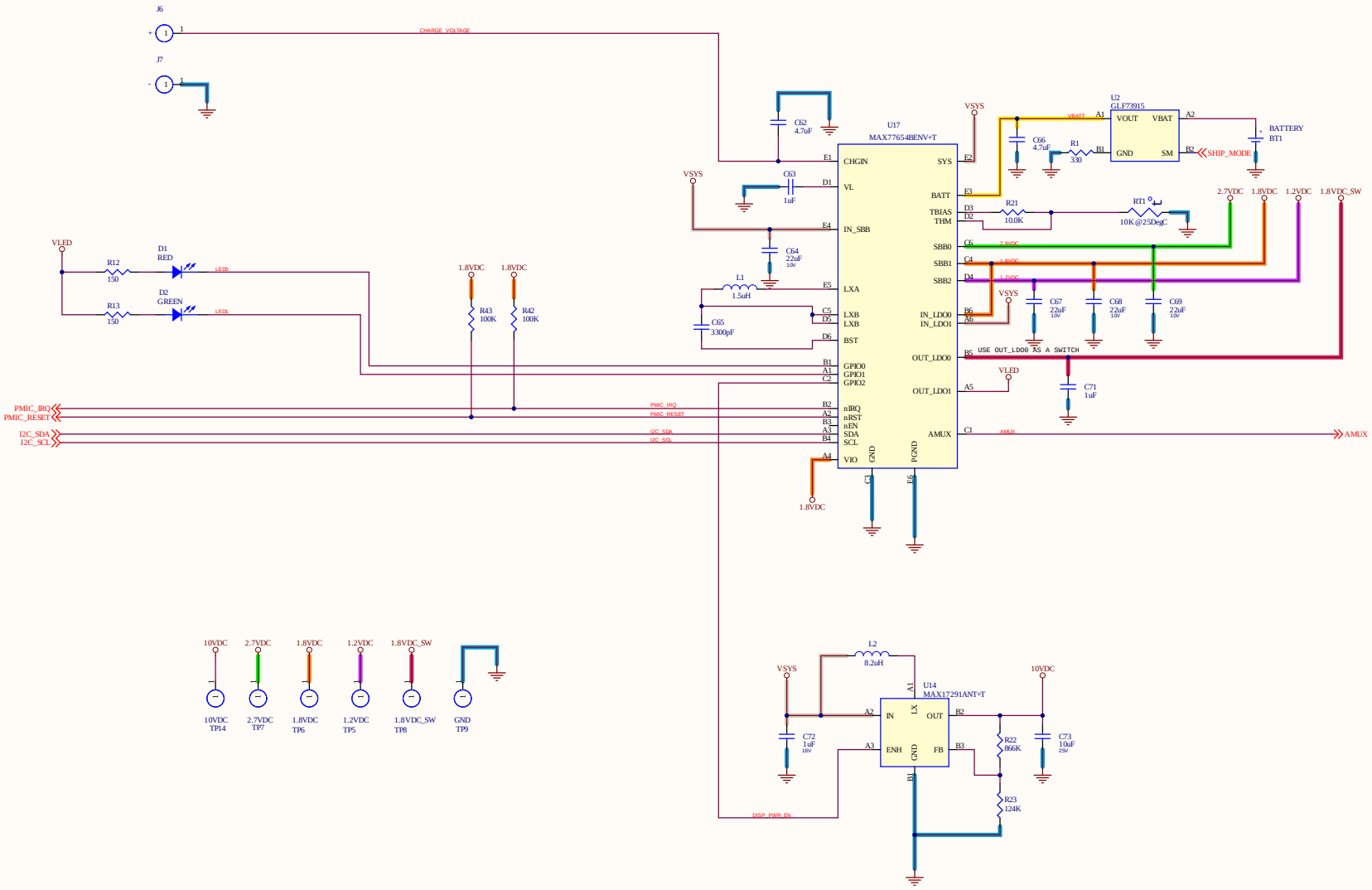
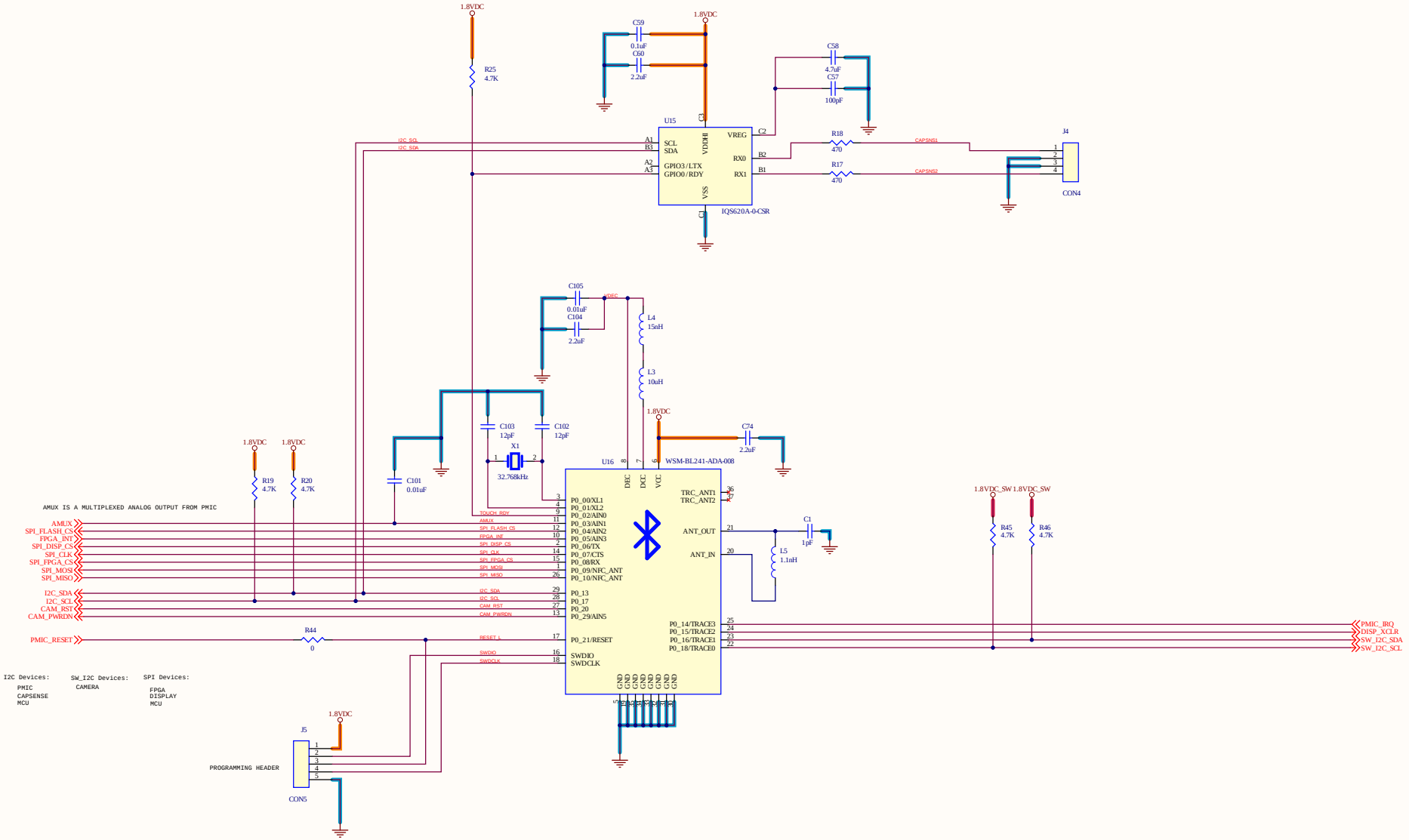


Schematic, MK12 v2			
Title: Power			Brilliant Labs Ltd.
Size: A	Document Number		Rev: A
Date: Jan 3, 2023	Schematic licensed under: CERN-OHL-P Rev 2	Sheet 1 of 5	



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Title: MCU, Bluetooth			Brilliant Labs Ltd.
Size: A	Document Number		Rev: A
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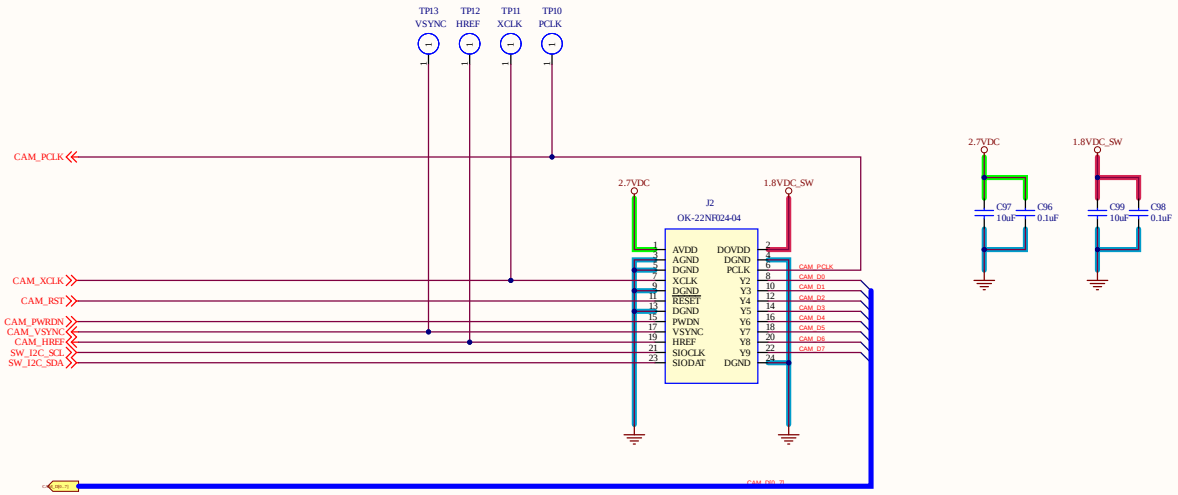

Schematic, MK12 v2		
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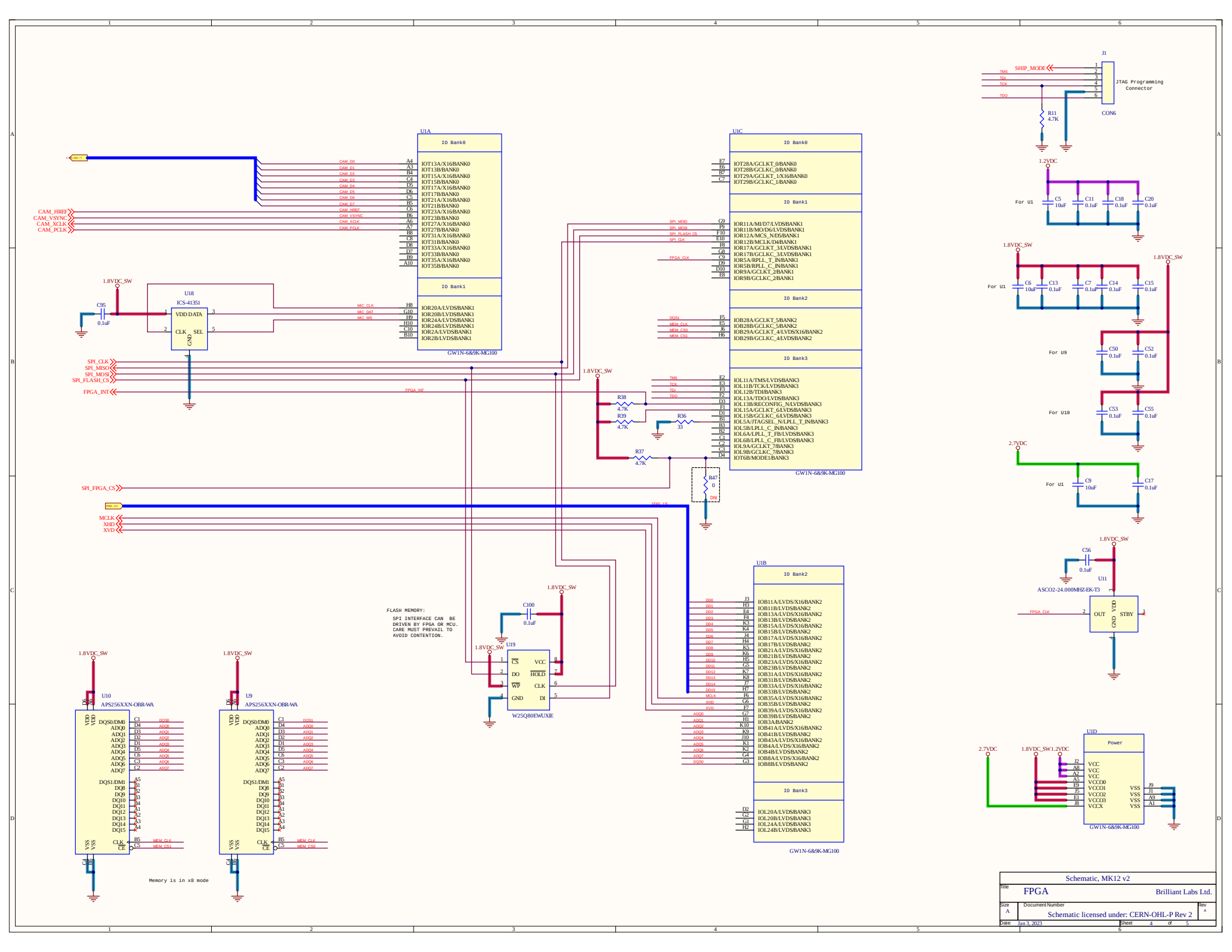
U1A
IO Bank0
IOT13A/X16/BANK0
IOT13B/BANK0
IOT15A/X16/BANK0
IOT15B/BANK0
IOT17A/X16/BANK0
IOT17B/BANK0
IOT21A/X16/BANK0
IOT21B/BANK0
IOT23A/X16/BANK0
IOT23B/BANK0
IOT27A/X16/BANK0
IOT27B/BANK0
IOT31A/X16/BANK0
IOT31B/BANK0
IOT33A/X16/BANK0
IOT33B/BANK0
IOT35A/X16/BANK0
IOT35B/BANK0
IO Bank1
IOR20A/LVDS/BANK1
IOR20B/LVDS/BANK1
IOR24A/LVDS/BANK1
IOR24B/LVDS/BANK1
IOR2A/LVDS/BANK1
IOR2B/LVDS/BANK1
GW1N-6&9K-MG100
U1C
IO Bank0
IOT28A/GCLKT_0/BANK0
IOT28B/GCLKC_0/BANK0
IOT29A/GCLKT_1/X16/BANK0
IOT29B/GCLKC_1/BANK0
IO Bank1
IOR11A/MI/D7/LVDS/BANK1
IOR11B/MO/D6/LVDS/BANK1
IOR12A/MCS_N/D5/BANK1
IOR12B/MCLK/D4/BANK1
IOR17A/GCLKT_3/LVDS/BANK1
IOR17B/GCLKC_3/LVDS/BANK1
IOR5A/RPLL_T_IN/BANK1
IOR5B/RPLL_C_IN/BANK1
IOR9A/GCLKT_2/BANK1
IOR9B/GCLKC_2/BANK1
IO Bank2
IOB28A/GCLKT_5/BANK2
IOB28B/GCLKC_5/BANK2
IOB29A/GCLKT_4/LVDS/X16/BANK2
IOB29B/GCLKC_4/LVDS/BANK2
IO Bank3
IOL11A/TMS/LVDS/BANK3
IOL11B/TCK/LVDS/BANK3
IOL12B/TDI/BANK3
IOL13A/TDO/LVDS/BANK3
IOL13B/RECONFIG_N/LVDS/BANK3
IOL15A/GCLKT_6/LVDS/BANK3
IOL15B/GCLKC_6/LVDS/BANK3
IOL5A/JTAGSEL_N/LPLL_T_IN/BANK3
IOL5B/LPLL_C_IN/BANK3
IOL6A/LPLL_T_FB/LVDS/BANK3
IOL6B/LPLL_C_FB/LVDS/BANK3
IOL9A/GCLKT_7/BANK3
IOL9B/GCLKC_7/BANK3
IOT6B/MODE1/BANK3
GW1N-6&9K-MG100
U1B
IO Bank2
IOB11A/LVDS/X16/BANK2
IOB11B/LVDS/BANK2
IOB13A/LVDS/X16/BANK2
IOB13B/LVDS/BANK2
IOB15A/LVDS/X16/BANK2
IOB15B/LVDS/BANK2
IOB17A/LVDS/X16/BANK2
IOB17B/LVDS/BANK2
IOB21A/LVDS/X16/BANK2
IOB21B/LVDS/BANK2
IOB23A/LVDS/X16/BANK2
IOB23B/LVDS/BANK2
IOB31A/LVDS/X16/BANK2
IOB31B/LVDS/BANK2
IOB33A/LVDS/X16/BANK2
IOB33B/LVDS/BANK2
IOB35A/LVDS/X16/BANK2
IOB35B/LVDS/BANK2
IOB39A/LVDS/X16/BANK2
IOB39B/LVDS/BANK2
IOB3A/BANK2
IOB41A/LVDS/X16/BANK2
IOB41B/LVDS/BANK2
IOB43A/LVDS/X16/BANK2
IOB4A/LVDS/X16/BANK2
IOB4B/LVDS/BANK2
IOB8A/LVDS/X16/BANK2
IOB8B/LVDS/BANK2
IO Bank3
IOL20A/LVDS/BANK3
IOL20B/LVDS/BANK3
IOL24A/LVDS/BANK3
IOL24B/LVDS/BANK3
GW1N-6&9K-MG100
U1D
Power
GW1N-6&9K-MG100
J1
JTAG Programming Connector
CON6
SHIP_MODE
TMS
TDI
TCK
TDO
R11 4.7K
1.2VDC
For U1
C5 10uF
C11 0.1uF
C18 0.1uF
C20 0.1uF
1.8VDC_SW
C6 10uF
C13 0.1uF
C7 0.1uF
C14 0.1uF
C15 0.1uF
For U9
C50 0.1uF
C52 0.1uF
For U10
C53 0.1uF
C55 0.1uF
2.7VDC
C9 10uF
C17 0.1uF
C56 0.1uF
U11
ASCO2-24.000MHZ-EK-T3
OUT
STBY
GND
VDD
U18
ICS-41351
VDD
DATA
CLK
SEL
GND
C95 0.1uF
MIC_CLK
MIC_DAT
MIC_WS
CAM_HREF
CAM_VSYNC
CAM_XCLK
CAM_PCLK
CAM_D0
CAM_D1
CAM_D2
CAM_D3
CAM_D4
CAM_D5
CAM_D6
CAM_D7
SPI_CLK
SPI_MISO
SPI_MOSI
SPI_FLASH_CS
FPGA_INT
SPI_FPGA_CS
MCLK
XHD
XVD
R38 4.7K
R39 4.7K
R36 33
R37 4.7K
R47 0
DNI
FLASH MEMORY:
SPI INTERFACE CAN BE DRIVEN BY FPGA OR MCU. CARE MUST PREVAIL TO AVOID CONTENTION.
C100 0.1uF
U19
W25Q80EWUXIE
CS
DO
WP
GND
VCC
HOLD
CLK
DI
U10
U9
APS256XXN-OBR-WA
Memory is in x8 mode
Schematic, MK12 v2
FPGA
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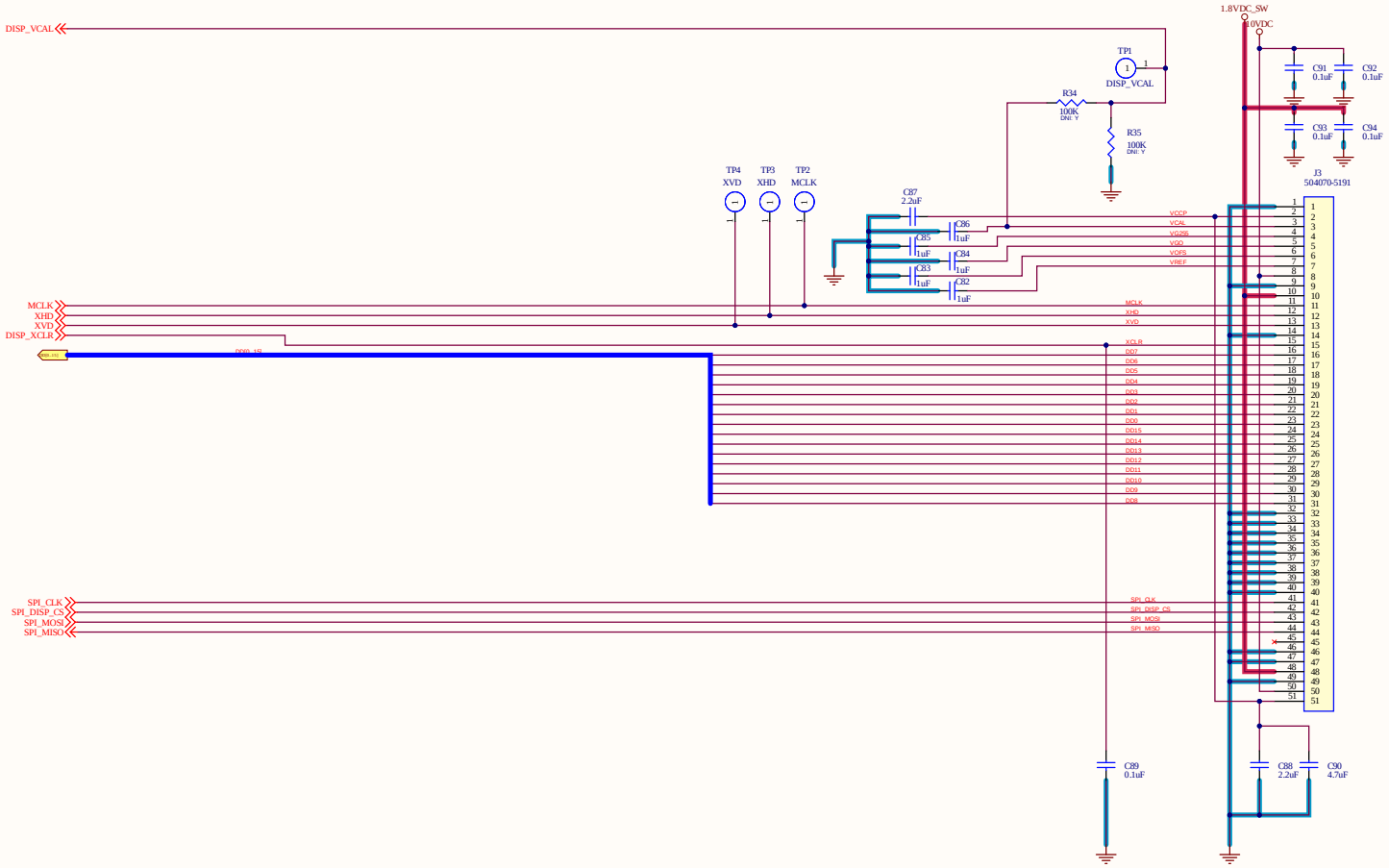

Schematic, MK12 v2		
Title: OLED Display		Brilliant Labs Ltd.
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