

RTL8211F(D)(I) UTP <=> RGMII QFN-40 Pin Reference Schematic

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Ethernet PHY

REVISION HISTORY


RTL8211F(D)(I) UTP <=> RGMII QFN-40 Pin Reference Schematic V1.0

RTL8211F(D)(I) UTP <=> RGMII QFN-40 Pin Reference Schematic V1.01

* Change the value of C5/C6 for RTL8211FDI/FI application.

RTL8211F(D)(I) UTP <=> RGMII QFN-40 Pin Reference Schematic V1.02

* Fix the name of the path.

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A circuit diagram showing a resistor labeled R7 with a value of 2.49K 1%. One end of the resistor is connected to a ground symbol, and the other end is connected to a node labeled RSET.

The diagram shows a circuit for DVDD33. A single input line from the left splits into two parallel branches. The top branch contains a resistor labeled R9 with a value of 4.7K, followed by a connection to a signal line labeled INTB. The bottom branch contains a resistor labeled R10 with a value of 4.7K, followed by a connection to a signal line labeled PHYRSTB.

Pull-up to disable PLL @ ALDP mode.

Pull-up for additional 2ns delay to TXC/RXC for data latching.

A circuit diagram showing a horizontal line representing a wire. On the left, the label "MDIO" is written in red. The wire continues to the right, passing through a resistor symbol (a zigzag line) labeled "R11" above it. To the right of the resistor, the value "1.5K" is written. The wire then turns upwards and connects to a terminal labeled "DVDDRG" in red.

[illegible]

The diagram illustrates the power supply connections for the ADXL345. It features three main power rails: VDD33 (blue), AVDD33 (green), and DVDD33 (orange). VDD33 is connected to the VDD33 pin of the ADXL345 and is also connected to the VDD33 pin of the ADXL345. AVDD33 is connected to the AVDD33 pin of the ADXL345 and is also connected to the AVDD33 pin of the ADXL345. DVDD33 is connected to the DVDD33 pin of the ADXL345 and is also connected to the DVDD33 pin of the ADXL345. The diagram includes two capacitors, C1 and C2, connected to AVDD33, and two capacitors, C3 and C4, connected to DVDD33. The capacitors are labeled with their values: C1 and C2 are 0.1uF, and C3 and C4 are 4.7uF X5R/X7R. The diagram also shows a resistor R1 connected to VDD33 and a resistor R2 connected to DVDD33. The resistors are labeled with their values: R1 is 0 and R2 is 0. The diagram includes the following text: "VDD33", "AVDD33", "DVDD33", "Close to PHY PIN11 and PIN40 for Analog Power", "Reserved for EMI. (optional)", and "Close to PHY PIN29 for Digital Power & SWR".

LED00/CFG_1D00

DVDD33

R16 47K (NC) LED00/CFG_1D00 R17 47K

R18 47K LED00/CFG_1D00 R19 47K (NC)

R20 47K LED00/CFG_1D00 R21 47K (NC)

Ground

RGMMI Power Source	CFG_EXT	CFG_LDO[1:0]
External 3.3V (default)	1'b1	2'b00
External 2.5V	1'b1	2'b01
External 1.8V	1'b1	2'b10
External 1.5V	1'b1	2'b11
Internal 2.5V	1'b0	2'b01
Internal 1.8V	1'b0	2'b10
Internal 1.5V	1'b0	2'b11

PHY Address	PHYAD[2:0]
0	3'b000
1 (default)	3'b001
2	3'b010
3	3'b011
4	3'b100
5	3'b101
6	3'b110
7	3'b111

RXC_N

R47

0

C27

22pF (NC)

RXC_N

Close to PHY. Reserved for EMI. (optional)

RXD_N

R48

0

RXD_N

R49

0

RXD_N

R50

0

RXD_N

R51

0

RXD_N

R52

0

RXD_N

DVDD33

DVDDR3

Note 1: R6 is not needed for ONLY 3.3V RGMII application, and DVDDR3 can be connected directly to DVDD33.

Note 2: DVDDR3 must be short (or R6 be mounted) to DVDD33 if the external RGMII 3.3V is selected.

Note 3: R6 must be removed if the internal or external 2.5V/1.8V/1.5V RGMII is selected.

Note 4: CAPs must be closed to pin28 for EMI consideration.

For LDO mode

For SWR mode

Note 7*

Note 6*

Reserved for EMI. (optional)

DVDD10

AVDD10

Note 1: The Trace length between L1 and PHY Pin 30 must be within 0.5 cm, C6 and C7 to L1 must be within 0.5cm.

Note 2: Bypass CAPs close to PHY DVDD10/AVDD10 power pins.

Note 3: Any inductance or bead except L1 is not allowed on the path from REGOUT to DVDD10/AVDD10.

Note 4: R3 is reserved to change the DVDD10/AVDD10 supply source to LDO mode (RTL8211FD).

Note 5: No design change of PCB model is needed if R3 is reserved. If only RTL8211FD used for particular PCB model, directly short REGOUT to DVDD10/AVDD10.

Note 6: If RTL8211FI is selected, the C6 should be replaced as 10uF X7R capacitor for industrial grade application. Please refer to the datasheet for other industrial grade information.

Note 7: If RTL8211FDI is selected, the C5 should be replaced for industrial grade application and the value is still under testing.