Notes:

1) Printed circuit board is controlled impedance.

2) Put multiple vias on Sonata's power pad for heat dissipation.

3) J6 and J8 to J19 are 2mm pitch and 0.8mm diameter.

4) Future revisions of the Phy will include TI's TLK100

DIFFERENTIAL PAIRS

PAGE 2 - 90 OHM
- PG2_GPIO42
- PG5_GPIO45

PAGE 3 - 90 OHM
- M3_USB0DM
- PG5_GPIO45

PAGE 7 - 100 OHM
- TX+
- TX-
- RX+
- RX-

SCHEMATIC CONTENTS:

SH01 - TITLE
SH02 - CONCERTO
SH03 - USB H/D
SH04 - ISO JTAG USB
SH05 - PHY + MAG (SMSC)

REVISION STATUS OF SHEETS

REV	A	A	A	A	A	A			
SH									
REV	A	A	A	A	A	A	A		
SH									
REV	A	A	A	A	A	A	A	NEXT ASSY	USED ON
SH								APPLICATION	

DWN	DATE
CHK	DATE
ENGR	DATE
ENGR-MGR	DATE
QA	DATE
MFG	DATE
RLSE	DATE

Texas Instruments

Title: Concerto Control Card - F28M35xx

Page Contents: Layout info, schematic notes

Date: Tuesday, July 12, 2011

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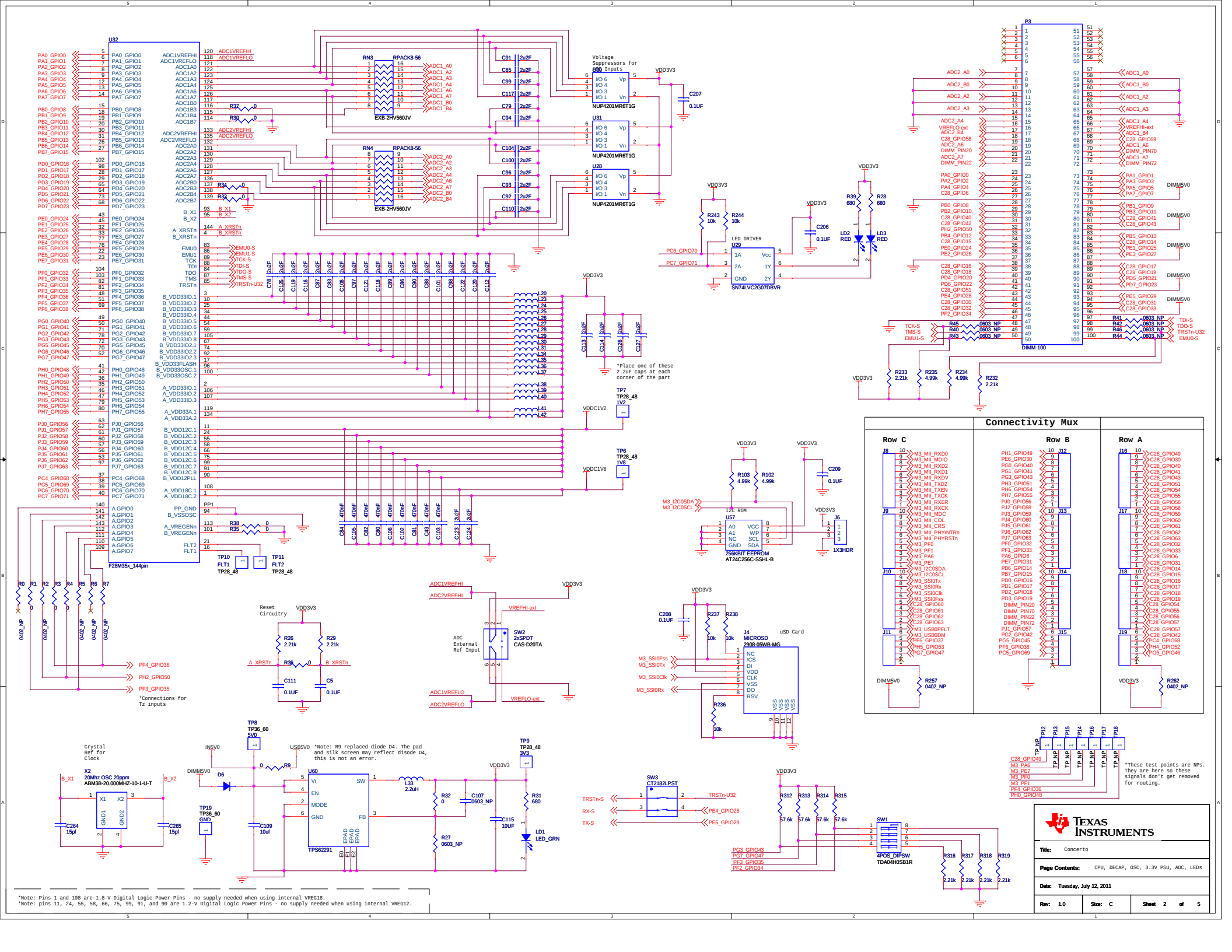


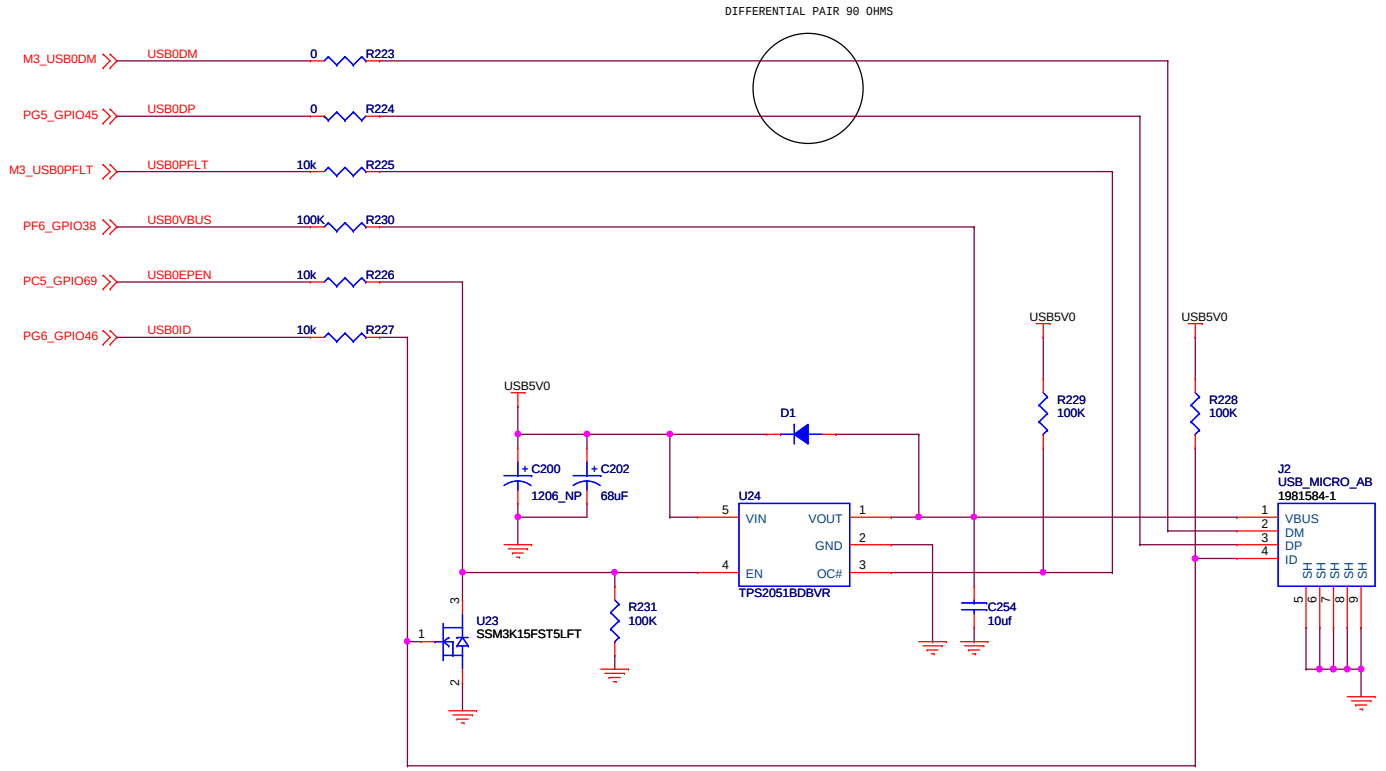
*Place one of these 2.2uF caps at each corner of the part

*Connections for Tz inputs

*Note: R9 replaced diode D4. The pad and silk screen may reflect disode D4, this is not an error.

*These test points are NPs. They are here so these signals don't get removed for routing.

*Note: Pins 1 and 108 are 1.8-V Digital Logic Power Pins - no supply needed when using internal VREG18.
*Note: pins 11, 24, 55, 58, 66, 75, 99, 91, and 90 are 1.2-V Digital Logic Power Pins - no supply needed when using internal VREG12.



Title: USB H/D		
Page Contents: USB uAB Conn, USB Device Power Switch		
Date: Monday, July 11, 2011		
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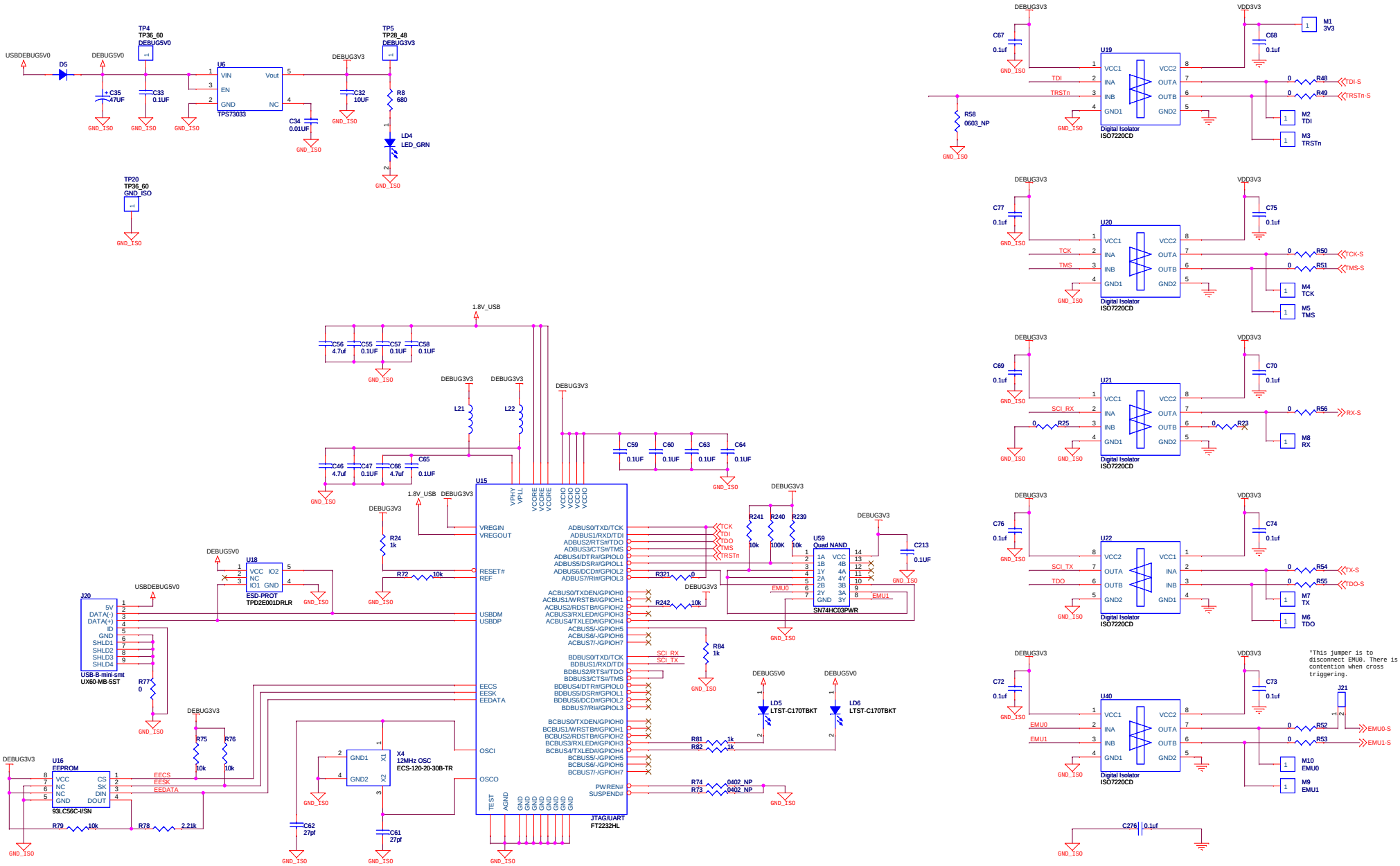
TP4
TP36_60
DEBUG5V0
TP5
TP28_48
DEBUG3V3
USBDEBUG5V0
DEBUG5V0
D5
U6
VIN
Vout
EN
GND
NC
TPS73033
C35
47UF
C33
0.1UF
C32
10UF
C34
0.01UF
R8
680
LD4
LED_GRN
GND_ISO
TP20
TP36_60
GND_ISO
1.8V_USB
C56
4.7uf
C55
0.1UF
C57
0.1UF
C58
0.1UF
L21
L22
C46
4.7uf
C47
0.1UF
C66
4.7uf
C65
0.1UF
C59
0.1UF
C60
0.1UF
C63
0.1UF
C64
0.1UF
U15
VPHY
VPLL
VCORE
VCCIO
R24
1k
R72
10k
U18
ESD-PROT
TPD2E001DRLR
J20
USB-B-mini-smt
UX60-MB-SST
R77
0
USBDM
USBDP
R75
10k
R76
10k
U16
EEPROM
93LC56C-I/SN
EECS
EESK
EEDATA
R79
10k
R78
2.21k
X4
12MHz OSC
ECS-120-20-30B-TR
OSCI
OSCO
C62
27pf
C61
27pf
TEST
AGND
JTAG/UART
FT2232HL
ADBUS0/TXD/TCK
ADBUS1/RXD/TDI
ADBUS2/RTS#/TDO
ADBUS3/CTS#/TMS
ADBUS4/DTR#/GPIOL0
ADBUS5/DSR#/GPIOL1
ADBUS6/DCD#/GPIOL2
ADBUS7/RI#/GPIOL3
ACBUS0/TXDEN/GPIOH0
ACBUS1/WRSTB#/GPIOH1
ACBUS2/RDSTB#/GPIOH2
ACBUS3/RXLED#/GPIOH3
ACBUS4/TXLED#/GPIOH4
ACBUS5/-/GPIOH5
ACBUS6/-/GPIOH6
ACBUS7/-/GPIOH7
BDBUS0/TXD/TCK
BDBUS1/RXD/TDI
BDBUS2/RTS#/TDO
BDBUS3/CTS#/TMS
BDBUS4/DTR#/GPIOL0
BDBUS5/DSR#/GPIOL1
BDBUS6/DCD#/GPIOL2
BDBUS7/RI#/GPIOL3
BCBUS0/TXDEN/GPIOH0
BCBUS1/WRSTB#/GPIOH1
BCBUS2/RDSTB#/GPIOH2
BCBUS3/RXLED#/GPIOH3
BCBUS4/TXLED#/GPIOH4
BCBUS5/-/GPIOH5
BCBUS6/-/GPIOH6
BCBUS7/-/GPIOH7
PWREN#
SUSPEND#
TCK
TDI
TDO
TMS
TRSTn
R241
R240
R239
10k
100K
10k
U59
Quad NAND
SN74HC03PWR
R321
0
R242
10k
EMU0
EMU1
C213
0.1UF
SCI_RX
SCI_TX
R84
1k
LD5
LTST-C170TBKT
LD6
LTST-C170TBKT
R81
1k
R82
1k
R74
0402_NP
R73
0402_NP
C67
0.1uf
U19
Digital Isolator
ISO7220CD
TDI
TRSTn
R58
0603_NP
C68
0.1uf
M1
3V3
R48
R49
TDI-S
TRSTn-S
M2
TDI
M3
TRSTn
C77
0.1uf
U20
TCK
TMS
C75
0.1uf
R50
R51
TCK-S
TMS-S
M4
TCK
M5
TMS
C69
0.1uf
U21
SCI_RX
R25
R23
C70
0.1uf
R56
RX-S
M8
RX
C76
0.1uf
U22
SCI_TX
TDO
C74
0.1uf
R54
R55
TX-S
TDO-S
M7
TX
M6
TDO
C72
0.1uf
U40
EMU0
EMU1
C73
0.1uf
R52
R53
EMU0-S
EMU1-S
M10
EMU0
M9
EMU1
J21
*This jumper is to disconnect EMU0. There is contention when cross triggering.
C276
0.1uf
VDD3V3
DEBUG3V3
Texas Instruments
Title: ISO JTAG USB
Page Contents: USB-to-JTAG, digital iso, serial debug
Date: Monday, July 11, 2011
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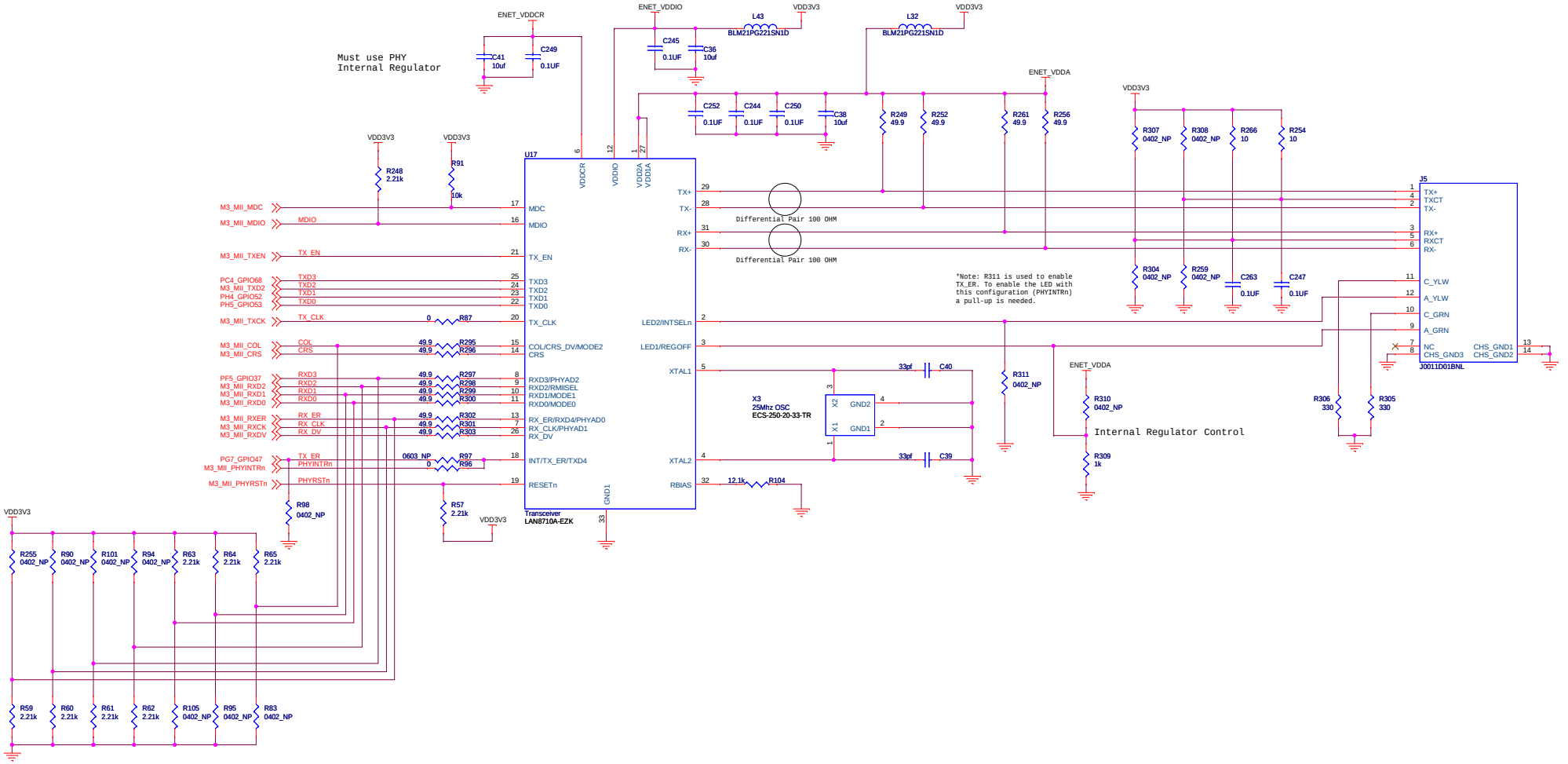

Title: PHY + MAG (SMSC)		
Page Contents: MII connections for external PHY		
Date: Tuesday, July 12, 2011		
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