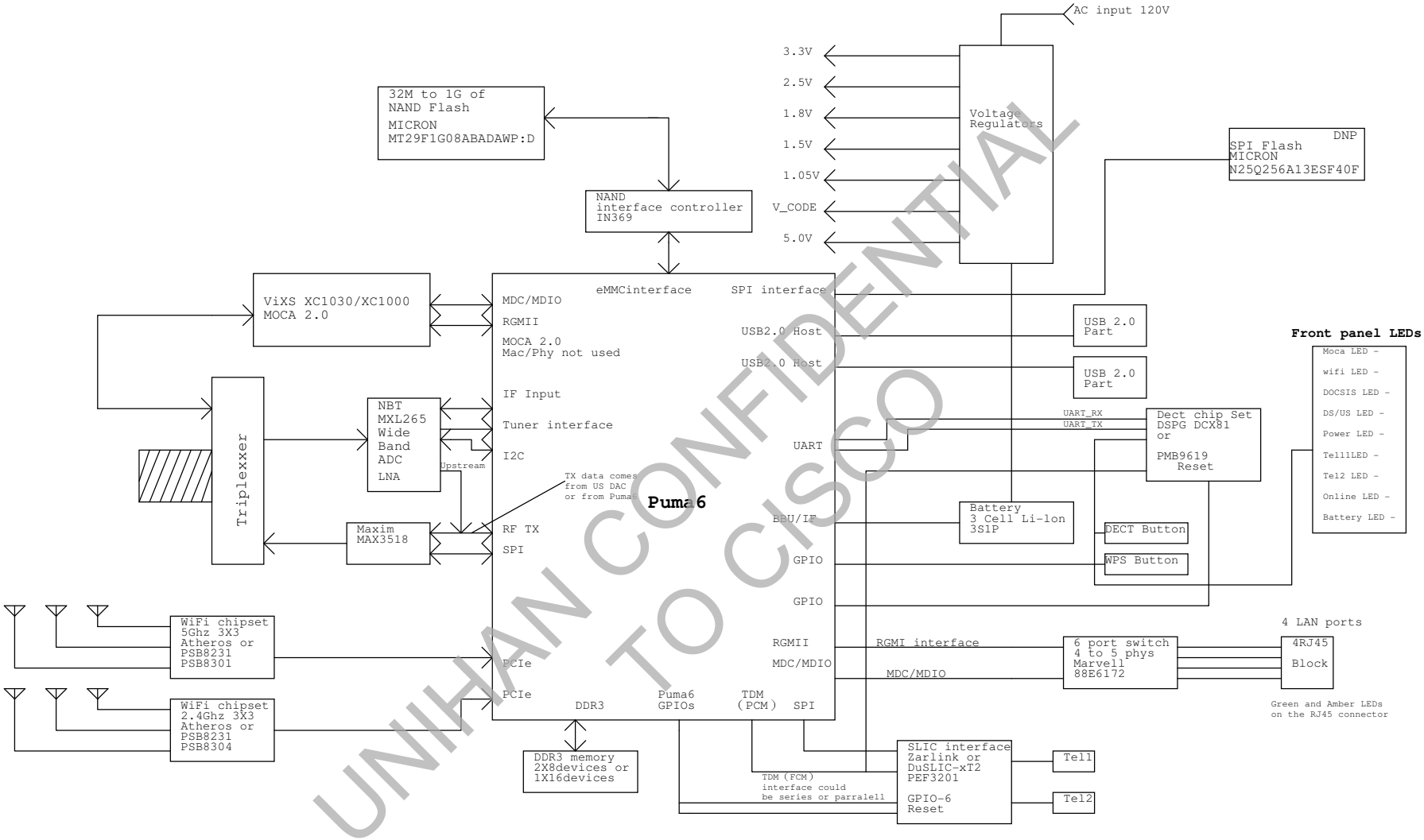
Tyrik_Li
2012/12/28

PEGATRON Title : CABLE MODEM

01-TITLE PAGE Engineer: Tyrik_Li

Size	Project Name	Rev
Custom	DPC3939_P2	4.00

Date: Friday, January 04, 2013 Sheet 1 of 27

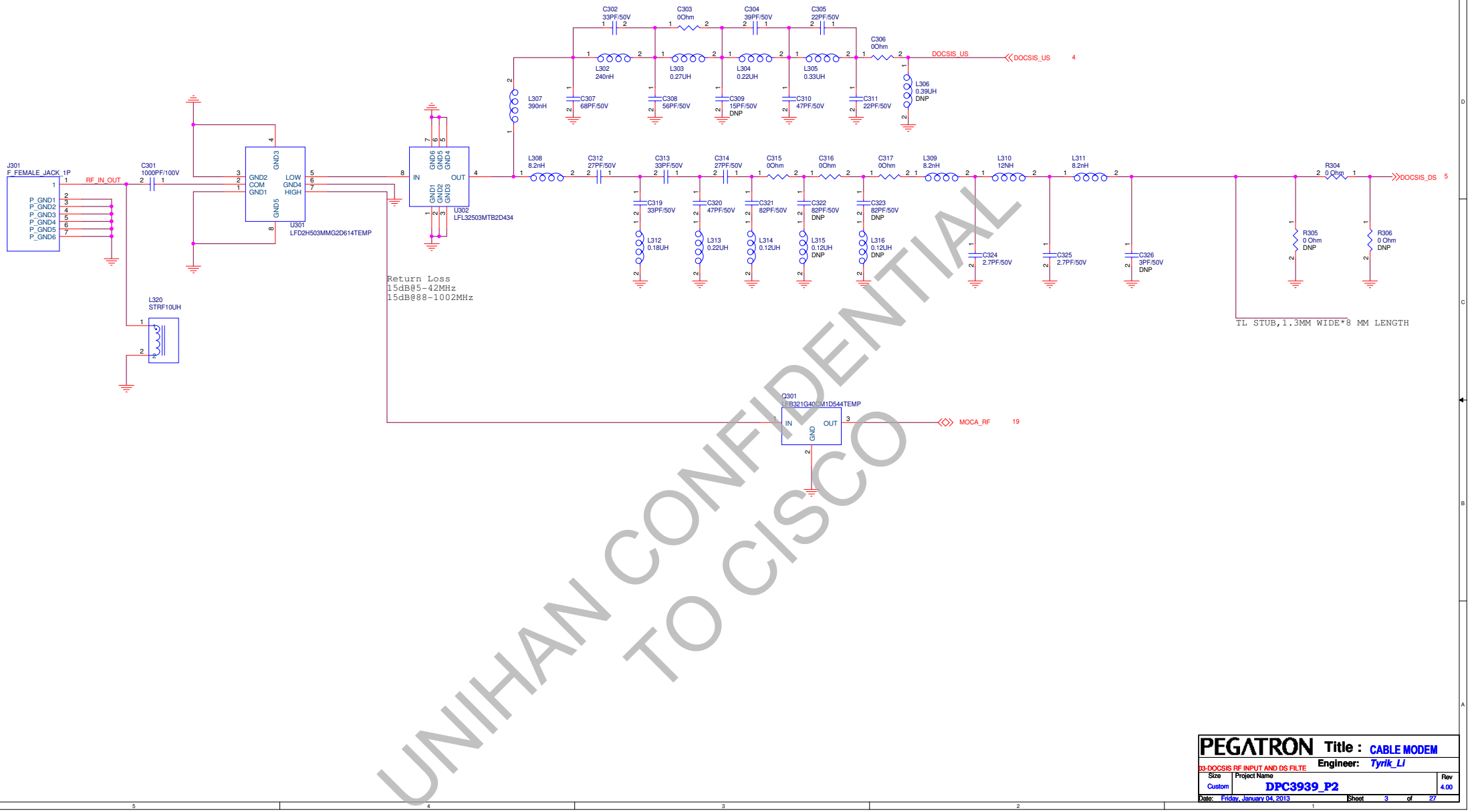


PEGATRON Title : CABLE MODEM

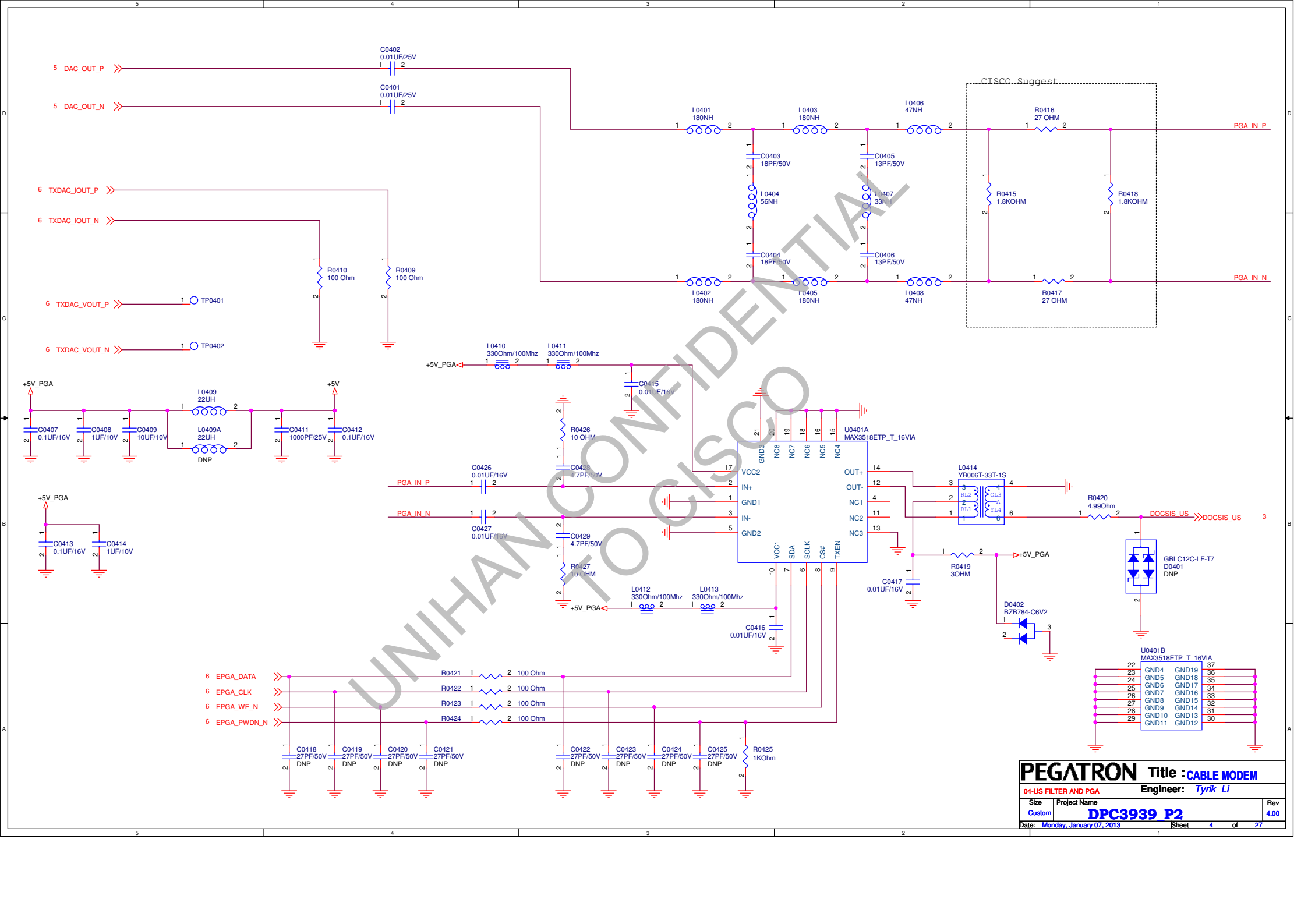
02-BLOCK DIAGRAM Engineer: Tyrik_Li

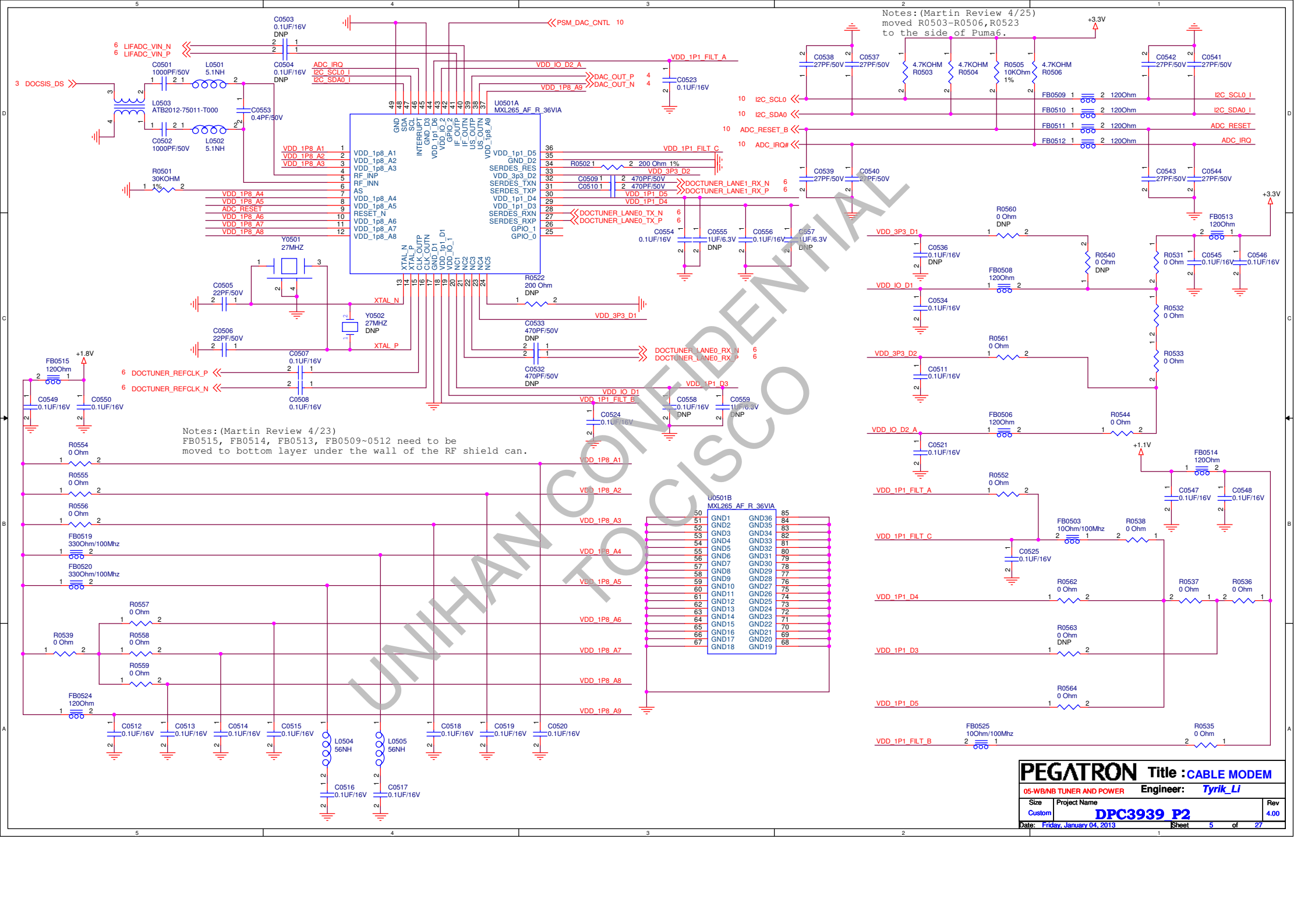
Size	Project Name	Rev
Custom	DPC3939_P2	4.00

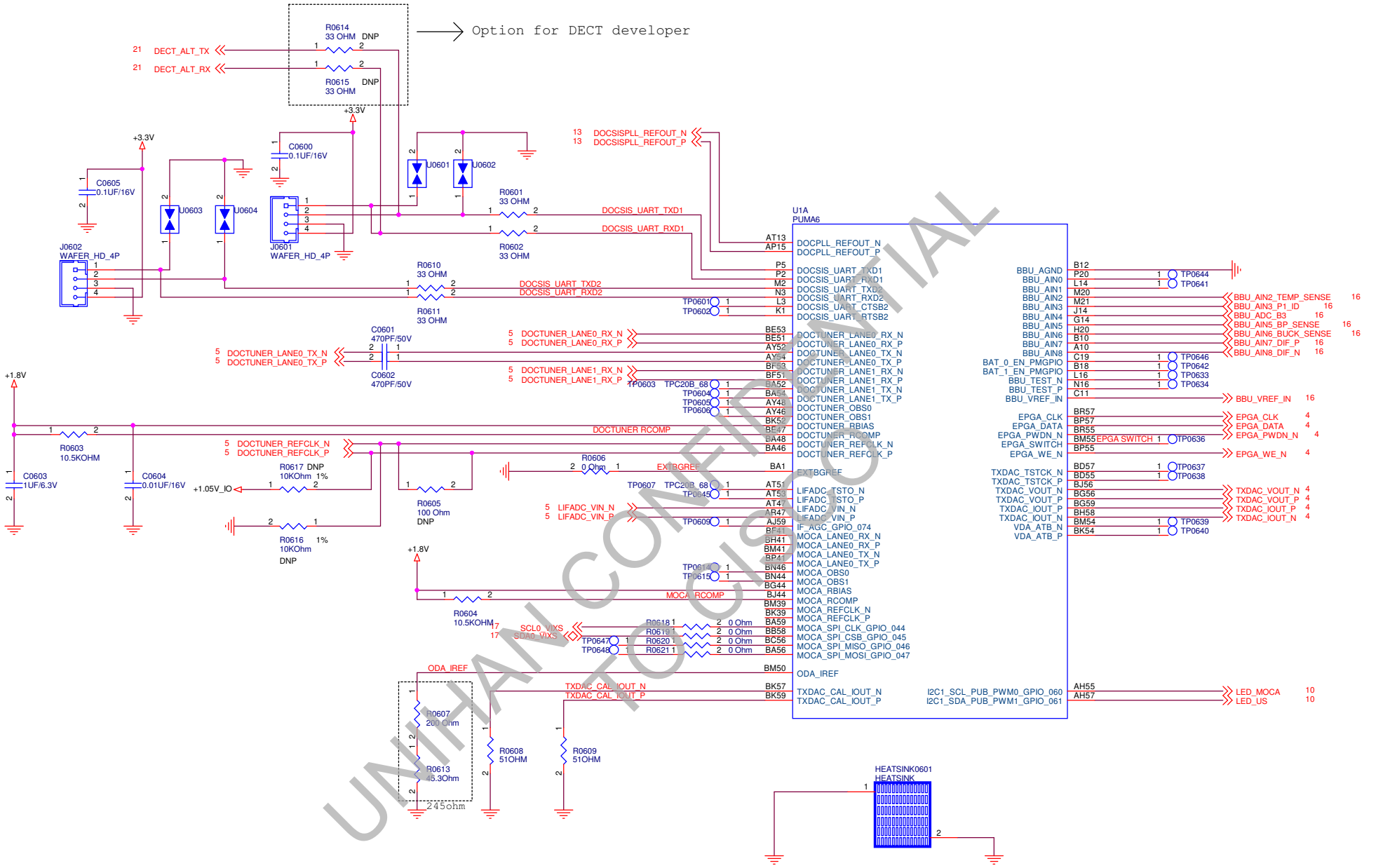
Date: Friday, January 04, 2013 Sheet 2 of 27



PEGATRON Title : CABLE MODEM
Engineer: Tyrik_Li
03-DOCSIS RF INPUT AND DS FILTE
Size: Custom | Project Name: DPC3939_P2 | Rev: 4.00
Date: Friday, January 04, 2013 | Sheet 3 of 27


5 DAC_OUT_P
5 DAC_OUT_N
C0402 0.01UF/25V
C0401 0.01UF/25V
CISCO Suggest
L0401 180NH
L0403 180NH
L0406 47NH
R0416 27 OHM
PGA_IN_P
C0403 18PF/50V
C0405 13PF/50V
L0404 56NH
L0407 33NH
C0404 18PF/50V
C0406 13PF/50V
R0415 1.8KOHM
R0418 1.8KOHM
6 TXDAC_IOUT_P
6 TXDAC_IOUT_N
R0410 100 Ohm
R0409 100 Ohm
L0402 180NH
L0405 180NH
L0408 47NH
R0417 27 OHM
PGA_IN_N
6 TXDAC_VOUT_P
TP0401
6 TXDAC_VOUT_N
TP0402
L0410 330Ohm/100Mhz
L0411 330Ohm/100Mhz
+5V_PGA
C0415 0.01UF/16V
+5V_PGA
L0409 22UH
+5V
C0407 0.1UF/16V
C0408 1UF/10V
C0409 10UF/10V
L0409A 22UH
C0411 1000PF/25V
C0412 0.1UF/16V
DNP
R0426 10 OHM
C0426 0.01UF/16V
PGA_IN_P
C0428 4.7PF/50V
U0401A MAX3518ETP_T_16VIA
GND3 NC8 NC7 NC6 NC5 NC4
VCC2 IN+ GND1 IN- GND2
OUT+ OUT- NC1 NC2 NC3
L0414 YB006T-33T-1S
R0420 4.99Ohm
DOCSIS_US
DOCSIS_US 3
+5V_PGA
C0413 0.1UF/16V
C0414 1UF/10V
PGA_IN_N
C0427 0.01UF/16V
C0429 4.7PF/50V
R0427 10 OHM
VCC1 SDA SCLK CS# TXEN
L0412 330Ohm/100Mhz
L0413 330Ohm/100Mhz
+5V_PGA
C0416 0.01UF/16V
C0417 0.01UF/16V
R0419 3OHM
+5V_PGA
D0402 BZB784-C6V2
GBLC12C-LF-T7
D0401
DNP
U0401B MAX3518ETP_T_16VIA
GND4 GND5 GND6 GND7 GND8 GND9 GND10 GND11
GND19 GND18 GND17 GND16 GND15 GND14 GND13 GND12
6 EPGA_DATA
6 EPGA_CLK
6 EPGA_WE_N
6 EPGA_PWDN_N
R0421 100 Ohm
R0422 100 Ohm
R0423 100 Ohm
R0424 100 Ohm
C0418 27PF/50V DNP
C0419 27PF/50V DNP
C0420 27PF/50V DNP
C0421 27PF/50V DNP
C0422 27PF/50V DNP
C0423 27PF/50V DNP
C0424 27PF/50V DNP
C0425 27PF/50V DNP
R0425 1KOhm
UNIHAN CONFIDENTIAL TO CISCO
PEGATRON
Title : CABLE MODEM
04-US FILTER AND PGA
Engineer: Tyrik_Li
Size Custom
Project Name DPC3939_P2
Rev 4.00
Date: Monday, January 07, 2013
Sheet 4 of 27


Notes:(Martin Review 4/25)
moved R0503-R0506,R0523
to the side of Puma6.
Notes:(Martin Review 4/23)
FB0515, FB0514, FB0513, FB0509~0512 need to be
moved to bottom layer under the wall of the RF shield can.
U0501A
MXL265_AF_R_36VIA
U0501B
MXL265_AF_R_36VIA
PEGATRON
Title : CABLE MODEM
05-WB/NB TUNER AND POWER
Engineer: Tyrik_Li
Size
Custom
Project Name
DPC3939_P2
Rev
4.00
Date: Friday, January 04, 2013
Sheet 5 of 27
UNIHAN CONFIDENTIAL
TO CISCO

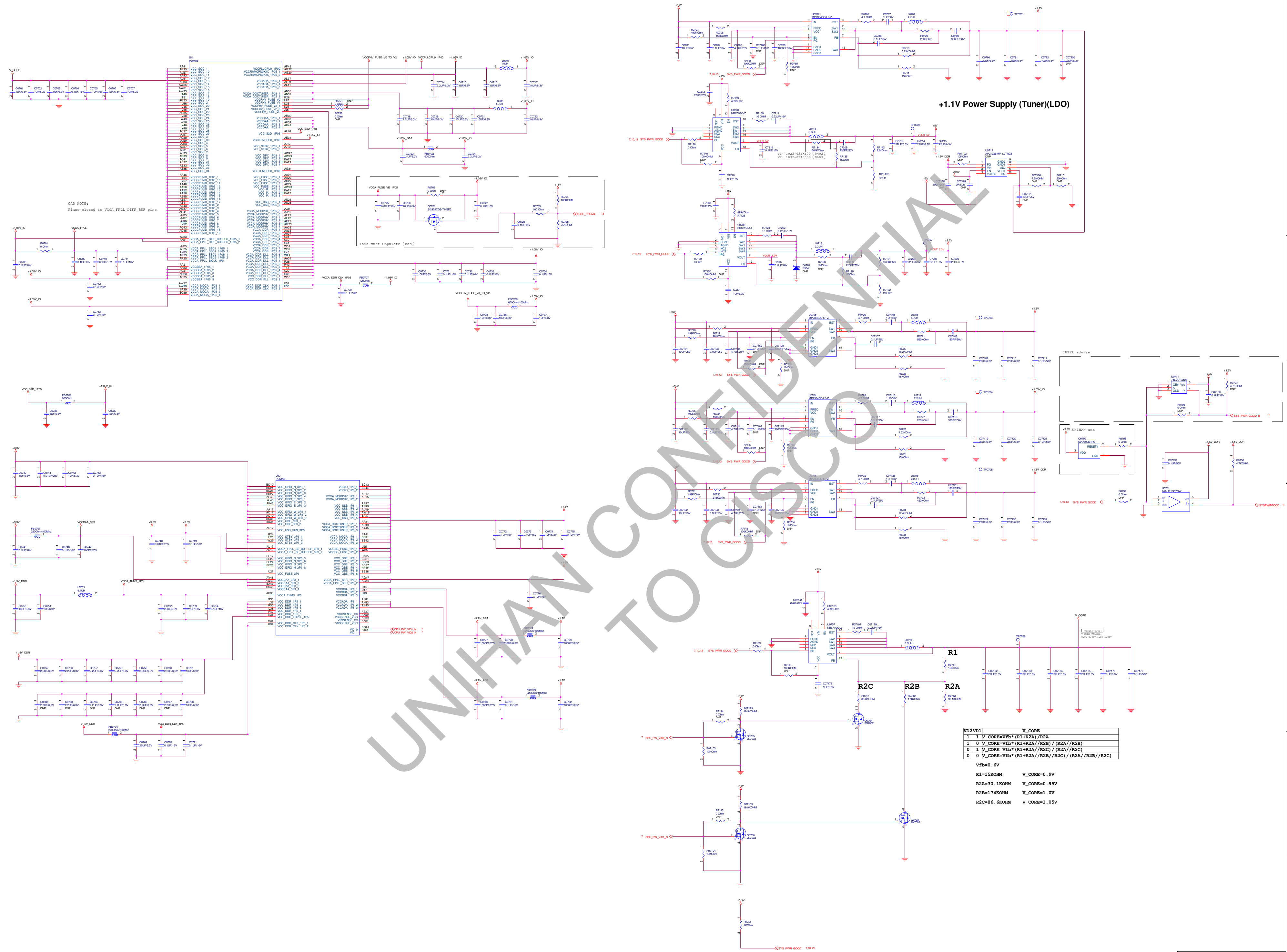


PEGATRON Title : CABLE MODEM

06-ADC Engineer: Tyrik_Li

Size	Project Name	Rev
Custom	DPC3939_P2	4.00

Date: Friday, January 04, 2013 Sheet 6 of 27



VD2	VD1	V_CORE
1	1	V_CORE=Vfb*(R1+R2A)/R2A
1	0	V_CORE=Vfb*(R1+R2A//R2B)/(R2A//R2B)
0	1	V_CORE=Vfb*(R1+R2A//R2C)/(R2A//R2C)
0	0	V_CORE=Vfb*(R1+R2A//R2B//R2C)/(R2A//R2B//R2C)

Vfb=0.6V

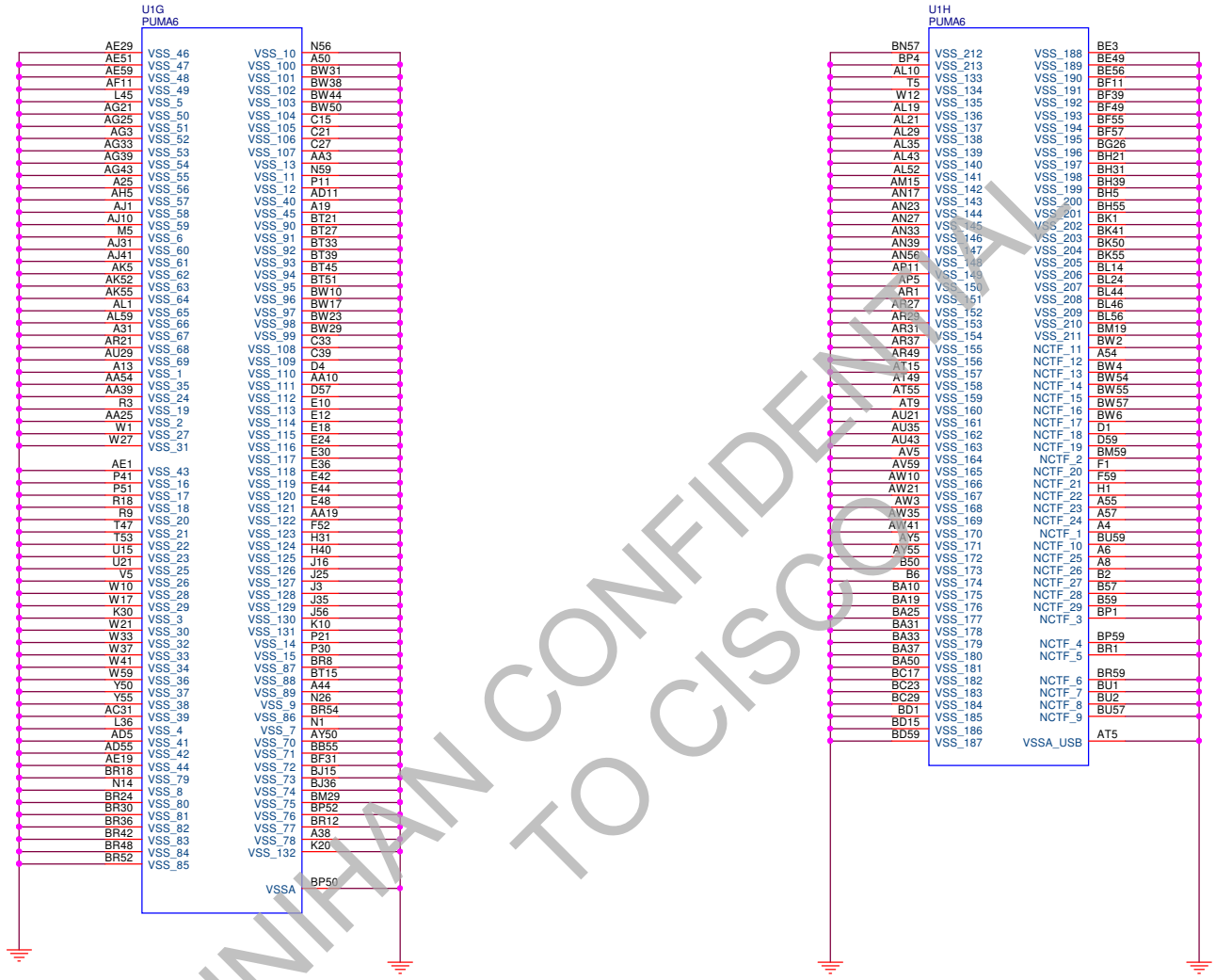
R1=15KOHM V_CORE=0.9V

R2A=30.1KOHM V_CORE=0.95V

R2B=174KOHM V_CORE=1.0V

R2C=86.6KOHM V_CORE=1.05V

PEGATRON	Title : CABLE MODEM		
07-POWER AND POWER FILTER	Engineer: Tyrik_Li		
Size E	Project Name DPC3939_P2		Rev 4.00
Date: Friday, January 04, 2013	Sheet 7 of 27		

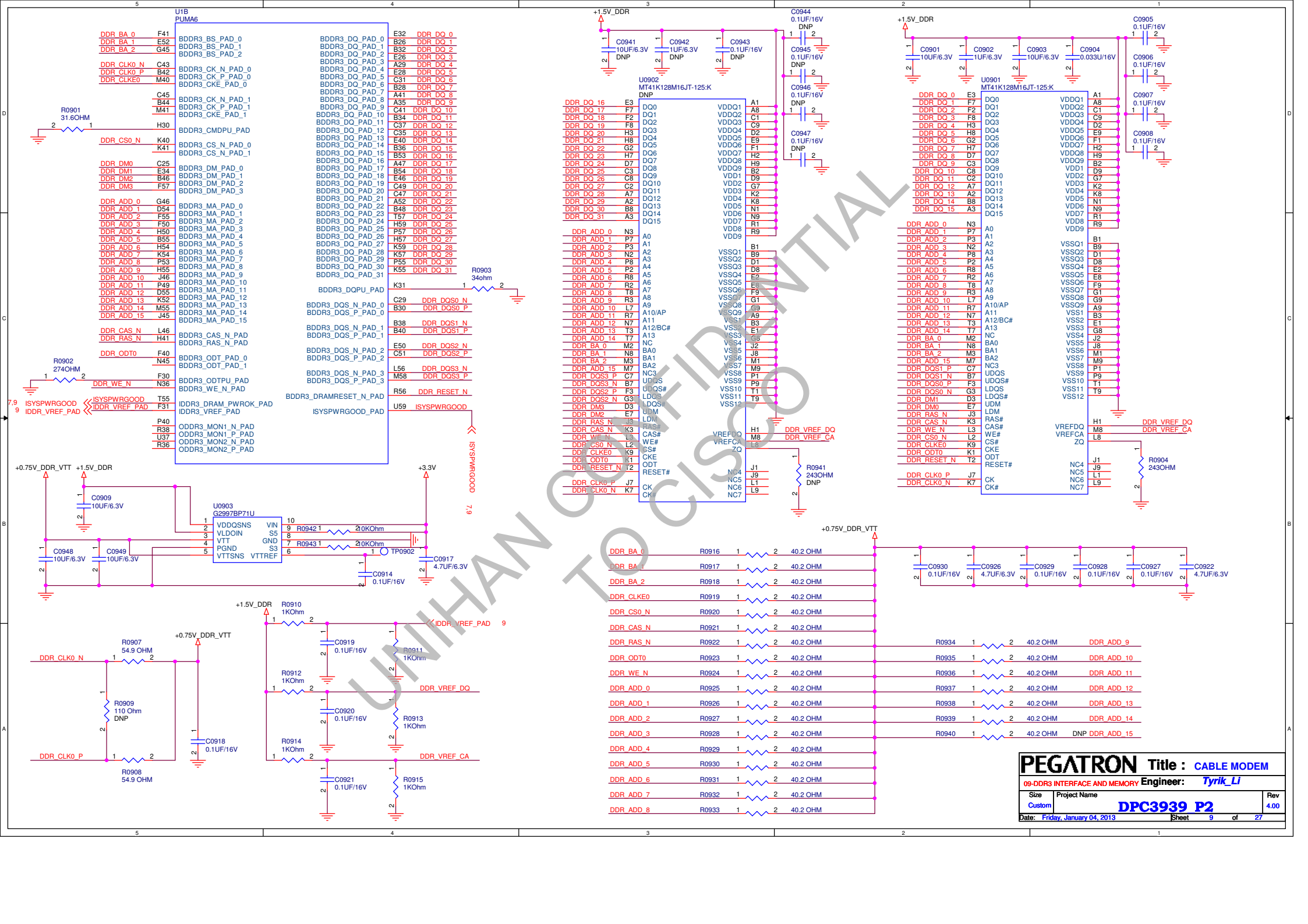


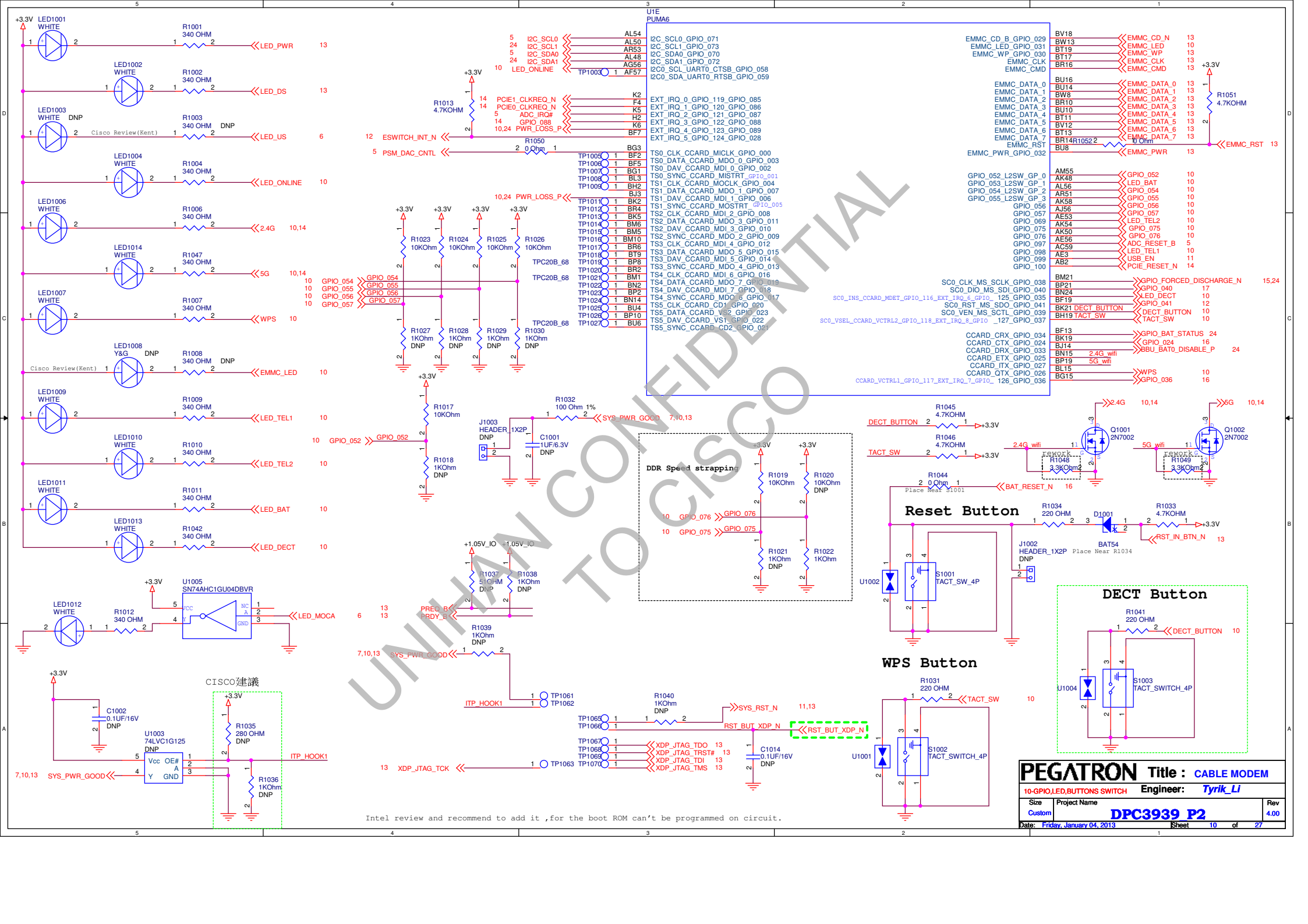
PEGATRON Title : CABLE MODEM

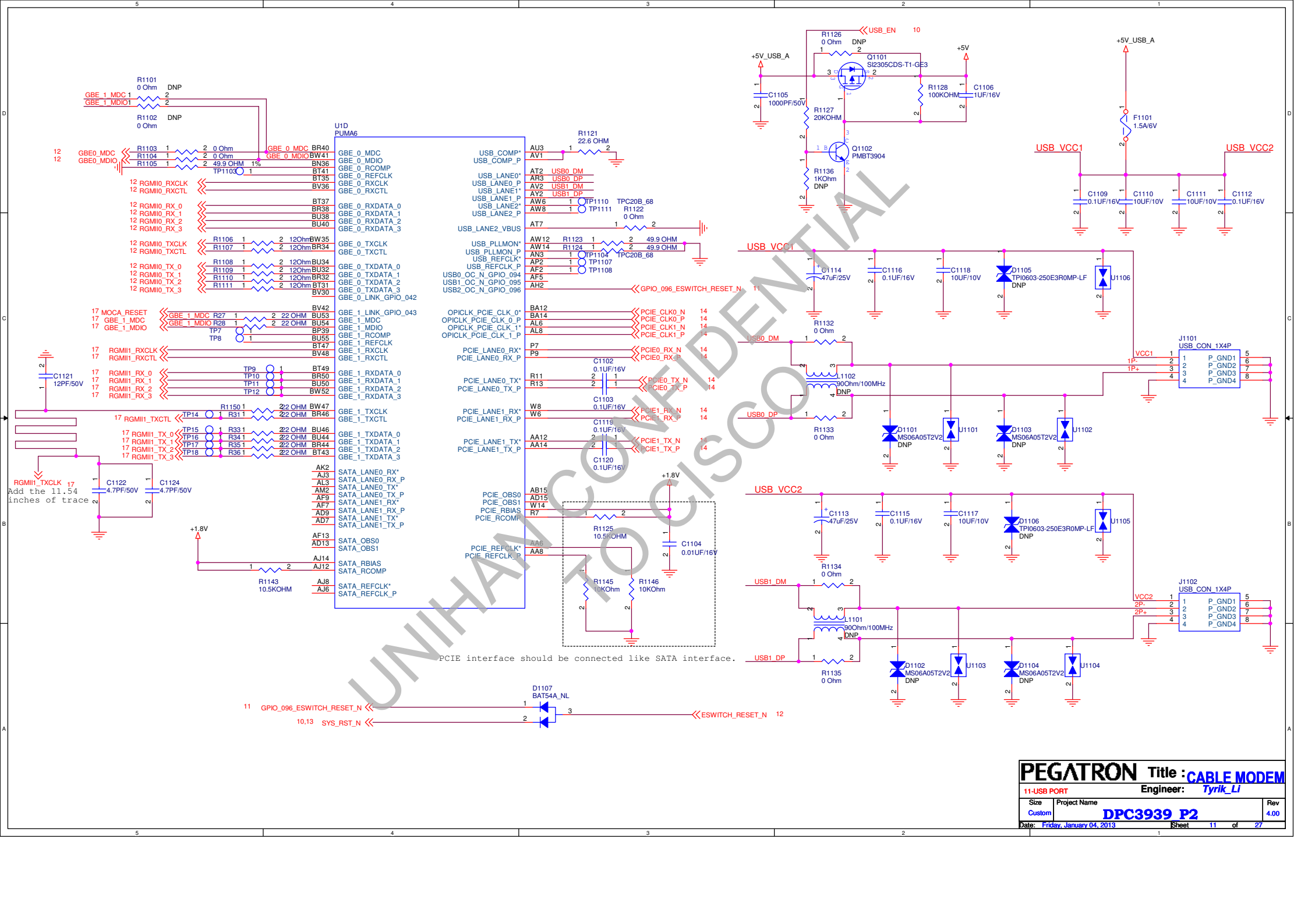
08-GND Engineer: Tyrik_Li

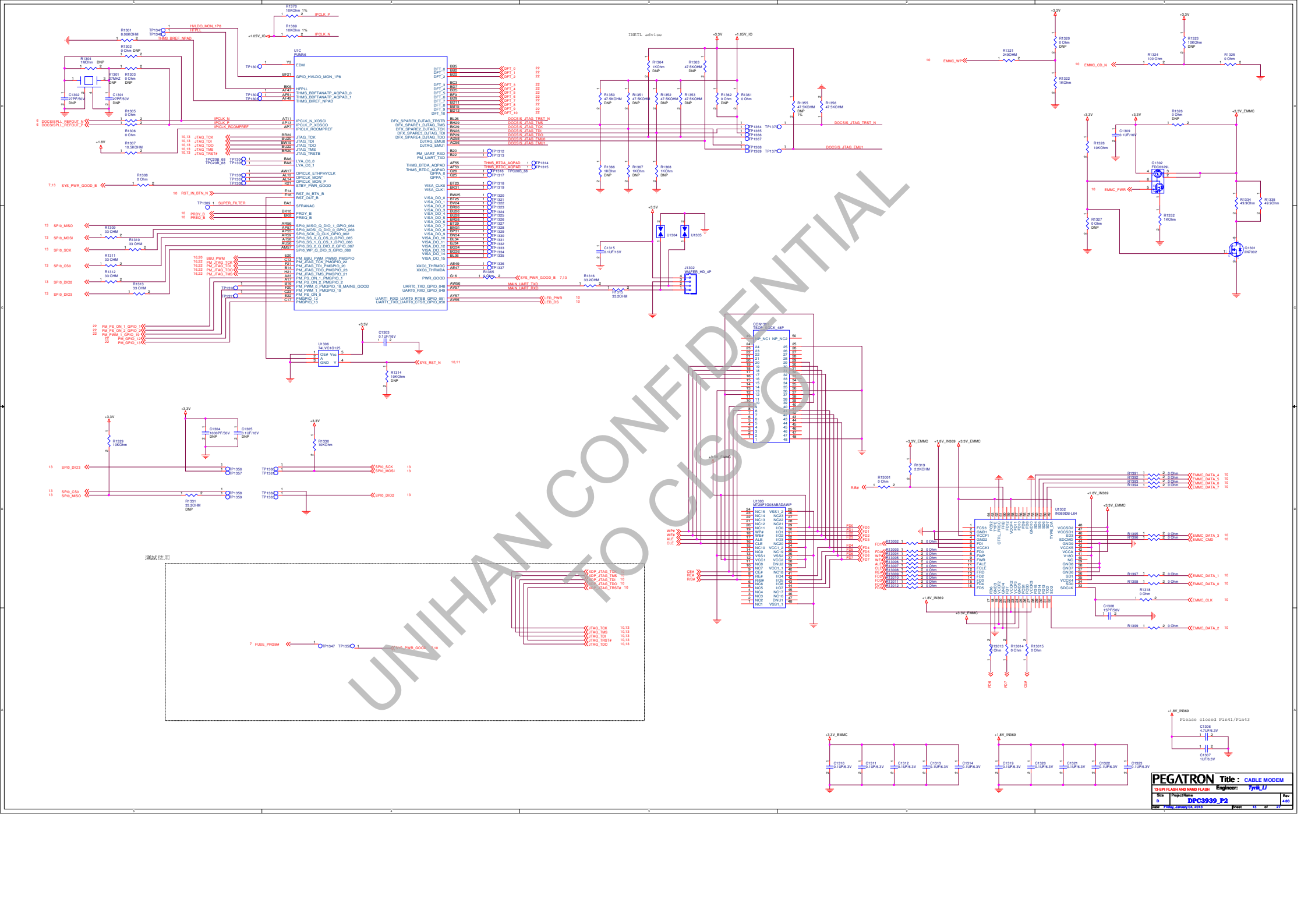
Size	Project Name	Rev
Custom	DPC3939_P2	4.00

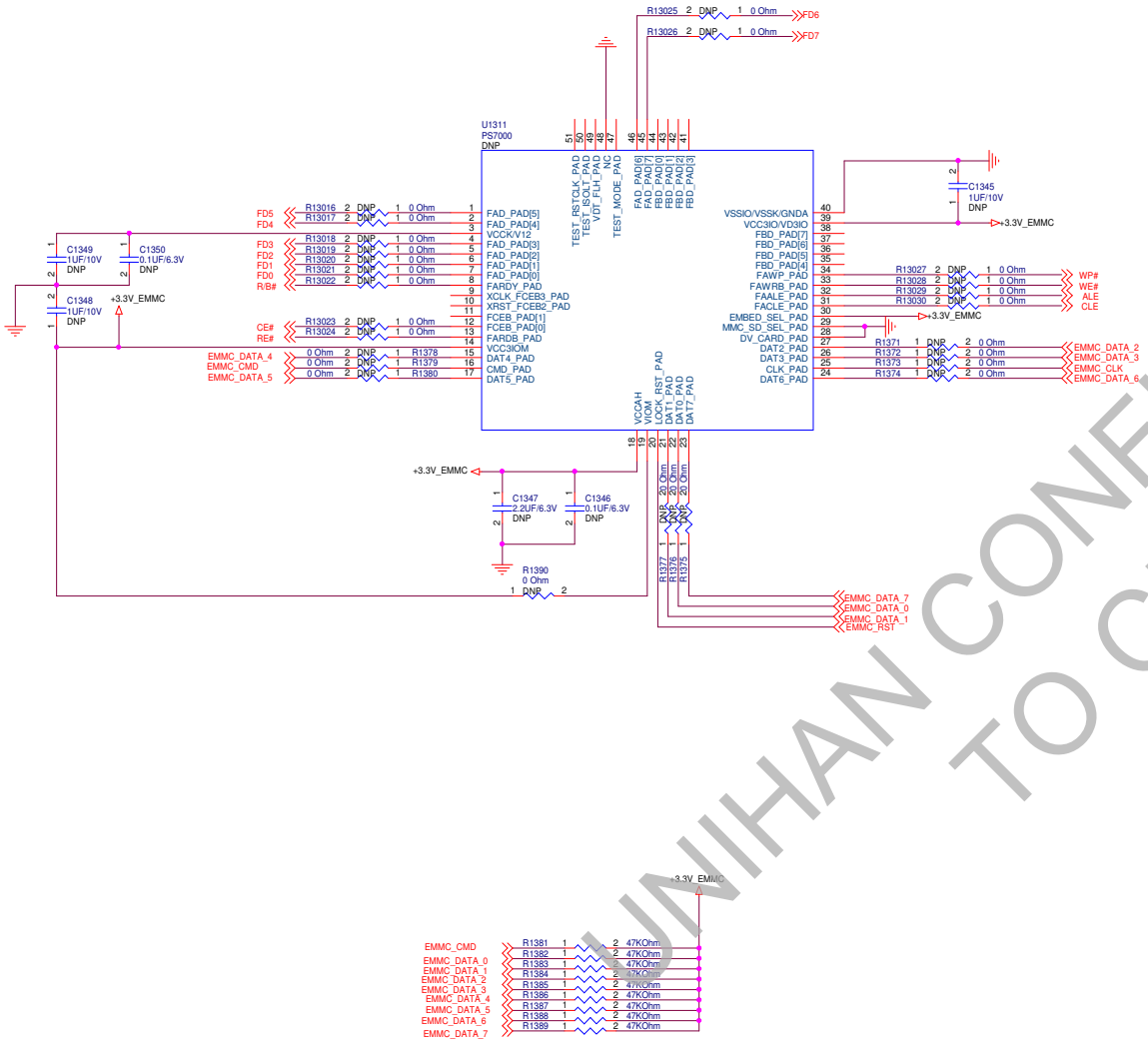
Date: Friday, January 04, 2013 Sheet 8 of 27






U1D
PUMA6
R1101 0 Ohm DNP
R1102 0 Ohm DNP
GBE_1_MDC
GBE_1_MDIO
GBE0_MDC
GBE0_MDIO
R1103 0 Ohm
R1104 0 Ohm
R1105 49.9 OHM 1%
TP1103
GBE_0_MDC
GBE_0_MDIO
GBE_0_RCOMP
GBE_0_REFCLK
GBE_0_RXCLK
GBE_0_RXCTL
RGMII0_RXCLK
RGMII0_RXCTL
RGMII0_RX_0
RGMII0_RX_1
RGMII0_RX_2
RGMII0_RX_3
GBE_0_RXDATA_0
GBE_0_RXDATA_1
GBE_0_RXDATA_2
GBE_0_RXDATA_3
RGMII0_TXCLK
RGMII0_TXCTL
R1106 12Ohm
R1107 12Ohm
GBE_0_TXCLK
GBE_0_TXCTL
RGMII0_TX_0
RGMII0_TX_1
RGMII0_TX_2
RGMII0_TX_3
R1108 12Ohm
R1109 12Ohm
R1110 12Ohm
R1111 12Ohm
GBE_0_TXDATA_0
GBE_0_TXDATA_1
GBE_0_TXDATA_2
GBE_0_TXDATA_3
GBE_0_LINK_GPIO_042
MOCA_RESET
GBE_1_MDC
GBE_1_MDIO
R27 22 OHM
R28 22 OHM
TP7
TP8
GBE_1_LINK_GPIO_043
GBE_1_MDC
GBE_1_MDIO
GBE_1_RCOMP
GBE_1_REFCLK
GBE_1_RXCLK
GBE_1_RXCTL
RGMII1_RXCLK
RGMII1_RXCTL
RGMII1_RX_0
RGMII1_RX_1
RGMII1_RX_2
RGMII1_RX_3
TP9
TP10
TP11
TP12
GBE_1_RXDATA_0
GBE_1_RXDATA_1
GBE_1_RXDATA_2
GBE_1_RXDATA_3
C1121 12PF/50V
R1150 22 OHM
R311 22 OHM
TP14
RGMII1_TXCTL
GBE_1_TXCLK
GBE_1_TXCTL
RGMII1_TX_0
RGMII1_TX_1
RGMII1_TX_2
RGMII1_TX_3
TP15
TP16
TP17
TP18
R33 22 OHM
R34 22 OHM
R35 22 OHM
R36 22 OHM
GBE_1_TXDATA_0
GBE_1_TXDATA_1
GBE_1_TXDATA_2
GBE_1_TXDATA_3
RGMII1_TXCLK
Add the 11.54 inches of trace
C1122 4.7PF/50V
C1124 4.7PF/50V
+1.8V
R1143 10.5KOHM
SATA_LANE0_RX*
SATA_LANE0_RX_P
SATA_LANE0_TX*
SATA_LANE0_TX_P
SATA_LANE1_RX*
SATA_LANE1_RX_P
SATA_LANE1_TX*
SATA_LANE1_TX_P
SATA_OBS0
SATA_OBS1
SATA_RBIAS
SATA_RCOMP
SATA_REFCLK*
SATA_REFCLK_P
USB_COMP*
USB_COMP_P
R1121 22.6 OHM
USB_LANE0*
USB_LANE0_P
USB_LANE1*
USB_LANE1_P
USB_LANE2*
USB_LANE2_P
USB0_DM
USB0_DP
USB1_DM
USB1_DP
TP1110
TP1111
TPC20B_68
R1122 0 Ohm
USB_LANE2_VBUS
USB_PLLMON*
USB_PLLMON_P
USB_REFCLK*
USB_REFCLK_P
R1123 49.9 OHM
R1124 49.9 OHM
TP1104
TP1107
TP1108
USB0_OC_N_GPIO_094
USB1_OC_N_GPIO_095
USB2_OC_N_GPIO_096
GPIO_096_ESWITCH_RESET_N
OPICLK_PCIE_CLK_0*
OPICLK_PCIE_CLK_0_P
OPICLK_PCIE_CLK_1*
OPICLK_PCIE_CLK_1_P
PCIE_CLK0_N
PCIE_CLK0_P
PCIE_CLK1_N
PCIE_CLK1_P
PCIE_LANE0_RX*
PCIE_LANE0_RX_P
PCIE0_RX_N
PCIE0_RX_P
PCIE_LANE0_TX*
PCIE_LANE0_TX_P
PCIE0_TX_N
PCIE0_TX_P
C1102 0.1UF/16V
C1103 0.1UF/16V
PCIE_LANE1_RX*
PCIE_LANE1_RX_P
PCIE1_RX_N
PCIE1_RX_P
C1119 0.1UF/16V
PCIE_LANE1_TX*
PCIE_LANE1_TX_P
PCIE1_TX_N
PCIE1_TX_P
C1120 0.1UF/16V
PCIE_OBS0
PCIE_OBS1
PCIE_RBIAS
PCIE_RCOMP
R1125 10.5KOHM
C1104 0.01UF/16V
PCIE_REFCLK*
PCIE_REFCLK_P
R1145 10KOhm
R1146 10KOhm
PCIE interface should be connected like SATA interface.
D1107 BAT54A_NL
GPIO_096_ESWITCH_RESET_N
SYS_RST_N
ESWITCH_RESET_N
USB_EN
R1126 0 Ohm DNP
Q1101 SI2305CDS-T1-GE3
+5V_USB_A
+5V
C1105 1000PF/50V
R1127 20KOHM
R1128 100KOHM
C1106 1UF/16V
Q1102 PMBT3904
R1136 1KOhm DNP
F1101 1.5A/6V
USB_VCC1
USB_VCC2
C1109 0.1UF/16V
C1110 10UF/10V
C1111 10UF/10V
C1112 0.1UF/16V
C1114 47uF/25V
C1116 0.1UF/16V
C1118 10UF/10V
D1105 TPI0603-250E3R0MP-LF DNP
U1106
R1132 0 Ohm
L1102 90Ohm/100MHz DNP
R1133 0 Ohm
D1101 MS06A05T2V2 DNP
U1101
D1103 MS06A05T2V2 DNP
U1102
J1101 USB_CON_1X4P
VCC1
1P-
1P+
P_GND1
P_GND2
P_GND3
P_GND4
C1113 47uF/25V
C1115 0.1UF/16V
C1117 10UF/10V
D1106 TPI0603-250E3R0MP-LF DNP
U1105
R1134 0 Ohm
L1101 90Ohm/100MHz DNP
R1135 0 Ohm
D1102 MS06A05T2V2 DNP
U1103
D1104 MS06A05T2V2 DNP
U1104
J1102 USB_CON_1X4P
VCC2
2P-
2P+
UNIHAN CONFIDENTIAL
TO CISCO
PEGATRON
Title : CABLE MODEM
11-USB PORT
Engineer: Tyrik_Li
Size Custom
Project Name DPC3939_P2
Rev 4.00
Date: Friday, January 04, 2013
Sheet 11 of 27



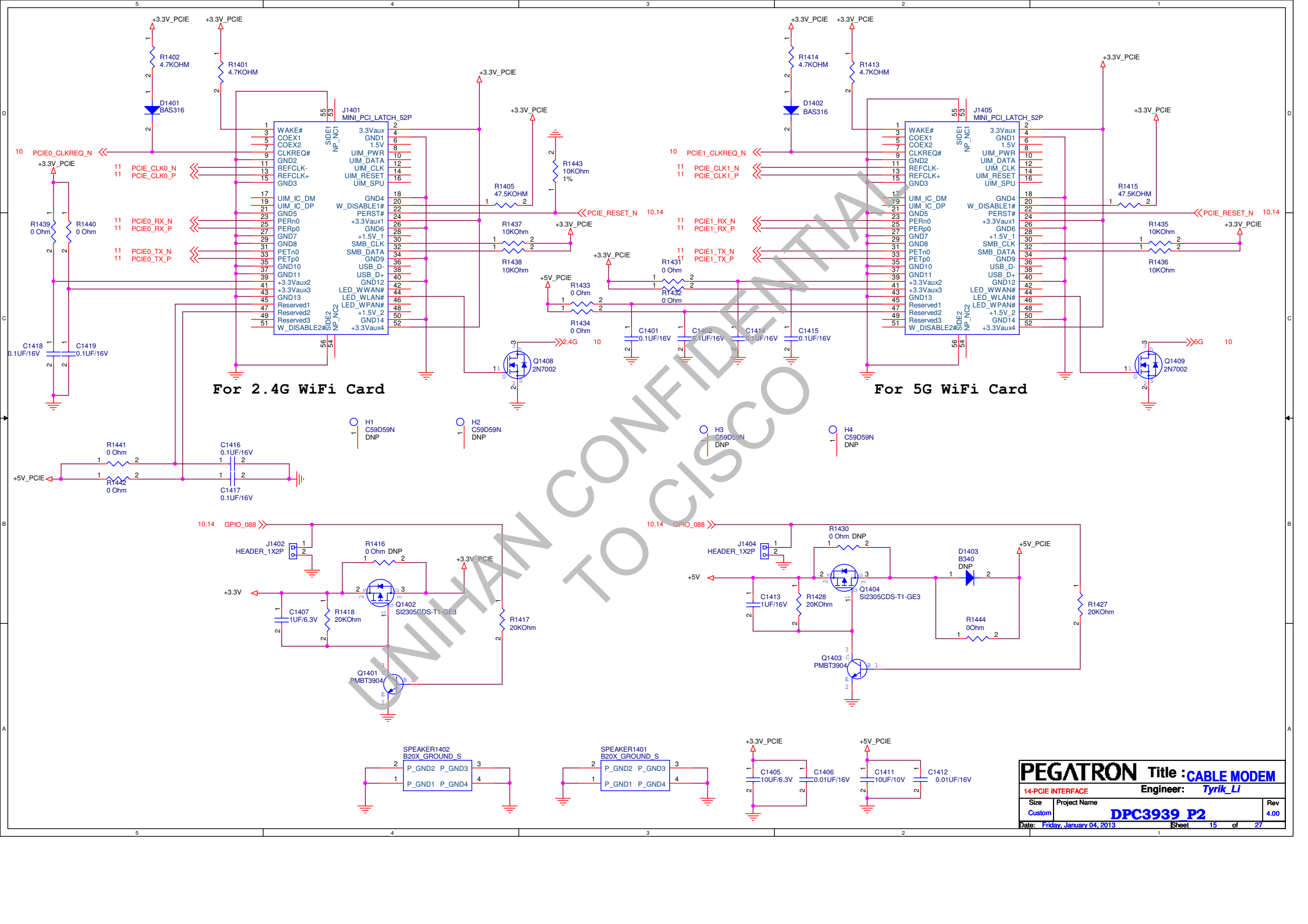


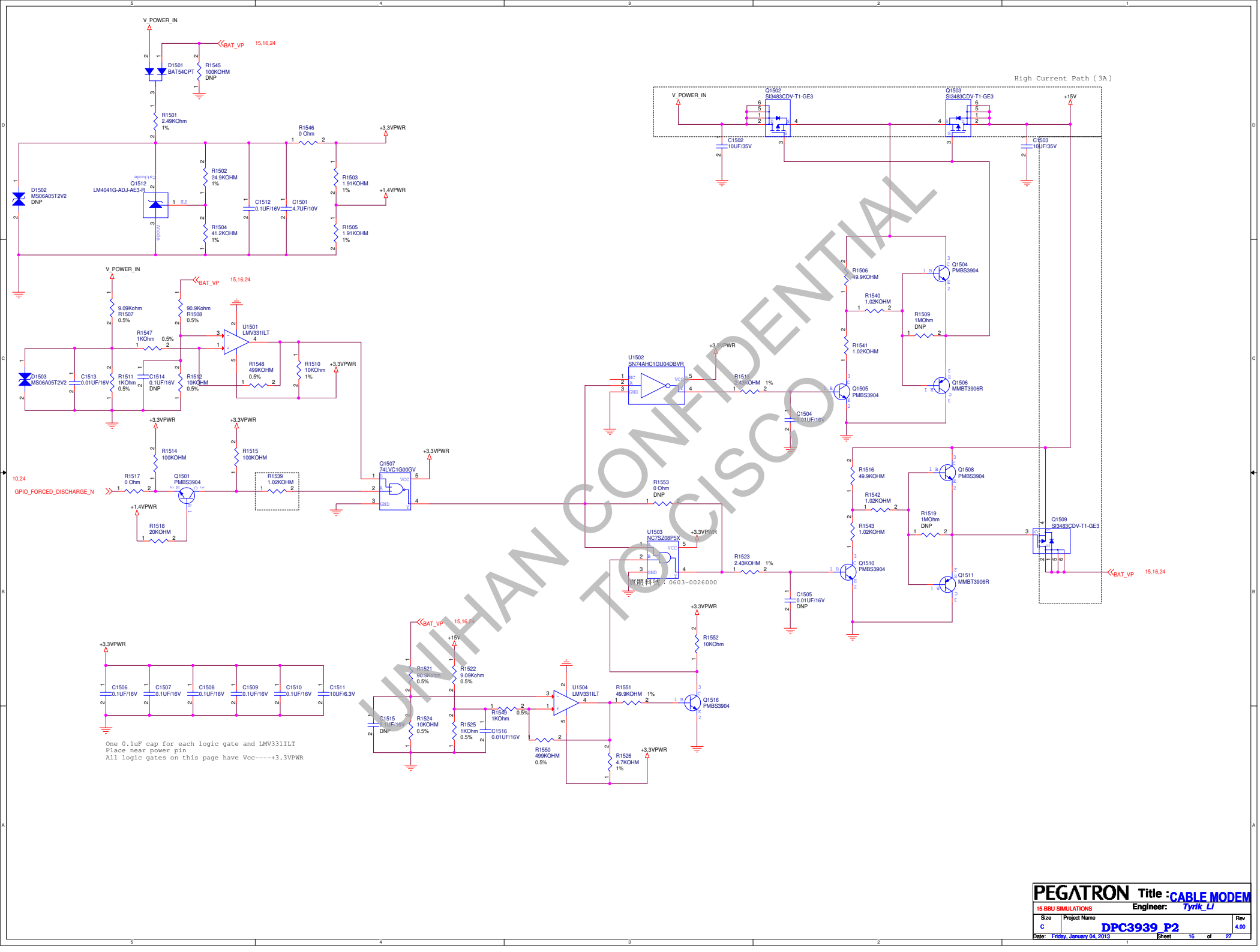
PEGATRON Title : CABLE MODEM

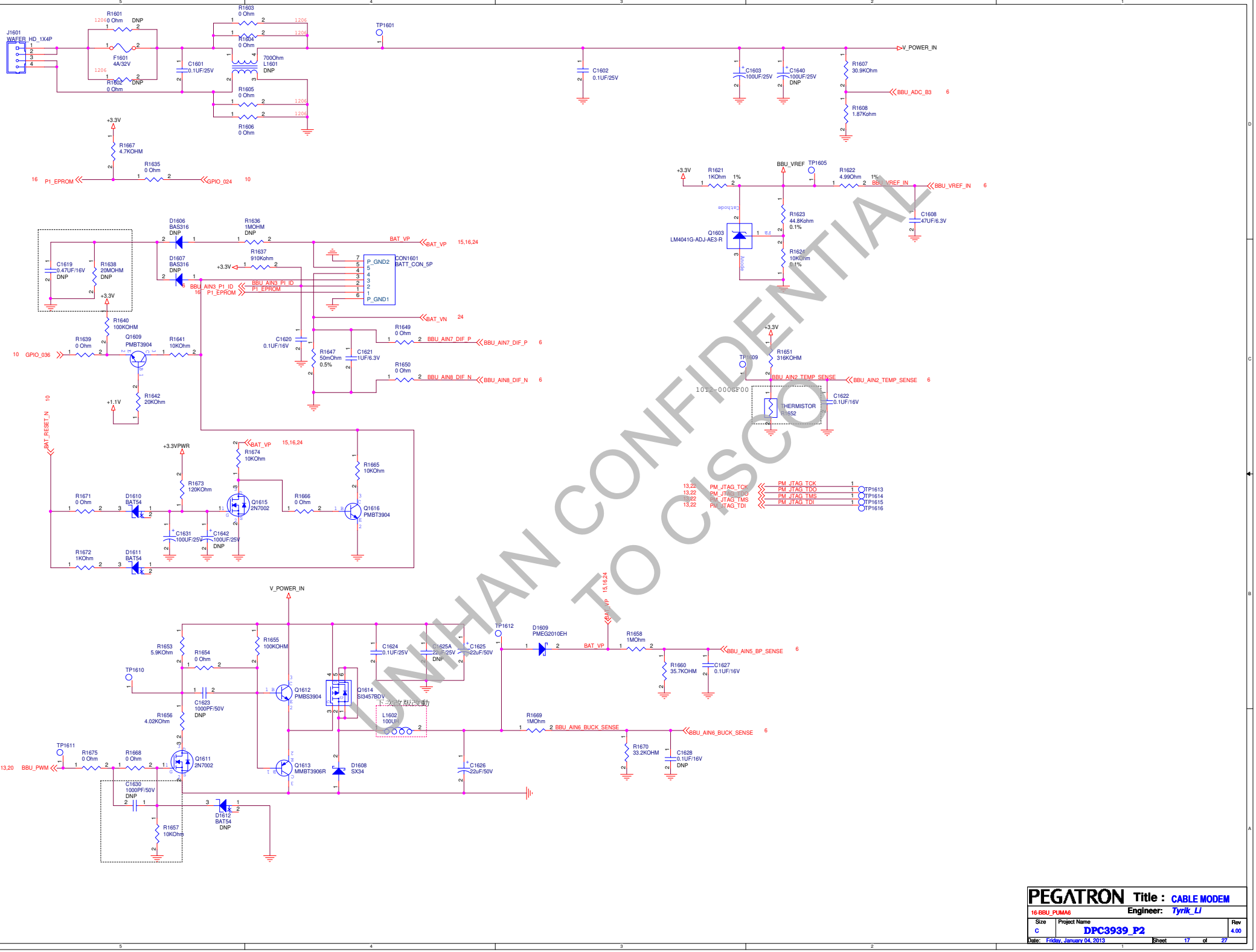
13A-EMMC AND NAND FLASH Engineer: Tyrik_Li

Size	Project Name	Rev
C	DPC3939_P2	4.00

Date: Friday, January 04, 2013 Sheet 14 of 27

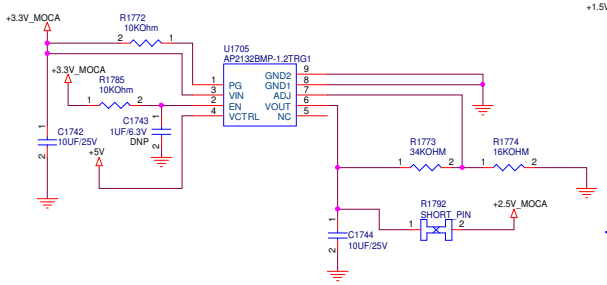

For 2.4G WiFi Card
For 5G WiFi Card
UNIHAN CONFIDENTIAL
TO CISCO
PEGATRON
Title : CABLE MODEM
14-PCIE INTERFACE
Engineer: Tyrik_Li
Size: Custom
Project Name: DPC3939_P2
Rev: 4.00
Date: Friday, January 04, 2013
Sheet 15 of 27


V_POWER_IN
BAT_VP
15,16,24
D1501
BAT54CPT
R1545
100KOHM
DNP
R1501
2.49KOhm
1%
R1546
0 Ohm
+3.3VPWR
R1502
24.9KOHM
1%
R1503
1.91KOHM
1%
+1.4VPWR
D1502
MS06A05T2V2
DNP
Q1512
LM4041G-ADJ-AE3-R
C1512
0.1UF/16V
C1501
4.7UF/10V
R1504
41.2KOHM
1%
R1505
1.91KOHM
1%
High Current Path (3A)
Q1502
SI3483CDV-T1-GE3
Q1503
SI3483CDV-T1-GE3
+15V
C1502
10UF/35V
C1503
10UF/35V
9.09Kohm
R1507
0.5%
90.9Kohm
R1508
0.5%
U1501
LMV331ILT
R1547
1KOhm
0.5%
R1548
499KOHM
0.5%
R1510
10KOhm
1%
D1503
MS06A05T2V2
C1513
0.01UF/16V
R1511
1KOhm
0.5%
C1514
0.1UF/16V
DNP
R1512
10KOHM
0.5%
R1514
100KOHM
R1515
100KOHM
10,24
GPIO_FORCED_DISCHARGE_N
R1517
0 Ohm
Q1501
PMBS3904
R1539
1.02KOHM
R1518
20KOHM
Q1507
74LVC1G00GV
U1502
SN74AHC1GU04DBVR
R1511
2.43KOHM
1%
C1504
0.01UF/16V
Q1505
PMBS3904
R1506
49.9KOHM
Q1504
PMBS3904
R1540
1.02KOHM
R1509
1MOhm
DNP
R1541
1.02KOHM
Q1506
MMBT3906R
R1553
0 Ohm
DNP
U1503
NC7SZ08P5X
R1523
2.43KOHM
1%
C1505
0.01UF/16V
Q1510
PMBS3904
R1516
49.9KOHM
Q1508
PMBS3904
R1542
1.02KOHM
R1519
1MOhm
DNP
R1543
1.02KOHM
Q1511
MMBT3906R
Q1509
SI3483CDV-T1-GE3
C1506
0.1UF/16V
C1507
0.1UF/16V
C1508
0.1UF/16V
C1509
0.1UF/16V
C1510
0.1UF/16V
C1511
10UF/6.3V
One 0.1uF cap for each logic gate and LMV331ILT
Place near power pin
All logic gates on this page have Vcc----+3.3VPWR
R1521
90.9Kohm
0.5%
R1522
9.09Kohm
0.5%
C1515
0.1UF/16V
DNP
R1524
10KOHM
0.5%
R1525
1KOhm
0.5%
C1516
0.01UF/16V
R1549
1KOhm
0.5%
U1504
LMV331ILT
R1550
499KOHM
0.5%
R1551
49.9KOHM
1%
Q1516
PMBS3904
R1552
10KOhm
R1526
4.7KOHM
1%
UNIHAN CONFIDENTIAL
TO CISCO
PEGATRON
Title : CABLE MODEM
15-BBU SIMULATIONS
Engineer: Tyrik_Li
Size
C
Project Name
DPC3939_P2
Rev
4.00
Date: Friday, January 04, 2013
Sheet 16 of 27

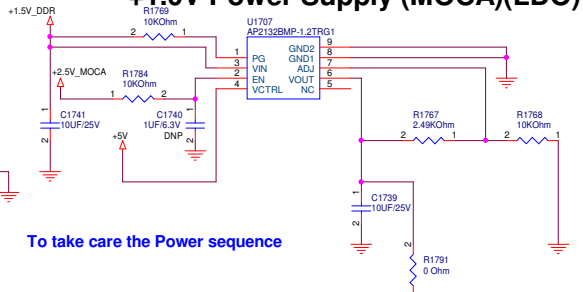


PEGATRON	Title : CABLE MODEM	
16-BBU_PUMA6	Engineer: Tyrik_Li	
Size: C	Project Name: DPC3939_P2	Rev: 4.00
Date: Friday, January 04, 2013	Sheet 17 of 27	

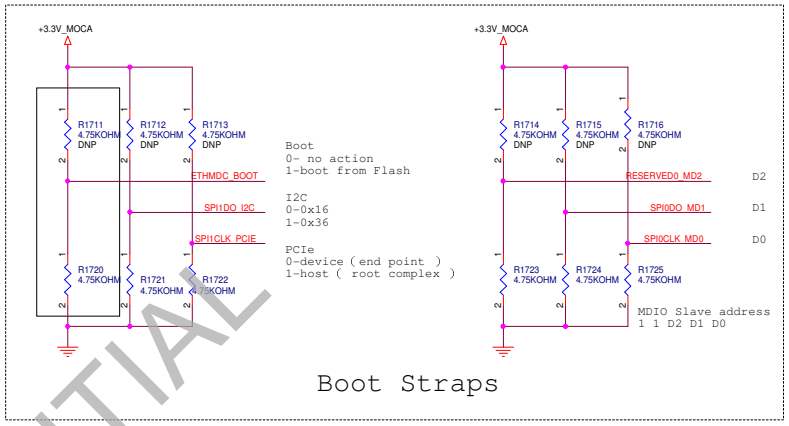
+2.5V Power Supply (MOCA)



+1.0V Power Supply (MOCA)(LDO)



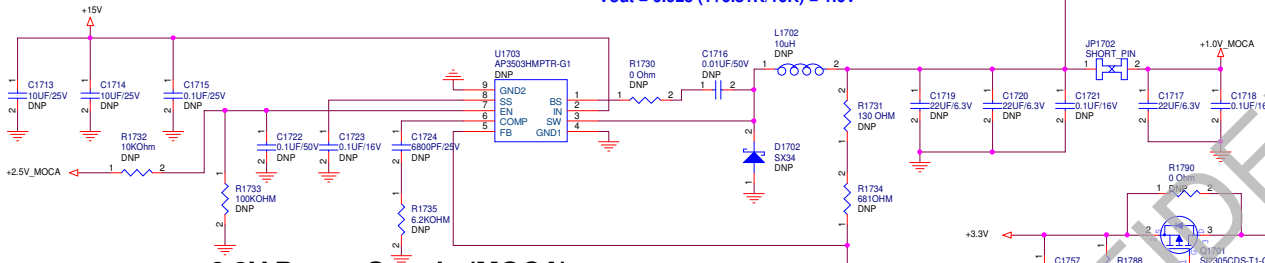
To take care the Power sequence



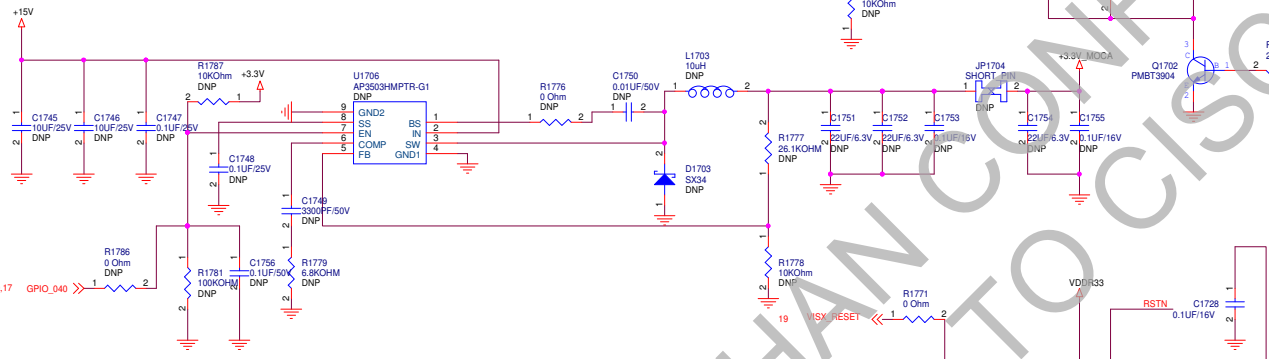
Boot Straps

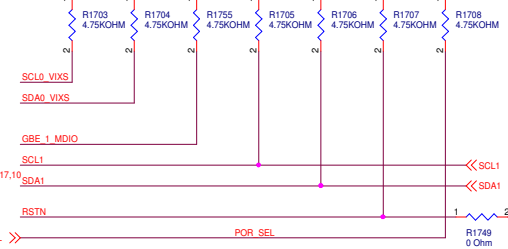
+1.0V Power Supply (MOCA)

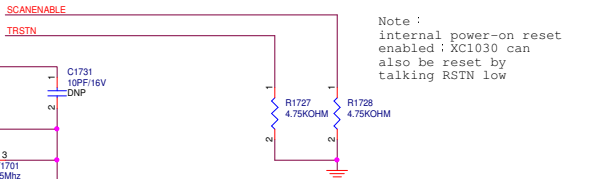
default Vout = 1.0V
Vout = 0.925 (1+0.81K/10K) = 1.0V



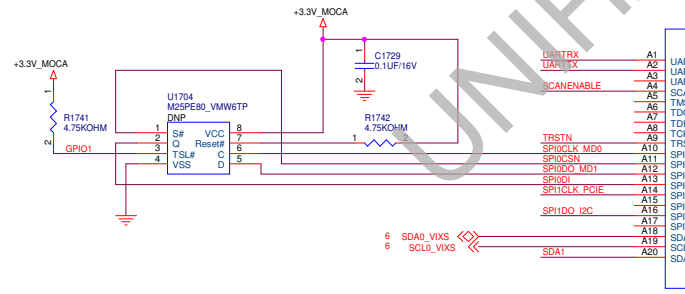
+3.3V Power Supply (MOCA)

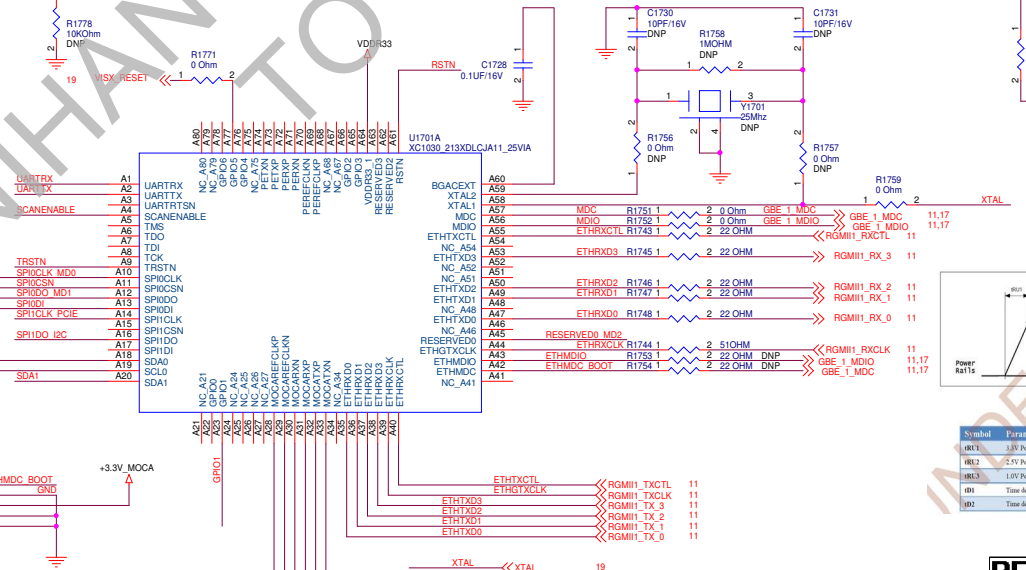






Note :
internal power-on reset enabled ; XC1030 can also be reset by talking RSTN low





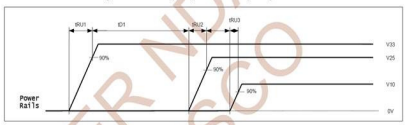
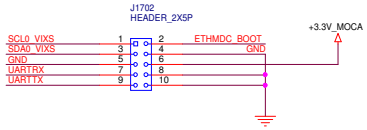
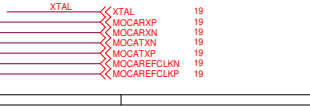


Figure 2: Power up Sequence Timing Diagram

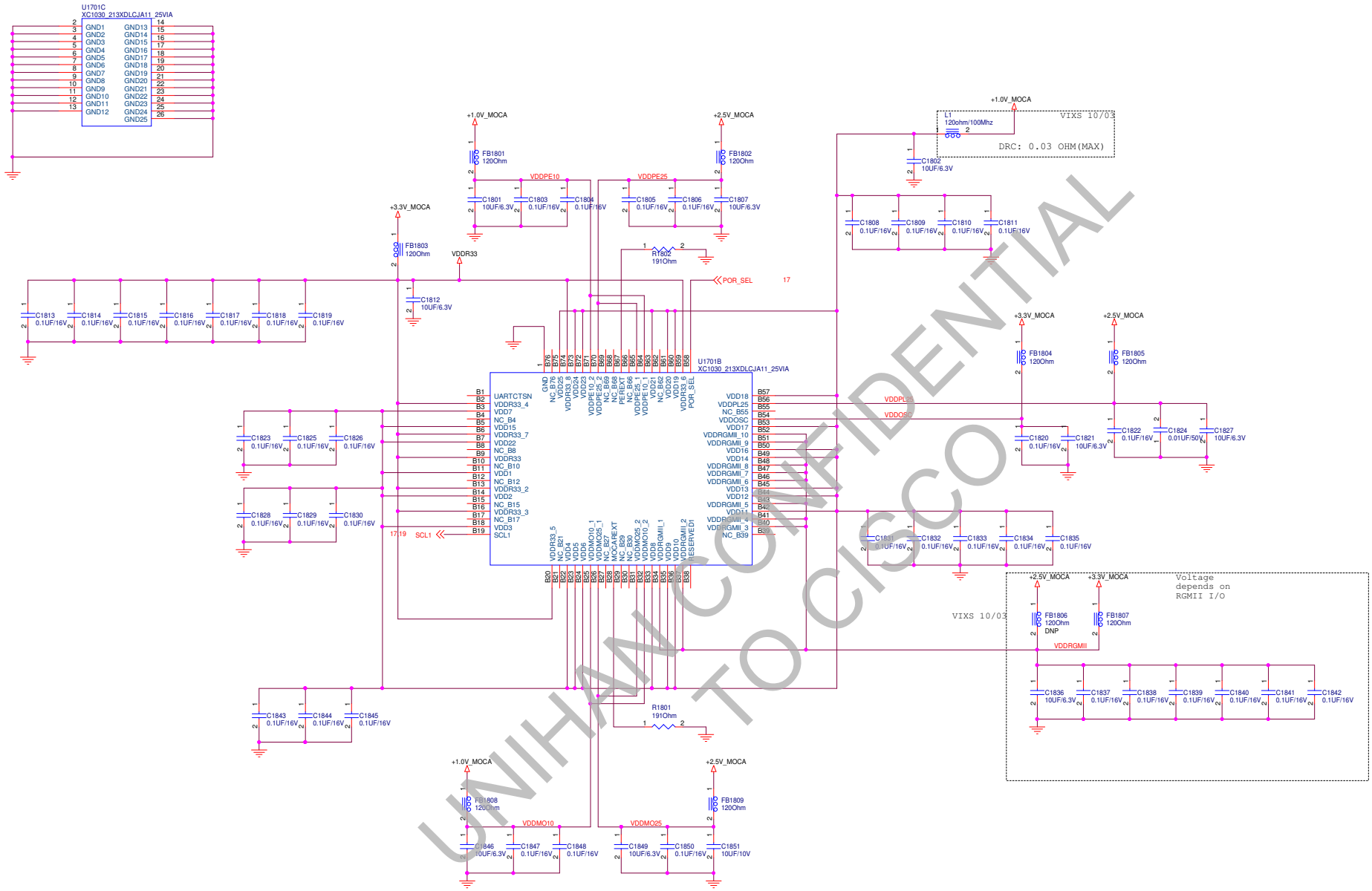
Table 16: Power up Sequence Timing Parameters

Symbol	Parameter	Min	Max	Unit	Notes
tRU1	3.3V Power supply ramp-up time, 0% to 90%	-	20	ms	
tRU2	2.5V Power supply ramp-up time, 0% to 90%	-	20	ms	
tRU3	1.0V Power supply ramp-up time, 0% to 90%	-	20	ms	
tD1	Time delay from V33 reaches 90% to V25 starts ramping	0	-	ms	
tD2	Time delay from V25 reaches 90% to V10 starts ramping	0	-	ms	

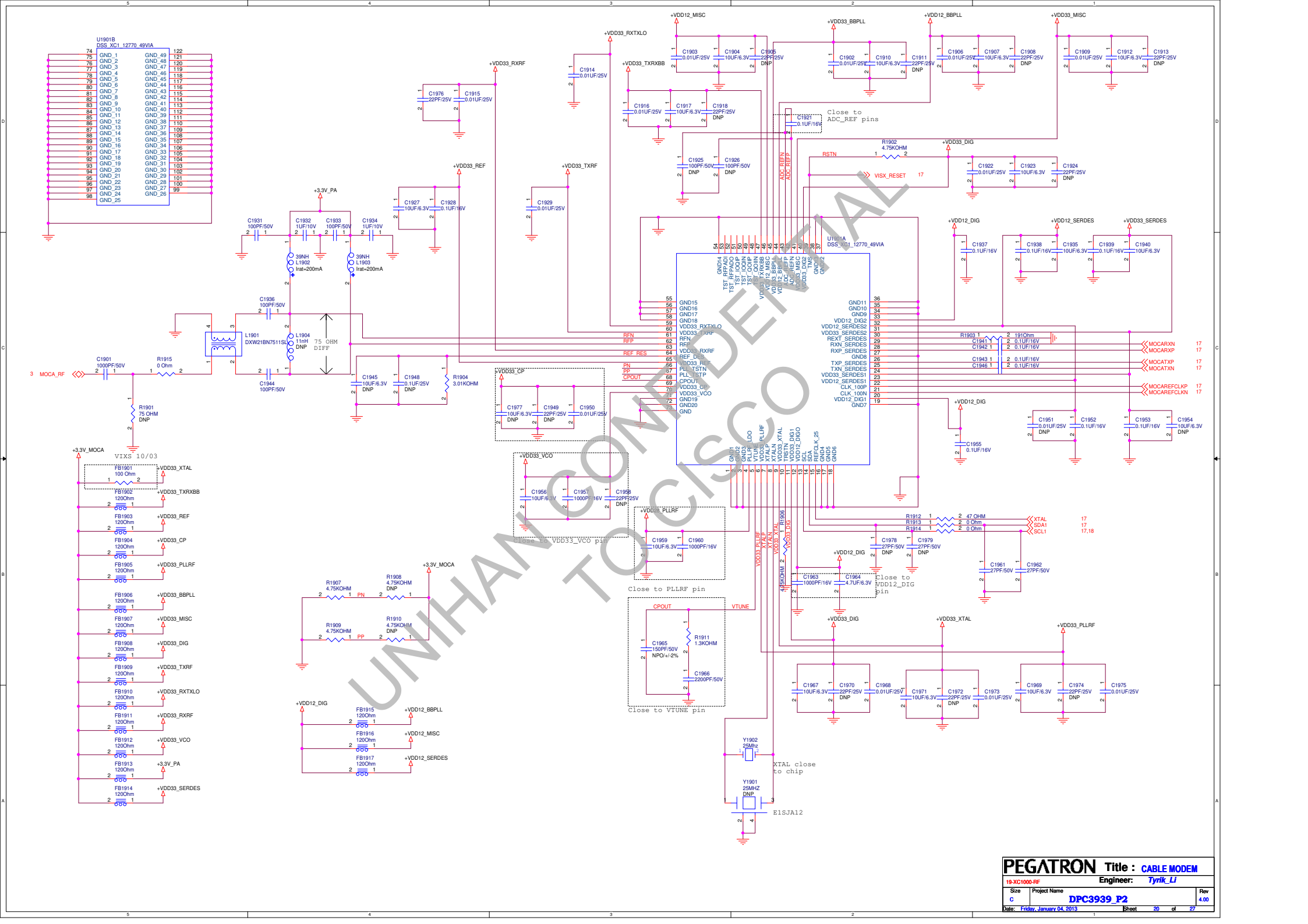




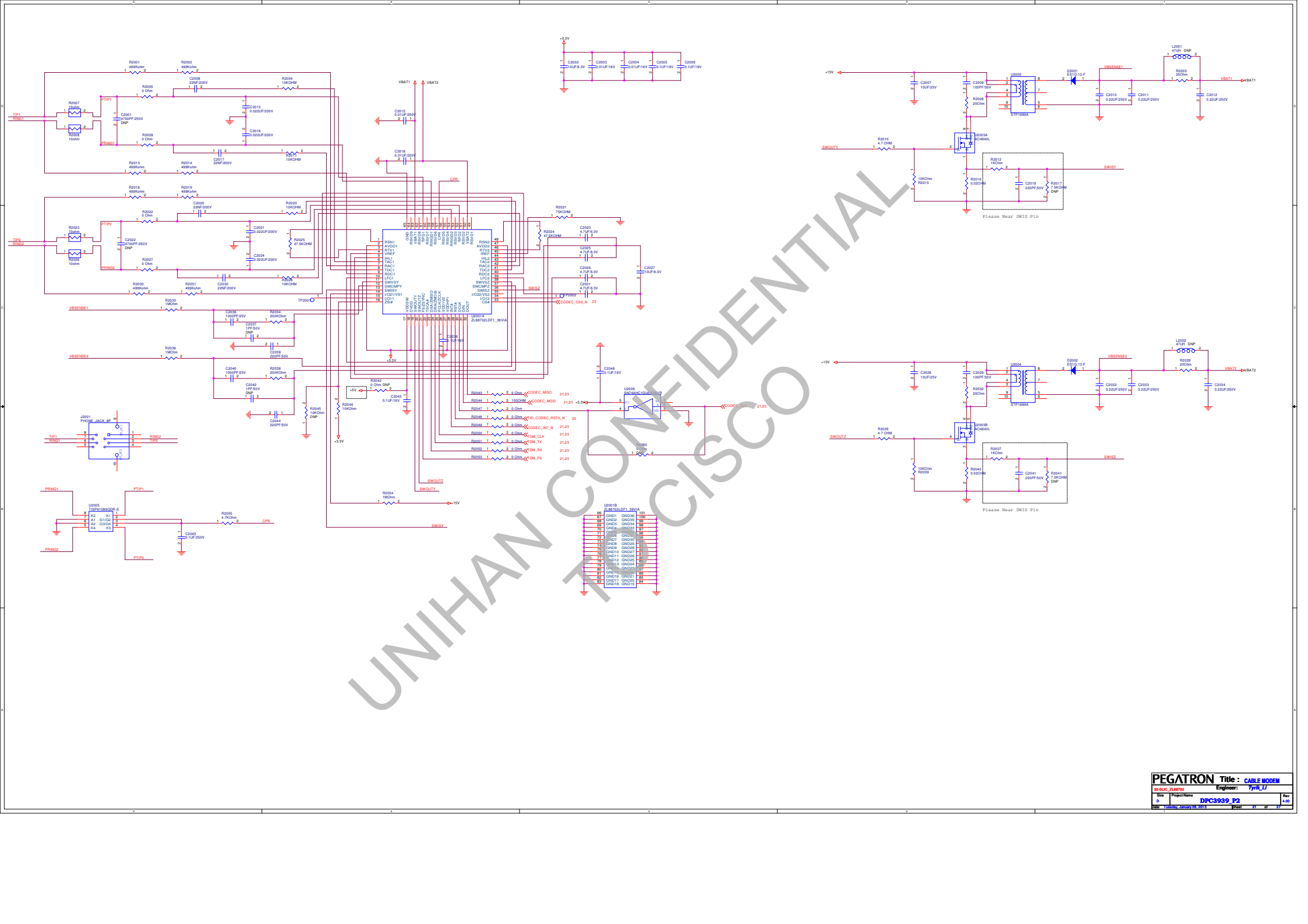
PEGATRON	Title : CABLE MODEM		
17-XC1030(A)	Engineer: Tyrrik_Li		
Size: C	Project Name: DPC3939_P2		Rev: 4.00
Date: Monday, January 07, 2013	Sheet 18 of 27		

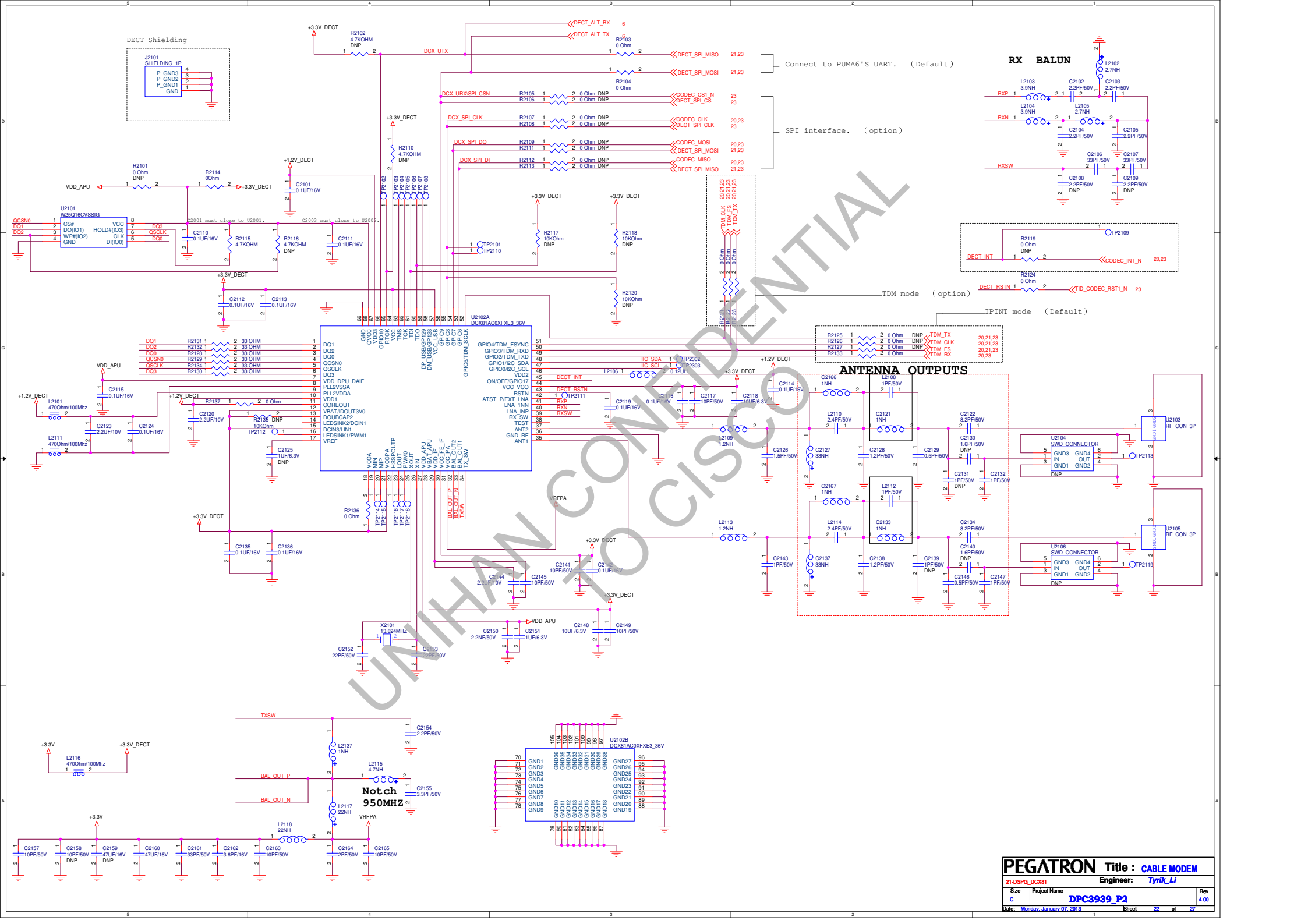


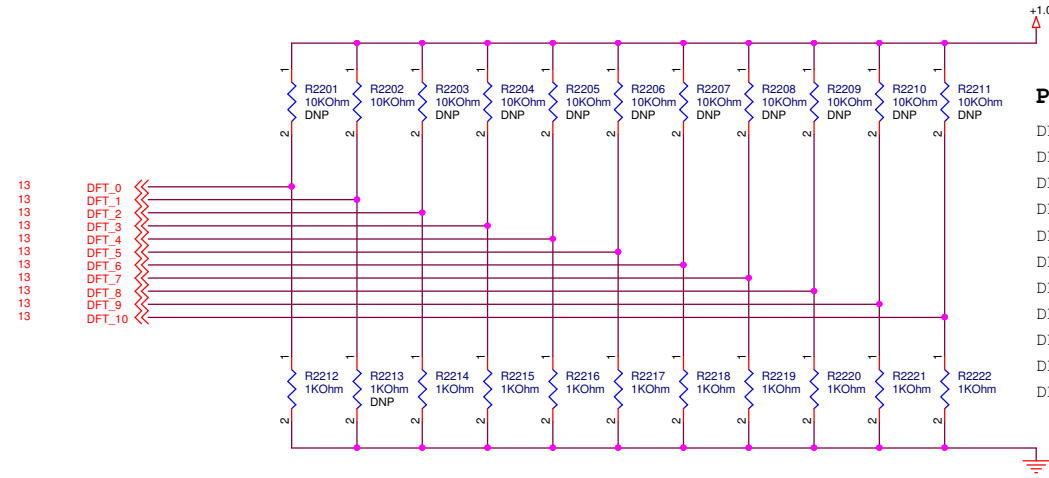
PEGATRON	Title : CABLE MODEM		
18-XC1030(B)	Engineer: Tyrik_Li		
Size: C	Project Name: DPC3939_P2		Rev: 4.00
Date: Friday, January 04, 2013	Sheet 19 of 27		



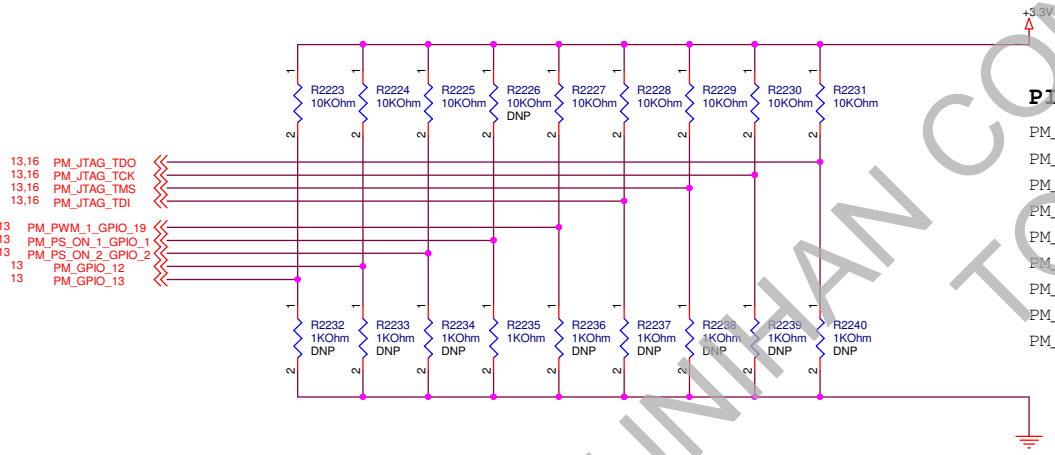
PEGATRON	Title : CABLE MODEM	
19-XC1000-RF	Engineer: Tyrik_Li	
Size: C	Project Name: DPC3939_P2	Rev: 4.00
Date: Friday, January 04, 2013	Sheet 20 of 27	


PEGATRON
Title : CABLE MODEM
20-SLIC_ZL88702
Engineer: Tyrik_LI
Size: D
Project Name: DPC3939_P2
Rev: 4.00
Date: Tuesday, January 08, 2013
Sheet 21 of 27
UNIHAN CONFIDENTIAL
TO CISCO


DECT Shielding
J2101
SHIELDING_1P
P_GND3
P_GND2
P_GND1
GND
+3.3V_DECT
R2102
4.7KOHM
DNP
DCX_UTX
DECT_ALT_RX
DECT_ALT_TX
R2103
0 Ohm
DECT_SPI_MISO
DECT_SPI_MOSI
Connect to PUMA6'S UART. (Default)
R2104
0 Ohm
DCX_URX\SPI_CSN
R2105
R2106
0 Ohm DNP
CODEC_CS1_N
DECT_SPI_CS
DCX_SPI_CLK
R2107
R2108
CODEC_CLK
DECT_SPI_CLK
DCX_SPI_DO
R2109
R2111
CODEC_MOSI
DECT_SPI_MOSI
DCX_SPI_DI
R2112
R2113
CODEC_MISO
DECT_SPI_MISO
SPI interface. (option)
RX BALUN
L2102
2.7NH
L2103
3.9NH
C2102
2.2PF/50V
C2103
2.2PF/50V
RXP
L2104
3.9NH
L2105
2.7NH
RXN
C2104
2.2PF/50V
C2105
2.2PF/50V
C2106
33PF/50V
C2107
33PF/50V
RXSW
C2108
2.2PF/50V
DNP
C2109
2.2PF/50V
DNP
R2110
4.7KOHM
DNP
R2101
0 Ohm
DNP
R2114
0Ohm
VDD_APU
+1.2V_DECT
C2101
0.1UF/16V
U2101
W25Q16CVSSIG
QCSN0
DQ1
DQ2
CS#
DO(IO1)
WP#(IO2)
GND
VCC
HOLD#(IO3)
CLK
DI(IO0)
DQ3
QSCLK
DQ0
C2001 must close to U2001.
C2003 must close to U2002.
C2110
0.1UF/16V
R2115
4.7KOHM
R2116
4.7KOHM
DNP
C2111
0.1UF/16V
C2112
0.1UF/16V
C2113
0.1UF/16V
TP2102
TP2103
TP2104
TP2105
TP2106
TP2107
TP2108
TP2101
TP2110
R2117
10KOhm
DNP
R2118
10KOhm
DNP
R2120
10KOhm
DNP
TDM_CLK
TDM_FS
TDM_TX
TDM mode (option)
IPINT mode (Default)
TP2109
DECT_INT
R2119
0 Ohm
DNP
CODEC_INT_N
DECT_RSTN
R2124
0 Ohm
TID_CODEC_RST1_N
U2102A
DCX81AC0XFXE3_36V
DQ1
DQ2
DQ0
QCSN0
QSCLK
DQ3
R2131
R2132
R2128
R2129
R2134
R2130
33 OHM
VDD_DPU_DAIF
PLL2VSSA
PLL2VDDA
VDD1
COREOUT
VBAT/IDOUT3V0
DOUBCAP2
LEDSINK2/DCIN1
DCIN3/LIN1
LEDSINK1/PWM1
VREF
GPIO4/TDM_FSYNC
GPIO3/TDM_RXD
GPIO2/TDM_TXD
GPIO1/I2C_SDA
GPIO0/I2C_SCL
VDD2
ON/OFF/GPIO17
VCC_VCO
RSTN
ATST_P/EXT_LNA
LNA_1NN
LNA_INP
RX_SW
TEST
ANT2
GND_RF
ANT1
DECT_INT
DECT_RSTN
RXP
RXN
RXSW
IIC_SDA
IIC_SCL
TP2302
TP2303
L2106
0.12UH
R2125
R2126
R2127
R2133
TDM_TX
TDM_CLK
TDM_FS
TDM_RX
ANTENNA OUTPUTS
L2101
470Ohm/100Mhz
L2111
470Ohm/100Mhz
C2115
0.1UF/16V
C2120
2.2UF/10V
C2123
2.2UF/10V
C2124
0.1UF/16V
R2137
0 Ohm
R2135 DNP
10KOhm
TP2112
C2125
1UF/6.3V
DNP
C2114
0.1UF/16V
C2116
0.1UF/16V
C2117
10PF/50V
C2118
10UF/6.3V
C2119
0.1UF/16V
L2108
1PF/50V
C2166
1NH
L2110
2.4PF/50V
C2121
1NH
C2122
8.2PF/50V
C2127
33NH
C2128
1.2PF/50V
C2129
0.5PF/50V
C2130
1.6PF/50V
DNP
C2131
1PF/50V
DNP
C2132
1PF/50V
U2104
SWD_CONNECTOR
GND3
GND4
IN
OUT
GND1
GND2
DNP
U2103
RF_CON_3P
TP2113
C2167
1NH
L2112
1PF/50V
C2133
1NH
C2134
8.2PF/50V
C2137
33NH
C2138
1.2PF/50V
C2139
1PF/50V
DNP
C2140
1.6PF/50V
DNP
C2146
0.5PF/50V
C2147
1PF/50V
U2106
SWD_CONNECTOR
U2105
RF_CON_3P
TP2119
L2109
1.2NH
L2113
1.2NH
C2126
1.5PF/50V
C2143
1PF/50V
R2136
0 Ohm
VRFPA
C2135
0.1UF/16V
C2136
0.1UF/16V
C2141
10PF/50V
C2142
0.1UF/16V
C2144
2.2UF/10V
C2145
10PF/50V
X2101
13.824MHZ
C2152
22PF/50V
C2153
22PF/50V
C2150
2.2NF/50V
C2151
1UF/6.3V
C2148
10UF/6.3V
C2149
10PF/50V
TXSW
BAL_OUT_P
BAL_OUT_N
L2137
1NH
L2115
4.7NH
L2117
22NH
L2118
22NH
Notch
950MHZ
C2154
2.2PF/50V
C2155
3.3PF/50V
L2116
470Ohm/100Mhz
C2157
10PF/50V
C2158
10PF/50V
DNP
C2159
47UF/16V
DNP
C2160
47UF/16V
C2161
33PF/50V
C2162
3.6PF/16V
C2163
10PF/50V
C2164
2PF/50V
C2165
10PF/50V
U2102B
DCX81AC0XFXE3_36V
GND1
GND2
GND3
GND4
GND5
GND6
GND7
GND8
GND9
GND10
GND11
GND12
GND13
GND14
GND15
GND16
GND17
GND18
GND19
GND20
GND21
GND22
GND23
GND24
GND25
GND26
GND27
GND28
GND29
GND30
GND31
GND32
GND33
GND34
GND35
GND36
UNIHAN CONFIDENTIAL TO CISCO
PEGATRON
Title : CABLE MODEM
Engineer: Tyrik_Li
21-DSPG_DCX81
Size C
Project Name DPC3939_P2
Rev 4.00
Date: Monday, January 07, 2013
Sheet 22 of 27



PIN NAME	STRAP NAME	DESCRIPTION
DFT[0]	SFR_VSRC_SEL	0: Use 1.8V
DFT[1]	BOOT_PATH[0]	01: EMMC
DFT[2]	BOOT_PATH[1]	
DFT[3]	ISCLK_BYP_STRAP	0: FPLL outputs are based on PLL output
DFT[4]	CLK_TEST_MODE	0: Clock test mode disabled
DFT[5]	FPLL_VALID_ALT	0: Design relies on valid signal from FPLL to proceed with power on
DFT[6]	Reserved	Reserved
DFT[7]	SEC_BOOT	0: Normal Boot
DFT[8]	Intel Manufacturing	0: Enable
DFT[9]	OEM Debug	0: Enable
DFT[10]	Reserved	Reserved



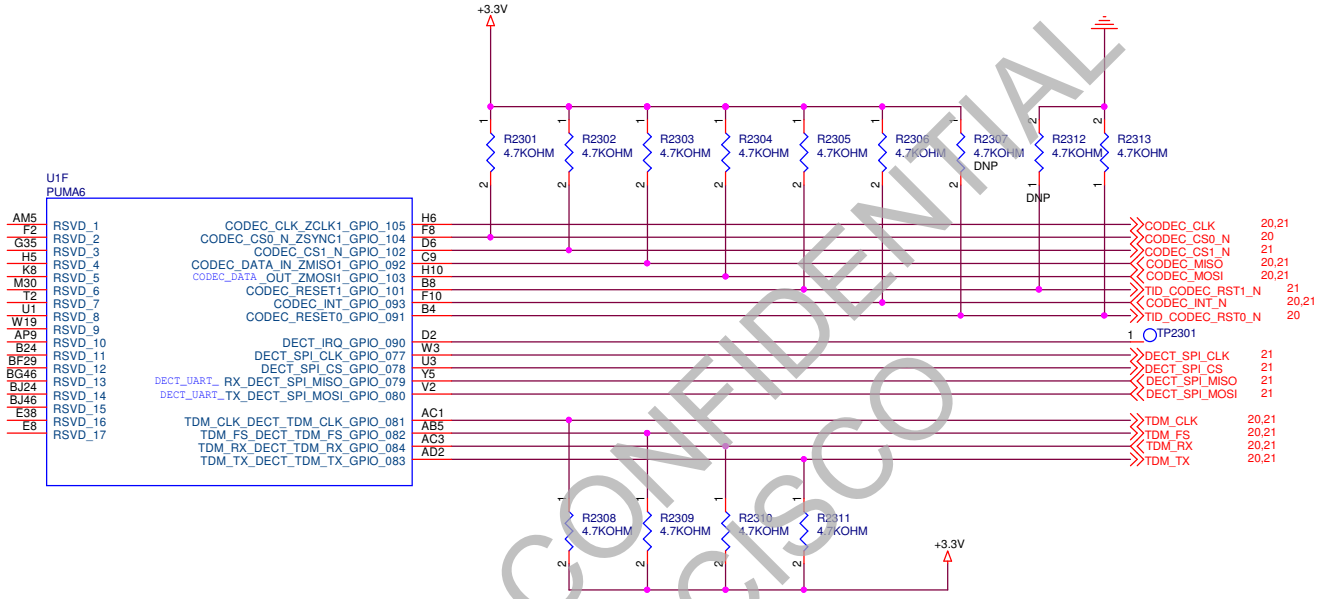
PIN NAME	STRAP NAME	DESCRIPTION
PM_JTAG_TDO_GPIO_23	RESET_OUT_SEL	1 = reset_outb is driven by HW
PM_JTAG_TCK_GPIO_22	PUNIT_DEBUG	1=Normal Operation
PM_JTAG_TMS_GPIO_21	FPLL_EXTCLK_FREQ_SEL	1=27 Mhz
PM_JTAG_TDI_GPIO_20	THRM_BYPASS	1=Firmware controls entry into FAIL_SAFE state
PM_PWM_1_GPIO_19	POSM_FAIL_SAFE	1=Normal Operation
PM_PS_ON_1_GPIO_1	FPLL_OSC_EN	1'b0: Bypass FPLL osc
PM_PS_ON_2_GPIO_2	FPLL_VRM_EN	1'b1: Enable FPLL VRM
PM_GPIO_12	POSM_BYPASS	1=Normal Operation
PM_GPIO_13	COLD_RESET_DISABLE	1=Cold reset results in warm reset

PEGATRON Title : CABLE MODEM

22-BOOT STRAPS Engineer: Tyrik_Li

Size	Project Name	Rev
Custom	DPC3939_P2	4.00

Date: Friday, January 04, 2013 Sheet 23 of 27

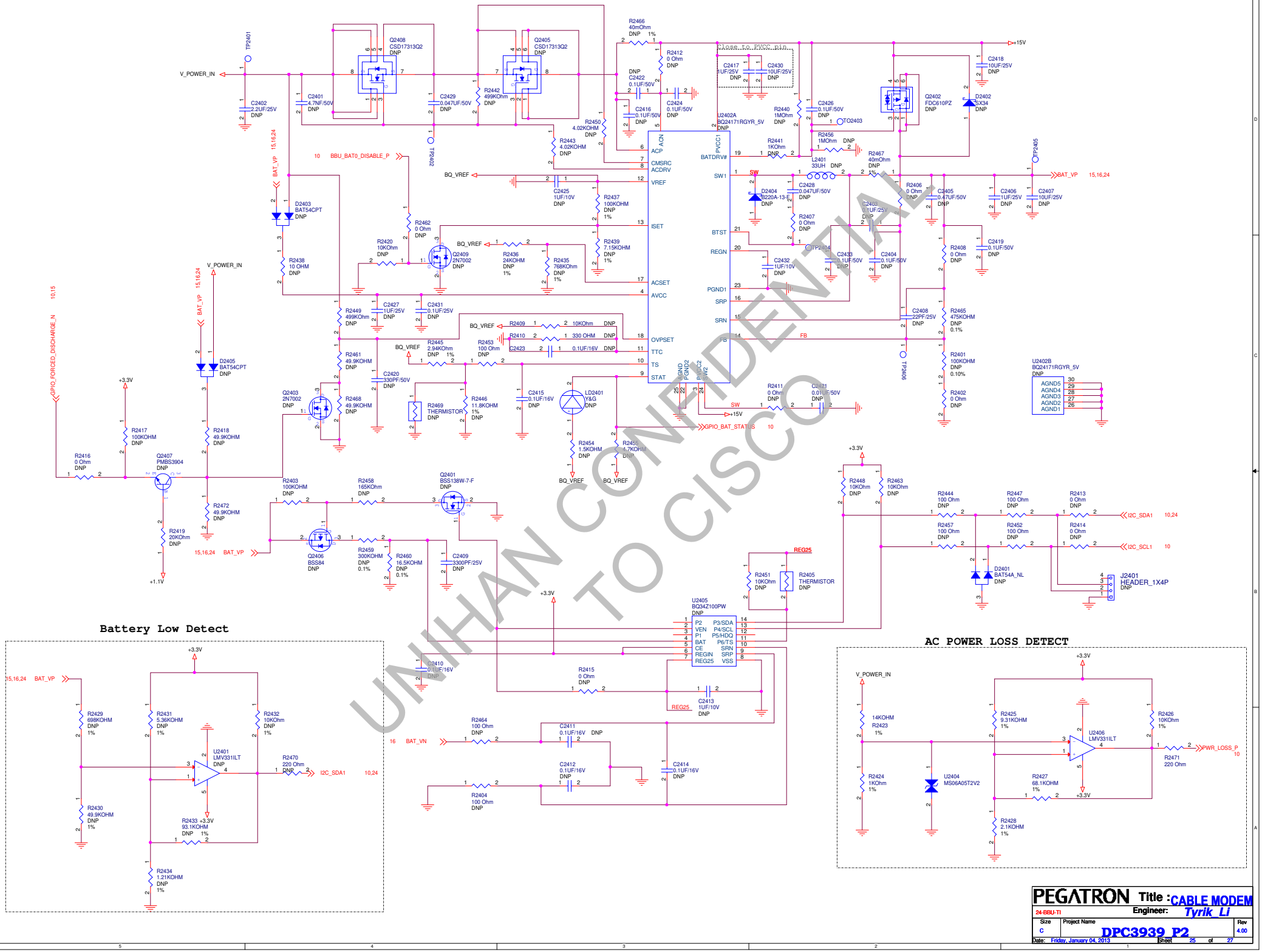


PEGATRON Title : CABLE MODEM

18-TID OPTIONAL RESISTORS Engineer: Tyrik_Li

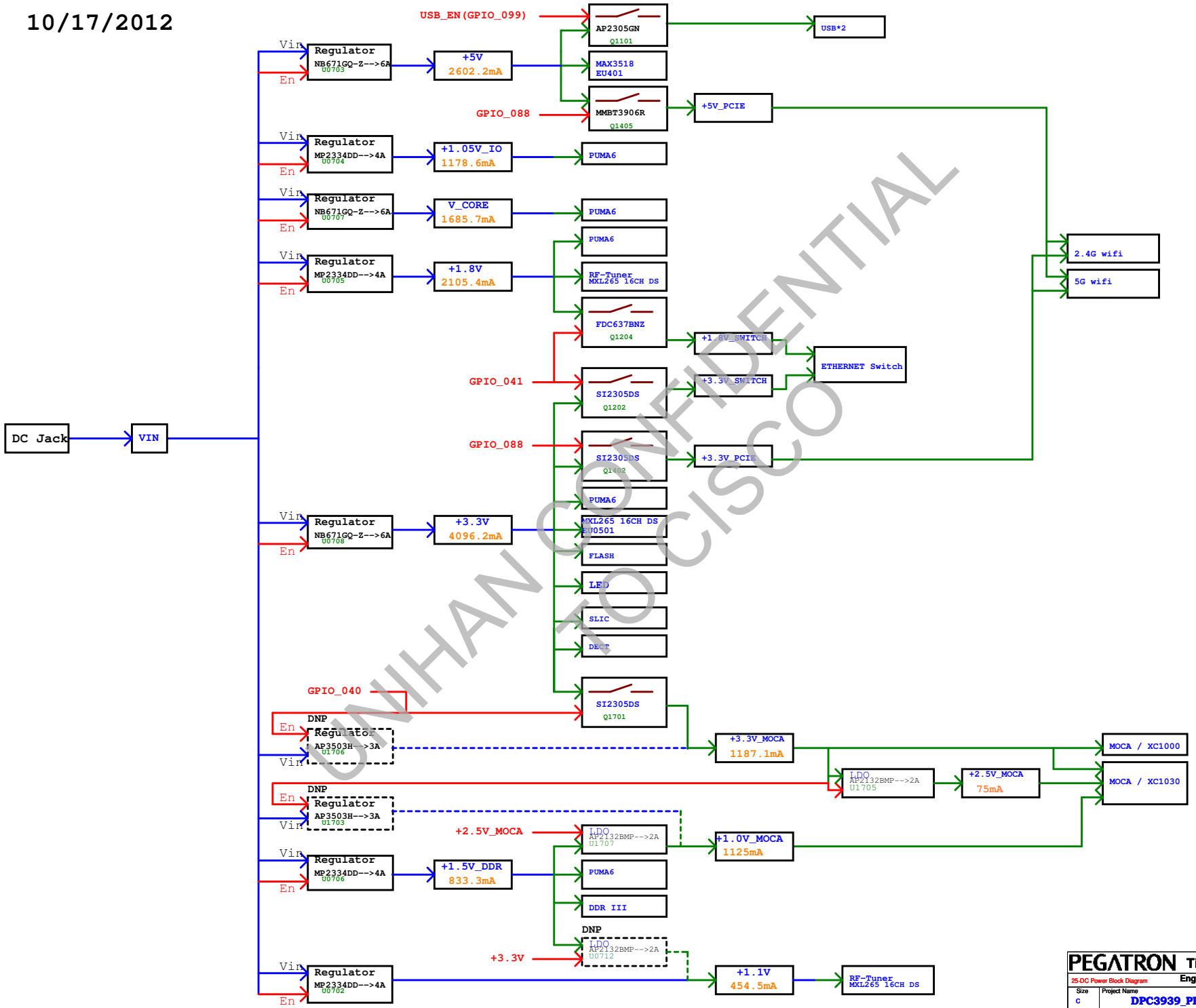
Size	Project Name	Rev
Custom	DPC3939_P2	4.00

Date: Thursday, March 14, 2013 Sheet 24 of 27


Battery Low Detect
AC POWER LOSS DETECT
UNIHAN CONFIDENTIAL
TO CISCO
PEGATRON
Title : CABLE MODEM
Engineer: Tyrik_Li
24-BBU-TI
Size C
Project Name DPC3939_P2
Rev 4.00
Date: Friday, January 04, 2013
Sheet 25 of 27

DPC3939 Power Architecture Phase II

10/17/2012



PEGATRON Title : CABLE MODEM

25-DC Power Block Diagram Engineer: Tyrik_Li

Size	Project Name	Rev
C	DPC3939_PHASE2	4.00

Date: Friday, January 04, 2013 Sheet 26 of 27

Item	Version	Description
1	DPC3939_P2 3.00	2012/11/22 1. Add U1310 and U1311 2. R1647,C1621 Populate 3. Remove the R305~R306 4. Add L0504,L0505 5. Swap L0503 Pin3 and Pin4 6. R2111,R2113 DNP 2012/11/27 1. R1044 change to 0 ohm 2. C1513,C1516 change to 0.01UF 3. R1671 change to 0 ohm 4. Add R1675,D1612(DNP) 5. R1622 change to 4.99 ohm 6. Populate C1622 7. Remove Q2001,Q2002 8. C0505,C0506 change to 22pf 9. C305 change to 22pf L304 change to 0.18UH C308 change to 68pf 10.DECT RF modify 11.C305 change to 22pf L304 change to 0.18NH C307 change to 68pf 12. C0505,C0506 change to 22PF 2012/11/28 1. Remove U1310
	DPC3939_P2 4.00	2012/12/24 1. TID_CODEC_RST0_N pull down 2. CODEC_CLK add U2006 3. R2044 change to 100 ohm 2012/12/26 1. TID_CODEC_RST0_N,TID_CODEC_RST1_N pull down 2. R2042 change to +5V 2012/12/28 1. C1121 change to 12PF 1. ADD C1122,C1124

Item	Version	Description
2	DPC3939_P2 1.00	2012/09/11 1. change ro MOCA 2.0 2. remove TI BBU 3. Murata diplexer design 4. remove two large capacitors in the SLIC 5. add 3.3K ohm between Pin land Pin 2 of Q1001,Q1002 6. C0547 chang to 22UF 7. R2125, R2126, R2127 to DNP Install R2212, R2122, R2123 8. U2107 DNP 9. R0616,R0617 DNP 10.change the BBU design 11.delete the +1.5V on PCIE 2012/09/12 1. RF shielding change to the design of DRG7908 2. add the net PSM_DAC_CNTL 3. populate R0614,R0615 DNP R0601,R0602 4. populate R0616,R0617 5. delete Q0701 6. delete R1141,R1142 7. IFCLK_P connect to +1.05V_IO through +10K ohm 8. populate R1658 9. add C1865 10.C2131 ,C2146 DNP 11.U2101 change to 0500-011M000 2012/09/14 1. C0547 change to 0.1UF,C0792 change to 10UF 2. C301 change to 100V then L301 3. delete C327,C328,R301,L317,L318 4. delete R0553,L0504,L0505 5. J1001 DNP 6. F1101,F1102 change to one fuse 1.5A 7. page 15,remove Battery Low Detect 8. Moca change to VIXS 9. Remove U2107 2012/09/21 1. MOCA VIXS change to the latest design 2. ETHMDC_BOOT connect to GBE_1_MDC ETHMDIO connect to GBE_1_MDIO 3. DNP R1101,R1102 4. C0798,C0799 change to SMT 5. delete R0413,R0415 6. R0416,R0417 change to 0402 size 7. add R1544 8. delete C0410 9. J1701 change to 0 ohm resister (DNP) 2012/09/27 1. Delete J1001,DNP U1003 2. Delete +5V_USB_B 3. DNP R1331,C1304,C1305 4. Change C1901 to 1000PF 50V 2012/10/03 1. Changed FB1901 to 100 Ohm and changed the name 2. Changed L1 to low DCR 2012/10/04 1. Modified XC1030/XC1000 symbol 2. add back TI BBU 2012/10/05 1. Modify BBU circuit
	DPC3939_P2 2.00	

PEGATRON Title : CABLE MODEM

24-CHANGE LIST Engineer: Tyrik_Li

Size	Project Name	Rev
Custom	DPC3939_P2	4.00

Date: Friday, January 04, 2013 Sheet 27 of 27