RK3566_F(DDR PHY)

U1F

	DDR4	LPDDR4	DDR3	LPDDR3			DDR4	LPDDR4	DDR3	LPDDR3	
DDR_DQ0_A	DDR4_DQ0_A	LPDDR4_DQL0_A	LPDDR4_DQ0_A	DDR3_DQ0	LPDDR3_DQ15		DDR4_A0	**LPDDR4_CLKP_B**	DDR3_A9	---	
DDR_DQ1_A	DDR4_DQ1_A	LPDDR4_DQL2_A	LPDDR4_DQ1_A	DDR3_DQ1	LPDDR3_DQ14		DDR4_A1	---	DDR3_A2	---	
DDR_DQ2_A	DDR4_DQ2_A	LPDDR4_DQL4_A	LPDDR4_DQ2_A	DDR3_DQ2	LPDDR3_DQ10		DDR4_A2	LPDDR4_A1_A	DDR3_A4	LPDDR3_A6	
DDR_DQ3_A	DDR4_DQ3_A	LPDDR4_DQL6_A	LPDDR4_DQ3_A	DDR3_DQ3	LPDDR3_DQ9		DDR4_A3	LPDDR4_CKE1_A	DDR3_A3	---	
DDR_DQ4_A	DDR4_DQ4_A	LPDDR4_DQL7_A	LPDDR4_DQ4_A	DDR3_DQ4	LPDDR3_DQ13		DDR4_A4	LPDDR4_A3_B	DDR3_BA1	LPDDR3_A3	
DDR_DQ5_A	DDR4_DQ5_A	LPDDR4_DQL5_A	LPDDR4_DQ5_A	DDR3_DQ5	LPDDR3_DQ12		DDR4_A5	LPDDR4_A5_B	DDR3_A11	LPDDR3_A2	
DDR_DQ6_A	DDR4_DQ6_A	LPDDR4_DQL3_A	LPDDR4_DQ6_A	DDR3_DQ6	LPDDR3_DQ8		DDR4_A6	LPDDR4_A1_B	DDR3_A13	LPDDR3_A1	
DDR_DQ7_A	DDR4_DQ7_A	LPDDR4_DQL1_A	LPDDR4_DQ7_A	DDR3_DQ7	LPDDR3_DQ11		DDR4_A7	LPDDR4_ODT0_CA_B	DDR3_A8	---	
DDR_DM0_A	DDR4_DML_A	LPDDR4_DM0_A	DDR3_DM0	LPDDR3_DM1			DDR4_A8	LPDDR4_ODT0_CA_A	DDR3_A6	LPDDR3_A9	
							DDR4_A9	**LPDDR4_CLKN_B**	DDR3_A5	---	
DDR_DQS0P_A	DDR4_DQSL_P_A	LPDDR4_DQS0P_A	DDR3_DQS0P	LPDDR3_DQS1P			DDR4_A10	LPDDR4_CKE0_B	DDR3_A10	---	
DDR_DQS0N_A	DDR4_DQSL_N_A	LPDDR4_DQS0N_A	DDR3_DQS0N	LPDDR3_DQS1N			DDR4_A11	LPDDR4_A0_A	DDR3_A7	LPDDR3_A8	
DDR_DQ8_A	DDR4_DQU3_A	LPDDR4_DQ8_A	DDR3_DQ8	LPDDR3_DQ25			DDR4_A12	LPDDR4_A3_A	DDR3_BA2	---	
DDR_DQ9_A	DDR4_DQU1_A	LPDDR4_DQ9_A	DDR3_DQ9	LPDDR3_DQ24			DDR4_A13	LPDDR4_A0_B	DDR3_A14	---	
DDR_DQ10_A	DDR4_DQU7_A	LPDDR4_DQ10_A	DDR3_DQ10	LPDDR3_DQ28			DDR4_A14_WEn	LPDDR4_A4_A	DDR3_A15	LPDDR3_A5	
DDR_DQ11_A	DDR4_DQU5_A	LPDDR4_DQ11_A	DDR3_DQ11	LPDDR3_DQ29			DDR4_A15_CASn	LPDDR4_A2_A	DDR3_A0	---	
DDR_DQ12_A	DDR4_DQU2_A	LPDDR4_DQ12_A	DDR3_DQ12	LPDDR3_DQ26			DDR4_A16_RASn	LPDDR4_A5_A	DDR3_RASn	LPDDR3_A7	
DDR_DQ13_A	DDR4_DQU4_A	LPDDR4_DQ13_A	DDR3_DQ13	LPDDR3_DQ31			DDR4_ACTn	LPDDR4_CKE1_B	DDR3_CASn	---	
DDR_DQ14_A	DDR4_DQU6_A	LPDDR4_DQ14_A	DDR3_DQ14	LPDDR3_DQ30			DDR4_BA0	LPDDR4_A2_B	DDR3_A1	---	
DDR_DQ15_A	DDR4_DQU0_A	LPDDR4_DQ15_A	DDR3_DQ15	LPDDR3_DQ27			DDR4_BA1	LPDDR4_A4_B	DDR3_A12	LPDDR3_A4	
DDR_DM1_A	DDR4_DMU_A	LPDDR4_DM1_A	DDR3_DM1	LPDDR3_DM3			DDR4_BG0	LPDDR4_ODT1_CA_B	DDR3_WEn	---	
DDR_DQS1P_A	DDR4_DQSU_P_A	LPDDR4_DQS1P_A	DDR3_DQS3P	LPDDR3_DQS3P			DDR4_BG1	LPDDR4_ODT1_CA_A	DDR3_BA0	---	
DDR_DQS1N_A	DDR4_DQSU_N_A	LPDDR4_DQS1N_A	DDR3_DQS3N	LPDDR3_DQS3N			DDR4_CKE	LPDDR4_CKE0_A	DDR3_CKE	LPDDR3_CKE	
DDR_DQ0_B	DDR4_DQU7_B	LPDDR4_DQ0_B	DDR3_DQ16	LPDDR3_DQ1			**DDR4_CLKP**	**LPDDR4_CLKP_A**	**DDR3_CLKP**	**LPDDR3_CLKP**	
DDR_DQ1_B	DDR4_DQU5_B	LPDDR4_DQ1_B	DDR3_DQ17	LPDDR3_DQ5			**DDR4_CLKN**	**LPDDR4_CLKN_A**	**DDR3_CLKN**	**LPDDR3_CLKN**	
DDR_DQ2_B	DDR4_DQU3_B	LPDDR4_DQ2_B	DDR3_DQ18	LPDDR3_DQ6			DDR4_CS0n	LPDDR4_CS0n_A	DDR3_ODT1	LPDDR3_ODT0	
DDR_DQ3_B	DDR4_DQU1_B	LPDDR4_DQ3_B	DDR3_DQ19	LPDDR3_DQ4			DDR4_CS1n	LPDDR4_CS1n_A	DDR3_CS1n	LPDDR3_ODT1	
DDR_DQ4_B	DDR4_DQU0_B	LPDDR4_DQ4_B	DDR3_DQ20	LPDDR3_DQ2			DDR4_ODT0	LPDDR4_CS1n_B	DDR3_ODT0	LPDDR3_CS1n	
DDR_DQ5_B	DDR4_DQU6_B	LPDDR4_DQ5_B	DDR3_DQ21	LPDDR3_DQ3			DDR4_ODT1	LPDDR4_CS0n_B	DDR3_CS0n	LPDDR3_CS0n	
DDR_DQ6_B	DDR4_DQU4_B	LPDDR4_DQ6_B	DDR3_DQ22	LPDDR3_DQ7							
DDR_DQ7_B	DDR4_DQU2_B	LPDDR4_DQ7_B	DDR3_DQ23	LPDDR3_DQ0			DDR4_RESETn	LPDDR4_RESETn	DDR3_RESETn	---	
DDR_DM0_B	DDR4_DMU_B	LPDDR4_DM0_B	DDR3_DM2	LPDDR3_DM0							
DDR_DQS0P_B	DDR4_DQSU_P_B	LPDDR4_DQS0P_B	DDR3_DQS2P	LPDDR3_DQS0P							
DDR_DQS0N_B	DDR4_DQSU_N_B	LPDDR4_DQS0N_B	DDR3_DQS2N	LPDDR3_DQS0N							
DDR_DQ8_B	DDR4_DQL0_B	LPDDR4_DQ8_B	DDR3_DQ24	LPDDR3_DQ18							
DDR_DQ9_B	DDR4_DQL2_B	LPDDR4_DQ9_B	DDR3_DQ25	LPDDR3_DQ19							
DDR_DQ10_B	DDR4_DQL4_B	LPDDR4_DQ10_B	DDR3_DQ26	LPDDR3_DQ22							
DDR_DQ11_B	DDR4_DQL6_B	LPDDR4_DQ11_B	DDR3_DQ27	LPDDR3_DQ23							
DDR_DQ12_B	DDR4_DQL7_B	LPDDR4_DQ12_B	DDR3_DQ28	LPDDR3_DQ16							
DDR_DQ13_B	DDR4_DQL5_B	LPDDR4_DQ13_B	DDR3_DQ29	LPDDR3_DQ17							
DDR_DQ14_B	DDR4_DQL1_B	LPDDR4_DQ14_B	DDR3_DQ30	LPDDR3_DQ20							
DDR_DQ15_B	DDR4_DQL3_B	LPDDR4_DQ15_B	DDR3_DQ31	LPDDR3_DQ21							
DDR_DM1_B	DDR4_DML_B	LPDDR4_DM1_B	DDR3_DM3	LPDDR3_DM2							
DDR_DQS1P_B	DDR4_DQSL_P_B	LPDDR4_DQS1P_B	DDR3_DQS3P	LPDDR3_DQS2P							
DDR_DQS1N_B	DDR4_DQSL_N_B	LPDDR4_DQS1N_B	DDR3_DQS3N	LPDDR3_DQS2N							

Note: Sequences can not be swap

Note:
Except DDR3, other DQ sequences
can not be swap

	VDDQ	VDDQL
DDR3L	1.35V	1.35V
DDR3	1.50V	1.50V
DDR4	1.20V	1.20V
LPDDR3	1.20V	1.20V
LPDDR4	1.10V	1.10V
LPDDR4X	1.10V	**0.60V**

Left side signals:
- 26 LPDDR4_DQ0_A
- 26 LPDDR4_DQ1_A
- 26 LPDDR4_DQ2_A
- 26 LPDDR4_DQ3_A
- 26 LPDDR4_DQ4_A
- 26 LPDDR4_DQ5_A
- 26 LPDDR4_DQ6_A
- 26 LPDDR4_DQ7_A
- 26 LPDDR4_DM0_A
- 26 LPDDR4_DQS0P_A
- 26 LPDDR4_DQS0N_A
- 26 LPDDR4_DQ8_A
- 26 LPDDR4_DQ9_A
- 26 LPDDR4_DQ10_A
- 26 LPDDR4_DQ11_A
- 26 LPDDR4_DQ12_A
- 26 LPDDR4_DQ13_A
- 26 LPDDR4_DQ14_A
- 26 LPDDR4_DQ15_A
- 26 LPDDR4_DM1_A
- 26 LPDDR4_DQS1P_A
- 26 LPDDR4_DQS1N_A
- 26 LPDDR4_DQ0_B
- 26 LPDDR4_DQ1_B
- 26 LPDDR4_DQ2_B
- 26 LPDDR4_DQ3_B
- 26 LPDDR4_DQ4_B
- 26 LPDDR4_DQ5_B
- 26 LPDDR4_DQ6_B
- 26 LPDDR4_DQ7_B
- 26 LPDDR4_DM0_B
- 26 LPDDR4_DQS0P_B
- 26 LPDDR4_DQS0N_B
- 26 LPDDR4_DQ8_B
- 26 LPDDR4_DQ9_B
- 26 LPDDR4_DQ10_B
- 26 LPDDR4_DQ11_B
- 26 LPDDR4_DQ12_B
- 26 LPDDR4_DQ13_B
- 26 LPDDR4_DQ14_B
- 26 LPDDR4_DQ15_B
- 26 LPDDR4_DM1_B
- 26 LPDDR4_DQS1P_B
- 26 LPDDR4_DQS1N_B

Right side signals:
- LPDDR4_CLKP_B 26
- LPDDR4_A1_A 26
- LPDDR4_CKE1_A 26
- LPDDR4_A3_B 26
- LPDDR4_A5_B 26
- LPDDR4_A1_B 26
- LPDDR4_ODT0_CA_B 26
- LPDDR4_ODT0_CA_A 26
- LPDDR4_CLKN_B 26
- LPDDR4_CKE0_B 26
- LPDDR4_A0_A 26
- LPDDR4_A3_A 26
- LPDDR4_A0_B 26
- LPDDR4_A4_A 26
- LPDDR4_A2_A 26
- LPDDR4_A5_A 26
- LPDDR4_CKE1_B 26
- LPDDR4_A2_B 26
- LPDDR4_A4_B 26
- LPDDR4_CKE0_A 26
- LPDDR4_CLKP_A 26
- LPDDR4_CLKN_A 26
- LPDDR4_CS0n_A 26
- LPDDR4_CS1n_A 26
- LPDDR4_CS1n_B 26
- LPDDR4_CS0n_B 26
- LPDDR4_RESETn 26

DDR_RZQ R1 240R 1%

DDR_VREFOUT

DDR_VDDQ_1 ... DDR_VDDQ_8 — VCC_DDR
C17 100nF 10V, C18 100nF 10V, C19 100nF 10V, C20 4.7uF 6.3V, C21 4.7uF 6.3V

DDR_VDDQL_1 ... DDR_VDDQL_5 — VCC0V6_DDR
C22 100nF 10V, C23 100nF 10V, C24 100nF 10V, C25 4.7uF 6.3V, C26 4.7uF 6.3V

DDR_AVSS

RK3566

U10A — LPDDR4_200p

CH A

Net	Pin
LPDDR4_DQ0_A	B2 / DQ0_a
LPDDR4_DQ1_A	C2 / DQ1_a
LPDDR4_DQ2_A	E2 / DQ2_a
LPDDR4_DQ3_A	F2 / DQ3_a
LPDDR4_DQ4_A	F4 / DQ4_a
LPDDR4_DQ5_A	E4 / DQ5_a
LPDDR4_DQ6_A	C4 / DQ6_a
LPDDR4_DQ7_A	B4 / DQ7_a
LPDDR4_DQS0P_A	D3 / DQS0_t_a
LPDDR4_DQS0N_A	E3 / DQS0_c_a
LPDDR4_DM0_A	C3 / DMI0_a
LPDDR4_DQ8_A	B11 / DQ8_a
LPDDR4_DQ9_A	C11 / DQ9_a
LPDDR4_DQ10_A	E11 / DQ10_a
LPDDR4_DQ11_A	F11 / DQ11_a
LPDDR4_DQ12_A	F9 / DQ12_a
LPDDR4_DQ13_A	E9 / DQ13_a
LPDDR4_DQ14_A	C9 / DQ14_a
LPDDR4_DQ15_A	B9 / DQ15_a
LPDDR4_DQS1P_A	D10 / DQS1_t_a
LPDDR4_DQS1N_A	E10 / DQS1_c_a
LPDDR4_DM1_A	C10 / DMI1_a
LPDDR4_A0_A	H2 / CA0_a
LPDDR4_A1_A	J2 / CA1_a
LPDDR4_A2_A	H9 / CA2_a
LPDDR4_A3_A	H10 / CA3_a
LPDDR4_A4_A	H11 / CA4_a
LPDDR4_A5_A	J11 / CA5_a
LPDDR4_CLKP_A	J8 / CK_t_a
LPDDR4_CLKN_A	J9 / CK_c_a
LPDDR4_CKE0_A	J4 / CKE0_a
LPDDR4_CKE1_A	J5 / CKE1_a
	K8 / CKE2_a_NC
LPDDR4_CS0n_A	H4 / CS0_a
LPDDR4_CS1n_A	H3 / CS1_a
	K5 / CS2_a_NC
LPDDR4_ODT0_CA_A	G2 / ODT_CA_a
	A5 / ZQ0
	A8 / ZQ1
	G11 / ZQ2_NC

CH B

Net	Pin
LPDDR4_DQ0_B	AA2 / DQ0_b
LPDDR4_DQ1_B	Y2 / DQ1_b
LPDDR4_DQ2_B	V2 / DQ2_b
LPDDR4_DQ3_B	U2 / DQ3_b
LPDDR4_DQ4_B	U4 / DQ4_b
LPDDR4_DQ5_B	V4 / DQ5_b
LPDDR4_DQ6_B	Y4 / DQ6_b
LPDDR4_DQ7_B	AA4 / DQ7_b
LPDDR4_DQS0P_B	W3 / DQS0_t_b
LPDDR4_DQS0N_B	V3 / DQS0_c_b
LPDDR4_DM0_B	Y3 / DMI0_b
LPDDR4_DQ8_B	AA11 / DQ8_b
LPDDR4_DQ9_B	Y11 / DQ9_b
LPDDR4_DQ10_B	V11 / DQ10_b
LPDDR4_DQ11_B	U11 / DQ11_b
LPDDR4_DQ12_B	U9 / DQ12_b
LPDDR4_DQ13_B	V9 / DQ13_b
LPDDR4_DQ14_B	Y9 / DQ14_b
LPDDR4_DQ15_B	AA9 / DQ15_b
LPDDR4_DQS1P_B	W10 / DQS1_t_b
LPDDR4_DQS1N_B	V10 / DQS1_c_b
LPDDR4_DM1_B	Y10 / DMI1_b
LPDDR4_A0_B	R2 / CA0_b
LPDDR4_A1_B	P2 / CA1_b
LPDDR4_A2_B	R9 / CA2_b
LPDDR4_A3_B	R10 / CA3_b
LPDDR4_A4_B	R11 / CA4_b
LPDDR4_A5_B	P11 / CA5_b
LPDDR4_CLKP_B	P8 / CK_t_b
LPDDR4_CLKN_B	P9 / CK_c_b
LPDDR4_CKE0_B	P4 / CKE0_b
LPDDR4_CKE1_B	P5 / CKE1_b
	N8 / CKE2_b_NC
LPDDR4_CS0n_B	R4 / CS0_b
LPDDR4_CS1n_B	R3 / CS1_b
	N5 / CS2_b_NC
LPDDR4_ODT0_CA_B	T2 / ODT_CA_b
LPDDR4_RESETn	T11 / RESET_n

R120 240R 1%
R121 240R 1%
VCC0V6_DDR

C159 NC/1nF 50V

U10B — LPDDR4_200p

VCC1V8_DDR — VDD1_1 … VDD1_8 (F1, F12, G4, G9, T4, T9, U1, U12)
VCC_DDR — VDD2_1 … VDD2_24 (A4, A9, F5, F8, H1, H5, H8, H12, K1, K3, K10, K12, N1, N3, N10, N12, R1, R5, R8, R12, U5, U8, AB4, AB9)
VCC0V6_DDR — VDDQ_1 … VDDQ_20 (B3, B5, B8, B10, D1, D5, D8, D12, F3, F10, U3, U10, W1, W5, W8, W12, AA3, AA5, AA8, AA10)

VSS_1 … VSS_58

DNU_1 … DNU_12 (A1, A2, A11, A12, B1, B12 / AA1, AA12, AB1, AB2, AB11, AB12)

Decoupling capacitors

VCC_DDR:
C160 22uF 6.3V, C161 22uF 6.3V, C163 1uF 10V, C164 100nF 10V, C165 100nF 10V, C166 100nF 10V, C167 100nF 10V, C168 100nF 10V, C169 100nF 10V, C170 100nF 10V, C171 100nF 10V, C172 100nF 10V, C173 100nF 10V, C174 100nF 10V, C175 100nF 10V, C176 100nF 10V, C177 100nF 10V, C178 100nF 10V, C179 100nF 10V

VCC_DDR — R122 0R — VCC0V6_DDR:
C180 22uF 6.3V, C181 22uF 6.3V, C183 1uF 10V, C184 100nF 10V, C185 100nF 10V, C186 100nF 10V, C187 100nF 10V, C188 100nF 10V, C189 100nF 10V, C190 100nF 10V, C191 100nF 10V, C192 100nF 10V, C193 100nF 10V, C194 100nF 10V, C195 100nF 10V, C196 100nF 10V, C197 100nF 10V, C198 100nF 10V, C199 100nF 10V, C200 100nF 10V, C201 100nF 10V

VCCA1V8_PMU — R123 0R — VCC1V8_DDR:
C204 10uF 6.3V, C205 100nF 10V, C206 100nF 10V, C207 100nF 10V