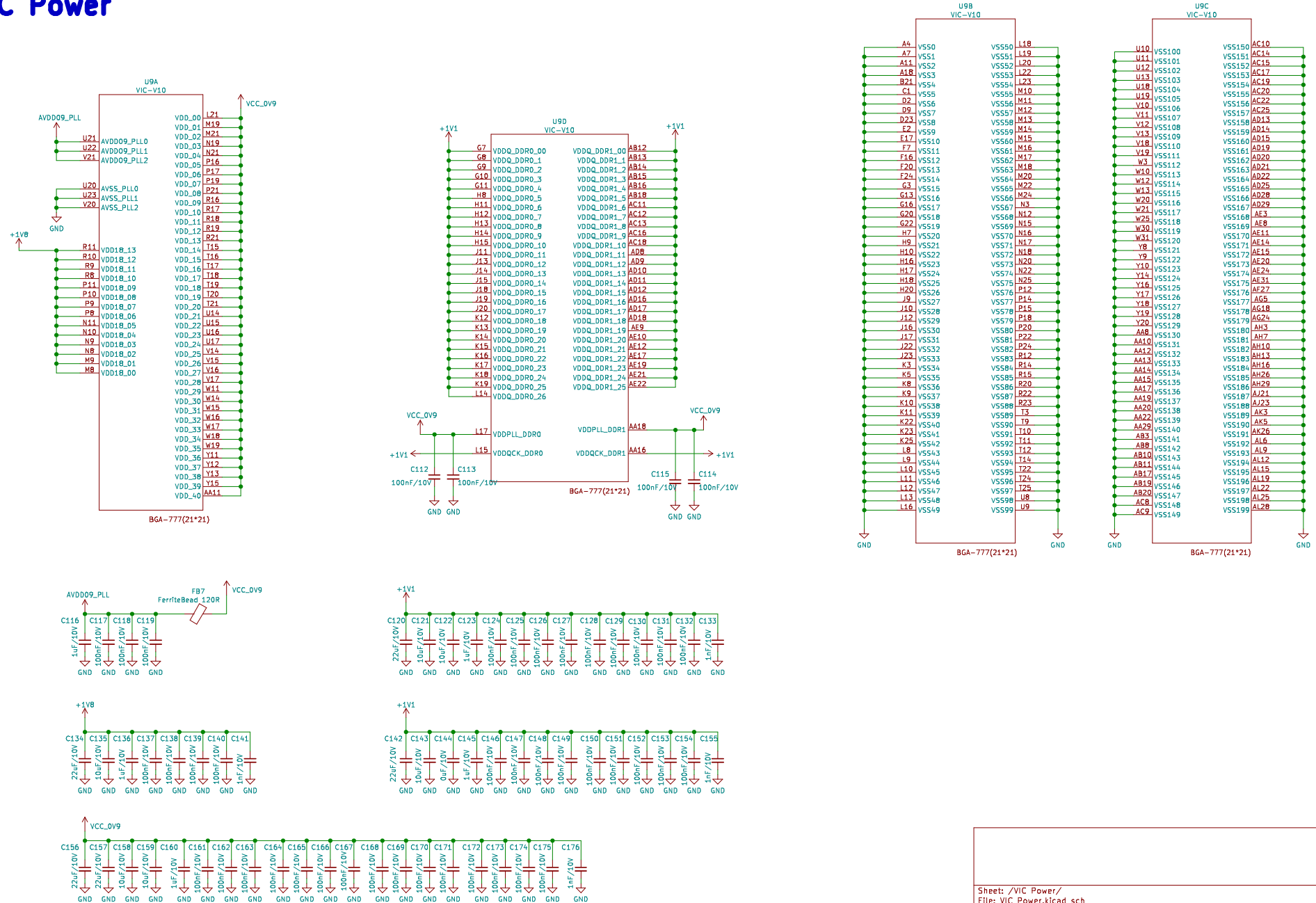


VIC Power



VIC DDR controller

U9E
VIC-V10

U9F
VIC-V10

BGA-777(21*21)

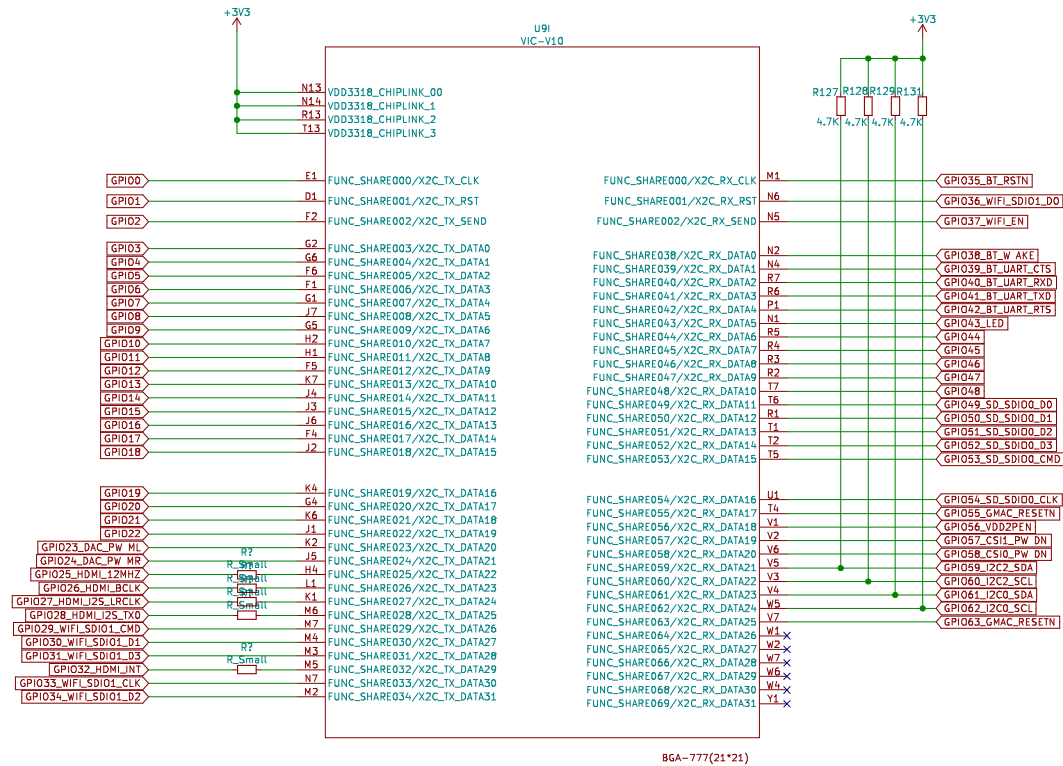
BGA-777(21*21)

Sheet: /BeagleV VIC DDR Ctrl/
File: BeagleV_VIC_DDR_Ctrl.kicad_sch

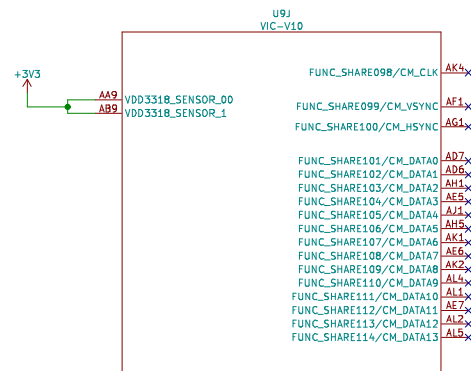
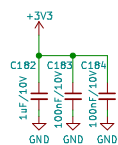
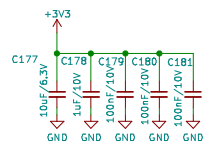
Title: Beagle V

Size: A3	Date: 2021-06-03	Rev: v0.7
KiCad E.D.A. kicad 5.99.0-unknown-a6c3d74a73125ubuntu20.04.1		Id: 4/19

VIC 3.3V GPIOs



BGA-777(21*21)



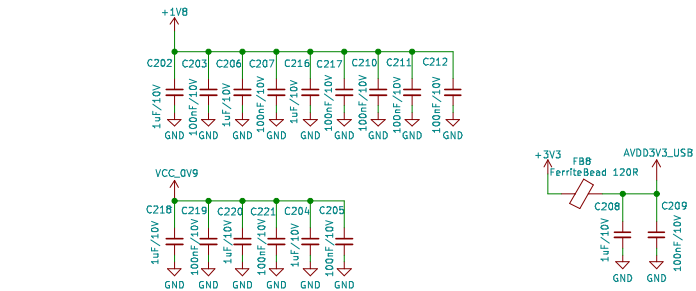
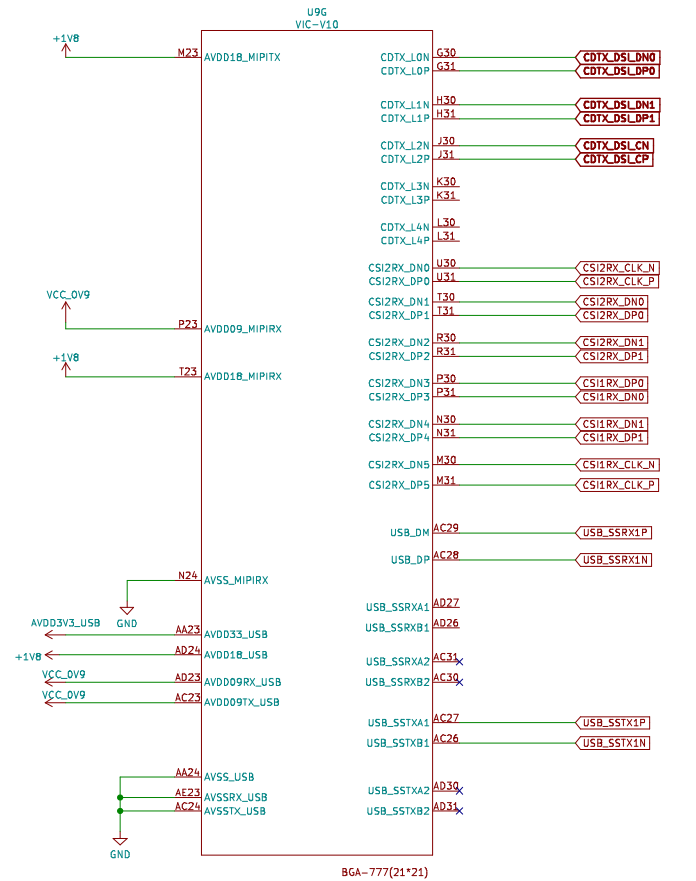
BGA-777(21*21)

Sheet: /BeagleV_VIC_LCD & GMI & GPIOs/
 File: BeagleV_VIC_LCD.kicad_sch

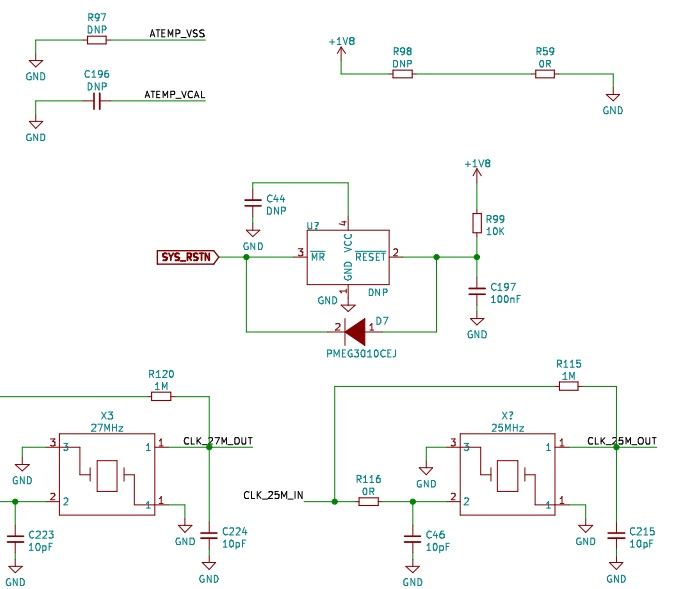
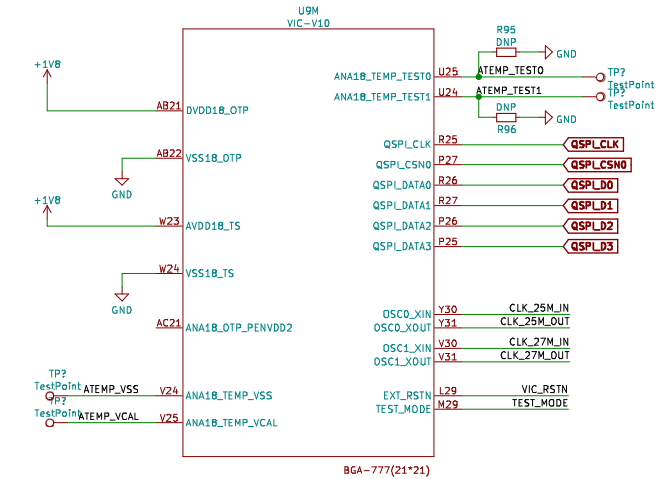
Title: Beagle V

Size: A3	Date: 2021-06-03	Rev: v0.7
KiCad E.D.A. kicad	5.99.0-unknown-a6c3d74a73125ubuntu20.04.1	Id: 6/19

VIC MIPI&USB



VIC CLOCK



LPDDR4

U7B
32Gb RAM

U7A
32Gb RAM

U7C
32Gb RAM

DDRO_A0 H2 CA0_A
DDRO_A1 J2 CA1_A
DDRO_A2 H9 CA2_A
DDRO_A3 H10 CA3_A
DDRO_A4 H11 CA4_A
DDRO_A5 J11 CA5_A

DDRO_CLK0N J9 CK_C_A
DDRO_CLK0P J8 CK_T_A

DDRO_CKE0 J4 CKE0_A
DDRO_CKE1 J5 CKE1_A

DDRO_CS0 H4 CS0_A
DDRO_CS1 H3 CS1_A

DDRO_ODT_1 G2 ODT_CA_A1
ZQ0

DDRO_A0 R2 CA0_B
DDRO_A1 P2 CA1_B
DDRO_A2 R9 CA2_B
DDRO_A3 R10 CA3_B
DDRO_A4 R11 CA4_B
DDRO_A5 P11 CA5_B

DDRO_CLK0N P9 CK_C_B
DDRO_CLK0P P8 CK_T_B

DDRO_CKE0 P4 CKE0_B
DDRO_CKE1 P5 CKE1_B

DDRO_CS0 R4 CS0_B
DDRO_CS1 R3 CS1_B

DDRO_ODT_1 T2 ODT_CA_B1
RESET_N T11
ZQ1

DDRO_A0 TP2
DDRO_A1 TP2
DDRO_A2 TP2
DDRO_A3 TP2
DDRO_A4 TP2
DDRO_A5 TP2

DDRO_CLK0N TP3
DDRO_CLK0P TP2

DDRO_CLK1N TP3
DDRO_CLK1P TP2

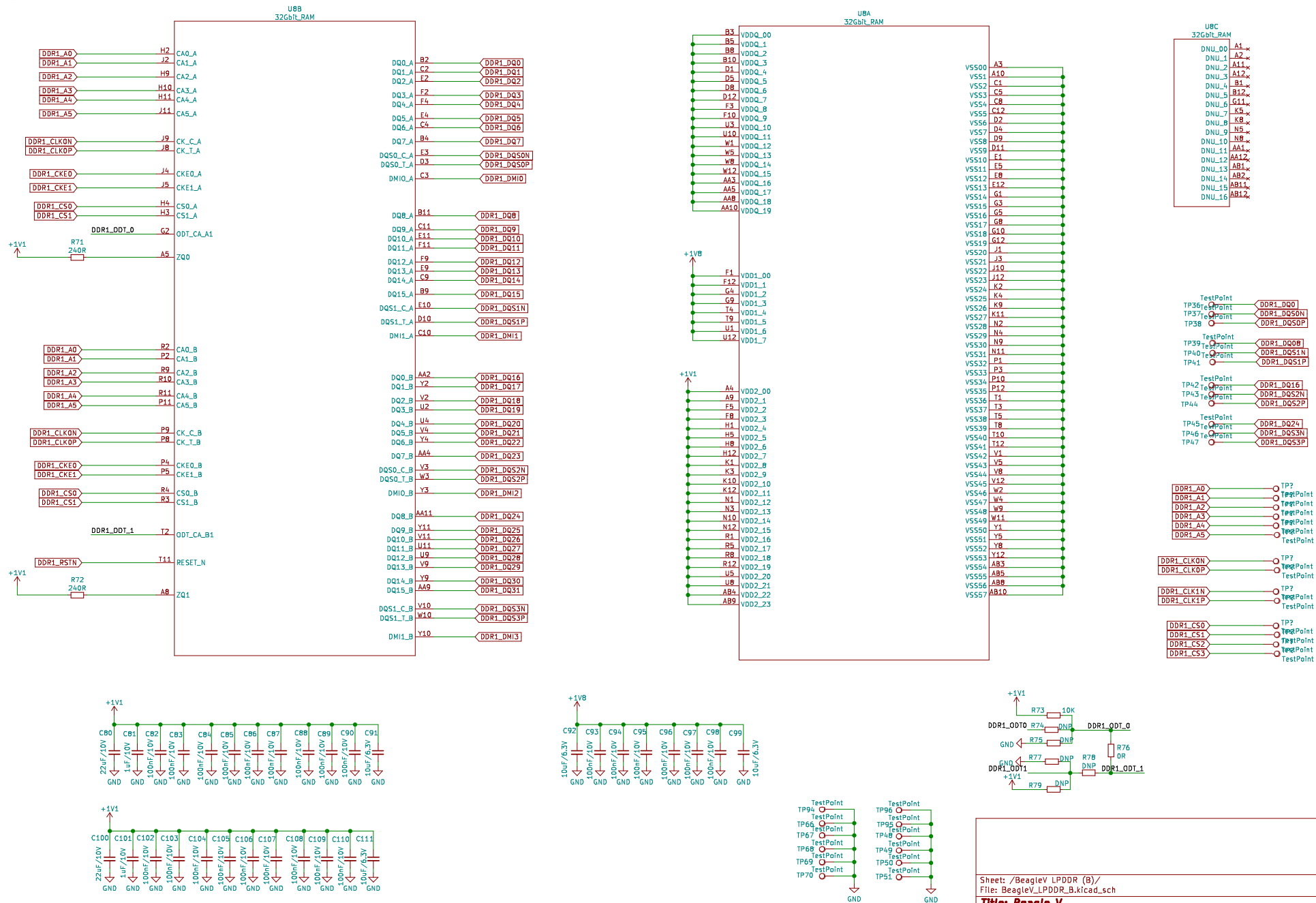
DDRO_CS0 TP3
DDRO_CS1 TP2
DDRO_CS2 TP2
DDRO_CS3 TP2

Sheet: /BeagleV LPDDR (A)/
File: BeagleV_LPDDR_A.kicad_sch

Title: Beagle V

Size: A3 Date: 2021-06-03
Kicad E.D.A. kicad 5.99.0-unknown-a6c3d74a73125ubuntu20.04.1 Id: B/19

LPDDR4

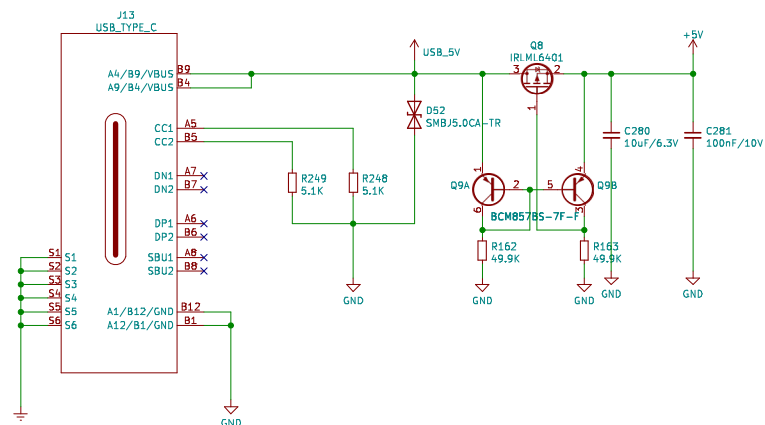


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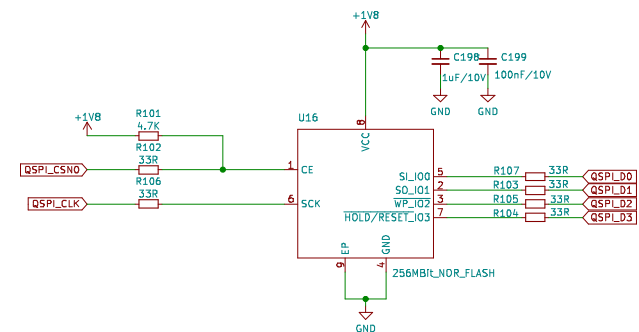
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Size: A3	Date: 2021-06-03	Rev: v0.7
KiCad E.D.A. kicad 5.99.0-unknown-a6c3d74a73125ubuntu20.04.1		Id: 9/19

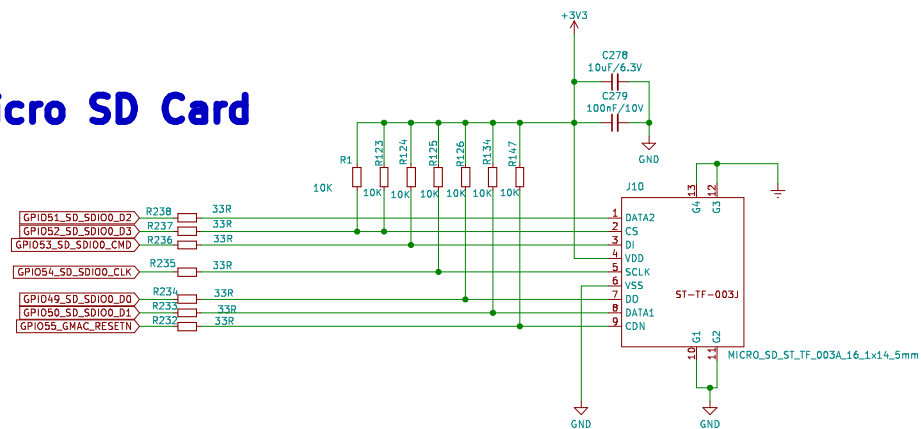
USB Type-C Power



Nor Flash For Boot



Micro SD Card

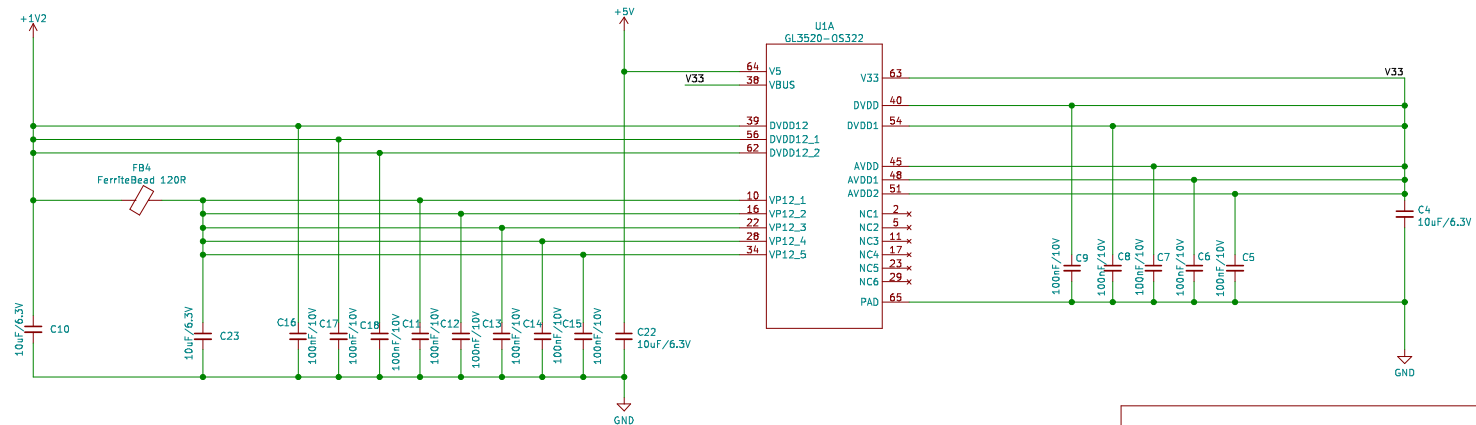
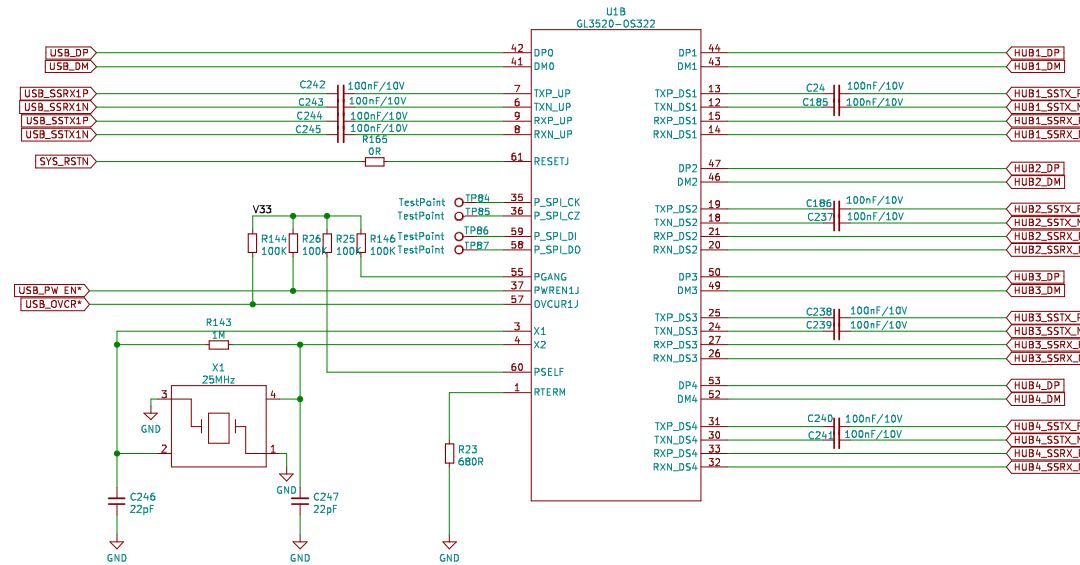


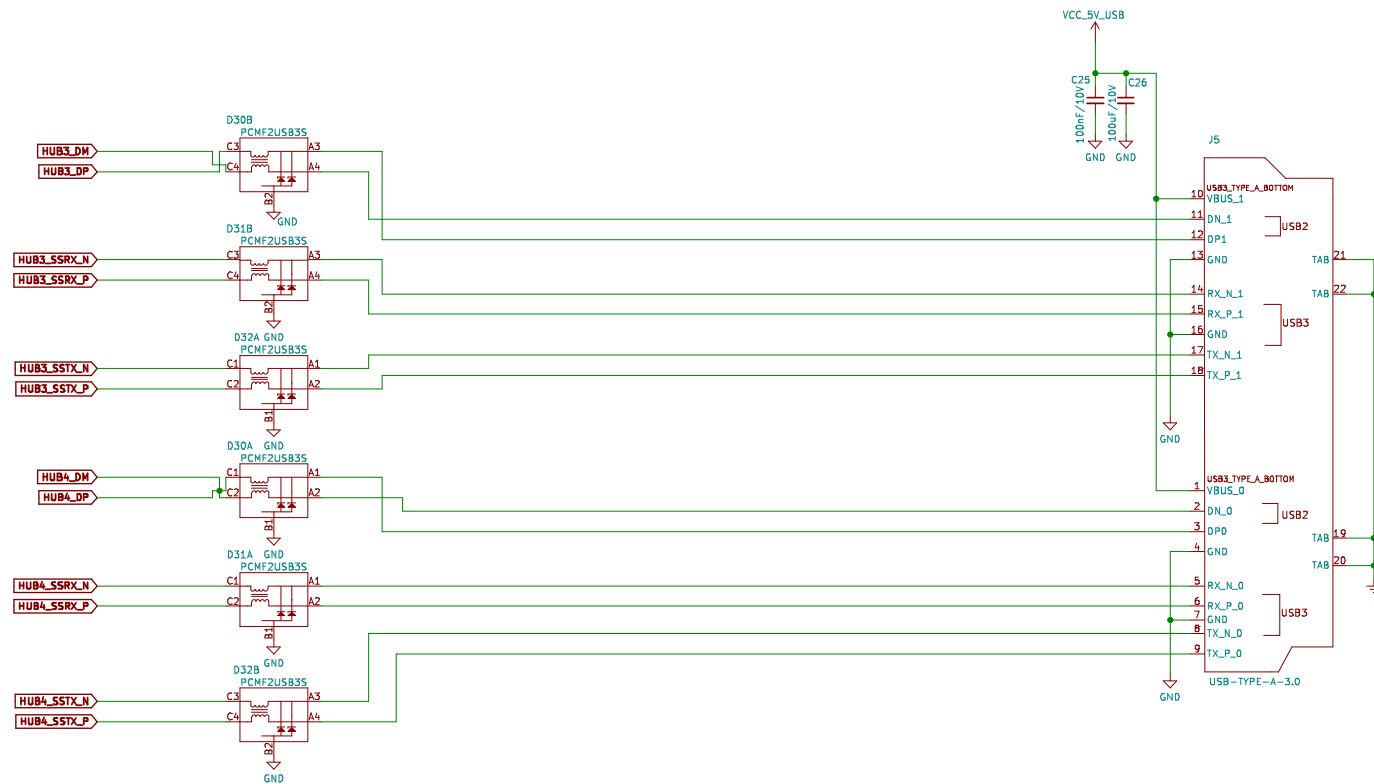
Sheet: /BeagleV Type C, uSD, QSPI Flash/
File: BeagleV_Type_C_uSD.kicad_sch

Title: Beagle V

Size: A3 Date: 2021-06-03 Rev: v0.7
KiCad E.D.A. kicad 5.99.0-unknown-a6c3d74a7312Subuntu20.04.1 Id: 10/19

USB 3.0 HUB TBD



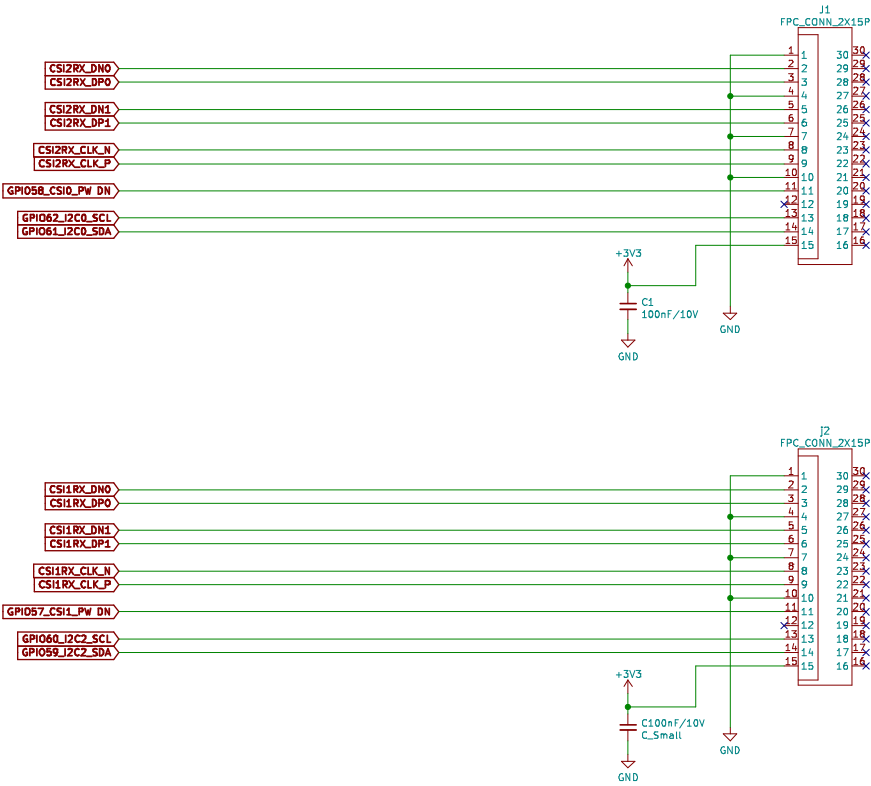


Sheet: /BeagleV USB TYPE A (B)/
File: BeagleV_USB_Type_A_B.kicad_sch

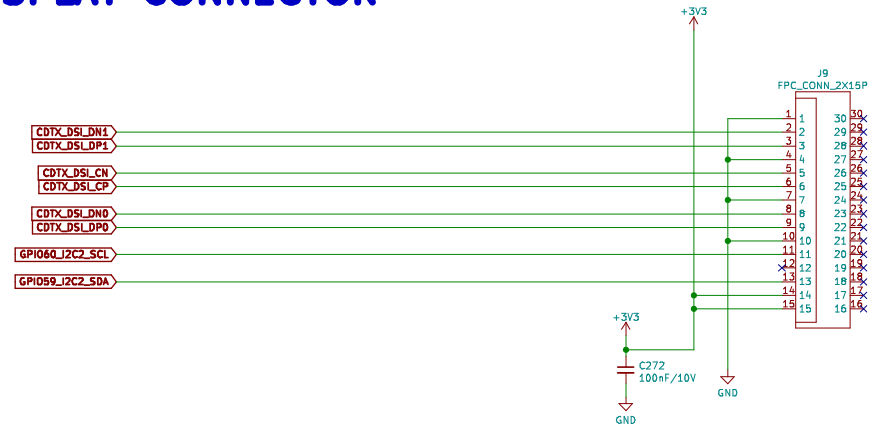
Title: Beagle V

Size: A3	Date: 2021-06-03	Rev: v0.7
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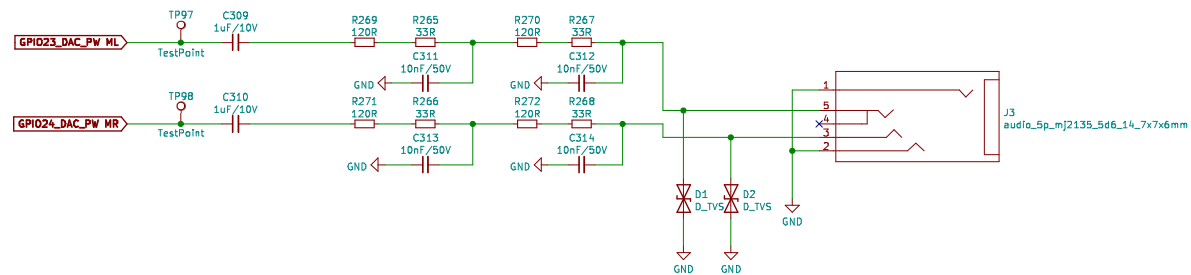
CAMERA CONNECTOR



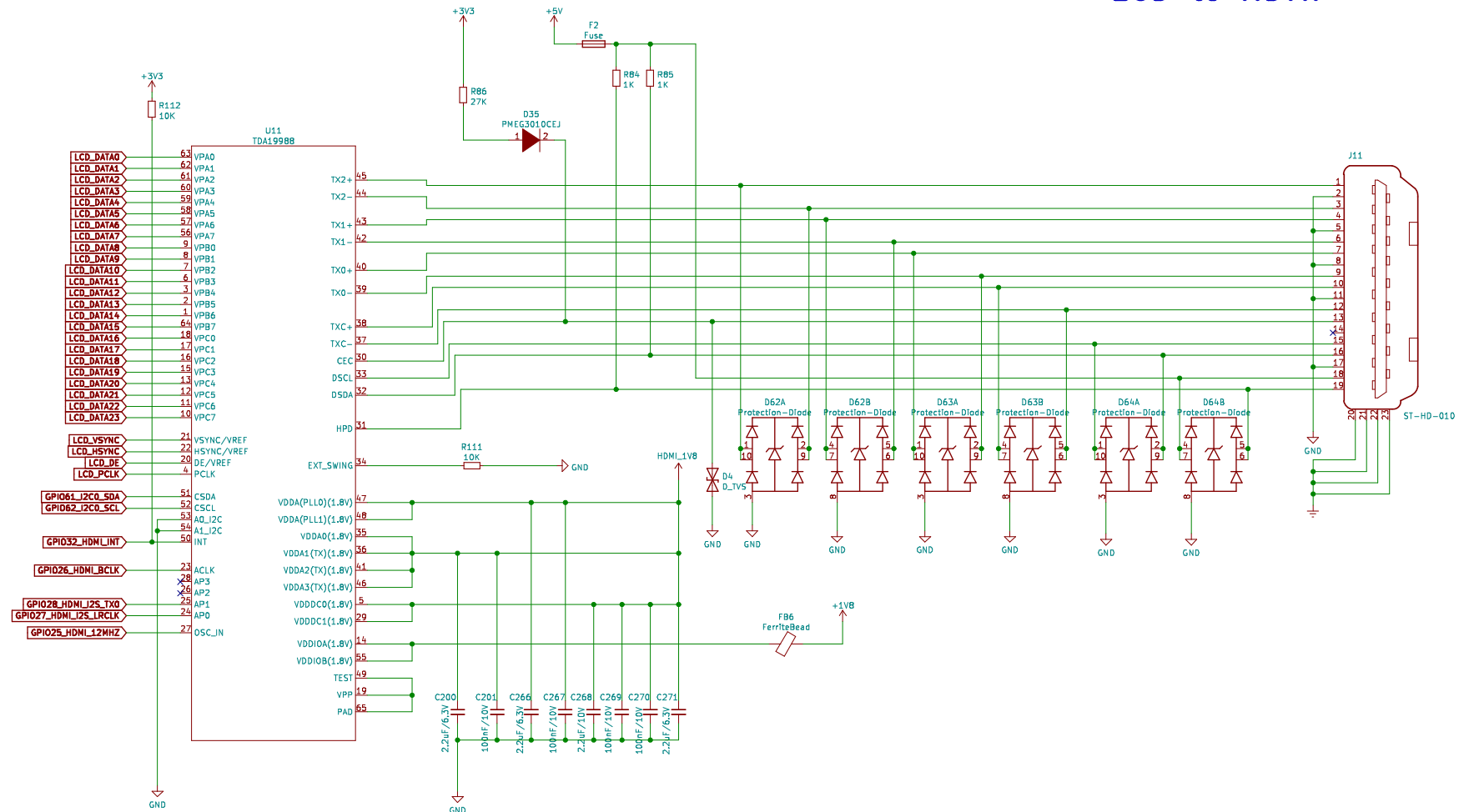
DISPLAY CONNECTOR



AUDIO



LCD to HDMI

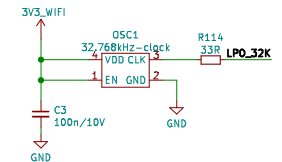
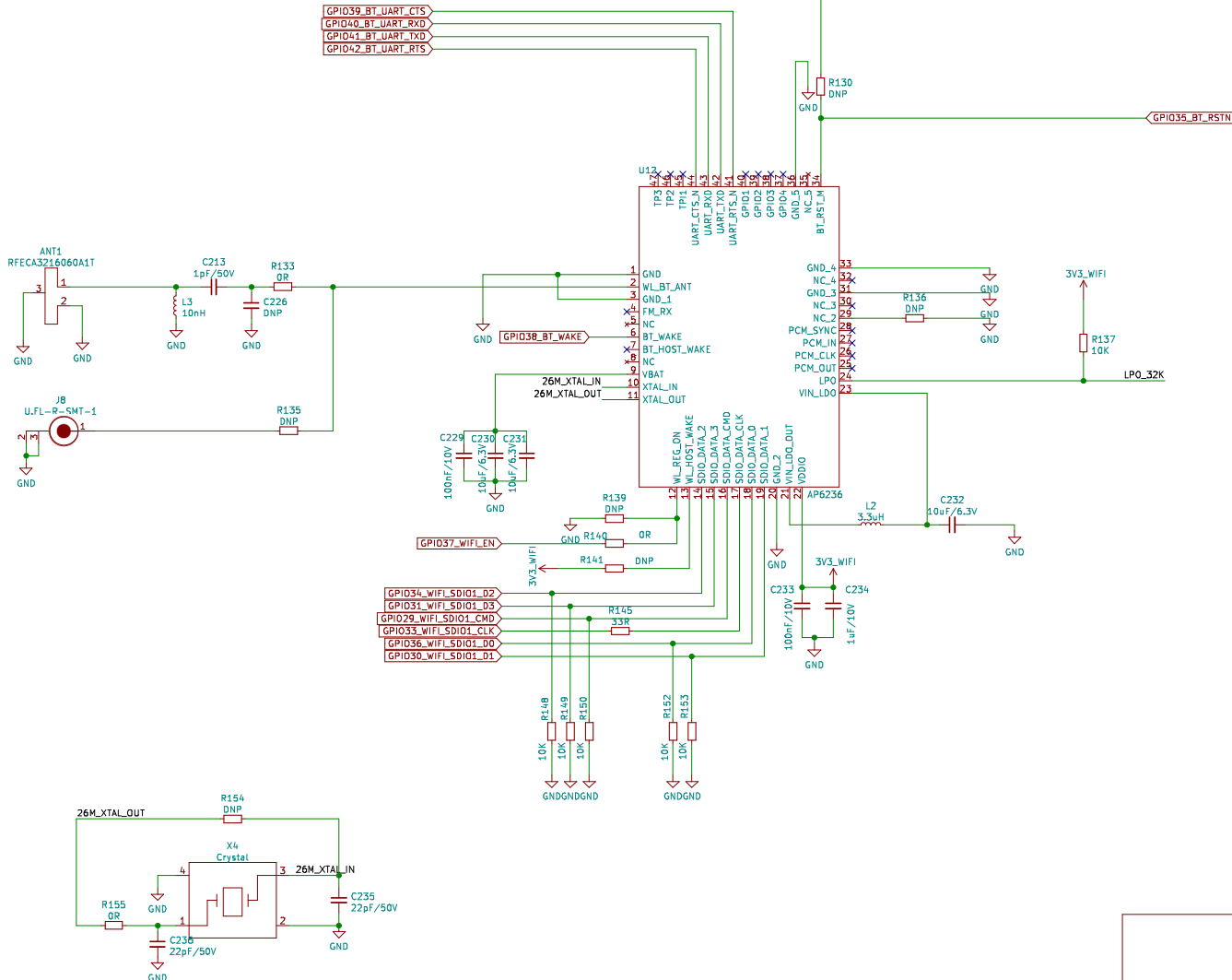
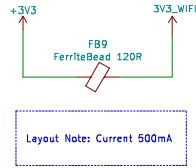


Sheet: /BeagleV HDMI FRAMER/
File: BeagleV_Hdmi_Framer.kicad_sch

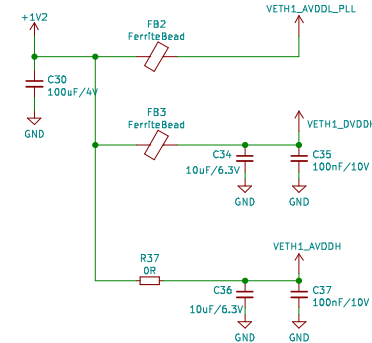
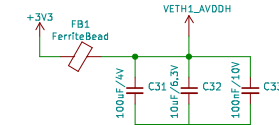
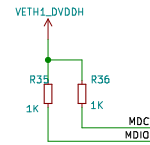
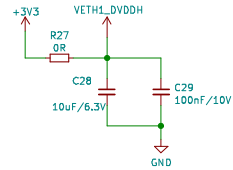
Title: Beagle V

Size: A3 Date: 2021-06-03 Rev: v0.7
KiCad E.D.A. kicad 5.99.0-unknown-a6c3d74a73125ubuntu20.04.1 Id: 16/19

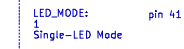
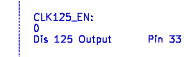
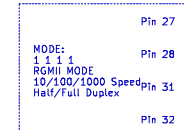
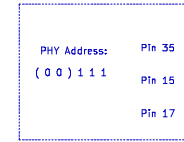
WiFi & Bluetooth



Gigabit Ethernet



Strapping Options:



Layout Notes:

The RGMII1 signals must be length-matched by TX and RX groups:
That is, the TX group should be matched within 300 MIl (7.62 mm),
and the RX group should be matched within 300 MIl (7.62 mm).
Total length should not exceed 1750 MIl (44.5 mm).

There is no requirement to match the TX and RX groups because their clocks are not related.

Layout Note:

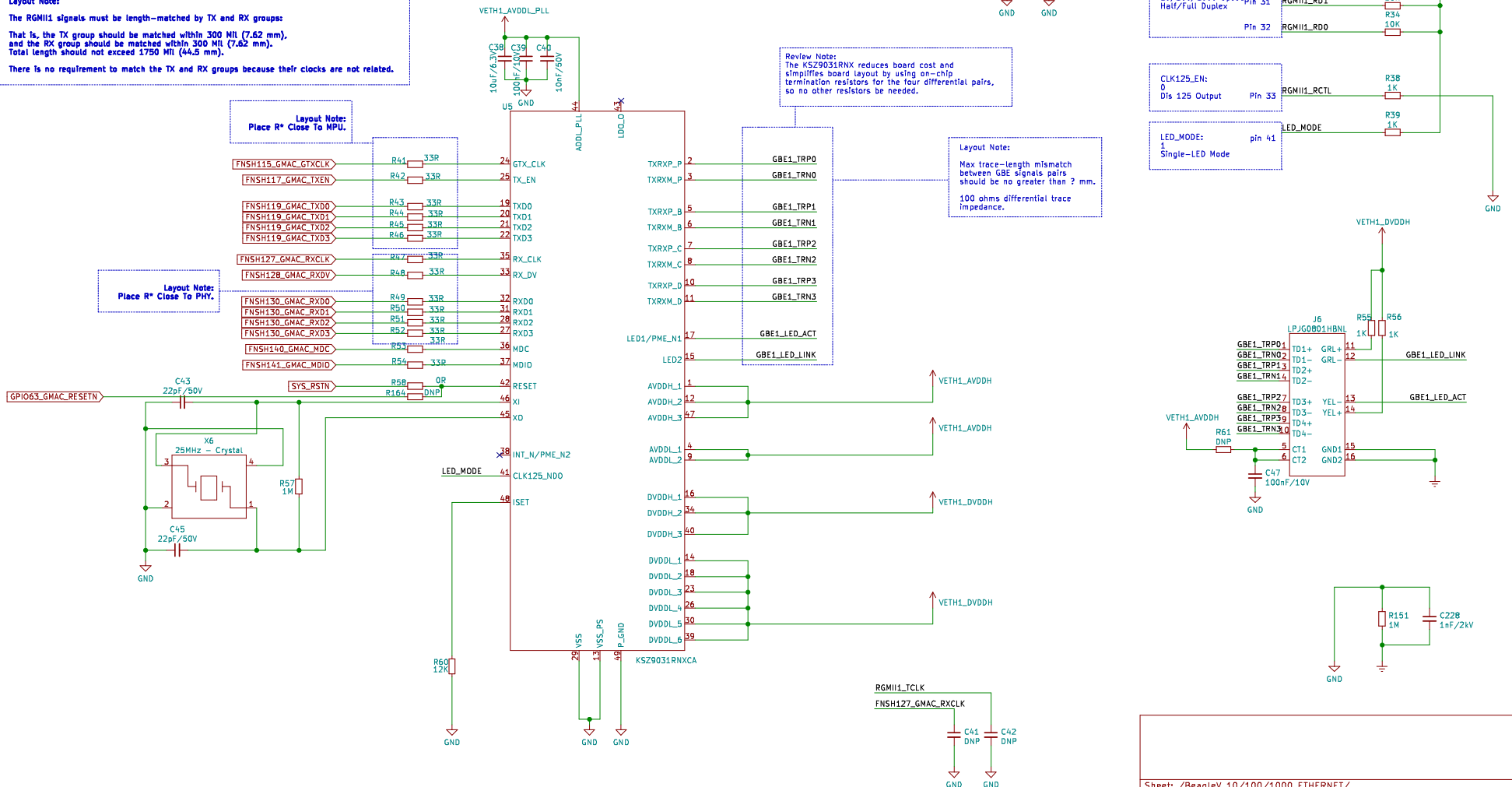
Place R* Close To MPU.

Layout Notes:

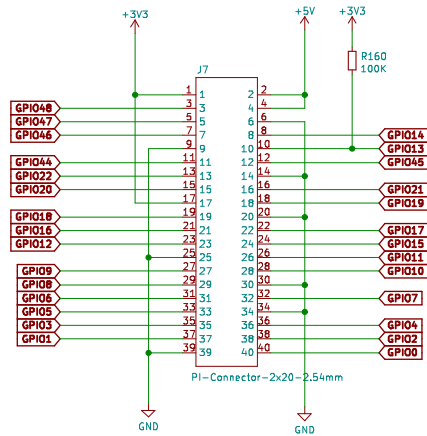
Place R* Close To PHY.

Review Note:
The KS29031RNX reduces board cost and
simplifies board layout by using on-chip
termination resistors for the four differential pairs,
so no other resistors are needed.

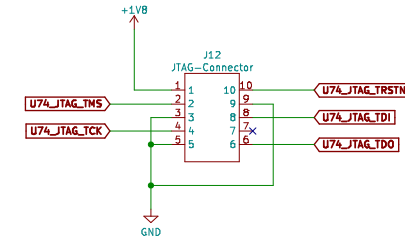
Layout Note:
Max trace-length mismatch
between GBE signals pairs
should be no greater than 2 mm.
100 ohms differential trace
impedance.



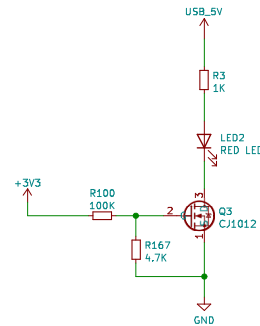
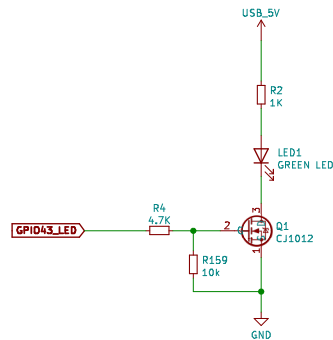
PI Connector



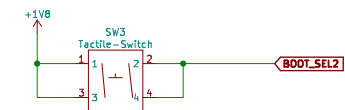
JTAG 1V8 for Tag-Connect cable



ACK&Power LEDs



Boot from UART



Sheet: /BeagleV RPI EXP CONN, LED, BUTTON/
File: BeagleV_RPI_Conn.kicad_sch

Title: Beagle V

Size: A3 Date: 2021-06-03 Rev: v0.7
KiCad E.D.A. kicad 5.99.0-unknown-a6c3d74a73125ubuntu20.04.1 Id: 19/19