (VCCIO0)

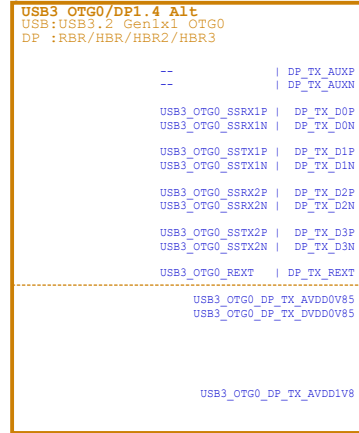


RK3576_B (UFS2.0)



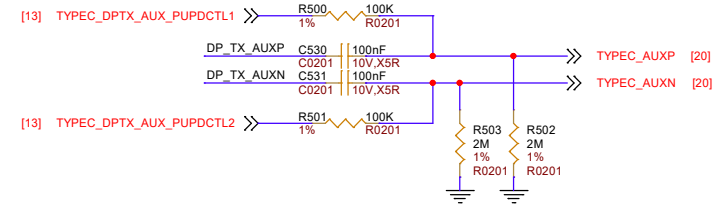
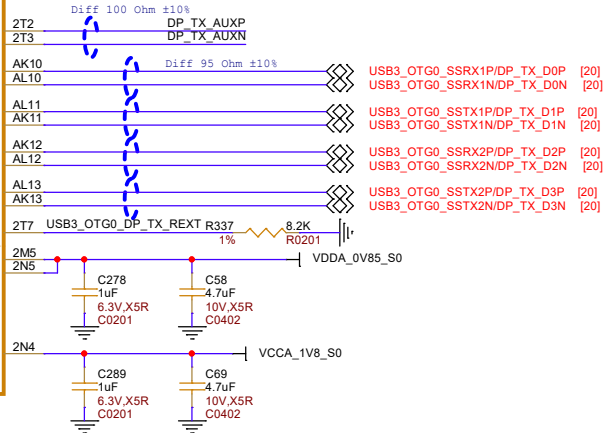
RK3576_L (USB3/DP)

U7L



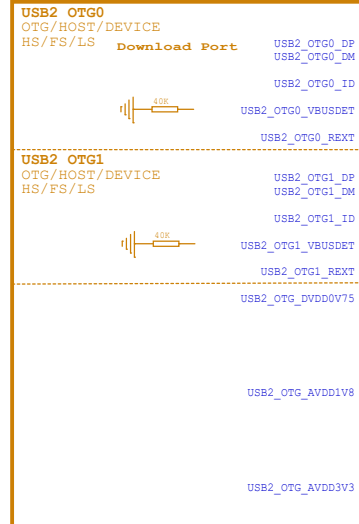
RK3576
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BGA698_0d65_16R1x17R2x1R08

Support: Type-C With
DisplayPort Alternate Mode

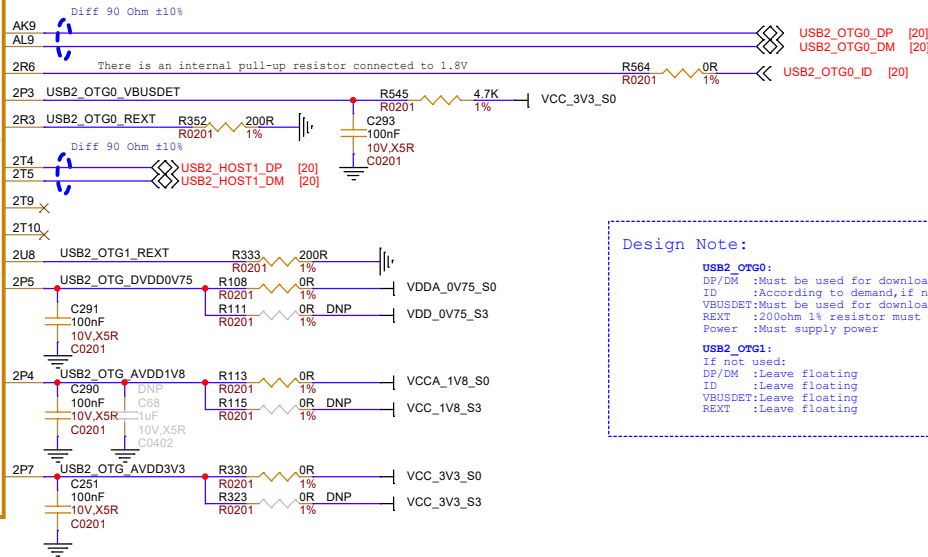


RK3576_M (USB2)

U7M



RK3576
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BGA698_0d65_16R1x17R2x1R08

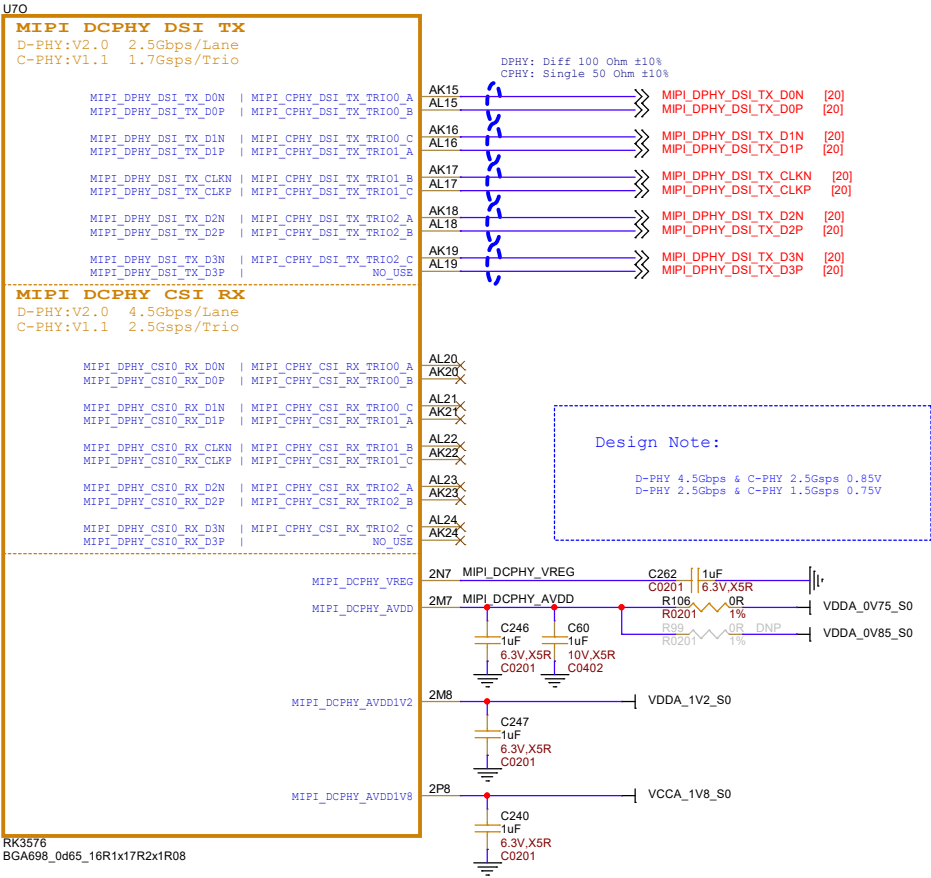


Design Note:

USB2 OTG0:
DP/DM :Must be used for download
ID :According to demand,if not used,leave floating
VBUSDET:Must be used for download
REXT :200ohm 1% resistor must be connected externally
Power :Must supply power

USB2 OTG1:
If not used:
DP/DM :Leave floating
ID :Leave floating
VBUSDET:Leave floating
REXT :Leave floating

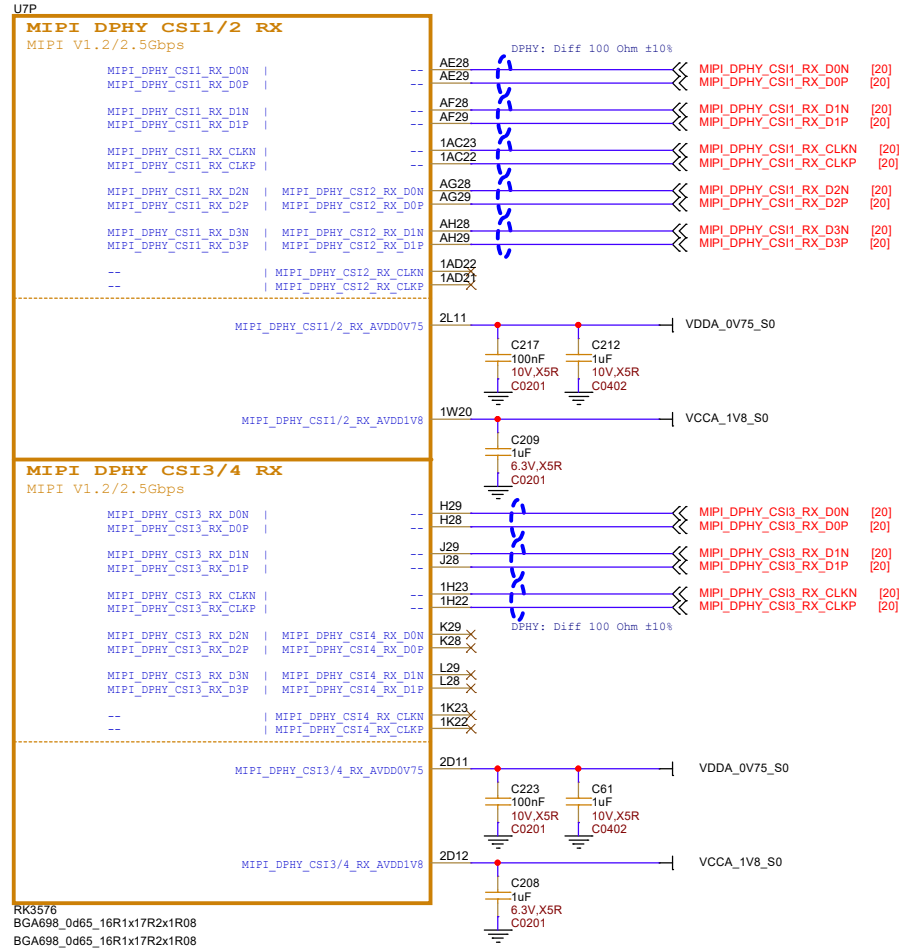
RK3576_O(MIPI DCPHY)



RK3576
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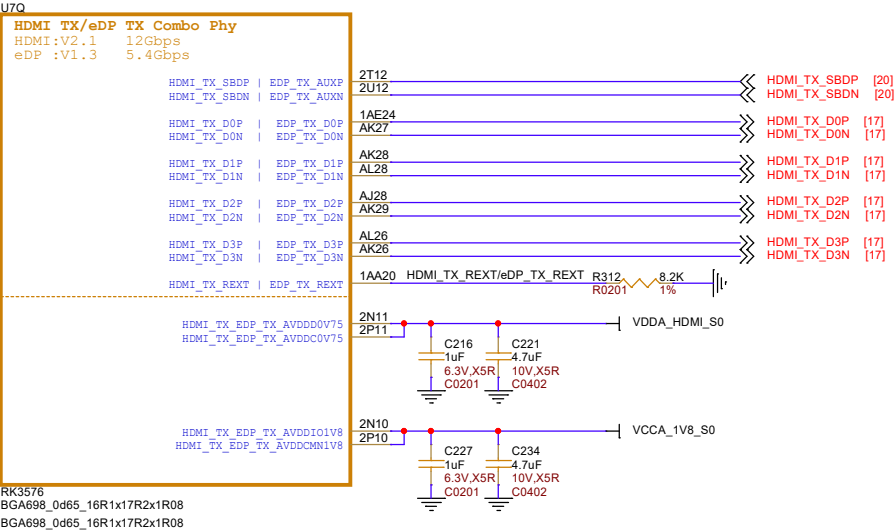
RK3576_P(MIPI DPHY CSI RX)

Support MIPI DPHY CSI1: 1/2/4Lane

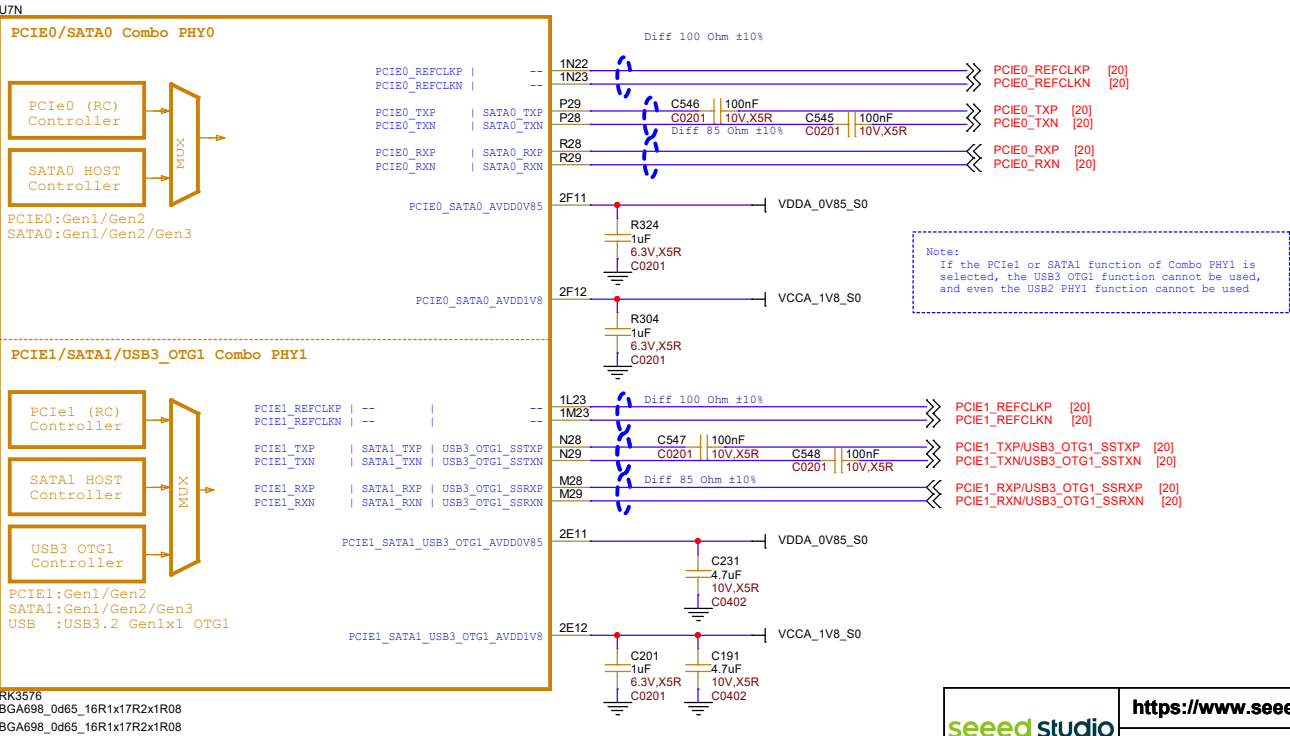


RK3576
BGA698_0d65_16R1x17R2x1R08
BGA698_0d65_16R1x17R2x1R08

RK3576_Q(HDMI/eDP)

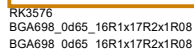


RK3576_N(PCIe/SATA/USB3)



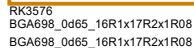
U7H

Operating Voltage=1.8V/3.3V

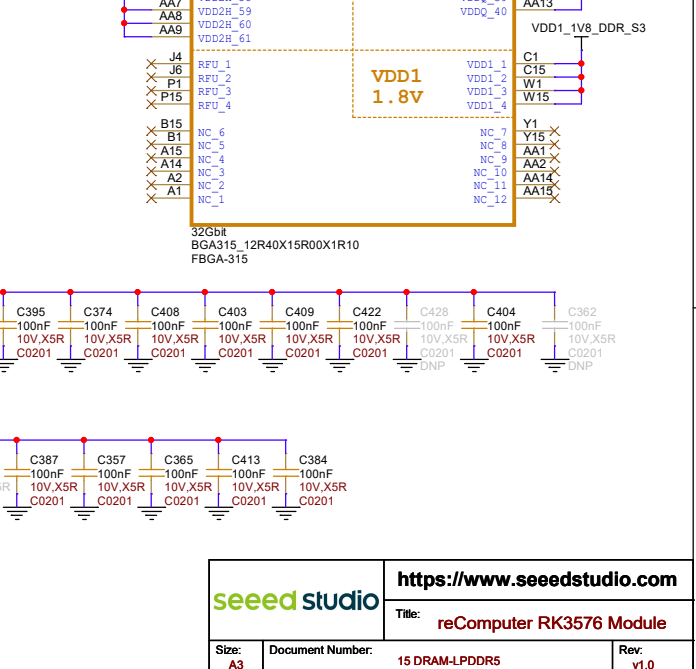
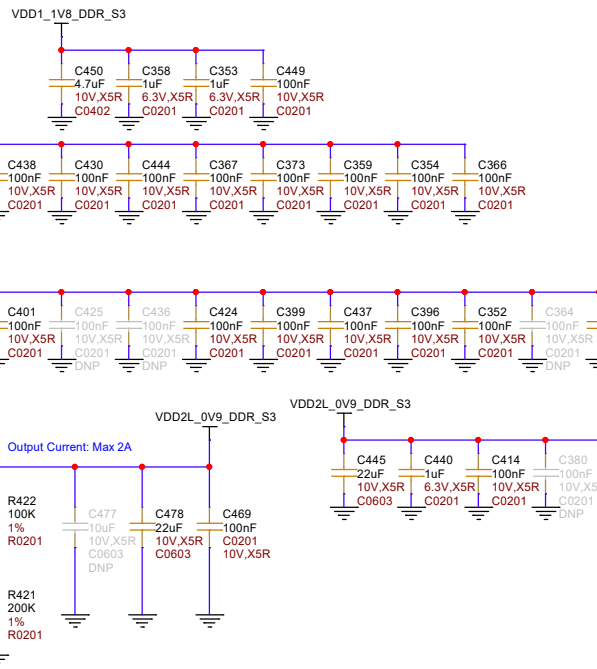
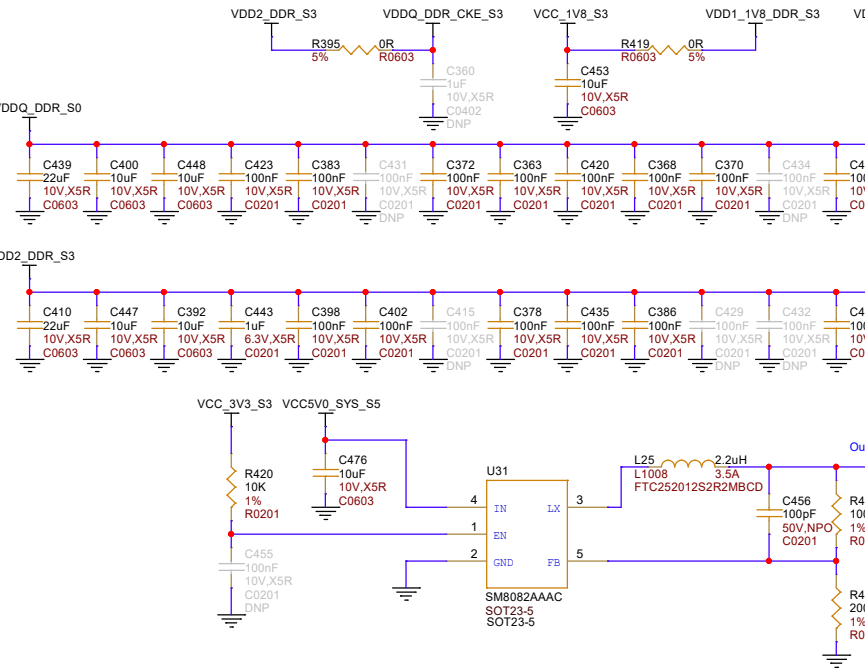


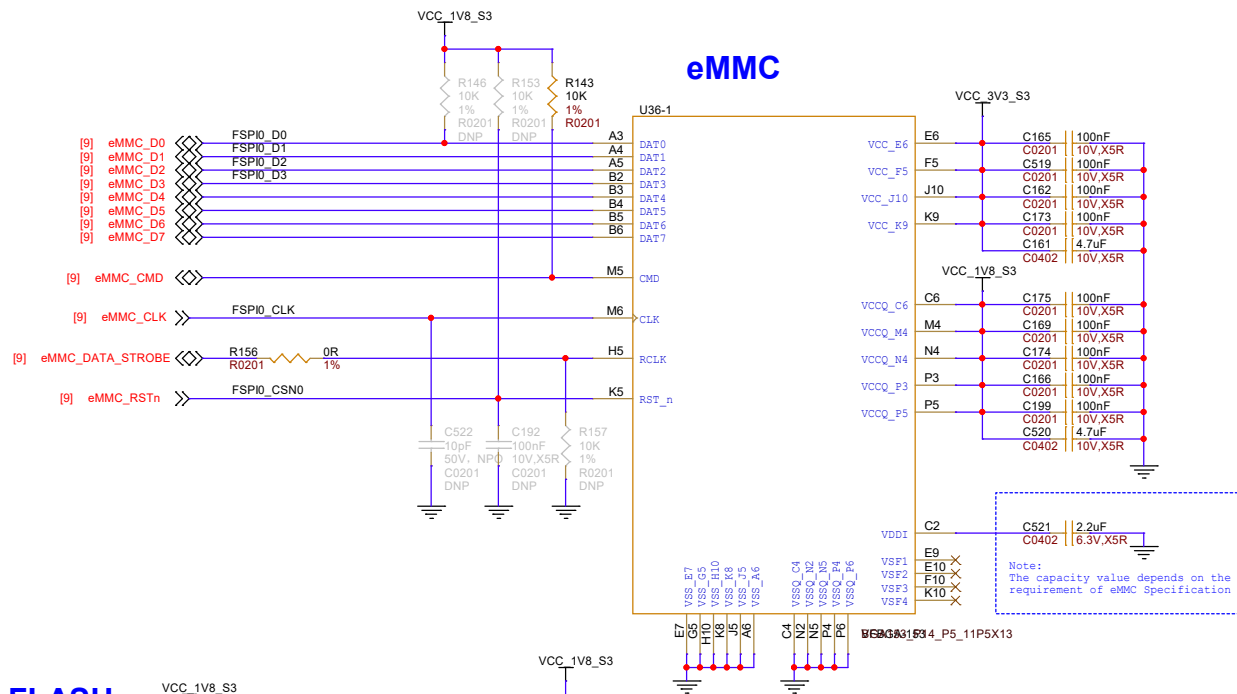
U71

Operating Voltage=1.8V/3.3V



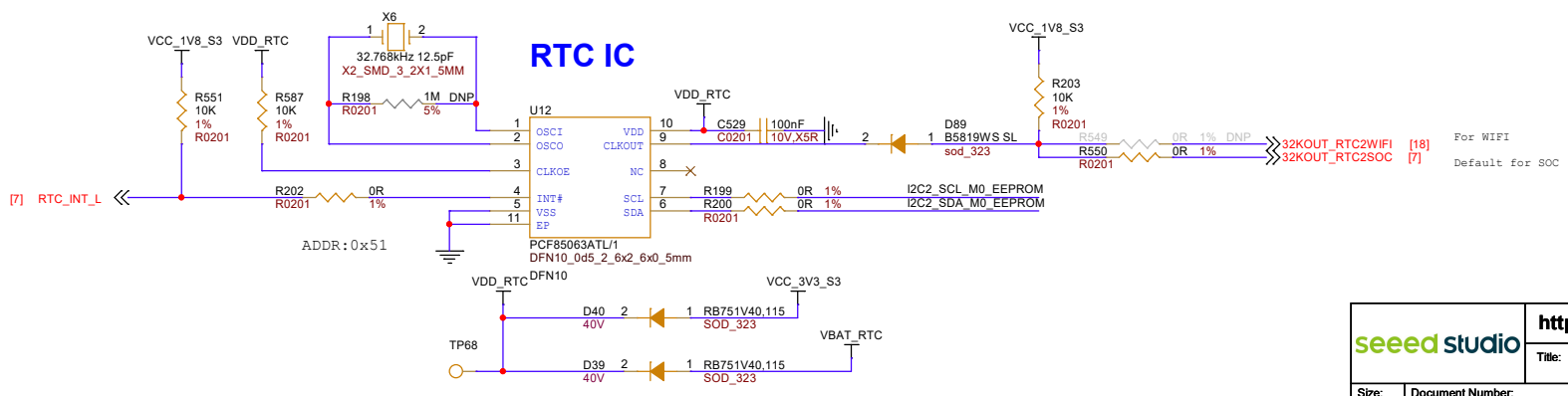
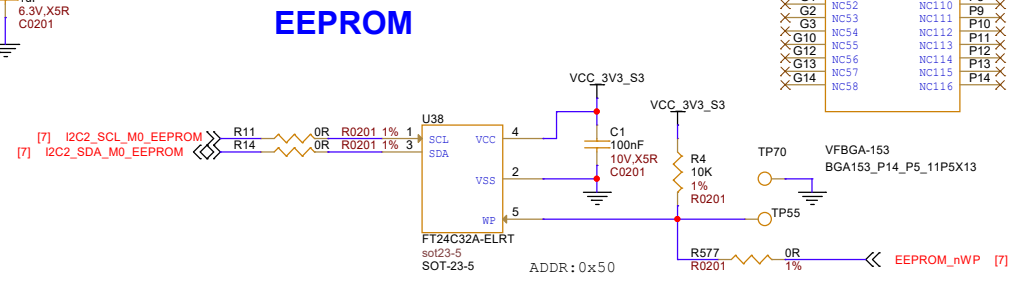
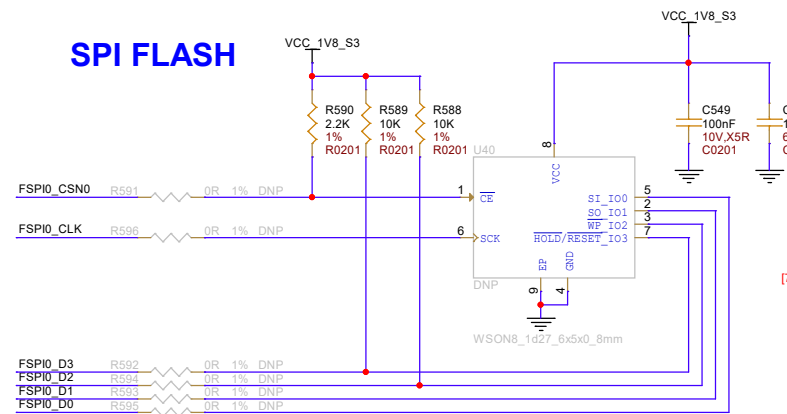
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8] LPDDR5_DQ0_A
8] LPDDR5_DQ1_A
8] LPDDR5_DQ2_A
8] LPDDR5_DQ3_A
8] LPDDR5_DQ4_A
8] LPDDR5_DQ5_A
8] LPDDR5_DQ6_A
8] LPDDR5_DQ7_A
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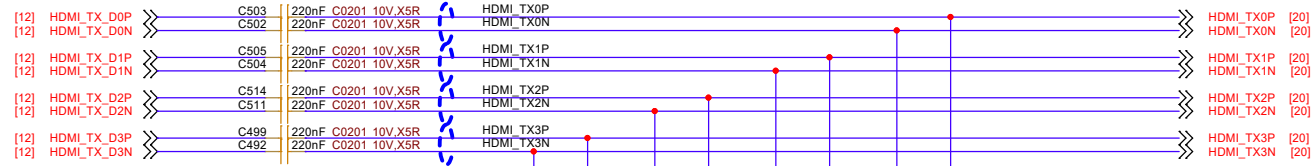
U36-2

A1	NC1	NC59	H1
A2	NC2	NC60	H2
A7	NC3	NC61	H3
A8	NC4	NC62	H12
A9	NC5	NC63	H13
A10	NC6	NC64	H14
A11	NC7	NC65	J1
A12	NC8	NC66	J2
A13	NC9	NC67	J3
A14	NC10	NC68	J12
B1	NC11	NC69	J13
B7	NC12	NC70	J14
B8	NC13	NC71	K1
B9	NC14	NC72	K2
B10	NC15	NC73	K3
B11	NC16	NC74	K6
B12	NC17	NC75	K7
B13	NC18	NC76	K12
B14	NC19	NC77	K13
C1	NC20	NC78	K14
C3	NC21	NC79	L1
C5	NC22	NC80	L2
C7	NC23	NC81	L3
C8	NC24	NC82	L12
C9	NC25	NC83	L13
C10	NC26	NC84	L14
C11	NC27	NC85	M1
C12	NC28	NC86	M2
C13	NC29	NC87	M3
C14	NC30	NC88	M7
D1	NC31	NC89	M8
D2	NC32	NC90	M9
D3	NC33	NC91	M10
D4	NC34	NC92	M11
D12	NC35	NC93	M12
D13	NC36	NC94	M13
D14	NC37	NC95	M14
E1	NC38	NC96	N1
E2	NC39	NC97	N3
E3	NC40	NC98	N6
E5	NC41	NC99	N7
E8	NC42	NC100	N8
E12	NC43	NC101	N9
E13	NC44	NC102	N10
E14	NC45	NC103	N11
F1	NC46	NC104	N12
F2	NC47	NC105	N13
F3	NC48	NC106	N14
F12	NC49	NC107	P1
F13	NC50	NC108	P2
F14	NC51	NC109	P7
G1	NC52	NC110	P8
G2	NC53	NC111	P9
G3	NC54	NC112	P10
G10	NC55	NC113	P11
G12	NC56	NC114	P12
G13	NC57	NC115	P13
G14	NC58	NC116	P14



Layout Note:
Diff 100 Ohm $\pm 10\%$

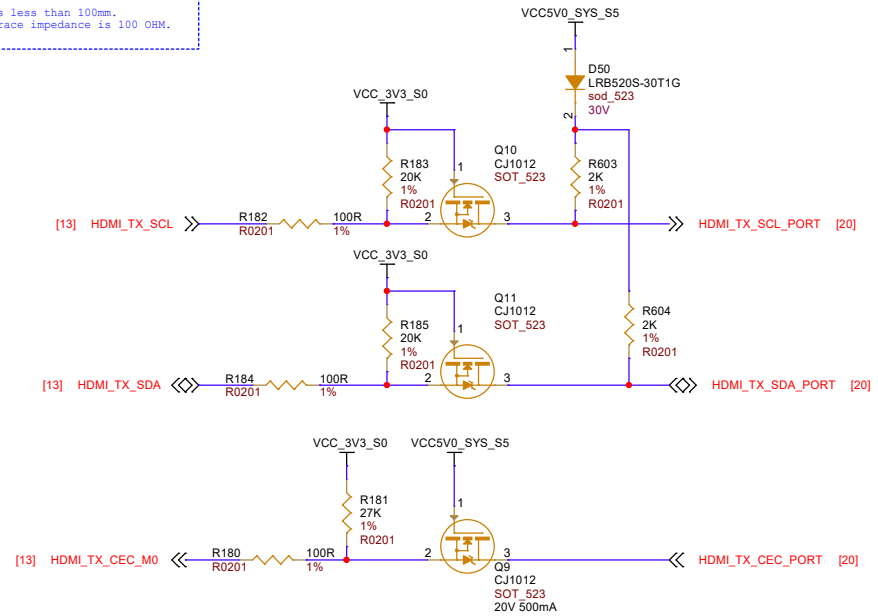
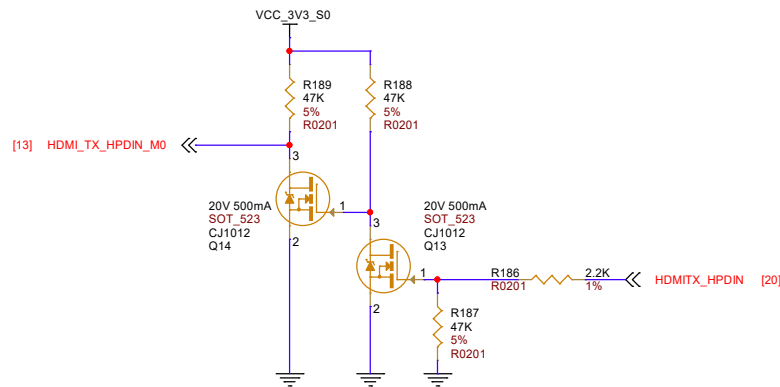
HDMI 2.1



[14] HDMI_TX_ON_H <=>

Design Note:
1) HDMI_TX_ON_H=1, HDMI2.0 TDMS Mode
2) HDMI_TX_ON_H=0, HDMI2.1 FRL Mode

Note:
The HDMI2.1 trace length is less than 100mm.
The HDMI2.1 differential trace impedance is 100 OHM.



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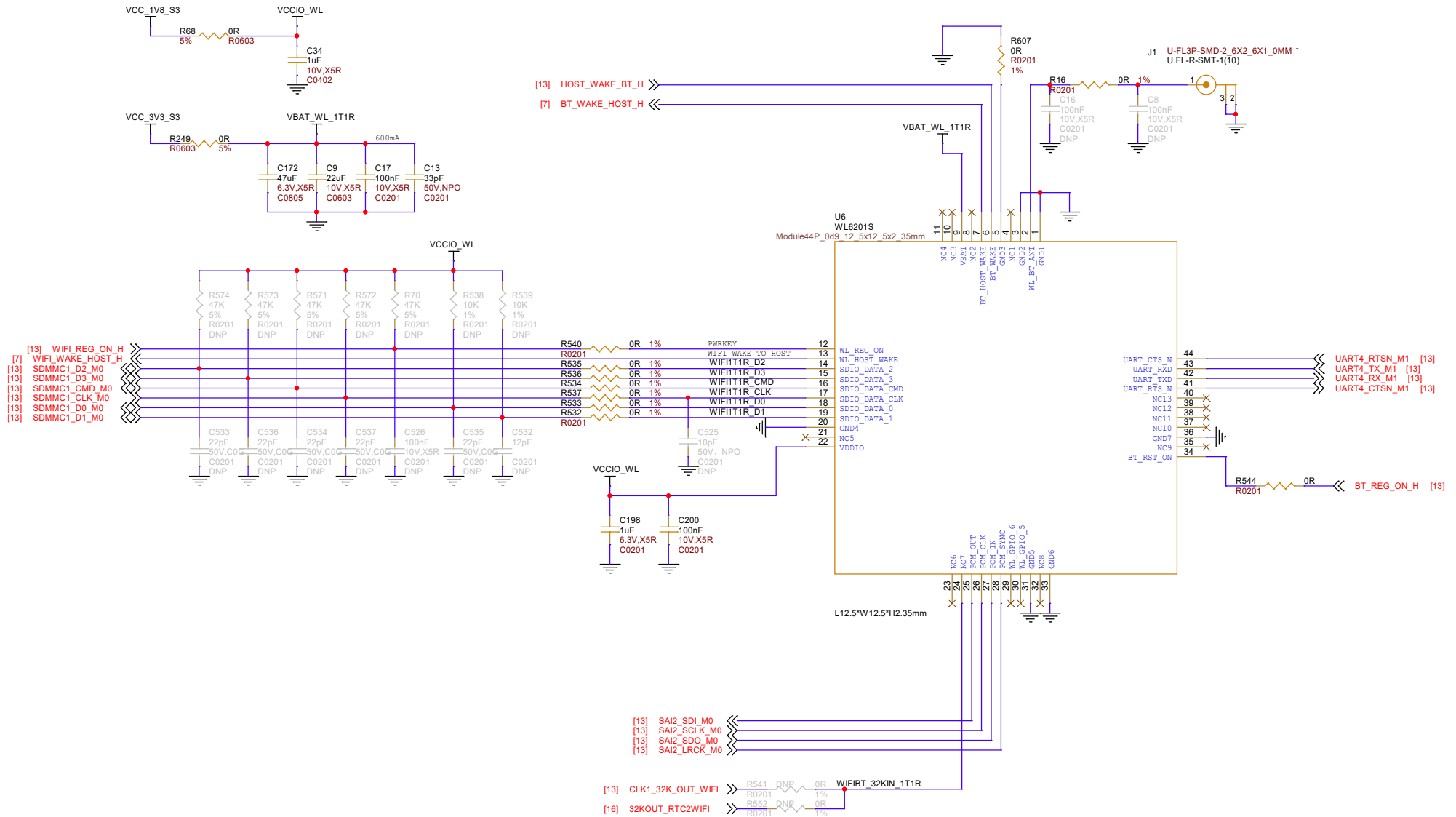
<https://www.seeedstudio.com>

Title: reComputer RK3576 Module

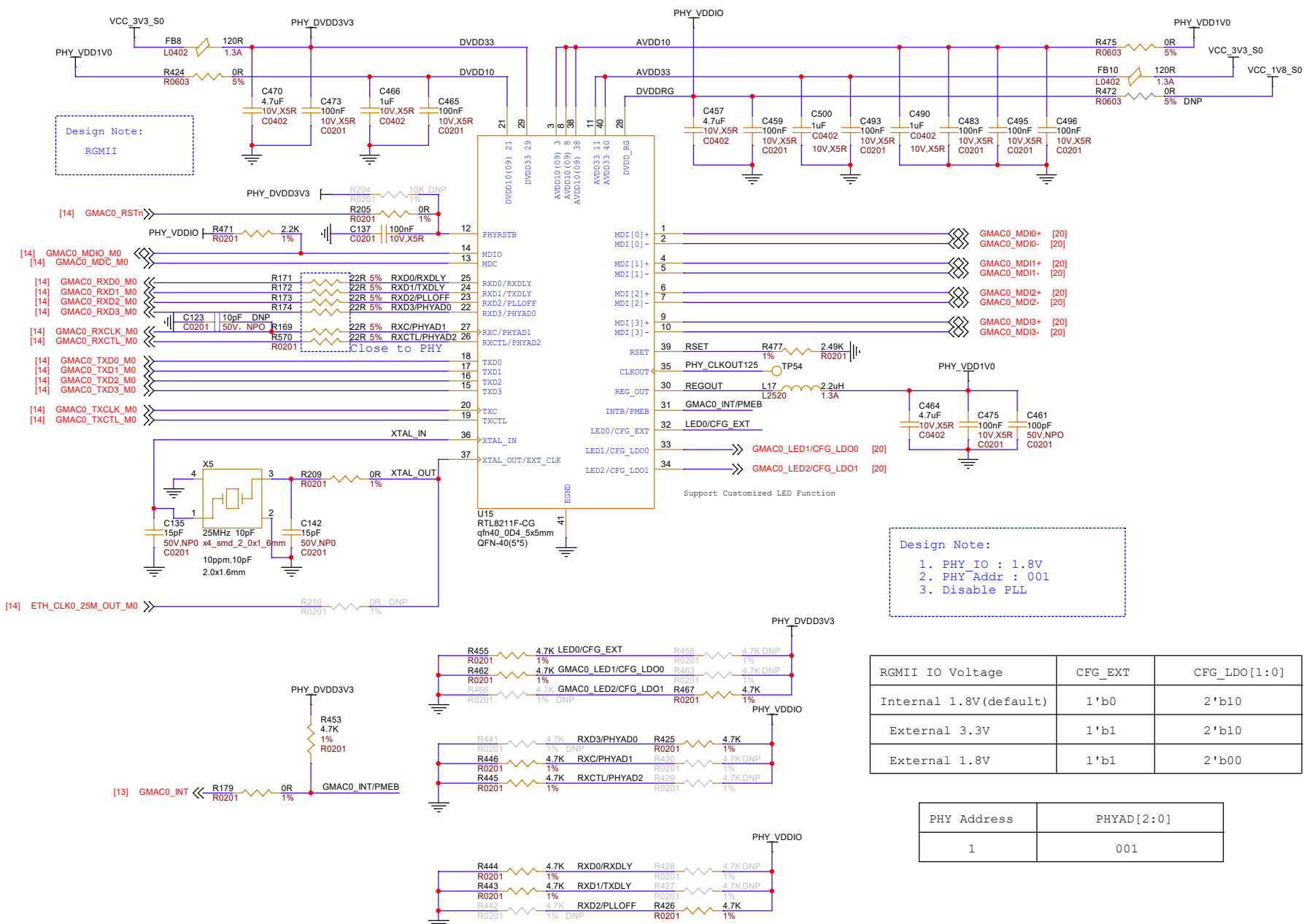
Size: A3 Document Number: 17 HDMI TX Rev: v1.0

Date: Friday, July 10, 2026 Sheet: 17 of 20

SDIO WIFI/BT MODULE



Gigabit Ethernet



RGMII IO Voltage	CFG_EXT	CFG_LDO[1:0]
Internal 1.8V(default)	1'b0	2'b10
External 3.3V	1'b1	2'b10
External 1.8V	1'b1	2'b00

PHY Address	PHYAD[2:0]
1	001

