

TMDSCSK388

TABLE OF CONTENTS

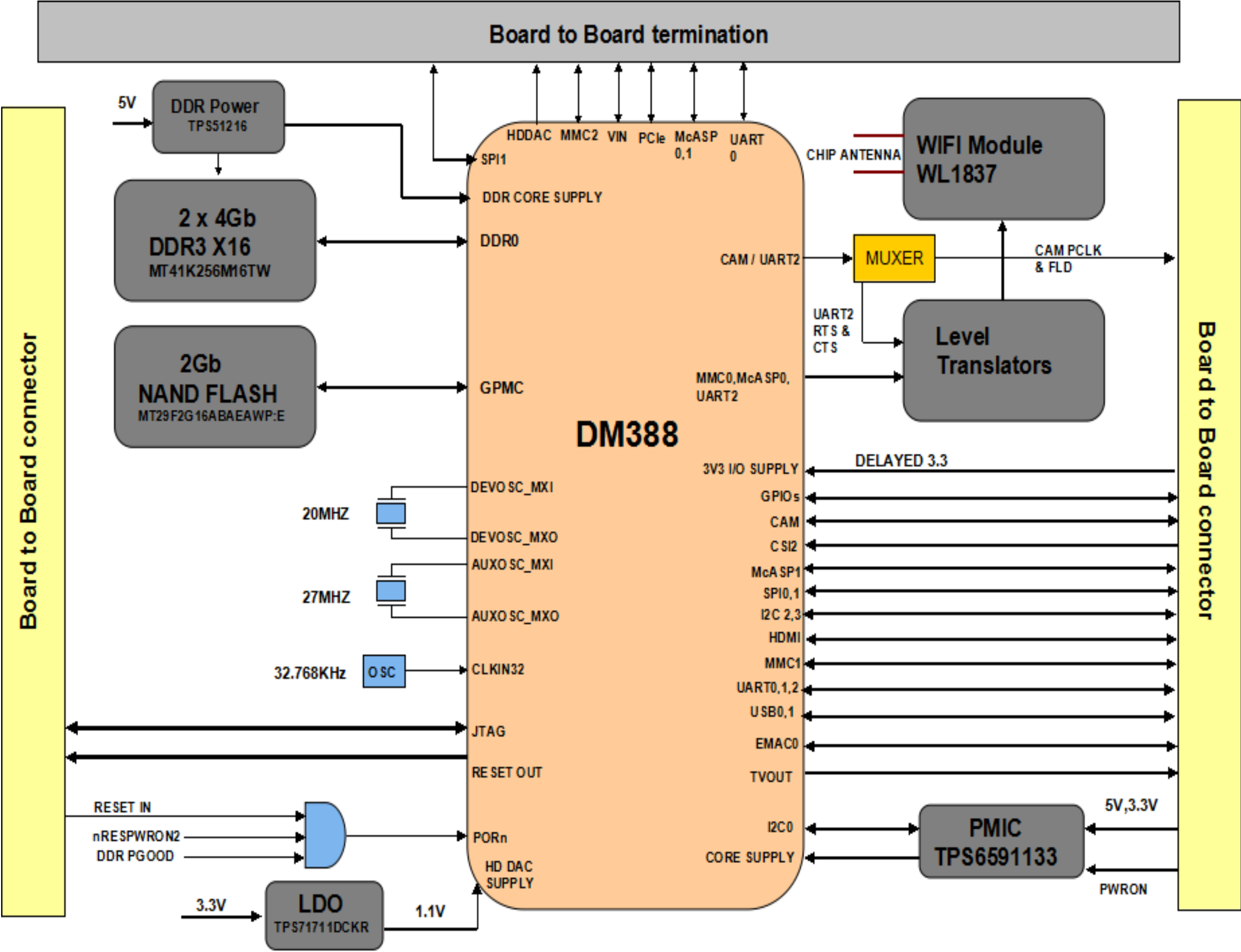
PAGE	CONTENTS
01	TABLE OF CONTENTS
02	REVISION HISTORY
03	BLOCK DIAGRAM
04	POWER FLOW DIAGRAM
05	POWER UP SEQUENCE
06	POWER CALCULATION
07	GPIO & I2C ADDRESS TABLE
08	CLOCKS & RESET
09	NAND FLASH,BOOTMODE & GPIOs
10	DDR3 INTERFACE
11	DM388 I/O PERIPHERALS
12	WLAN TRANSLATORS & CAM MUXER
13	WLAN + BT MODULE
14	DM388 POWER
15	DM388 VSS
16	PMIC POWER 1
17	PMIC POWER 2
18	DDR3 POWER
19	ETHERNET,HDMI & USB
20	CAMERA, JTAG, CSI
21	BOARD TO BOARD CONNECTORS
22	HARDWARE SCHEMATICS

REV	REV B
VER	3.0

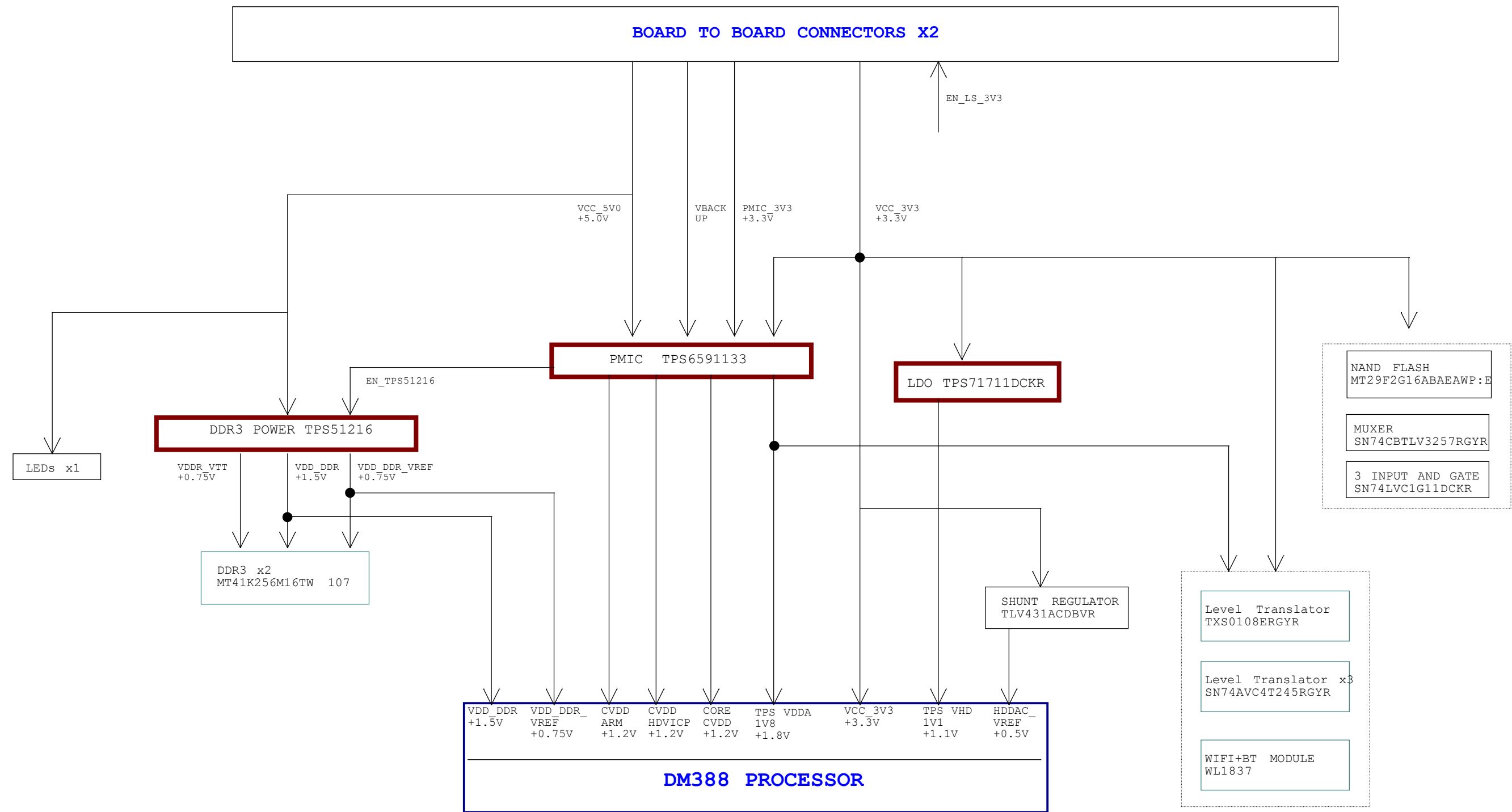
REVISION HISTORY

VER #	DATE	DESCRIPTION OF CHANGES	AUTHOR	REVIEWED BY	APPROVED BY
0.1	22nd SEP 2016	REVA Change List implemented Baselined for REVB	Mistral Design Team	AJIT MB	AJIT MB
0.2	4th NOV 2016	I2C0 SDA and I2C0 SCL lines to PMIC updated	Mistral Design Team	AJIT MB	AJIT MB
1.0	8th NOV 2016	Baselined	Mistral Design Team	AJIT MB	AJIT MB
1.1	6th JAN 2017	SD card Part# added to hardware schematics page	Mistral Design Team	AJIT MB	AJIT MB
2.0	6th JAN 2017	Baselined	Mistral Design Team	AJIT MB	AJIT MB
2.1	13th JAN 2017	Renamed the Schematics from PRDN_REVA to REV B	Mistral Design Team	AJIT MB	AJIT MB
3.0	13th JAN 2017	Baselined	Mistral Design Team	AJIT MB	AJIT MB

BLOCK DIAGRAM



POWER FLOW DIAGRAM



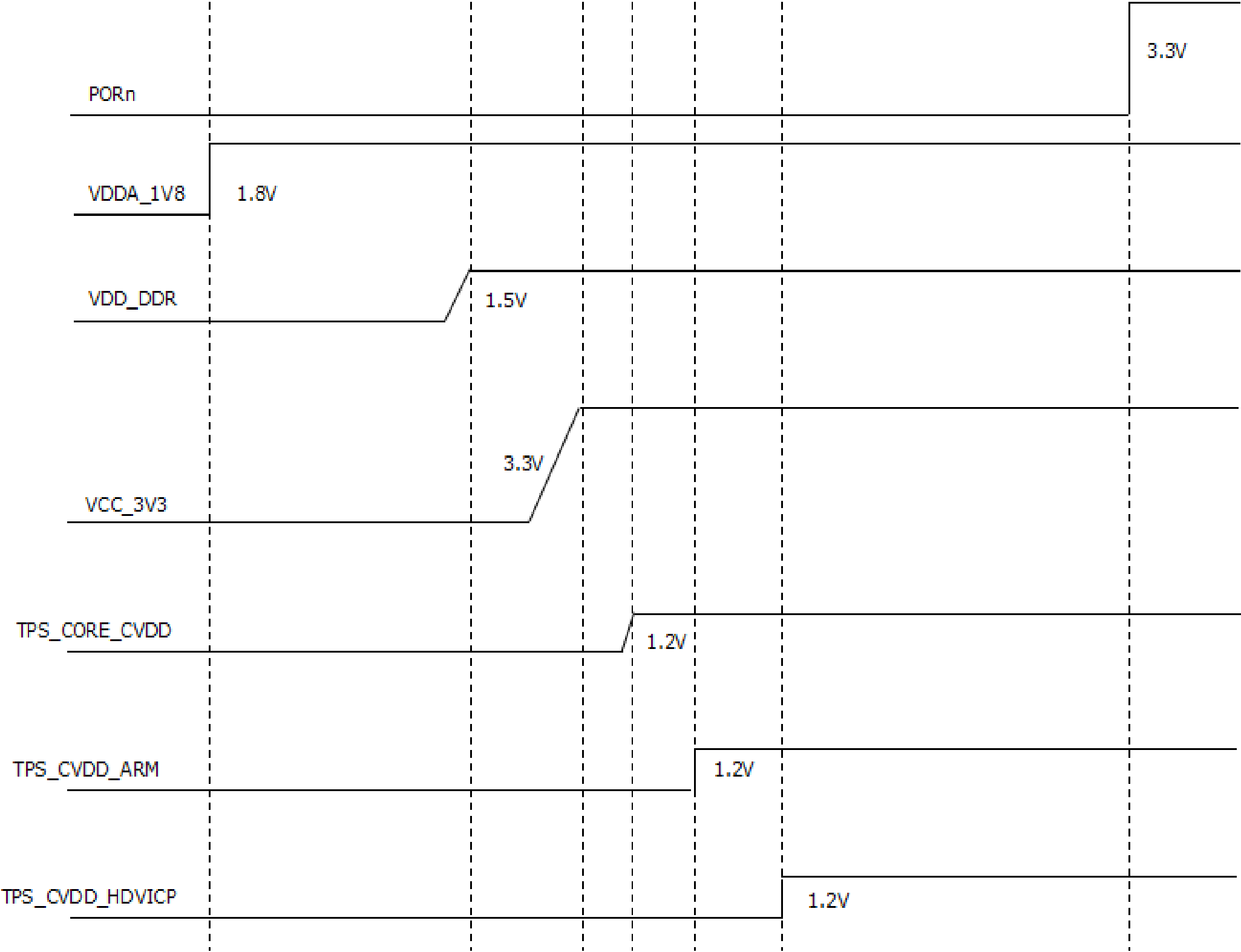
NOTE :

REGULATORS

DEVICES

Multiple powered device

POWER UP SEQUENCE



POWER CALCULATION

DM388_SOM											
Part Number	QTY	CVDD (CORE_CVDD)	CVDD_ARM (PMIC VDD1)	CVDD_HDVICP (PMIC VDD2)	VDD_1V8 (PMIC VIO)	TPS51216 (VCC_1V5)	TPS71711DCKR (TPS VHD 1V1)	VCC_3V3 (Carrier Card)	DDR_VTT 0.75	PMIC_3V3	VCC_5V0
TMS320DM388	1	1125.00	365.00	0.00	53.00	402.00	150.00	139.00		382.6968984	
DDR3(MT41K256M16TW)	2					520			272		
MT29F4G16ABAEAWP	1							30			
TXS0108EPWR	2				0.036	0.036		0.108			
WL1837MOD	1							909.0909091			
SN74AVC4T245RGYR	3				300			300			
SN74LVC1G11DCKR	1							100			
SN74CBTLV3257RGYR	1							128			
LED	1										3
Total (mA)		1125	365	0	353.036	922.036		1606.198909	272	382.6968984	320.6470588
Input voltage		5	3.3	3.3	3.3	5	3.3	5	1.5	5	5
Efficiency		0.85	0.85	0.8	0.85	0.8		0.85	0.85	0.85	0.75
Quiescent current (mA)											
Output Voltage		1.2	1.2	1.2	1.8	1.5	1.1	3.3	0.75	3.3	3.3
Current Drawn from Input		317.6470588	156.1497326	0	226.5471658	345.7635	150	1247.166212	160	297.1528858	504
Current Drawn from VCC_5V0 (mA)	2210.729656										

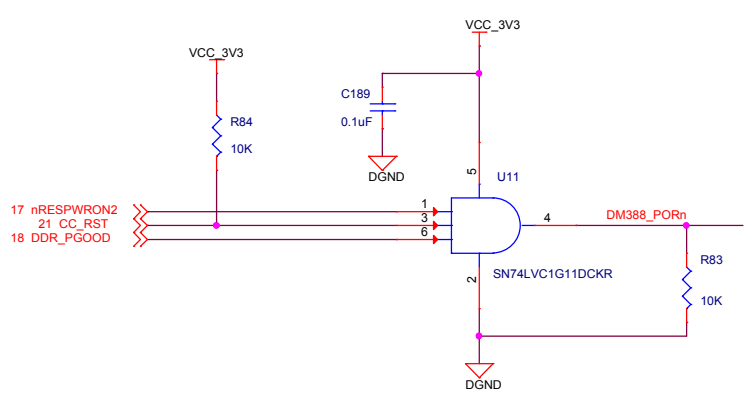
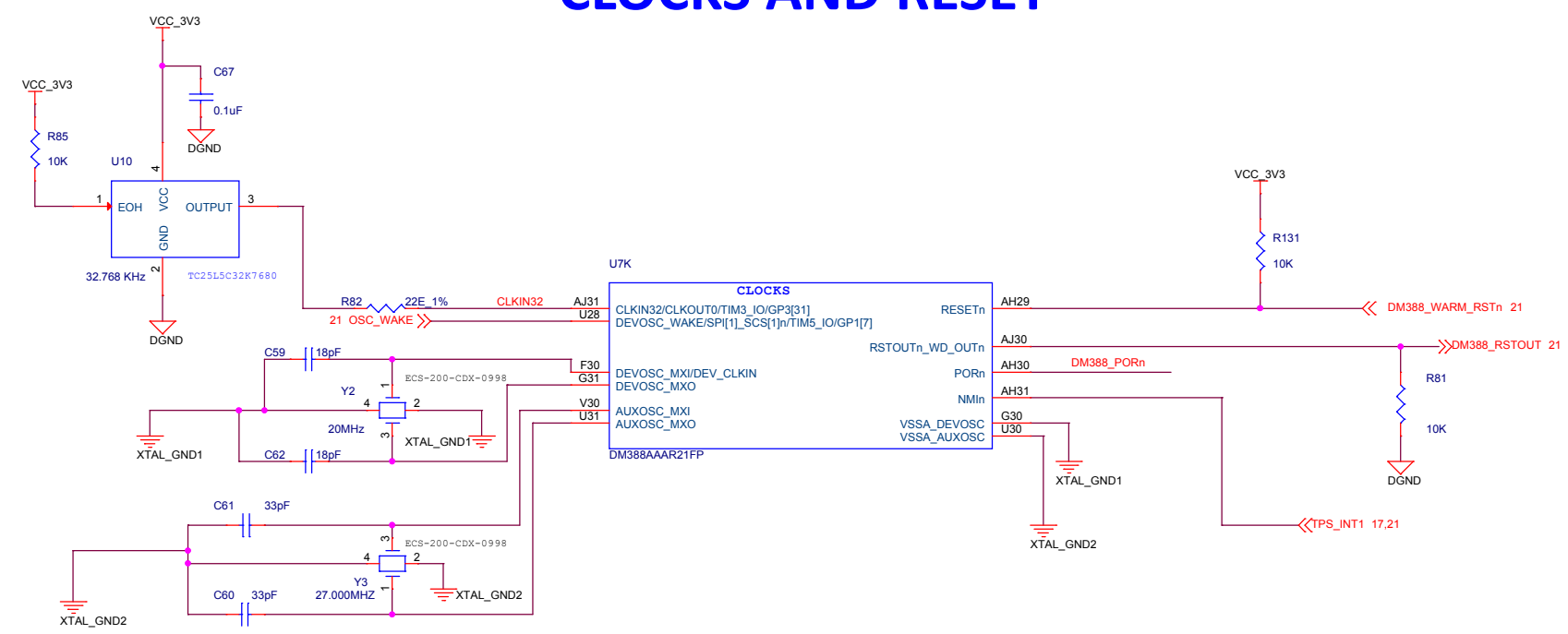
GPIO TABLE

GPIO NAME	PROCESSOR PIN	PURPOSE	Internal/ External PU/PD states
TPS_INT1	NMI	NMIn interrupt from PMIC to DM388 processor	INTERNAL PU
DM388_GPMC_WPn	GP1[26]	WRITE PROTECT TO NAND FLASH	EXTERNAL PU
DM388_WLAN_IRQ	GP1[13]	INTERRUPT FROM WL1837 MOD	EXTERNAL PU
DM388_WLAN_EN	GP2[6]	WLAN ENABLE SIGNAL TO WIFI MODULE (WL1837)	INTERNAL PD
DM388_BT_EN	GP2[5]	BLUETOOTH ENABLE SIGNAL TO WIFI MODULE (WL1837)	INTERNAL PD
DM388_TPS_SLEEP	GP1[15]	PMIC SLEEP INPUT	INTERNAL PU
DM388_MUX_SEL	GP1[16]	SELECTION SIGNAL TO CAMERA & UART MUXER	EXTERNAL PD
ENET_RSTn	GP3[20]	ETHERNET RESET	INTERNAL PU
DM388_MMC1_DAT6 /GP0_12	GP0[12]	KEYPAD	INTERNAL PU
DM388_MMC1_DAT7 /GP0_13	GP0[13]	KEYPAD	INTERNAL PU
DM388_GP1[10]	GP1[10]	KEYPAD	INTERNAL PD
DM388_McASP0_AXR5	MCA[0]_AXR[5]	KEYPAD	INTERNAL PD
DM388_GP3[3]	GP3[3]	LED	INTERNAL PD
DM388_GP0[9]	GP0[9]	LED	INTERNAL PD
DM388_GP1[24]	GP1[24]	LED	INTERNAL PU
DM388_GP1[25]	GP1[25]	LED	INTERNAL PU
DM388_GP1[30]	GP1[30]	LED	INTERNAL PD

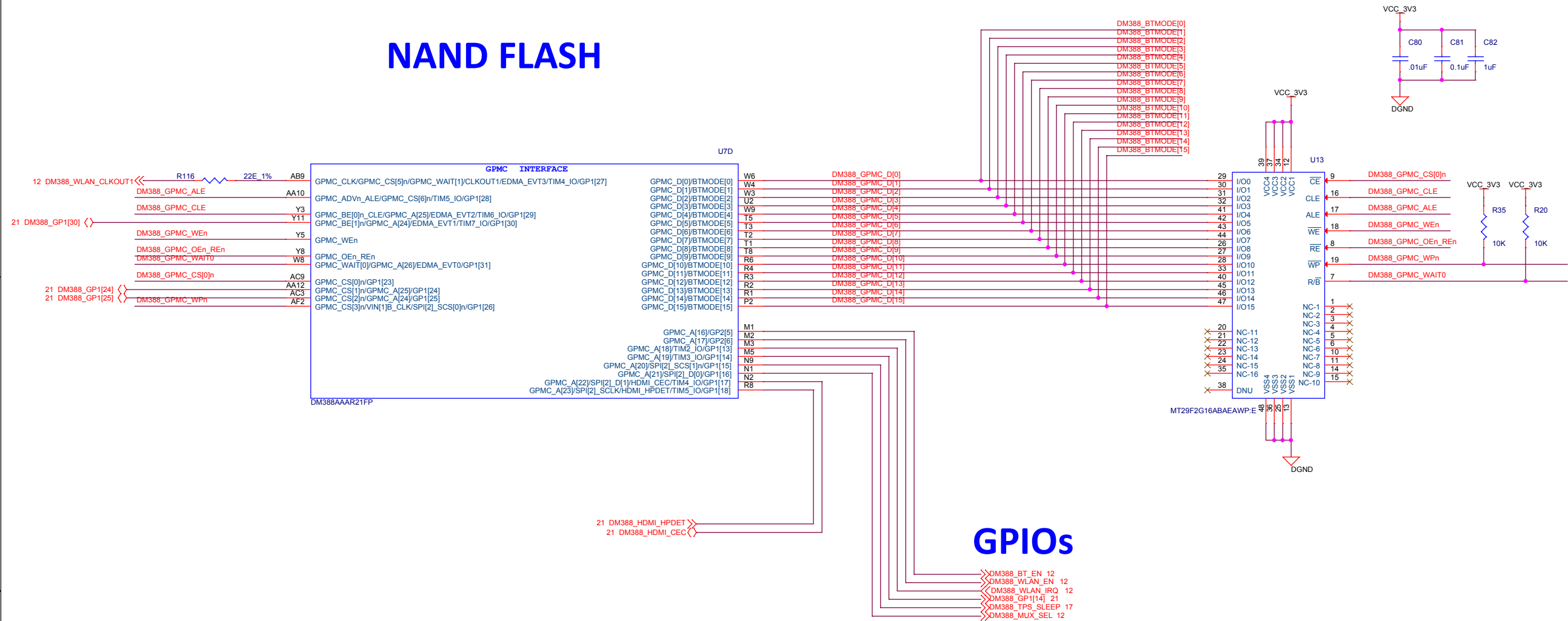
I2C ADDRESS TABLE

MASTER	I2C USED	SLAVE DEVICE	ADDRESS
DM388 PROCESSOR	I2C0	PMIC	0x2D (General Purpose)
	I2C2	Camera Module	0x10 (Camera Sensor)
			0x2D (LVDS module)
		Audio Codec (TLV320AIC3104)	0x18

CLOCKS AND RESET



NAND FLASH

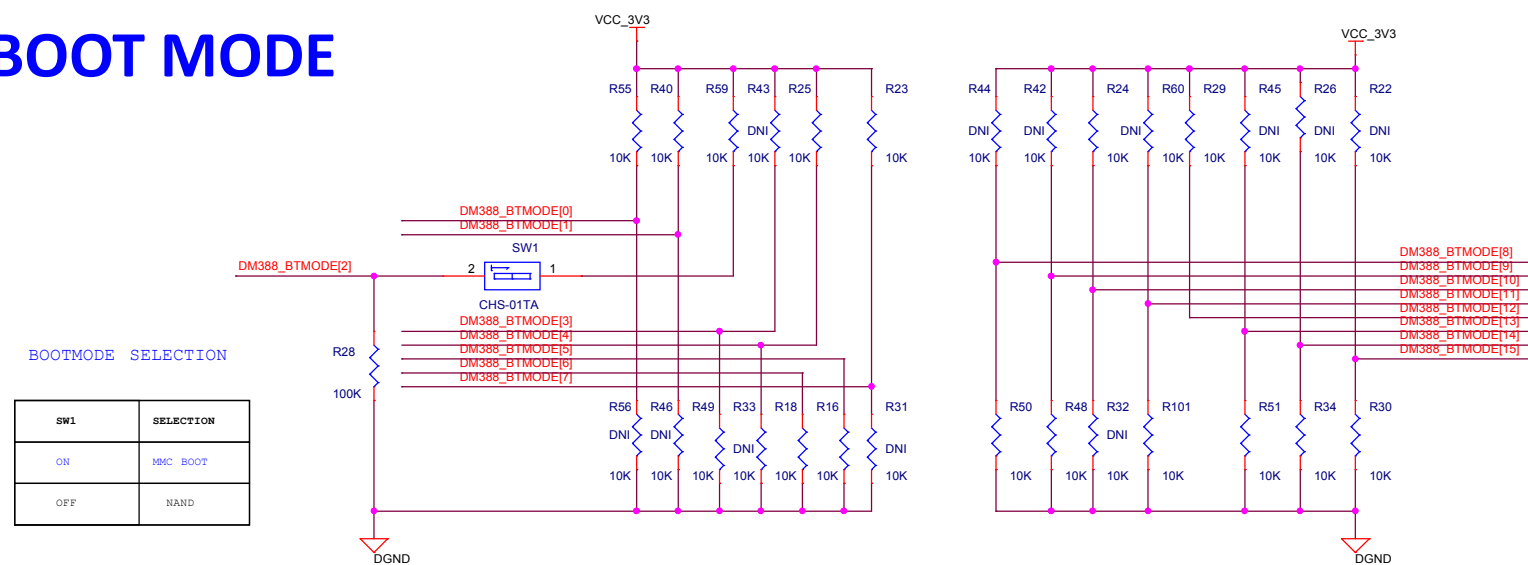


GPIOs

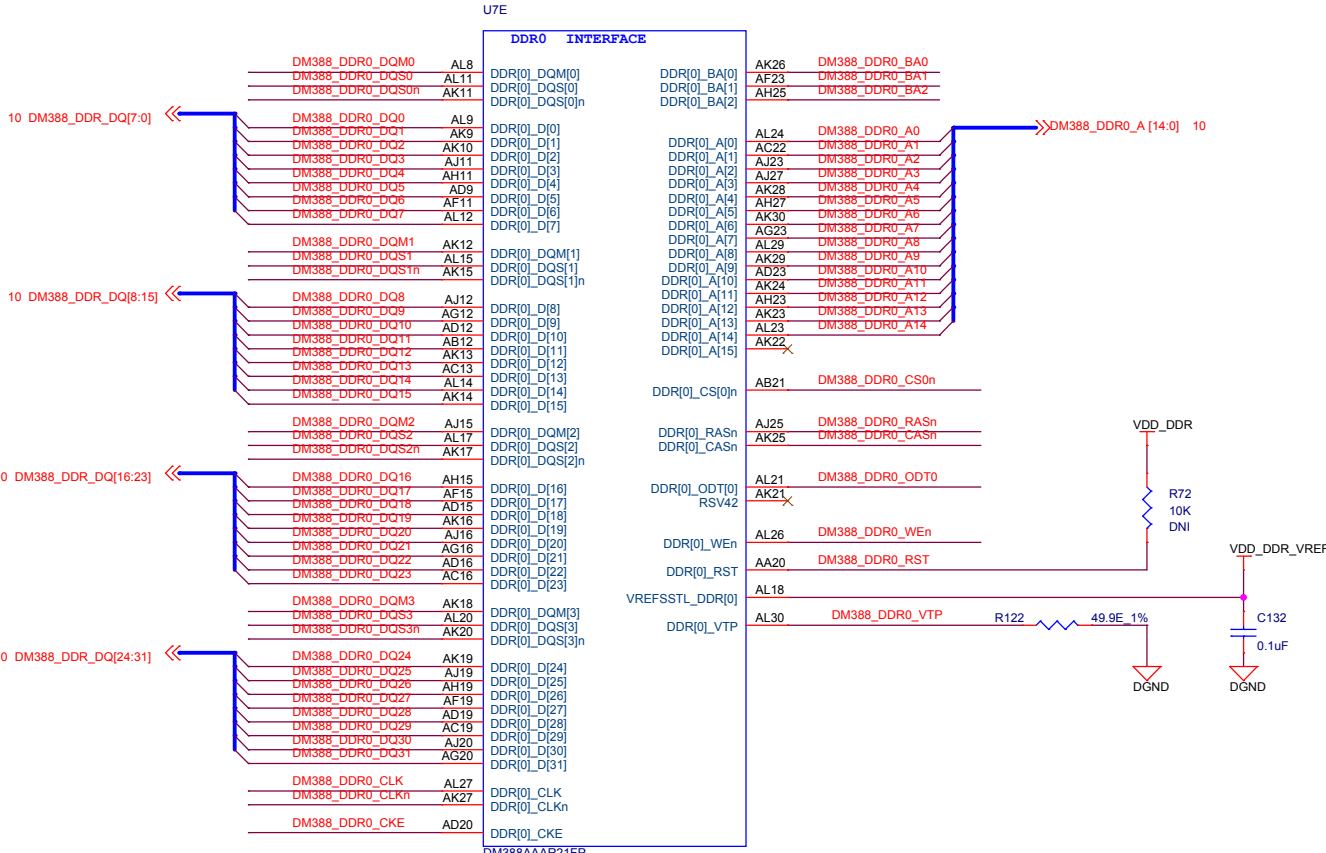
BOOTMODE TABLE

BOOTMODE PIN	DEFAULT SETTING	DESCRIPTION
BTMODE15	0	GPMC CS0 Wait disabled
BTMODE14	0	GPMC CS0 Address/Data not muxed
BTMODE13	0	
BTMODE12	1	GPMC CS0 16bit Data bus
BTMODE11	0	RSTOUT is asserted when a Watchdog Timer reset, POR, RESET, or Emulation/Software-Global Cold/Warm reset occurs
BTMODE10	0	GPMC Option A
BTMODE9	0	MII (GMII) Ethernet PHY Mode
BTMODE8	0	
BTMODE7	1	RGMII Internal delay disabled
BTMODE6	0	RSV
BTMODE5	0	RSV
BTMODE[4:0]	10011	NAND BOOT
	10111	MMC BOOT

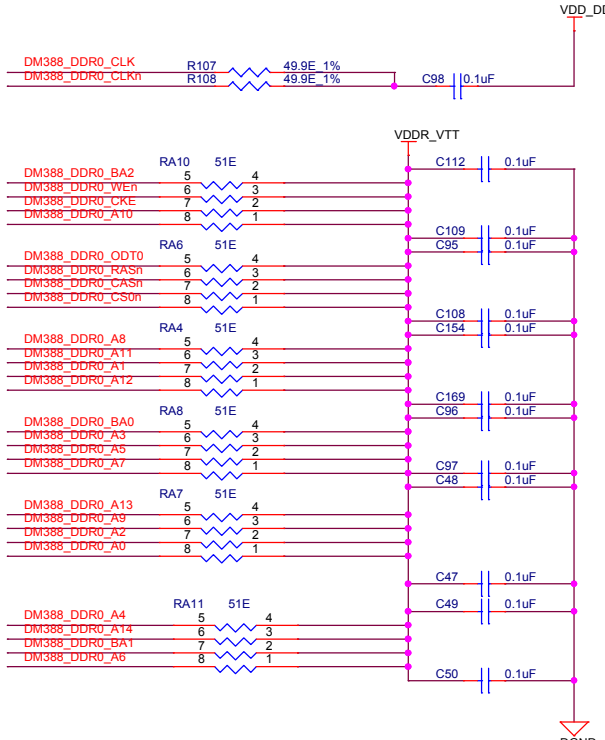
BOOT MODE



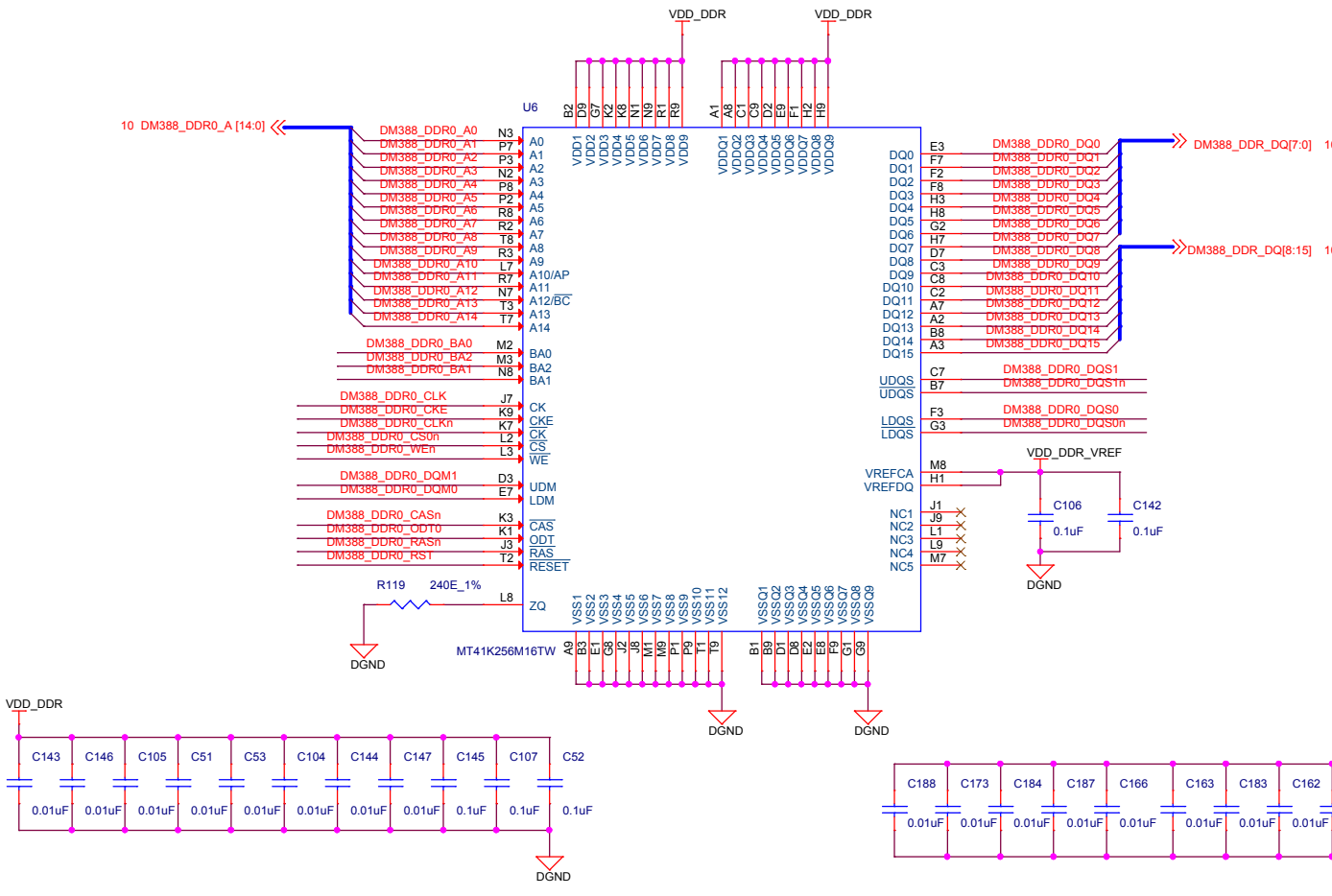
DM388 DDR INTERFACE



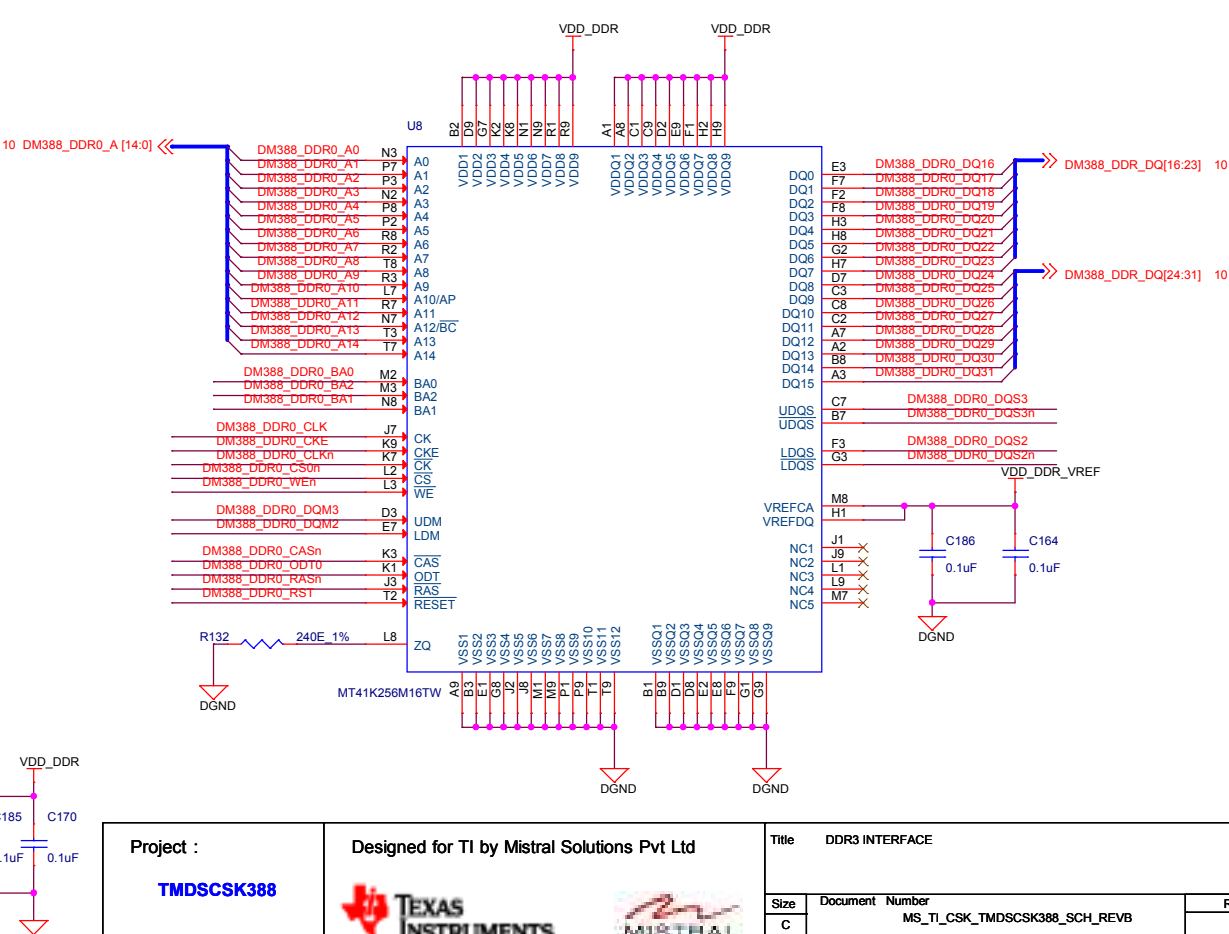
DDR TERMINATION



DDR DEVICE 1



DDR DEVICE 2



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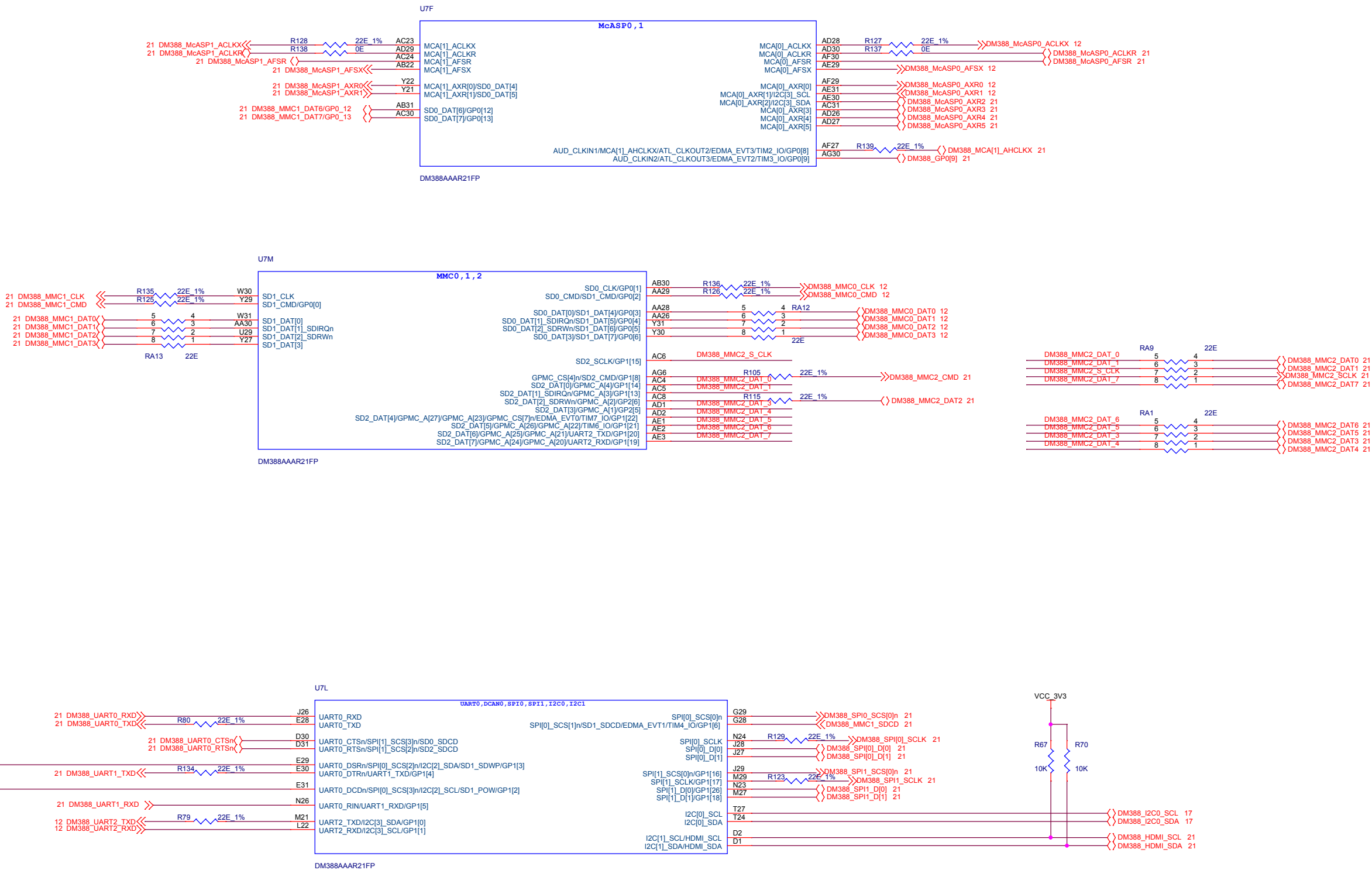
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Title **DDR3 INTERFACE**

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DM388 I/O PERIPHERALS



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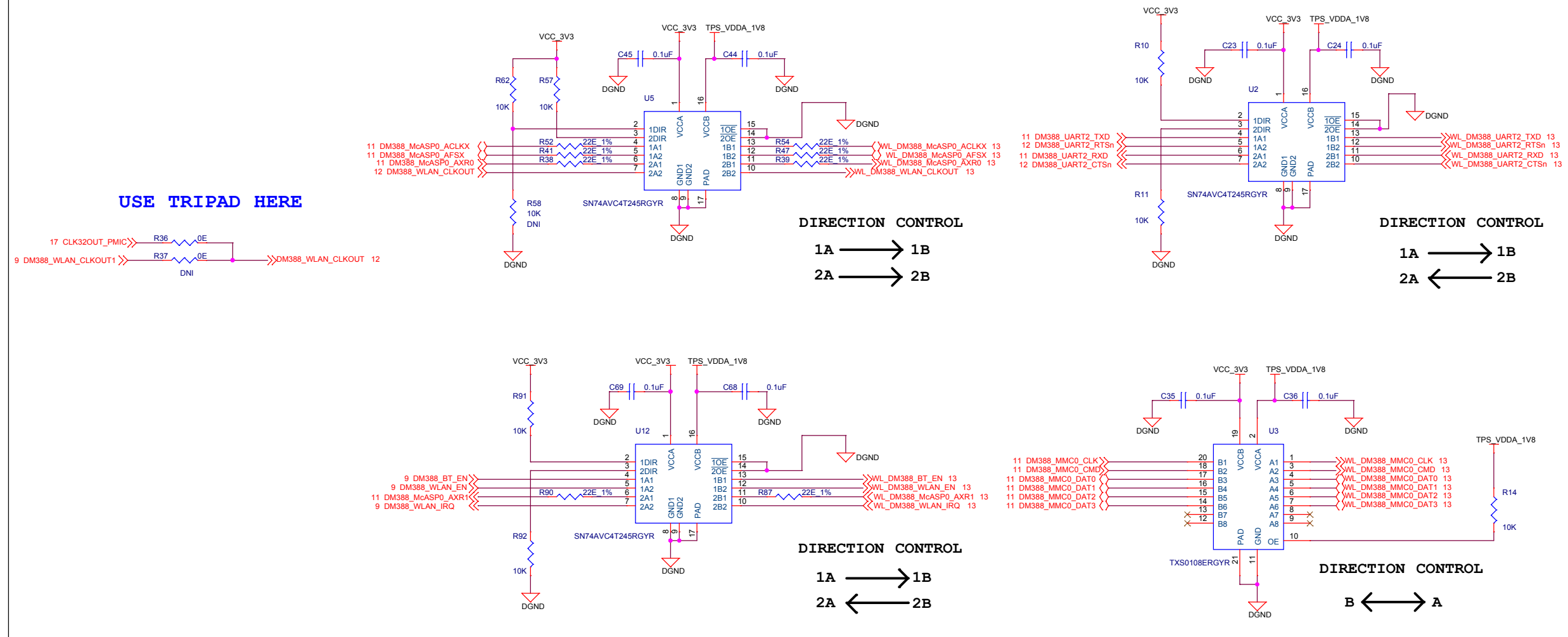
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Rev B

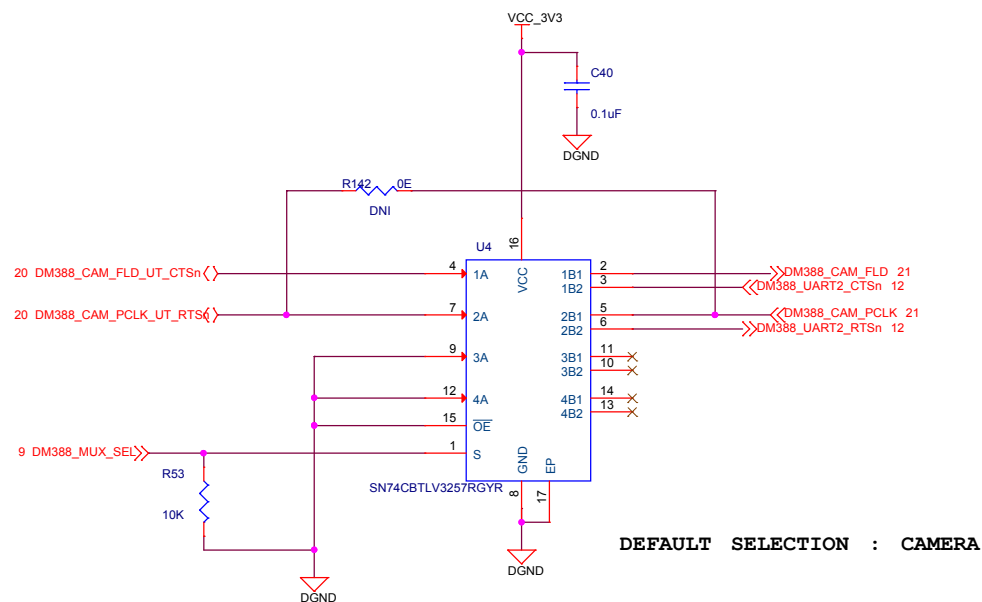
Date: Friday, January 13, 2017

Sheet 11 of 22

WLAN TRANSLATORS



UART & CAM MUXER



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TMDSCSK388

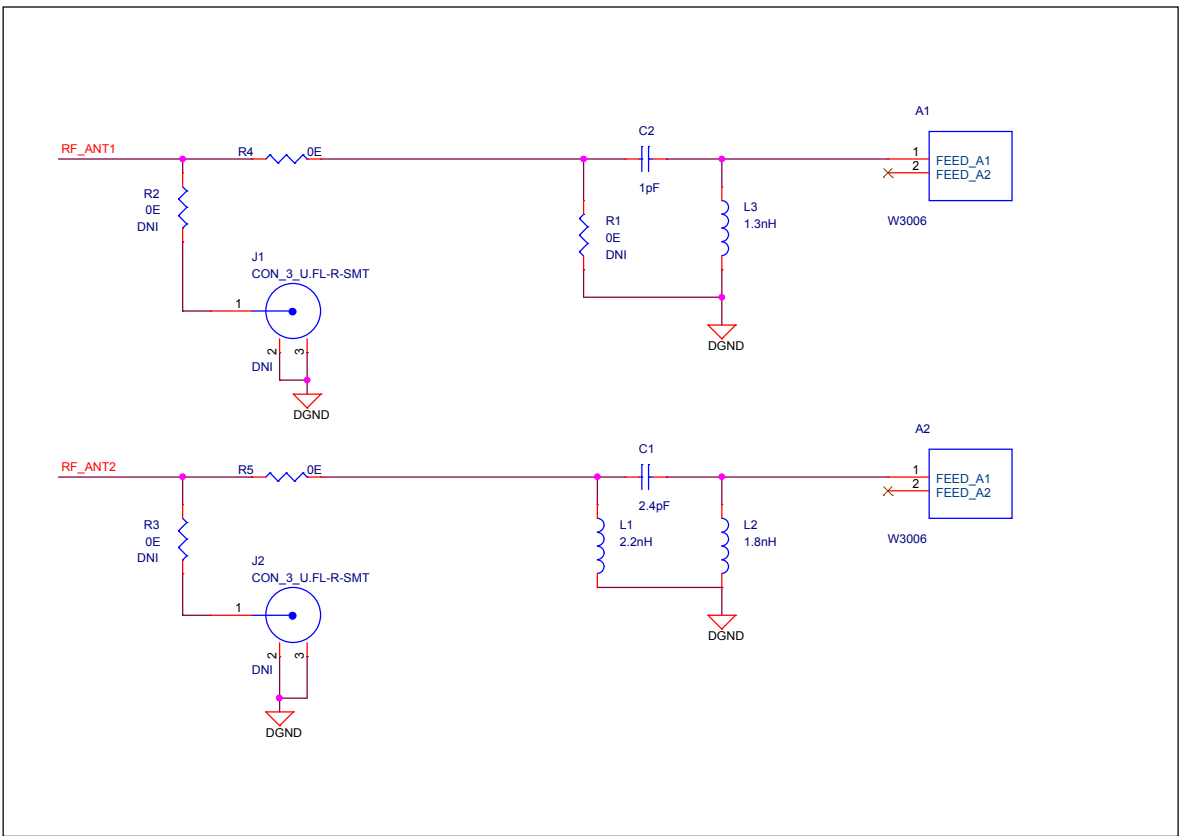
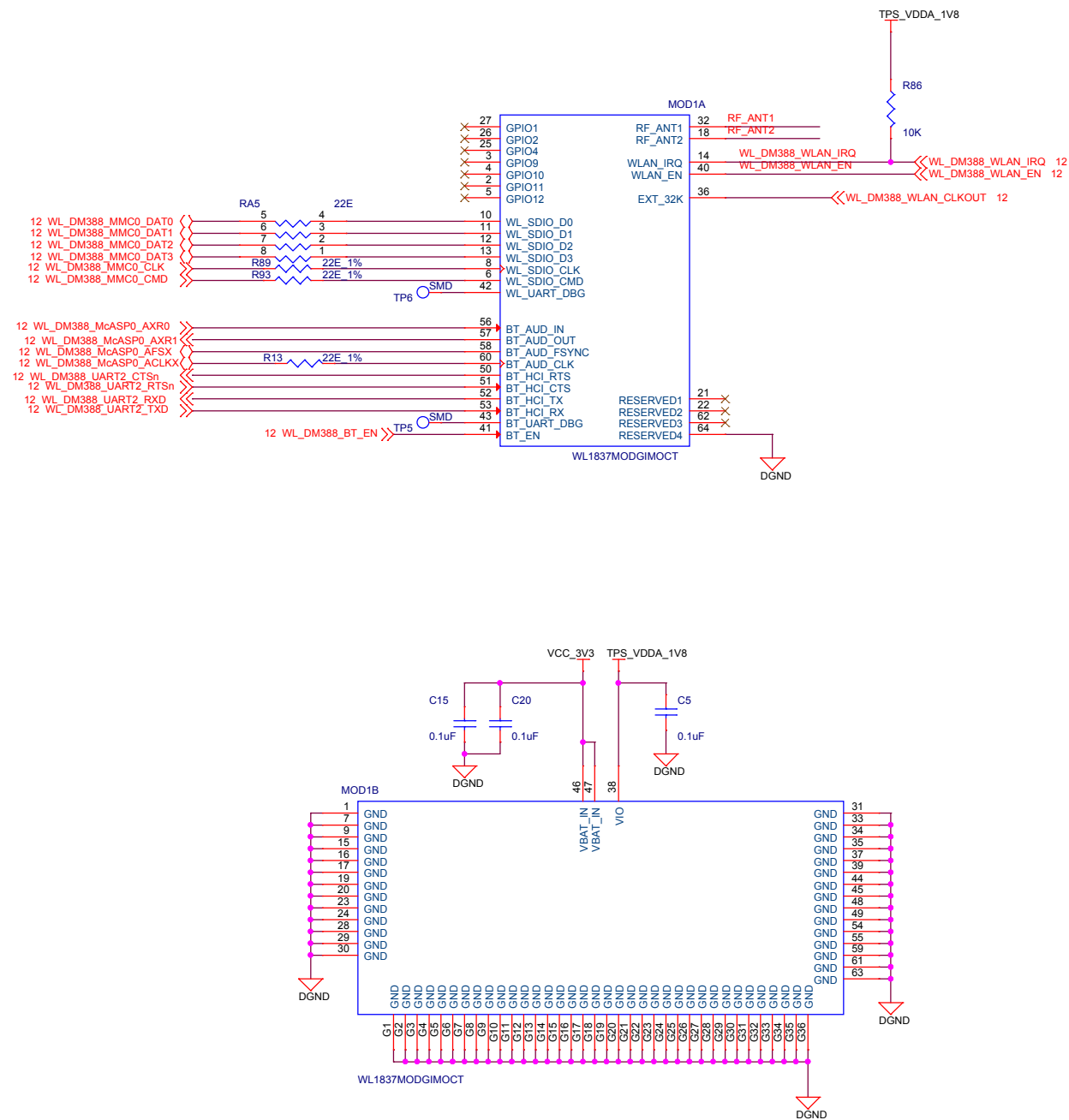
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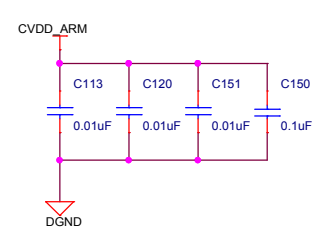
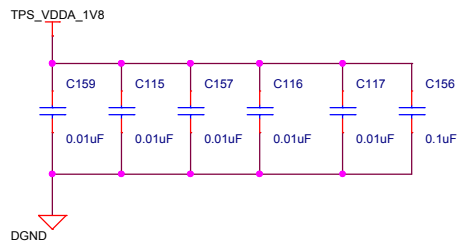
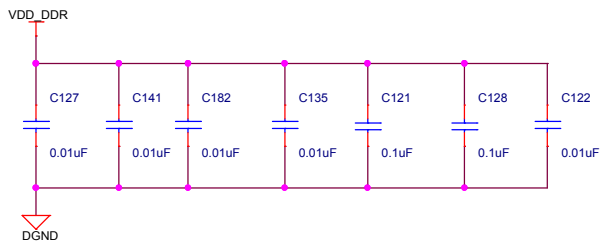
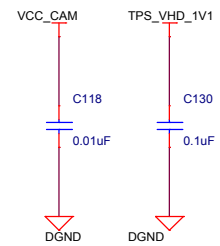
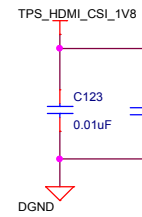
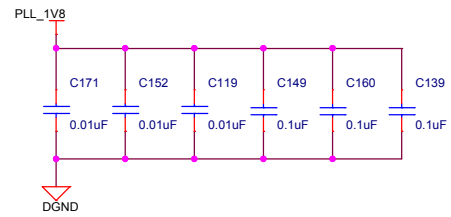
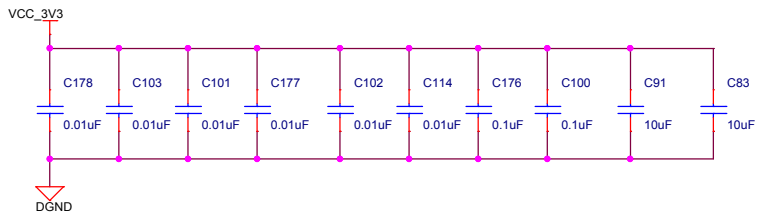
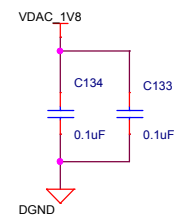
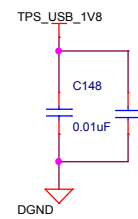
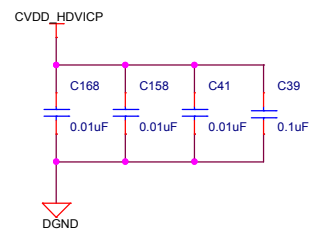
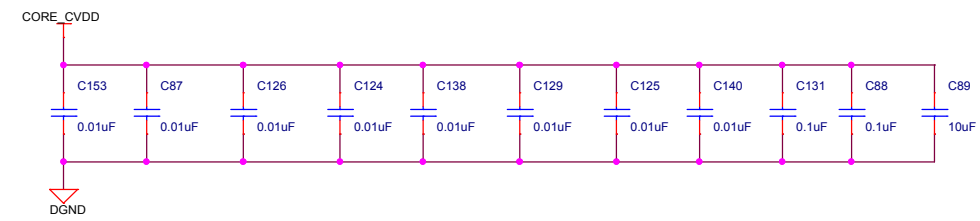
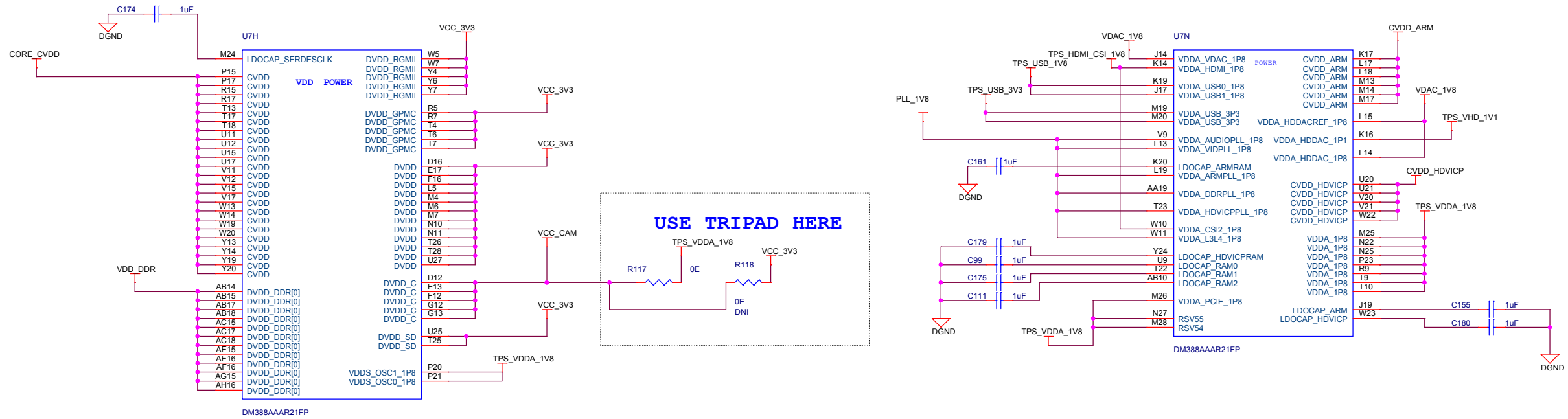
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Size	Document Number	Rev
C	MS_TI_CSK_TMDSCSK388_SCH_REVB	B
Date:	Friday, January 13, 2017	Sheet 12 of 22

WLAN + BT MODULE



DM388 POWER



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TMDSCSK388

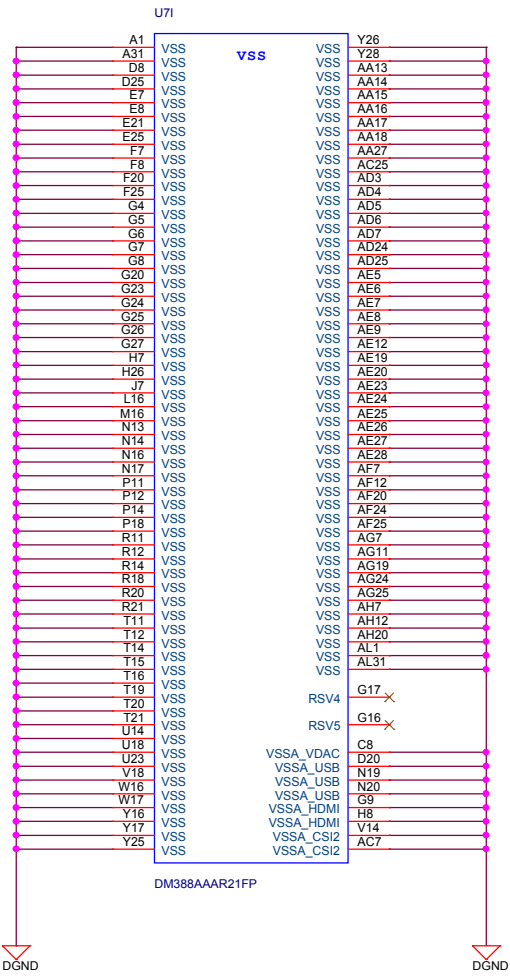
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Title	DM388 POWER
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Size	Document Number	Re
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Date:	Friday, January 13, 2017	Sheet 14 of 22

DM388 VSS



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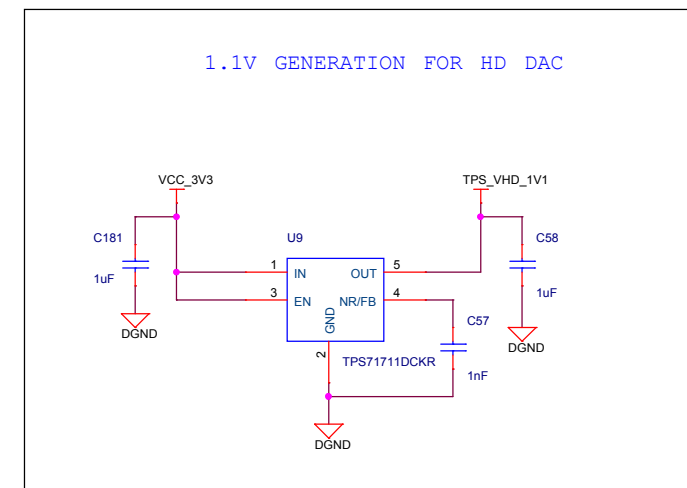
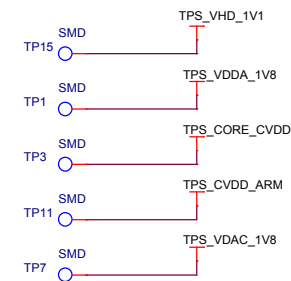
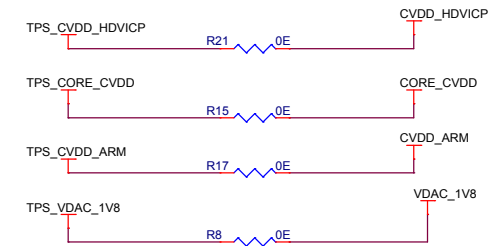
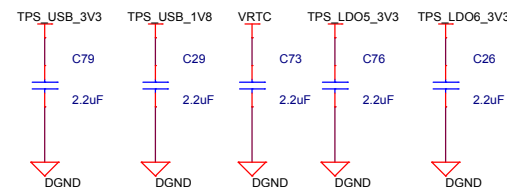
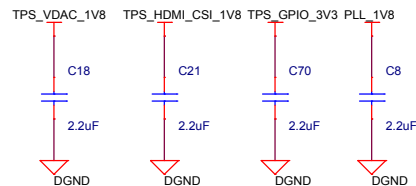
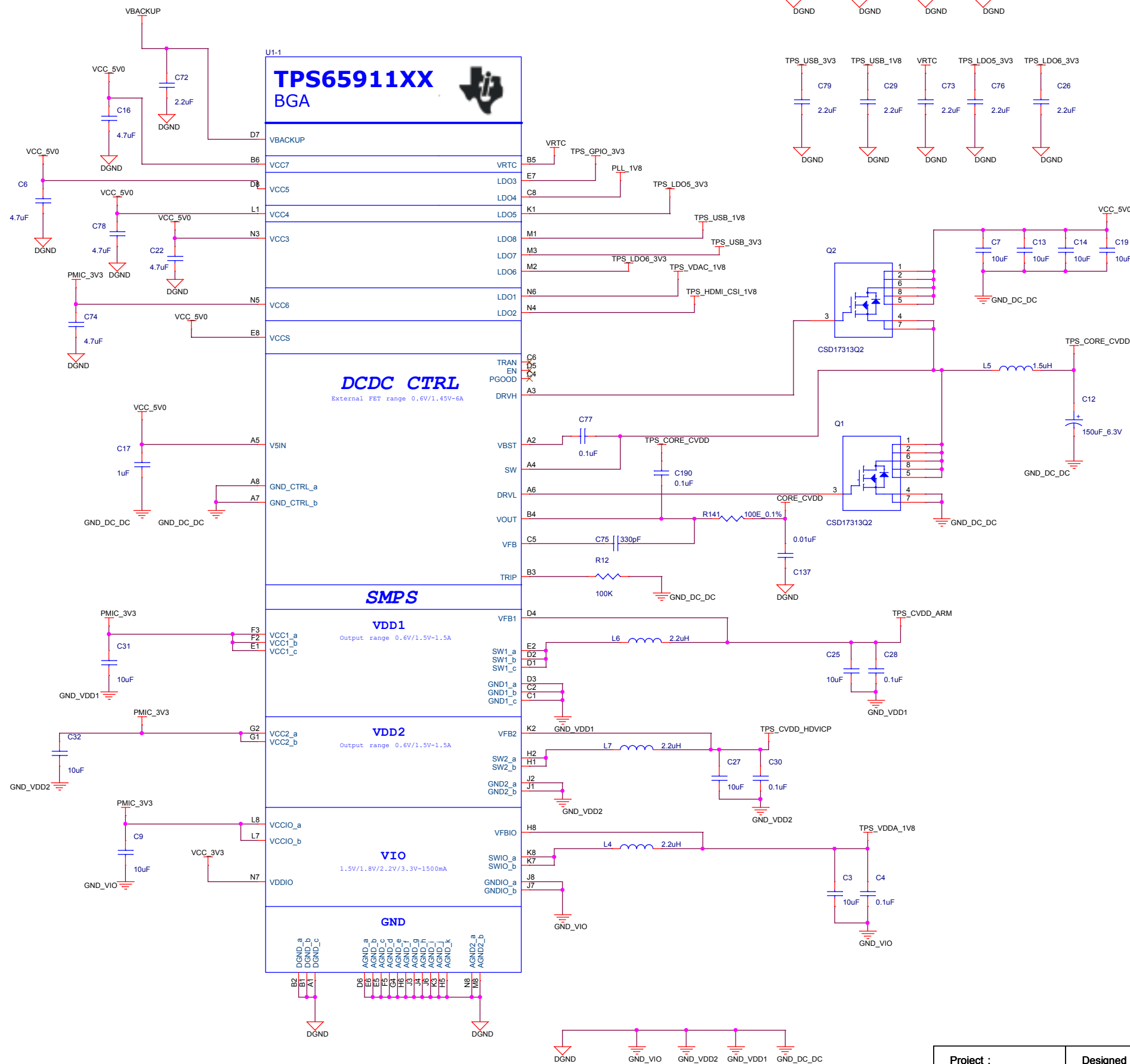
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Size	Document	Number	Rev
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Date: Friday, January 13, 2017

Sheet 15 of 22

PMIC POWER 1



Project

TMDCSK388

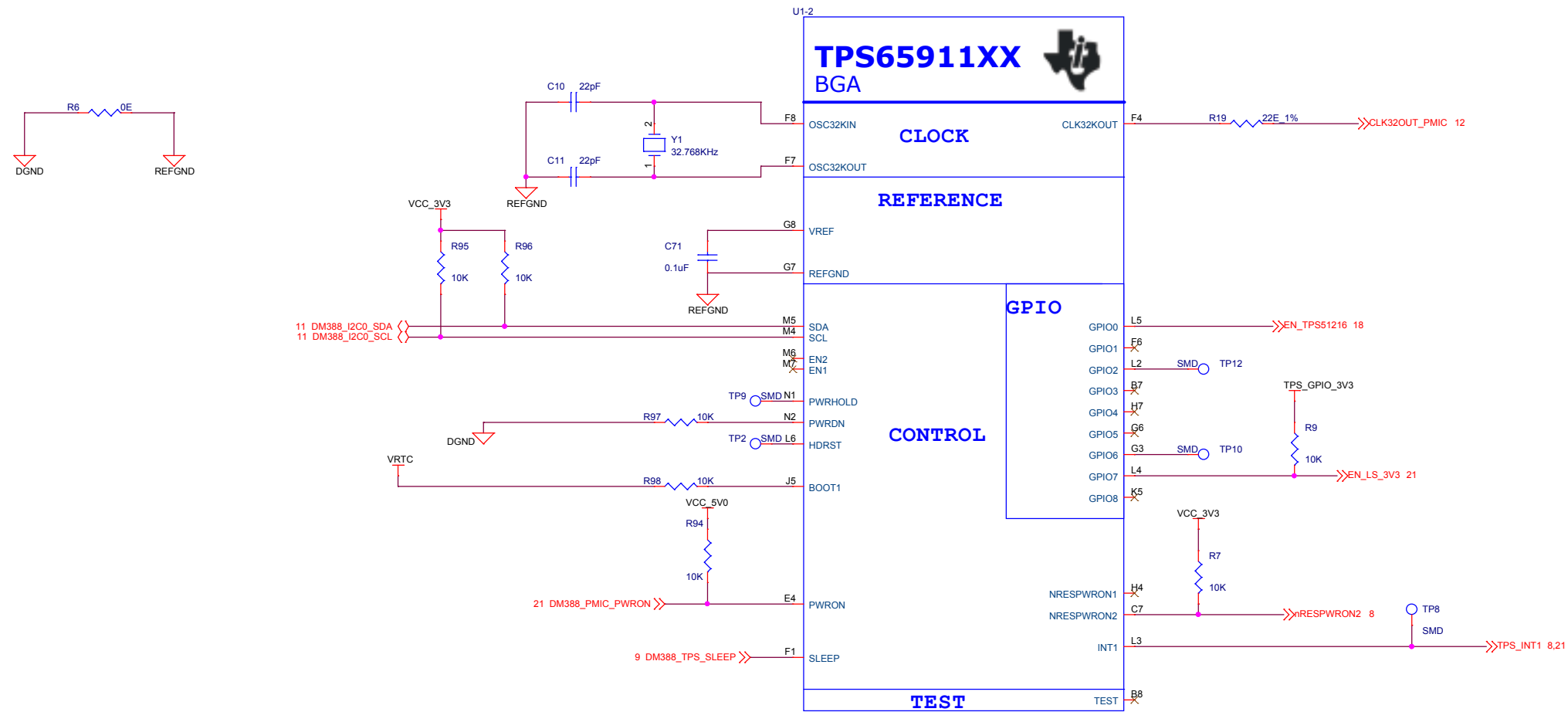
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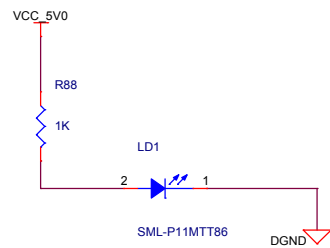
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Size	Document Number	Rev
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Date:	Friday, January 13, 2017	Sheet 16 of 22

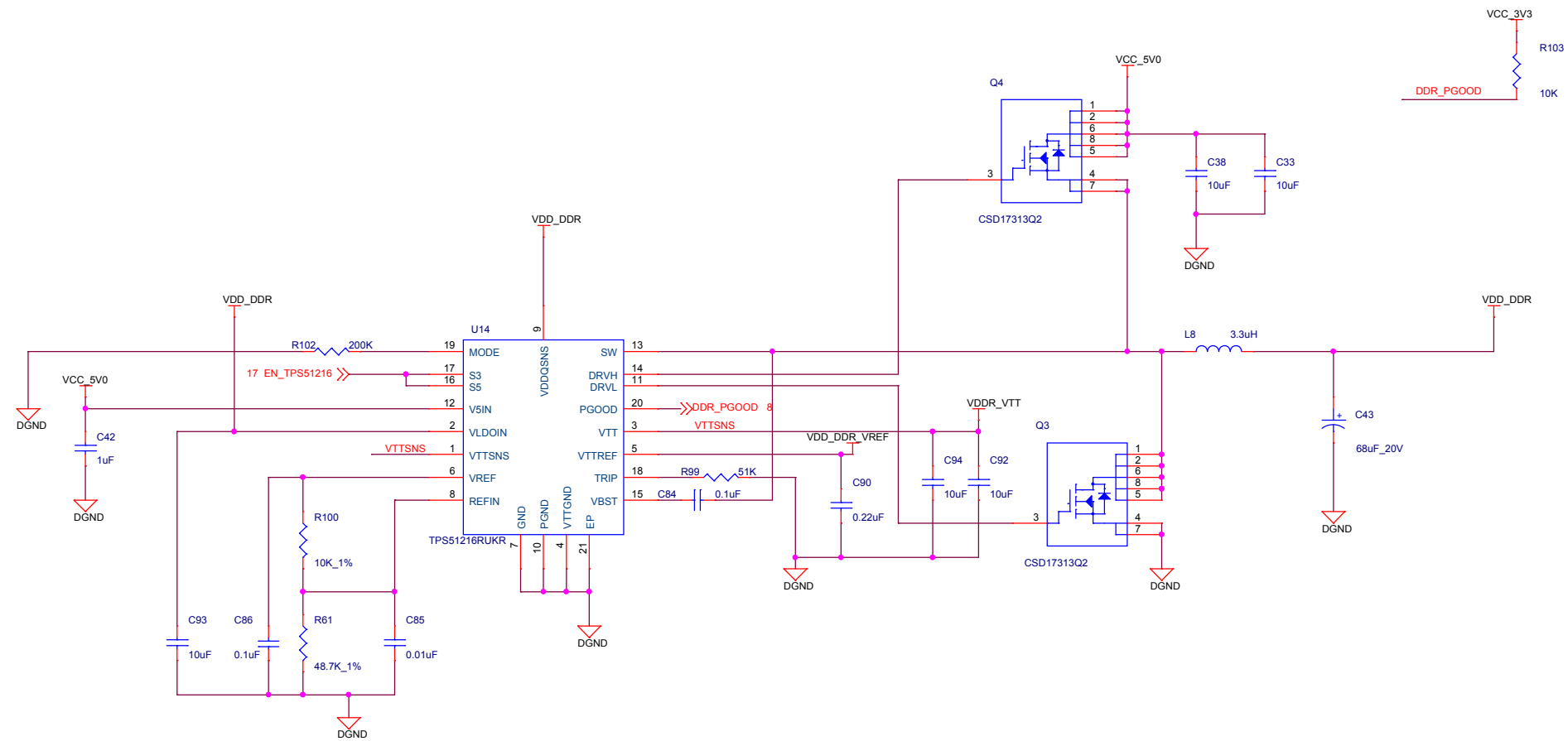
PMIC POWER 2



POWER INDICATION

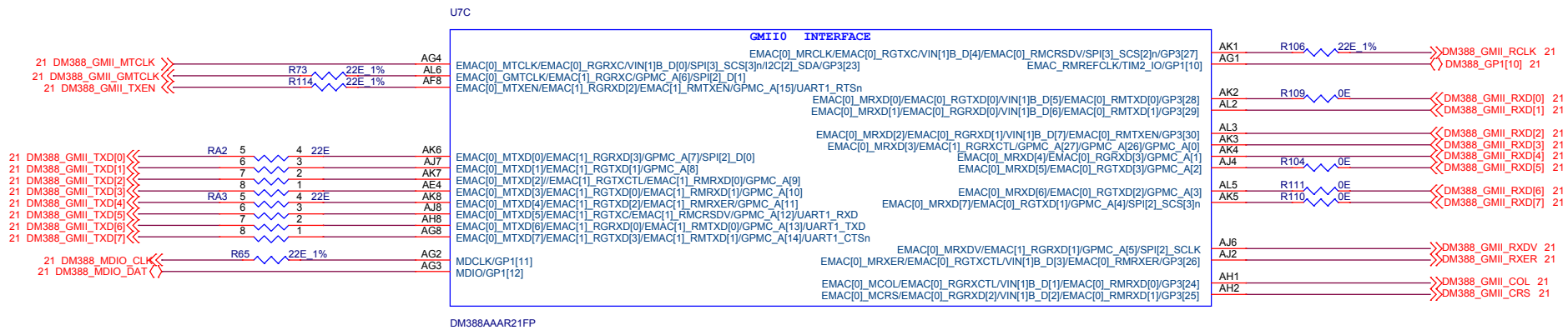


DDR3 POWER

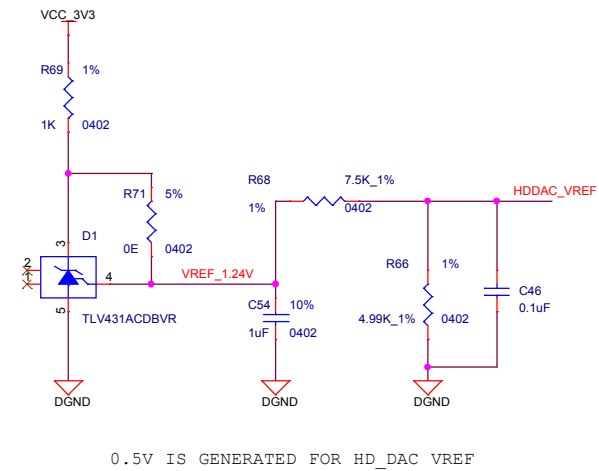
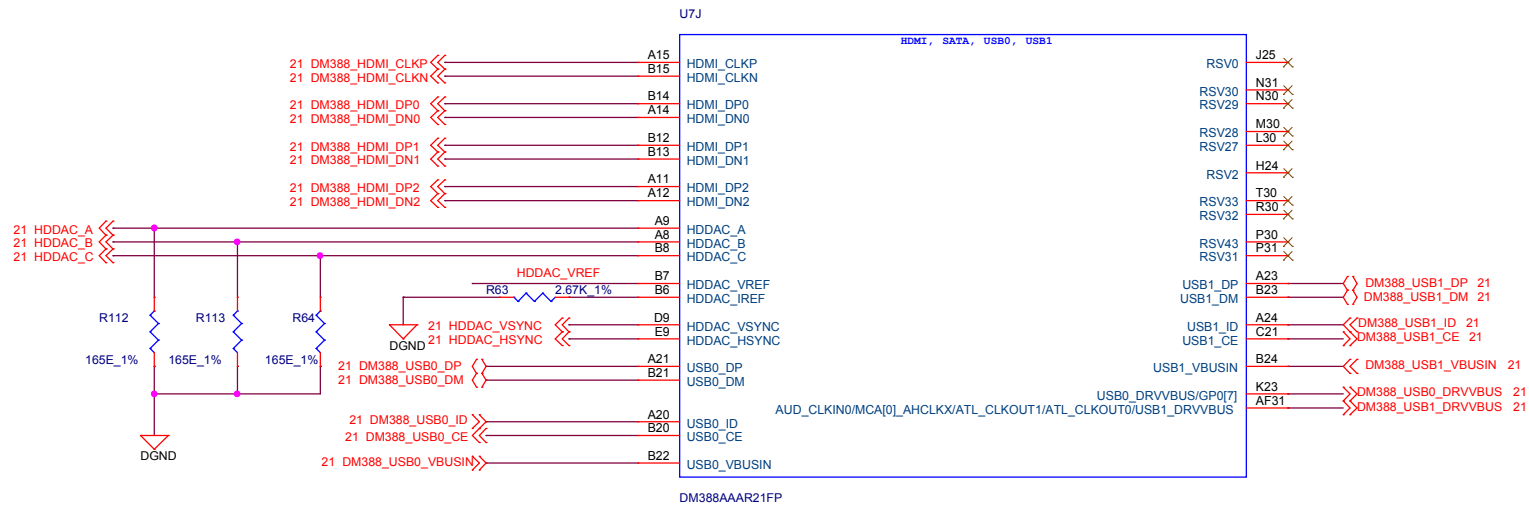


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		Size	Document Number	Rev
		C	MS_TI_CSK_TMDSCSK388_SCH_REVB	
Date:		Friday, January 13, 2017	Sheet 18 of 22	

ETHERNET



HDMI & USB



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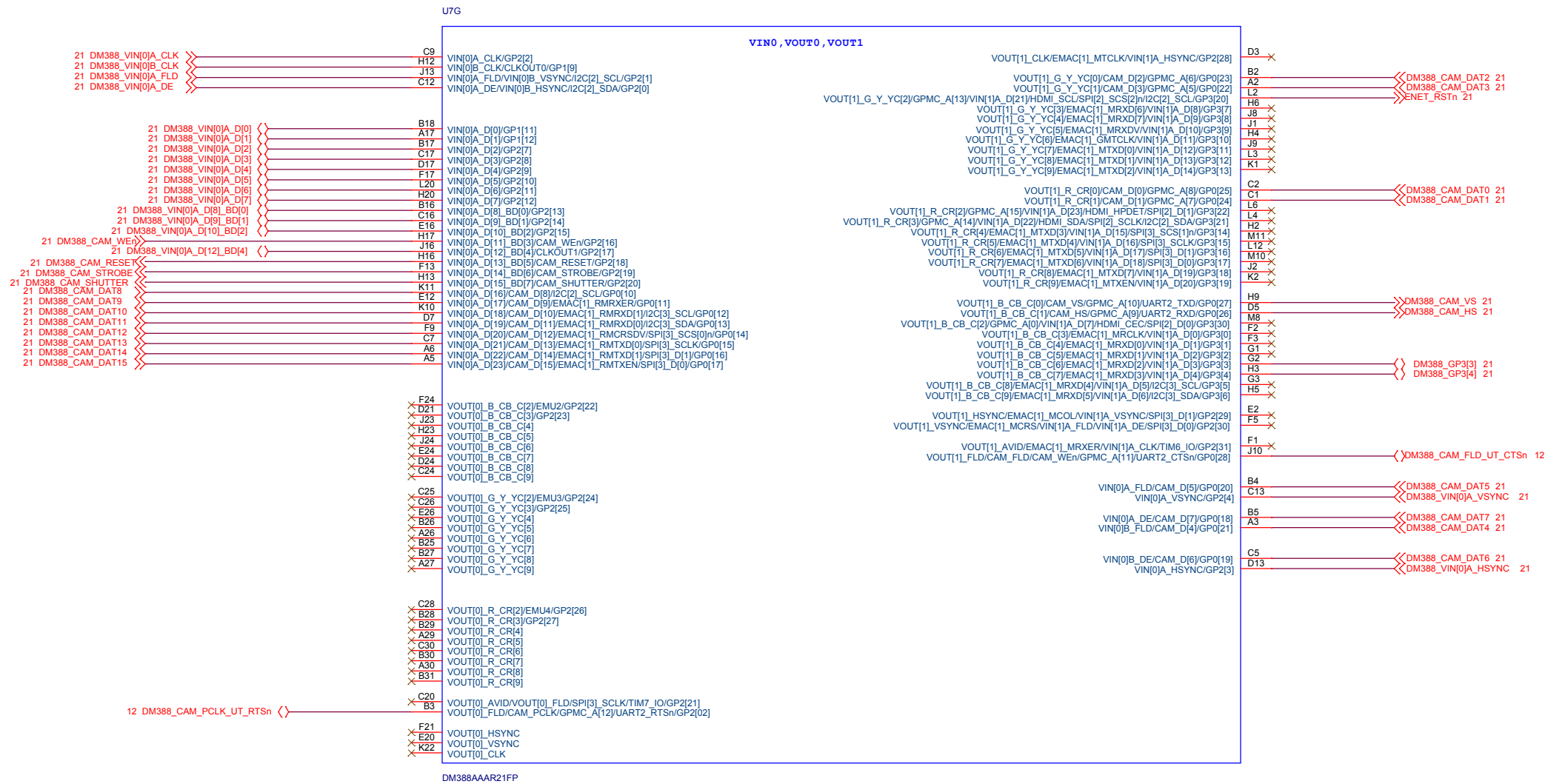
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Date: Friday, January 13, 2017

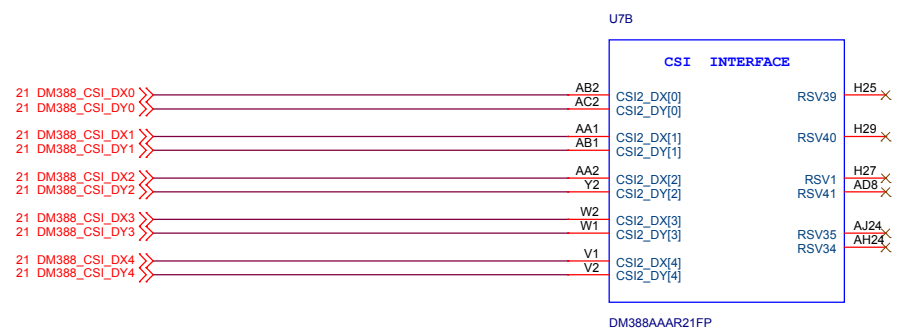
Sheet 19 of 22

Rev B

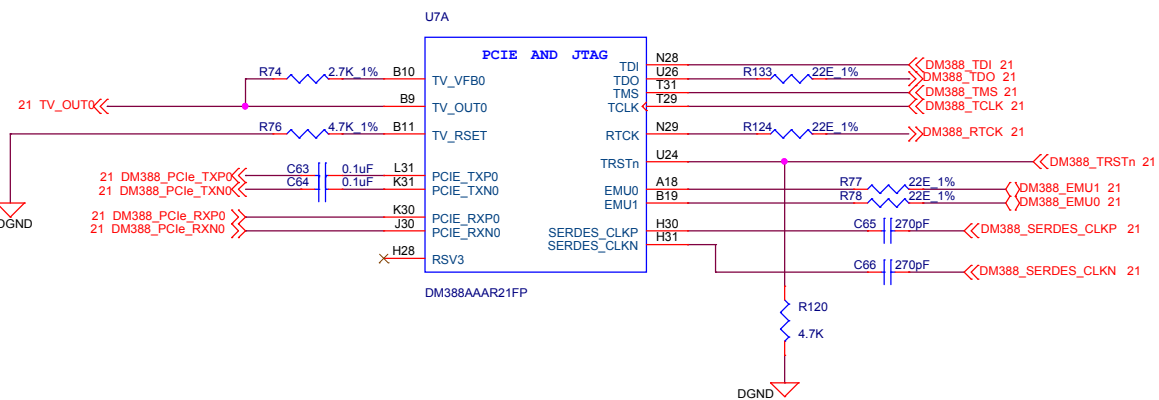
CAMERA



CSI



JTAG, PCIE, TV OUT



Project

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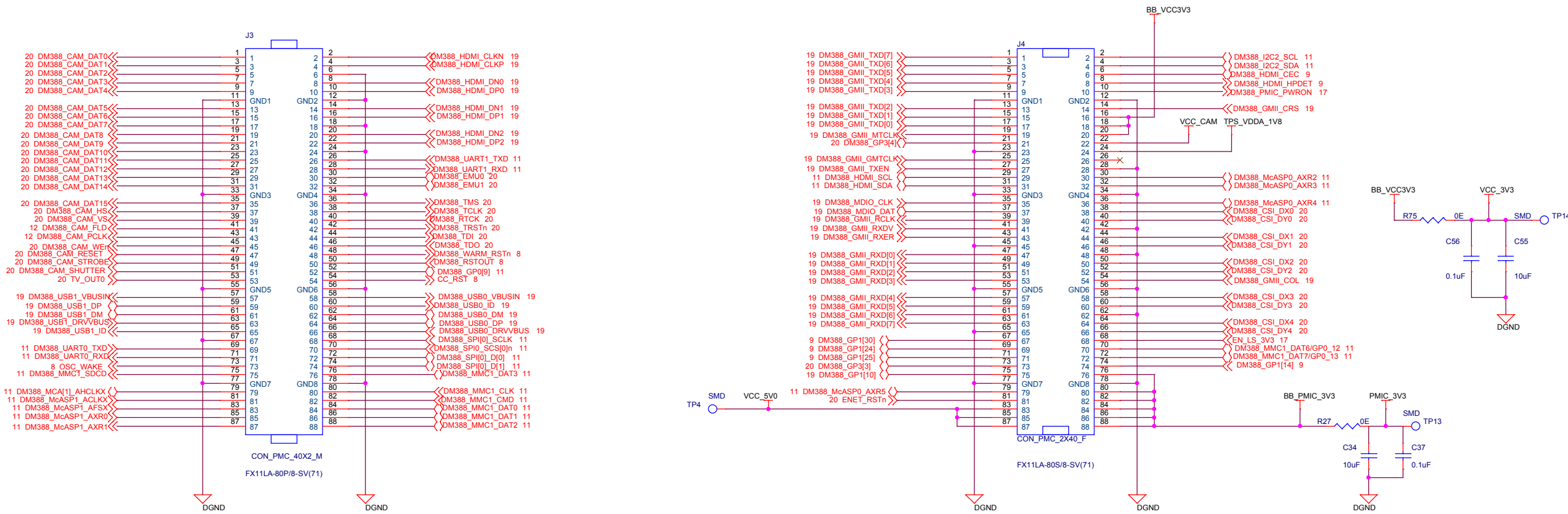
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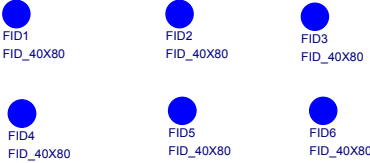
Size	Document Number	Rev
C	MS_TI_CSK_TMDSCSK388_SCH_REVB	B
Date:	Friday, January 13, 2017	Sheet 20 of 22

BOARD TO BOARD CONNECTORS



HARDWARE SCHEMATICS

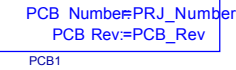
FIDUCIALS



MicroSD CARD



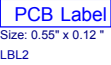
LOGOs & LABELs



Serial No:



ASSY REV



Label Assembly Note

ZZ1
The boards and components must be baked before assembly

Label Assembly Note

ZZ2
Provide serial numbers to the assembled boards for identification

Label Assembly Note

ZZ3
Please carry out the cold points check verification and provide the report for each assembled board

Label Assembly Note

ZZ4
The assembled board are wrapped in ESD Covers(individual) and packed securely before shipment.

Label Assembly Note

ZZ5
All MSL components should be baked as per JEDEC standard

Label Assembly Note

ZZ6
PCB should be baked at 120 degree for 8 hours

Label Assembly Note

ZZ7
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

Label Assembly Note

ZZ8
These assemblies are ESD sensitive, ESD precautions shall be observed.

Label Assembly Note

ZZ9
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

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Title
HARDWARE SCHEMATICS

Size Document Number
C MS_TI_CSK_TMDSCSK388_SCH_REVB

Rev
B

Date: Friday, January 13, 2017 Sheet 22 of 22