INTEGRATION
SOFTWARE
ELECTRONIC
ENGINEERING

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IGEPv2 - RC version (2011-March-21)

CONTENTS :

PAGE NO.	SCHEMATIC PAGE
1	COVER PAGE
2	POWER
3	OMAP3 1 OF 3
4	OMAP3 2 OF 3, JTAG, SWITCHES, LEDS, SVIDEO
5	OMAP3 3 OF 3
6	TWL4030 1 of 2, AUDIO JACKS, LED, 26MHZ, 32KHZ
7	TWL4030 2 of 2
8	USB HOST & OTG
9	SD/MMC, SERIAL DEBUG PORT, BB EXP., KEYB EXP.
10	DVI-D & LCD EXP.
11	ETHERNET
12	CAM + ADC
13	COMBO WIFI BLUETOOTH

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Wednesday, March 23, 2011

REV	MODIF.	DES.	DATE	VER.	DATE
A	INIT EDIT	AFG	22/05/09	MCT	21/03/11

01 - COVER
IGEPv2-RC
SCALE 1/1
REV. C
SHEET 1/13

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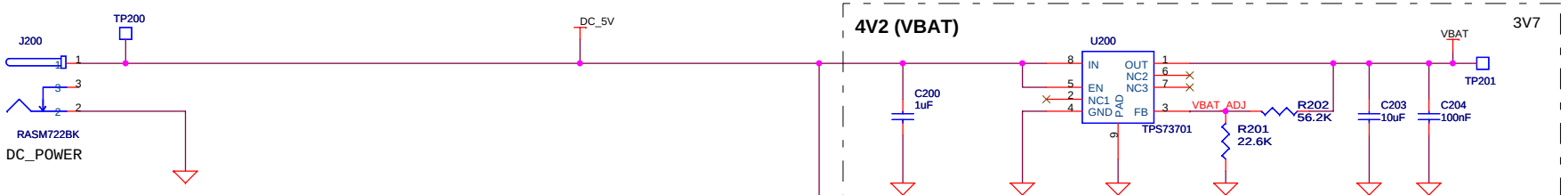
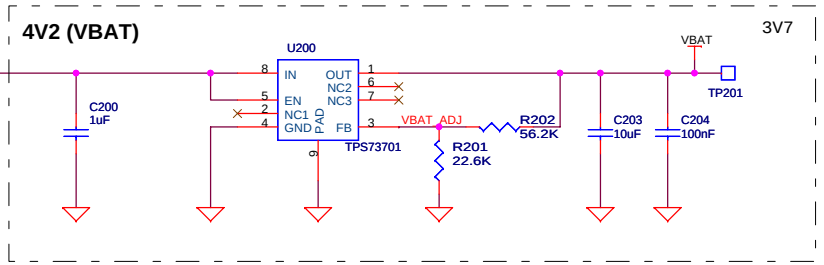
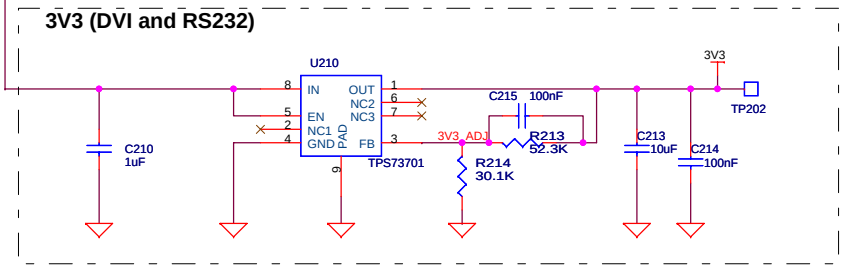
POWER SUPPLY 5V DC







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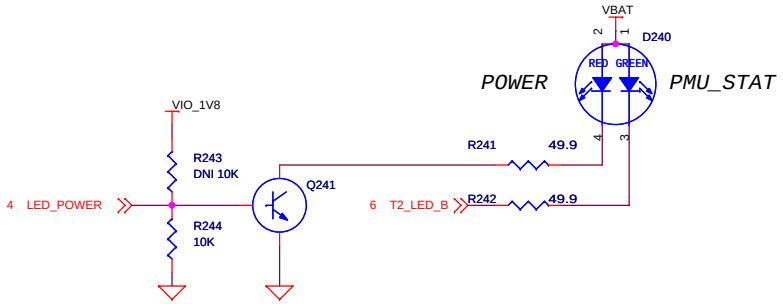
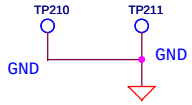
	R243	R244
IGEPv2 - RB version	10K	Empty
IGEPv2 - RC version	Empty	10K





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A	INIT EDIT	AFG	22/05/09	MCT	21/03/11

02 - POWER

IGEPv2-RC

SCALE 1/1

REV. C

SHEET 2/13

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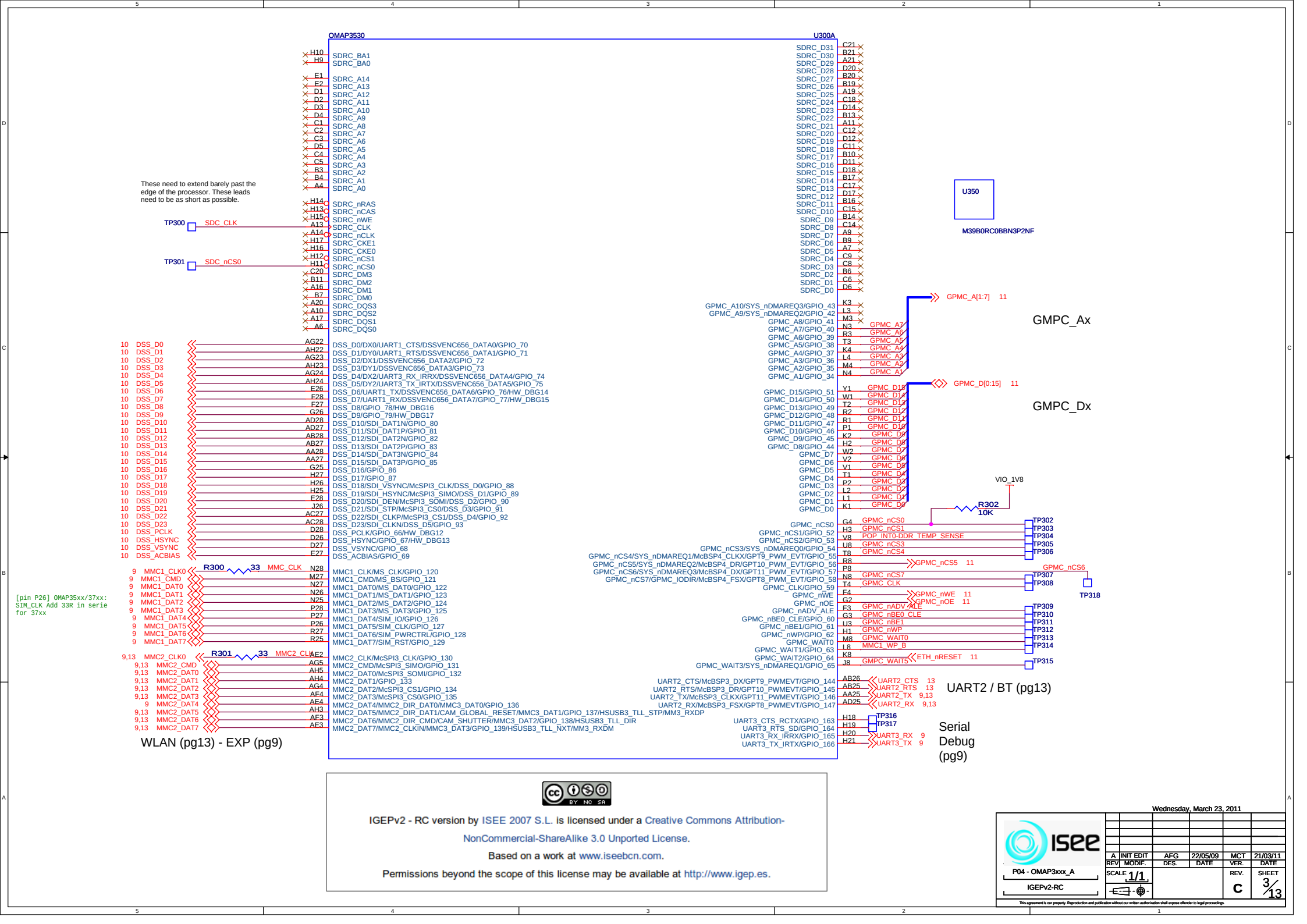

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A	INIT EDIT	AFG	22/05/09	MCT	21/03/11

P04 - OMAP3xxx_A

IGEPv2-RC

SCALE 1/1

REV. C

SHEET 3/13

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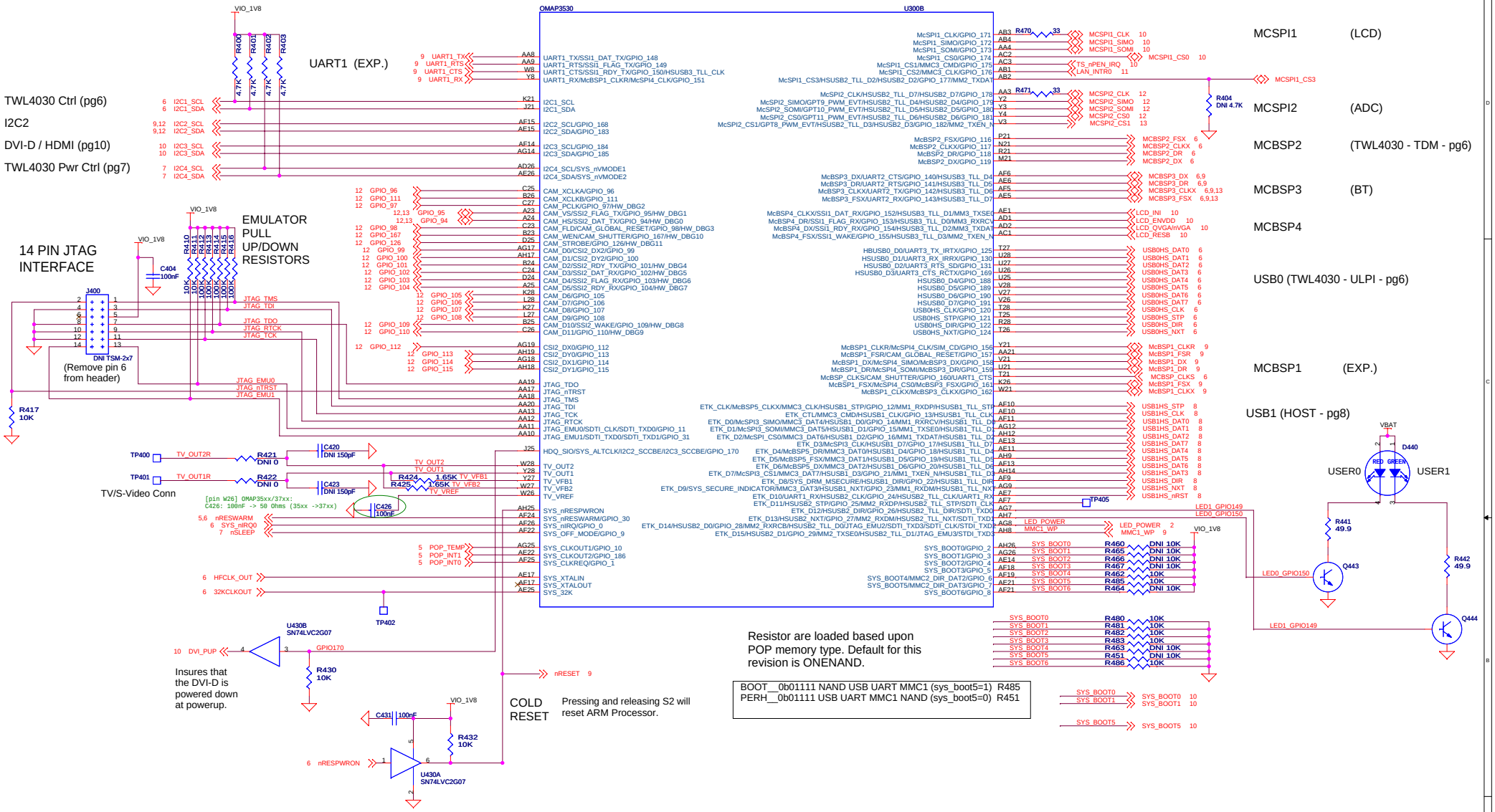

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P04 - OMAP3xxx_B
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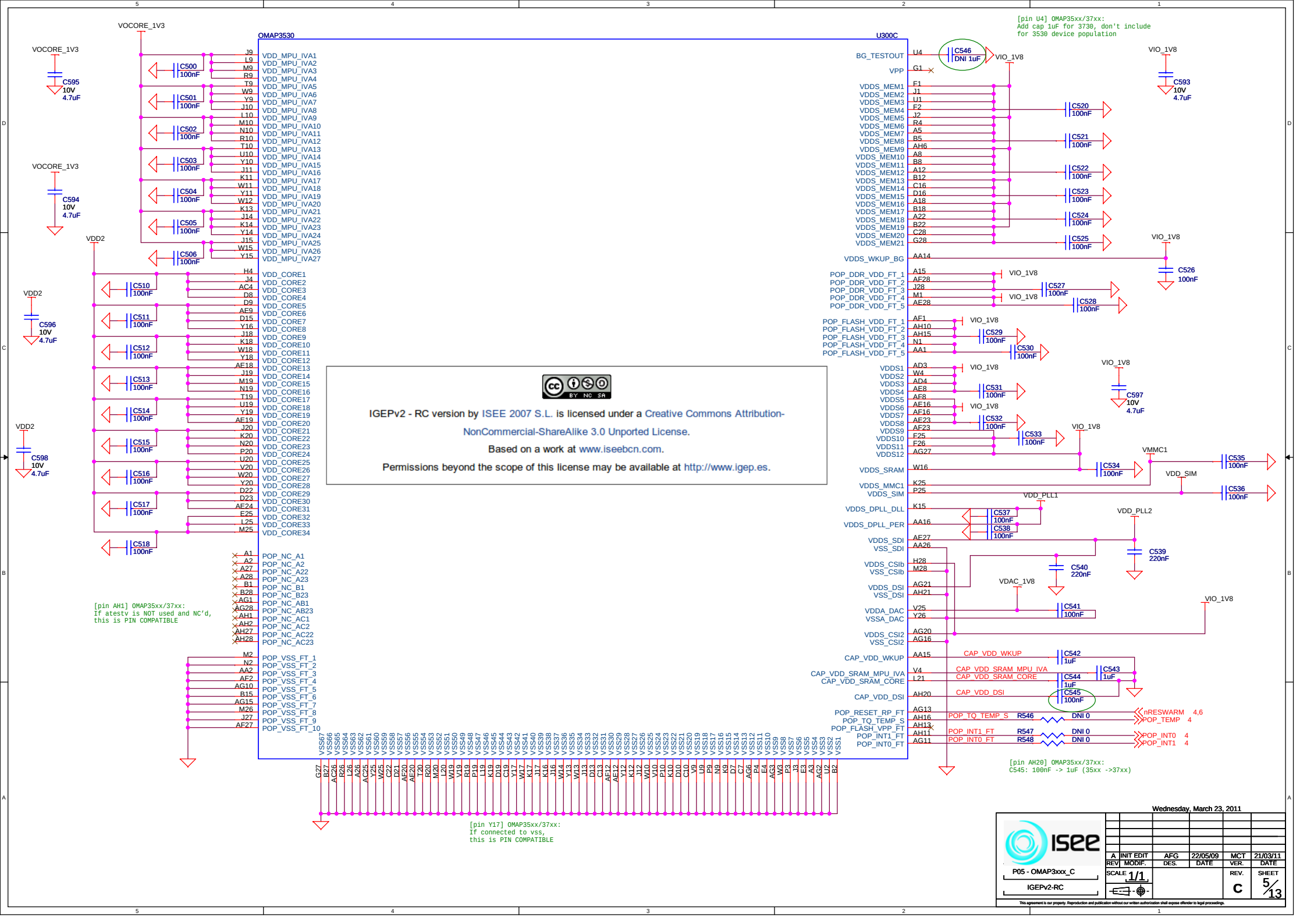
OMAP3530
U300C
VOCORE_1V3
VDD2
VIO_1V8
VDAC_1V8
VDD_PLL1
VDD_PLL2
VMMC1
VDD_SIM
[pin U4] OMAP35xx/37xx:
Add cap 1uF for 3730, don't include
for 3530 device population
[pin AH1] OMAP35xx/37xx:
If atestv is NOT used and NC'd,
this is PIN COMPATIBLE
[pin Y17] OMAP35xx/37xx:
If connected to vss,
this is PIN COMPATIBLE
[pin AH20] OMAP35xx/37xx:
C545: 100nF -> 1uF (35xx ->37xx)
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P05 - OMAP3xxx_C
IGEPv2-RC
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REV. C
SHEET 5/13
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TWL4030
Triton2
PART A

TPS65950
(TWL4030)

TPS65950 U600A

CLOCKS
HFCLKIN
HFCLKOUT
CLKEN
CLKEN2
CLKREQ
CLK256FS

ULPI
UCLK
STP/GPIO.9
DIR/GPIO.10
NXT/GPIO.11
DATA0/UART4.TXD
DATA1/UART4.RXD
DATA2/UART4.RTSI
DATA3/UART4.CTSO/GPIO.12
DATA4/GPIO.14
DATA5/GPIO.3
DATA6/GPIO.4
DATA7/GPIO.5

USB
VBUS
DP/UART3.RXD
DN/UART3.TXD
ID

Control
I2C.CNTL.SDA
I2C.CNTL.SCL
INT1
INT2
PWRON
nRESWARM
nRESPWRON
VREF
SYSEN
BOOT0
BOOT1
MSECURE

PCM VSP
PCM.VCK
PCM.VDR
PCM.VDX
PCM.VFS

PCM BT
BT.PCM.VDX/GPIO.17/DIG.MIC.CLK1
BT.PCM.VDR/GPIO.16/DIG.MIC.CLK0

TDM
I2S.CLK
I2S.SYNC
I2S.DIN
I2S.DOUT

TEST
JTAG.TCK/BERCLK
JTAG.TDI/BERDATA
TEST
TESTV2
TESTV1
TEST.RESET

32kHz
32KXOUT
32KXIN
32KCLKOUT

LED
LEDB/VIBRA.M
LEDA/VIBRA.P
LEDSYNC/GPIO.13
LEDGND

ADC
ADCIN0
ADCIN1
ADCIN2
START.ADC

Headset UART
UART1.TXD
UART1.RXD/GPIO.8

MCPC
RTSO/CLK64K/BERCLK/ADCIN5
CTSI/BERDATA/ADCIN3
TXAF/ADCIN4
RXAF/ADCIN6
MANU

Voiceband / stereo codec

HandFree
IHF.LEFT.P
IHF.LEFT.M
IHF.RIGHT.P
IHF.RIGHT.M

Earpeace
EAR.P
EAR.M

Headset
HSOL
PreDriv.LEFT/VMID
HSOR
PreDriv.RIGHT/ADCIN7
VHSMIC
HSMIC.P
HSMIC.M

ANA_MIC
MICBIAS1/VMIC1
MIC.MAIN.P
MIC.MAIN.M
MICBIAS2/VMIC2
MIC.SUB.P/DIG.MIC.0
MIC.SUB.M/DIG.MIC1

AUX Input
AUXL
AUXR

GPIO
GPIO.0/CD1/JTAG.TDO
GPIO.1/CD2/JTAG.TMS
GPIO2/T1
GPIO.6/CLKOK/PWM0/T3
GPIO.7/VIBRA.SYNC/PWM1/T4
GPIO.15/T2
RFID.EN

Keypad
KPD.R0
KPD.R1
KPD.R2
KPD.R3
KPD.R4
KPD.R5
KPD.R6
KPD.R7
KPD.C0
KPD.C1
KPD.C2
KPD.C3
KPD.C4
KPD.C5
KPD.C6
KPD.C7

CLK_26MHz

AUDIO_OUT

AUDIO_IN

(Note: TP654 NO layout space pin N14)

Wednesday, March 23, 2011

REV	MODIF.	DES.	DATE	VER.	DATE
A	INIT EDIT	AFG	22/05/09	MCT	21/03/11

P06 - TPS65950_A
IGEPv2-RC
SCALE 1/1
REV. C
SHEET 6/13

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TWL4030
Triton2

Part B
Power

TPS65950
(TWL4030)

Domain	Type	Voltage	Current
External			
VDD1	SMPS	0.6V to 1.45V	1100mA
VDD2	SMPS	0.6V to 1.45V/1.5V	600mA
VIO	SMPS	1.8V /1.85V	600mA
VBUS	CP	4.8V	100mA
VAUX1	LDO	2.5V/2.8V/3.0V	200mA
VAUX2	LDO	1.0V/1.2V/1.5V/1.8V/2.5V/2.8V	100mA
VAUX3	LDO	1.5V/1.8V/2.5V/2.8V	200mA
VAUX4	LDO	0.7V/1.0V/1.2V/1.5V/1.8V/2.5V/2.8V	100mA
VMMC1	LDO	1.85V/2.85V/3.0V/3.15V	220mA
VMMC2	LDO	1.85V/2.6V/2.85V/3.0V/3.15V	100mA
VMIC1	LDO	1.8V	10mA
VMIC2	LDO	1.8V	10mA
VSIM	LDO	1.8V/2.8V/3.0V	50mA
VDAC	LDO	1.2V/1.3V/1.8V	65mA
VPLL1	LDO	1.0V/1.2V/1.3V/1.8V	40mA
VPLL2	LDO	0.7V/1.0V/1.2V/1.3V/1.8V	60mA
Internal			
VUSB	LDO	3.1V	15mA
VUSB_1P5	LDO	1.5V	30mA
VUSB_1P8	LDO	1.8V	30mA
VINTDIG	LDO	1.5V	50mA
VINANA1	LDO	1.5V	50mA
VINANA2	LDO	2.5V/2.75V	250mA
VRTC	LDO	1.5V	

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A	INIT EDIT	AFG	22/05/09	MCT	21/03/11

P07 - TPS65950_B
IGEPv2-RC
SCALE 1/1
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SHEET 7/13

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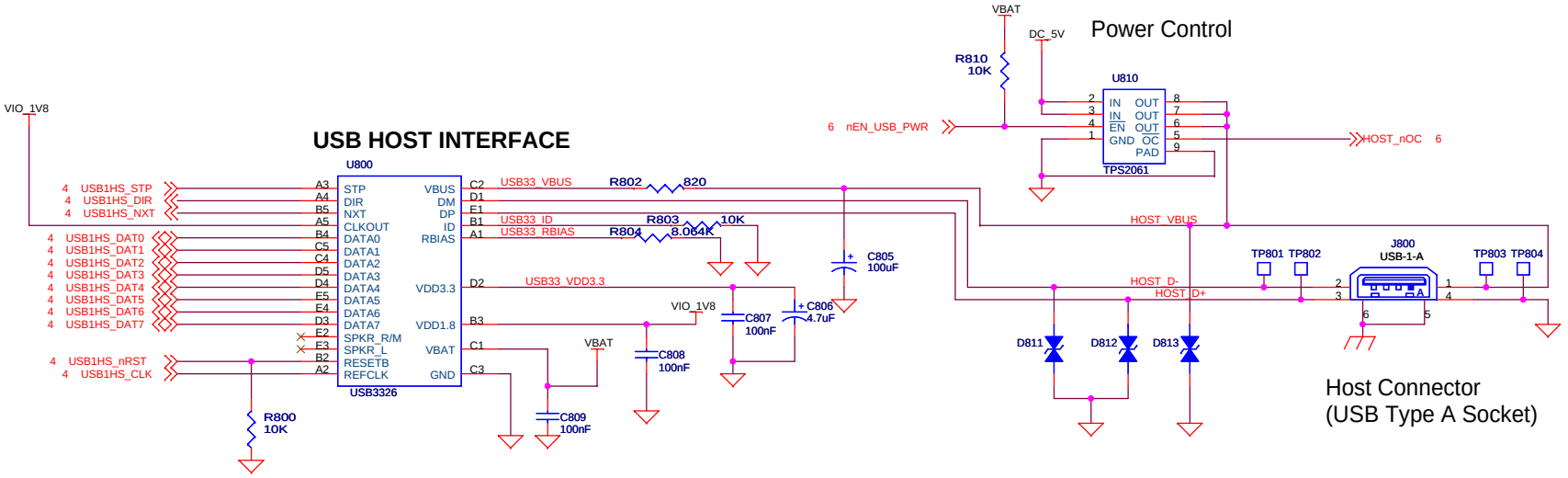

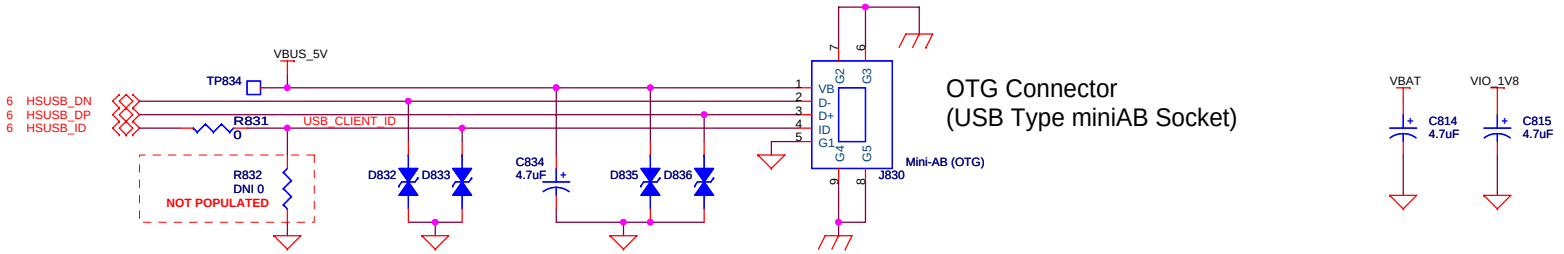

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REV	MODIF.	DES.	DATE	VER.	DATE
A	INIT EDIT	AFG	22/05/09	MCT	21/03/11

P08 - USB HOST and OTG

IGEPv2-RC

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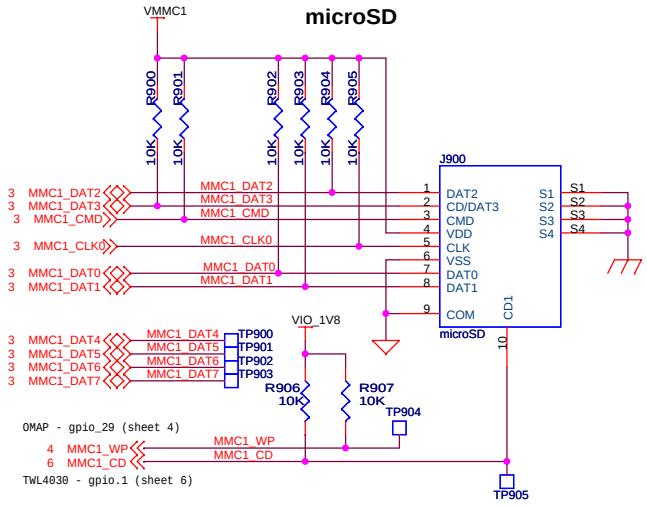
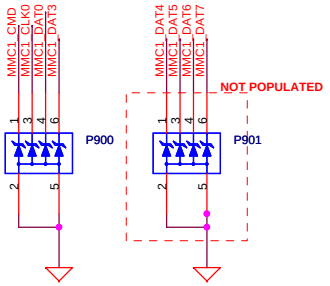
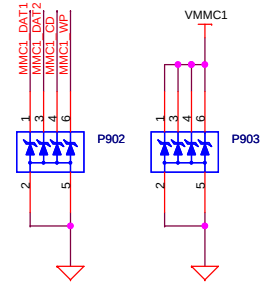
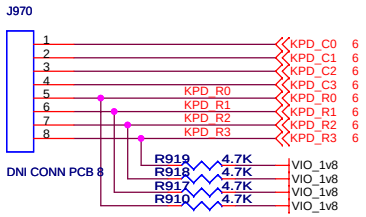
microSD

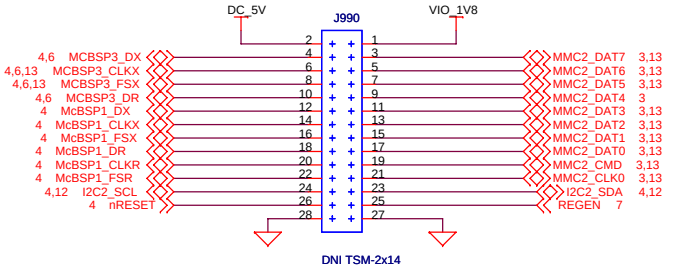


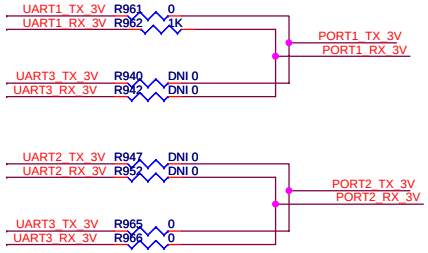


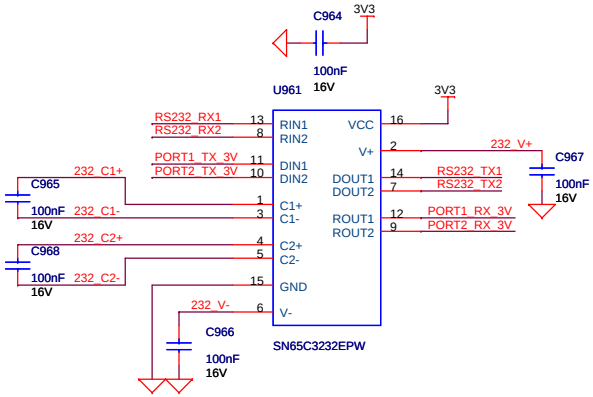


Expansion Connectors

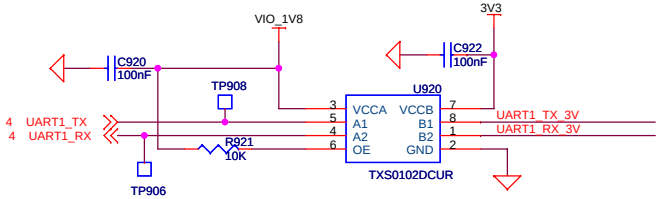




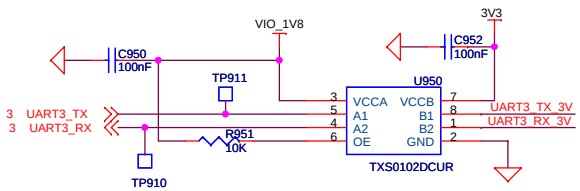


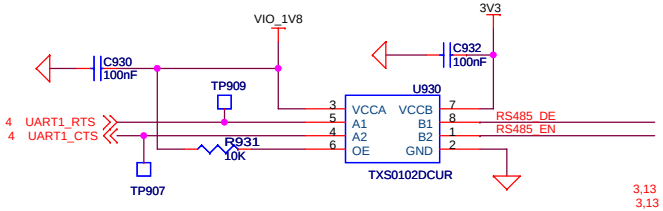


UART1 Serial Port

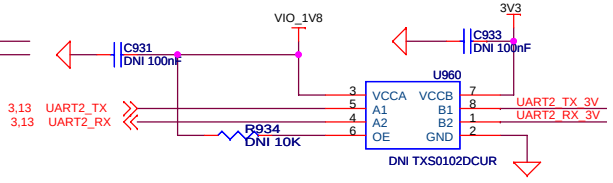


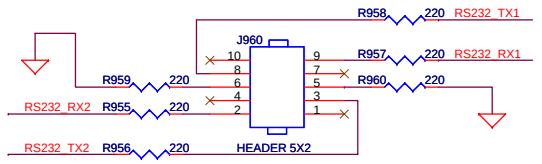
SERIAL DEBUG PORT
UART3 Serial Port



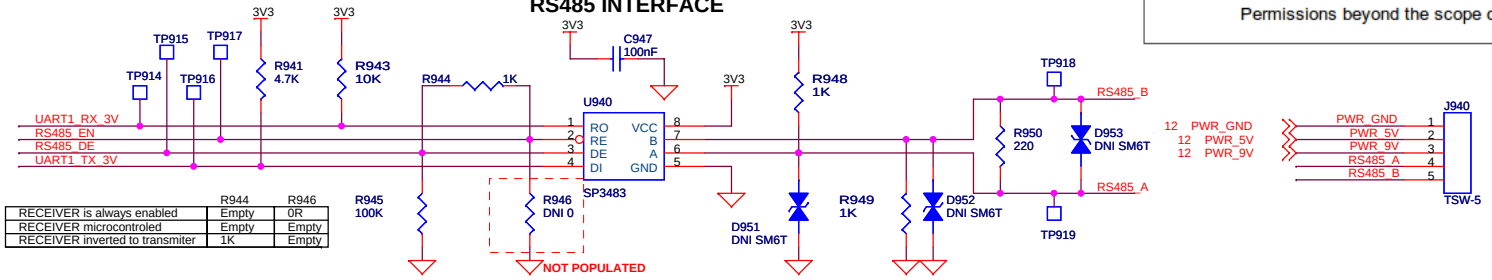


UART2 Serial Port





RS485 INTERFACE



	R944	R946
RECEIVER is always enabled	Empty	0R
RECEIVER microcontroled	Empty	Empty
RECEIVER inverted to transmiter	1K	Empty

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<variant_name>

Wednesday, March 23, 2011

REV	MODIF.	DES.	DATE	VER.	DATE
A	INIT EDIT	AFG	22/05/09	MCT	21/03/11

P09 - MMC - SERIAL - EXP

IGEPv2-RC

SCALE 1/1

REV. C

SHEET 9/13

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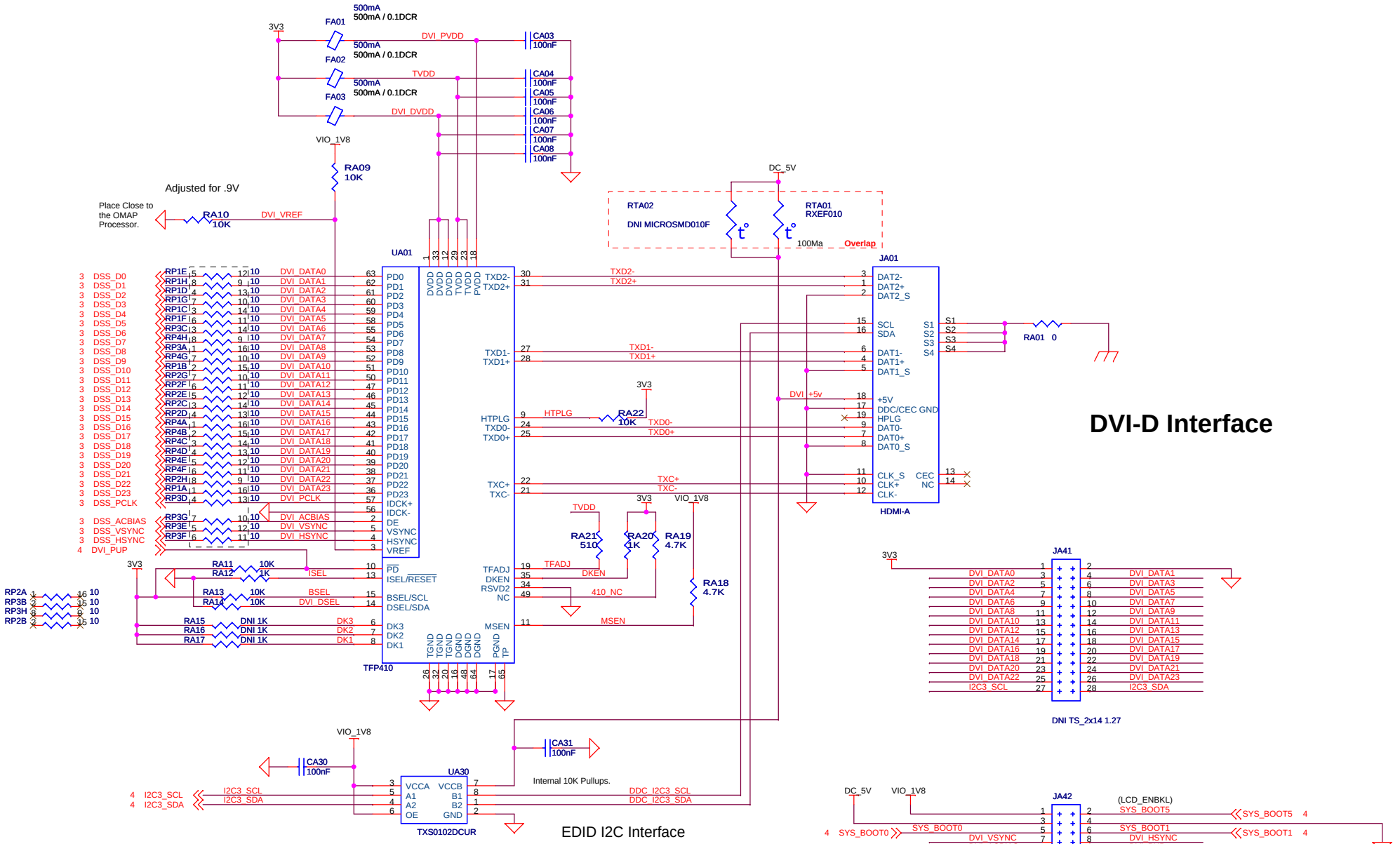

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<Variant Name>

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A	INIT EDIT	AFG	22/05/09	MCT	21/03/11

P10 - DVI-D / HDMI

IGEPv2-RC

SCALE 1/1

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SHEET 10/13

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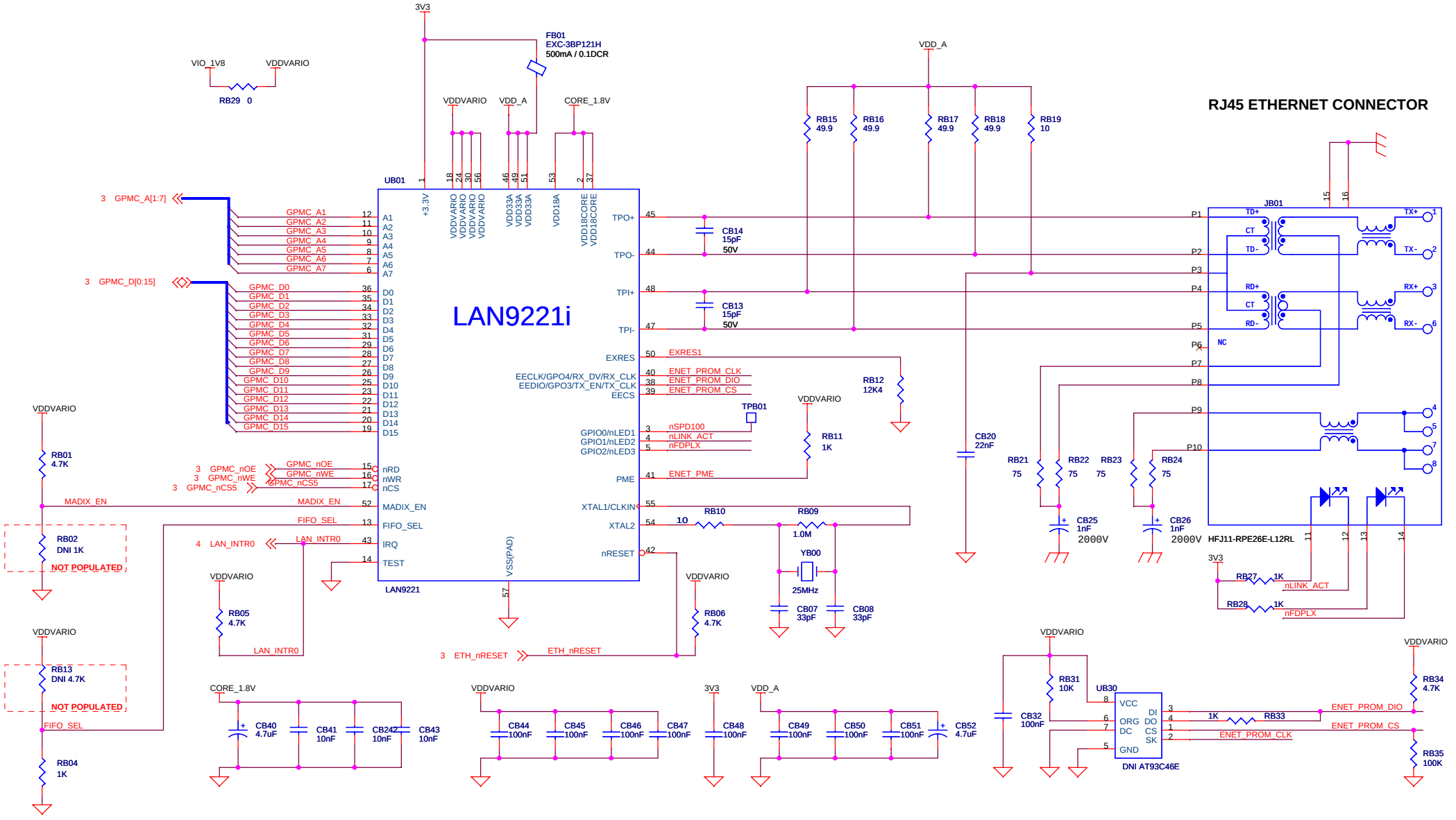

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P11 - ETHERNET

IGEPv2-RC

SCALE 1/1

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SHEET 11/13

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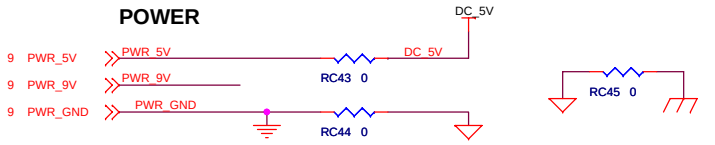
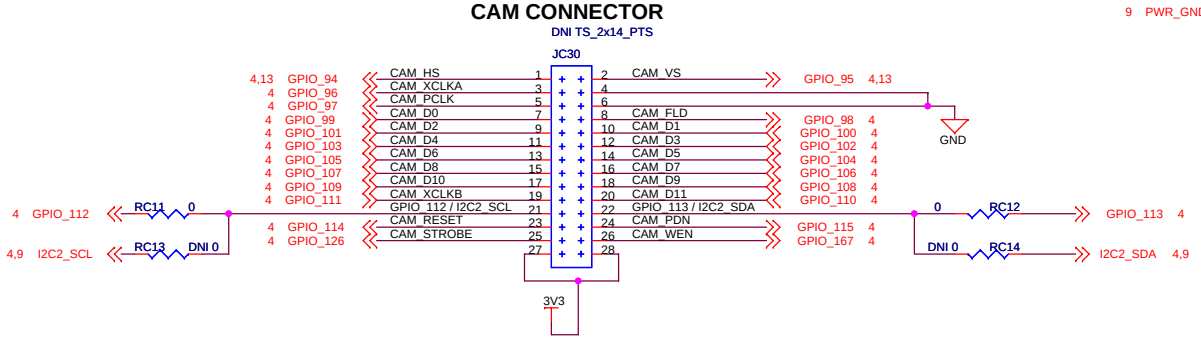
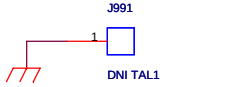
POWER



CAM CONNECTOR





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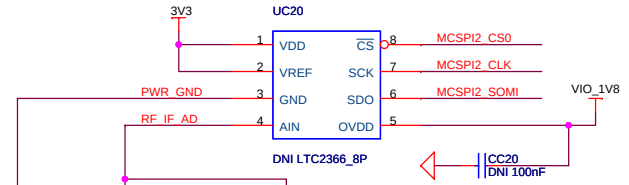
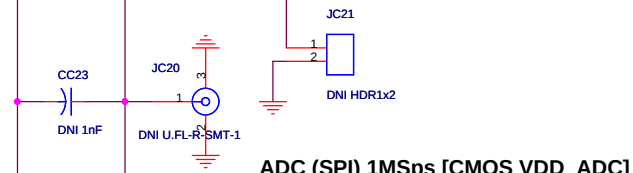
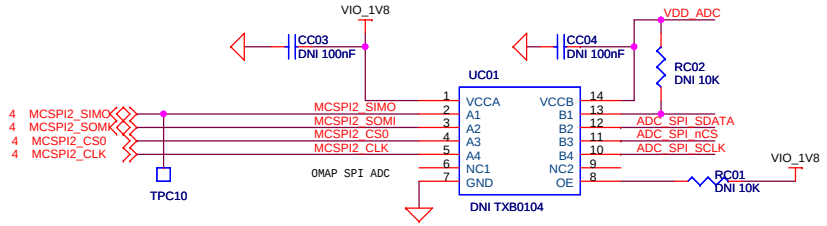
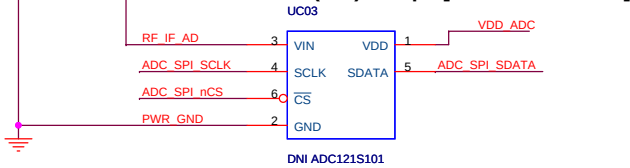
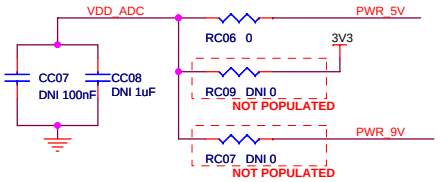






ADC (SPI) 1MSps [CMOS VDD_ADC]





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Wednesday, March 23, 2011

REV	MODIF.	DES.	DATE	VER.	DATE
A	INIT EDIT	AFG	22/05/09	MCT	21/03/11

P12 - ADC_CAM

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SCALE 1/1

REV. C

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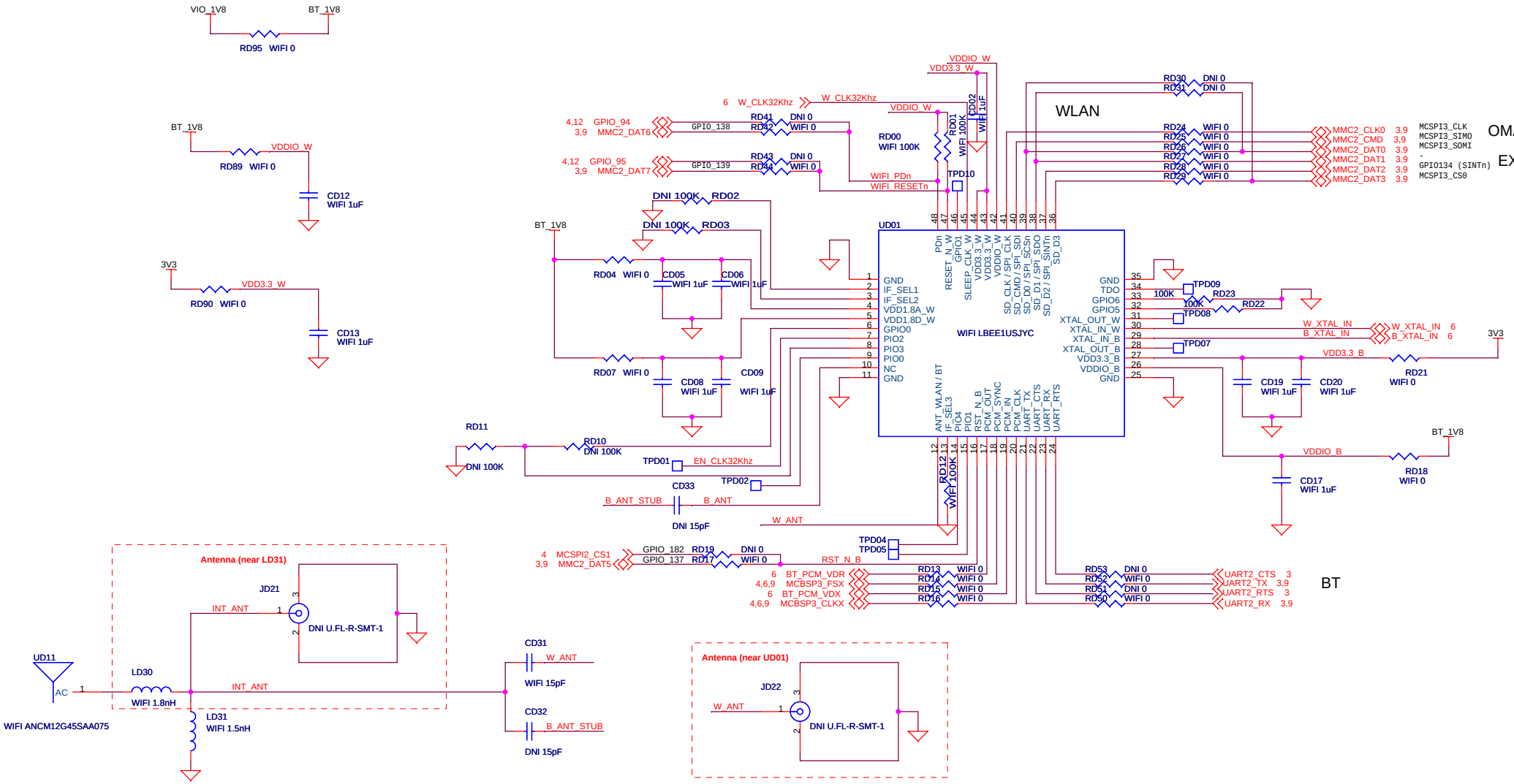
WIFI-BLUETOOTH



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A	INIT EDIT	AFG	22/05/09	MCT	21/03/11

P13 - WIFI BLUETOOTH

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SCALE 1/1

REV. C

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