REV	Description	DATE	BY
Ver 1	Initial Release.		

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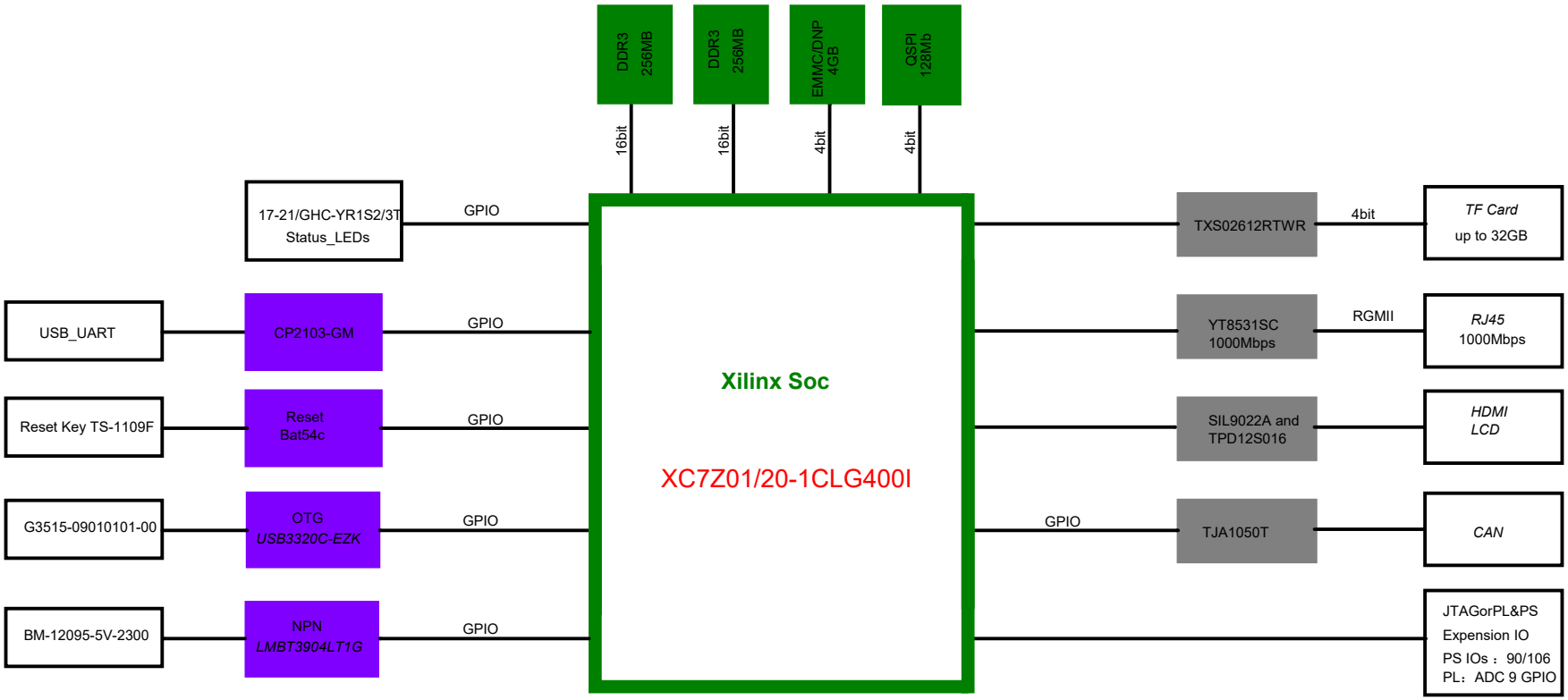
1	TITLE PAGE
2	BLOCK
3	Z7020_PL
4	POWER LOGIC
5	Z7020_PS
6	Z7020_POWER
7	USB OTG
8	DDR3 MEMORY
9	QSPI FLASH
10	10/100/1000 ETHERNET
11	HDMI
12	Sensor: G&T,CAN
13	NAND_FLASH
14	PWR:1.0V&1.5V,VTT
15	Power 1.8V,3.3V&DCin
16	EXP CONN
17	MISC

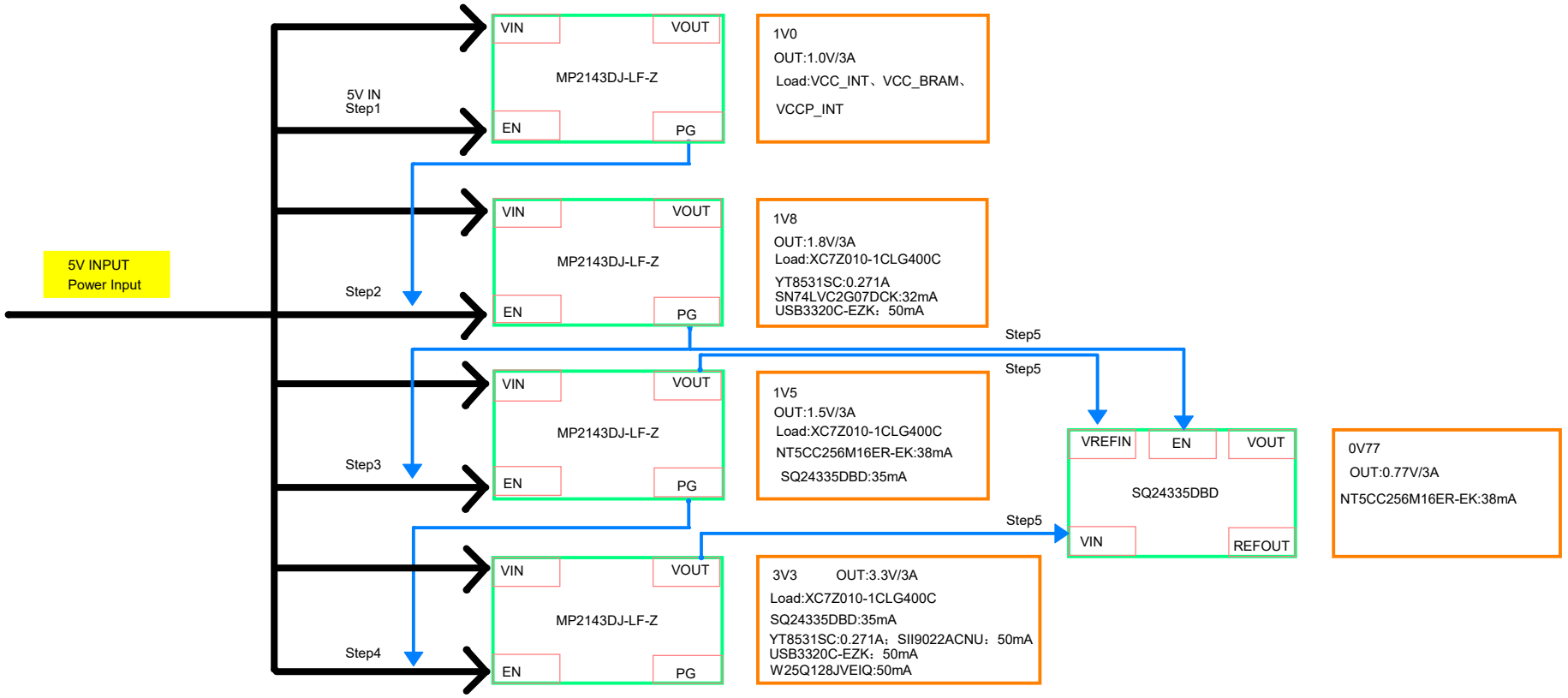
MYiR http://www.myir-tech.com

Title: MYS-7Z010-20-V2

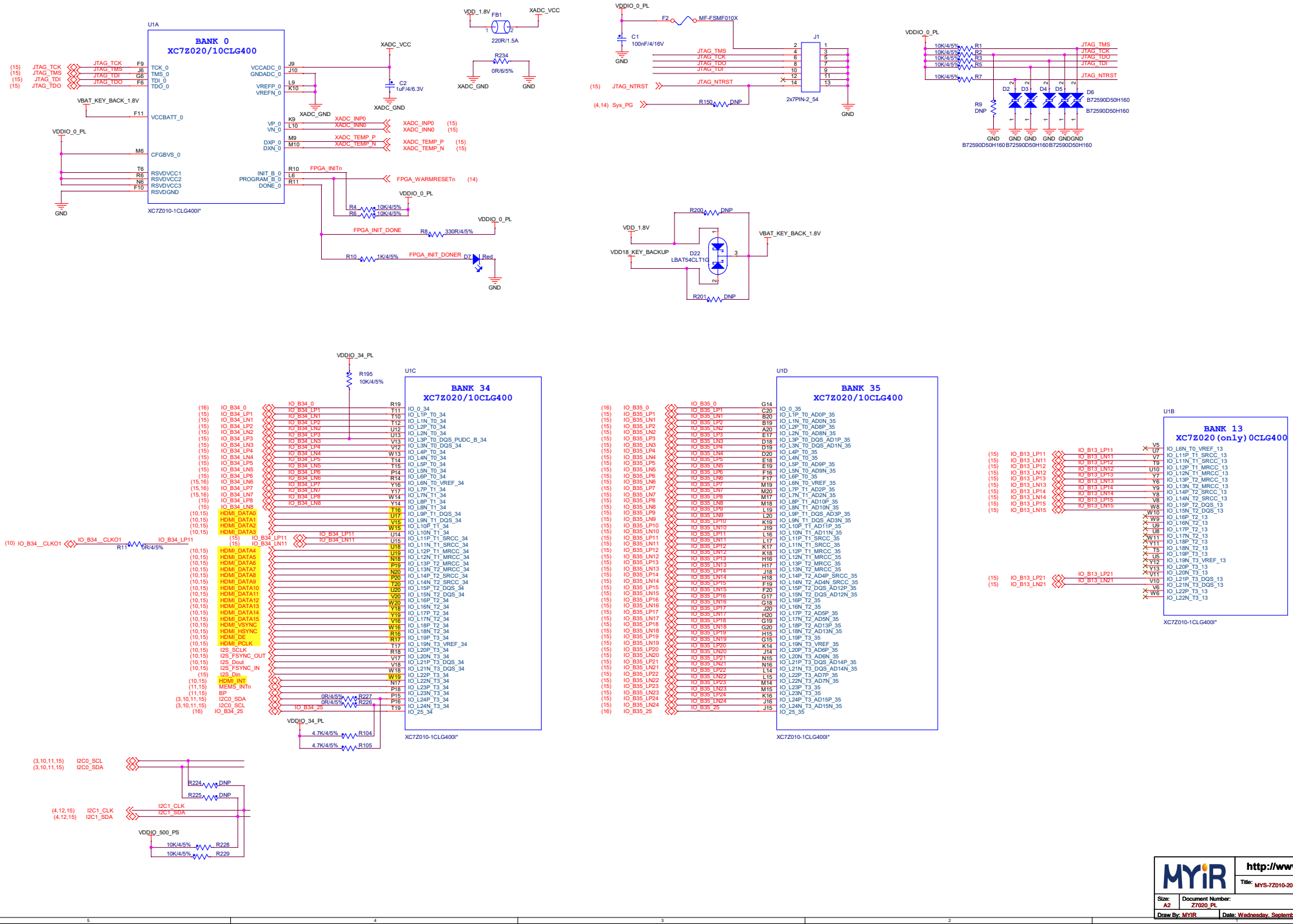
Size:	Document Number:	Rev:
A3	Title Page	V1.0
Draw By: MYIR	Date: Friday, August 19, 2022	Sheet: 01 of 17



MYiR	http://www.myir-tech.com	
	Title: MYS-7Z010-20-V2	
Size: A3	Document Number: BLOCK	Rev: V1.0
Draw By: MYIR	Date: Friday, August 19, 2022	Sheet: 02 of 17



MYiR	http://www.myir-tech.com	
	Title: MYS-7Z010-20-V2	
Size: A3	Document Number: POWER LOGIC	Rev: V1.0
Draw By: MYIR	Date: Wednesday, September 14, 2022	Sheet: 2-1of 17


U1A
BANK 0
XC7Z020/10CLG400
XC7Z010-1CLG400I*
VDD_1.8V
FB1
220R/1.5A
XADC_VCC
R234
0R/6%5%
XADC_GND
C2
1uF/4/6.3V
VBAT_KEY_BACK_1.8V
VDDIO_0_PL
GND
JTAG_TCK
JTAG_TMS
JTAG_TDI
JTAG_TDO
XADC_INP0
XADC_INN0
XADC_TEMP_P
XADC_TEMP_N
FPGA_INITn
FPGA_WARMRESETn
FPGA_INIT_DONE
FPGA_INIT_DONER
R4
R6
10K/4/5%
R8
330R/4/5%
R10
1K/4/5%
D7
Red
VDDIO_0_PL
F2
MF-FSMF010X
C1
100nF/4/16V
J1
2x7PIN-2_54
JTAG_NTRST
Sys_PG
R150
DNP
R1
R2
R3
R5
R7
R9
D2
D3
D4
D5
D6
B72590D50H160
R200
DNP
R201
DNP
VDD_1.8V
VDD18_KEY_BACKUP
D22
LBAT54CLT1G
VBAT_KEY_BACK_1.8V
U1C
BANK 34
XC7Z020/10CLG400
XC7Z010-1CLG400I*
VDDIO_34_PL
R195
10K/4/5%
IO_B34_CLKO1
R11
0R/4/5%
HDMI_DATA0
HDMI_DATA1
HDMI_DATA2
HDMI_DATA3
HDMI_DATA4
HDMI_DATA5
HDMI_DATA6
HDMI_DATA7
HDMI_DATA8
HDMI_DATA9
HDMI_DATA10
HDMI_DATA11
HDMI_DATA12
HDMI_DATA13
HDMI_DATA14
HDMI_DATA15
HDMI_VSYNC
HDMI_HSYNC
HDMI_DE
HDMI_PCLK
I2S_SCLK
I2S_FSYNC_OUT
I2S_Dout
I2S_FSYNC_IN
I2S_Din
HDMI_INT
MEMS_INTn
BP
I2C0_SDA
I2C0_SCL
R227
R226
0R/4/5%
R104
4.7K/4/5%
R105
4.7K/4/5%
U1D
BANK 35
XC7Z020/10CLG400
XC7Z010-1CLG400I*
U1B
BANK 13
XC7Z020(only)0CLG400
XC7Z010-1CLG400I*
I2C0_SCL
I2C0_SDA
R224
DNP
R225
DNP
I2C1_CLK
I2C1_SDA
VDDIO_500_PS
R228
R229
10K/4/5%
MYiR
http://www.myir-tech.com
Title: MYS-7Z010-20-V2
Size: A2
Document Number: Z7020_PL
Rev: V1.0
Draw By: MYiR
Date: Wednesday, September 14, 2022
Sheet: 03 of 17

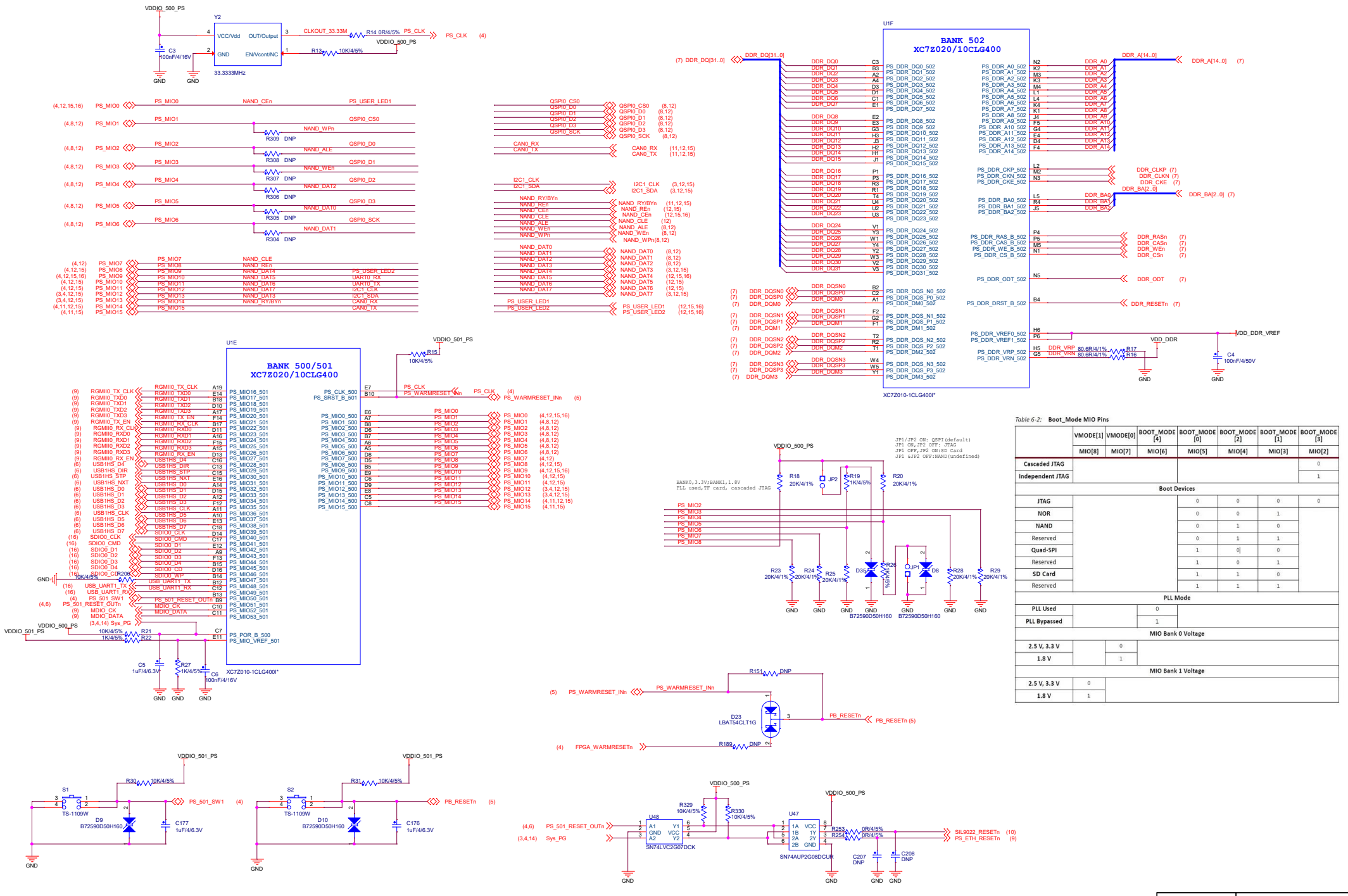
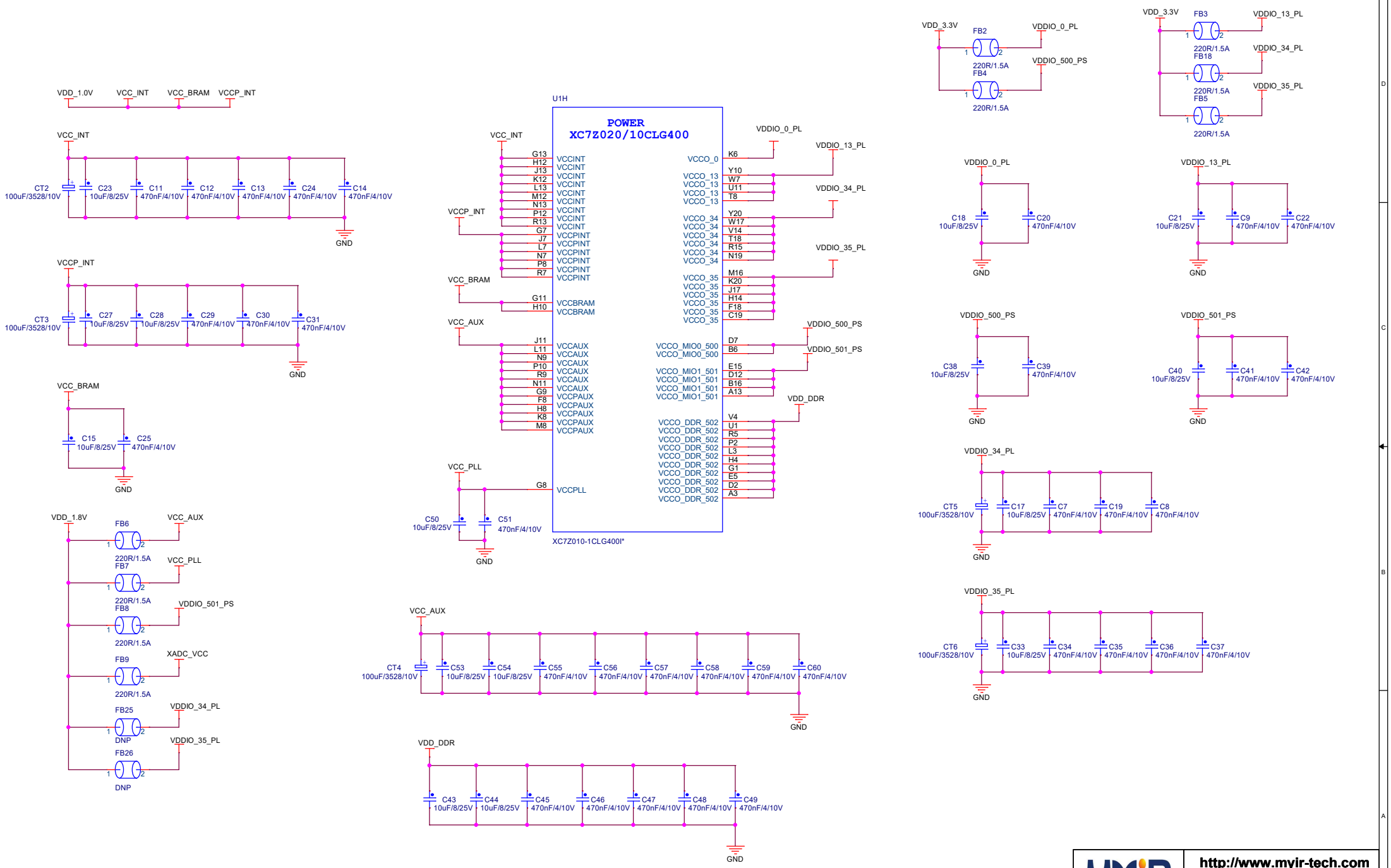


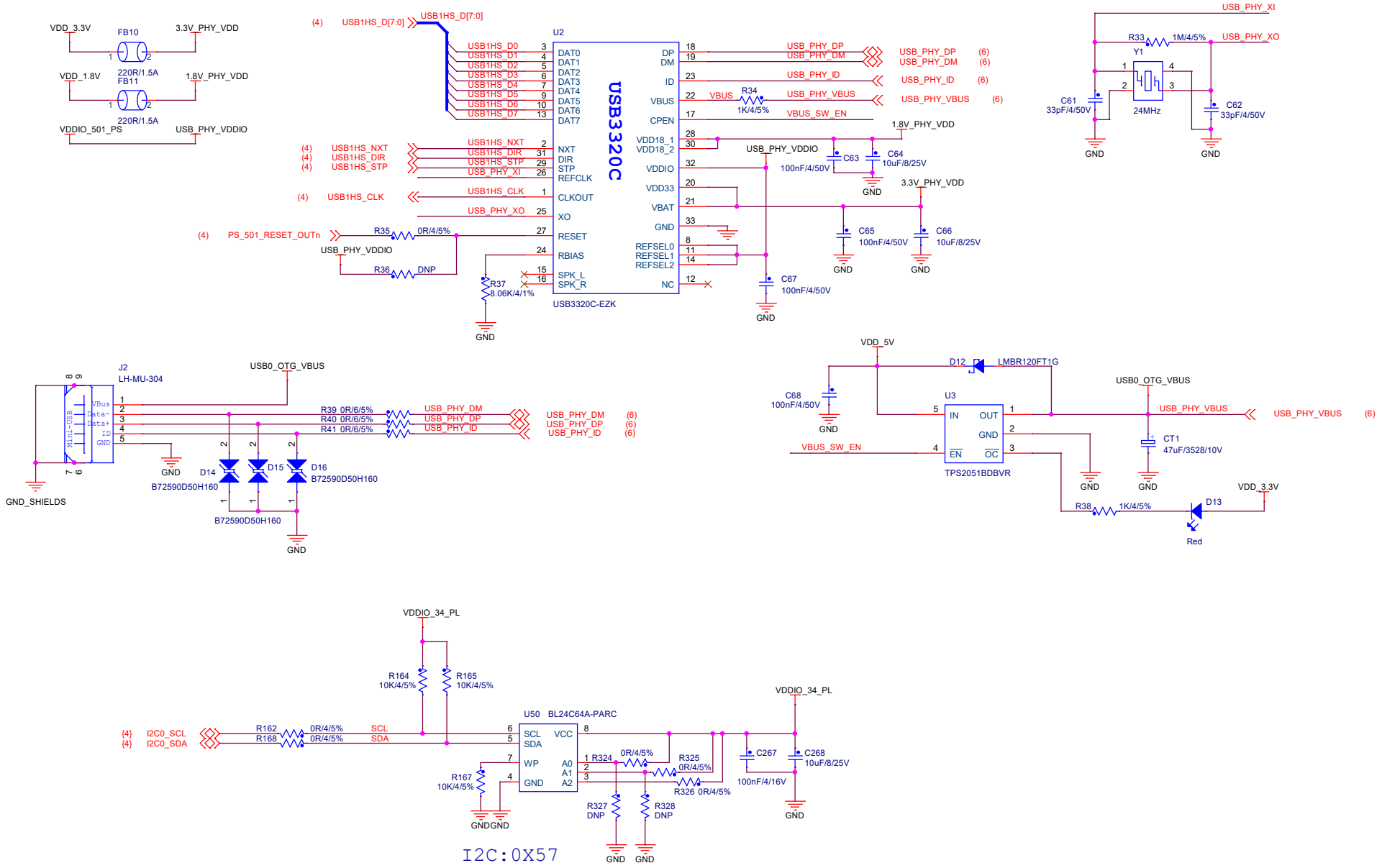
Table 6-2: **Boot_Mode MIO Pins**

	VMODE[1]	VMODE[0]	BOOT_MODE [4]	BOOT_MODE [0]	BOOT_MODE [2]	BOOT_MODE [1]	BOOT_MODE [3]
	MIO[8]	MIO[7]	MIO[6]	MIO[5]	MIO[4]	MIO[3]	MIO[2]
Cascaded JTAG							0
Independent JTAG							1
Boot Devices							
JTAG				0	0	0	0
NOR				0	0	1	
NAND				0	1	0	
Reserved				0	1	1	
Quad-SPI				1	0	0	
Reserved				1	0	1	
SD Card				1	1	0	
Reserved				1	1	1	
PLL Mode							
PLL Used			0				
PLL Bypassed			1				
MIO Bank 0 Voltage							
2.5 V, 3.3 V		0					
1.8 V		1					
MIO Bank 1 Voltage							
2.5 V, 3.3 V	0						
1.8 V	1						

MYiR	http://www.myir-tech.com		
	Title: MYS-7Z010-20-V2		
Size: A2	Document Number: Z7020_PS		Rev: V1.0
Draw By: MYiR	Date: Thursday, November 03, 2022		Sheet: 04 of 17

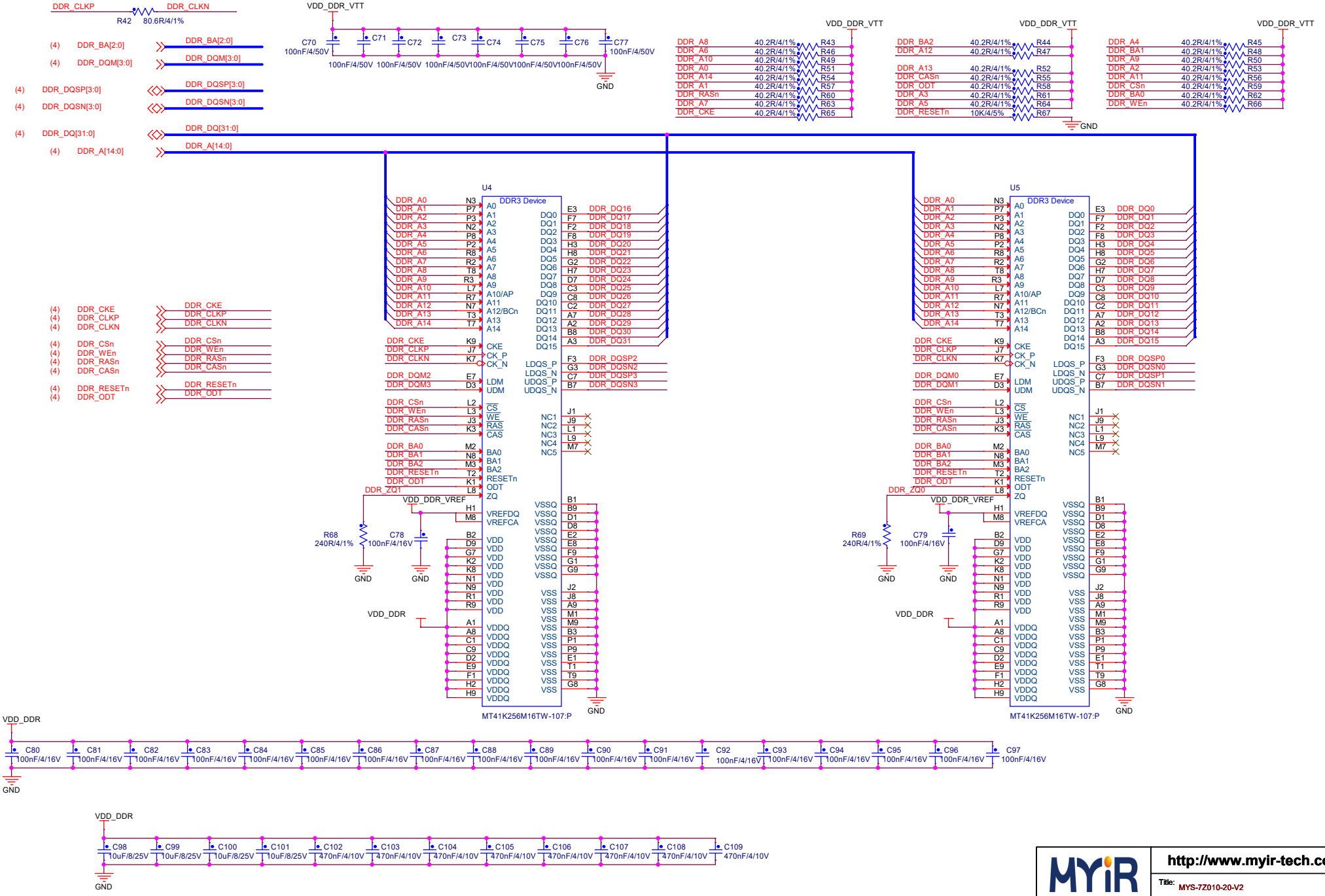


MYiR	http://www.myir-tech.com	
	Title: MYS-7Z010-20-V2	
Size: A3	Document Number: Z7020_POWER	Rev: V1.0
Draw By: MYIR	Date: Wednesday, September 14, 2022	Sheet: 05 of 17

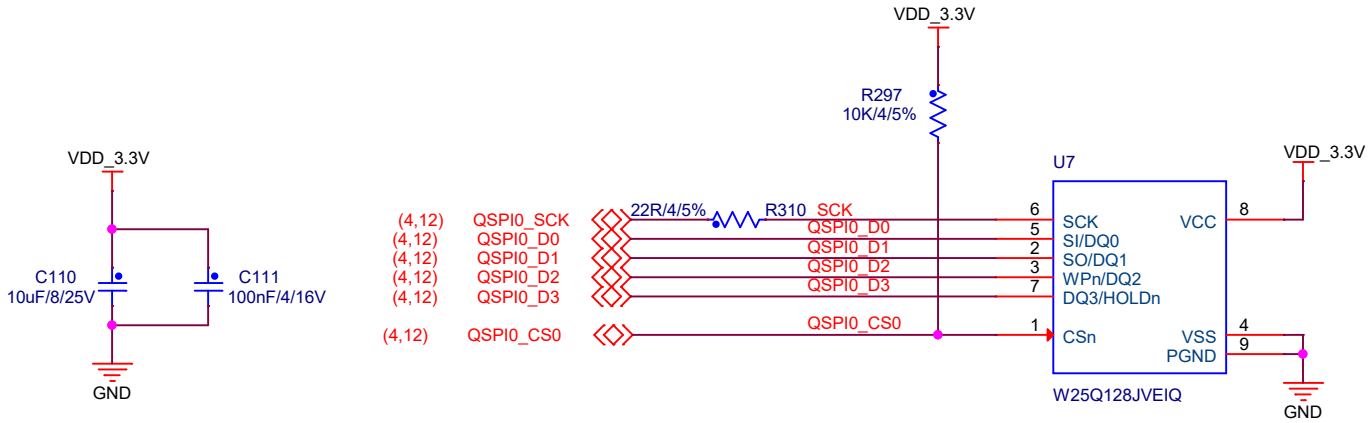


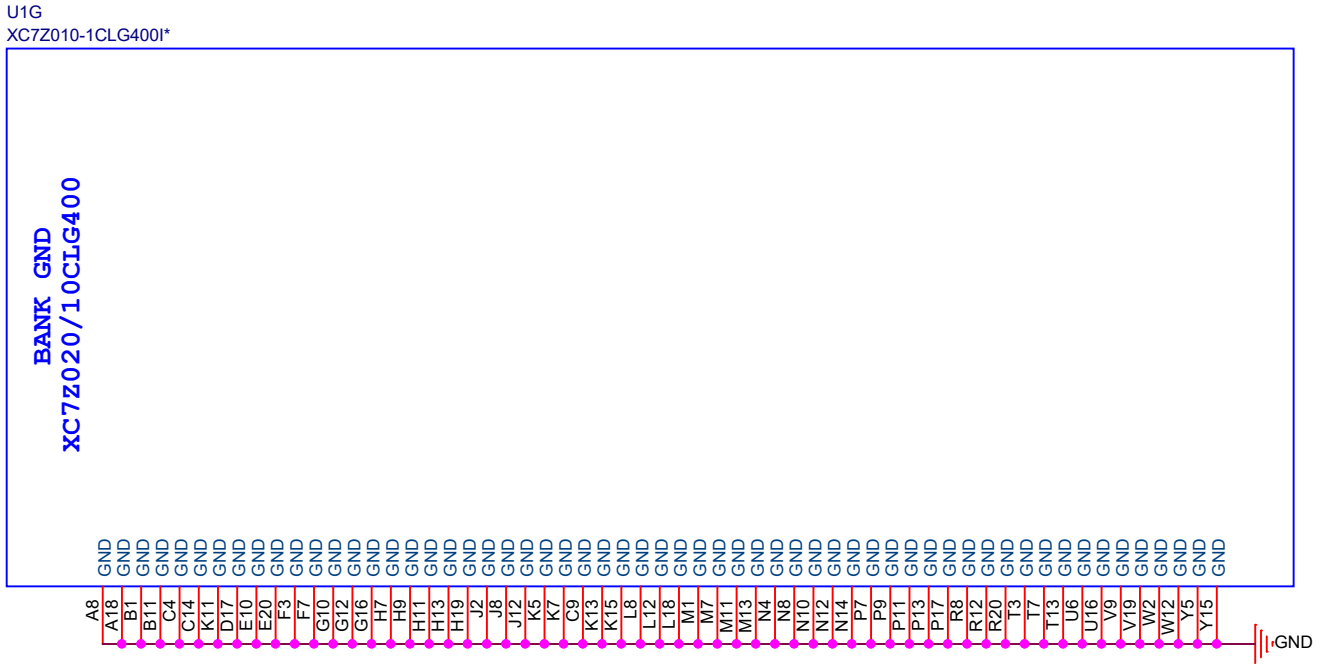
MYiR	http://www.myir-tech.com	
	Title: MYS-7Z010-20-V2	
Size: A3	Document Number: USB OTG	Rev: V1.0
Draw By: MYIR	Date: Thursday, October 27, 2022	Sheet: 06 of 17

1024MB DDR3 (x32)

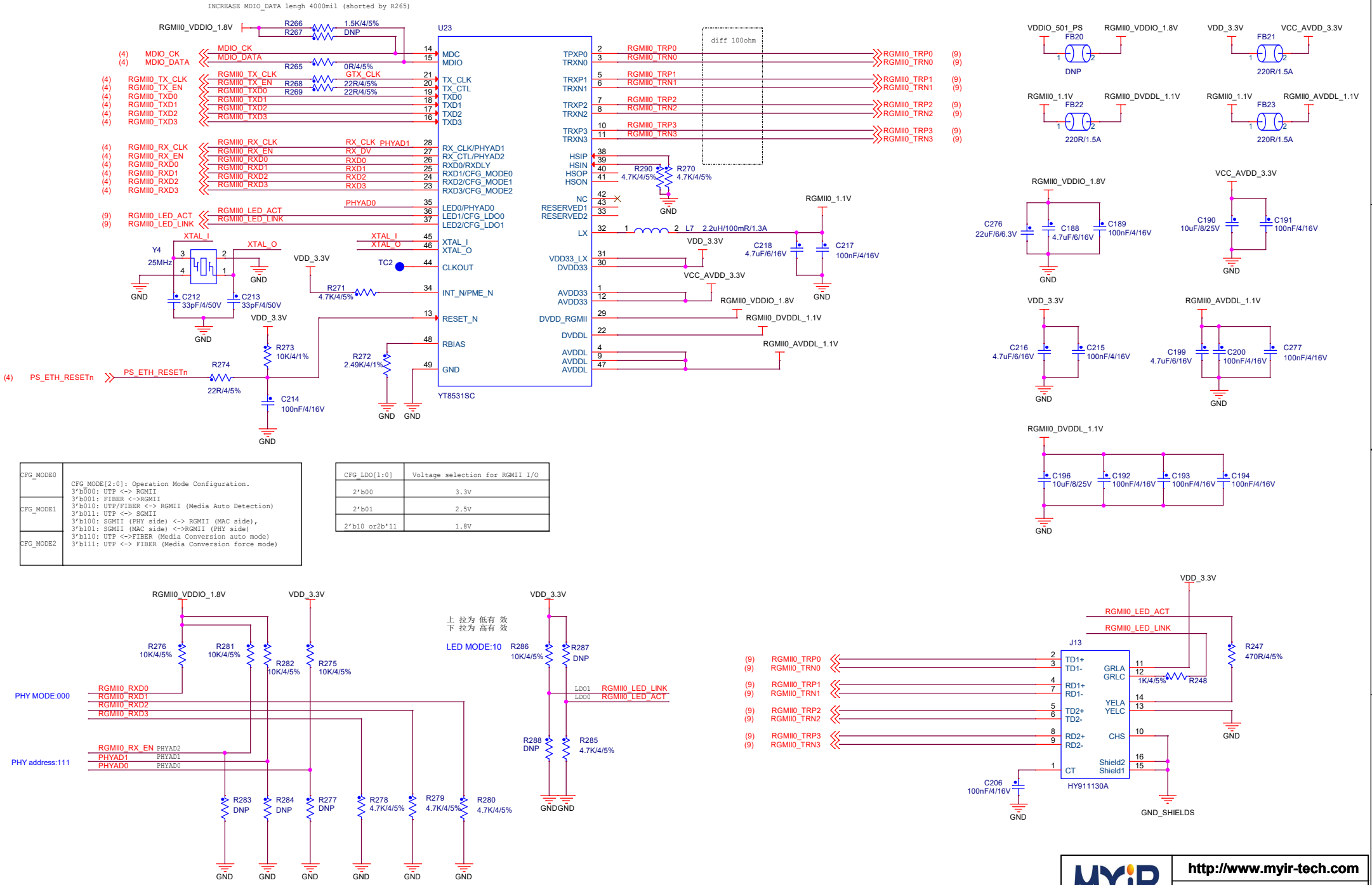


MYiR	http://www.myir-tech.com		
	Title: MYS-7Z010-20-V2		
Size: A3	Document Number: DDR3 MEMORY		Rev: V1.0
Draw By: MYIR	Date: Wednesday, September 14, 2022		Sheet: 07 of 17





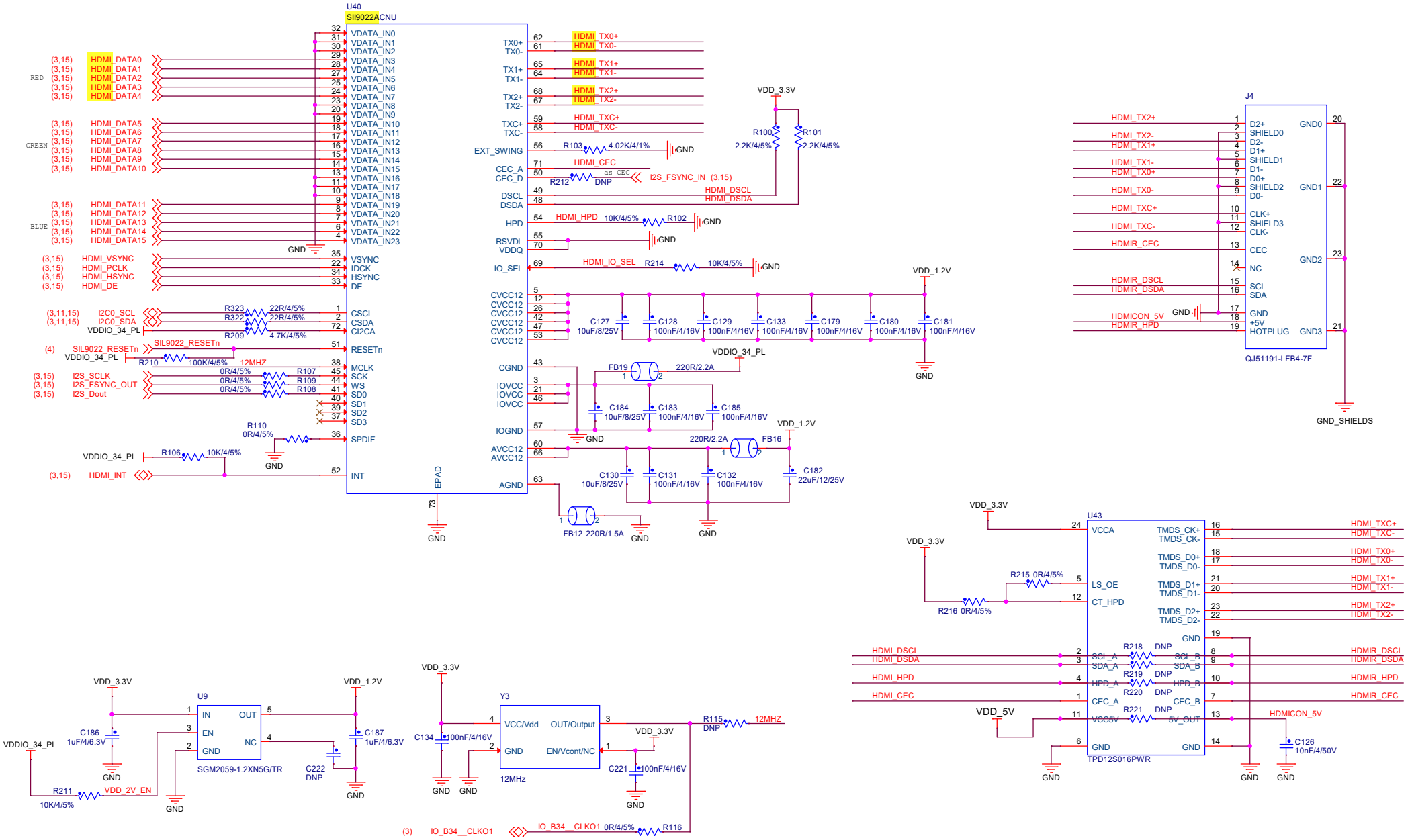
MYiR	http://www.myir-tech.com	
	Title: MYS-7Z010-20-V2	
Size: A4	Document Number: QSPI FLASH	Rev: V1.0
Draw By: MYIR	Date: Wednesday, September 14, 2022	Sheet: 08 of 17



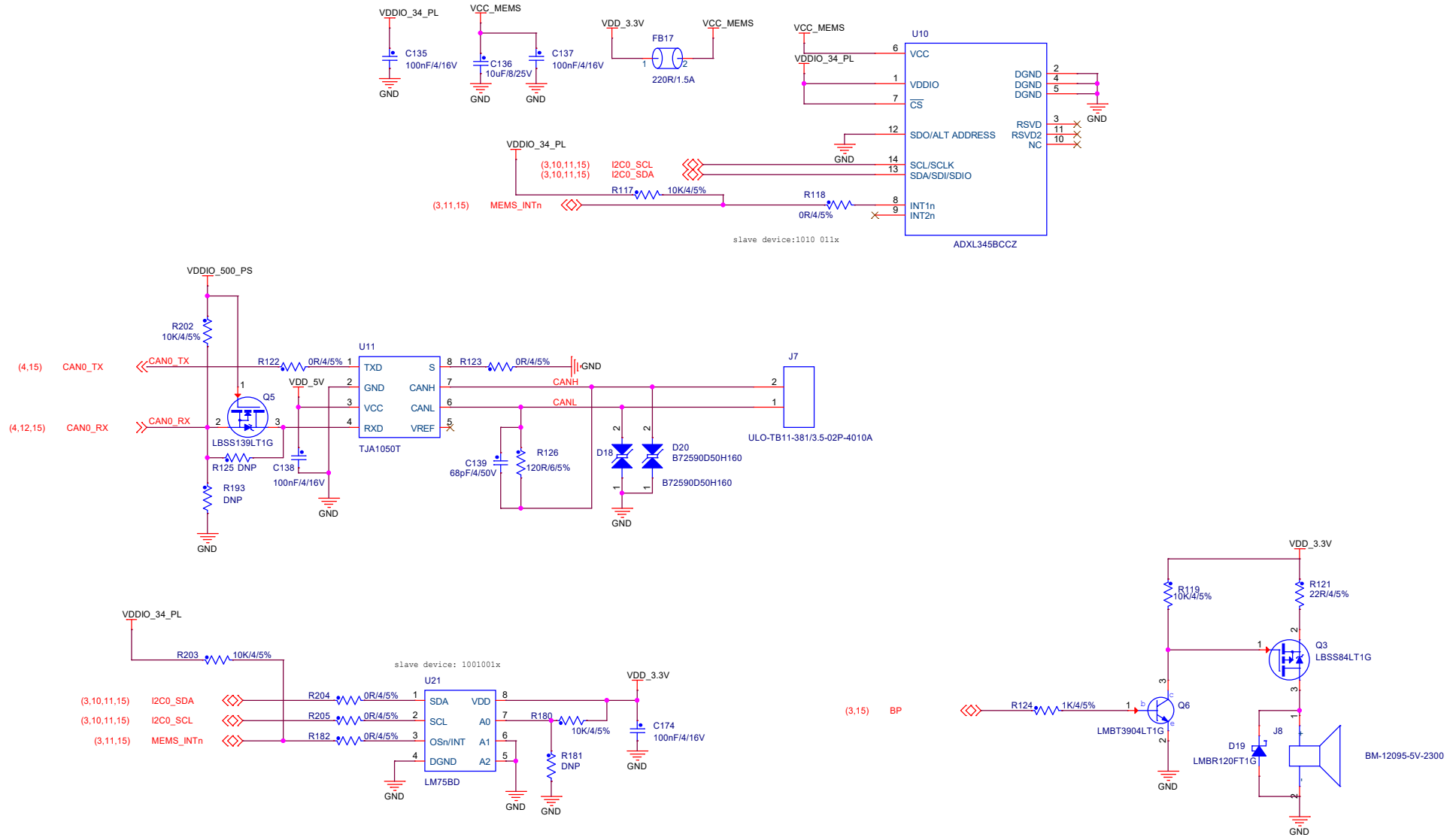
CFG_MODE0	CFG_MODE[2:0]: Operation Mode Configuration. 3'b000: UTP <-> RGMII 3'b001: FIBER <->RGMII 3'b010: UTP/FIBER <-> RGMII (Media Auto Detection) 3'b011: UTP <-> SGMII 3'b100: SGMII (PHY side) <-> RGMII (MAC side), 3'b101: SGMII (MAC side) <->RGMII (PHY side) 3'b110: UTP <->FIBER (Media Conversion auto mode) 3'b111: UTP <-> FIBER (Media Conversion force mode)
CFG_MODE1	
CFG_MODE2	

CFG_LDO[1:0]	Voltage selection for RGMII I/O
2'b00	3.3V
2'b01	2.5V
2'b10 or2b'11	1.8V

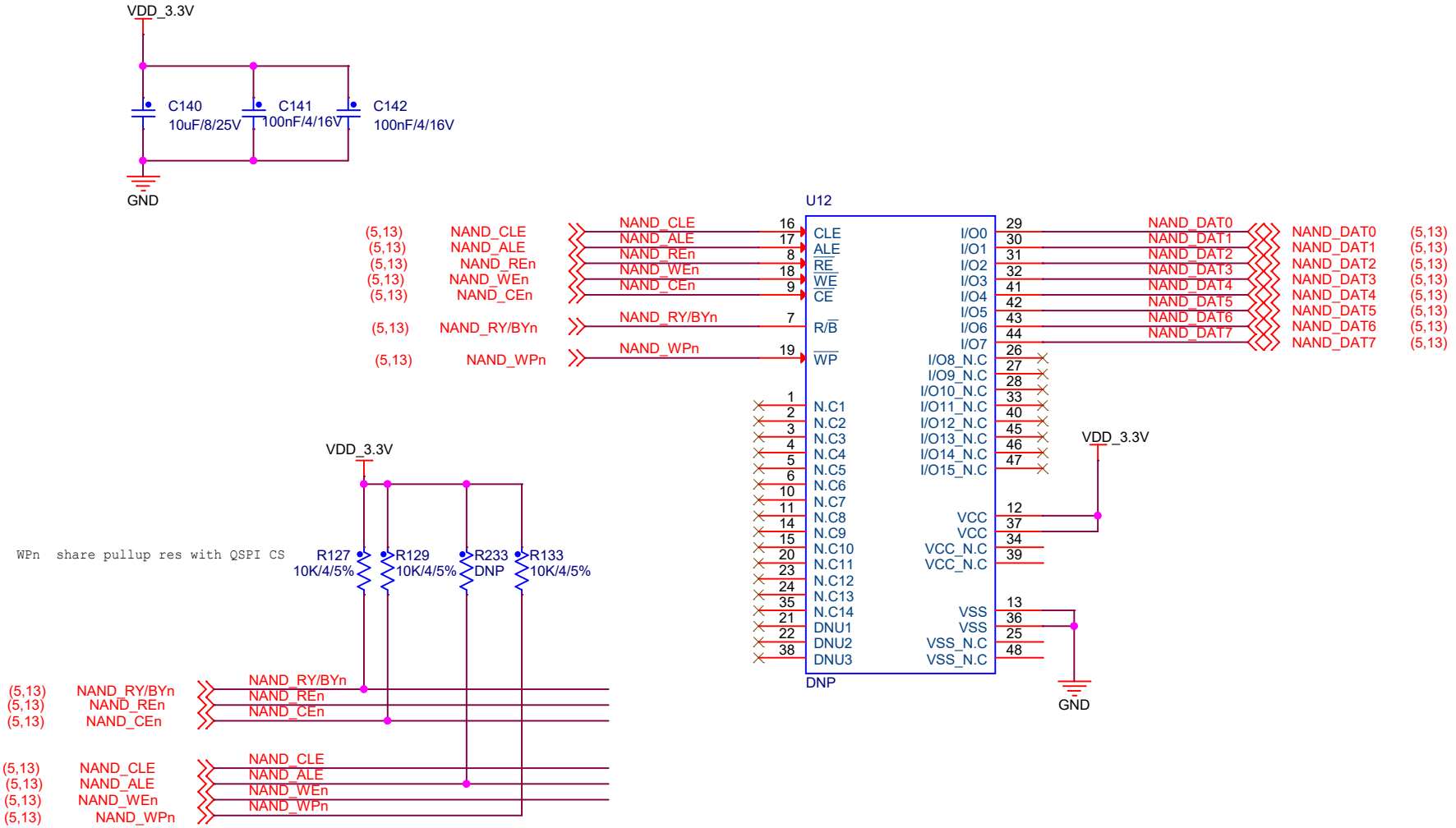
MYiR	http://www.myir-tech.com
Title:	MYS-7Z010-20-V2
Size: A3	Document Number: 10/100/1000 Ethernet
Rev: V1.0	
Draw By: MYIR	Date: Wednesday, November 09, 2022
Sheet: 09 of 17	



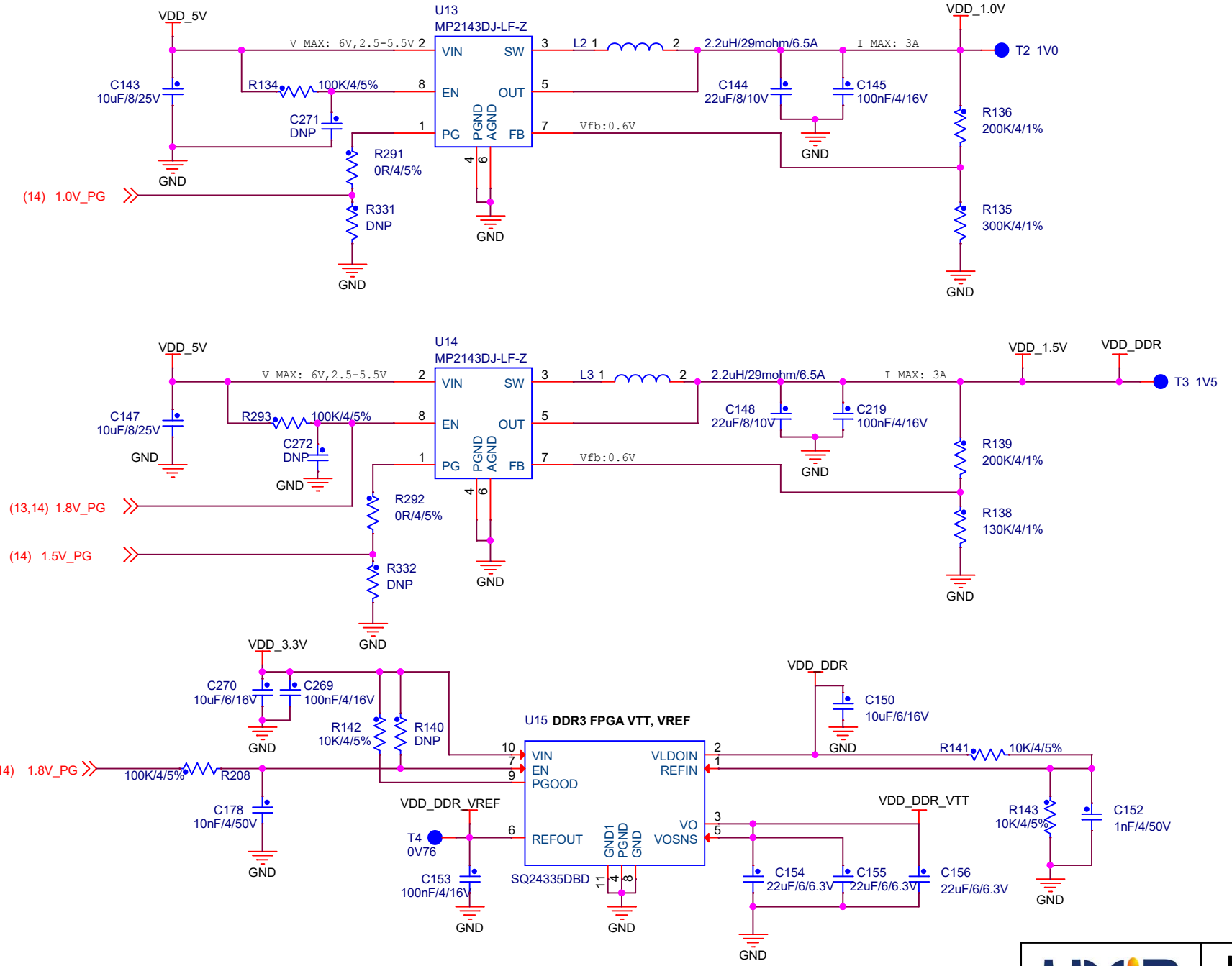
MYiR	http://www.myir-tech.com		
	Title: MYS-7Z010-20-V2		
Size: A3	Document Number: HDMI		Rev: V1.0
Draw By: MYIR	Date: Friday, November 11, 2022		Sheet: 10 of 17



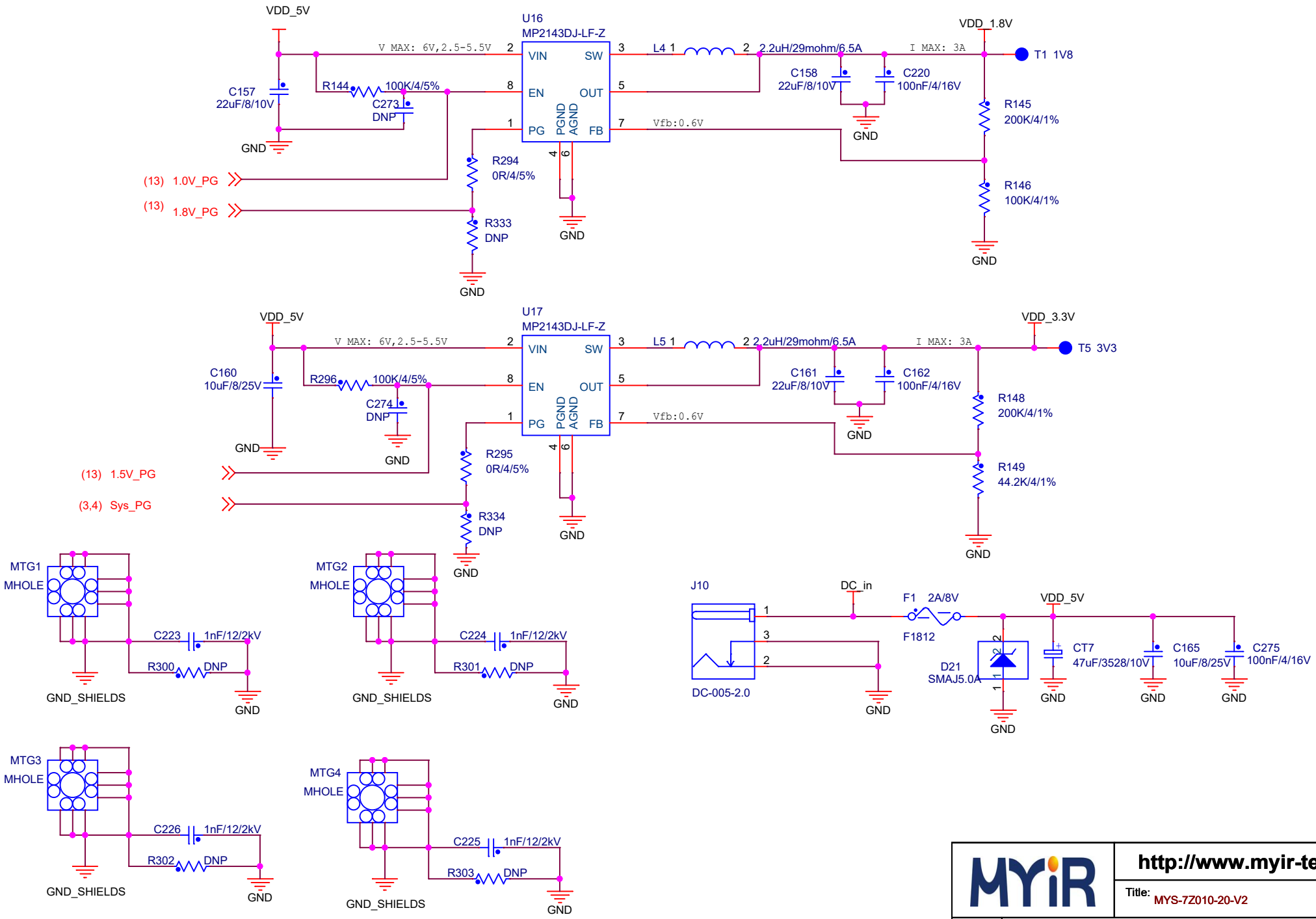
MYiR	http://www.myir-tech.com	
	Title: MYS-7Z010-20-V2	
Size: A3	Document Number: Sensor: G&T,CAN	Rev: V1.0
Draw By: MYIR	Date: Wednesday, September 14, 2022	Sheet: 11 of 17

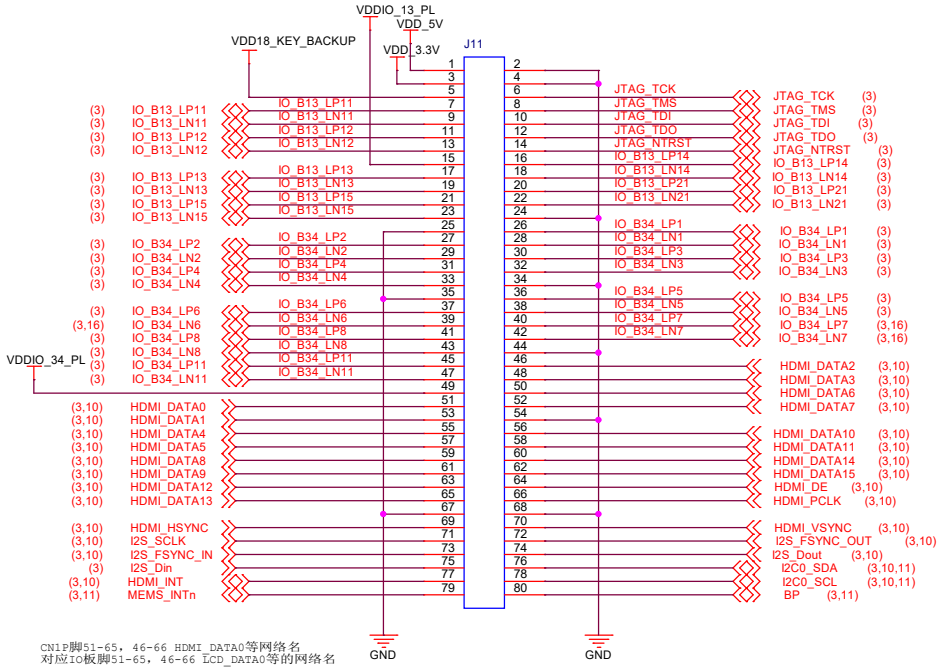


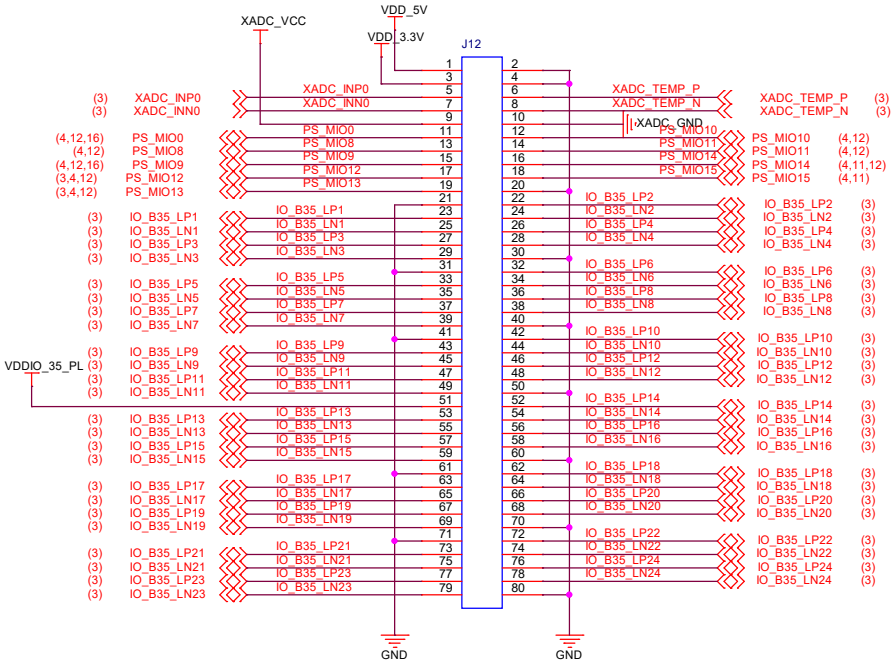
MYiR	http://www.myir-tech.com	
	Title: MYS-7Z010-20-V2	
Size: A4	Document Number: NAND_FLASH	Rev: V1.0
Draw By: MYIR	Date: Wednesday, September 14, 2022	Sheet: 12 of 17



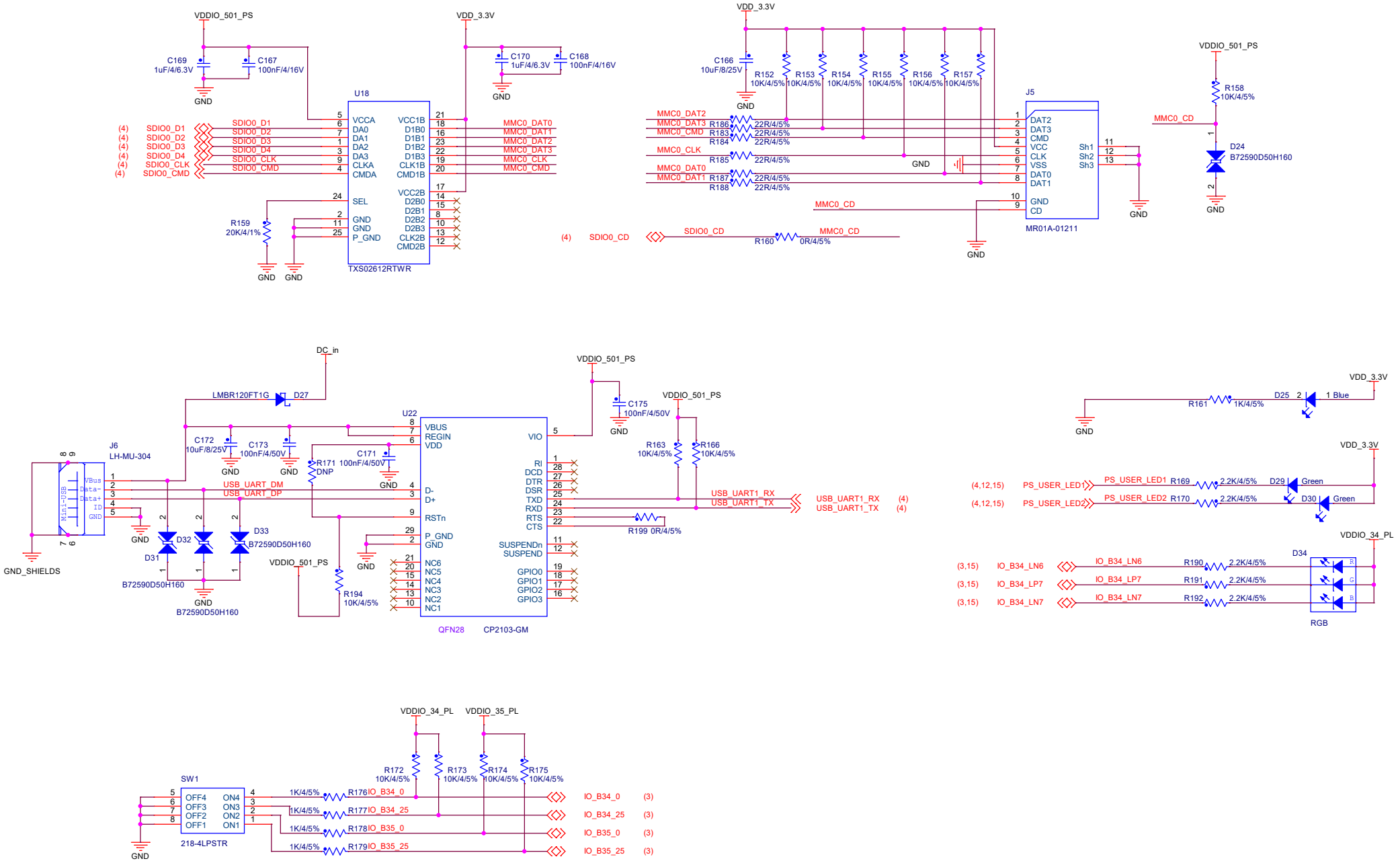
MYiR	http://www.myir-tech.com	
	Title: MYS-7Z010-20-V2	
Size: A4	Document Number: PWR:1.0V&1.5V,VTT	Rev: V1.0
Draw By: MYIR	Date: Thursday, November 10, 2022	Sheet: 13 of 17


VDD_5V
U16
MP2143DJ-LF-Z
V MAX: 6V,2.5-5.5V
VIN
SW
EN
OUT
PG
PGND
AGND
FB
L4 1
2.2uH/29mohm/6.5A
I MAX: 3A
VDD_1.8V
T1 1V8
C157
22uF/8/10V
R144
100K/4/5%
C273
DNP
C158
22uF/8/10V
C220
100nF/4/16V
R145
200K/4/1%
R146
100K/4/1%
Vfb:0.6V
R294
0R/4/5%
R333
DNP
(13) 1.0V_PG
(13) 1.8V_PG
GND
U17
MP2143DJ-LF-Z
L5 1
2.2uH/29mohm/6.5A
VDD_3.3V
T5 3V3
C160
10uF/8/25V
R296
100K/4/5%
C274
DNP
C161
22uF/8/10V
C162
100nF/4/16V
R148
200K/4/1%
R149
44.2K/4/1%
R295
0R/4/5%
R334
DNP
(13) 1.5V_PG
(3,4) Sys_PG
MTG1
MHOLE
MTG2
MHOLE
MTG3
MHOLE
MTG4
MHOLE
C223
1nF/12/2kV
R300
DNP
C224
1nF/12/2kV
R301
DNP
C226
1nF/12/2kV
R302
DNP
C225
1nF/12/2kV
R303
DNP
GND_SHIELDS
J10
DC_in
DC-005-2.0
F1
2A/8V
F1812
D21
SMAJ5.0A
CT7
47uF/3528/10V
C165
10uF/8/25V
C275
100nF/4/16V
http://www.myir-tech.com
Title: MYS-7Z010-20-V2
Size: A4
Document Number: Power 1.8V,3.3V&DCin
Rev: V1.0
Draw By: MYIR
Date: Friday, November 04, 2022
Sheet: 14 of 17





MYiR	http://www.myir-tech.com	
	Title: MYS-7Z010-20-V2	
Size: A3	Document Number: Exp Conn	Rev: V1.0
Draw By: MYIR	Date: Wednesday, September 14, 2022	Sheet: 15 of 17



MYiR	http://www.myir-tech.com	
	Title: MYS-7Z010-20-V2	
Size: A3	Document Number: MISC	Rev: V1.0
Draw By: MYIR	Date: Wednesday, September 14, 2022	Sheet: 16 of 17