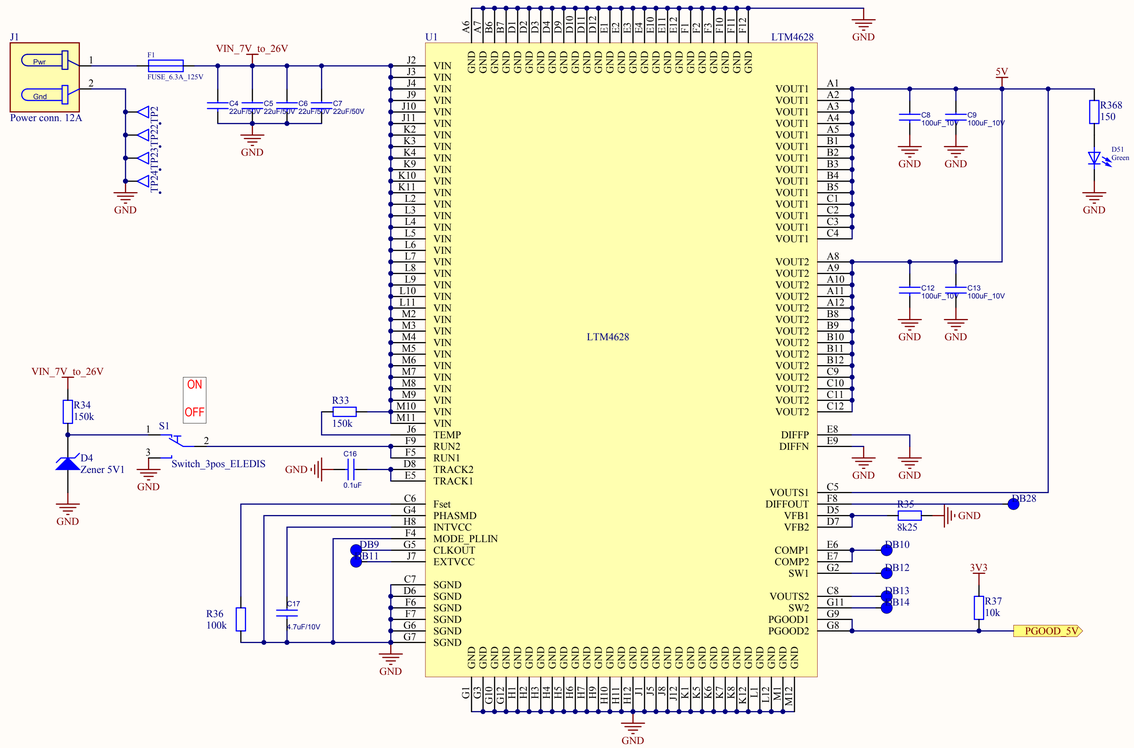
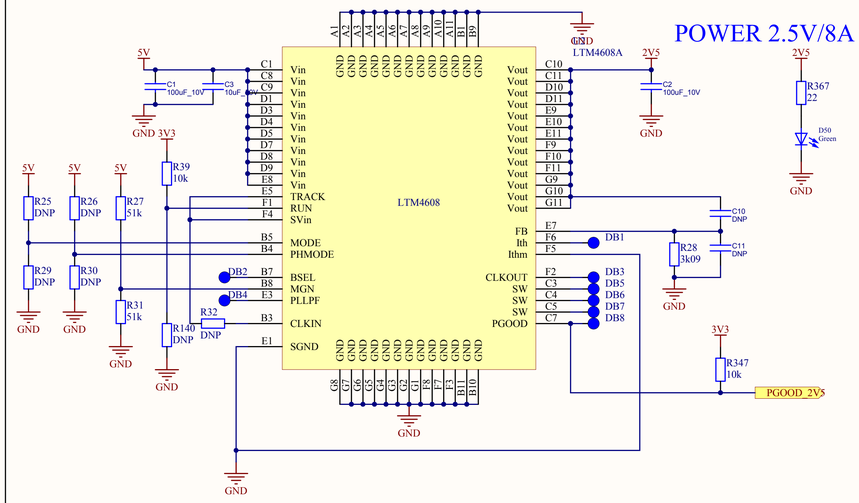
POWER 5V/16A



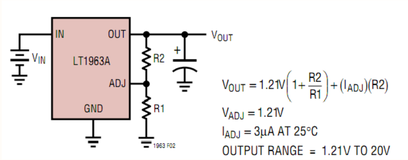
POWER 2.5V/8A



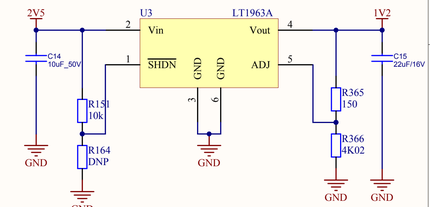
Revision OK 03.10.2012 OAN/VTT

PIN6 = TAB GND
LT1963A
LT1963A-1.5
LT1963A-1.8

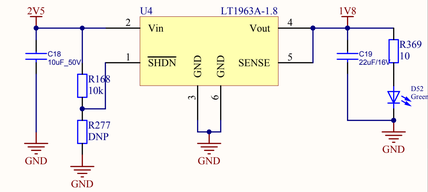
POWER 1.25V/1.5A



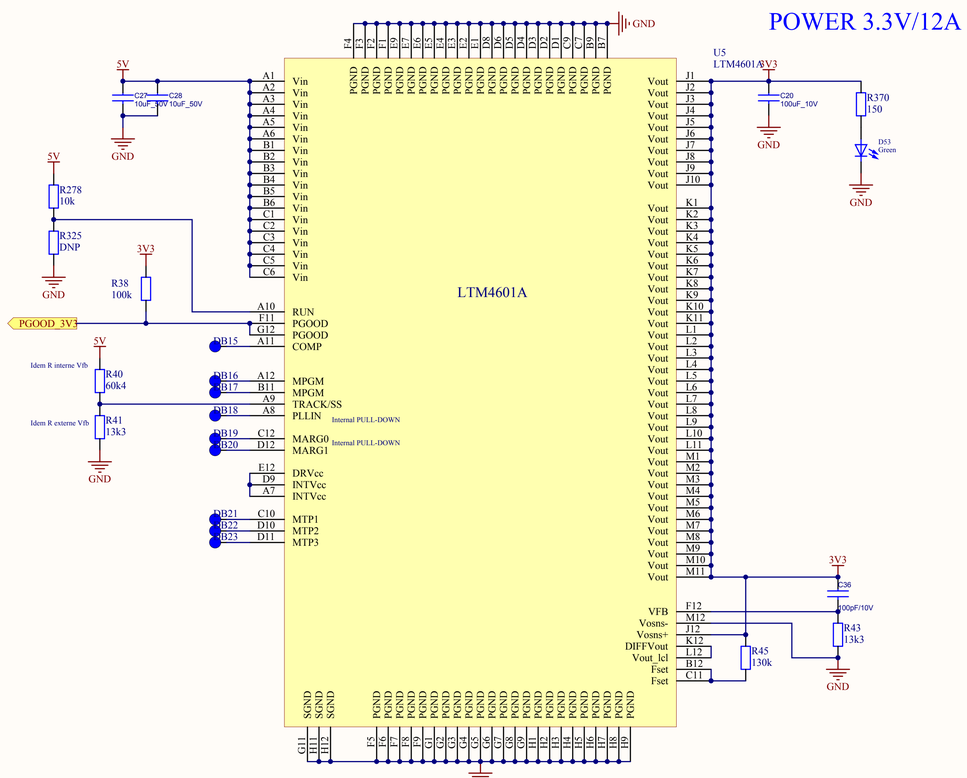
POWER 1.8V/1.5A



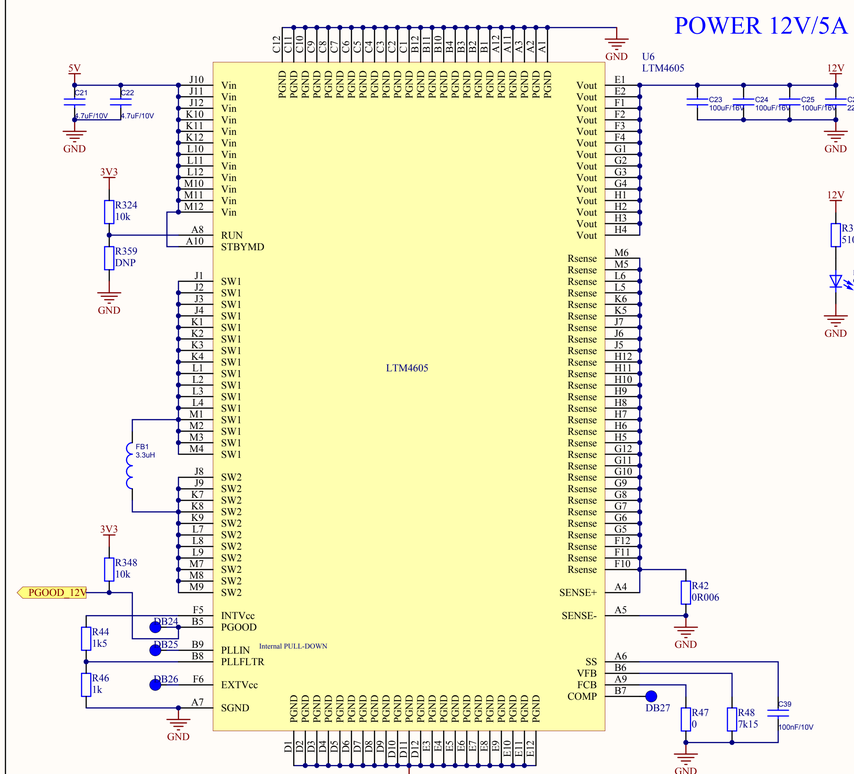
POWER 1.8V/1.5A



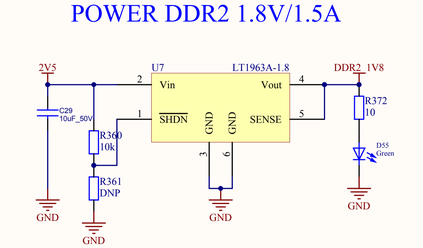
POWER 3.3V/12A



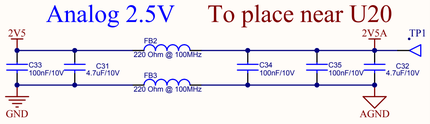
POWER 12V/5A



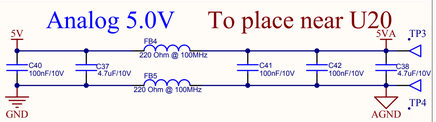
POWER DDR2 1.8V/1.5A



Analog 2.5V To place near U20

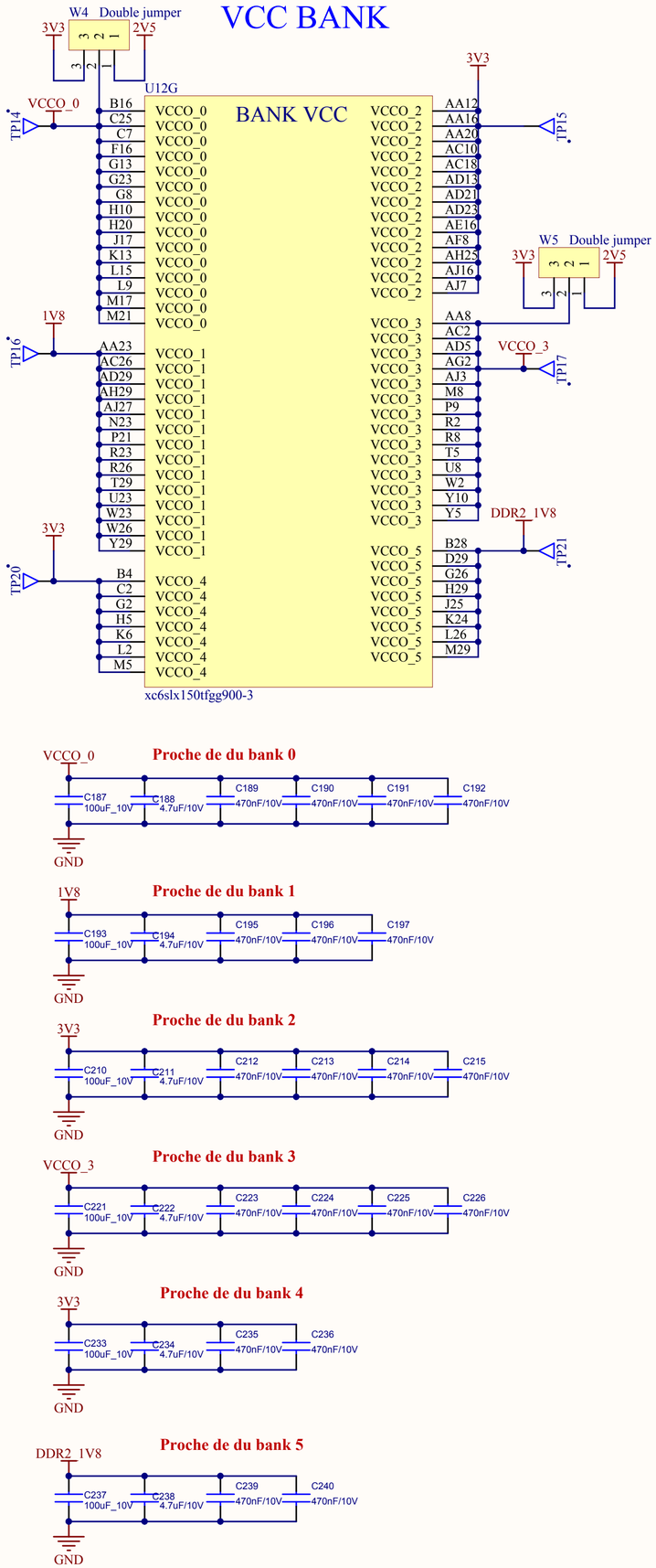


Analog 5.0V To place near U20



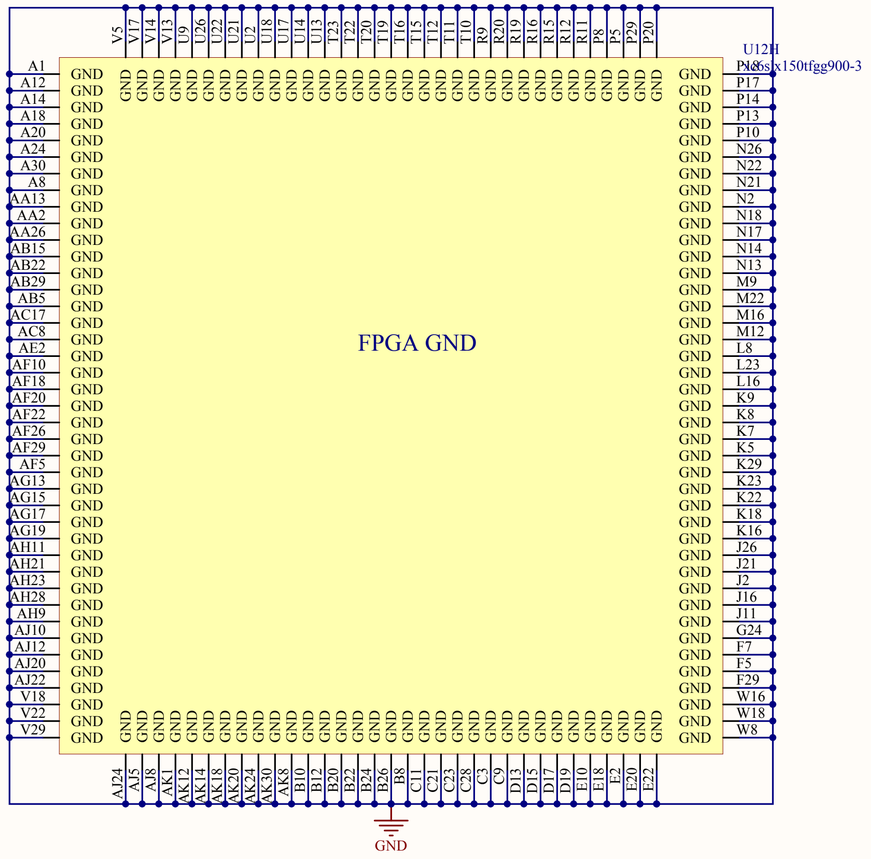
R&S PCB_Spartan6.PrjPCB	
SP6_Board_Power.SchDoc	Rev 0.5
Drawn by: VTT	Date: 10.10.2012
Approved by: *	Page 2 of 28

VCC BANK

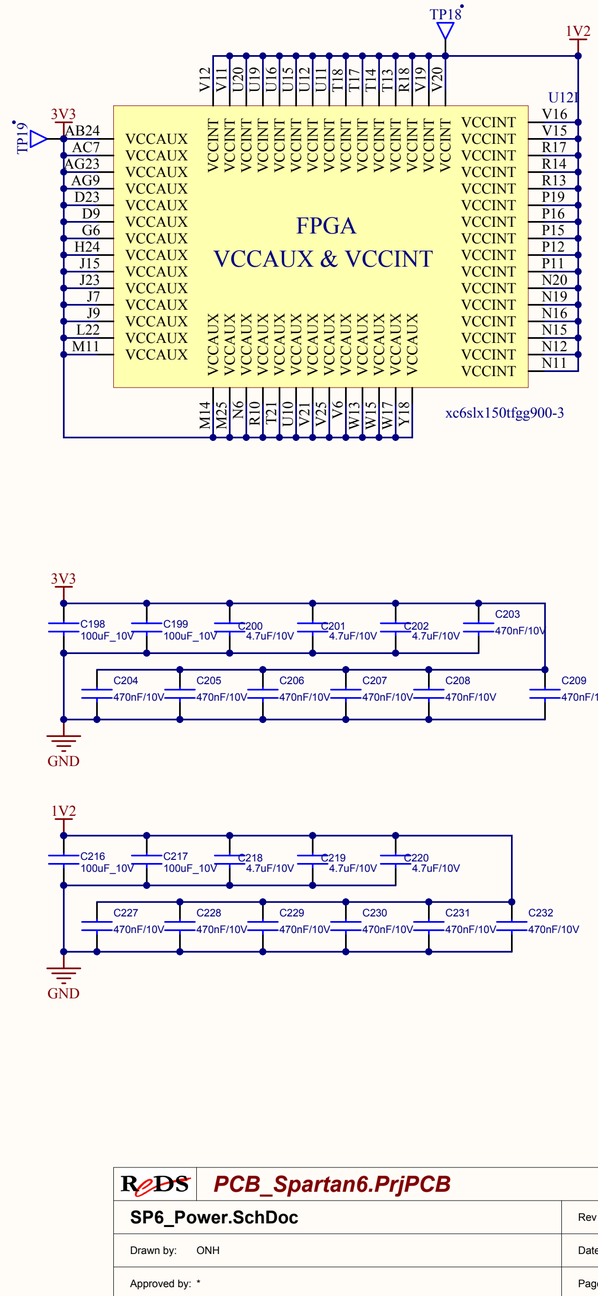


Revision OK 03.10.2012 OAN/VTT

GND

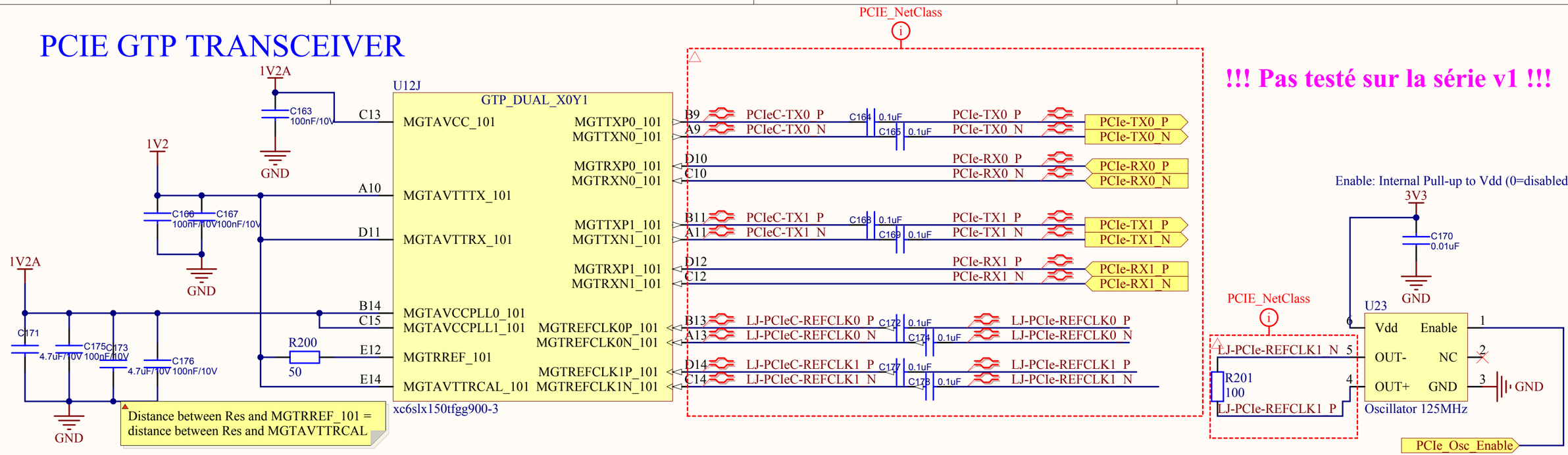


VCCAUX & VCCINT



R~~e~~DS PCB_Spartan6.PrjPCB	
SP6_Power.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
Approved by: *	Page 3 of 28

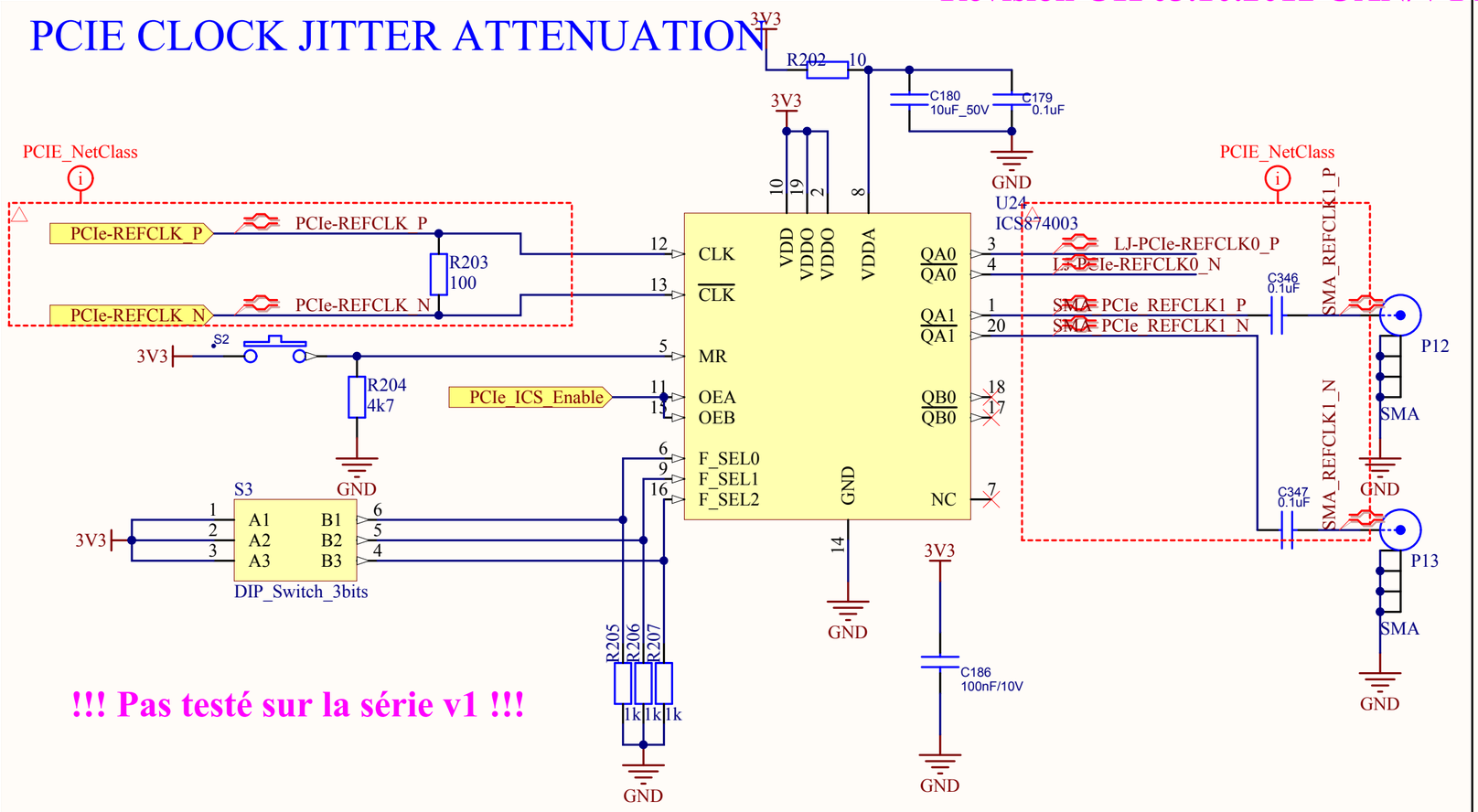
PCIE GTP TRANSCEIVER



!!! Pas testé sur la série v1 !!!

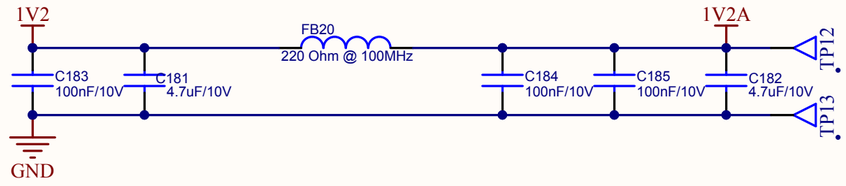
Revision OK 03.10.2012 OAN/VTT

PCIE CLOCK JITTER ATTENUATION



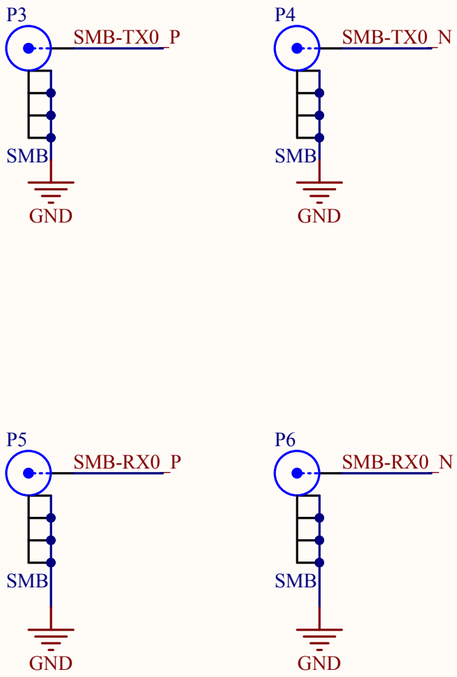
!!! Pas testé sur la série v1 !!!

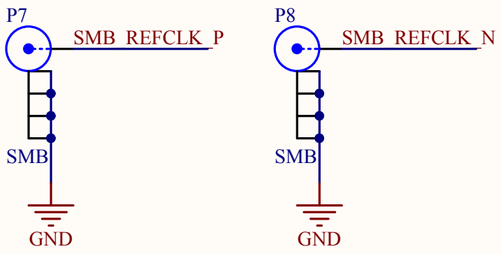
PCIE GTP ANALOG POWER



R&DS PCB_Spartan6.PrjPCB	
SP6_PCIe.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
Approved by: *	Page 5 of 28

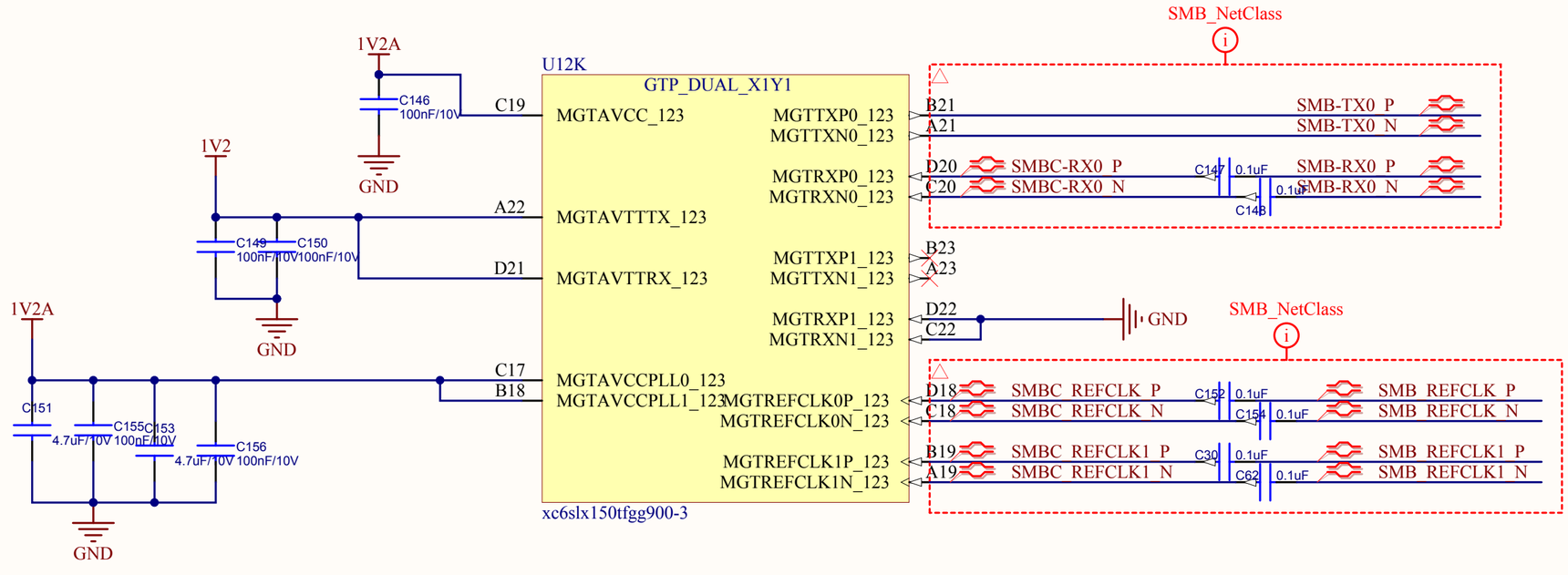
SMB CONNECTORS



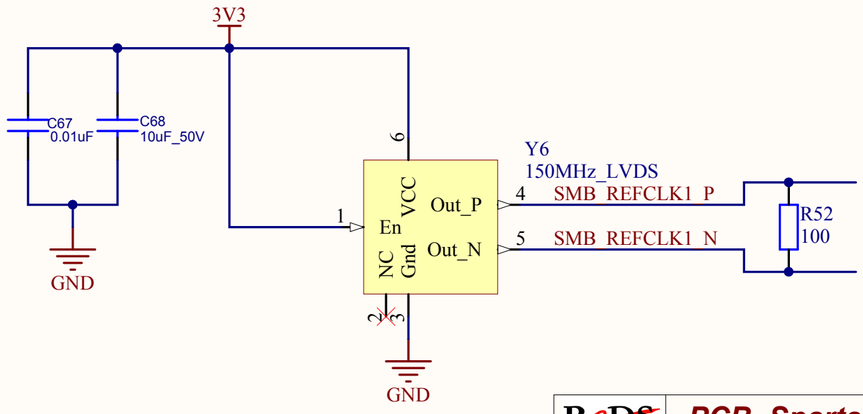


Revision OK 03.10.2012 OAN/VTT

GTP TRANSCEIVER FOR SMB

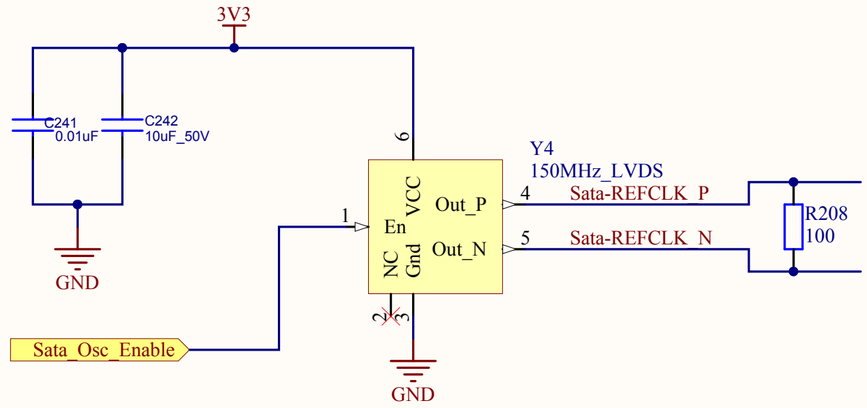


OSCILLATOR 150MHZ



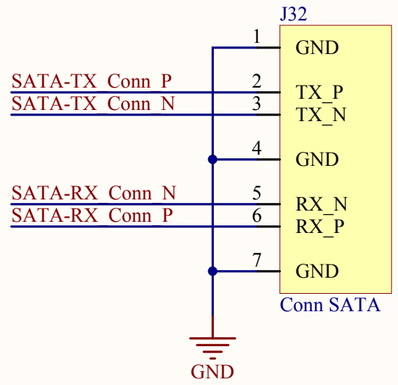
R&DS PCB_Spartan6.PrjPCB	
SP6_GTP_SMB.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
Approved by: *	Page 6 of 28

OSCILLATOR 150MHZ



!!! Pas testé sur la série v1 !!!

SATA CONNECTOR



!!! Pas testé sur la série v1 !!!

Revision OK 03.10.2012 OAN/VTT

SATA GTP TRANSCEIVER

!!! Pas testé sur la série v1 !!!

Distance between Res and MGTRREF_101 = distance between Res and MGTAVTTRCAL

RoDS PCB_Spartan6.PrjPCB	
SP6_SATA.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
Approved by: *	Page 7 of 28

SPARTAN 6 BANK0

OSCILLATOR 100MHZ

CONNECTOR FMC1

FMC1 & FMC2 GTP TRANSCEIVER

U12A

BANK0

2.5V/3.3V

xc6slx150tfgg900-3

LAYOUT NOTE:

- Each differential pair should provide a differential impedance of 100ohm.
- Each single signal should provide an impedance of 50 ohm

TRST_L Should be on 3V3 bank, but should work on 2V5 bank cause Vih min is 2V0 followin the 3V3 LVTTL signaling

Revision OK 03.10.2012 OAN/VTT

C185, C186, C191 & C192 peuvent être remplacées par une 0Ohm si nécessaire

U12L

GTP_DUAL_X1Y0

xc6slx150tfgg900-3

Ticket 605/613 - erreurs dues au manque de soudure sur les deux FMC
A mettre dans rapport à Locatis (TODO)

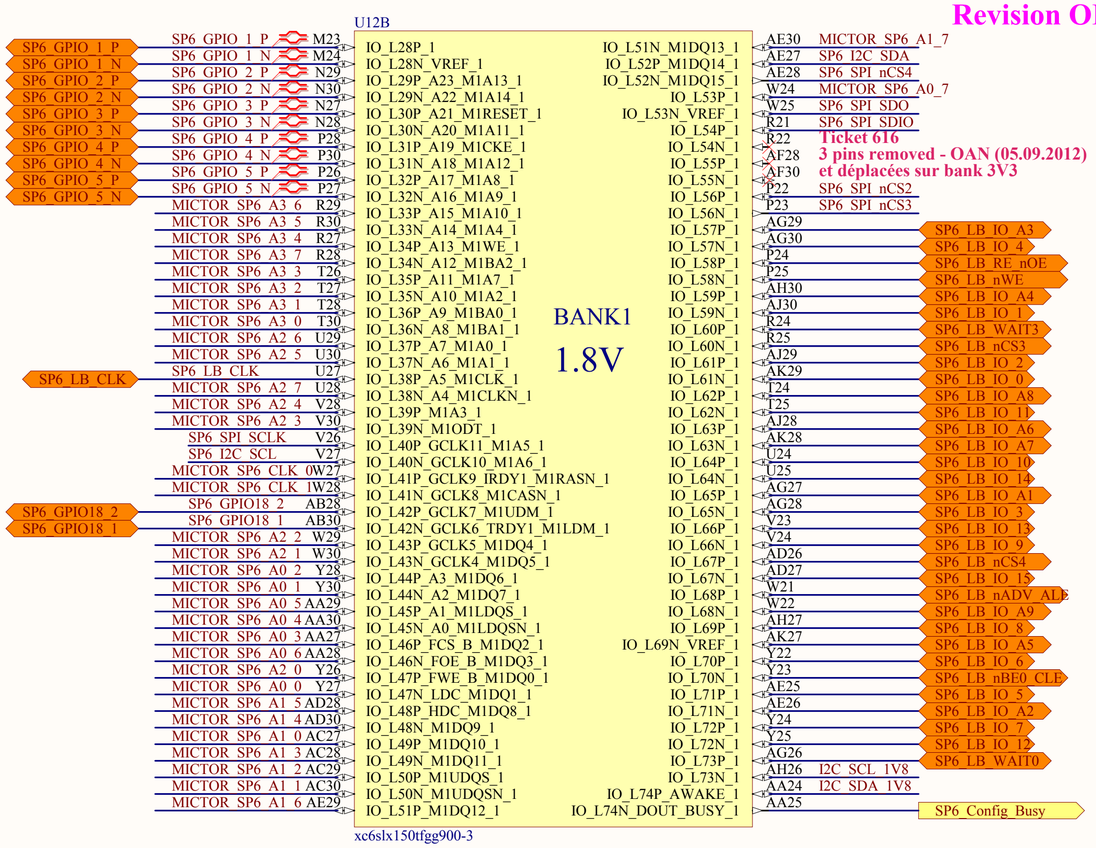
Ticket 609 - FMC1 est le seul FMC compatible avec lesignal LVDS
A mettre dans datasheet Reptar (TODO)

Connected on the page LB_Serial

R&DS PCB_Spartan6.PrjPCB	
SP6_FMC1.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
Approved by: *	Page 8 of 28

SPARTAN 6 BANK 1

Revision OK 03.10.2012 OAN/VTT



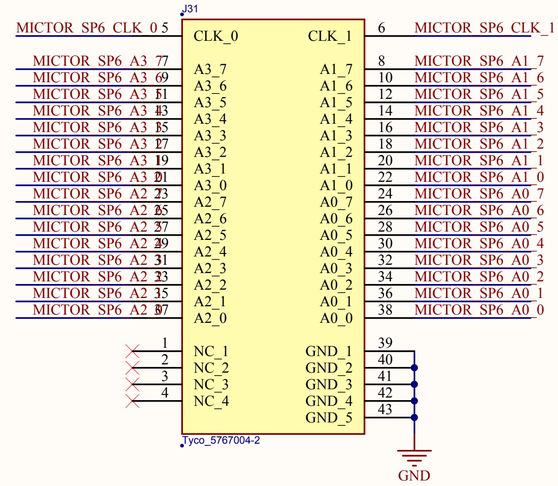
Les signaux *CLK* ne peuvent pas être swapper!!

Les signaux MICTOR_X peuvent être swapper entre eux excepté MICTOR_CLK_X

Les signaux SP6_LB_XX peuvent être swapper entre eux.

les signaux SP6_GPIO_X_X peuvent être swapper entre eux mais attention aux paires differentielles.

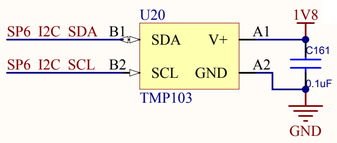
MICTOR DEBUG CONNECTOR



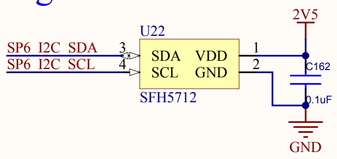
I2C Temperature Sensor

I2C address :

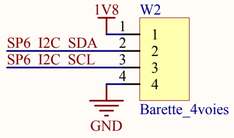
0101001 : Light sensor
1110001 : Temperature sensor



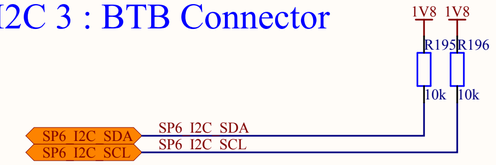
I2C Light Sensor



I2C External Connector

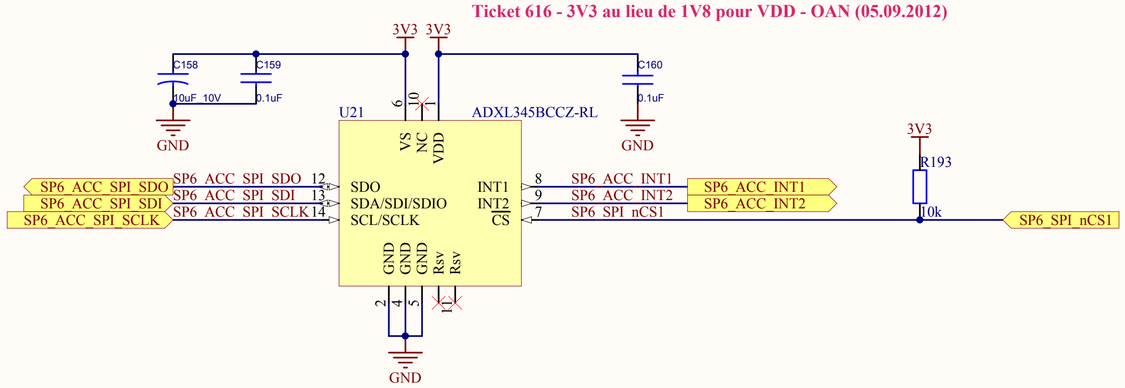


I2C 3 : BTB Connector

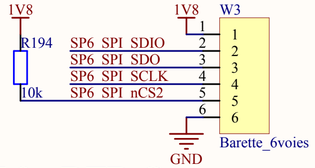


SPI 1: Accelerometer

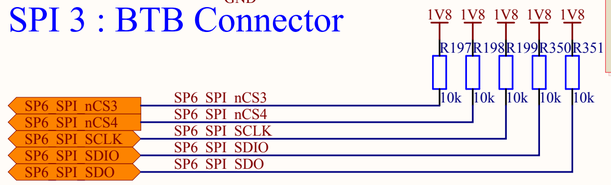
Ticket 616 - 3V3 au lieu de 1V8 pour VDD - OAN (05.09.2012)



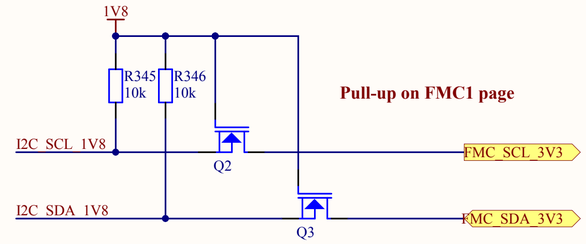
SPI 2 : External Connector



SPI 3 : BTB Connector



Correspondance SPI FPGA <=> CPU
SP6_SPI_SDO <=> up_SPI_SIMO (Slave In Master Out)
SP6_SPI_SDIO <=> up_SPI_SOMI (Slave Out Master In)



R⊘DS PCB_Spartan6.PrjPCB	
SP6_LB_Serial.SchDoc	Rev 0.5
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80 PINS DDK (REDS CONNECTOR)

SPARTAN 6 BANK 2

OSCILLATOR 25MHZ

Ticket 616 added - OAN (05.09.2012)

Ticket 616 added - OAN (05.09.2012)

Ticket 616 added - OAN (05.09.2012)

Ticket 616 added - OAN (05.09.2012)

Ticket 616 added - OAN (05.09.2012)

Ticket 616

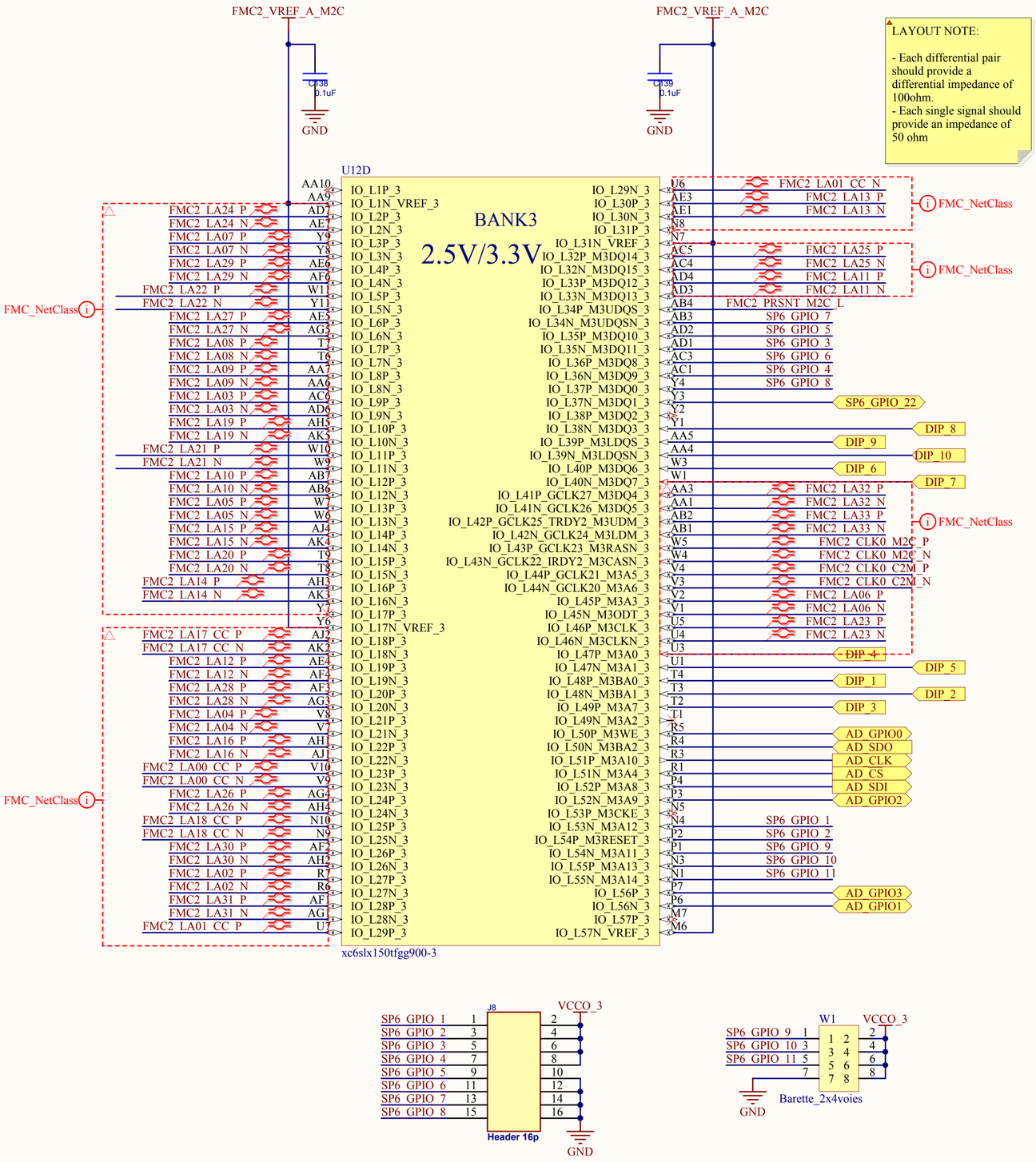
R&DS PCB_Spartan6.PrjPCB	
SP6_Conf_80pins.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
Approved by: *	Page 10 of 28

Ticket 605/613 - erreurs dues au manque de soudure sur les deux FMC
A mettre dans rapport à Locatis (TODO)

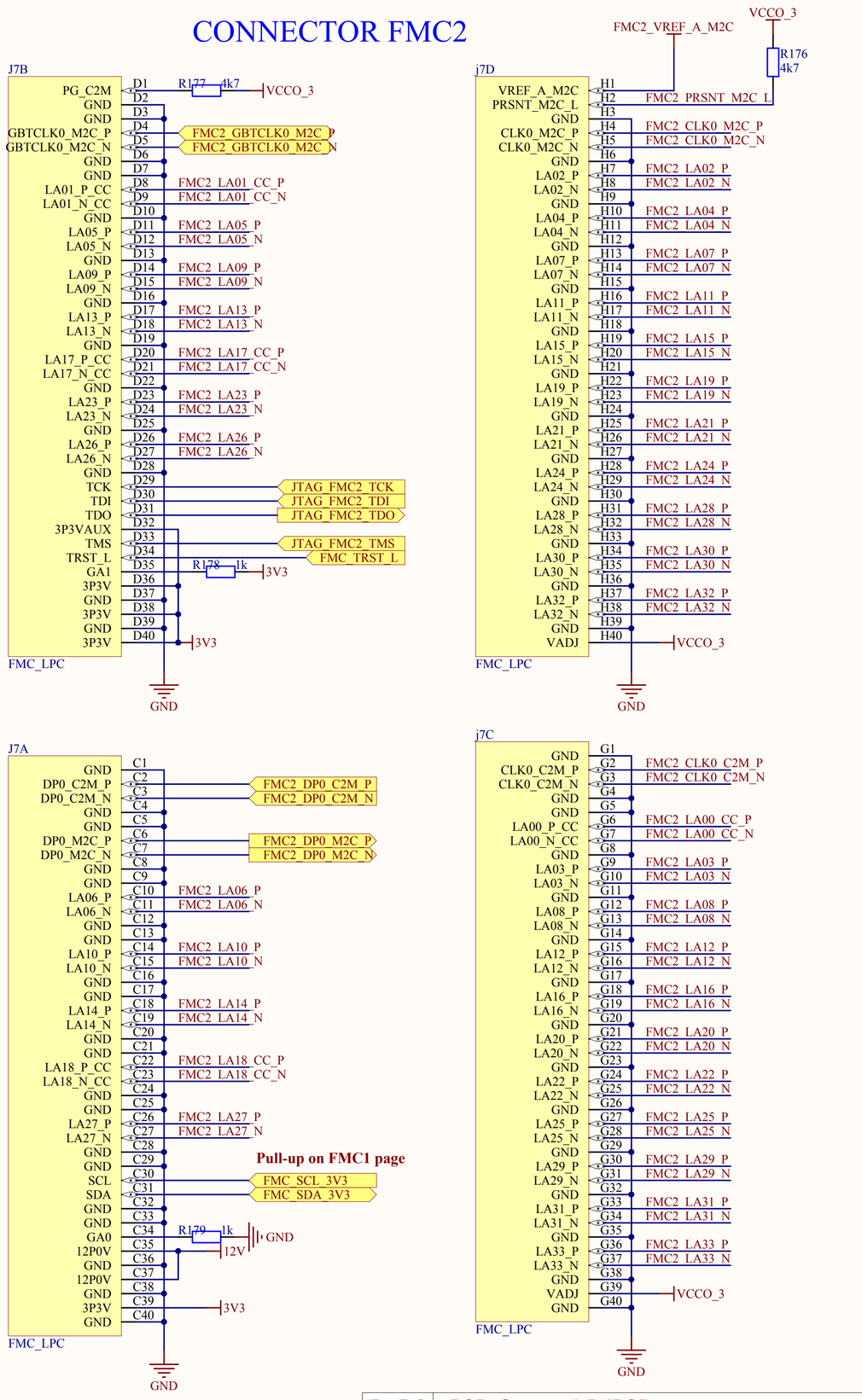
Revision OK 03.10.2012 OAN/VTT

Ticket 609 - FMC2 n'est pas compatible avec les signaux LVDS => utiliser uniquement avec des cartes FMC avec pins single-ended
A mettre dans datasheet Reptar (TODO)

SPARTAN 6 BANK3



CONNECTOR FMC2



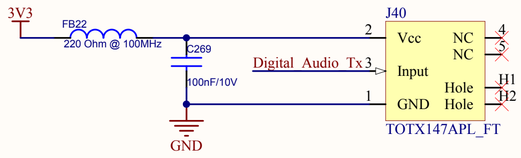
R&DS PCB_Spartan6.PrjPCB	
SP6_FMC2.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
Approved by: *	Page 11 of 28

Revision OK 03.10.2012 OAN/VTT

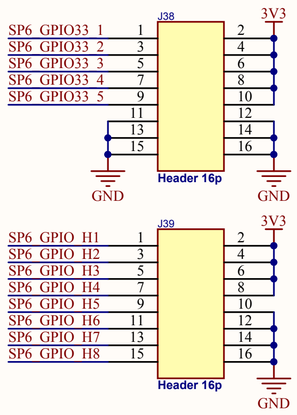
TOSLINK Receiving Connector

!!! Pas testé pour la série 1 !!!

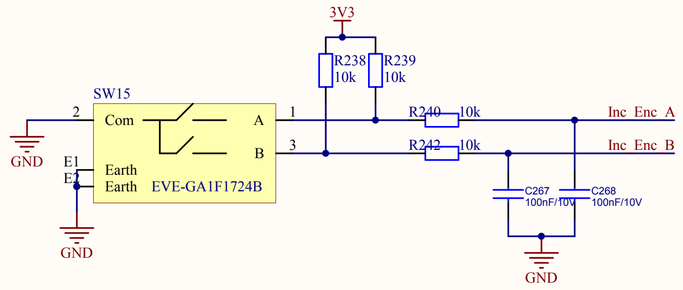
TOSLINK Transmitting Connector



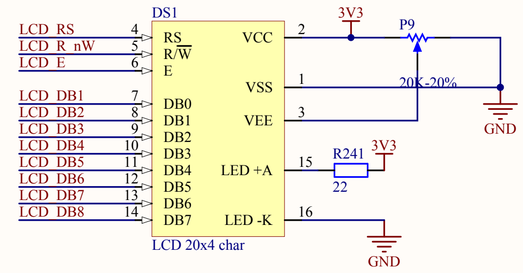
GPIOs header



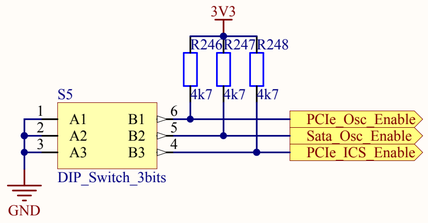
INCREMENTAL ENCODER



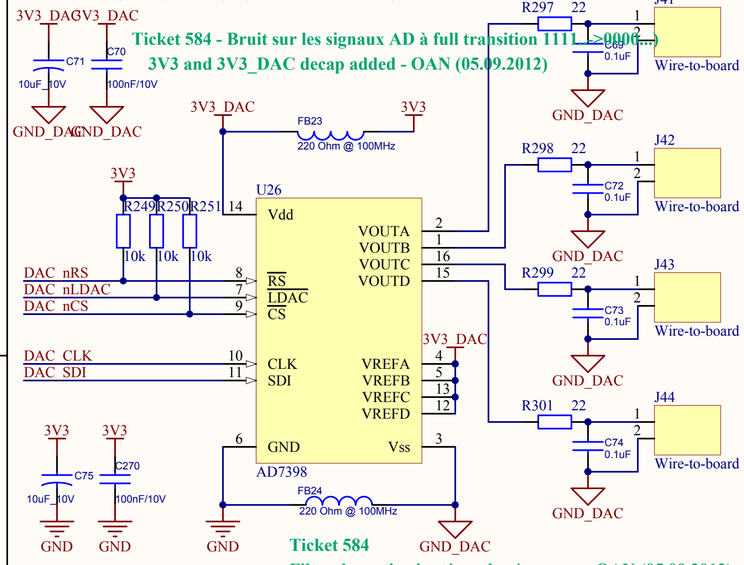
40X2 CHARACTERS LCD DISPLAY



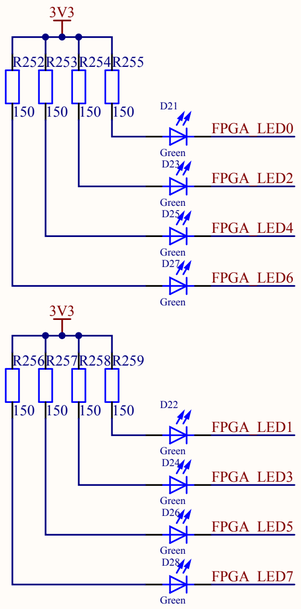
PCIe/Sata/ Clocks Enable



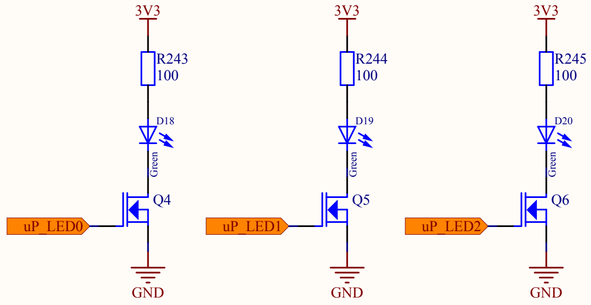
12 BITS D/A CONVERTOR



8X LEDs FOR SPARTAN 6

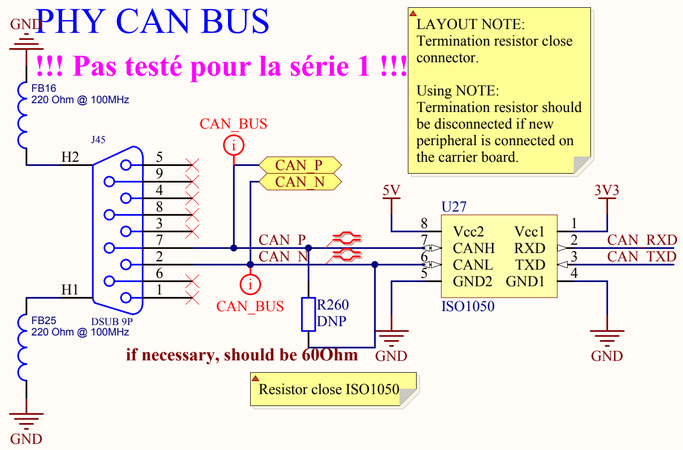


3X LEDs FOR uP

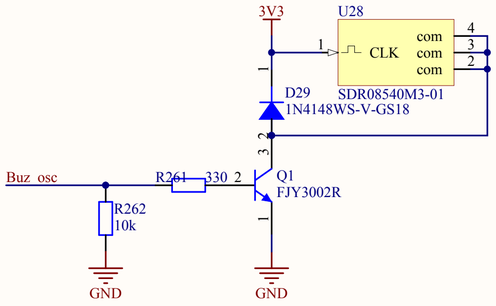


PHY CAN BUS

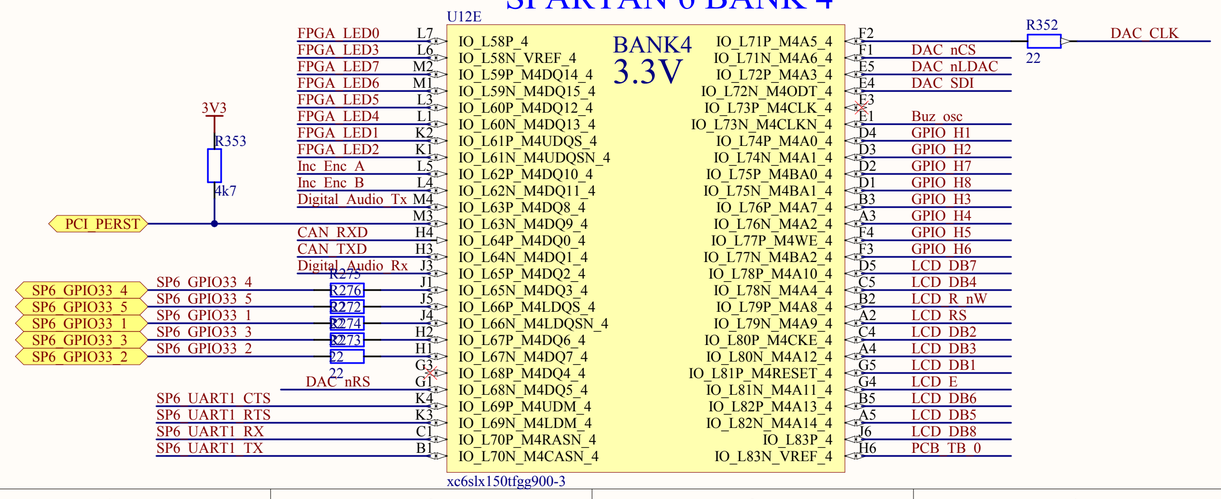
!!! Pas testé pour la série 1 !!!

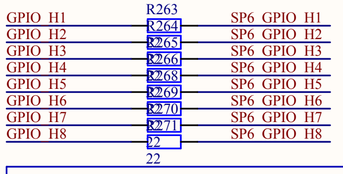


BUZZER

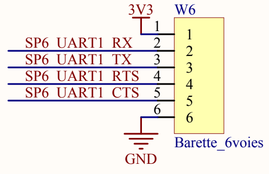


SPARTAN 6 BANK 4

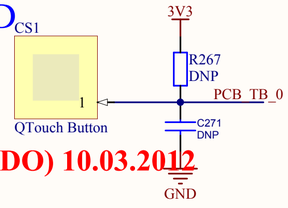




UART 1 : External Connector



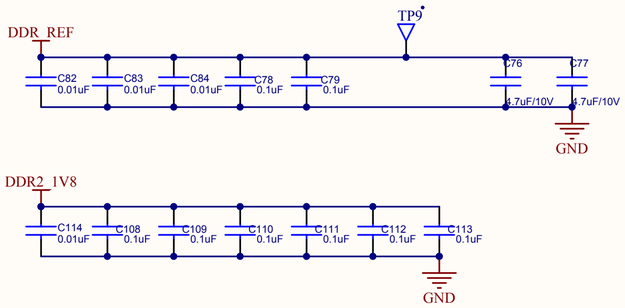
TOUCH CONTROL PAD



A tester pour la série 1 (TODO) 10.03.2012

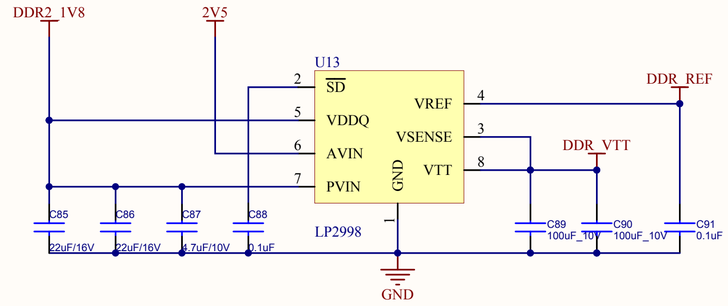
R∅DS PCB_Spartan6.PrjPCB	
SP6_Use_Int.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
Approved by: *	Page 12 of 28

2GB DDR2

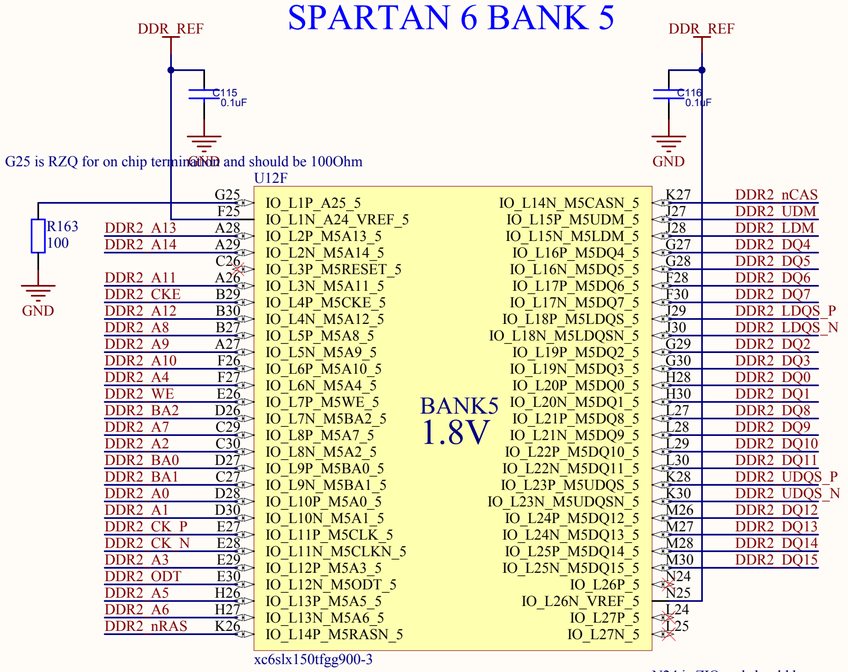


Revision OK 03.10.2012 OAN/VTT

DDR3 VOLTAGE REFERENCE

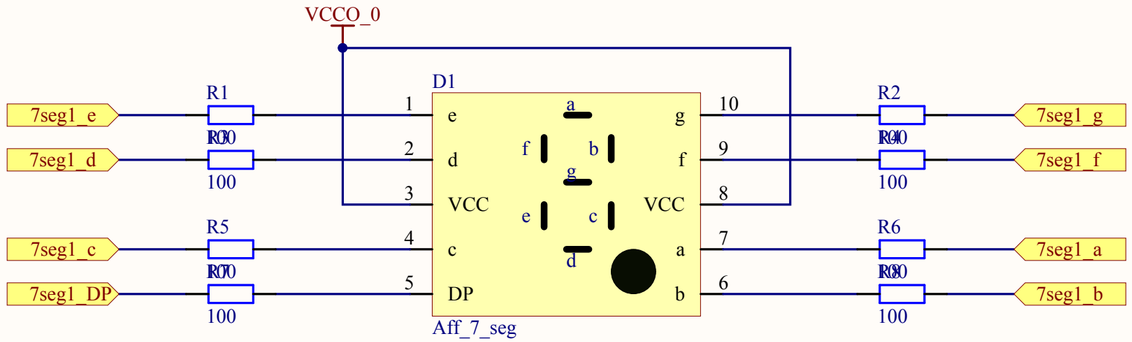


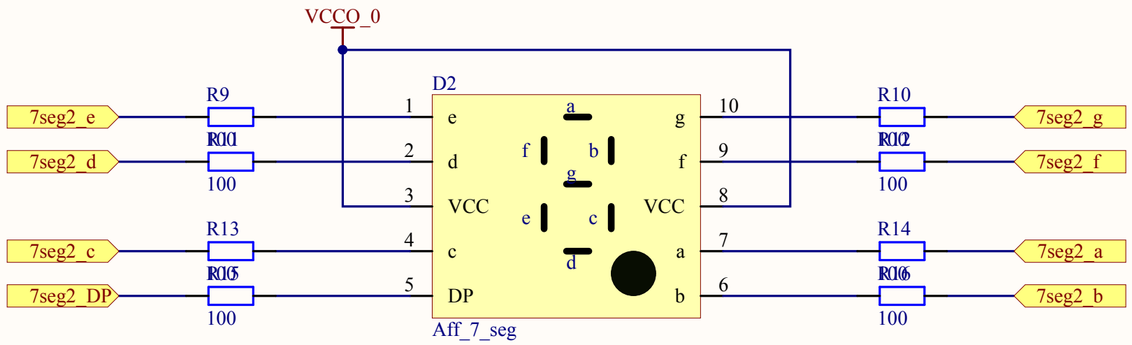
SPARTAN 6 BANK 5

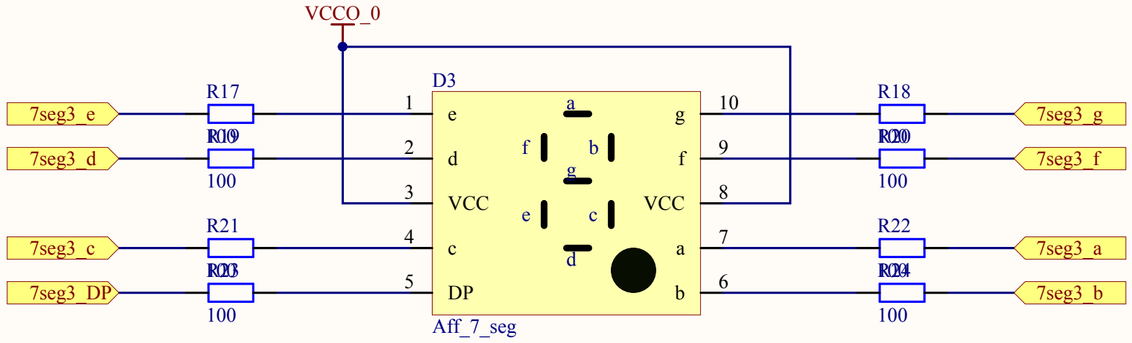


R&S PCB_Spartan6.PrjPCB	
SP6_DDR3.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
Approved by: *	Page 13 of 28

3 X 7 SEGMENTS







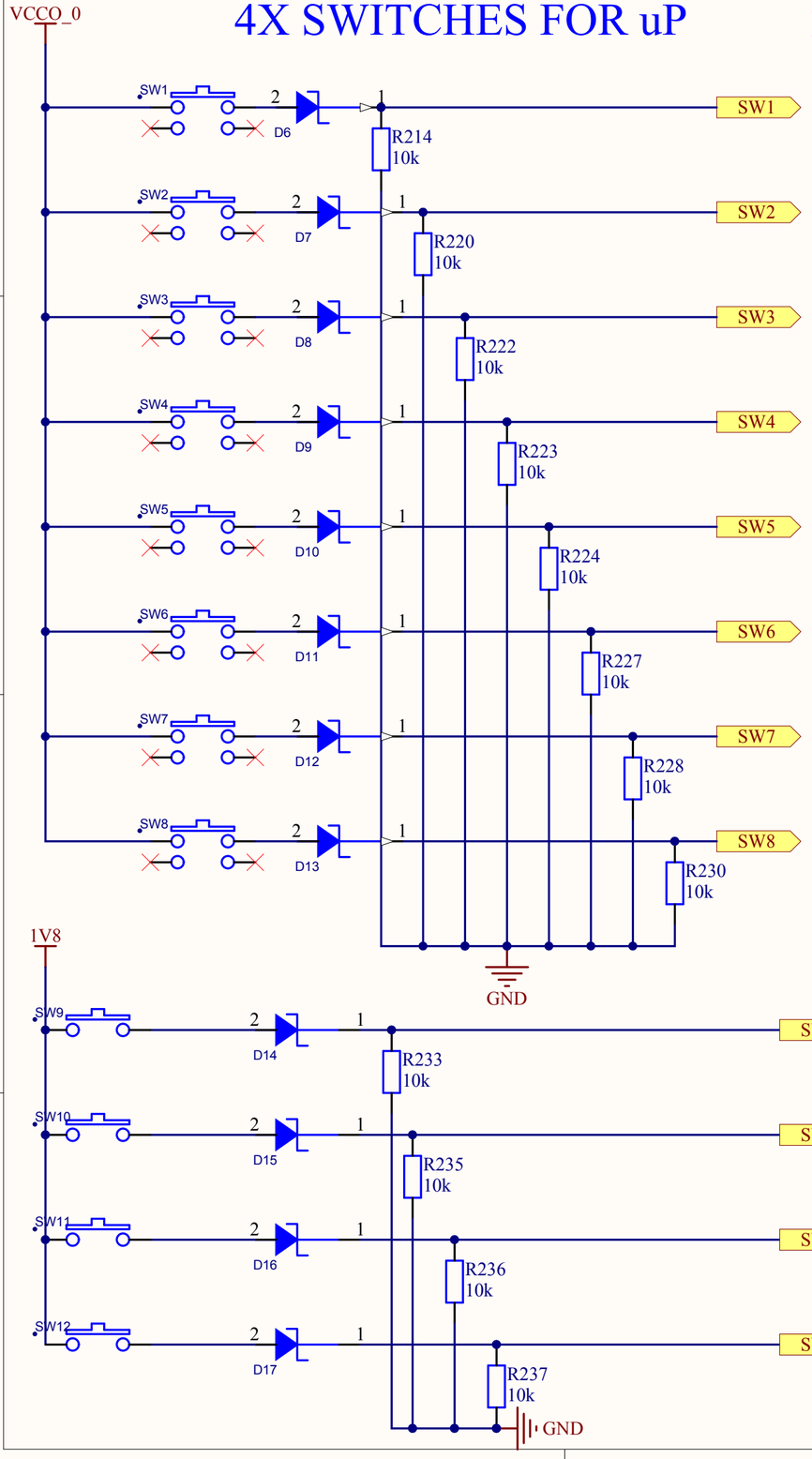
Revision OK 03.10.2012 OAN/VTT

VCCO_0	= 2V5/3V3
LED Vforward	= 1V8
LED Ifwd type	= 10mA => 1 luminous
Imax = 3.3-1.8/100	= 15mA => 1.4 luminous
Imax = 2.5-1.8/100	= 7mA => 0.6 luminous

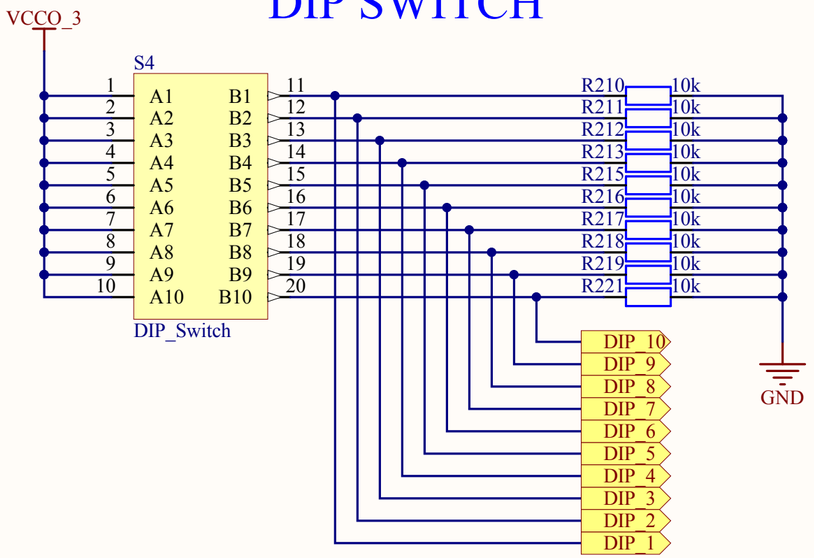
R~~e~~DS PCB_Spartan6.PrjPCB	
SP6_7seg.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
Approved by: *	Page 14 of 28

8X SWITCHES FOR FPGA
4X SWITCHES FOR uP

Revision OK 03.10.2012 OAN/VTT

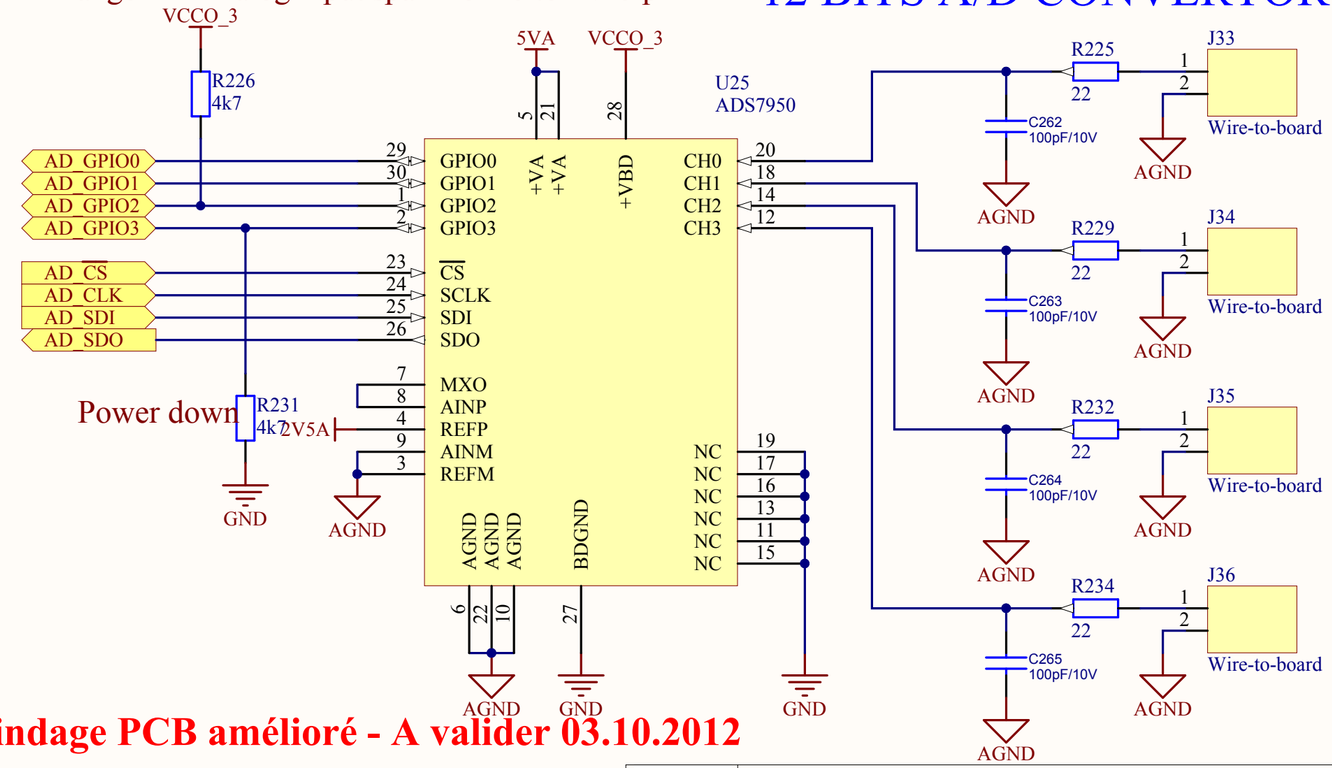


DIP SWITCH



Range 2 = Analog input span from 0 to 2Vrefp

12 BITS A/D CONVERTOR



Blindage PCB amélioré - A valider 03.10.2012

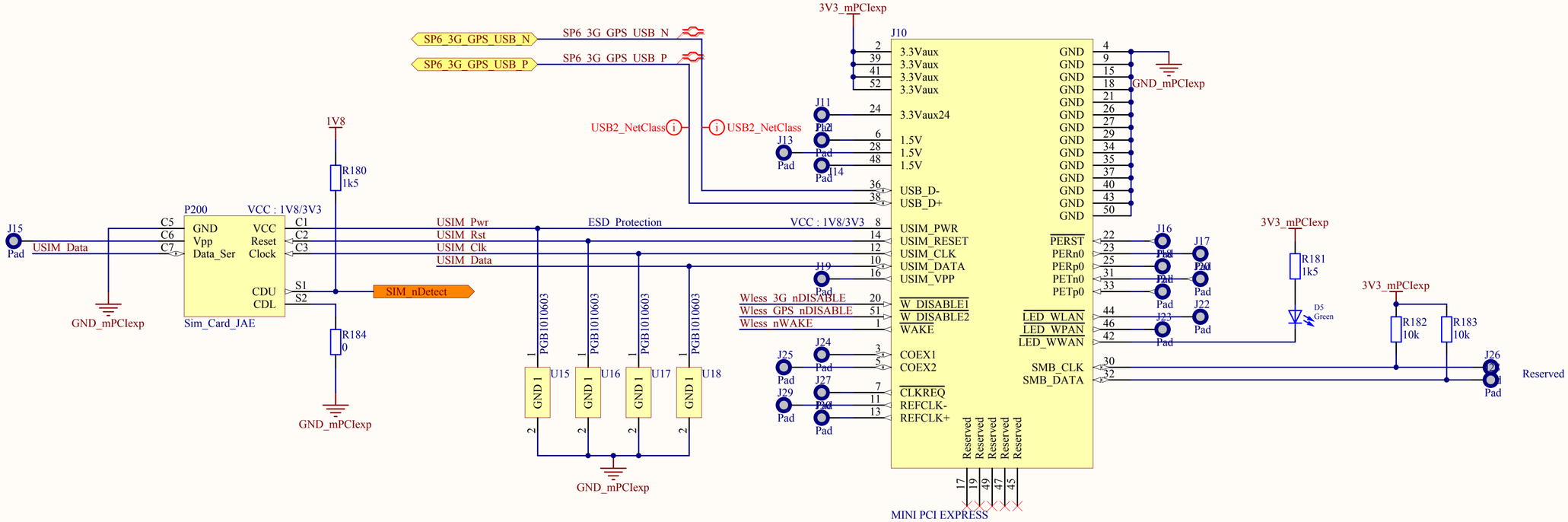
R&DS PCB_Spartan6.PrjPCB	
SP6_Switch_DA.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
Approved by: *	Page 15 of 28

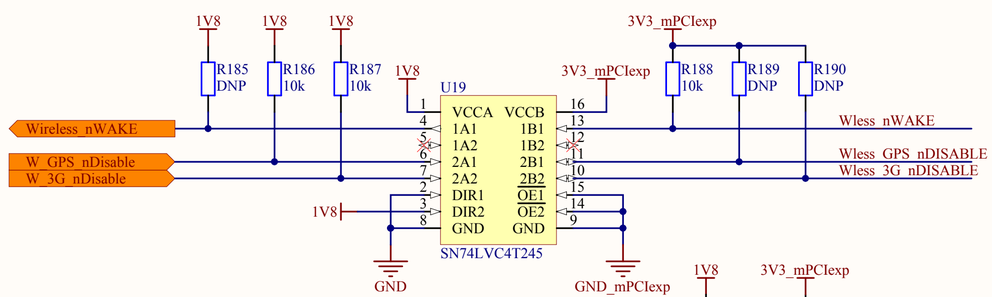
Revision OK 03.10.2012 OAN/VTT

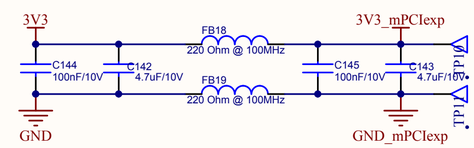
3G/GPS MODULE

J9
LATCH
mini PCIe
LATCH MINI PCI EXPRESS

U39 F3607gw

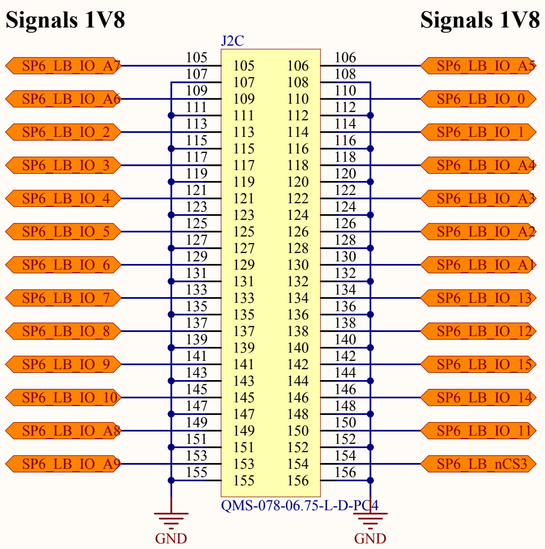




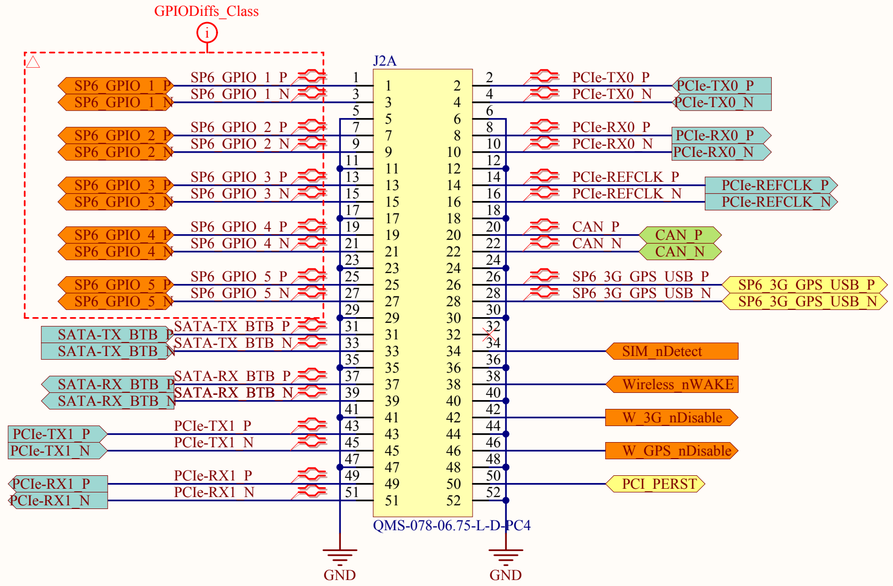


R&DS PCB_Spartan6.PrjPCB	
SP6_GPS_3G.SchDoc	Rev 0.5
Drawn by: VTT	Date: 10.10.2012
Approved by: *	Page 16 of 28

uP local bus



GPIOs SATA PCIe GPS 3G CAN Bus



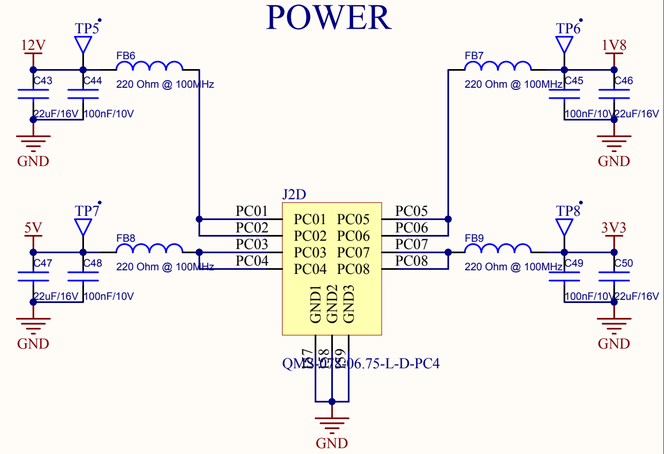
Revision OK 03.10.2012 OAN/VTT

Layout note for QTH_60 pins and QMS-078-06.75-X-D-PC4 connectors

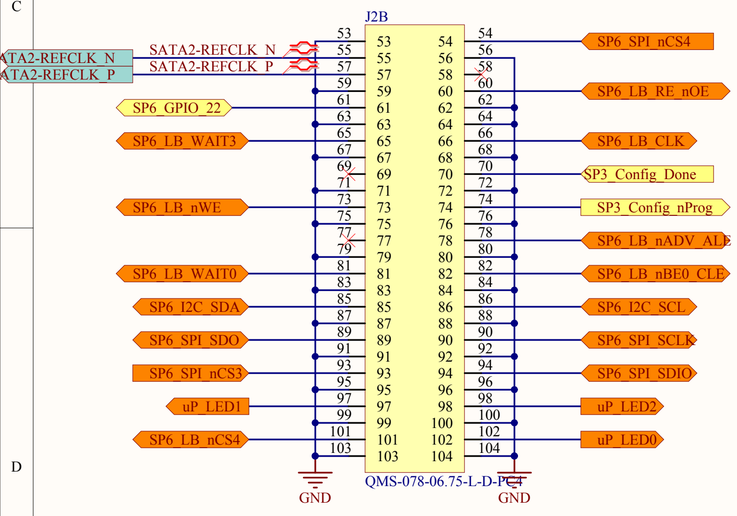
LAYOUT NOTE:

- Each differential pair should provide a differential impedance of 100ohm.
- Each single signal should provide an impedance of 50 ohm

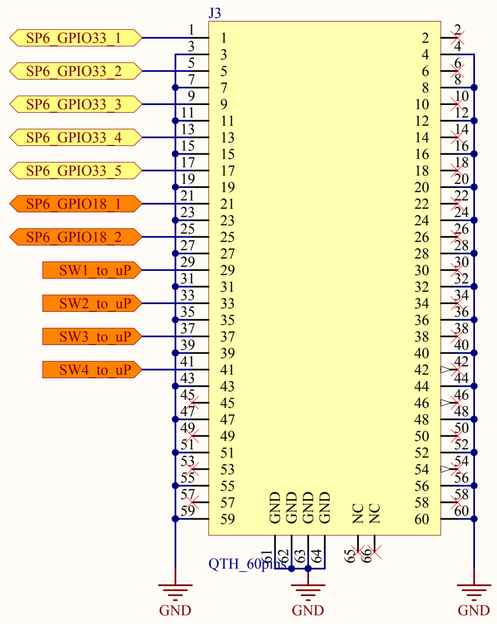
POWER



I2C UART uP_SWs uP_LEDs SPI



GPIOs SPI conf



Ne rien changer au pinout du connecteur car correspondance avec carte uP!!!

R~~e~~DS PCB_Spartan6.PrjPCB	
SP6_BTB_Conn.SchDoc	Rev 0.5
Drawn by: ONH	Date: 10.10.2012
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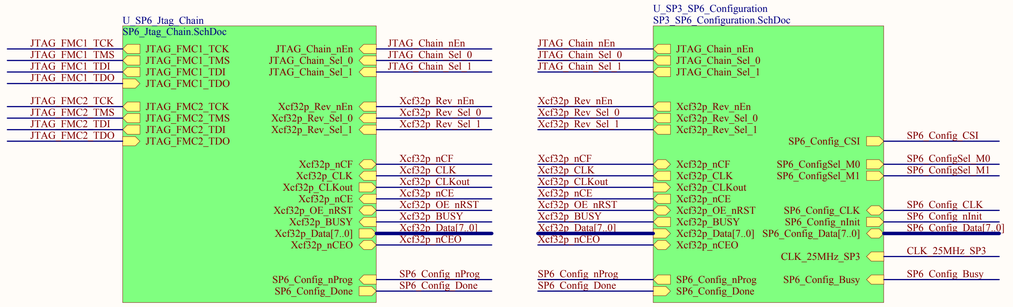

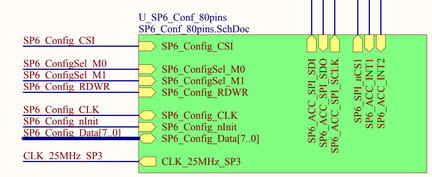

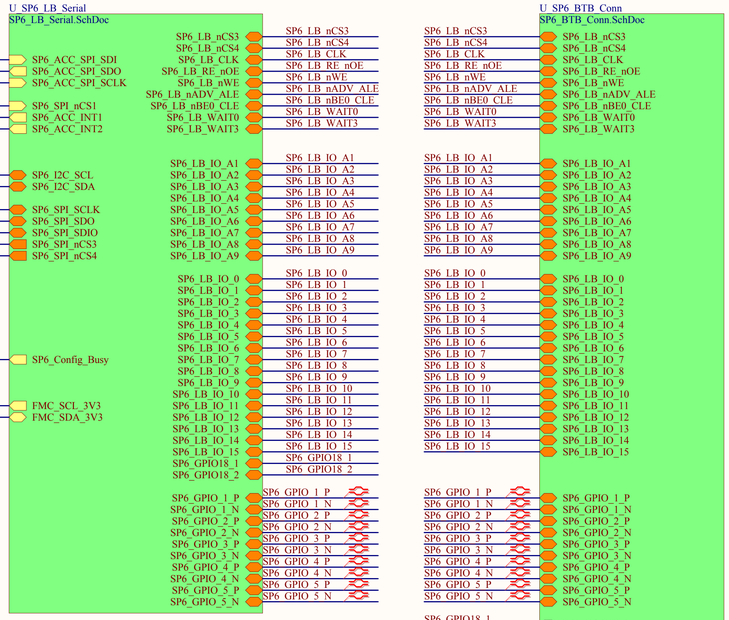

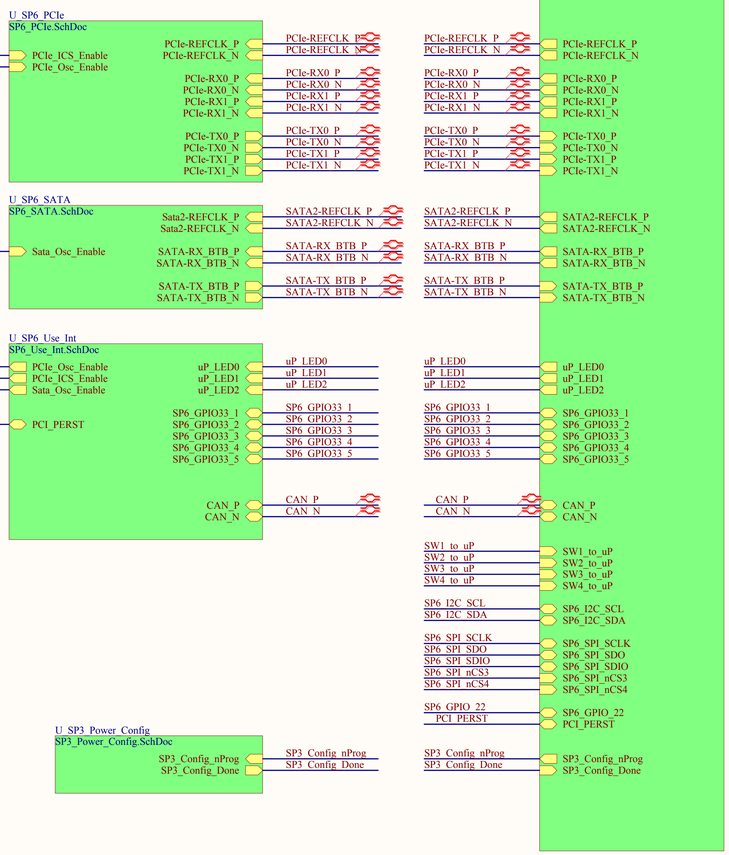

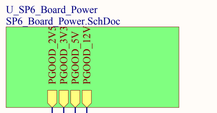

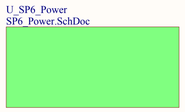

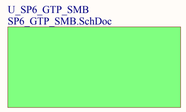

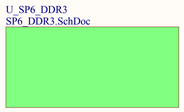

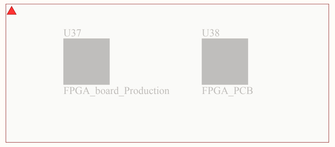

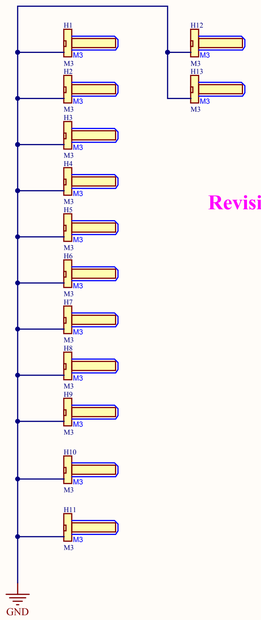

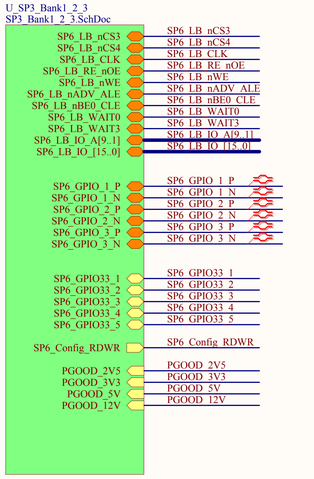

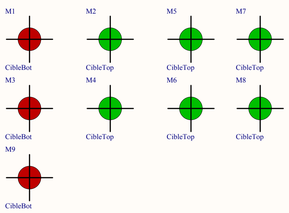

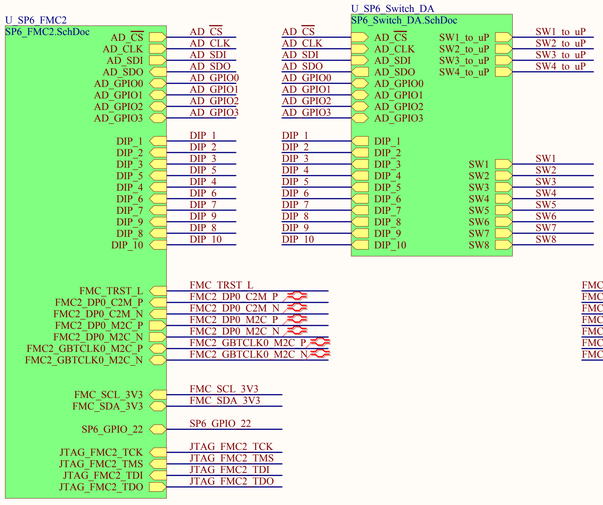

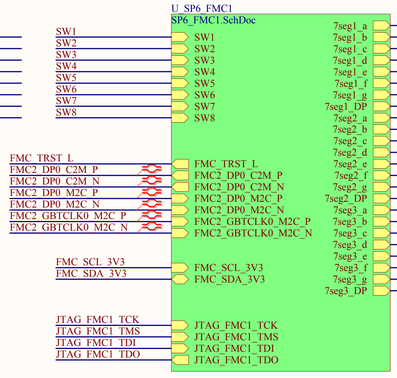

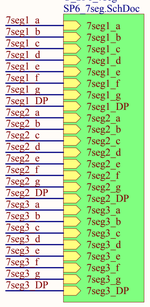

Revision OK 03.10.2012 OAN/VTT

R⊘DS PCB_Spartan6.PrjPCB	
FPGA_Board.SchDoc	Rev *
Drawn by: YNG/VTT	Date: 10.10.2012
Approved by: *	Page * of *

Revision OK 03.10.2012 OAN/VTT

SP6_LB_IO_A[9..1]
SP6_LB_IO_[15..0]
SP6_LB_IO_A[9..1]
SP6_LB_IO_[15..0]

U29B

BANK 1

IO_L01N_1/LDC2	N14	SP6_LB_IO_14
IO_L01P_1/HDC	N13	SP6_LB_nBE0_CLE
IO_L02N_1/LDC0	P15	SP6_LB_CLK
IO_L02P_1/LDC1	R15	SP6_LB_IO_4
IO_L03N_1/A1	N16	SP6_LB_IO_8
IO_L03P_1/A0	P16	SP6_LB_IO_A3
IO_L05N_1/VREF_1	M14	SP6_LB_IO_9
IO_L05P_1	M13	SP6_LB_IO_3
IO_L06N_1/A3	K13	SP6_LB_WAIT0
IO_L06P_1/A2	L13	SP6_LB_nADV_ALE
IO_L07N_1/A5	M16	SP6_LB_IO_1
IO_L07P_1/A4	M15	SP6_LB_IO_A4
IO_L08N_1/A7	L16	SP6_LB_IO_0
IO_L08P_1/A6	L14	SP6_LB_IO_2
IO_L10N_1/A9	J13	SP6_LB_RE_nOE
IO_L10P_1/A8	J12	SP6_LB_WAIT3
IO_L11N_1/RHCLK1	K14	SP6_LB_nWE
IO_L11P_1/RHCLK0	K15	SP6_LB_IO_A9
IO_L12N_1/TRDY1/RHCLK3	J16	SP6_LB_IO_A5
IO_L12P_1/RHCLK2	K16	SP6_LB_IO_A7
IO_L14N_1/RHCLK5	H14	SP6_LB_IO_A2
IO_L14P_1/RHCLK4	J14	SP6_LB_IO_A6
IO_L15N_1/RHCLK7	H16	SP6_LB_IO_15
IO_L15P_1/IRDY1/RHCLK6	H15	SP6_LB_IO_5
IO_L16N_1/A11	F16	SP6_LB_IO_6
IO_L16P_1/A10	G16	SP6_LB_IO_7
IO_L17N_1/A13	G14	SP6_LB_IO_12
IO_L17P_1/A12	H13	SP6_LB_IO_A1
IO_L18N_1/A15	F15	SP6_LB_IO_13
IO_L18P_1/A14	E16	SP6_LB_IO_10
IO_L19N_1/A17	F14	SP6_LB_nCS4
IO_L19P_1/A16	G13	SP6_LB_nCS3
IO_L20N_1/A19	F13	SP6_LB_IO_A8
IO_L20P_1/A18	E14	SP6_LB_IO_11
IO_L22N_1/A21	D15	SP6_GPIO_1_N
IO_L22P_1/A20	D16	SP6_GPIO_1_P
IO_L23N_1/A23	D14	SP6_GPIO_2_N
IO_L23P_1/A22	E13	SP6_GPIO_2_P
IO_L24N_1/A25	C15	SP6_GPIO_3_N
IO_L24P_1/A24	C16	SP6_GPIO_3_P

XC3S200AN-5FTG256C

U29C

BANK 2

IO_L01N_2/M0	P4	SP3_SW7
IO_L01P_2/M1	N4	SP3_SW8
IO_L02N_2/CSO_B	T2	R322 22 SP6_GPIO33_4
IO_L02P_2/M2	R2	SP3_SW9
IO_L03N_2/VS2	T3	R321 22 SP6_GPIO33_3
IO_L03P_2/RDWR_B	R3	SP3_MICTOR_A3_7
IO_L04N_2/VS0	P5	SP3_MICTOR_NC_4
IO_L04P_2/VS1	N6	SP3_MICTOR_A0_0
IO_L05N_2	R5	SP3_MICTOR_NC_2
IO_L05P_2	T4	SP3_Red_nLED0
IO_L06N_2/D6	T6	SP3_Red_nLED3
IO_L06P_2/D7	T5	SP3_Red_nLED1
IO_L07N_2	P6	SP3_Red_nLED2
IO_L07P_2	N7	SP3_Red_nLED4
IO_L08N_2/D4	N8	SP3_Red_nLED5
IO_L08P_2/D5	P7	SP3_Green_nLED2
IO_L09N_2/GCLK13	T7	SP3_Green_nLED0
IO_L09P_2/GCLK12	R7	SP3_Green_nLED1
IO_L10N_2/GCLK15	T8	SP3_Green_nLED3
IO_L10P_2/GCLK14	P8	SP3_Green_nLED4
IO_L11N_2/GCLK1	P9	SP3_Green_nLED5
IO_L11P_2/GCLK0	N9	SP3_SP6_Config_RDWR
IO_L12N_2/GCLK3	T9	SP3_RevSel_nLED1
IO_L12P_2/GCLK2	R9	SP3_RevSel_nLED0
IO_L13N_2	M10	SP3_JTAG_Sel_nLED0
IO_L13P_2	N10	SP3_JTAG_Sel_nLED1
IO_L14N_2/MOSI/CSI_B	P10	SP3_ConfigMode_nLED0
IO_L14P_2	T10	SP3_ConfigMode_nLED1
IO_L15N_2/DOUT	R11	SP3_SW1
IO_L15P_2/AWAKE	T11	SP3_SW6
IO_L16N_2	N11	R308 22 SP6_GPIO33_2
IO_L16P_2	P11	R307 22 SP6_GPIO33_1
IO_L17N_2/D3	P12	SP3_SW5
IO_L17P_2/INIT_B	T12	
IO_L18N_2/D1	R13	SP3_SW3
IO_L18P_2/D2	T13	SP3_SW4
IO_L19N_2	P13	SP3_SW0
IO_L19P_2	N12	R323 22 SP6_GPIO33_5
IO_L20N_2/CCLK	R14	
IO_L20P_2/D0/DIN/MISO	T14	SP3_SW2

XC3S200AN-5FTG256C

R381 DNP

GND

3V3

R382 4k7

R383 4k7

3V3

S7

DIP_Switch

1	A1	B1	11	SP3_SW0	R335 10k
2	A2	B2	12	SP3_SW1	R334 10k
3	A3	B3	13	SP3_SW2	R333 10k
4	A4	B4	14	SP3_SW3	R332 10k
5	A5	B5	15	SP3_SW4	R331 10k
6	A6	B6	16	SP3_SW5	R330 10k
7	A7	B7	17	SP3_SW6	R329 10k
8	A8	B8	18	SP3_SW7	R328 10k
9	A9	B9	19	SP3_SW8	R327 10k
10	A10	B10	20	SP3_SW9	R326 470

GND

3V3

R309 R310 R311 R312 R313 R314 — 150 — D31 D32 D33 D34 D35 D36 — Green

SP3_Green_nLED0
SP3_Green_nLED1
SP3_Green_nLED2
SP3_Green_nLED3
SP3_Green_nLED4
SP3_Green_nLED5

3V3

R315 R316 R317 R318 R319 R320 — 330 — D37 D38 D39 D40 D41 D42 — Red

SP3_Red_nLED0
SP3_Red_nLED1
SP3_Red_nLED2
SP3_Red_nLED3
SP3_Red_nLED4
SP3_Red_nLED5

U29E

D6	IP_0
D12	IP_0
E6	IP_0
F7	IP_0
F9	IP_0
F10	IP_0
E9	IP_0/VREF_0
K12	IP_L04N_1/VREF_1
K11	IP_L04P_1
J11	IP_L09N_1
J10	IP_L09P_1/VREF_1
H11	IP_L13N_1
H10	IP_L13P_1
G11	IP_L21N_1
G12	IP_L21P_1/VREF_1
F11	IP_L25N_1
F12	IP_L25P_1/VREF_1
L7	IP_2
L8	IP_2
L9	IP_2/VREF_2
L10	IP_2/VREF_2
M7	IP_2/VREF_2
M8	IP_2/VREF_2
M11	IP_2/VREF_2
N5	IP_2/VREF_2
F4	IP_L04N_3/VREF_3
E4	IP_L04P_3
G5	IP_L06N_3/VREF_3
G6	IP_L06P_3
J7	IP_L13N_3
H7	IP_L13P_3
K6	IP_L21N_3
K5	IP_L21P_3
L6	IP_L25N_3/VREF_3
L5	IP_L25P_3

XC3S200AN-5FTG256C

U29D

BANK 3

IO_L01N_3	C1	PGOOD_2V5
IO_L01P_3	C2	PGOOD_3V3
IO_L02N_3	D3	PGOOD_5V
IO_L02P_3	D4	PGOOD_12V
IO_L03N_3	E1	SP3_SW_PB0
IO_L03P_3	D1	SP3_SW_PB1
IO_L05N_3	E2	SP3_MICTOR_A1_1
IO_L05P_3	E3	SP3_MICTOR_A1_0
IO_L07N_3	G4	SP3_MICTOR_A2_1
IO_L07P_3	F3	SP3_MICTOR_A0_7
IO_L08N_3/VREF_3	G1	SP3_MICTOR_A0_4
IO_L08P_3	F1	SP3_MICTOR_A0_6
IO_L09N_3	H4	SP3_MICTOR_A2_0
IO_L09P_3	G3	SP3_MICTOR_A0_3
IO_L10N_3	H5	SP3_MICTOR_A1_2
IO_L10P_3	H6	SP3_MICTOR_A1_3
IO_L11N_3/LHCLK1	H1	SP3_MICTOR_A0_2
IO_L11P_3/LHCLK0	G2	SP3_MICTOR_A0_5
IO_L12N_3/IRDY2/LHCLK3	J3	SP3_MICTOR_A2_4
IO_L12P_3/LHCLK2	H3	SP3_MICTOR_A0_1
IO_L14N_3/LHCLK5	J1	SP3_MICTOR_A2_3
IO_L14P_3/LHCLK4	J2	SP3_MICTOR_A2_2
IO_L15N_3/LHCLK7	K1	SP3_MICTOR_CLK_0
IO_L15P_3/TRDY2/LHCLK6	K3	SP3_MICTOR_CLK_1
IO_L16N_3	L2	SP3_MICTOR_A2_5
IO_L16P_3/VREF_3	L1	SP3_MICTOR_A2_6
IO_L17N_3	J6	SP3_MICTOR_A1_4
IO_L17P_3	J4	SP3_MICTOR_A1_5
IO_L18N_3	L3	SP3_MICTOR_A3_5
IO_L18P_3	K4	SP3_MICTOR_A1_6
IO_L19N_3	L4	SP3_MICTOR_A1_7
IO_L19P_3	M3	SP3_MICTOR_A3_6
IO_L20N_3	N1	SP3_MICTOR_A3_0
IO_L20P_3	M1	SP3_MICTOR_A2_7
IO_L22N_3	P1	SP3_MICTOR_A3_1
IO_L22P_3	N2	SP3_MICTOR_A3_3
IO_L23N_3	P2	SP3_MICTOR_A3_4
IO_L23P_3	R1	SP3_MICTOR_A3_2
IO_L24N_3	M4	SP3_MICTOR_NC_1
IO_L24P_3	N3	SP3_MICTOR_NC_3

XC3S200AN-5FTG256C

3V3

R300 10k

SW14

GND

3V3

R136 10k

SW13

GND

MICTOR DEBUG CONNECTOR

J48

SP3_MICTOR_CLK_0	5	CLK_0	CLK_1
			6 SP3_MICTOR_CLK_1
SP3_MICTOR_A3_7	7	A3_7	A1_7 8 SP3_MICTOR_A1_7
SP3_MICTOR_A3_6	9	A3_6	A1_6 10 SP3_MICTOR_A1_6
SP3_MICTOR_A3_5	11	A3_5	A1_5 12 SP3_MICTOR_A1_5
SP3_MICTOR_A3_4	13	A3_4	A1_4 14 SP3_MICTOR_A1_4
SP3_MICTOR_A3_3	15	A3_3	A1_3 16 SP3_MICTOR_A1_3
SP3_MICTOR_A3_2	17	A3_2	A1_2 18 SP3_MICTOR_A1_2
SP3_MICTOR_A3_1	19	A3_1	A1_1 20 SP3_MICTOR_A1_1
SP3_MICTOR_A3_0	21	A3_0	A1_0 22 SP3_MICTOR_A1_0
SP3_MICTOR_A2_7	23	A2_7	A0_7 24 SP3_MICTOR_A0_7
SP3_MICTOR_A2_6	25	A2_6	A0_6 26 SP3_MICTOR_A0_6
SP3_MICTOR_A2_5	27	A2_5	A0_5 28 SP3_MICTOR_A0_5
SP3_MICTOR_A2_4	29	A2_4	A0_4 30 SP3_MICTOR_A0_4
SP3_MICTOR_A2_3	31	A2_3	A0_3 32 SP3_MICTOR_A0_3
SP3_MICTOR_A2_2	33	A2_2	A0_2 34 SP3_MICTOR_A0_2
SP3_MICTOR_A2_1	35	A2_1	A0_1 36 SP3_MICTOR_A0_1
SP3_MICTOR_A2_0	37	A2_0	A0_0 38 SP3_MICTOR_A0_0
SP3_MICTOR_NC_1	1	NC_1	GND_1 39
SP3_MICTOR_NC_2	2	NC_2	GND_2 40
SP3_MICTOR_NC_3	3	NC_3	GND_3 41
SP3_MICTOR_NC_4	4	NC_4	GND_4 42
			GND_5 43

Tyco_5767004-2

GND

3V3

R336 R337 — 150 — D43 D44 — Green

SP3_JTAG_Sel_nLED0
SP3_JTAG_Sel_nLED1

3V3

R338 R339 — 150 — D45 D46 — Green

SP3_RevSel_nLED0
SP3_RevSel_nLED1

3V3

R340 R341 — 150 — D47 D48 — Green

SP3_ConfigMode_nLED0
SP3_ConfigMode_nLED1

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SP3_Bank1_2_3.SchDoc		Rev *
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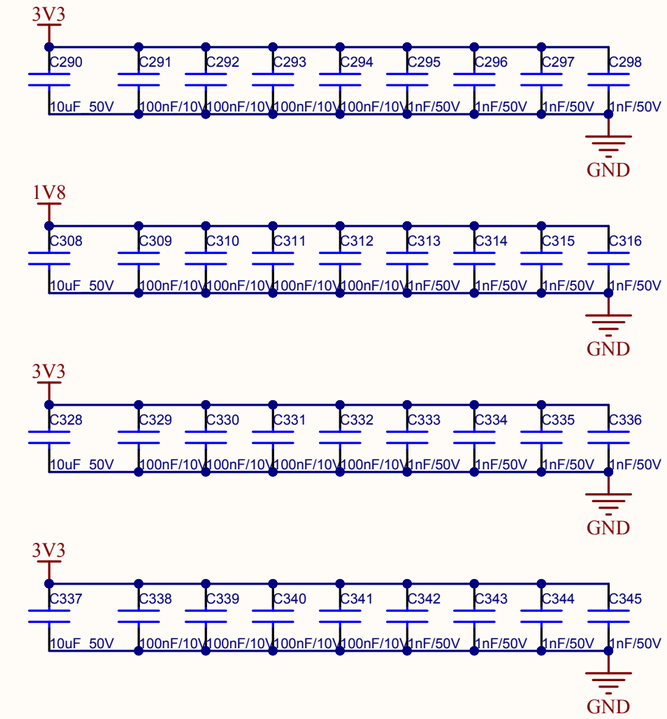

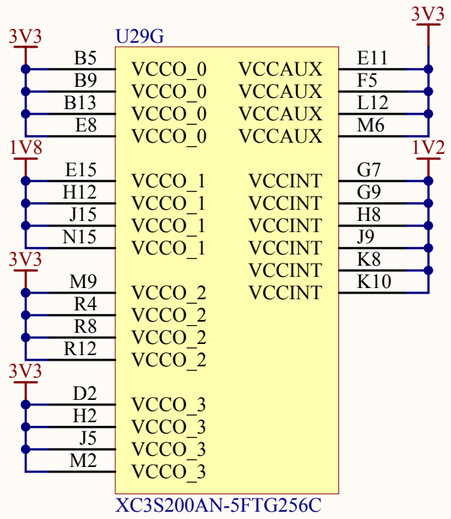

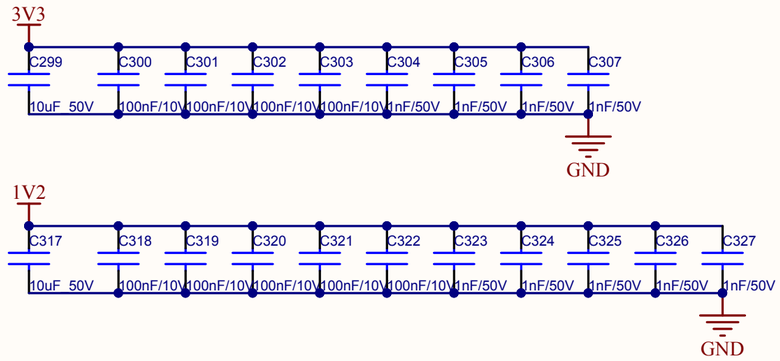

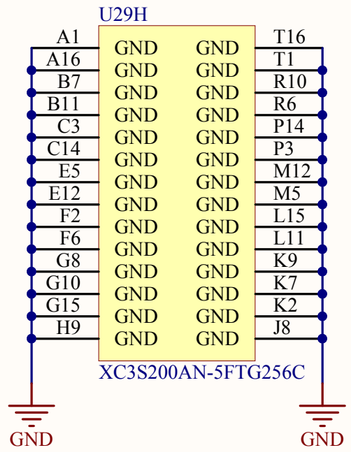

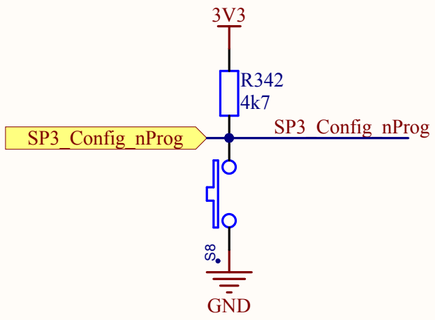

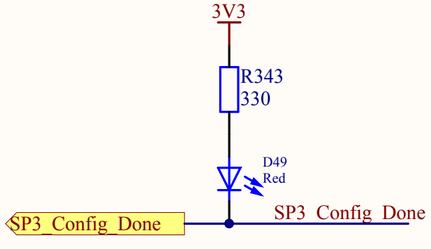

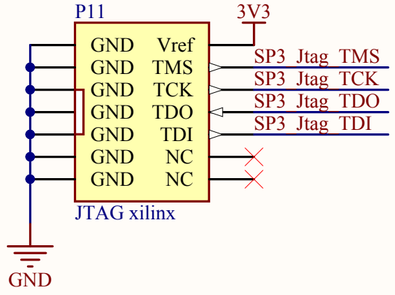

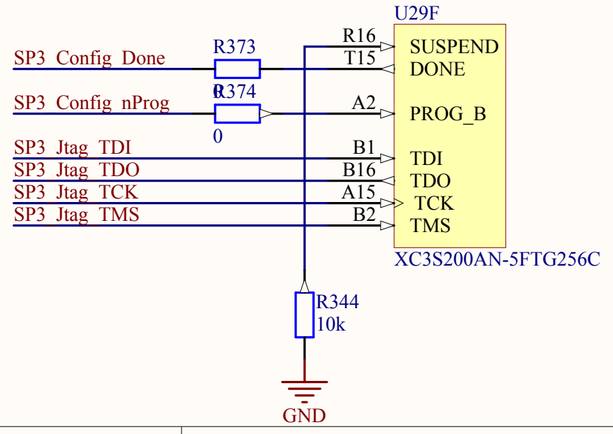

Revision OK 03.10.2012 OAN/VTT

R/DS PCB_Spartan6.PrjPCB	
SP3_Power_Config.SchDoc	Rev *
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Si SP3 pas configurée, la SP6 ne peut être configurée que par JTAG (SMT)

U29A

BANK 0

XC3S200AN-5FTG256C

IO_L01N_0	C13	Xcf32p_Data7
IO_L01P_0	D13	Xcf32p_Data3
IO_L02N_0	B14	Xcf32p_Data5
IO_L02P_0/VREF_0	B15	Xcf32p_nCEO
IO_L03N_0	D11	Xcf32p_nCE
IO_L03P_0	C12	Xcf32p_nCF
IO_L04N_0	A13	Xcf32p_Data4
IO_L04P_0	A14	Xcf32p_Data6
IO_L05N_0	A12	Xcf32p_Data2
IO_L05P_0	B12	Xcf32p_Rev_Sel_0
IO_L06N_0/VREF_0	E10	Xcf32p_OE_nRST
IO_L06P_0	D10	Xcf32p_BUSY
IO_L07N_0	A11	Xcf32p_Rev_nEn
IO_L07P_0	C11	Xcf32p_Rev_Sel_1
IO_L08N_0	A10	Xcf32p_Data1
IO_L08P_0	B10	Xcf32p_Data0
IO_L09N_0/GCLK5	D9	Xcf32p_p_CLK
IO_L09P_0/GCLK4	C10	Xcf32p_CLKout
IO_L10N_0/GCLK7	A9	SP3_Clk_100Mhz
IO_L10P_0/GCLK6	C9	SP6_ConfigSel_M0
IO_L11N_0/GCLK9	D8	SP6_ConfigSel_M1
IO_L11P_0/GCLK8	C8	
IO_L12N_0/GCLK11	B8	SP6_Config_p_CLK
IO_L12P_0/GCLK10	A8	Start_Config_SP6
IO_L13N_0	C7	SP6_Config_nProg
IO_L13P_0	A7	SP6_Config_Done
IO_L14N_0/VREF_0	E7	SP6_Config_nInit
IO_L14P_0	F8	SP6_Config_Busy
IO_L15N_0	B6	SP6_Config_Data0
IO_L15P_0	A6	SP6_Config_Data1
IO_L16N_0	C6	SP6_Config_Data2
IO_L16P_0	D7	SP6_Config_Data3
IO_L17N_0	C5	SP6_Config_Data4
IO_L17P_0	A5	SP6_Config_Data5
IO_L18N_0	B4	SP6_Config_Data6
IO_L18P_0	A4	SP6_Config_Data7
IO_L19N_0	B3	SP6_Config_CSI
IO_L19P_0	A3	JTAG_Chain_nEn
IO_L20N_0/PUDC_B	D5	JTAG_Chain_Sel_0
IO_L20P_0/VREF_0	C4	JTAG_Chain_Sel_1

Xcf32p_Data[7..0] — Xcf32p_Data[7..0]

3V3 — R354 4k7 — R355 4k7

Platform FLASH

Xcf32p_nCEO — Xcf32p_nCE — Xcf32p_nCF — Xcf32p_OE_nRST — Xcf32p_BUSY

3V3 — R356 4k7

R357 22 — Xcf32p_CLK — Xcf32p_CLK — Xcf32p_CLKout

R358 22 — SP3_25MHz_SP3 — SP6_Config_CLK — SP6_Config_CLK

SP6_Config_CSI

SP6_Config_Data[7..0] — SP6_Config_Data[7..0]

JTAG Selection :
00 : Not used
01 : Not used
10 : SMT module
11 : Header

Default :
Mux enable
SMT Module

FPGA Bitstream Selection :
00 : BS 0
01 : BS 1
10 : BS 2
11 : BS 3

Default :
XCF disable
BS 0

FPGA Configuration Selection :
00 : Master Select MAP / BPI
01 : Master Serial / SPI
10 : Slave Select MAP
11 : Slave Serial

Default :
Master Select MAP

3V3 — R281 10k

JTAG_Chain_nEn — JTAG_Chain_nEn
JTAG_Chain_Sel_0 — JTAG_Chain_Sel_0
JTAG_Chain_Sel_1 — JTAG_Chain_Sel_1

R279 10k — R280 10k — GND

3V3 — R282 10k

Xcf32p_Rev_nEn — Xcf32p_Rev_nEn
Xcf32p_Rev_Sel_0 — Xcf32p_Rev_Sel_0
Xcf32p_Rev_Sel_1 — Xcf32p_Rev_Sel_1

R283 10k — R284 10k — GND

SP6_ConfigSel_M0 — SP6_ConfigSel_M0
SP6_ConfigSel_M1 — SP6_ConfigSel_M1

R285 10k — R286 10k — GND

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3V3 — R290 330 — D30 Red — R155 0 — SP6_Config_Done — SP6_Config_Done

3V3 — R291 4k7 — Start_Config_SP6 — S6 — GND

OSCILLATOR 100MHZ

3V3 — R292 10k — C272 0.01uF — GND

Y5: VCC (4), En Out (1), Gnd (2) — 100MHz/1V8-3V3 — R293 22 — SP3_Clk_100Mhz

GND — S8

3V3 — R287 4k7

3V3 — R288 2k4

3V3 — R289 2k4

SP6_Config_nProg — SP6_Config_nProg
SP6_Config_nInit — SP6_Config_nInit
SP6_Config_Busy — SP6_Config_Busy

R/DS PCB_Spartan6.PrjPCB	
SP3_SP6_Configuration.SchDoc	Rev *
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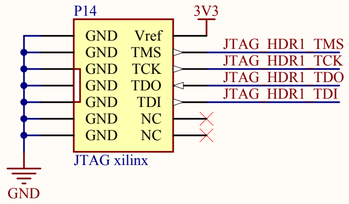
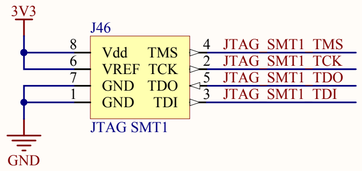
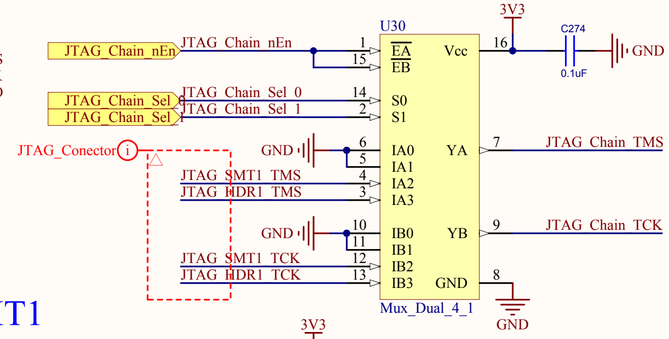
JTAG Multiplexer

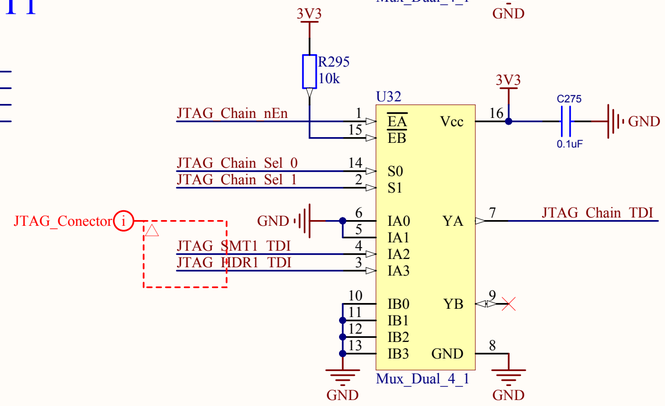
JTAG "11" : HEADER



JTAG "10" : USB SMT1

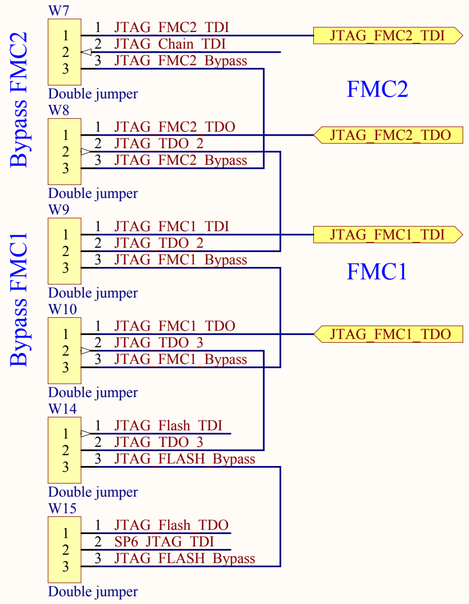




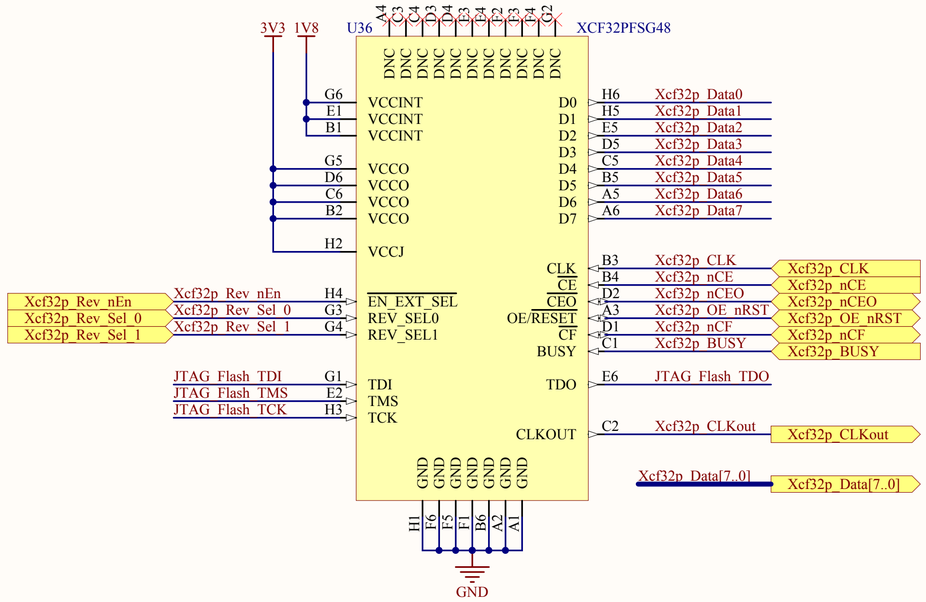


FMC Configuration

Bypass : Jumper 2-3



XCF32p Configuration



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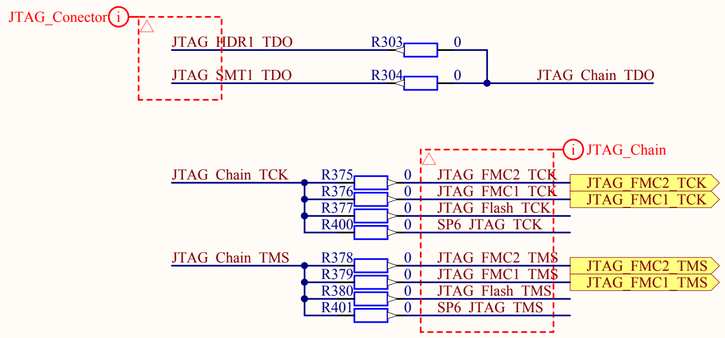
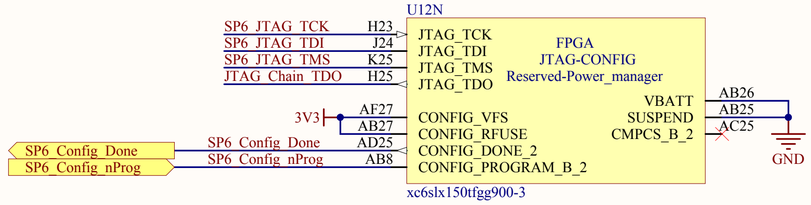


FPGA Configuration

DONE/PROG: VCCO_2 @ 3V3
JTAG: VCCaux @ 3V3



R~~DS~~ PCB_Spartan6.PrjPCB	
SP6_Jtag_Chain.SchDoc	Rev *
Drawn by: YNG	Date: 10.10.2012
Approved by: *	Page * of *