K2GEVM

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VER	1.5

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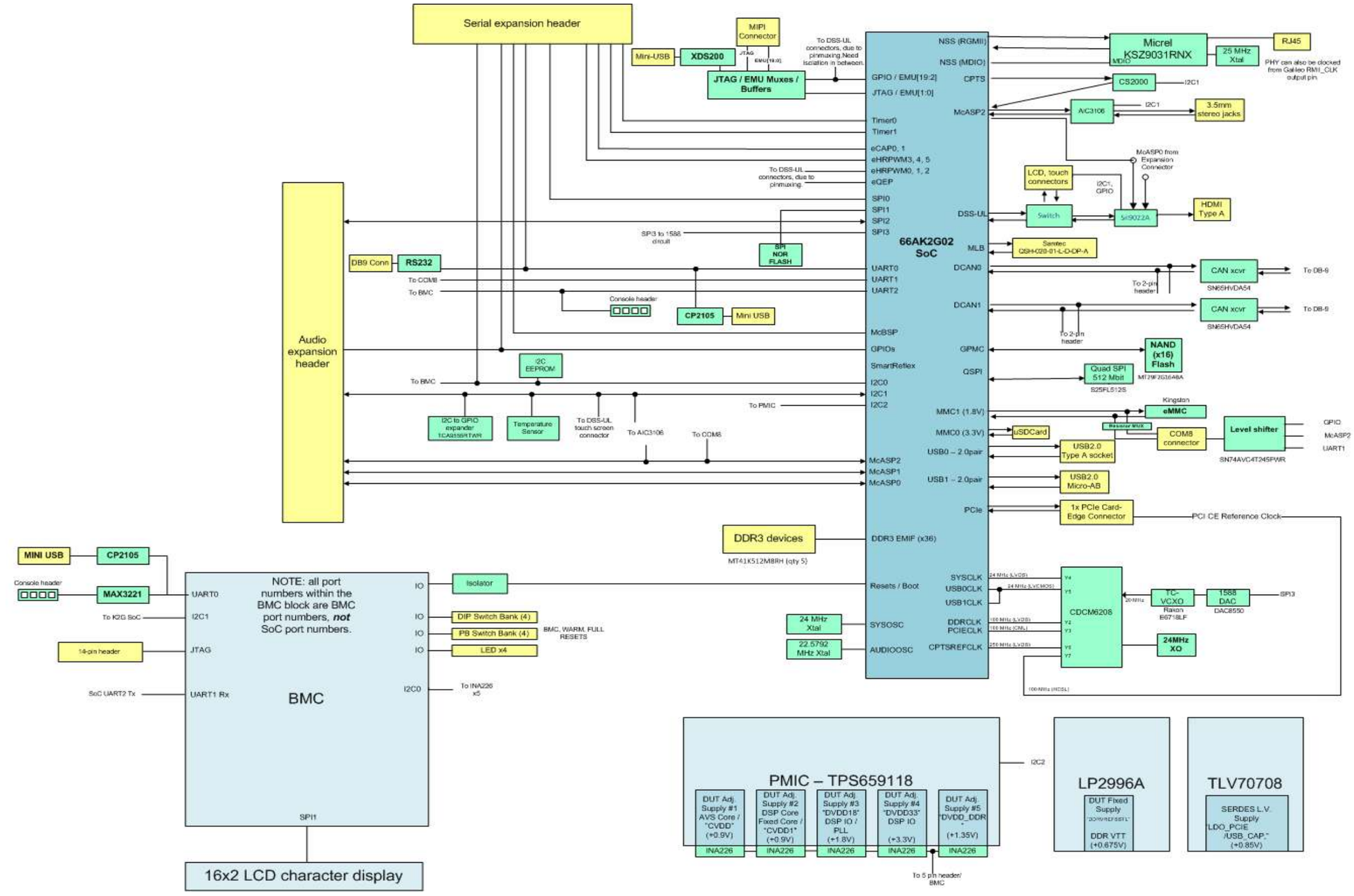
REVISION HISTORY

VER #	DATE	DESCRIPTION OF CHANGES	AUTHOR
0.1	12th OCT 2015	QSPI Buffer Removed (U148,C823,R916) ,R463 Mounted Over Voltage Protection Circuit Added in Page 50	Mistral Design Team
0.2	19th OCT 2015	AA19,AB19,Y20,W19,D2,L2,G3,F18,H2,AA18,Y19,Y14,H5 and M5 balls of the processor renamed R737 added R176,R184,R191,R198 changed to pull down R197,R190,R183,R175 changed to pull up	Mistral Design Team
0.3	28th OCT 2015	R927 added b/w SOC and BMC Net "SOC_BAWCLKSEL" renamed as "RSV6_TOGGLE"	Mistral Design Team
0.4	29th OCT 2015	Nets BAW_ATEST, VDDA_BAW, VDD18_BAW are renamed as RSV7_ATEST, VDDA_0V9 ,VDD18_1V8	Mistral Design Team
0.5	4th NOV 2015	"M5" & "H5" pins of processor moved to corresponding power domain symbol parts " M5 " pin of processor tied directly to CVDD1 FB18,C186,C526 Removed Tittle block updated as per customer request	Mistral Design Team
0.6	11th NOV 2015	U142 replaced with TXS0108EPWR R58 made DNI	Mistral Design Team
0.7	16th NOV 2015	R769 R562,R764 are made DNI due to internal pull up/down in TPD12S016	Mistral Design Team
0.8	8th DEC 2015	Customer comments updated	Mistral Design Team
1.0	11th DEC 2015	Beta ECR/ECN implemented Baselined schematics	Mistral Design Team
1.1	18th JAN 2016	R374 and R370 mounted	Mistral Design Team
1.2	4th MAR 2016	R431 and R442 value changed to 200E	Mistral Design Team
1.3	23rd MAR 2016	VCNTL[0:5] pin names of U1-32 renamed as RSV[13:18]	Mistral Design Team
1.4	28th MAR 2016	Hided VCNTL[0:5] net labels of U1-32	Mistral Design Team
1.5	12th APR 2016	SOC pin names updated as per datasheet ' SPRS932A-DECEMBER 2015-REVISED FEBRUARY 2016 '	Mistral Design Team

BLOCK DIAGRAM - K2GEVM



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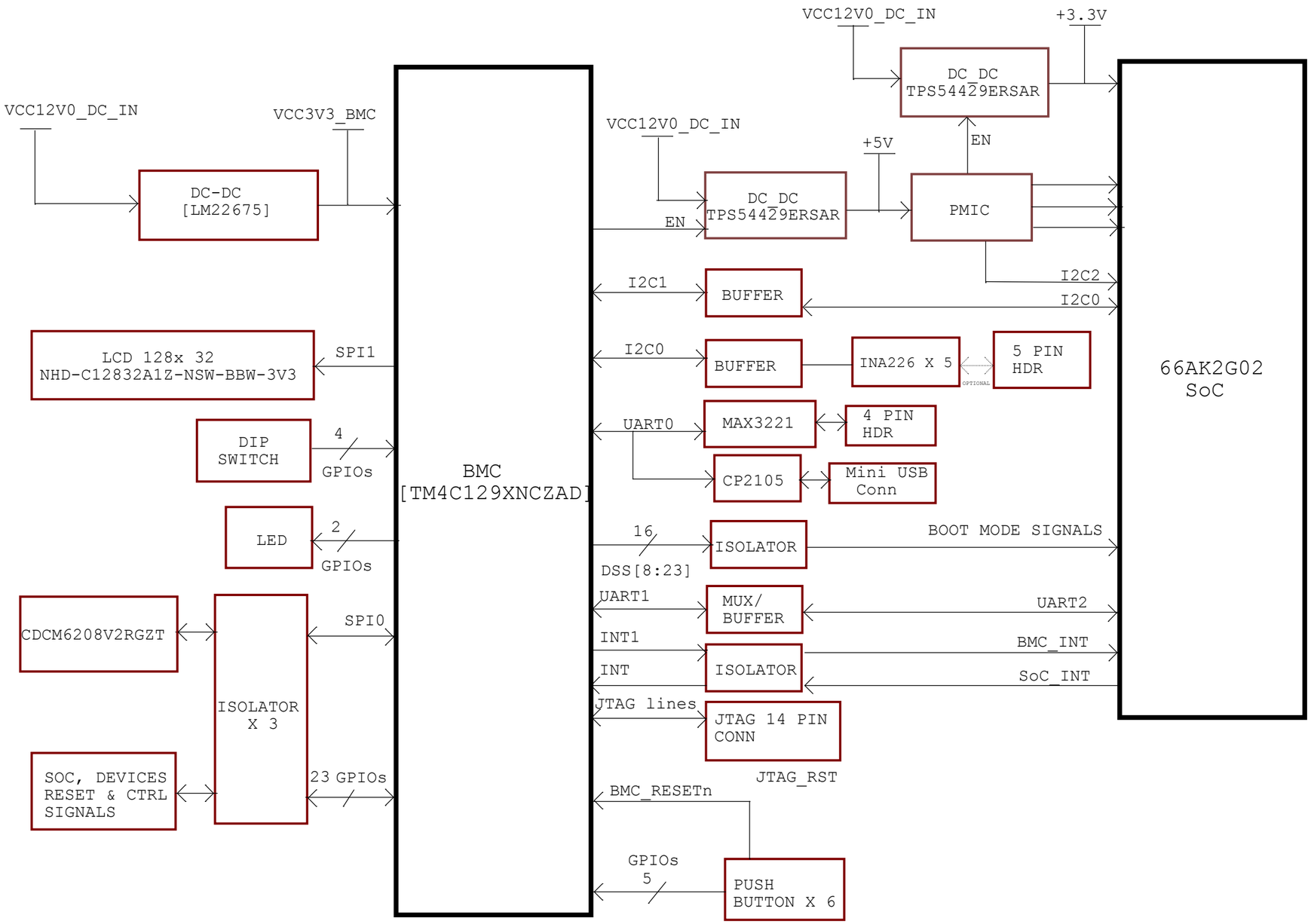
BLOCK DIAGRAM - BMC



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	BLOCK DIAGRAM - BMC
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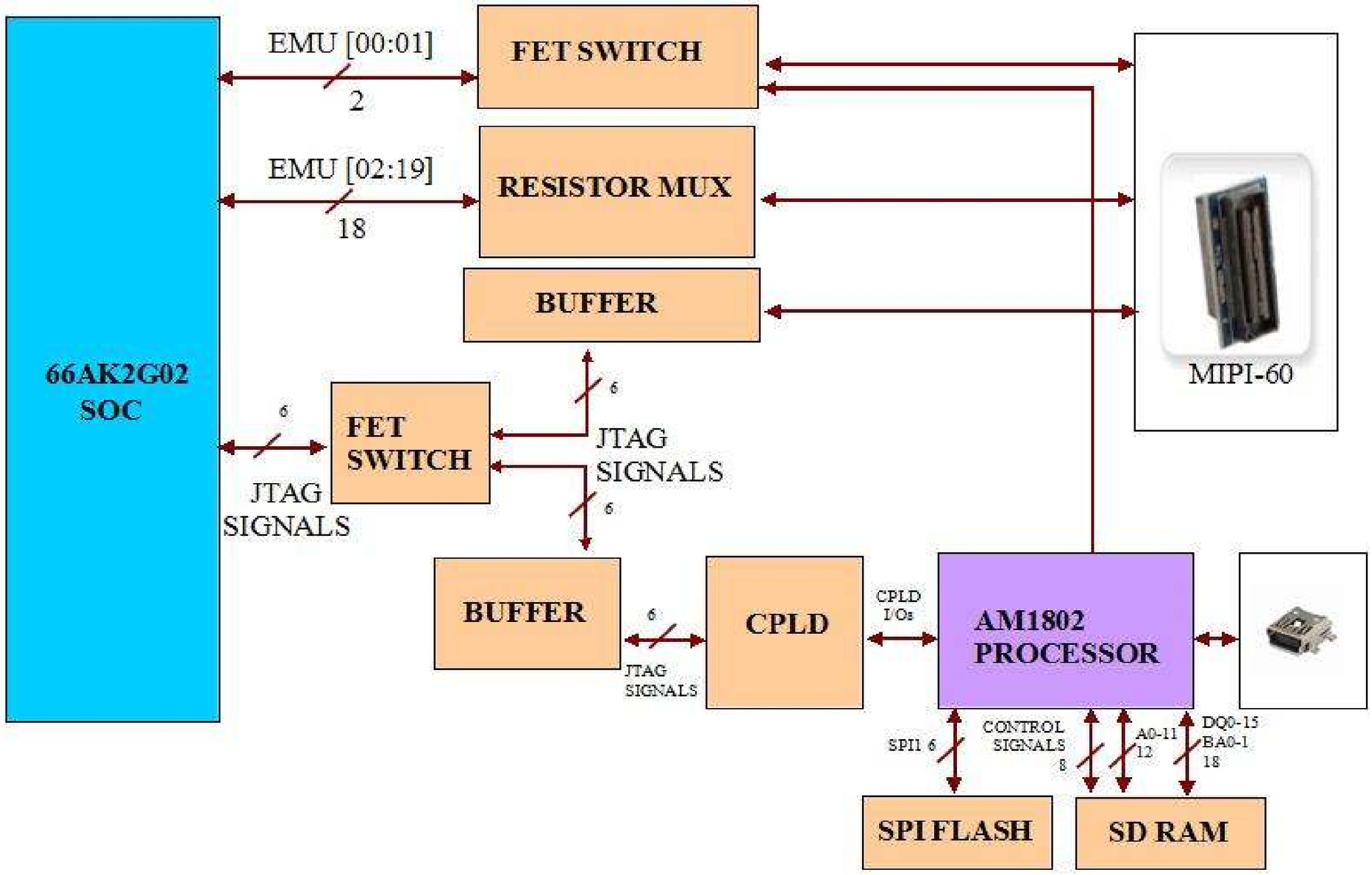
BLOCK DIAGRAM - XDS200



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: BLOCK DIAGRAM - XDS200
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POWER FLOW DIAGRAM

DC IN
+12V
7.6A

OVP CKT

LED

VCC12V0_MLB
+12V

VCC12V0
+12V
1243mA

TPS54429 EN

PMIC_GPIO2

VCC12V0_PCIE
+12V
2000mA

PCIE CONNECTOR

3300mA

DCAN R1Z-3.305
x2

400mA

MLB CONNECTOR

370mA

VCC12V0_DC_IN
+12V
1160mA

5V_EN

TPS54620RGY EN

VCC5V0_DCDC
+5V
4741mA

VCC12V0_DC_IN
+12V
1679mA

VCC3V3_DCIN

EN

AUDIO EXPANSION CONNECTOR

VCC12V0_AUD_EXP
+12V
750mA

VCC12V0_DC_IN
+12V
310mA

LM22675MR

VCC3V3_BMC
+3.3V
924mA

LED

BOARD MANAGEMENT
CONTROLLER (BMC)
TM4C129XNCZADI3

EN
VCC_VBUS
_XDS

TPS650006RTET

VCC1V2
_XDS
+1.2V
38mA

VCC1V8
_XDS
+1.8V
18.3mA

VCC3V3
_XDS
+3.3V
365mA

LED x 3

SPI FLASH
IS25CD010-JNLE

PROCESSOR
AM1802

SDRAM
MT48LC4M16A2B4
-75G

CPLD
XC2C64A-5VQ44C

EN
VCC3V3

TPS79601DRBR

VCOM_BAT
1000mA

COM8 CONN

LED

VCC12V0_DC_IN
+12V
380mA

VCC12V0_DC_IN
+12V
780mA

TPS54429 EN

PMIC_VIO

VCC3V3_DC_IN

+3.3V
2554mA

VCC5V0_DC_DC

PMIC TPS659118

TLV707085DQNT

EN
VCC3V3

TPS71712

VCC1V2
+1.2V
60mA

HDMI TX
SiI9022ACNU

TPS61081

VLED+
+19.2V
40mA

LCD BACKLIGHT
NHD-4.3-480272EF-ATXL-CTP

LP3985IM5-3.0

VCC3V0_BMC_LCD
+3V
35mA

BMC DISPLAY
NHD-C12832A1Z-NSW-BBW-3V3

VCC5V0_USBx 1000mA

USB0 LOAD SWITCH
TPS2051BD

USB1 LOAD SWITCH
TPS2051BD

SOC GPIO

SD#

LP2996A

PROCESSOR
AM1802

CPLD
XC2C64A-5VQ44C

VDDR_VTT
+0.675V
272mA

VCC_DDR_VREF
+0.675V
0.05mA

VDD_DDR
+1.35V
1175mA

DDR3 x5
MT41K512M8RH-125:E

VCC1V8
LDO2
+1.8V
276mA

PROCESSOR
AM1802

AUDIO CODEC
TLV320AIC3106IRGZT

Level Translator x3
SN74AVC4T245PW

COM8 VBAT
LDO

EMMC16G-S100

AVDDA_XPLL DVDD18 +1.8V 300mA	DVDD_DDR +1.35V 284mA	CVDD +0.9V 4654mA	CVDD1 +0.9V 464mA	DDR_VREF +0.675V 0.010mA	DVDD33, VCC3V3 +3.3V 133mA	LDO_PCIE /USB_CAP, +0.85V 109mA

K2G PROCESSOR (66AK2G02)

SPI EPROM
N25Q128A13ESF40F

MICRO SD CARD

12.288MHz

I2C EEPROM
AT24CM01

AUDIO CODEC
TLV320AIC3106IRGZT

QSPI
S25FL512SAGMFI011

NAND FLASH
MT29F2G16ABAFAWP:F

GPIO EXPANDER
TCA9555RTWR

LEDs x7

Level Translator x3
SN74AVC4T245PW

EMMC16G-S100

UART TO USB
CP2105

DCAN0 & 1
ISO1050

CS2000CP-CZZ

DAC 8550IBDGKT

TCA9517DGKR

AUD EXP

INA226 x5

TEMP SENSOR
TMP102AIDRLT

CLOCK
CDCM6208V2RGZT

ETHERNET PHY
KSZ9031RNXCA

RJ45 LEDs x2

TOUCH SCREEN & LCD

HDMI
SiI9022ACNU

DSS BUFFER x2

CLOCK
CDCM6208V2RGZT

LDO3_1V8,+1.8V,90mA

NOTE:

REGULATORS

DEVICES

Multiple powered device

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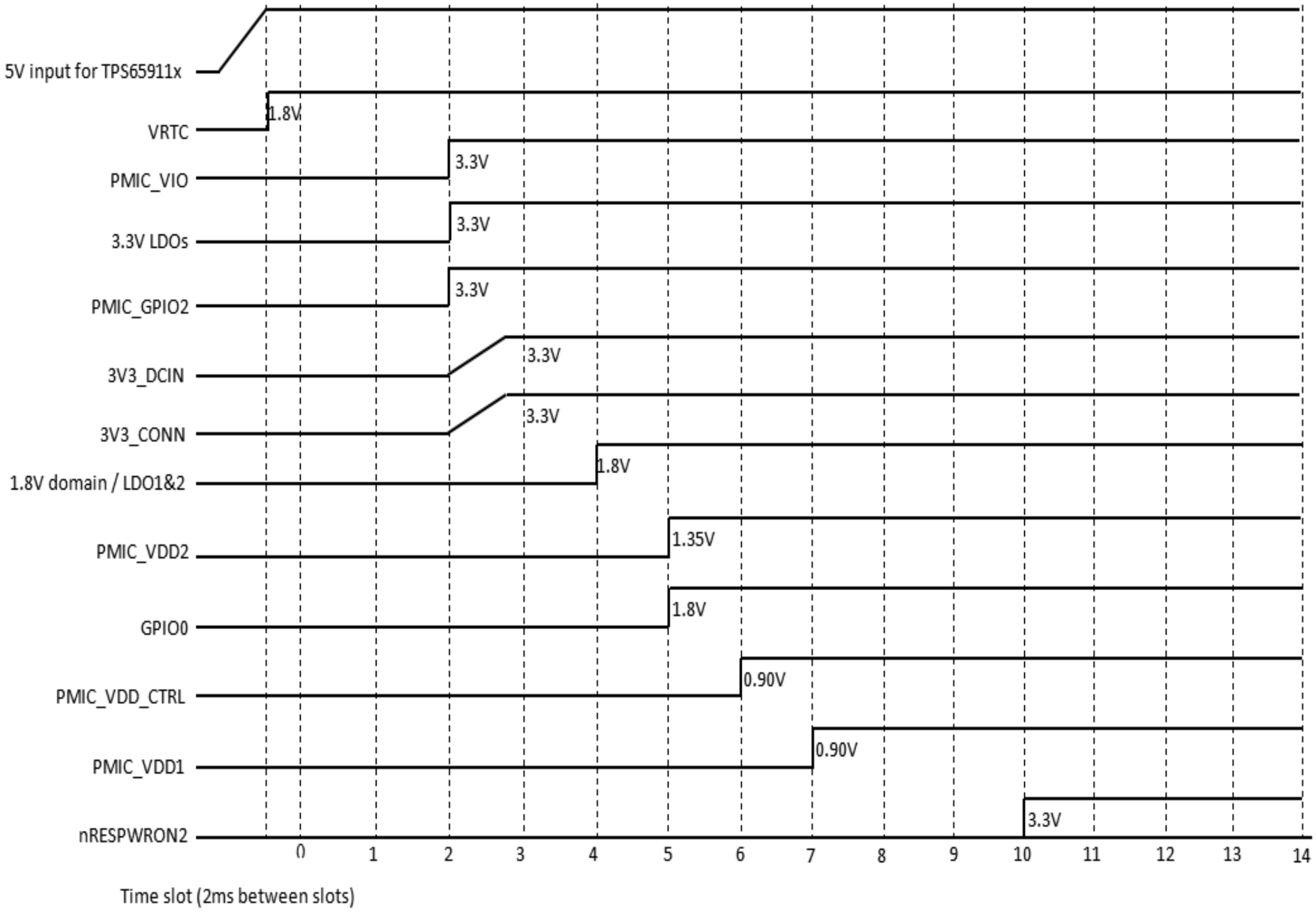
BOARD POWER UP SEQUENCE



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: BOARD POWER SEQUENCE DIAGARAM
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SoC I2C ADDRESS TABLE

I2C0 DEVICES	7 BIT ADDRESS
EEPROM	0x50 (PAGE 0)
	0x51 (PAGE 1)
BMC	0x0 (PROGRAMMABLE)
SERIAL EXPANSION CONNECTOR	TBD
PCIe CONNECTOR	TBD

I2C2 DEVICES	7 BIT ADDRESS
PMIC	0x2D (GENERAL PURPOSE) TBD
	0x12 (VOLTAGE SCALING) TBD

I2C1 DEVICES	7 BIT ADDRESS
HDMI TRANSMITTER	0x3B
	0x3F
	0x62
AUDIO CODEC	0x1B
TOUCH SCREEN	0x70 (WRITE)
	0x71 (READ)
I/O EXPANDER	0x20
TEMPERTURE SENSOR	0x48
MLB CONNECTOR	TBD
AUDIO EXPANSION CONNECTOR	0x4A,0x4B,0x4C,0x4D
CLOCK GENREATOR (CS2000CP-CZZ)	0x4F

BMC I2C ADDRESS TABLE

BMC I2C0 DEVICES	7 BIT ADDRESS
PMBUS	0x40 : 3.3V
	0x41 : CVDD
	0x42 : CVDD1
	0x43 : 1.8V
	0x44 : DVDD_DDR

BMC I2C1 DEVICES	7 BIT ADDRESS
PROCESSOR	ALWAYS MASTER

McASP CONFIGURATION

McASP PORT	DEVICES	DEVICE MODE
McASP0	DAC- PCM1690 x2	SLAVE
	I2S HEADER	MASTER
McASP1	ADC- PCM1865 x2	SLAVE
McASP2	HDMI TRANSMITTER (DEFAULT)	SLAVE
	AUDIO CODEC AIC3106	
	DIR9001(DEFAULT)	MASTER
	COM8	

Project : K2G EVM

Designed for TI by Mistral Solutions Pvt Ltd

Title I2C TREE

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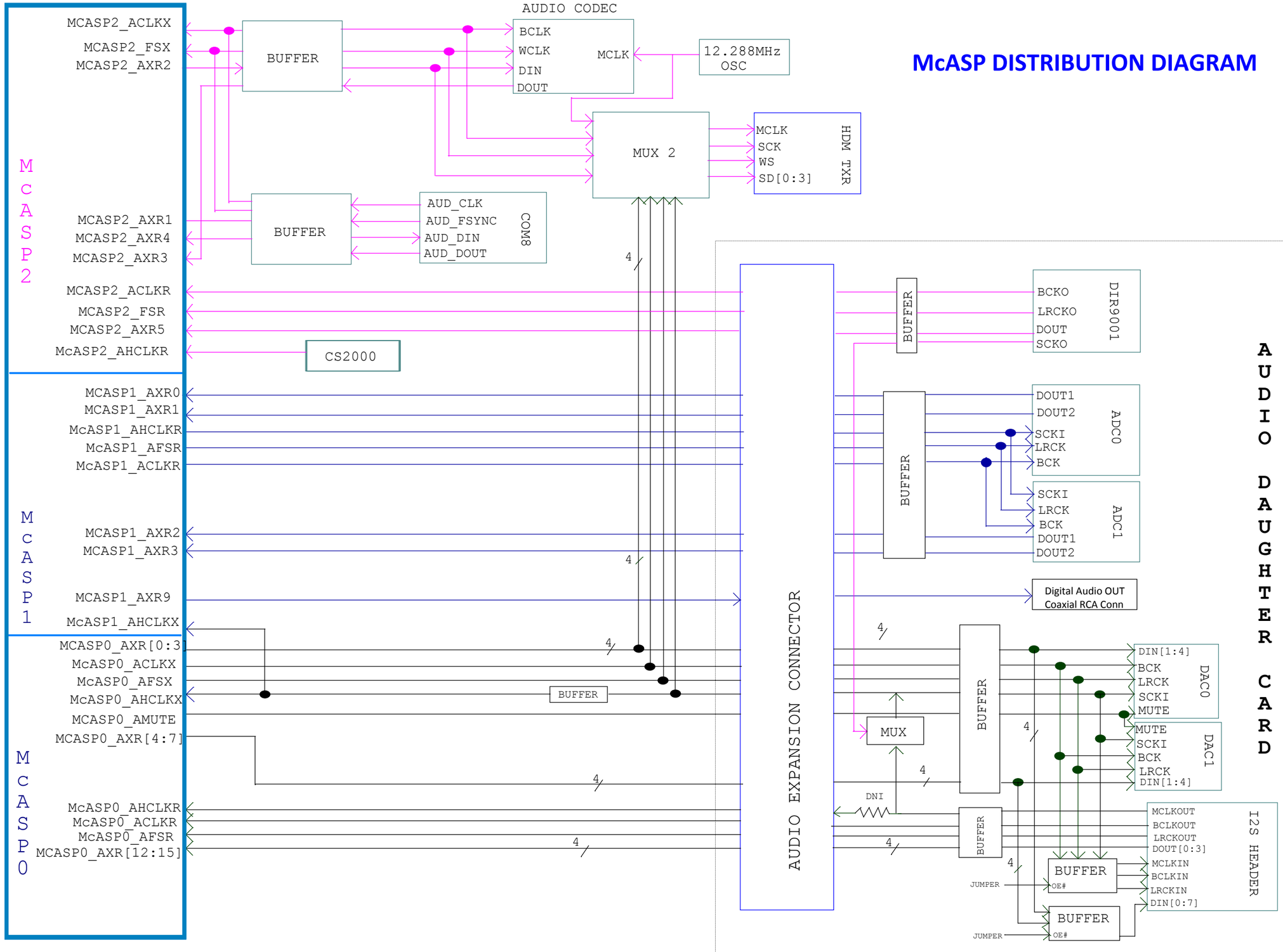
McASP DISTRIBUTION DIAGRAM



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	MCASP TREE
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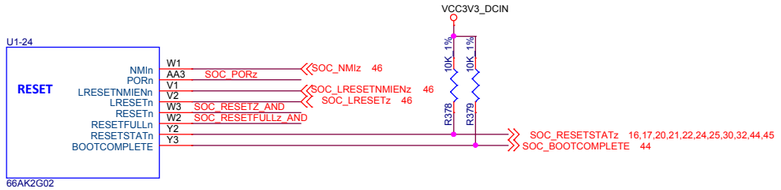
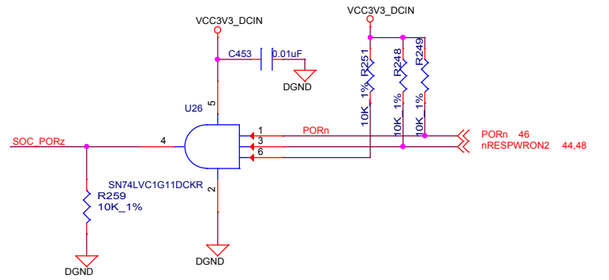
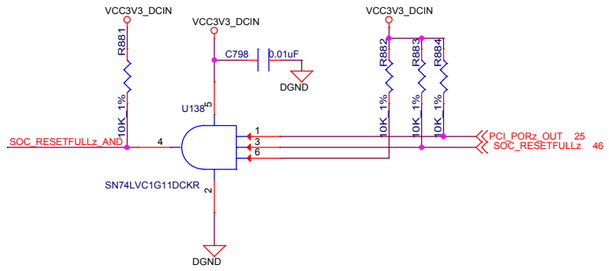
SoC RESET



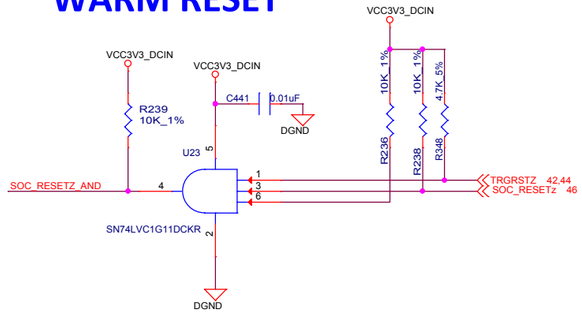
POWER ON RESET



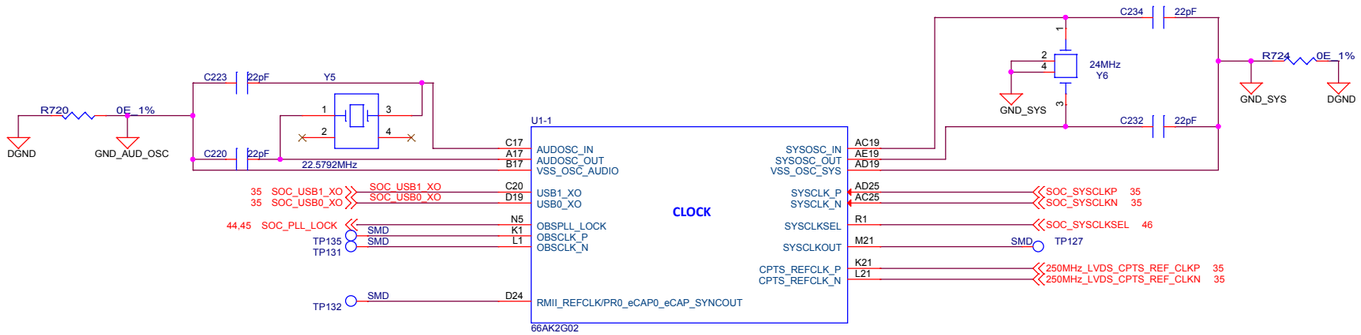
FULL RESET



WARM RESET



SoC CLOCK



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: SOC CLOCK & RESET
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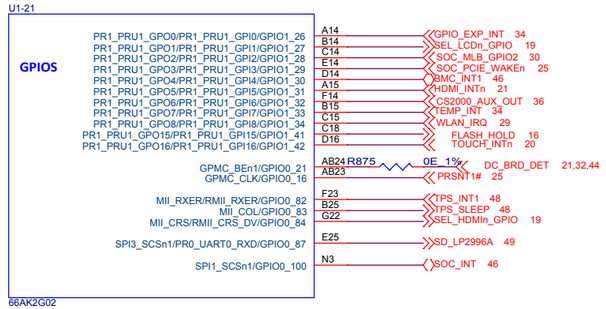
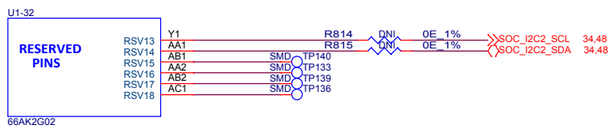
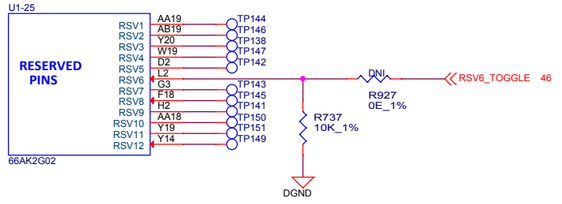
SoC GPIOs



RESERVED PINS





Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	SOC GPIO, SMART REFLEX & TEST OUT
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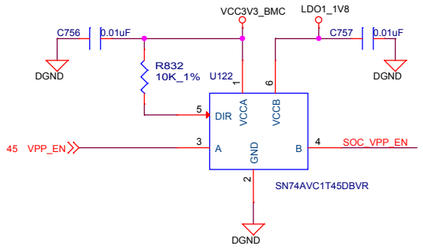
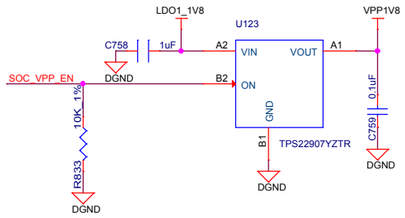
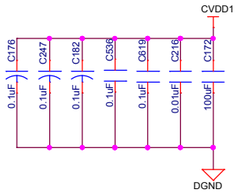
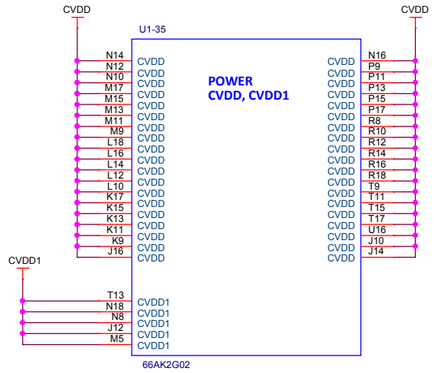
VPP POWER GENERATION

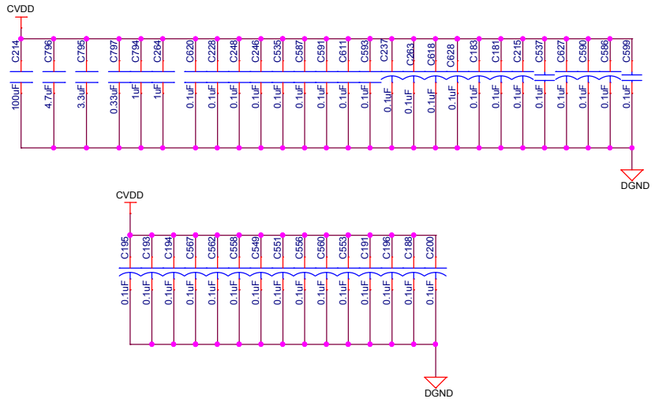




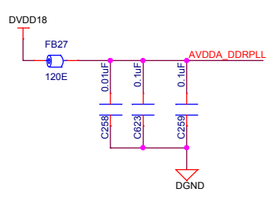
SoC POWER -CVDD,CVDD1

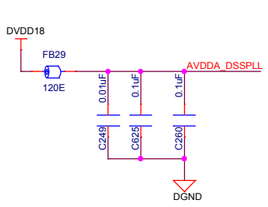


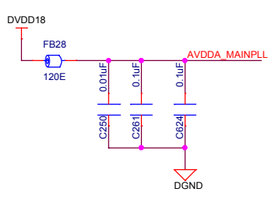


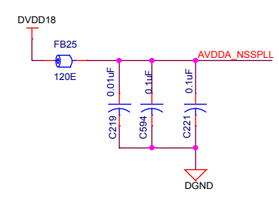


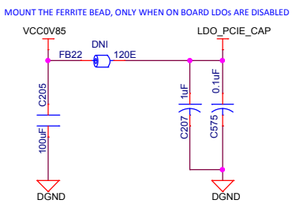
SoC POWER - PLL

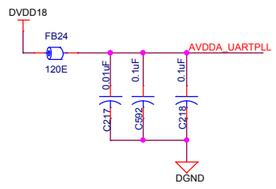


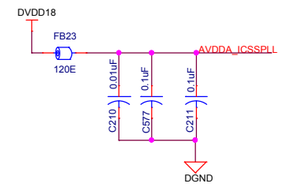


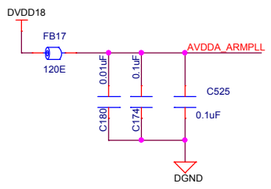


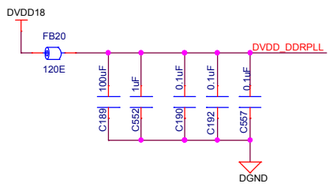


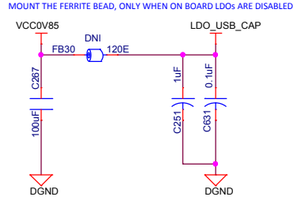


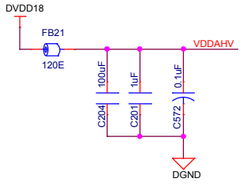












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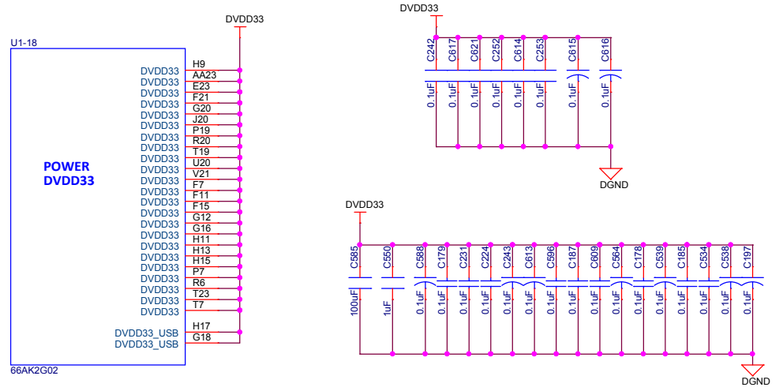
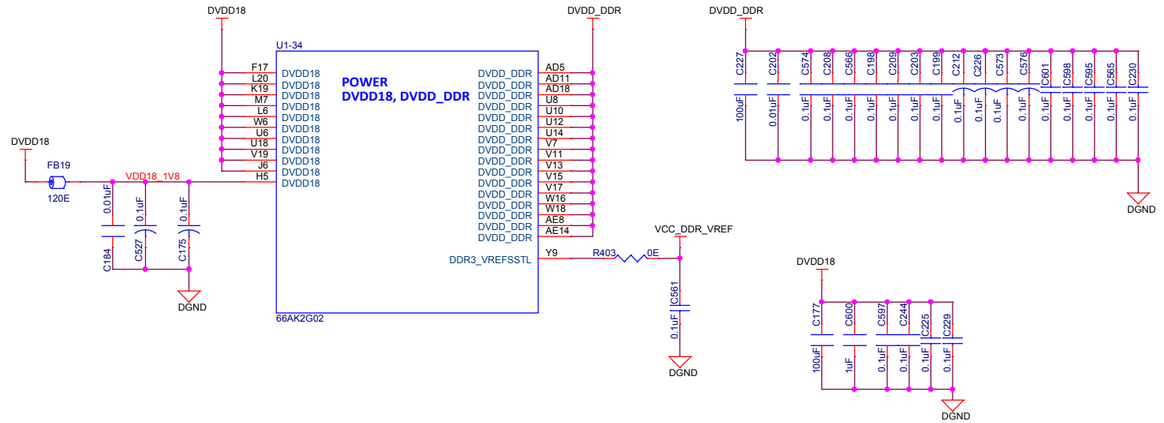
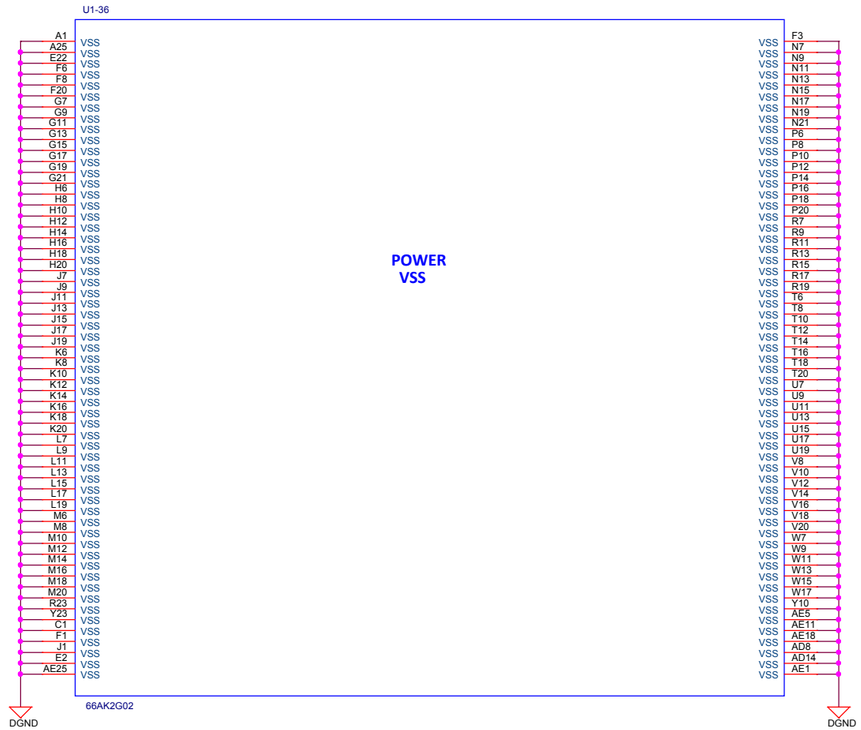
SoC POWER - DVDD33



SoC POWER - DVDD18, DVDD_DDR



SoC POWER - VSS



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	SOC POWER - DVDD33, DVDD18, DVDD_DDR & VSS
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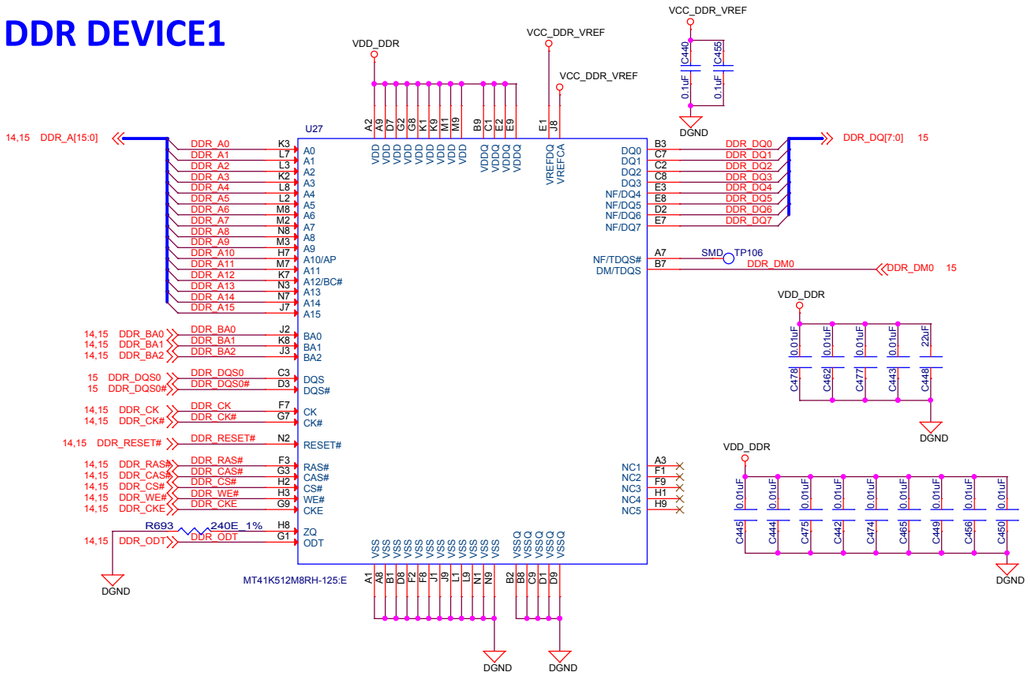
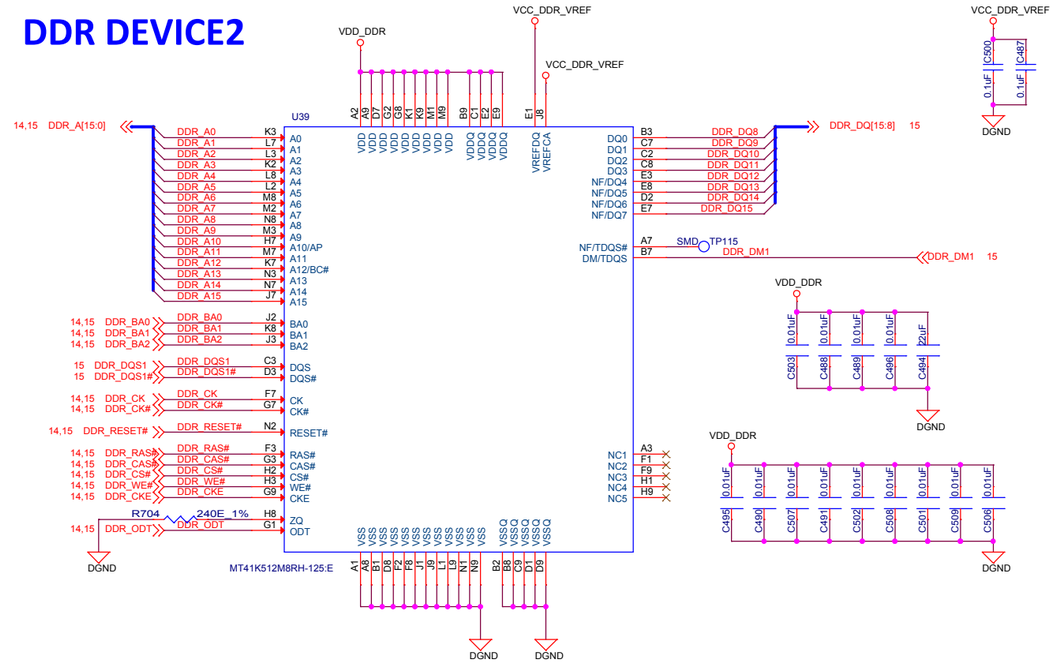
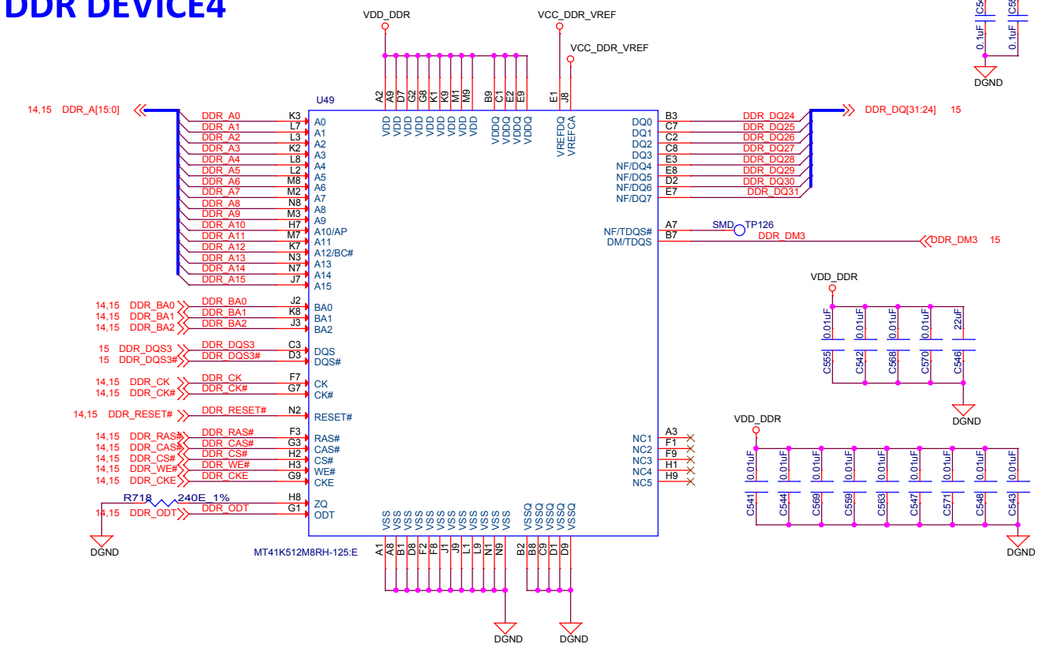
DDR DEVICE1



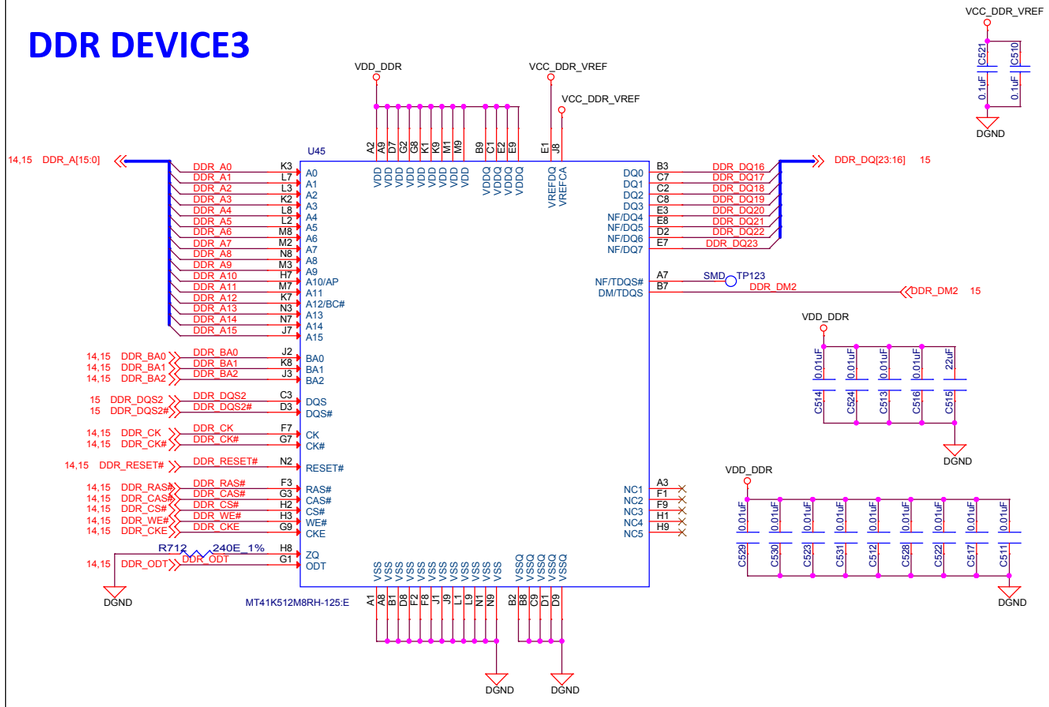
DDR DEVICE2



DDR DEVICE4

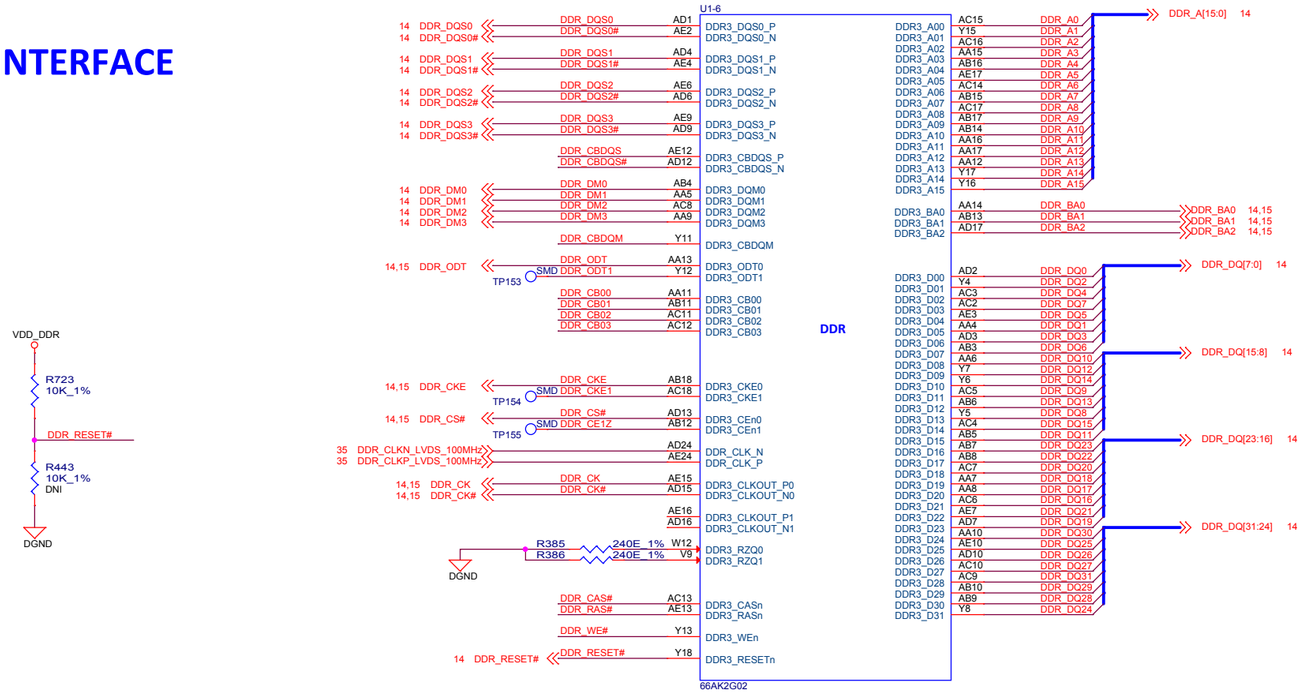


DDR DEVICE3

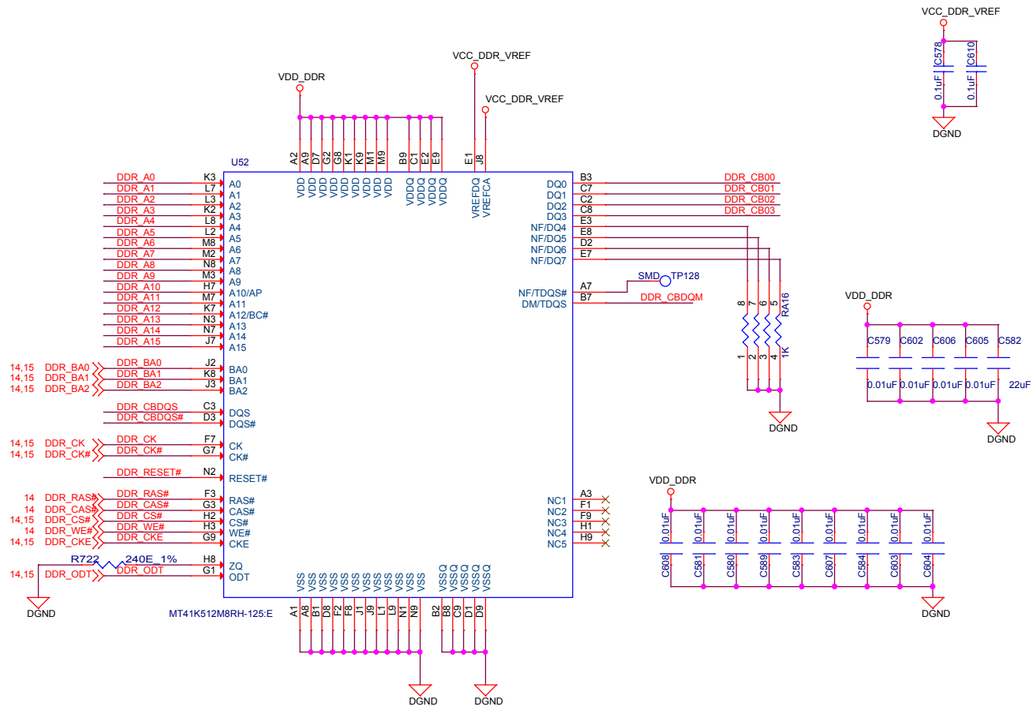


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	DDR3L DEVICES
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Wednesday, April 13, 2016	Sheet 14 of 50

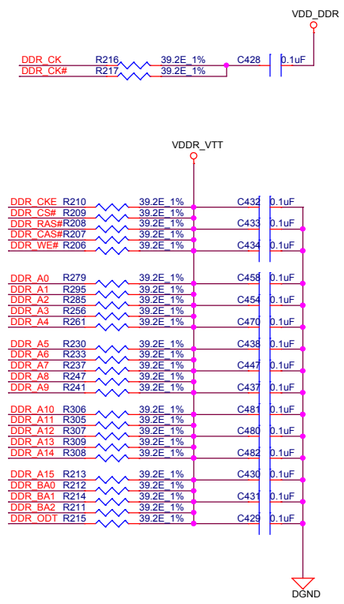
SoC DDR INTERFACE



ECC DEVICE

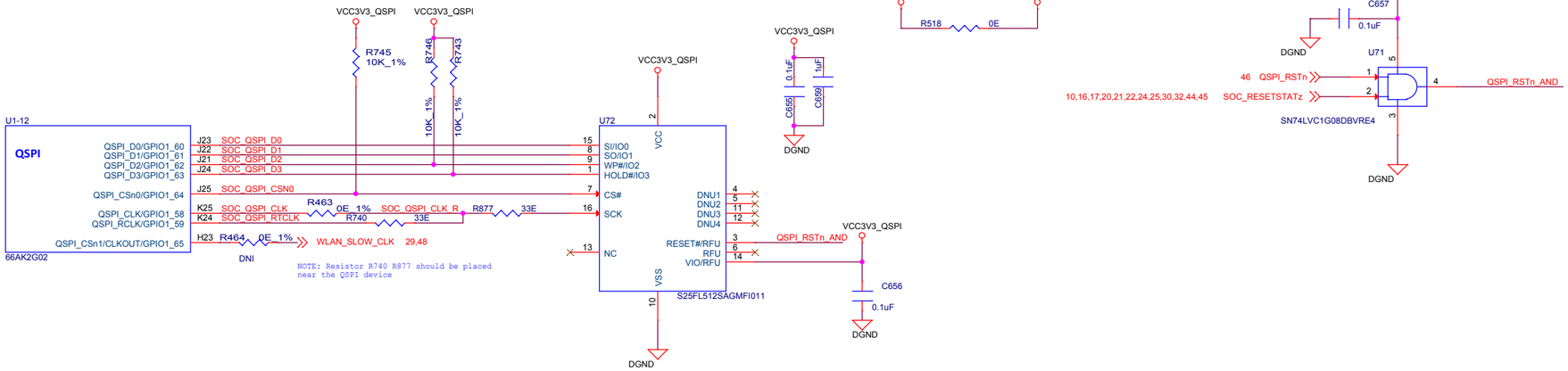


DDR TERMINATION

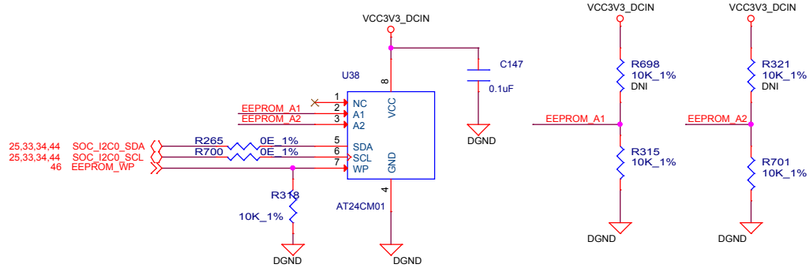


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	SOC DDR MODULE, ECC & TERMINATION
		Size C	Document Number MS_TI_K2GEVM_SCH_REVD
		Rev	D
		Date: Thursday, April 14, 2016	Sheet 15 of 50

QSPI

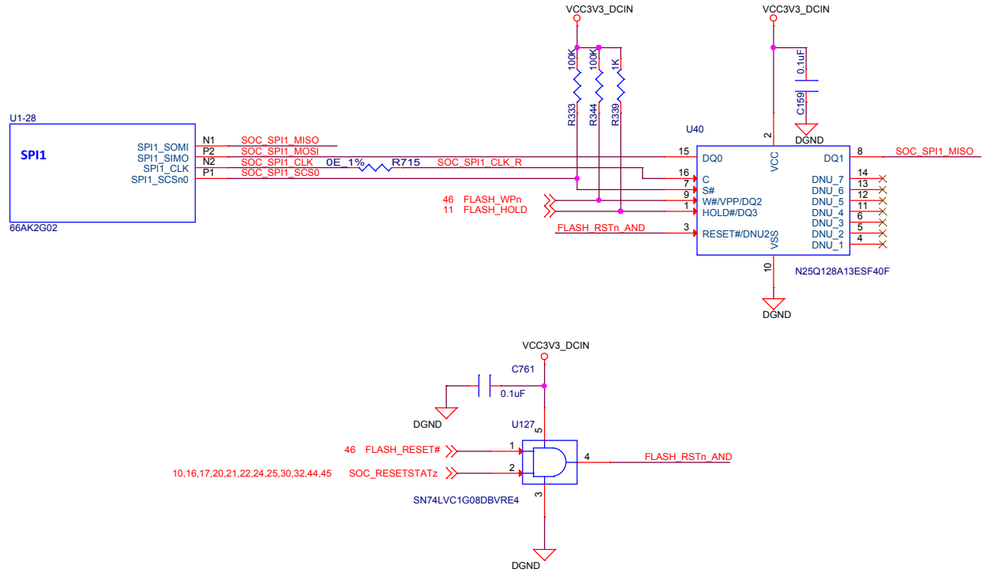


I2C EEPROM FLASH



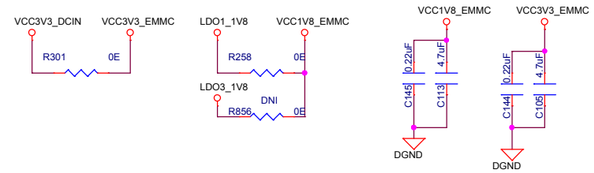
I2C ADDRESS: 0x50 (PAGE 0), 0x51 (PAGE 1)

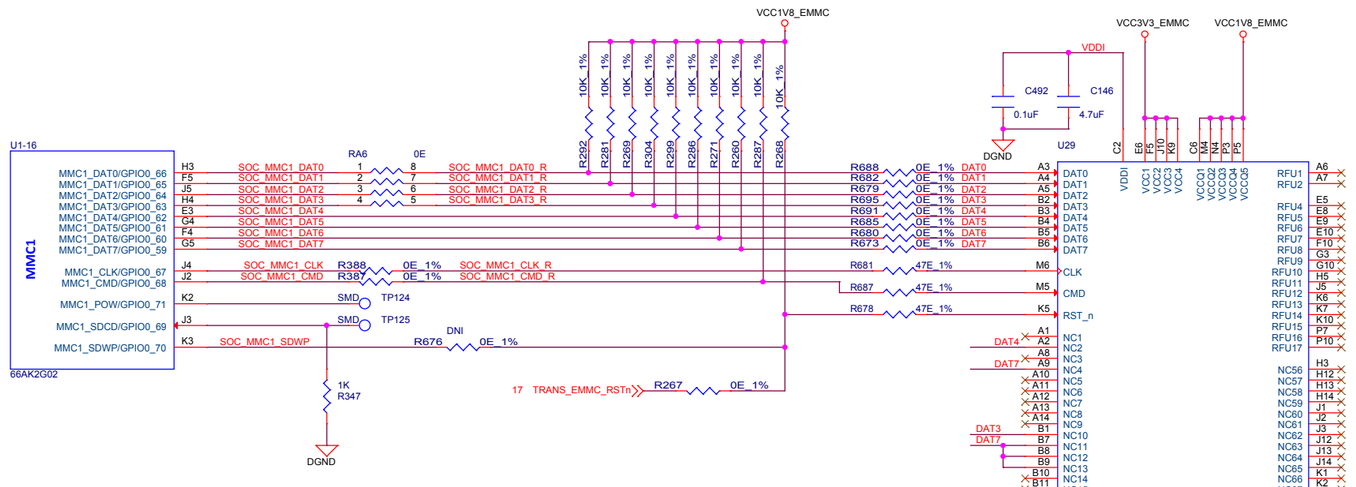
SPI NORFLASH



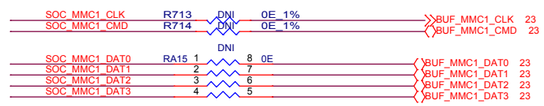
Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	QSPI, I2C & SPI EEPROM FLASH
		Size C	Document Number MS_TI_K2GEVM_SCH_REVD — Rev D
		Date: Thursday, April 14, 2016	Sheet 16 of 50

eMMC FLASH

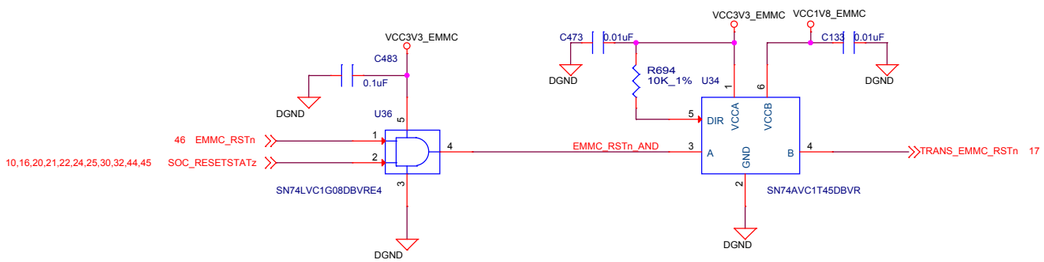




NOTE: MMC1 IS BY DEFAULT CONNECTED TO EMMC. IF COM8 TO BE USED RESISTOR RA6, R387 , R388 & R822 SHOULD BE DNI AND RA15, R713, R714 & R393 SHOULD BE MOUNTED



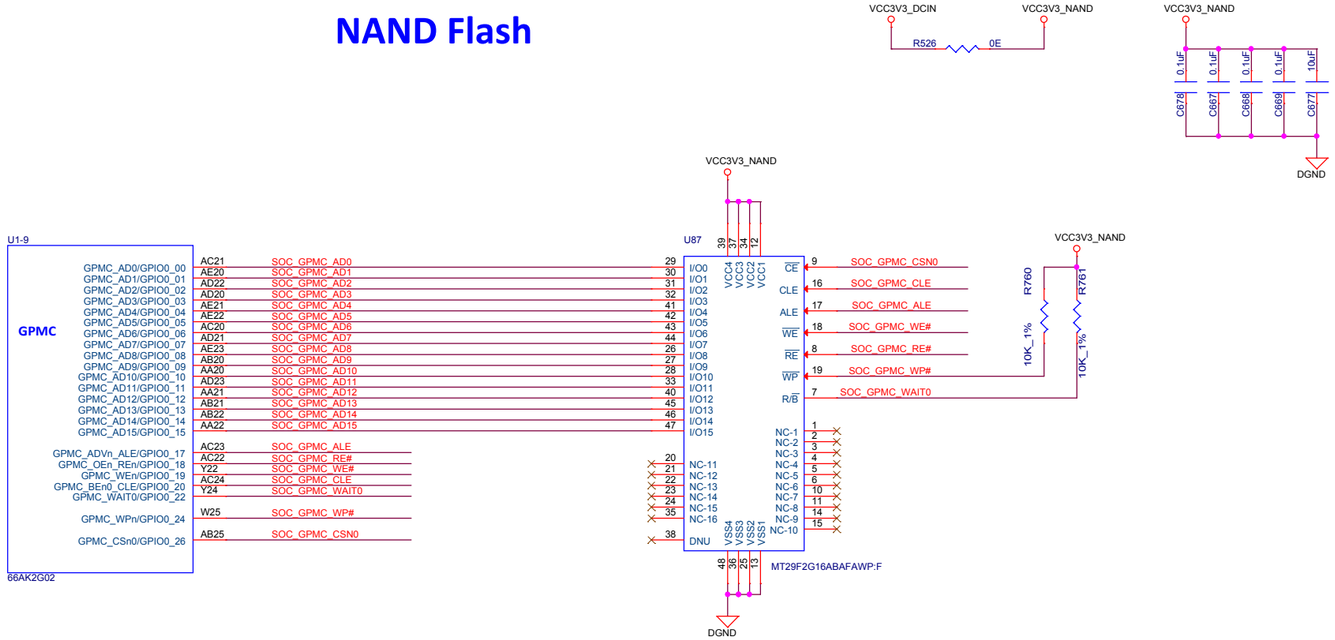
eMMC RESET



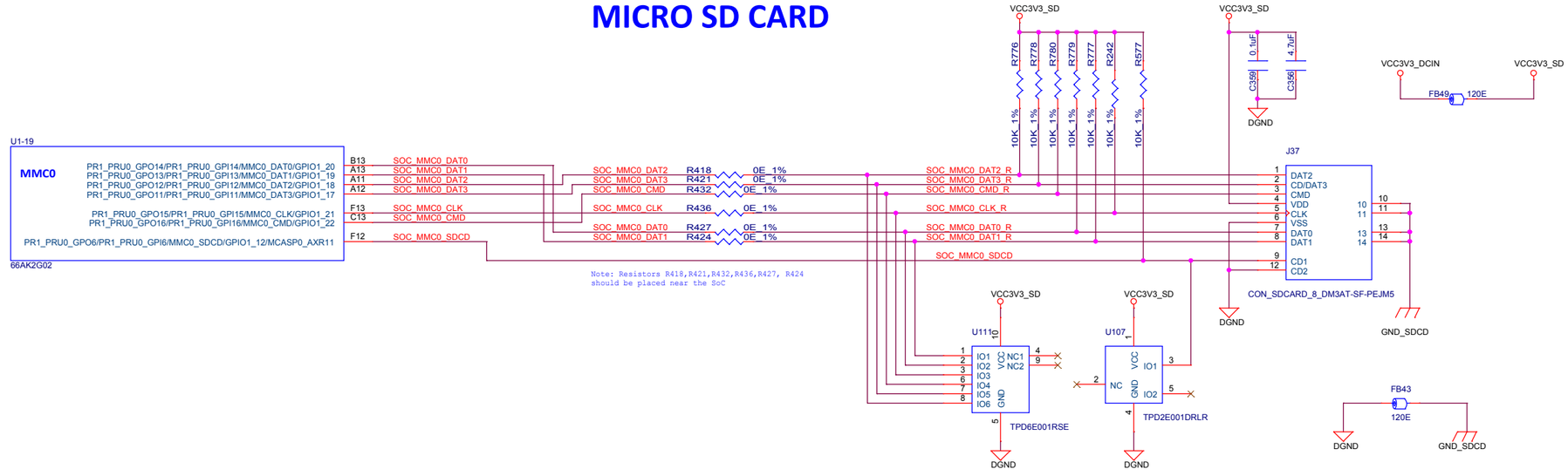
Note: NC pins are connected to eMMC Signals for routing

Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	EMMC FLASH
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Thursday, April 14, 2016	Sheet 17 of 50

NAND Flash

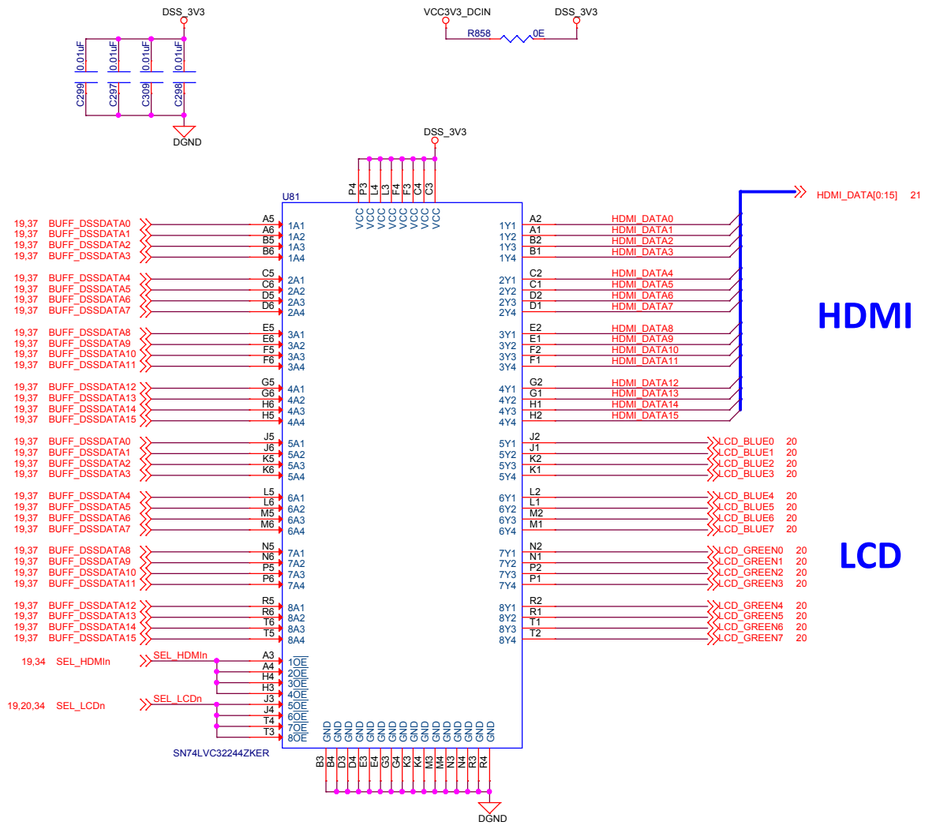


MICRO SD CARD

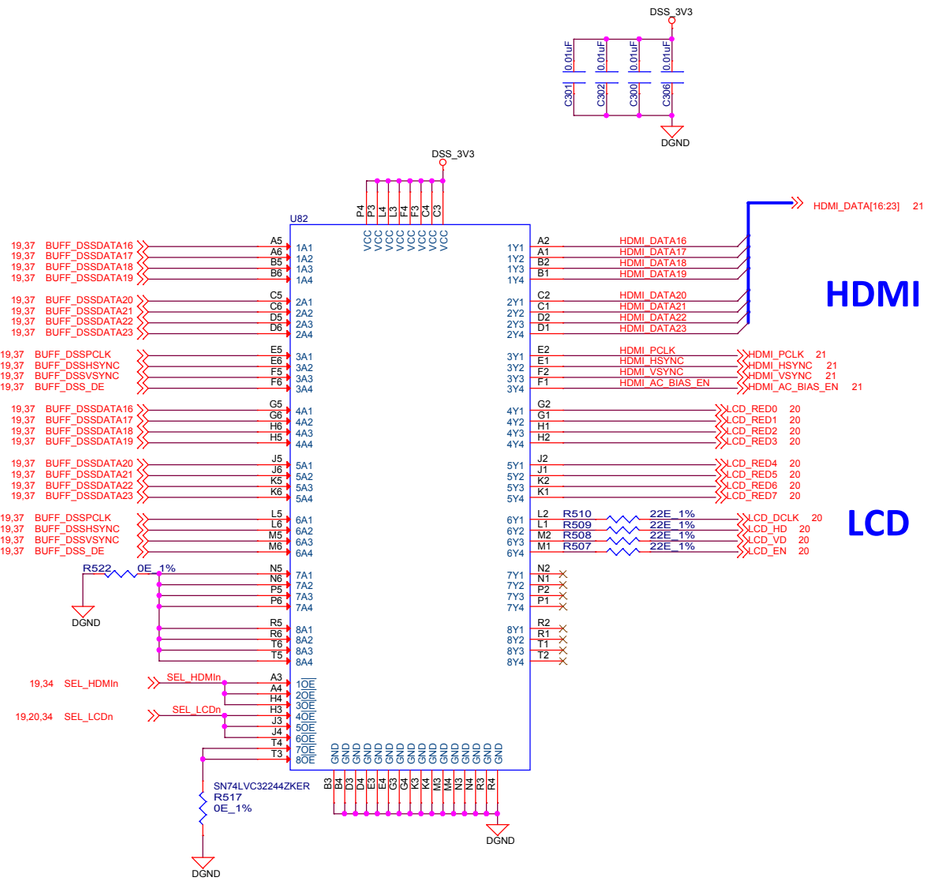


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	NAND FLASH & SD CARD
		Size C	Document Number MS_TI_K2GEVM_SCH_REVD — Rev D
		Date: Thursday, April 14, 2016	Sheet 18 of 50

DSS BUFFER 1



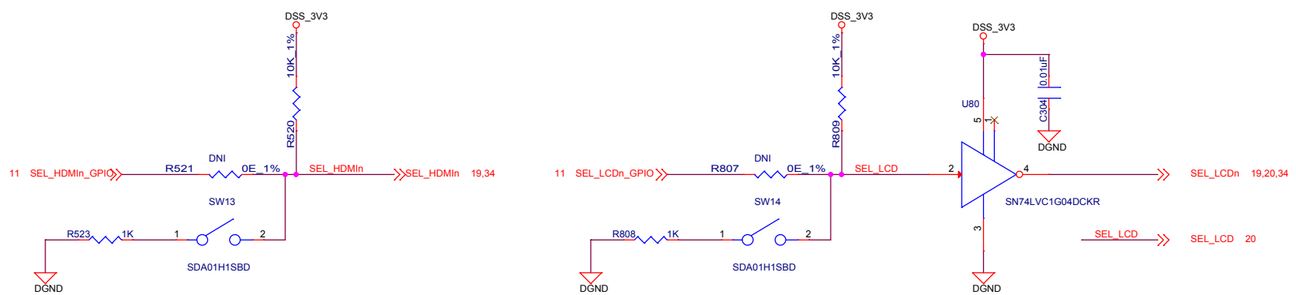
DSS BUFFER 2



SELECTION LCD AND HDMI

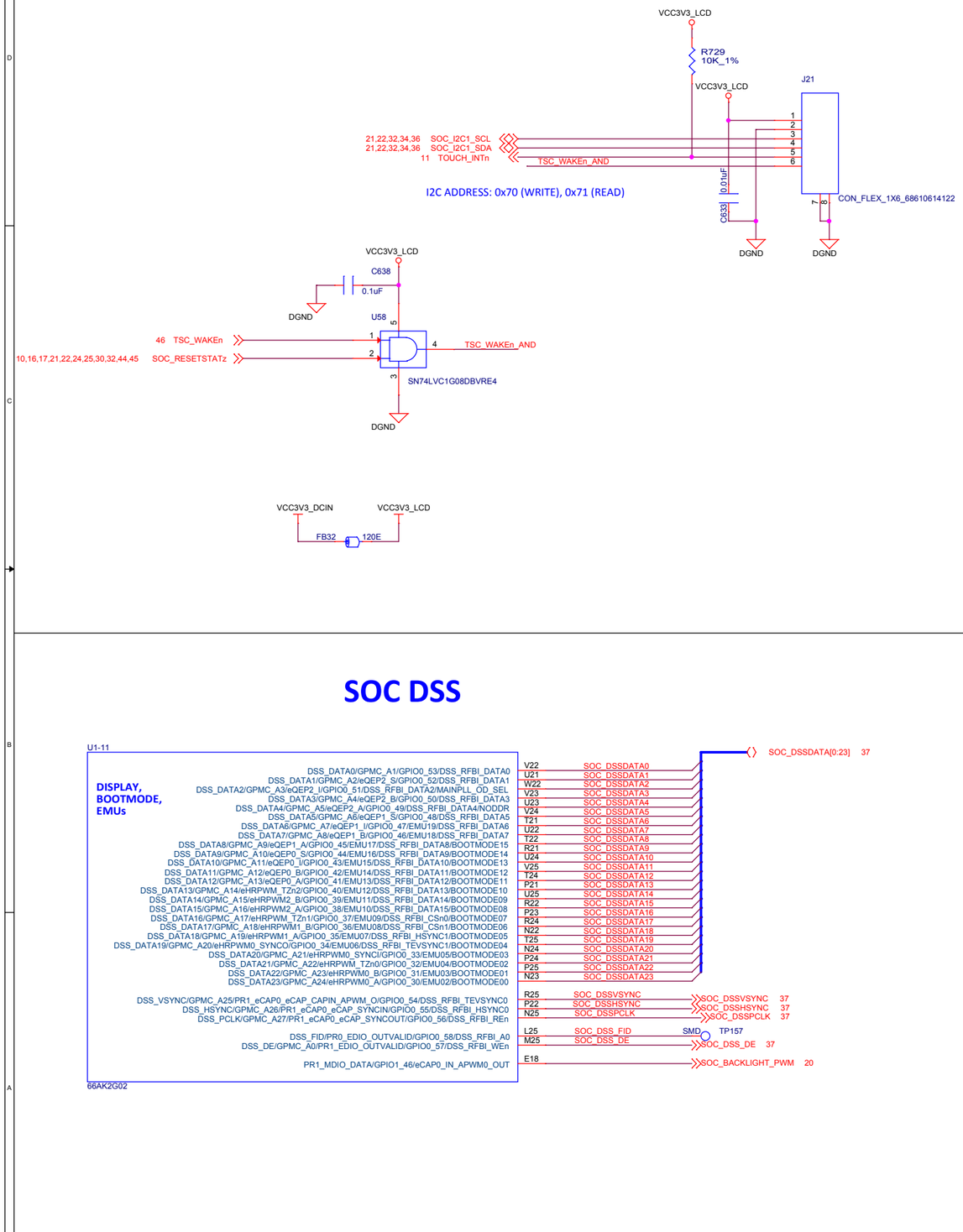
HDMI/LCD SWITCH SELECTION

SW14	SW13	DEVICE
ON	ON	HDMI ON
OFF	OFF	LCD ON
OFF	ON	NOT VALID
ON	OFF	NOT VALID

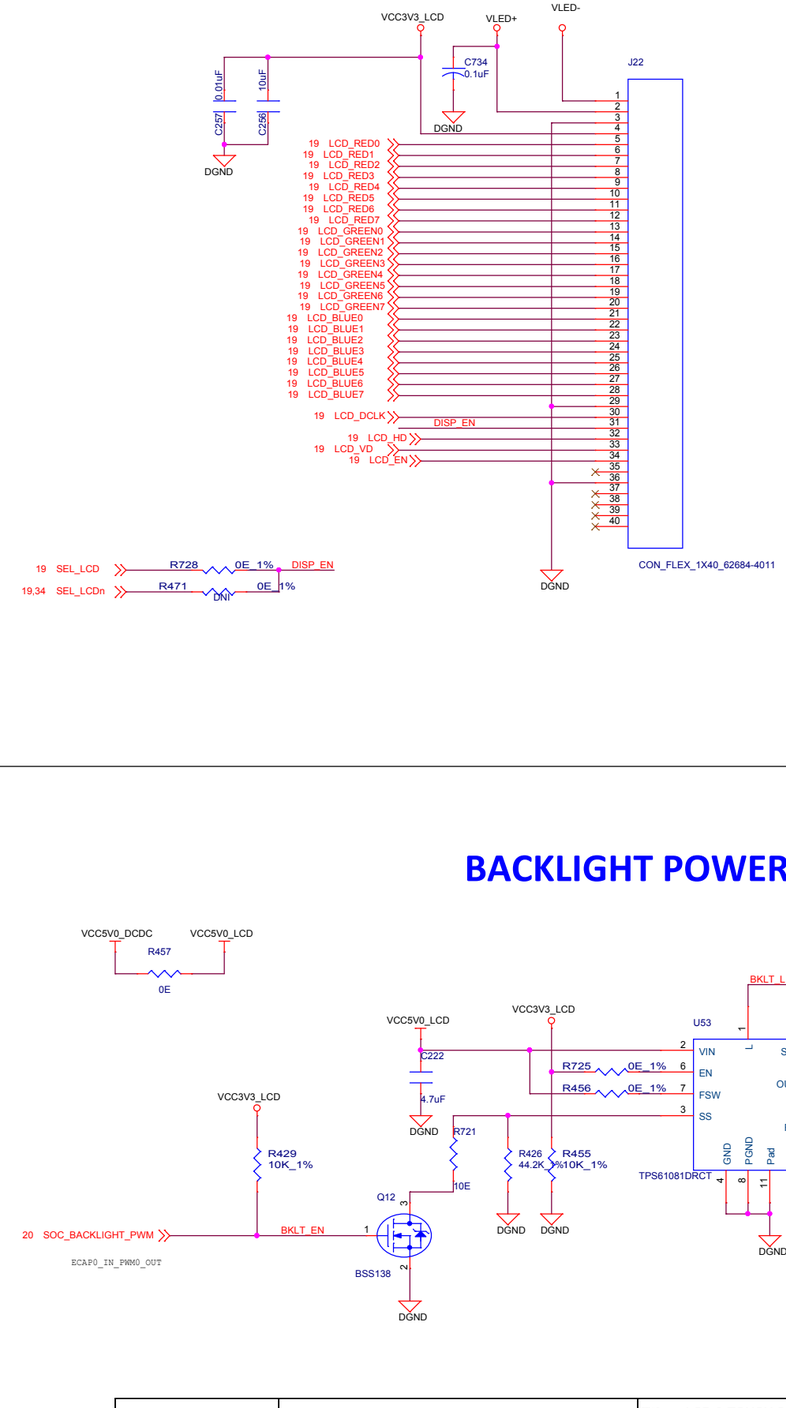


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: DSS BUFFER SECTION
		Size: C — Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Wednesday, April 13, 2016 — Sheet 19 of 50

TOUCH SCREEN CONNECTOR



LCD CONNECTOR



SOC DSS

BACKLIGHT POWER

Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	LCD & TOUCH SCREEN
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Thursday, April 14, 2016	Sheet 20 of 50

HDMI TRANSMITTER

HDMI Audio Line selection between McASP0 & McASP2

DC_BRD_DET	AUDIO LINE SELECTED
L	McASP2
H	McASP0

I2C ADDRESS: 0x3B, 0x3F, 0x62

HDMI 1.2V GENERATION

HDMI ESD DEVICE

NOTE:
TPD12S016PWR has integrated pullup or pulldown resistors on the I2C and HPD lines hence no external pullup or pulldown required.

HDMI CONNECTOR

Project :	K2G EVM
Designed for TI by Mistral Solutions Pvt Ltd	
Title	HDMI TRASMITTER
Size	C
Document Number	MS_TI_K2GEVM_SCH_REVD
Rev	D
Date:	Wednesday, April 13, 2016
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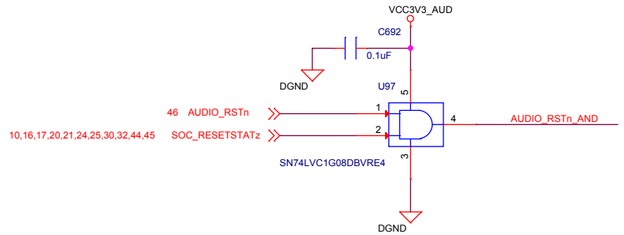
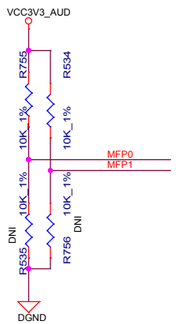
AUDIO CODEC RESET

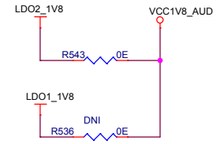


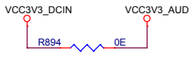


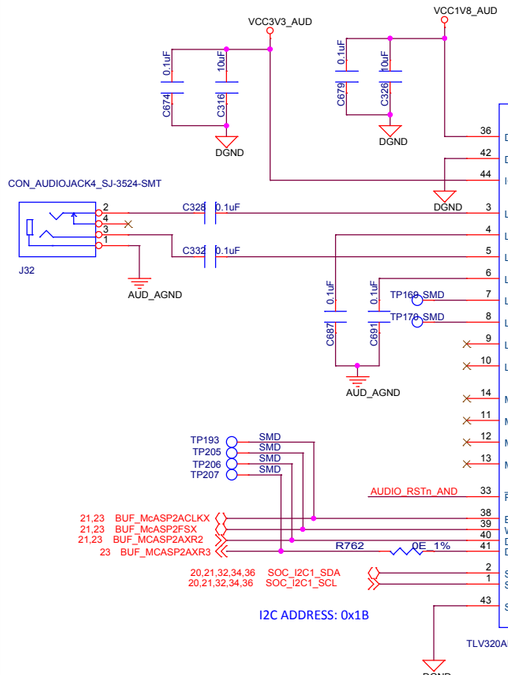
CODEC I2C ADDRESS SELECTION

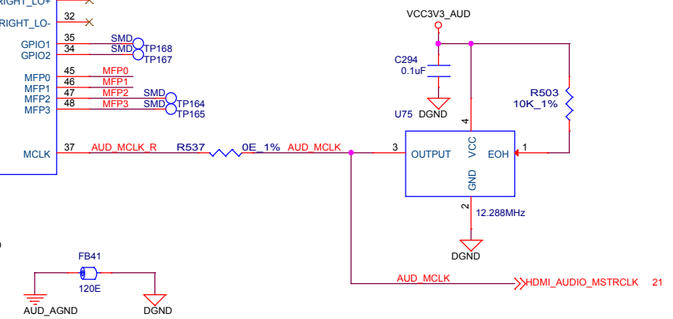
MFP0	MFP1	ADDRESS
L	L	1A
L	H	1B
H	L	1C
H	H	1D

AUDIO CODEC



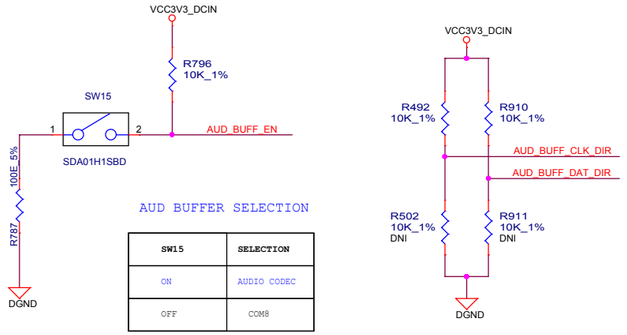






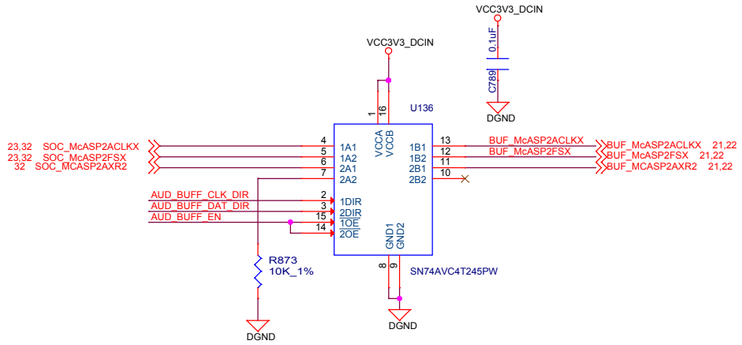
Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	AUDIO CODEC
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Wednesday, April 13, 2016	Sheet 22 of 50

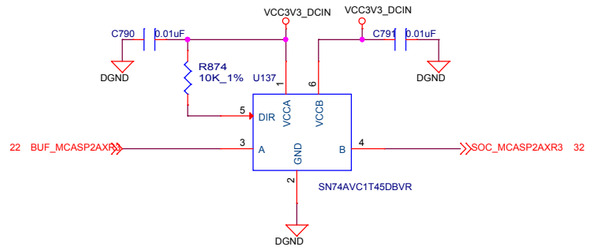
AUDIO BUFFER



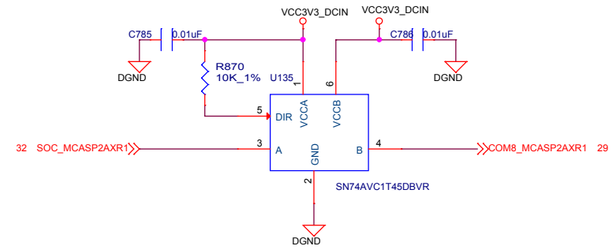
AUD BUFFER SELECTION

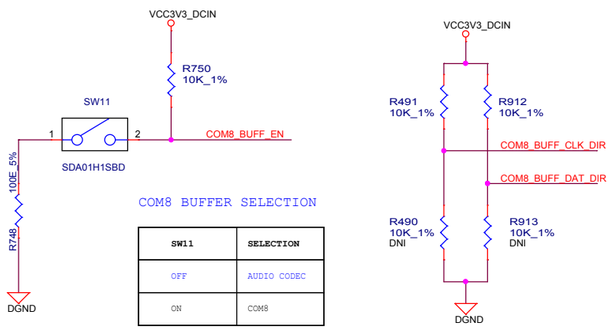
SW15	SELECTION
ON	AUDIO CODEC
OFF	COM8





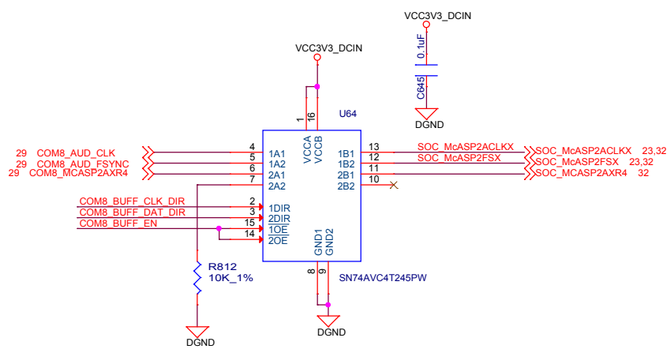
COM8 BUFFER



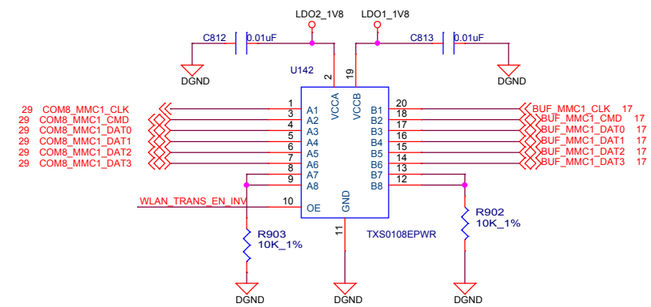


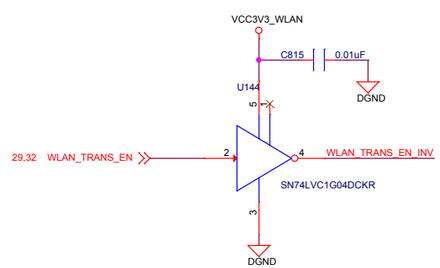
COM8 BUFFER SELECTION

SW11	SELECTION
OFF	AUDIO CODEC
ON	COM8



COM8 SDIO BUFFER





Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: MCASP2 BUFFERS FOR COM8 , HDMI& AUDIO CODEC
		Size: C — Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
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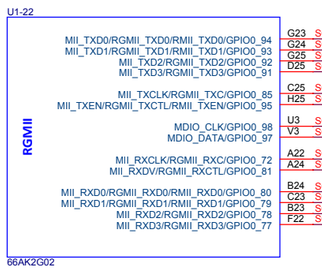
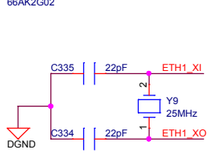
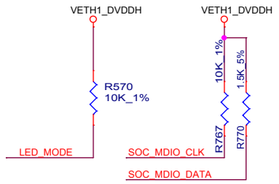
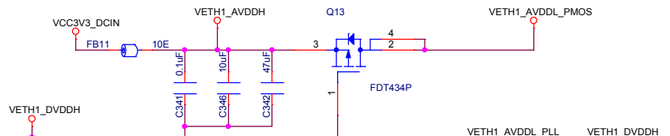
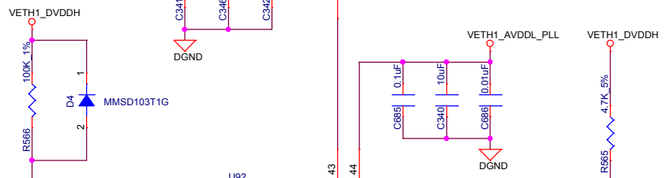
ETHERNET PHY

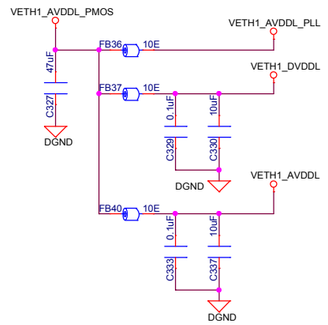


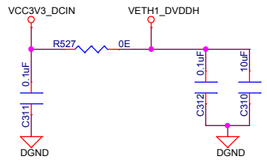




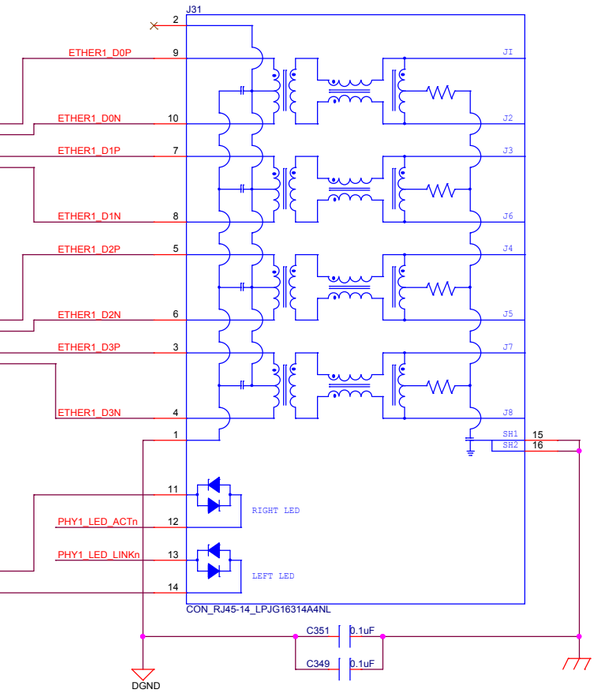




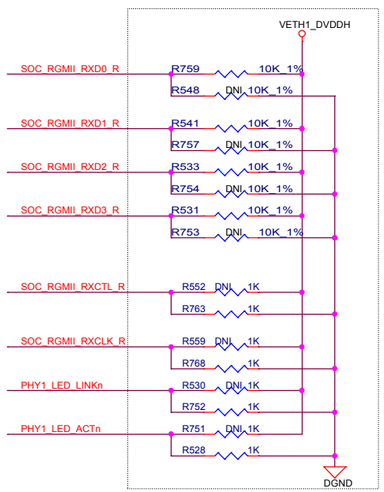




ETHERNET CONNECTOR



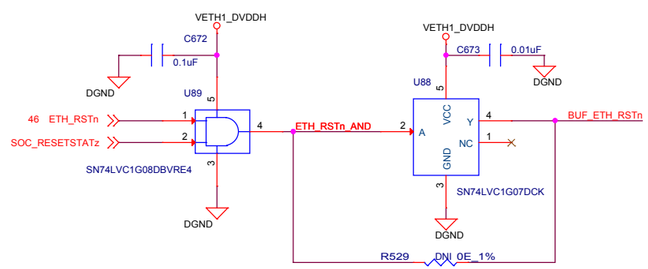
ETHERNET MODE CONFIGURATION



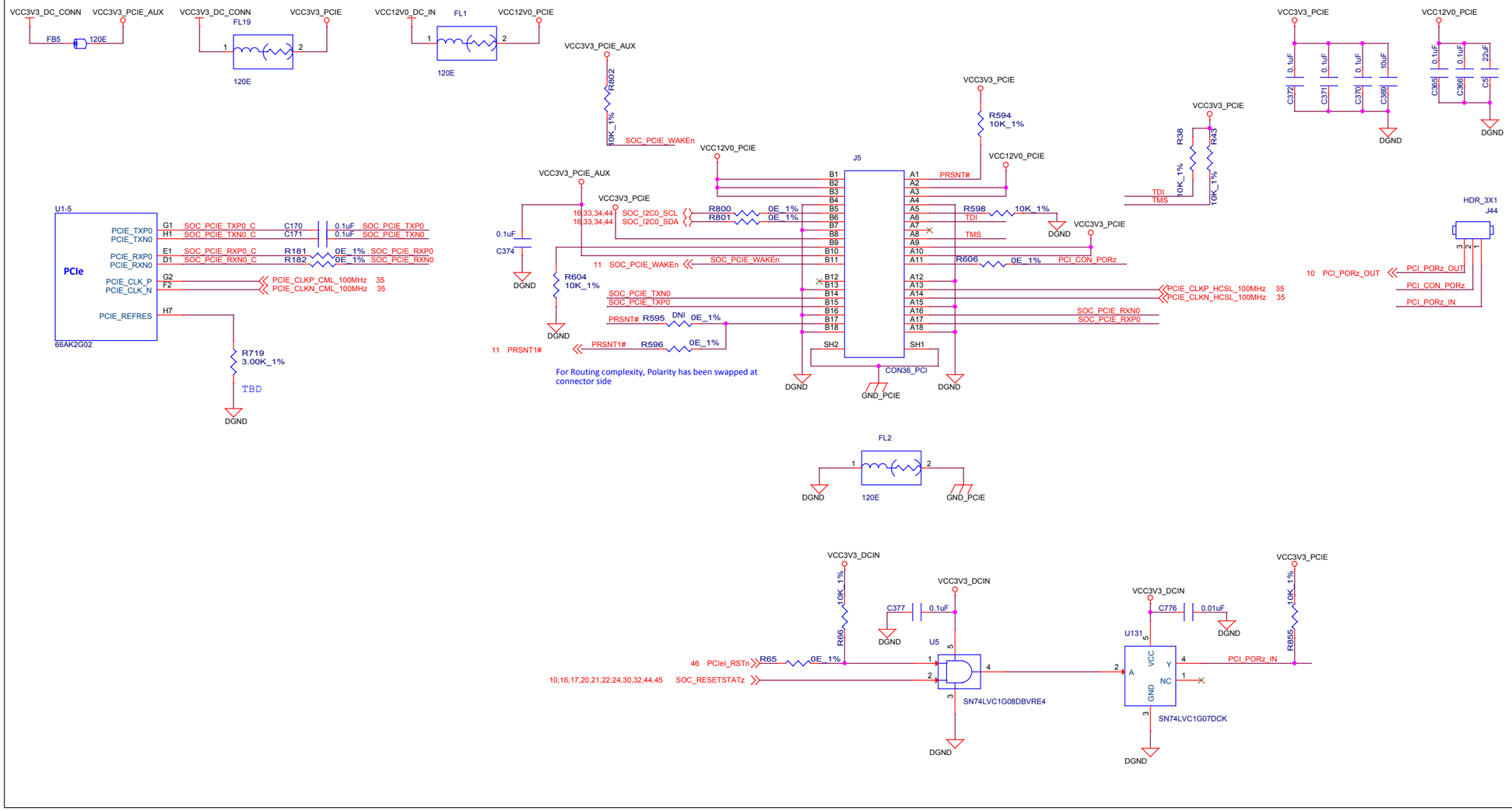
RXD[3:0]	MODE
0100	NAND TREE
0111	CHIP POWER DOWN
1100	RGMII MODE - ADVERTISE 1000 BASE-T FULL DUPLEX ONLY
1101	RGMII MODE- ADVERTISE 1000 BASE-T FULL & HALF DUPLEX ONLY
1110	RGMII MODE- ADVERTISE ALL CAPABILITIES (10/100/1000 SPEED HALF / FULL DUPLEX), EXCEPT 1000 BASE-T HALF DUPLEX
1111	RGMII MODE- ADVERTISE ALL CAPABILITIES (10/100/1000 SPEED HALF / FULL DUPLEX)

ETHERNET ESD DEVICES

ETHERNET RESET

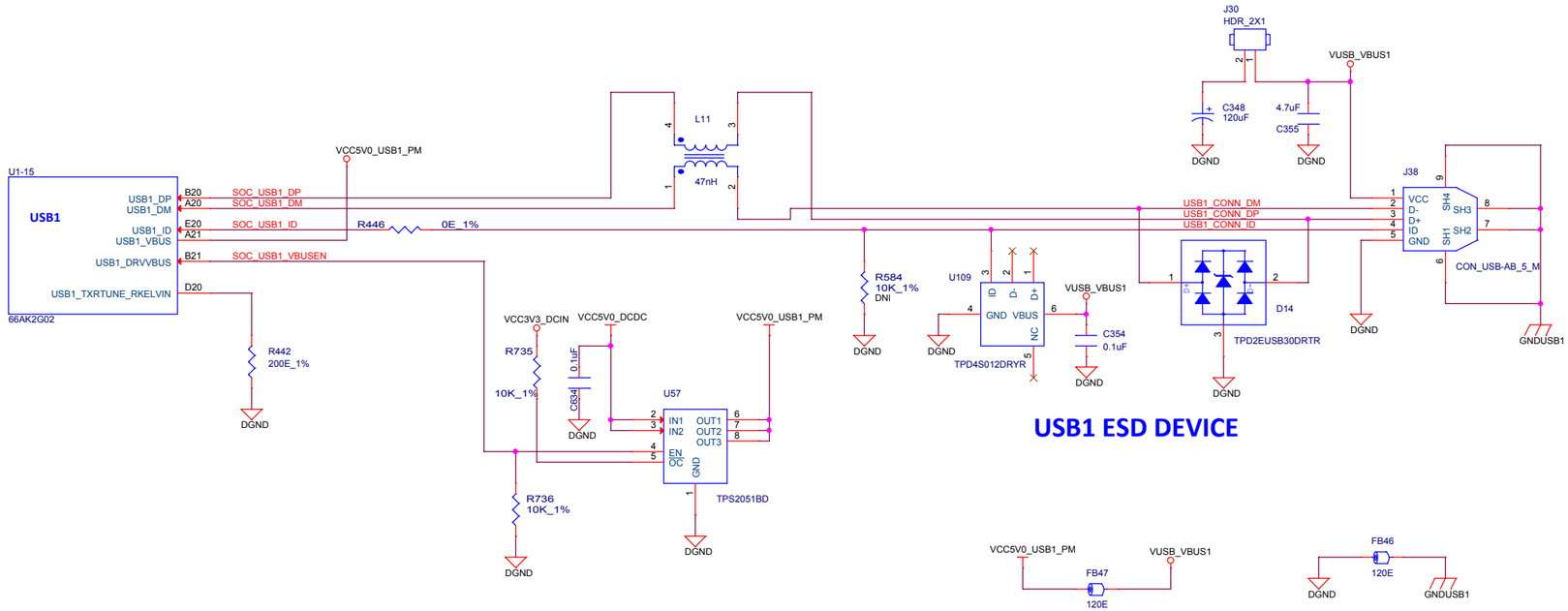


PCI EXPRESS x1 CONNECTOR

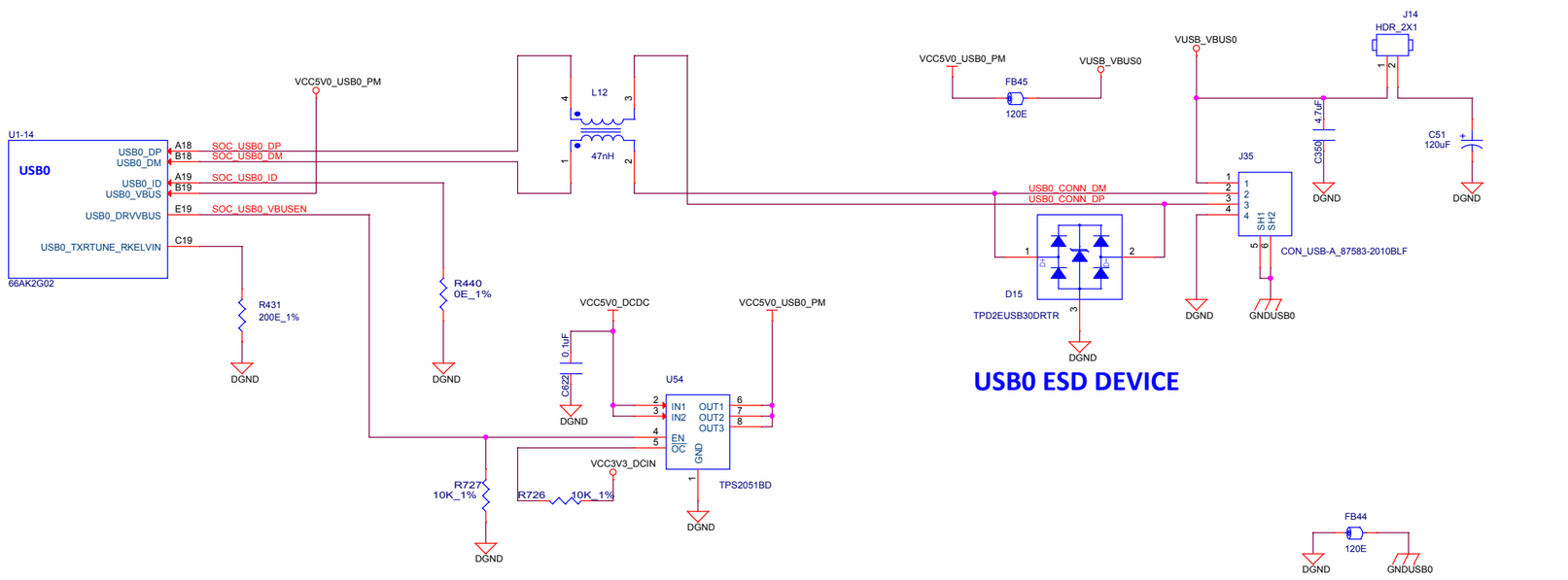


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	PCIe x1 CONNECTOR
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Thursday, April 14, 2016	Sheet 25 of 50

USB1 DUAL ROLE

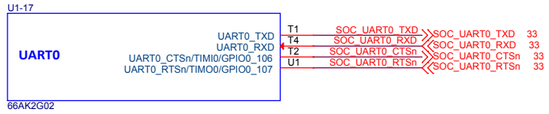


USB0 HOST

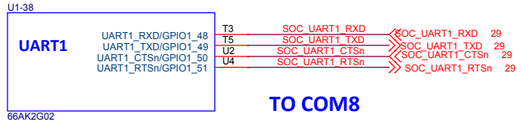


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	USB DUAL ROLE & HOST
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Thursday, April 14, 2016	Sheet 26 of 50

SoC UART0

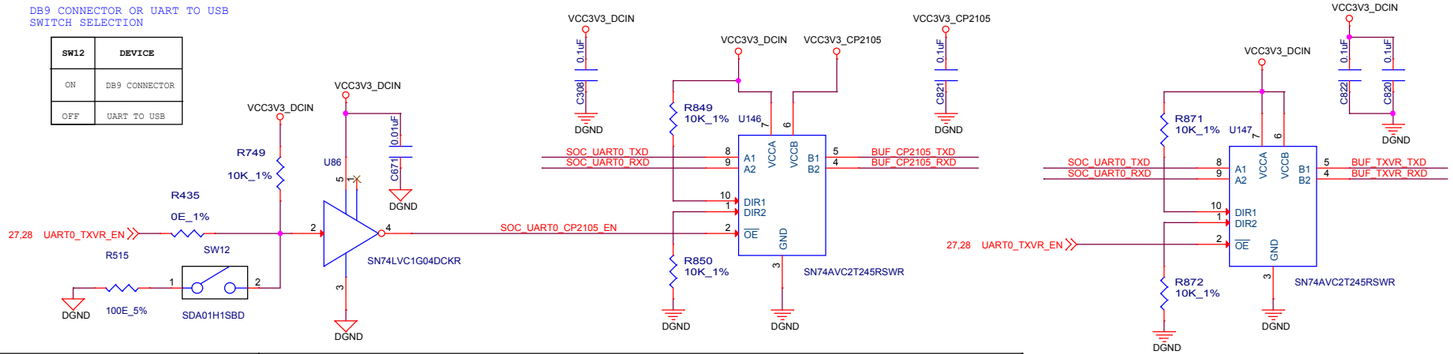


SoC UART1

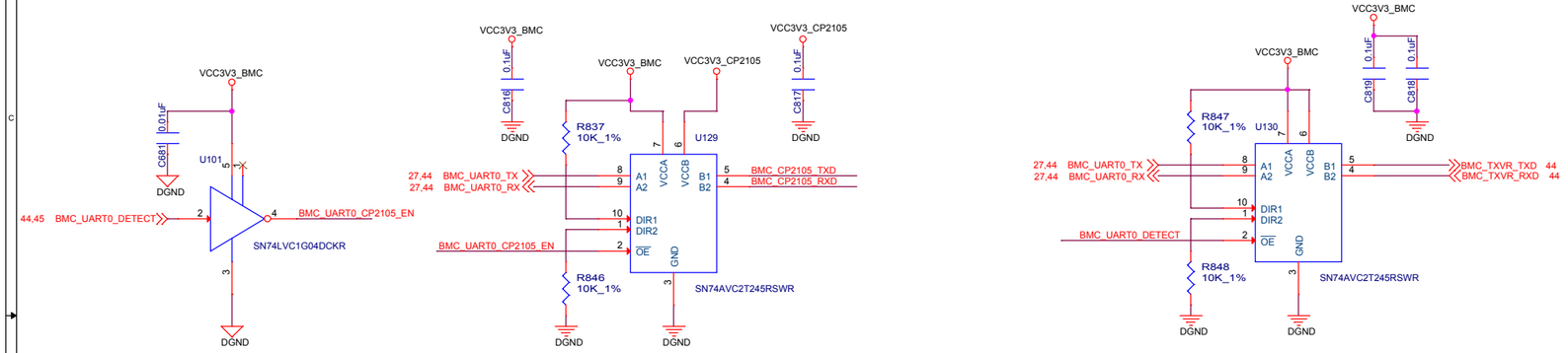


TO COM8

SoC_UART0 MUX: CP2105 or DB9



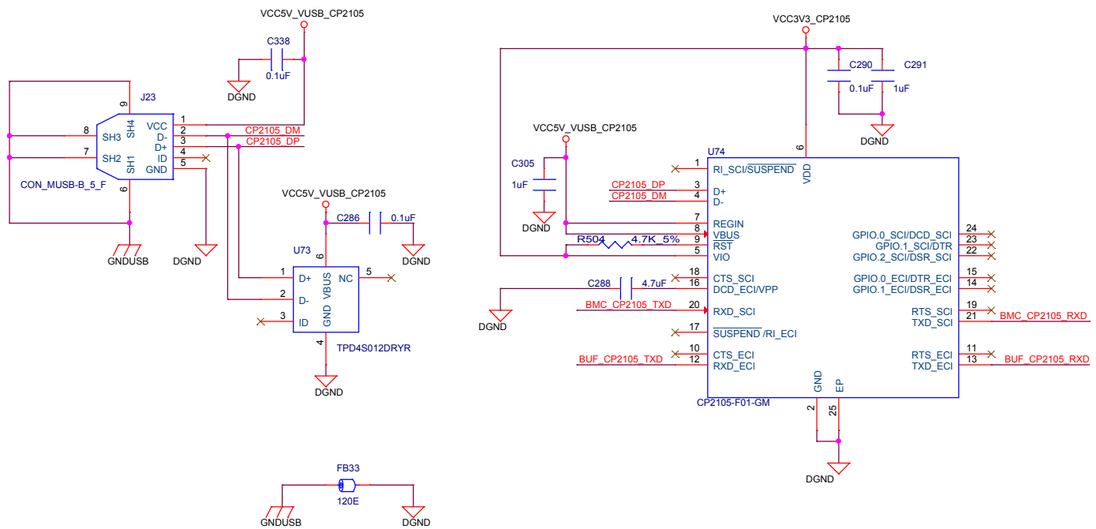
MUX BETWEEN BMC UART0 TO USB & 4 PIN HDR



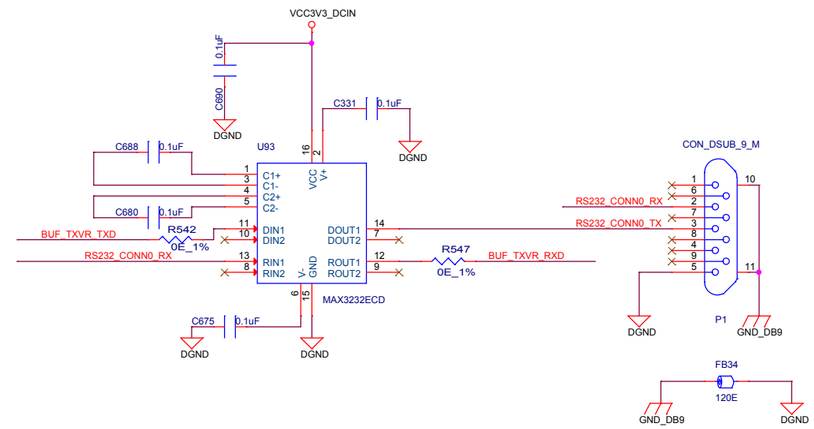
SoC_UART0 MUX SELECTION

SOC_UART0_CP2105_EN	SoC_UART0 Connected to
L	CP2105 (USB-to-UART)
H	UART TRANSCIEVER DB9 CONNECTOR

SoC UART0 & BMC CONSOLE OVER USB

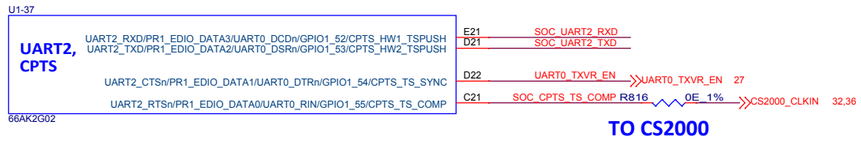


UART0 DB9 CON

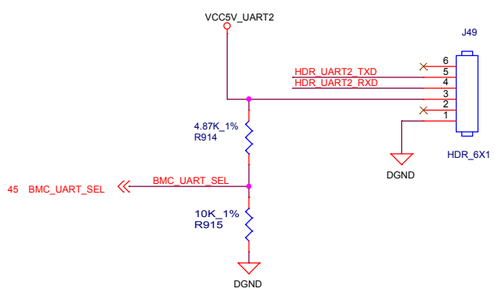


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	UART 0,1,& 2
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD
		Rev: D	
		Date: Thursday, April 14, 2016	Sheet 27 of 50

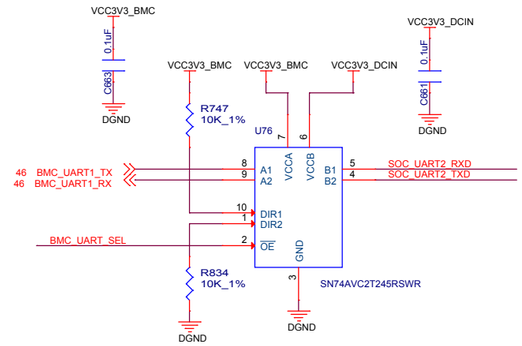
SoC UART2

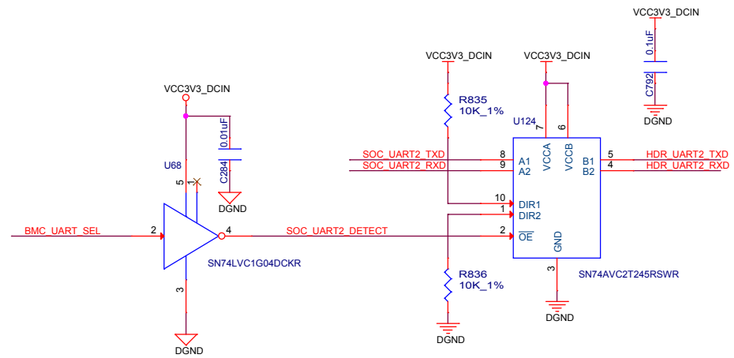


UART2 HEADER



SoC UART2 MUX - BMC or UART2 Header



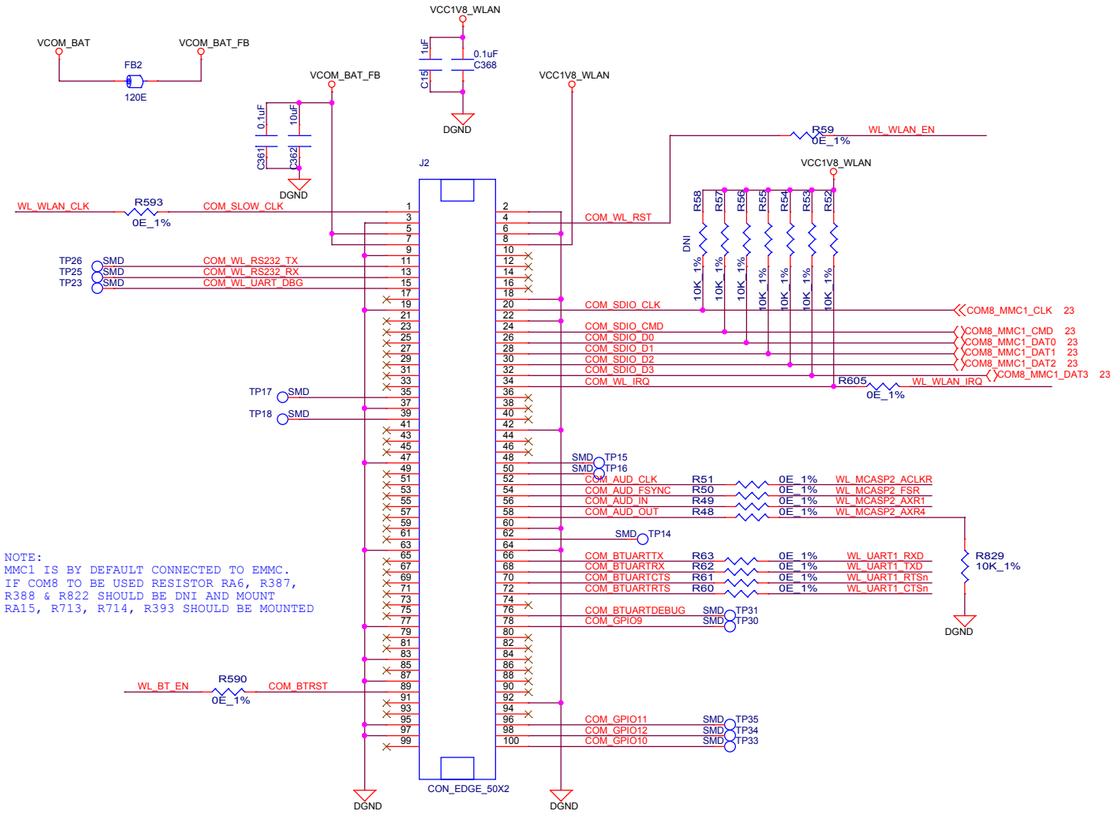


SoC_UART2 MUX SELECTION

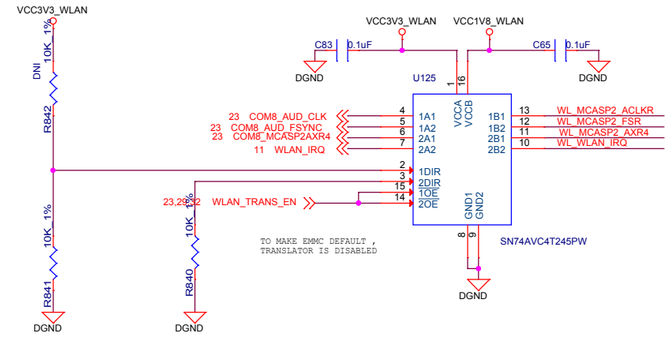
BMC_UART_SEL	SoC_UART2 Connected to
L	BMC
H	UART2 HEADER (J49)

Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	UART2
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD
		Rev	D
		Date: Thursday, April 14, 2016	Sheet 28 of 50

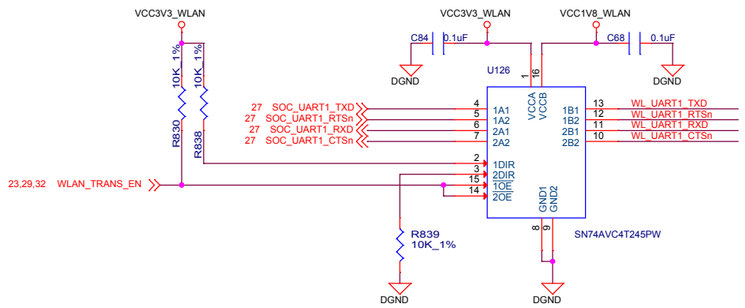
COM8 CONNECTOR



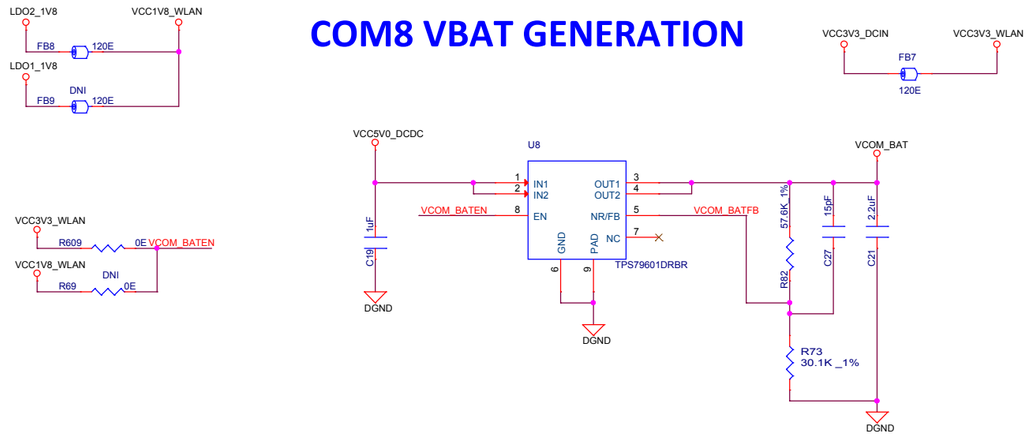
COM8 LEVEL TRANSLATOR1



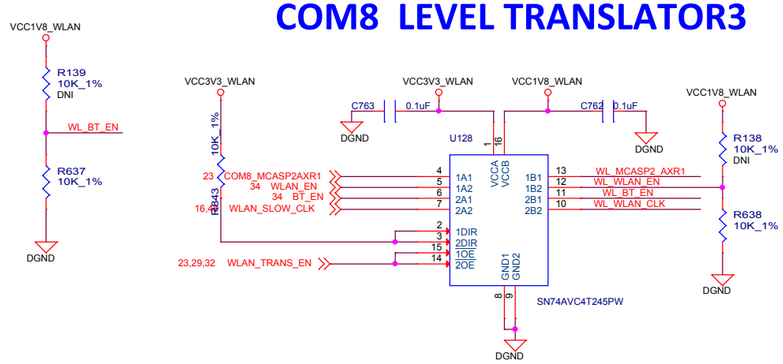
COM8 LEVEL TRANSLATOR2



COM8 VBAT GENERATION



COM8 LEVEL TRANSLATOR3



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	COM8 CONNECTOR
		Size C	Document Number MS_TI_K2GEVM_SCH_REVD — Rev D
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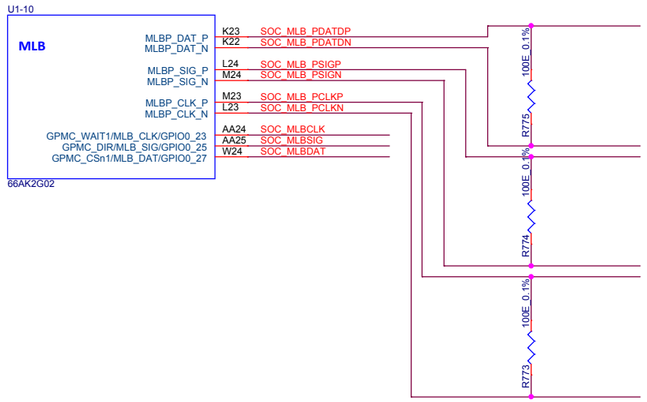
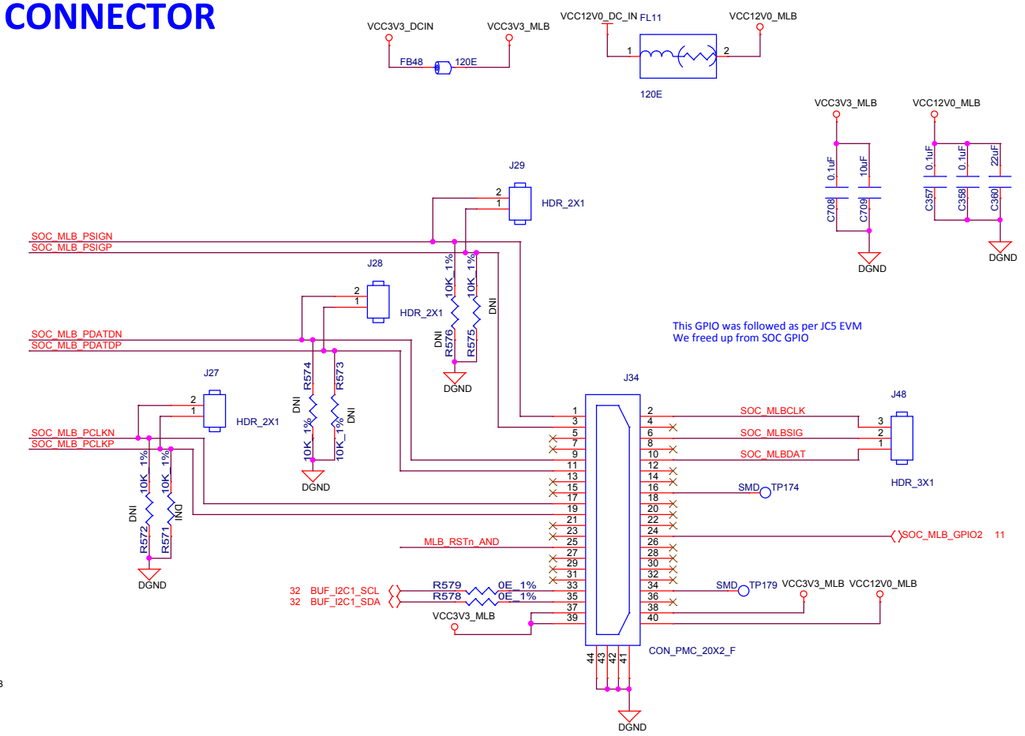
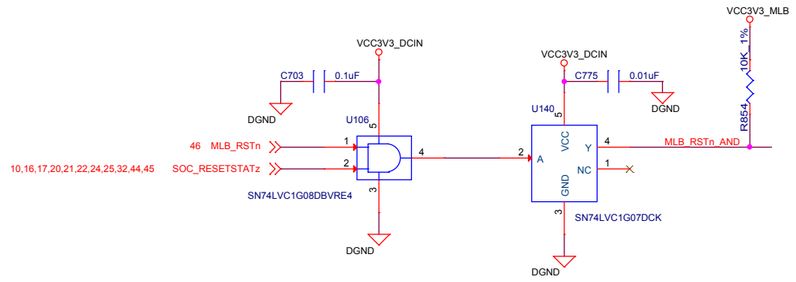
MLB CONNECTOR







Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: MLB CONNECTOR
		Size: C — Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
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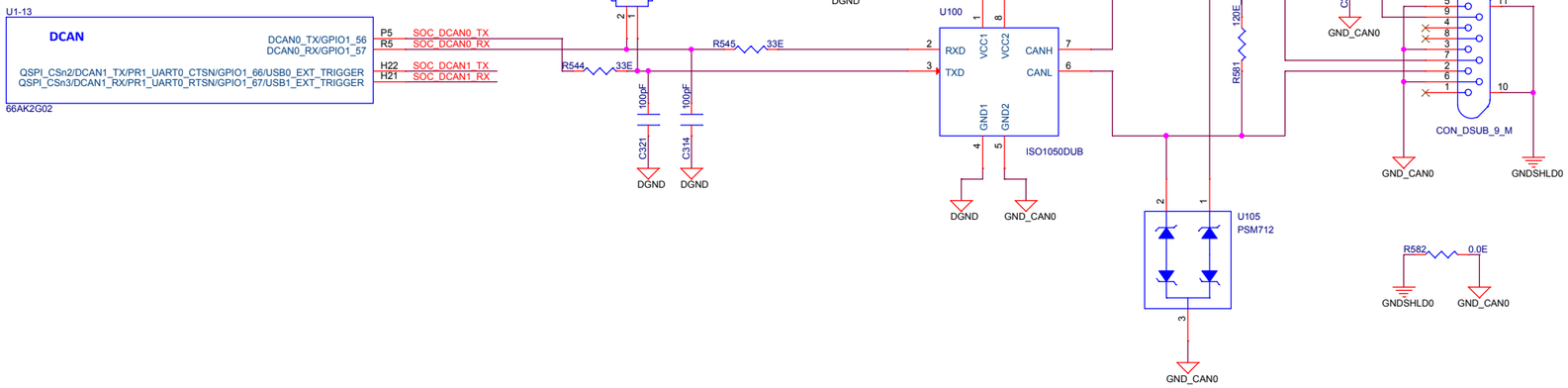
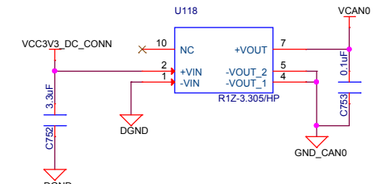
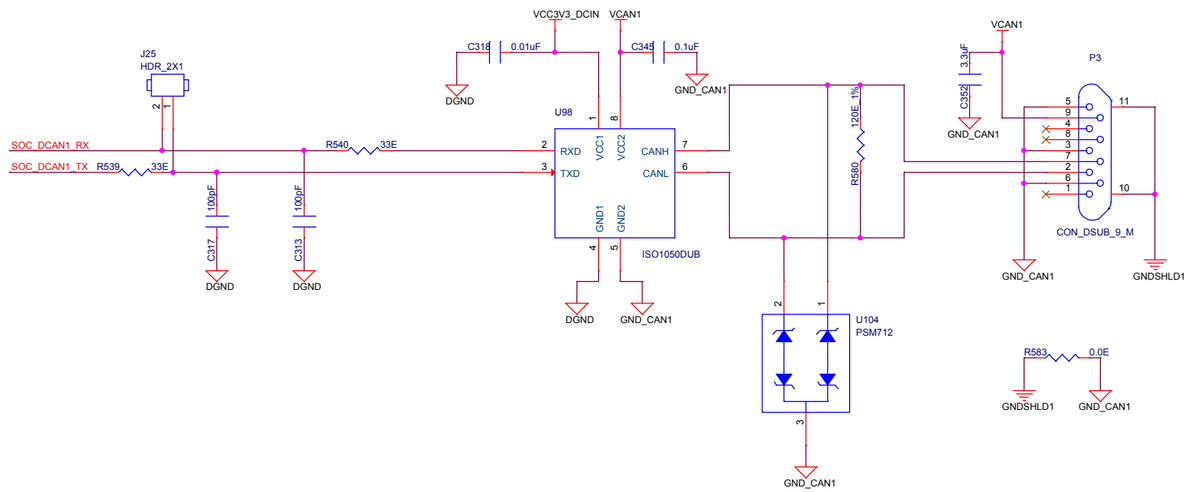
DCAN0



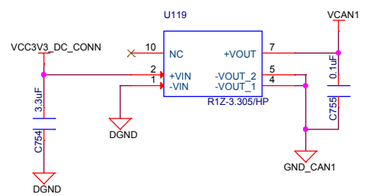
DCAN0 POWER



DCAN1



DCAN1 POWER



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	DCAN CONNECTOR
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
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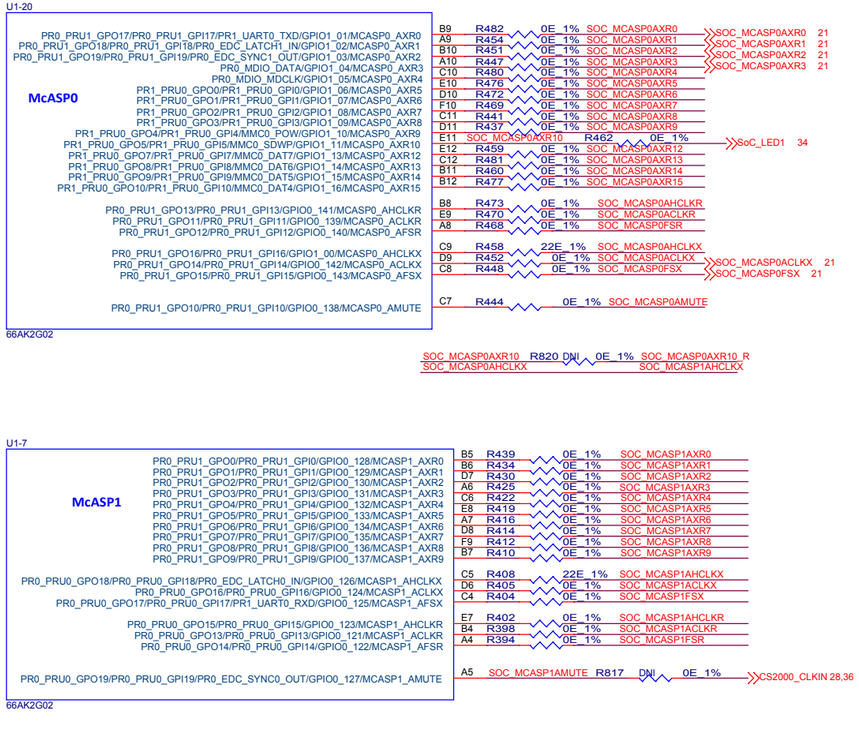
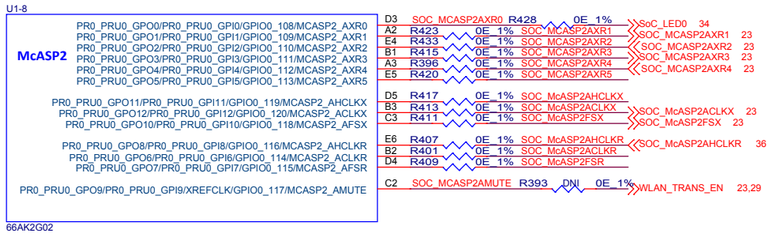
SOC MCASP



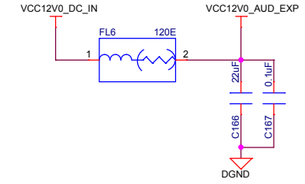
SOC_MCASP0AXR10 R820 DNI 0E_1% SOC_MCASP0AXR10_R
SOC_MCASP0AHCLKX SOC_MCASP1AHCLKX

SOC_MCASP1AMUTE R823 0E_1% SOC_MCASP1AMUTE_R

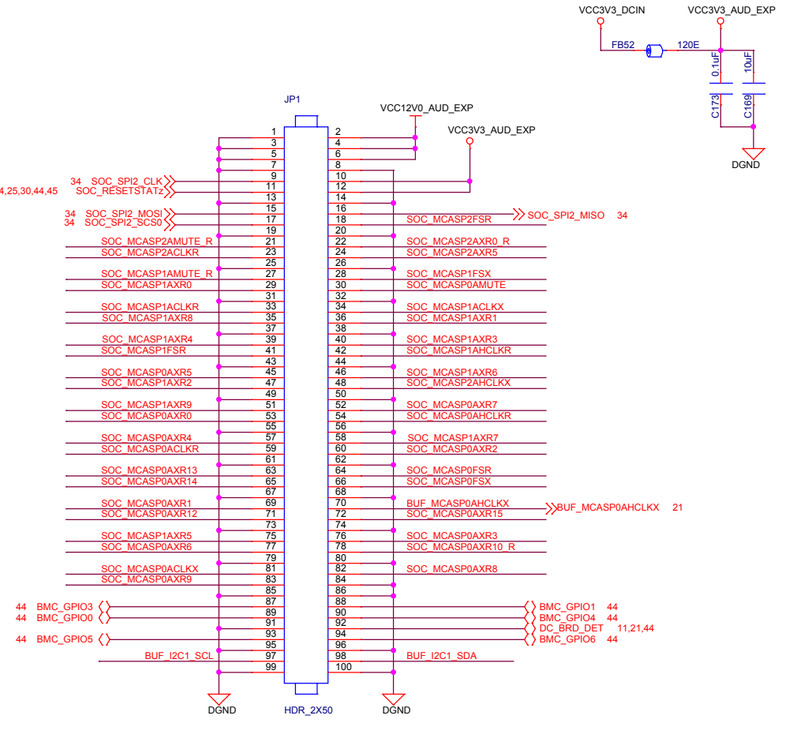


SOC_MCASP2AXR0 R821 DNI 0E_1% SOC_MCASP2AXR0_R
SOC_MCASP2AMUTE R822 DNI 0E_1% SOC_MCASP2AMUTE_R

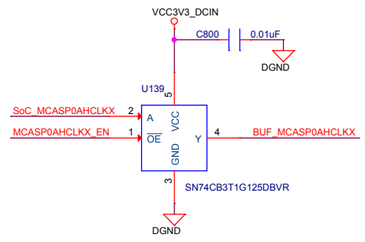
AUDIO EXP CONNECTOR

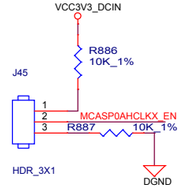


SOC SIGNAL	GPIOs ON AUDIO CARD
SOC_MCASP0AXR8/GPIO1_09	DIR_RST#
SOC_MCASP0AXR9/GPIO1_10	PCM1690_RST#
SOC_McASP0_AMUTE	DAC0_AMUTEI#, DAC1_AMUTEI#
SOC_MCASP1AXR4/GPIO0_132	McASP_CLK_SEL
SOC_MCASP1AXR6/GPIO0_134	DIR_AUDIO#
SOC_MCASP1AXR7/GPIO0_135	DIR_EMPH
SOC_MCASP1AXR8/GPIO0_136	DIR_ERROR
SOC_MCASP1AXR5/GPIO0_133	DIR_CLKST
SOC_MCASP1ACLKX/GPIO0_124	DIR_FSOUT0
SOC_MCASP1FSX / GPIO0_125	DIR_FSOUT1
SOC_SPI2_MOSI / GPIO0_105	I2SHDR_GPIO0
SOC_SPI2_MISO / GPIO0_104	I2SHDR_GPIO1

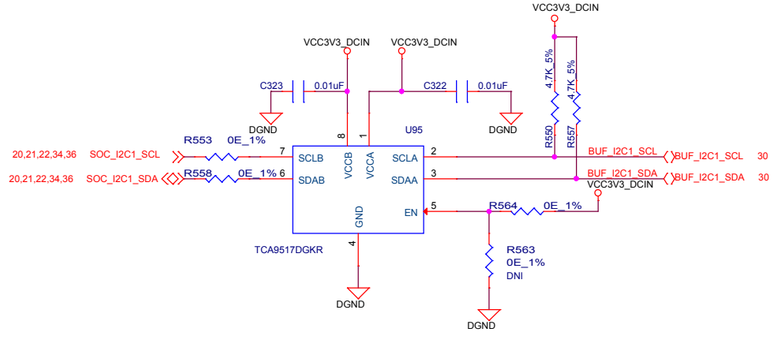


McASP0AHCLKX_BUFFER





I2C BUFFER



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	AUDIO EXP CONNECTOR
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
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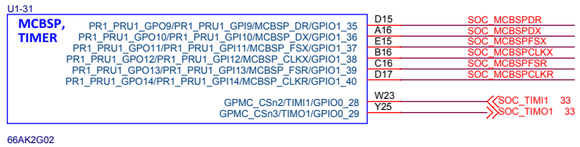
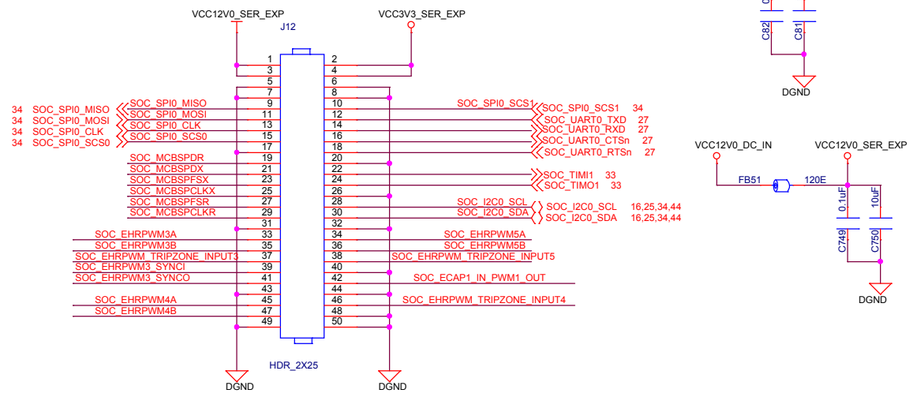
SoC McBSP



SoC PWM

SERIAL EXPANSION CONNECTOR



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	SERIAL & EHRPWM EXP CONNECTOR
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD
		Rev: D	
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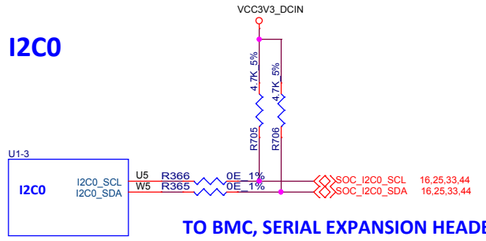
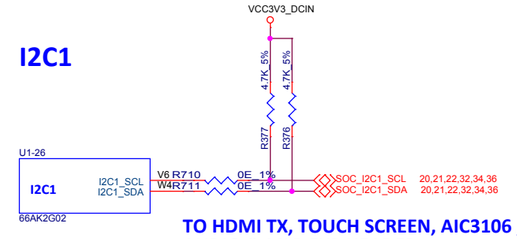
I2C0



TO BMC, SERIAL EXPANSION HEADER

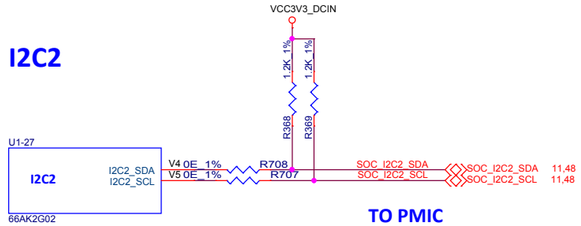
I2C1



TO HDMI TX, TOUCH SCREEN, AIC3106 ,
AUDIO & MLB EXP HEADER

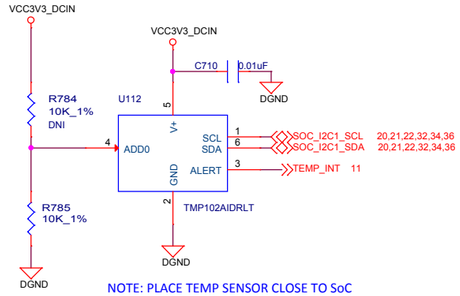
SoC I2C

I2C2



TO PMIC

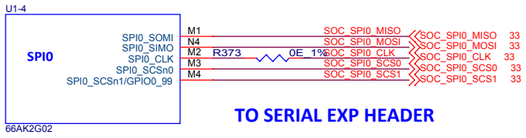
TEMPERATURE SENSOR



NOTE: PLACE TEMP SENSOR CLOSE TO SoC
I2C ADDRESS: 0x48

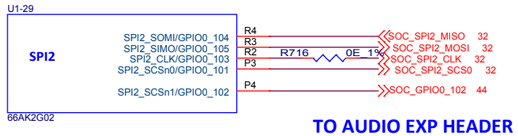
SoC SPI

SPI0



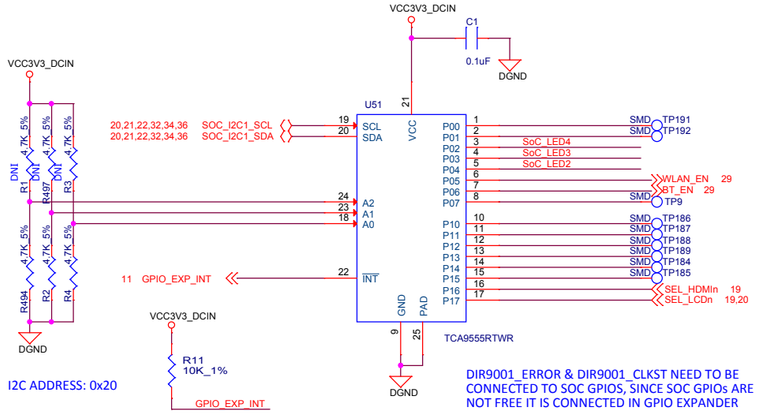
TO SERIAL EXP HEADER

SPI2



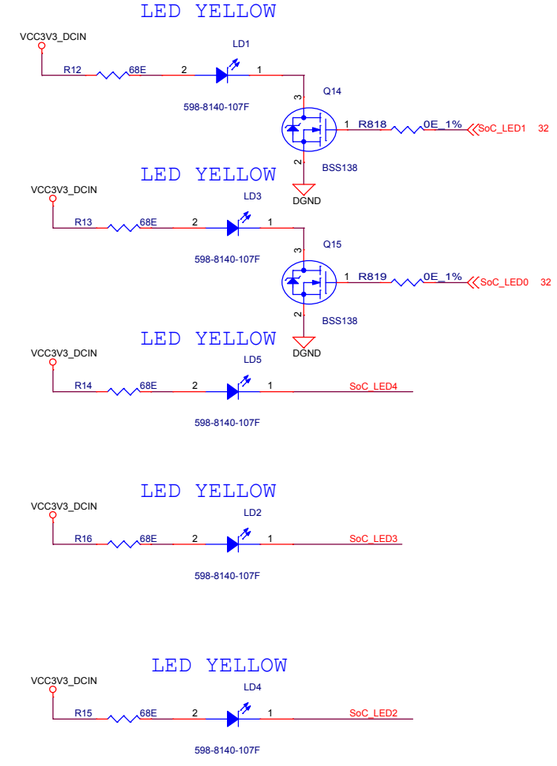
TO AUDIO EXP HEADER

GPIO EXPANDER & LEDs



I2C ADDRESS: 0x20

DIR9001_ERROR & DIR9001_CLKST NEED TO BE CONNECTED TO SOC GPIOS, SINCE SOC GPIOs ARE NOT FREE IT IS CONNECTED IN GPIO EXPANDER



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: SERIAL CONTROL INTERFACE
		Size: C — Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
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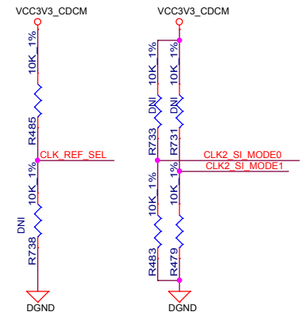
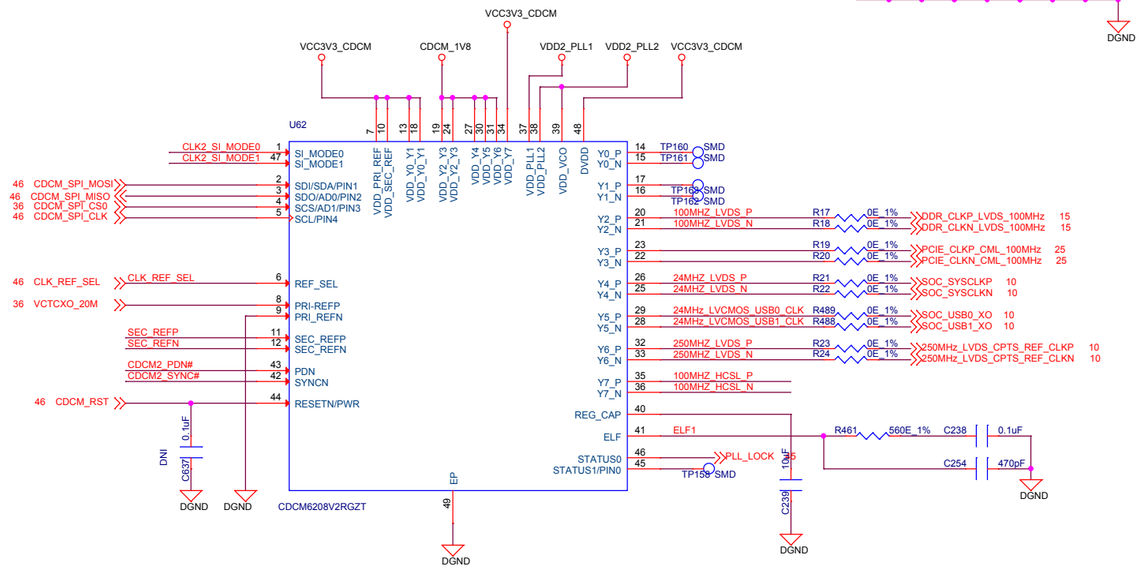
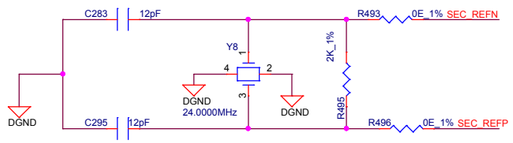
CLOCK GENERATOR

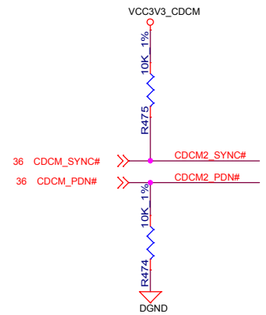


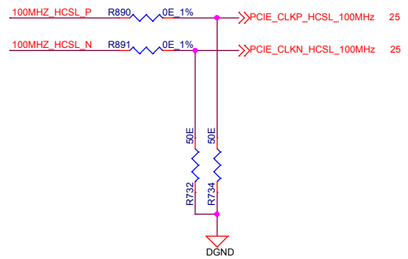
MODE SELECTION FOR CDCM DEVICE

SI_MODE1	SI_MODE0	MODE SELECTED
0	0	SPI MODE
0	1	I2C MODE
1	0	PIN MODE (NO SERIAL PROGRAMMING)
1	1	RESERVED









Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: CLOCK DISTRIBUTION 1
		Size: C; Document Number: MS_TI_K2GEVM_SCH_REVD; Rev: D
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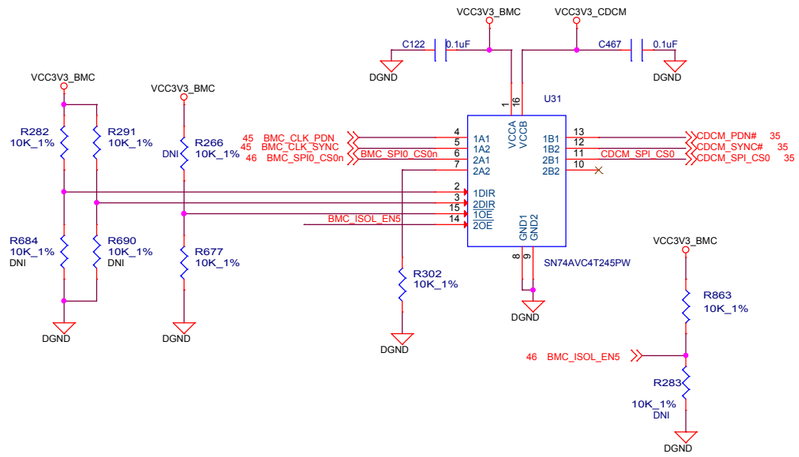
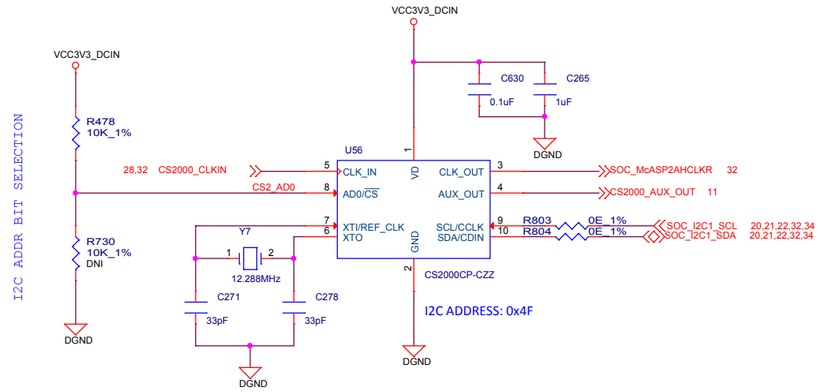
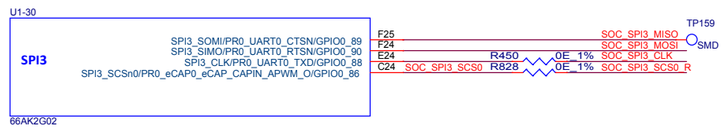
BMC ISOLATOR 5



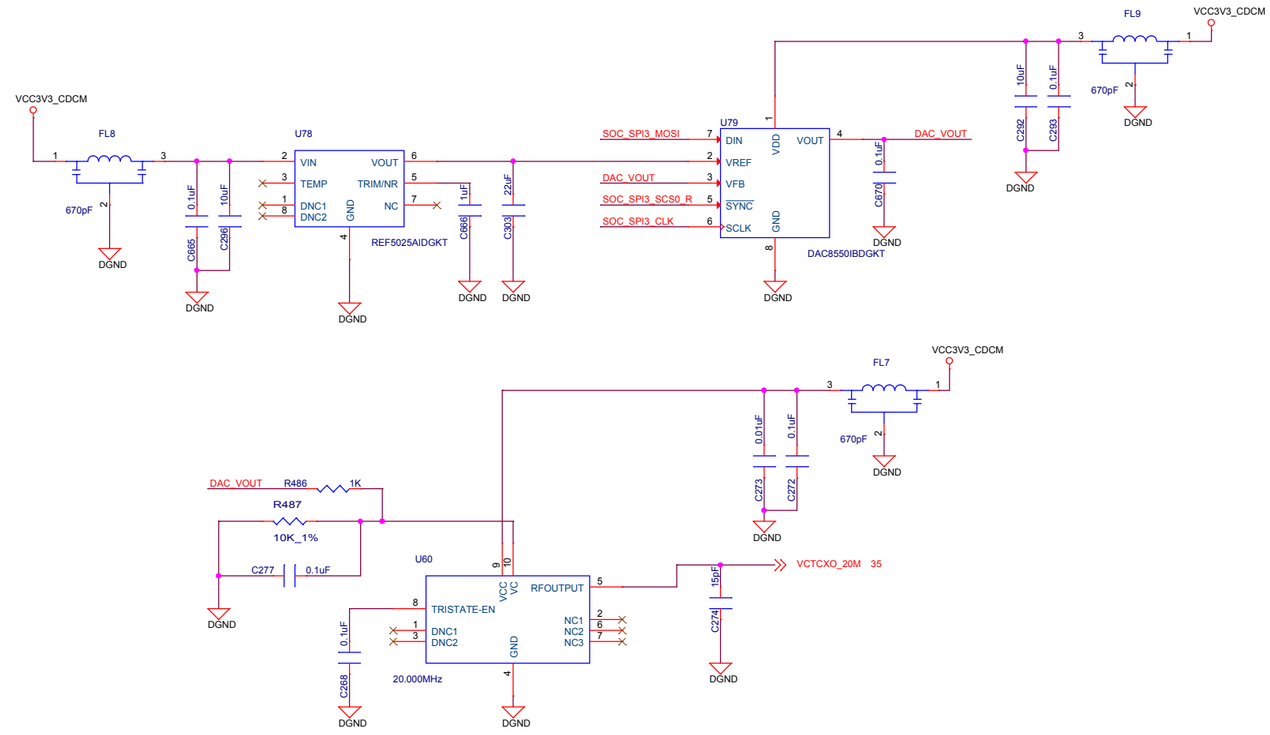
GENERATOR - AUDIO CLOCK DOMAIN



SoC SPI3



AVB CLOCK GENERATOR- 1588 CLOCK DOMAIN



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: CLOCK DISTRIBUTION 2
		Size: C — Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
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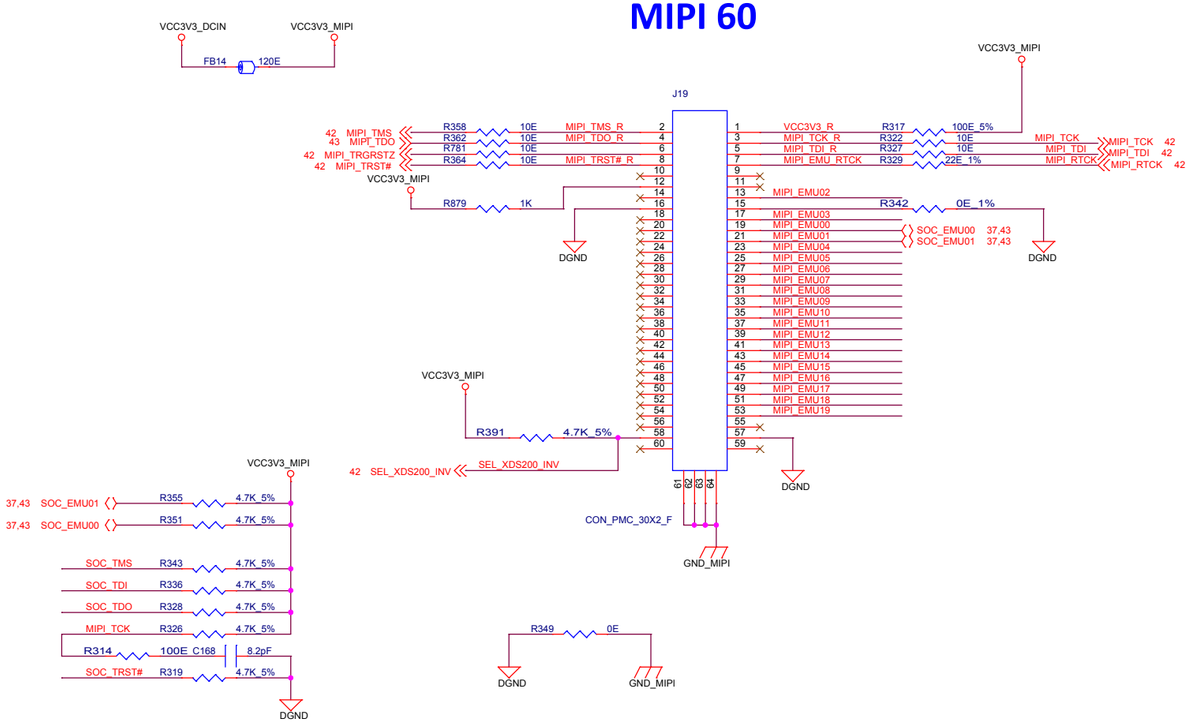
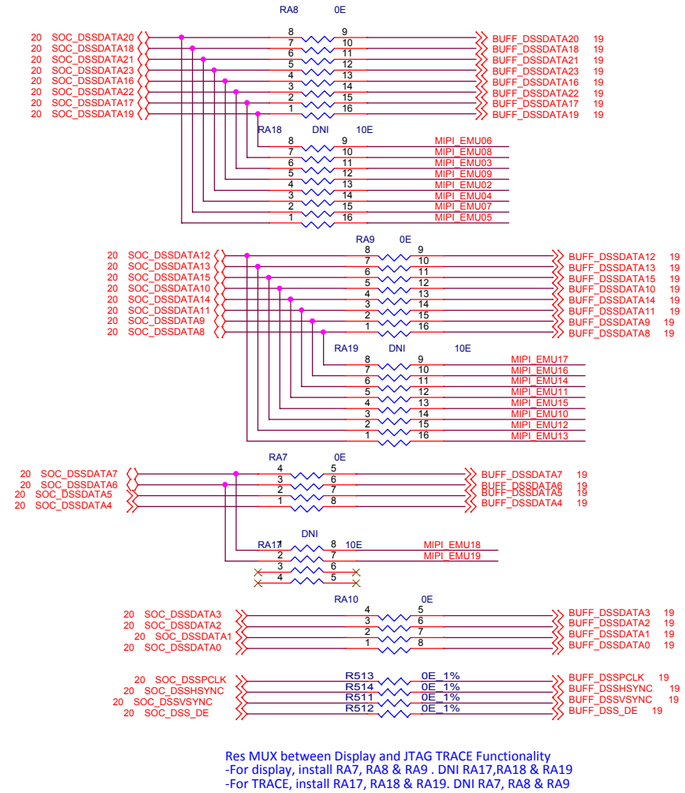
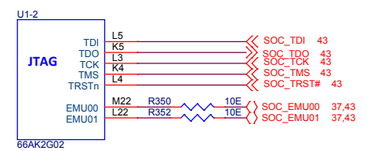
MIPI 60

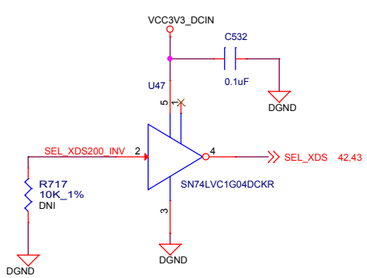


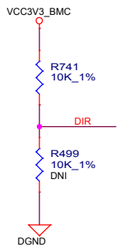


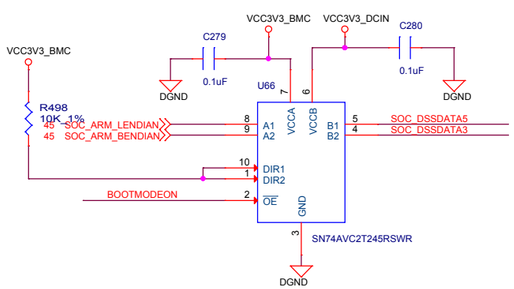
Res MUX between Display and JTAG TRACE Functionality
-For display, install RA7, RA8 & RA9 . DNI RA17,RA18 & RA19
-For TRACE, install RA17, RA18 & RA19. DNI RA7, RA8 & RA9

SoC JTAG

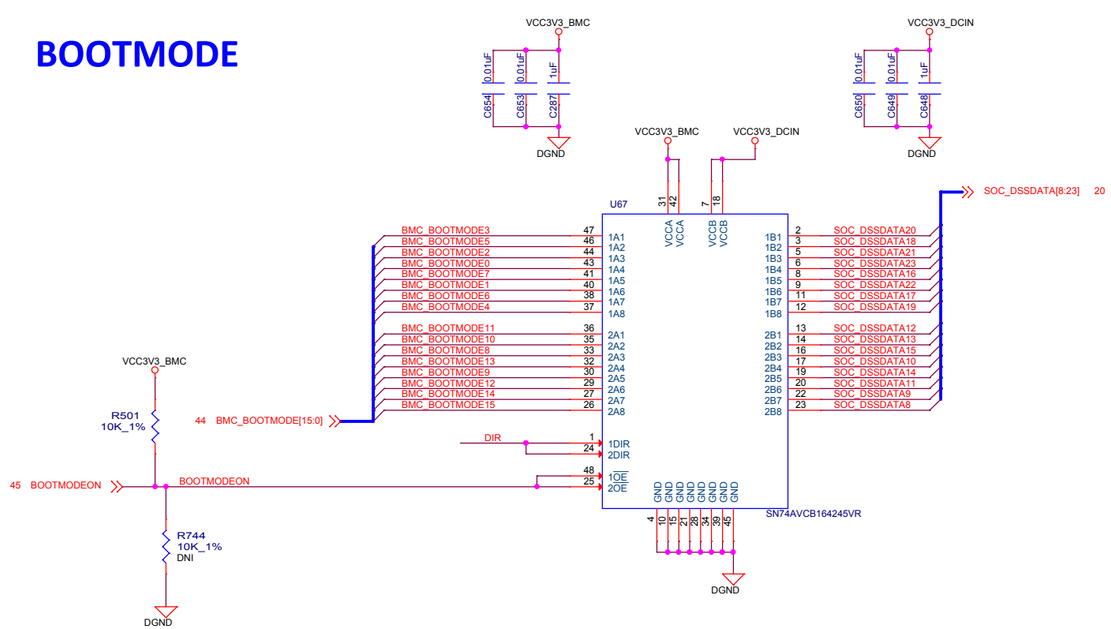






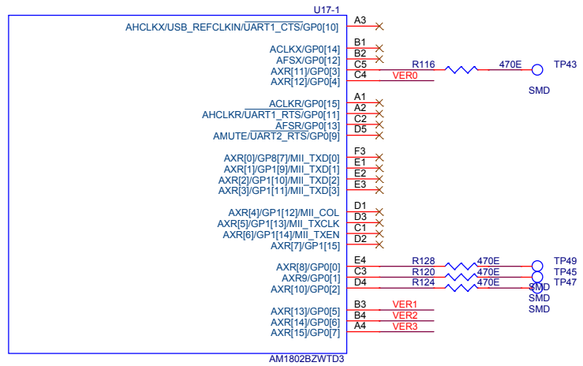


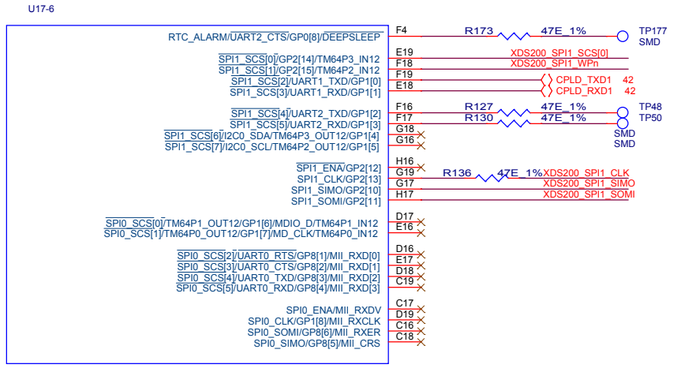
BOOTMODE

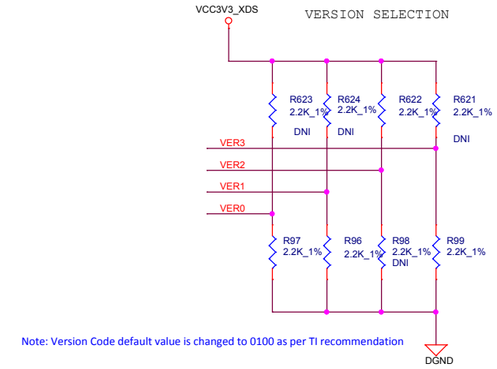


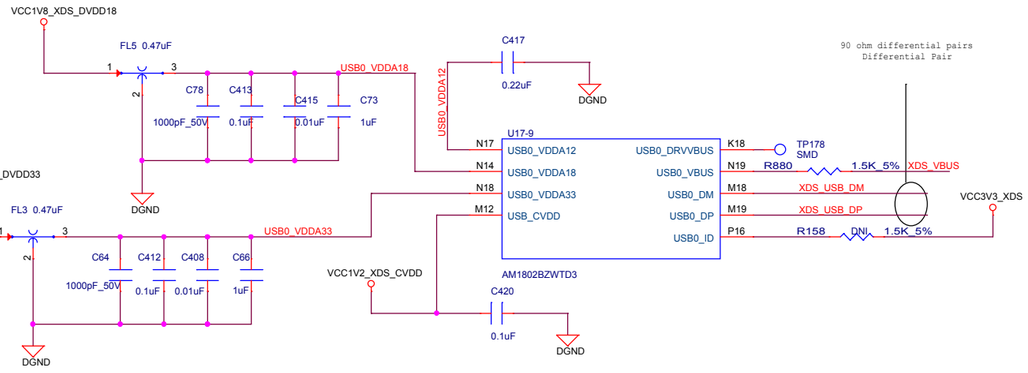
Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	EMU & MIPI60 CONNECTOR
		Size C	Document Number MS_TI_K2GEVM_SCH_REVD — Rev D
		Date: Thursday, April 14, 2016	Sheet 37 of 50

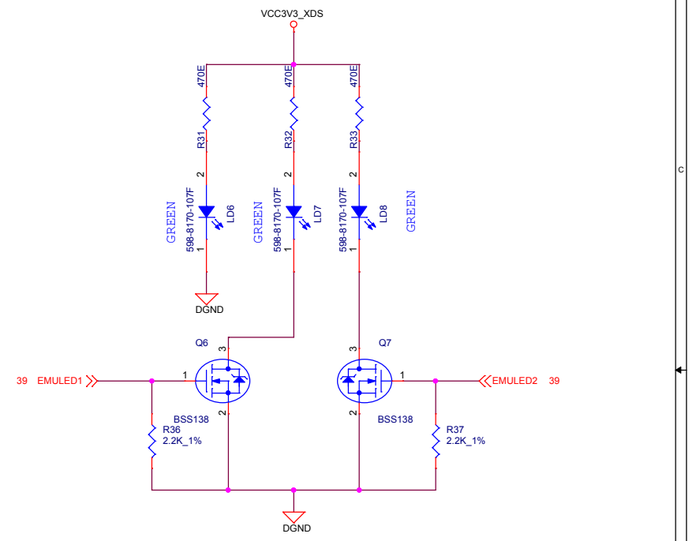
XDS200

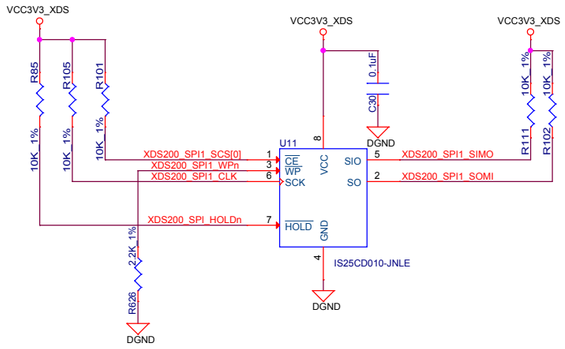




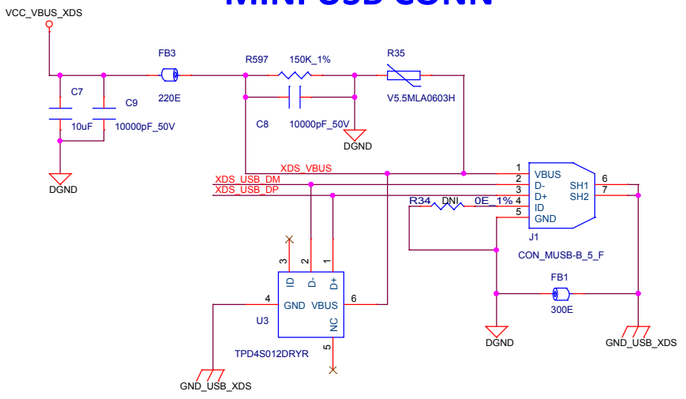






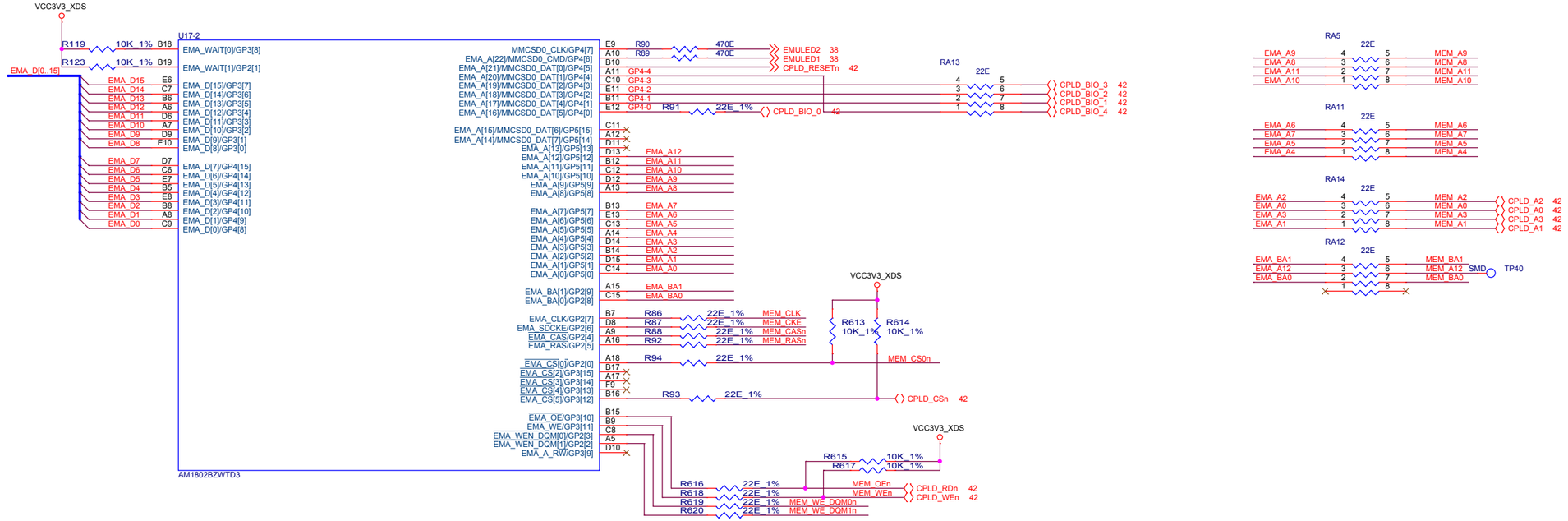


MINI USB CONN

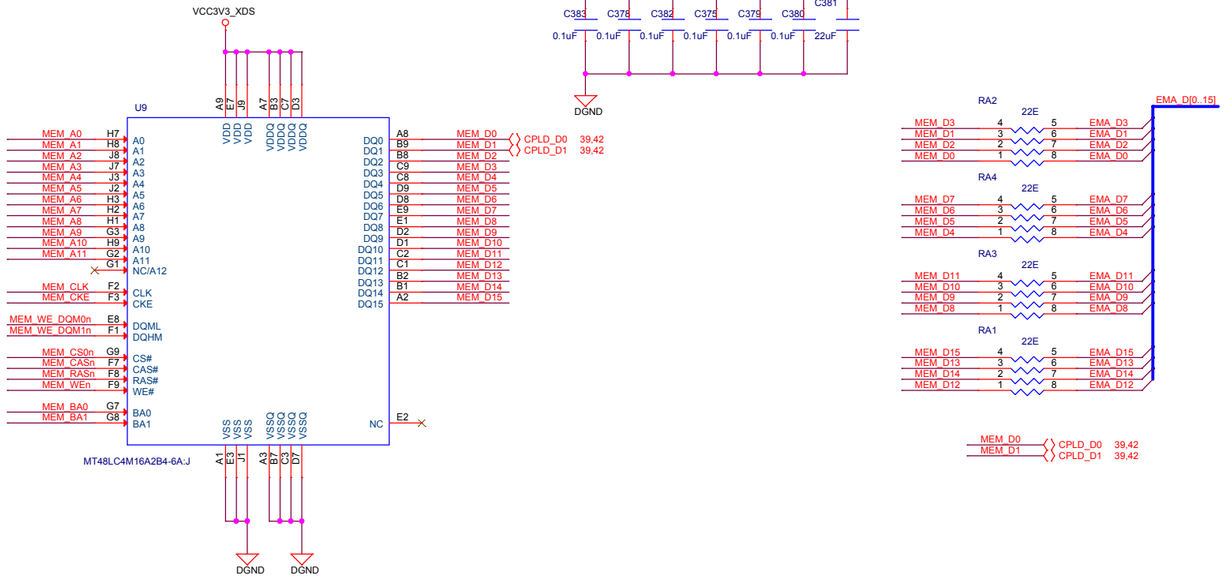


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	XDS200
		Size C	Document Number MS_TI_K2GEVM_SCH_REVD — Rev D
		Date: Wednesday, April 13, 2016	Sheet 38 of 50

XDS200

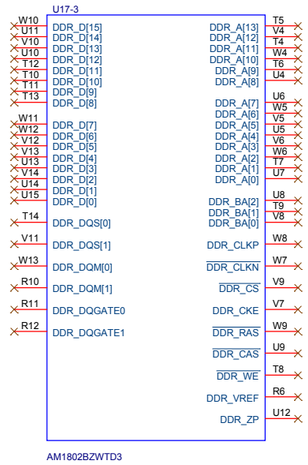


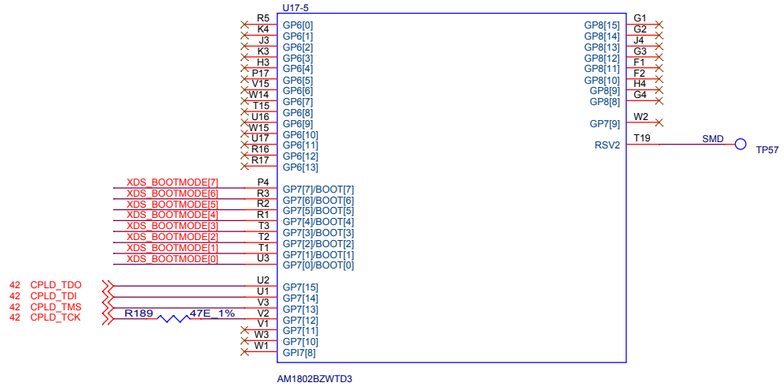
SDRAM



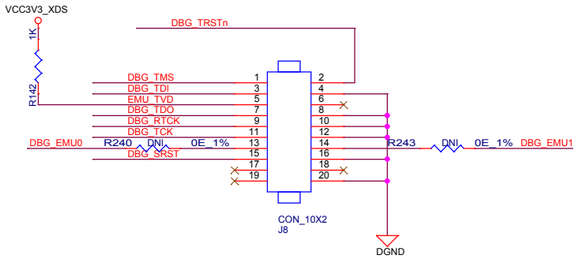
Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	JTAG_XDS200_2
		Size C	Document Number MS_TI_K2GEVM_SCH_REVD — Rev D
		Date: Wednesday, April 13, 2016	Sheet 39 of 50

XDS200

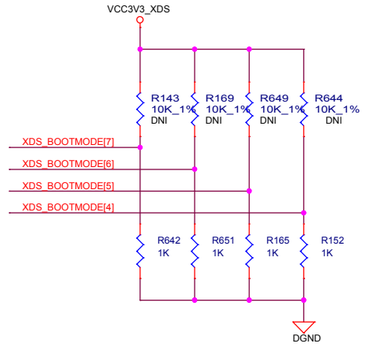


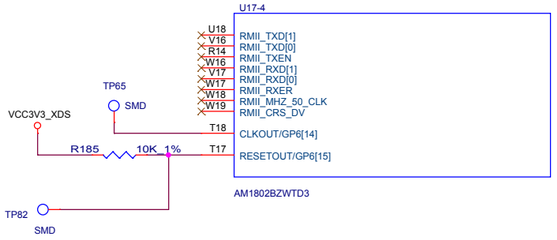


JTAG HEADER FOR AM1802

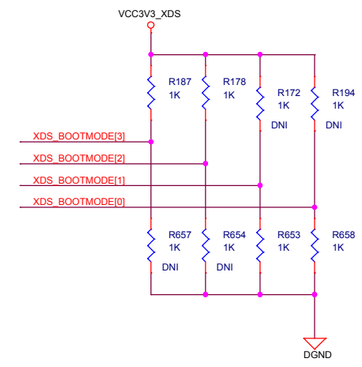


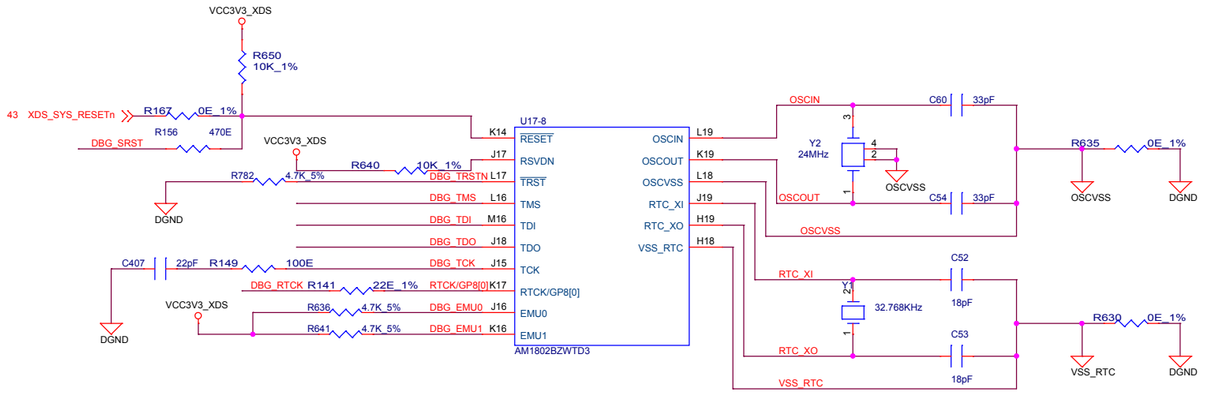
BOOTMODE: SPI1-FLASH ^B0001100





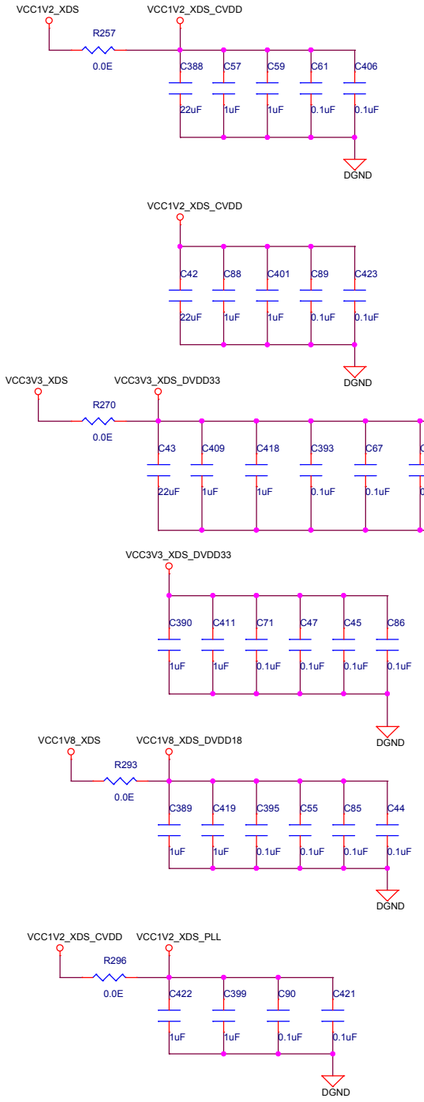
BOOT MODE



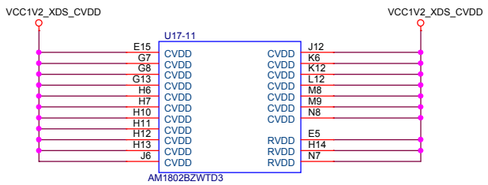


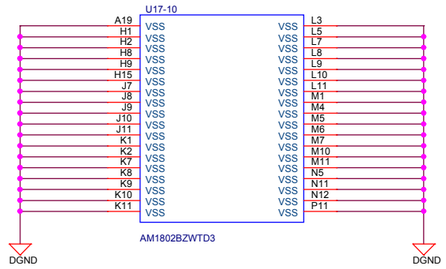
Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	JTAG_XDS200_3
		Size C	Document Number MS_TI_K2GEVM_SCH_REVD — Rev D
		Date: Wednesday, April 13, 2016	Sheet 40 of 50

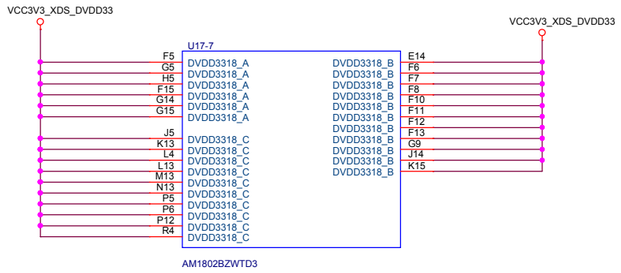
XDS200 DECAPS

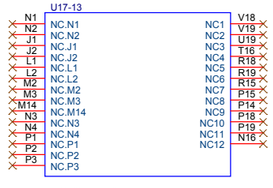


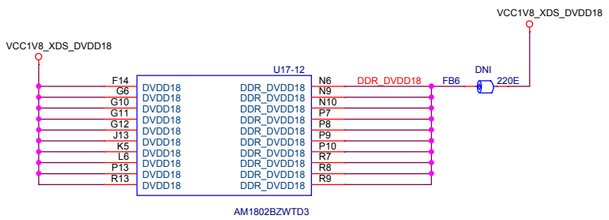
XDS200



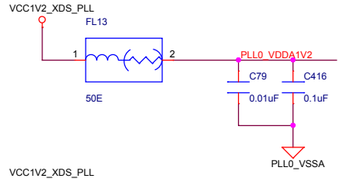


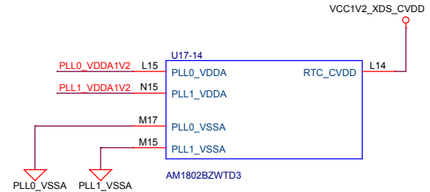


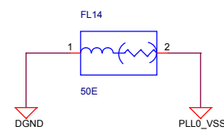


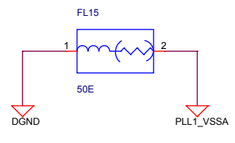


DDR PHY DOES NOT REQUIRE POWER IF NOT USED, PER DATA SHEET, BUT NOT A TYPICAL USE CASE.



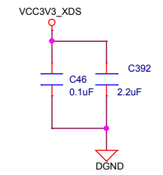


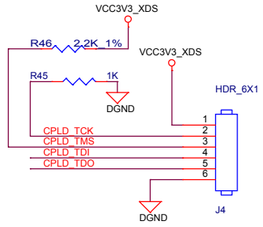




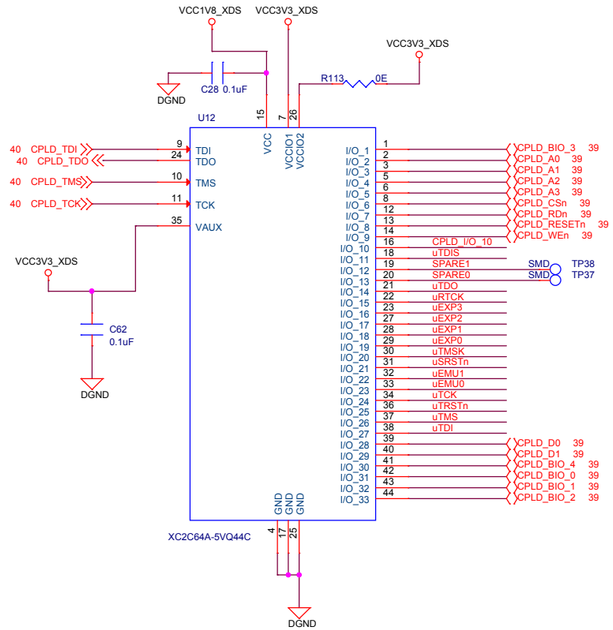
Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: JTAG_XDS200_4
		Size: C — Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Wednesday, April 13, 2016 — Sheet 41 of 50

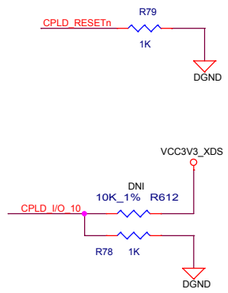
XDS200 CPLD

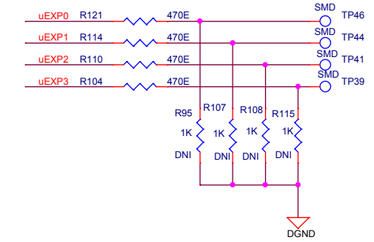


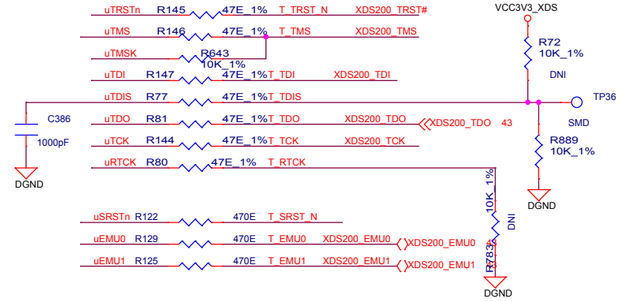


JTAG HEADER FOR CPLD

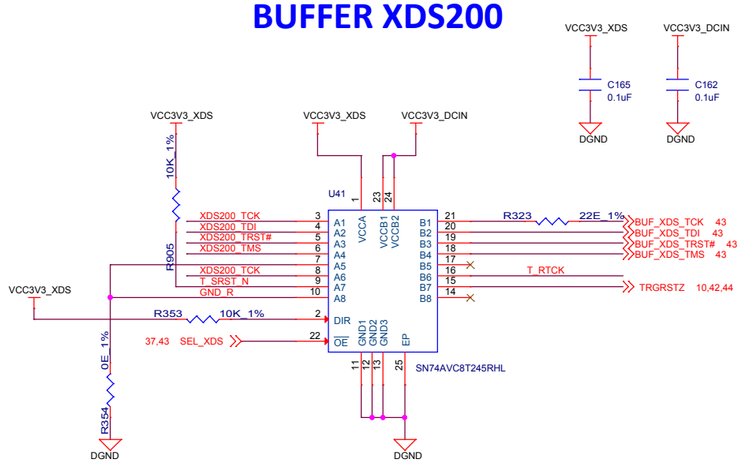




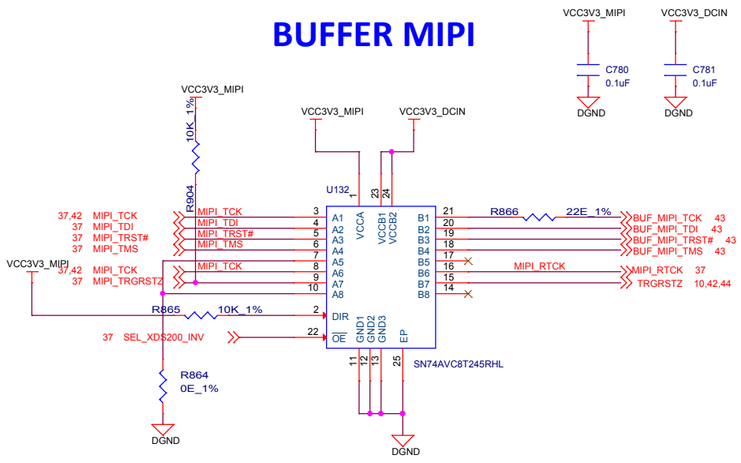




BUFFER XDS200

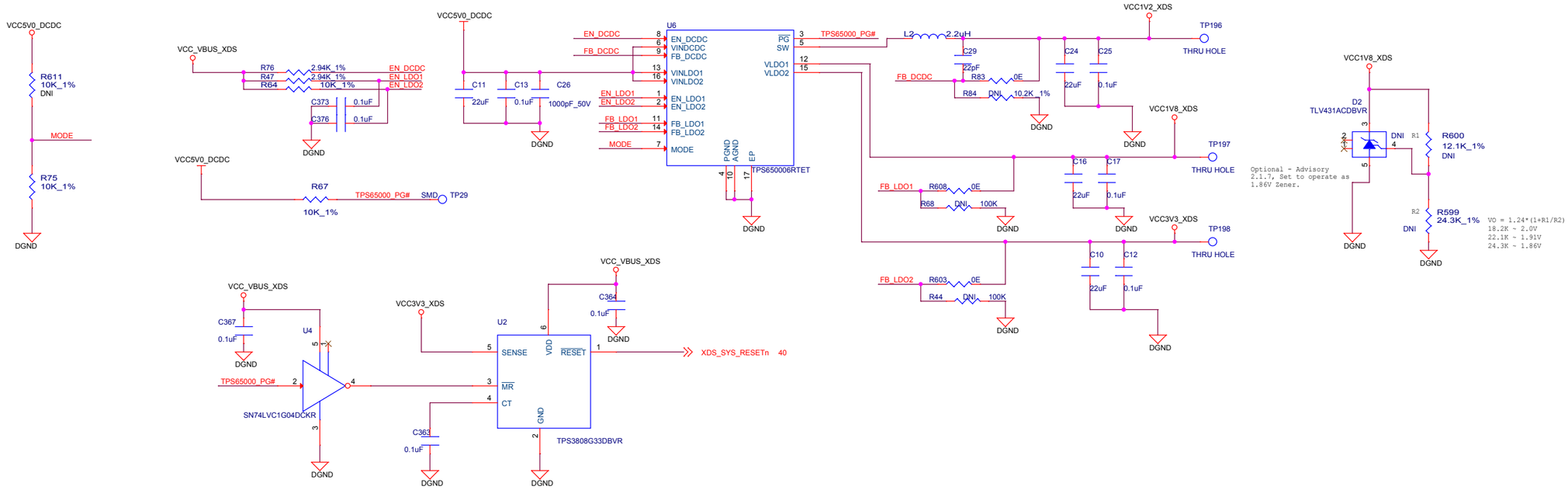


BUFFER MIPI

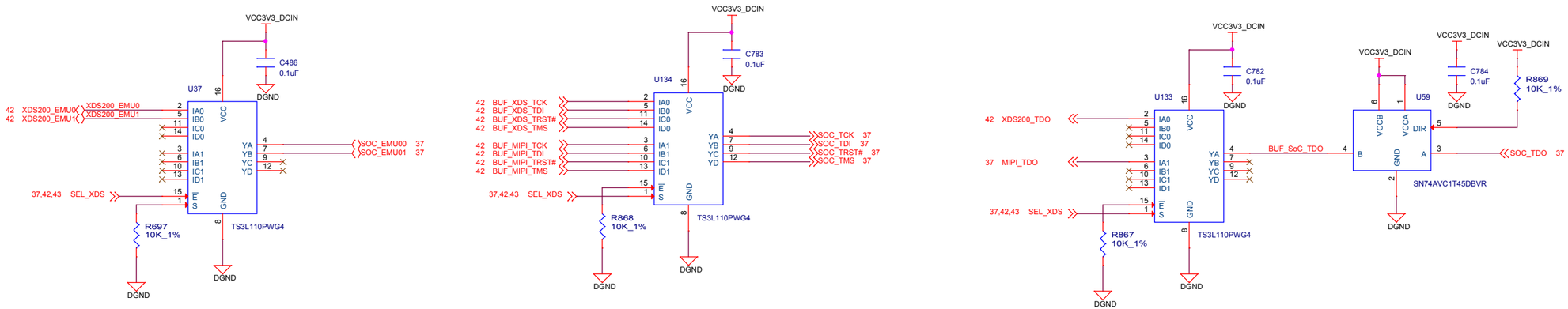


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	JTAG_XDS200_CPLD
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD
			Rev: D
		Date: Wednesday, April 13, 2016	Sheet 42 of 50

XDS200 POWER

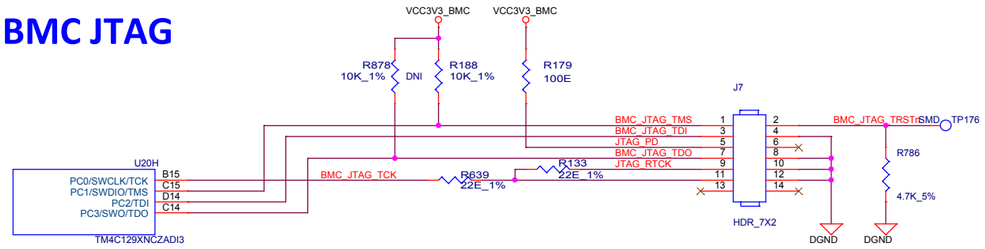


JTAG FET SWITCH

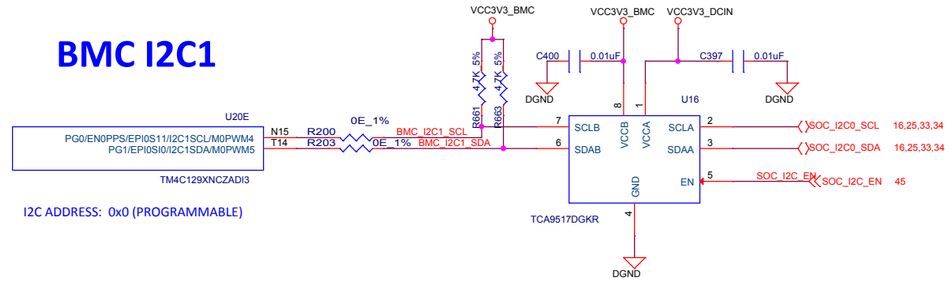


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	XDS200 POWER
		Size C	Document Number MS_TI_K2GEVM_SCH_REVD — Rev D
		Date: Wednesday, April 13, 2016	Sheet 43 of 50

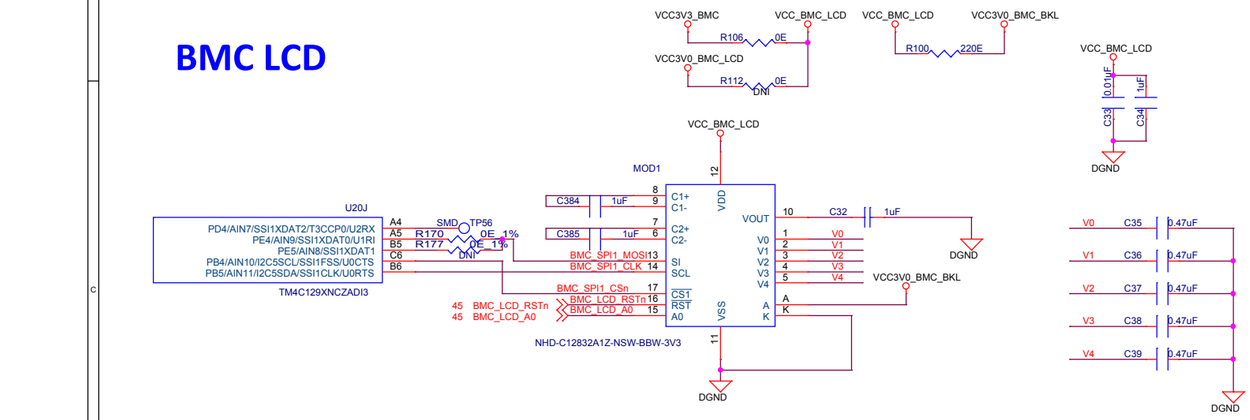
BMC JTAG



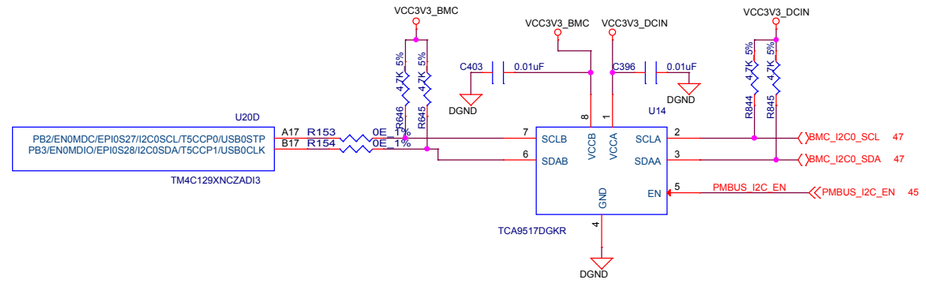
BMC I2C1



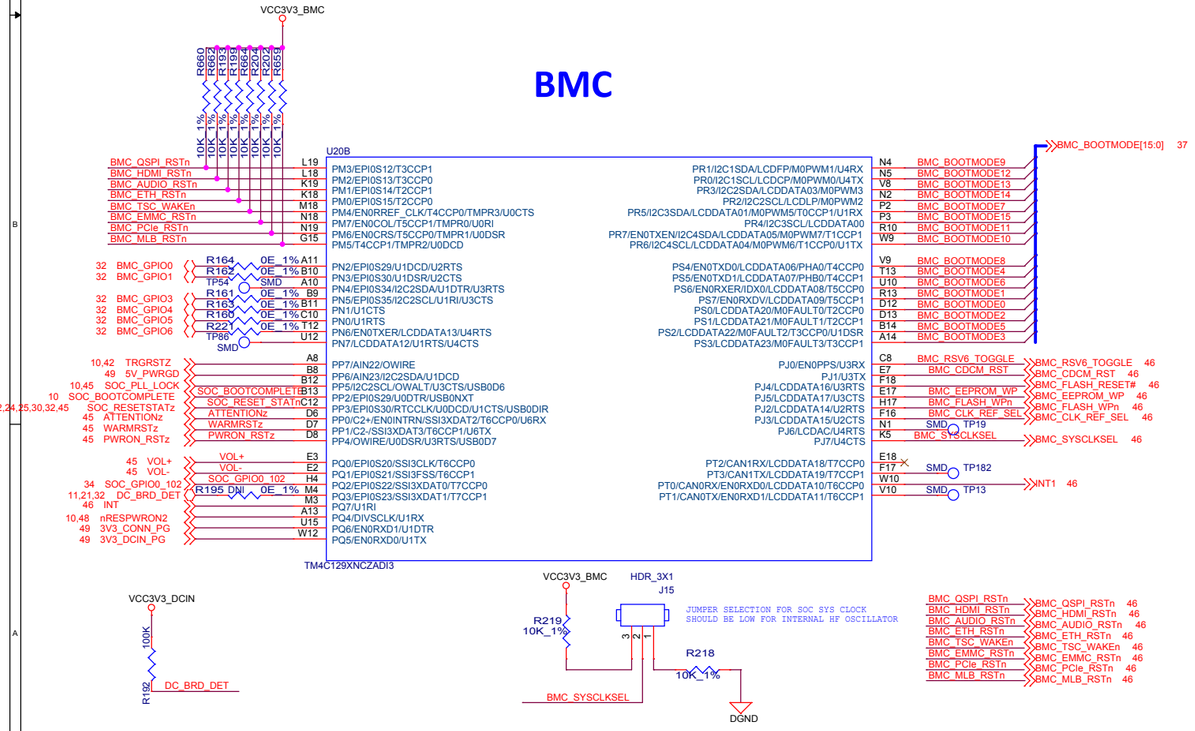
BMC LCD



BMC I2C0

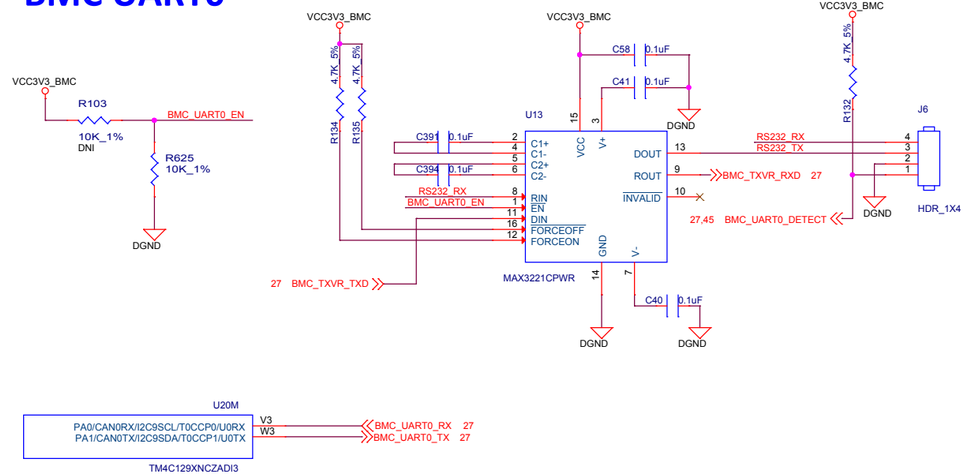


BMC



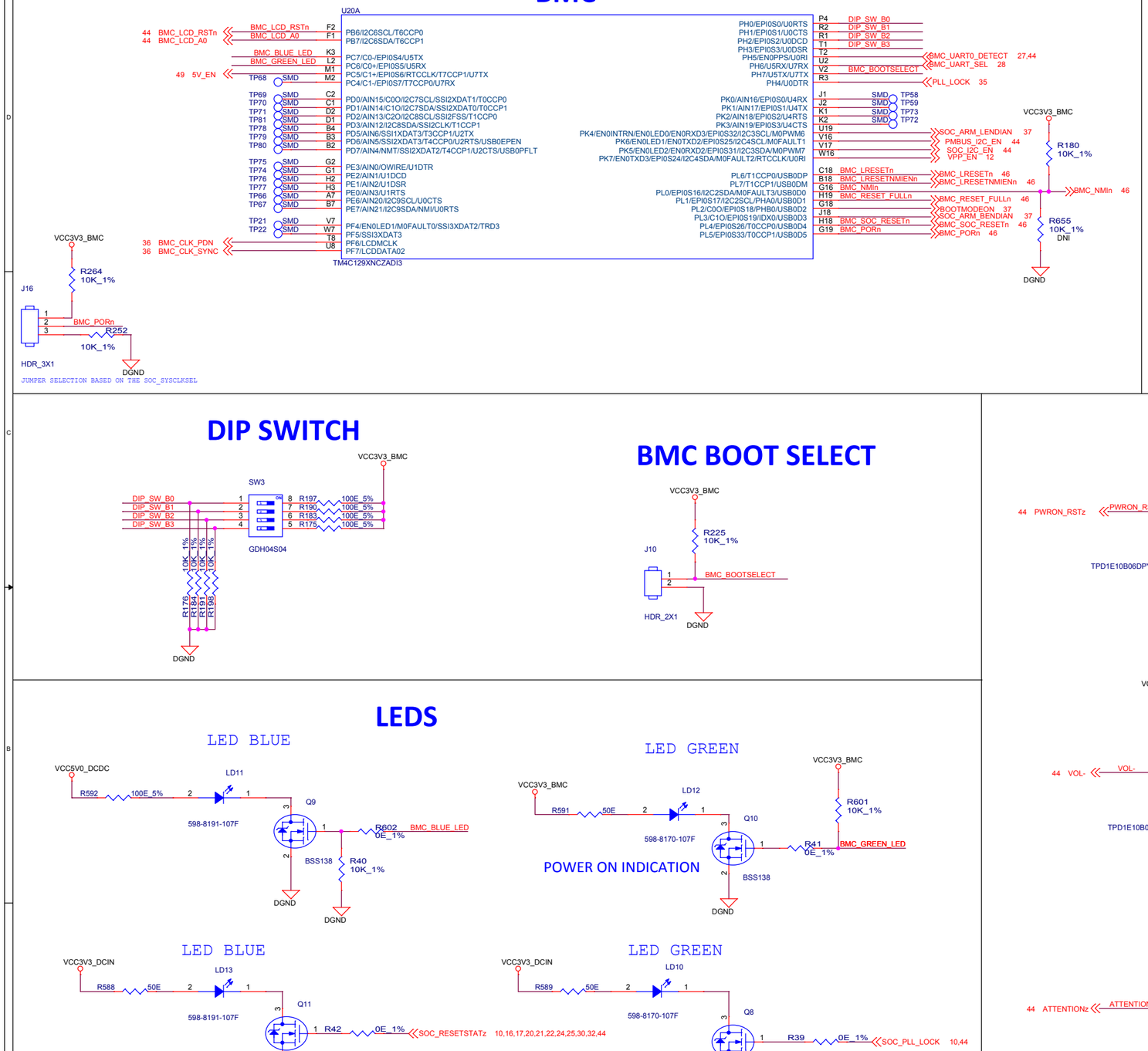
BMC TEST POINTS

BMC UART0

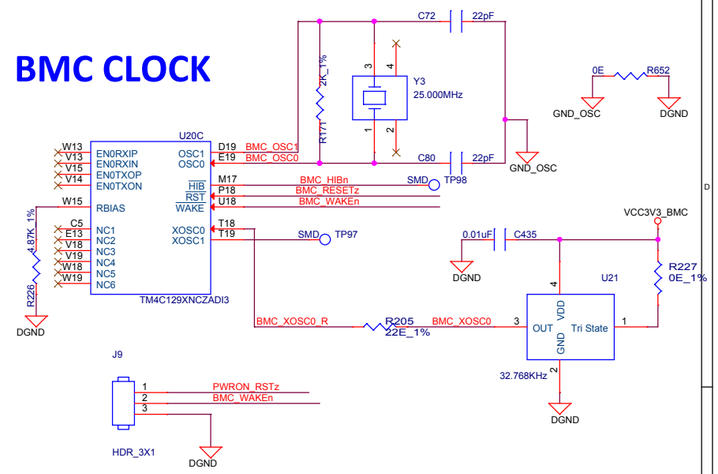


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	BOARD MANAGEMENT CONTROL_1
		Size C	Document Number MS_TI_K2GEVM_SCH_REVD — Rev D
		Date: Wednesday, April 13, 2016	Sheet 44 of 50

BMC



BMC CLOCK

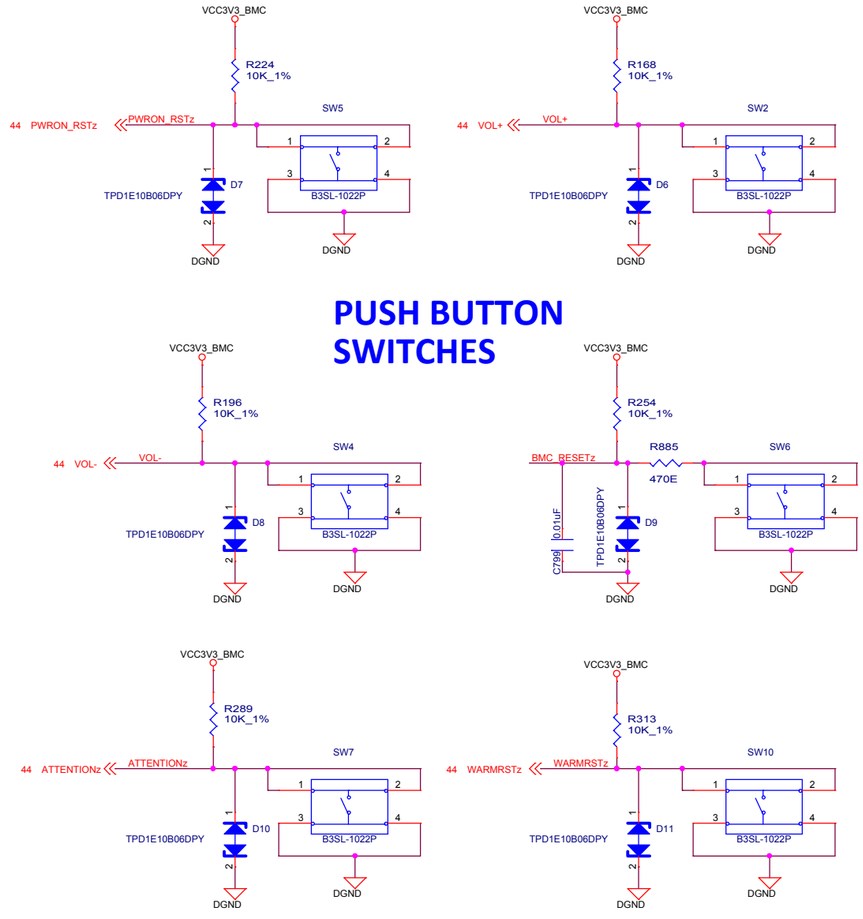


DIP SWITCH

BMC BOOT SELECT

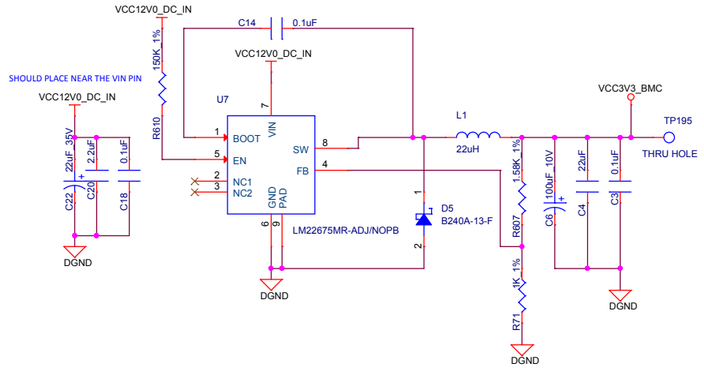
LEDS

PUSH BUTTON SWITCHES

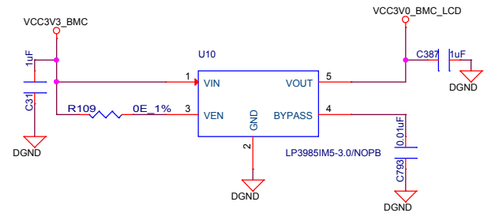


Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: BOARD MANAGEMENT CONTROL_2
		Size: C — Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Wednesday, April 13, 2016 — Sheet 45 of 50

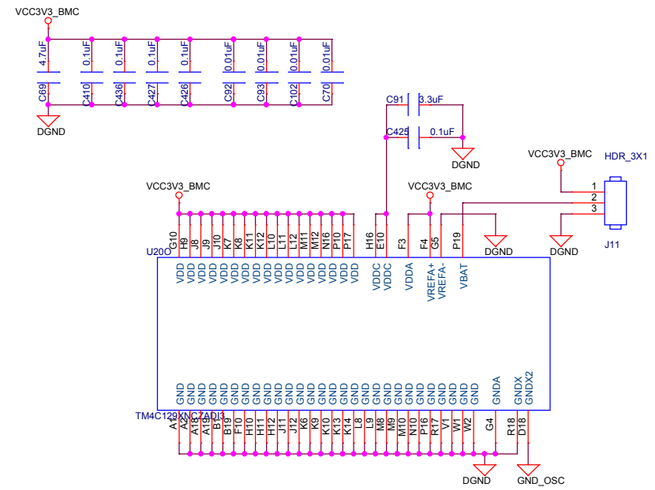
BMC 3.3V GENERATOR



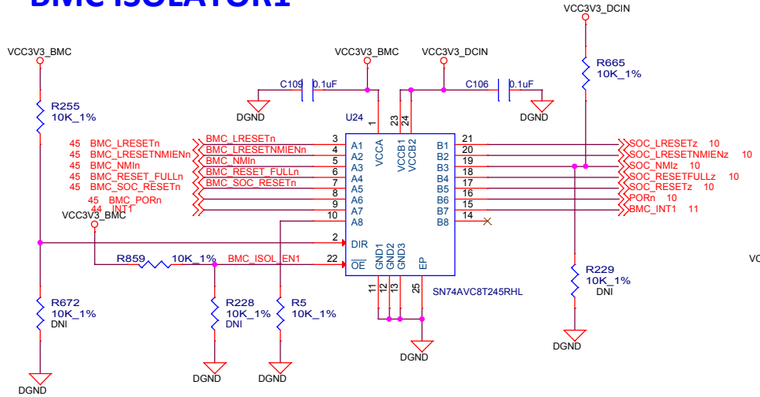
BMC LCD 3V GENERATOR



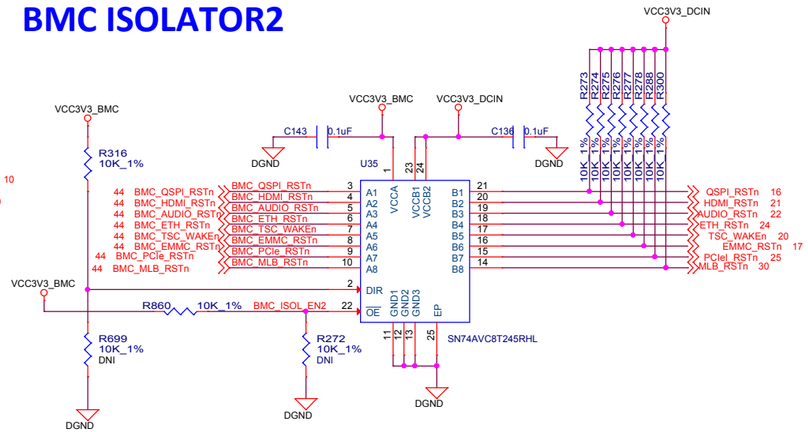
BMC POWER



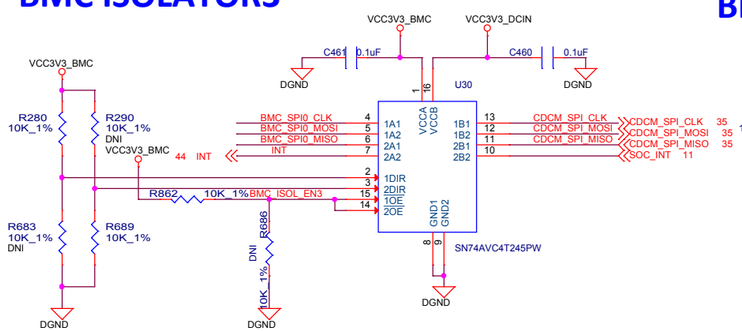
BMC ISOLATOR1



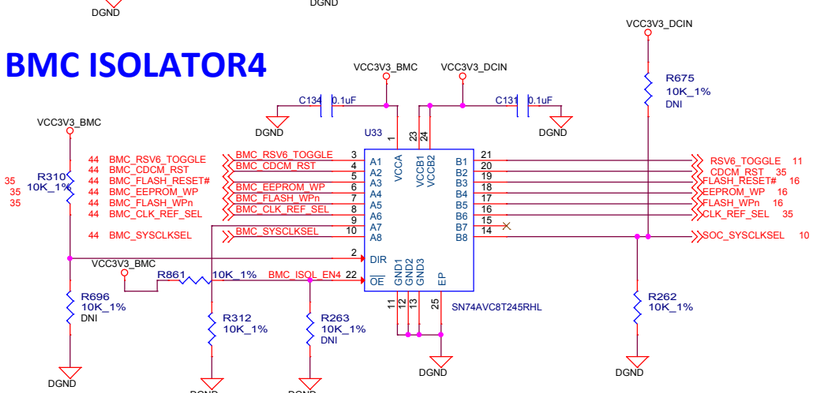
BMC ISOLATOR2



BMC ISOLATOR3

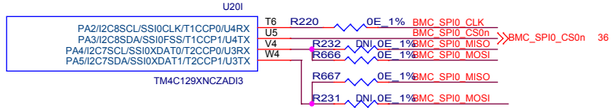


BMC ISOLATOR4

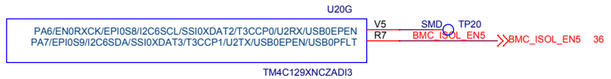


U20N

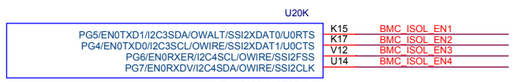
U20I



U20G



U20K



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	BOARD MANAGEMENT CONTROL_3
		Size: C	Document Number: MS_TI_K2GEVM_SCH_REVD
		Rev	D
		Date:	Wednesday, April 13, 2016
		Sheet	46 of 50

PMIC POWER SECTION 1

TPS659118
BGA

U32-1

VBACKUP, VCC7, VCC5, VCC4, VCC3, VCC6, VCCS, V5IN, GND_CTRL_a, GND_CTRL_b

DCDC CTRL
External FET range 0.95V-6000mA

TRAN, EN, PGOOD (PMIC_PGOOD), DRVH, VBST, SW, DRVL, VOUT, VFB, TRIP

SMPS

VDD1
Output range 0.95V-1100mA

VCC1_a, VCC1_b, VCC1_c, SW1_a, SW1_b, SW1_c, GND1_a, GND1_b, GND1_c, VFB1

VDD2
Output range 1.35V-1500mA

VCC2_a, VCC2_b, SW2_a, SW2_b, GND2_a, GND2_b, VFB2

VIO
3.3V-1100mA

VCCIO_a, VCCIO_b, VDDIO, VFBIO, SWIO_a, SWIO_b, GNDIO_a, GNDIO_b

GND

DGND_a, DGND_b, DGND_c, AGND_a, AGND_b, AGND_c, AGND_d, AGND_e, AGND_f, AGND_g, AGND_h, AGND_i, AGND_j, AGND_k, AGND2_a, AGND2_b

LDO1_1V8, LDO2_1V8, LDO3_1V8, LDO4_1V8, LDO5_3V3, LDO6_3V3, LDO7_3V3, LDO8_3V3

TP84, TP122, TP118, TP103, TP100, TP110, TP120, TP121, TP119, TP91, TP102, TP85, TP113 (THRU HOLE), TP92, TP90

U22 CSD87330Q3D

L4 2.7uH, L5 2.2uH, L6 2.2uH, L7 2.2uH

C101 330uF_6.3V

R692 0E_1%, R671 0E_1%, R670 0E_1%, R244 39K_1%, C451 330pF, C452 0.1uF

FB15 120E

J17 HDR_3X1

VCC5V0_DCDC, VCC3V3_DCIN, VBACKUP, VRTC, VCC12V0_DC_IN, PMIC_VDD_CTRL, PMIC_VDD1, PMIC_VDD2, PMIC_VIO, CVDD

DGND, AGND, GND_DC-DC, GND_VDD1, GND_VDD2, GND_VIO

INA DEVICES

U42, U43, U44, U46, U48 — INA226AIDGSR

J39, J40, J41, J42, J43 HDR_2X1

J18 HDR_5X1

PMBUS_SDA, PMBUS_SCL, INA_ALERT

R374 OE_1%, R370 OE_1%, R118 0E_1%, R117 0E_1%, R788 DNI 0E_1%, R789 DNI 0E_1%, R790 DNI 0E_1%, R791 DNI 0E_1%, R792 DNI 0E_1%

BMC_I2C0_SCL 44, BMC_I2C0_SDA 44

I2C ADDRESS: 0x40 : 3.3V

I2C ADDRESS: 0x41 : CVDD

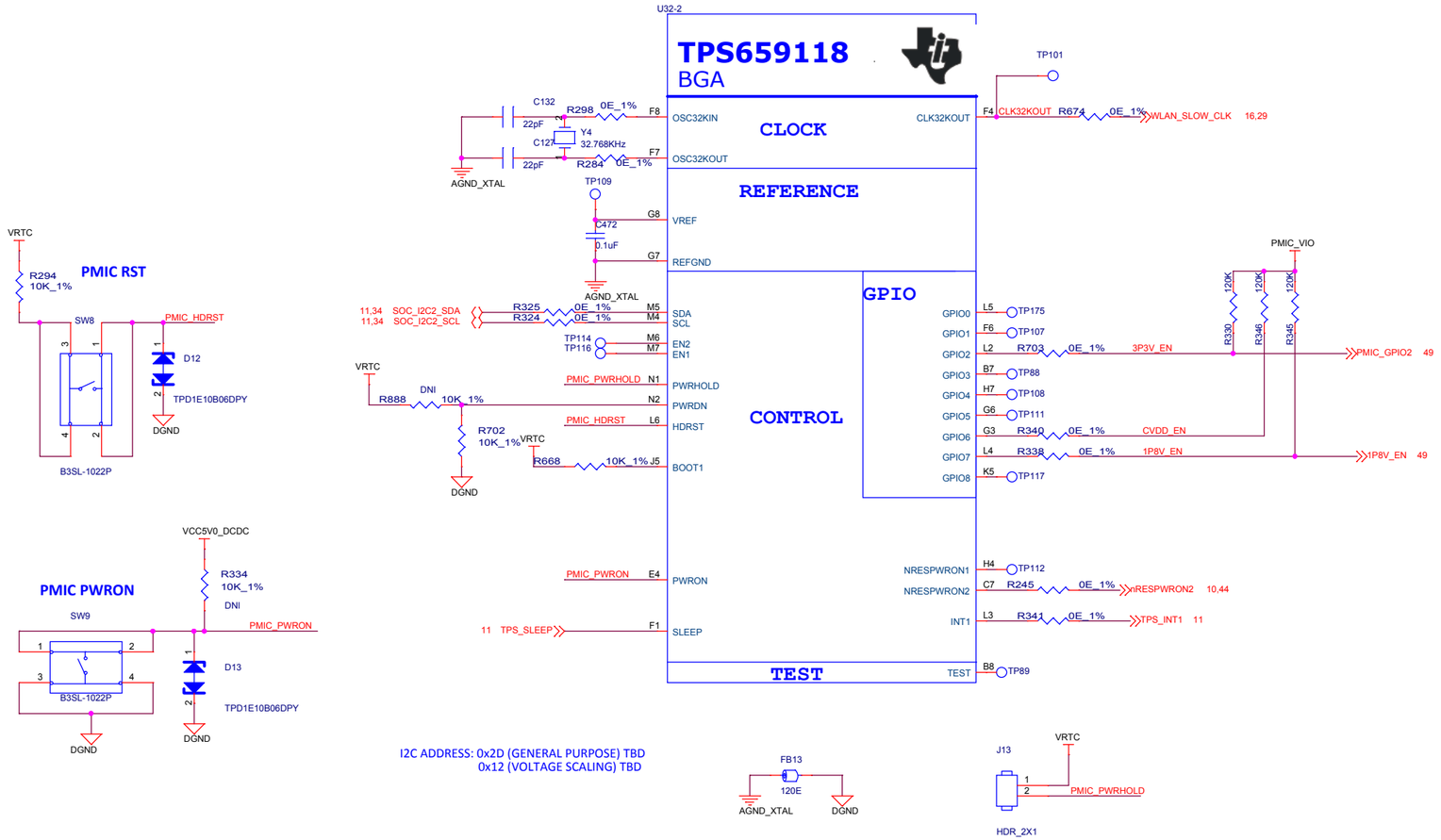
I2C ADDRESS: 0x42 : CVDD1

I2C ADDRESS: 0x43 : 1.8V

I2C ADDRESS: 0x44 : DVDD_DDR

Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title	PMIC POWER CIRCUIT 1
		Size C	Document Number MS_TI_K2GEVM_SCH_REVD — Rev D
		Date: Wednesday, April 13, 2016	Sheet 47 of 50

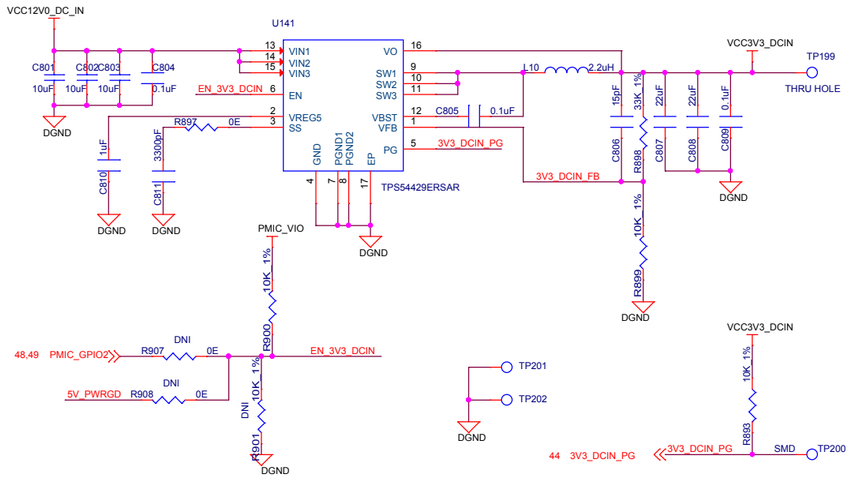
PMIC POWER SECTION 2



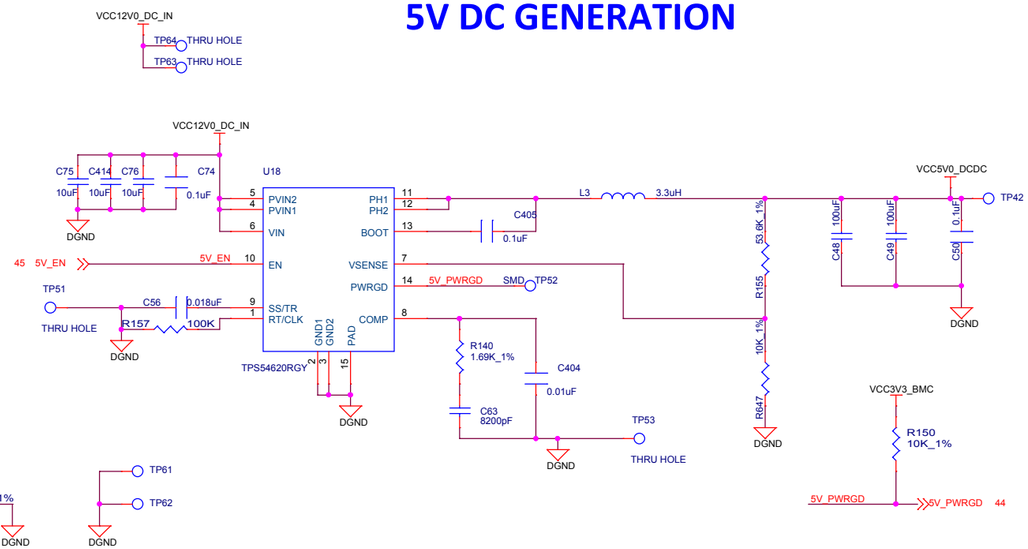
I2C ADDRESS: 0x2D (GENERAL PURPOSE) TBD
0x12 (VOLTAGE SCALING) TBD

Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: PMIC POWER CIRCUIT 2
		Size: C — Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Wednesday, April 13, 2016 — Sheet 48 of 50

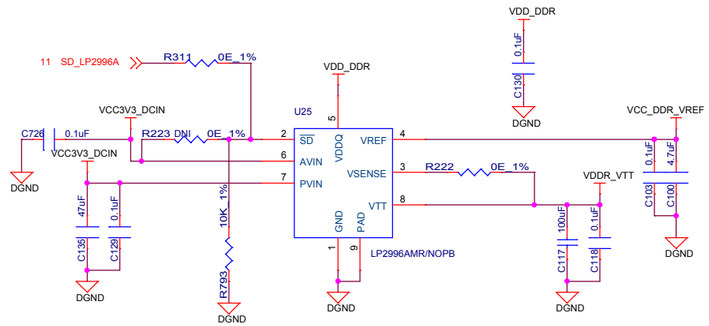
3.3V DC



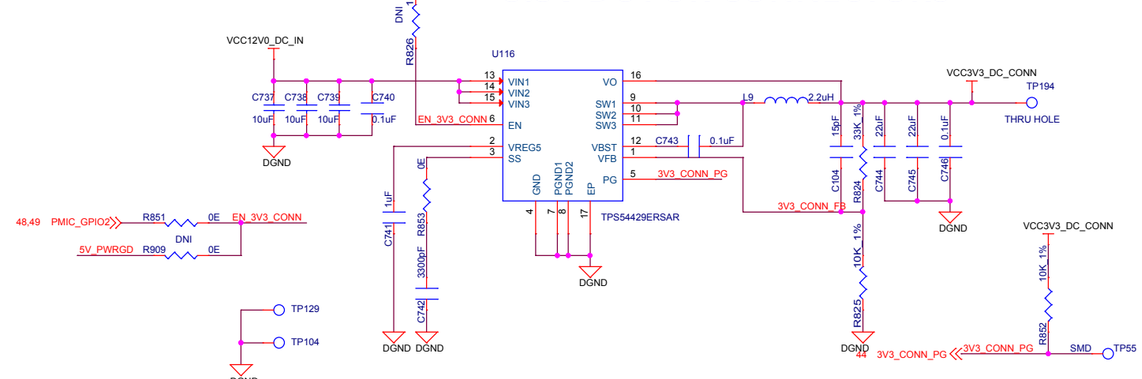
5V DC GENERATION



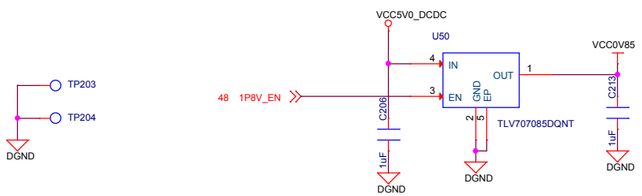
DDR VTT & VREF GENERATION



3.3V DC FOR CONNECTORS

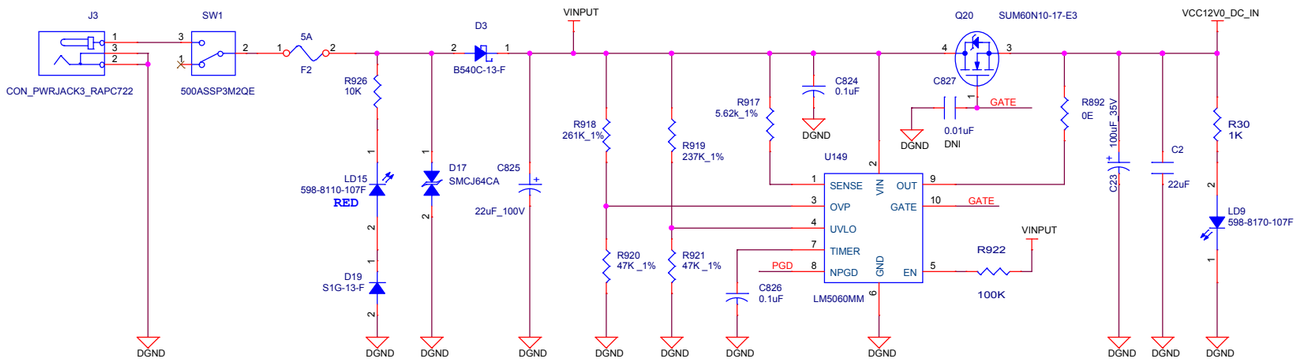


0.85V OPTIONAL LDO FOR PCIE & USB MODULES



Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: DDR3L POWER
		Size: C — Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Wednesday, April 13, 2016 — Sheet 49 of 50

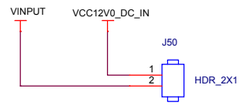
OVER VOLTAGE PROTECTION CIRCUIT



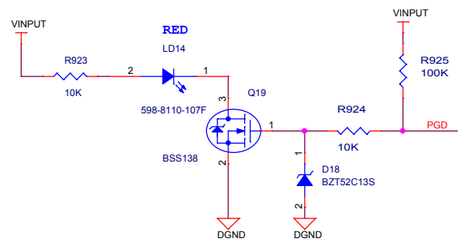
Note:-

Vinput nominal = 12V
I input max = 5A

Condition	LED Status(LD15)
Reverse Voltage	ON



Fault Indication



Condition	LED Status(LD14)
VINPUT between 11 to 13V & Current below 5A	OFF
VINPUT above 13V or below 11V & Current above 5A	ON

Note:-

When fault is indicated ,set to proper voltage and power cycle the board.

Project : K2G EVM	Designed for TI by Mistral Solutions Pvt Ltd	Title: OVER VOLTAGE PROTECTION
		Size: C — Document Number: MS_TI_K2GEVM_SCH_REVD — Rev: D
		Date: Wednesday, April 13, 2016 — Sheet 50 of 50

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