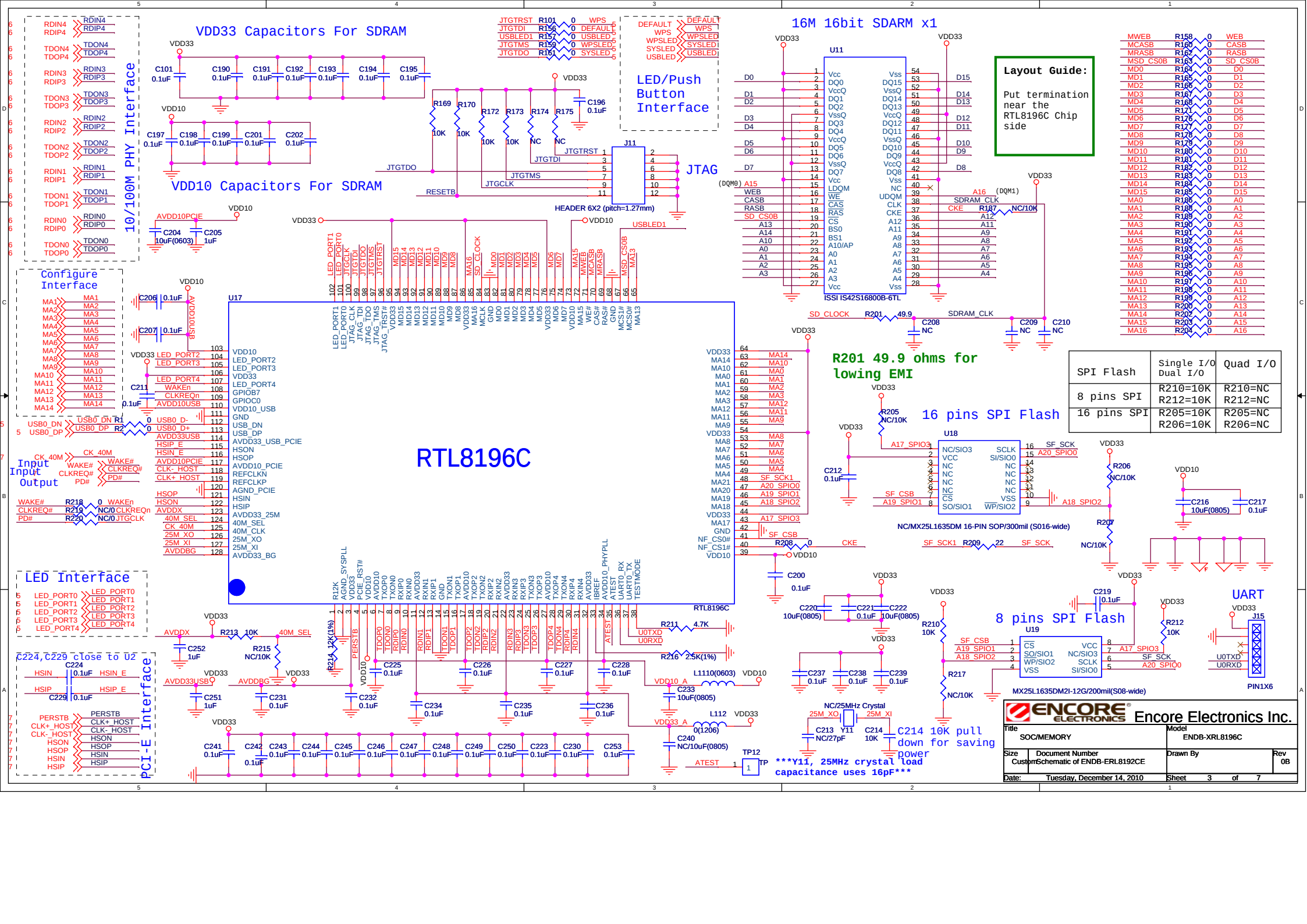
RTL8196C
VDD33 Capacitors For SDRAM
VDD10 Capacitors For SDRAM
16M 16bit SDARM x1
ISSI IS42S16800B-6TL
10/100M PHY Interface
LED/Push Button Interface
JTAG
HEADER 6X2 (pitch=1.27mm)
Configure Interface
LED Interface
PCI-E Interface
16 pins SPI Flash
8 pins SPI Flash
NC/MX25L1635DM 16-PIN SOP/300mil (S016-wide)
MX25L1635DM2I-12G/200mil(S08-wide)
R201 49.9 ohms for lowing EMI
Layout Guide:
Put termination near the RTL8196C Chip side
C224,C229 close to U2
C214 10K pull down for saving power
Y11, 25MHz crystal load capacitance uses 16pF
UART
Encore Electronics Inc.
SPI Flash | Single I/O Dual I/O | Quad I/O
8 pins SPI | R210=10K R212=10K | R210=NC R212=NC
16 pins SPI | R205=10K R206=10K | R205=NC R206=NC
Title: SOC/MEMORY
Model: ENDB-XRL8196C
Size: Custom
Document Number: Schematic of ENDB-ERL8192CE
Drawn By
Rev: 0B
Date: Tuesday, December 14, 2010
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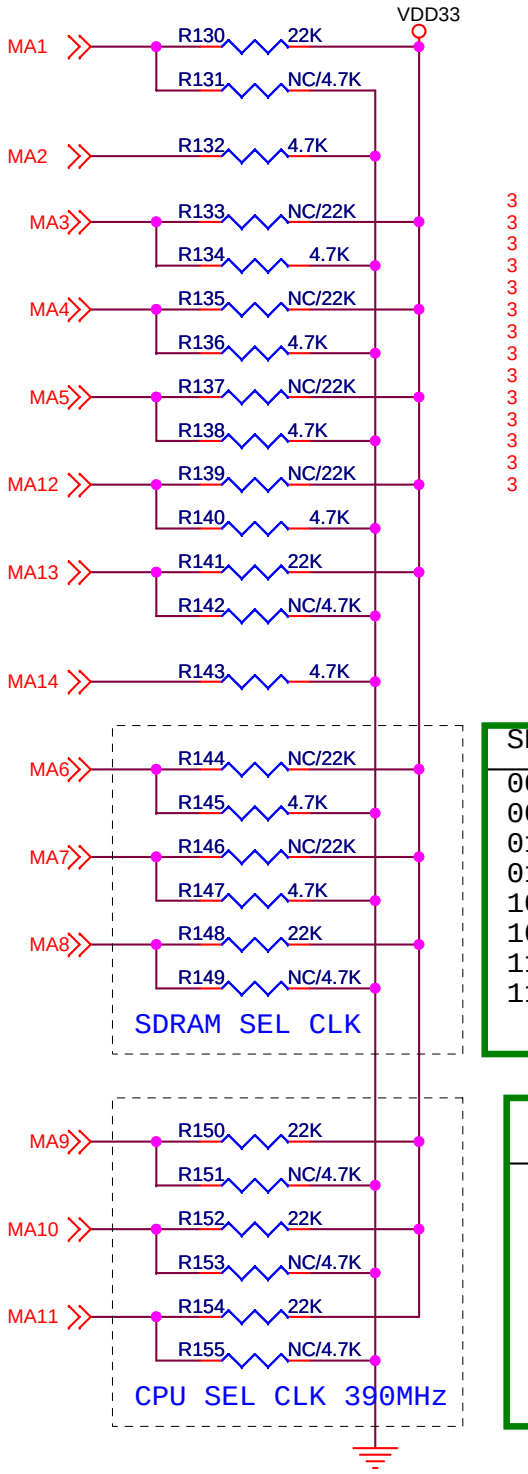
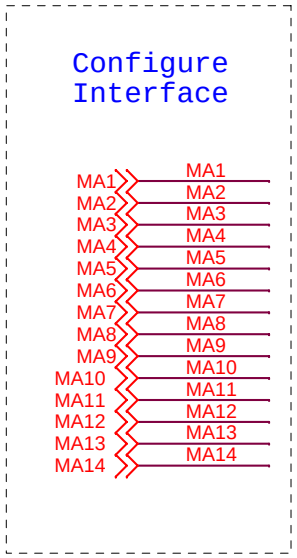
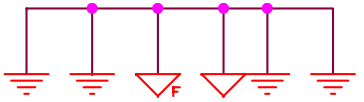


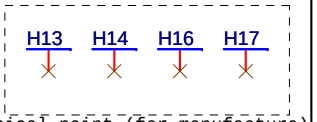


Signal	Function	Descrpition
MA1	BOOTSEL	0: NOR Flash(default) 1: SPI Flash
MA3	Clklx_from_clkm	0: default 1: Clk_lx come from Clk_m
MA4	Enable external reset	0:disable (default) 1: enable
MA5	SYNC_LX_OC	0: default 1: set SYNC_OC=SYNC_LX =SYNC_LX_OC for testing
MA[6:8]	(DRAM SEL CLK) clk_m2x_freq_Sel[0:2]	H/W strap can set 3 bits[0:2]
MA[9:11]	(CPU SEL CLK) clk_cpu_freq_Sel[1:3]	H/W strap can set 3 bits[1:3]
MA12	ck_cpu_div_sel	0: default 1: pll_cpu divide by 2
MA13	en_router_mode	0: 1 port AP mode 1: 5 port router mode (default)

SDRAMClkSel[2:0]
000: 65.625 MHz
001: 78.125 MHz
010: 125 MHz
011: 150 MHz
100: 156.25 MHz(default)
101: 168.75 MHz
110: 193.75 MHz
111: 237.5 MHz

CPUClkSel[2:0]
000: 250 MHz
001: 270 MHz
010: 290 MHz
011: 310 MHz
100: 330 MHz
101: 350 MHz
110: 370 MHz
111: 390 MHz





Opical point (for manufacture)

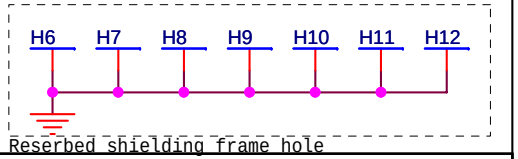
TP9

H3

H1

H2

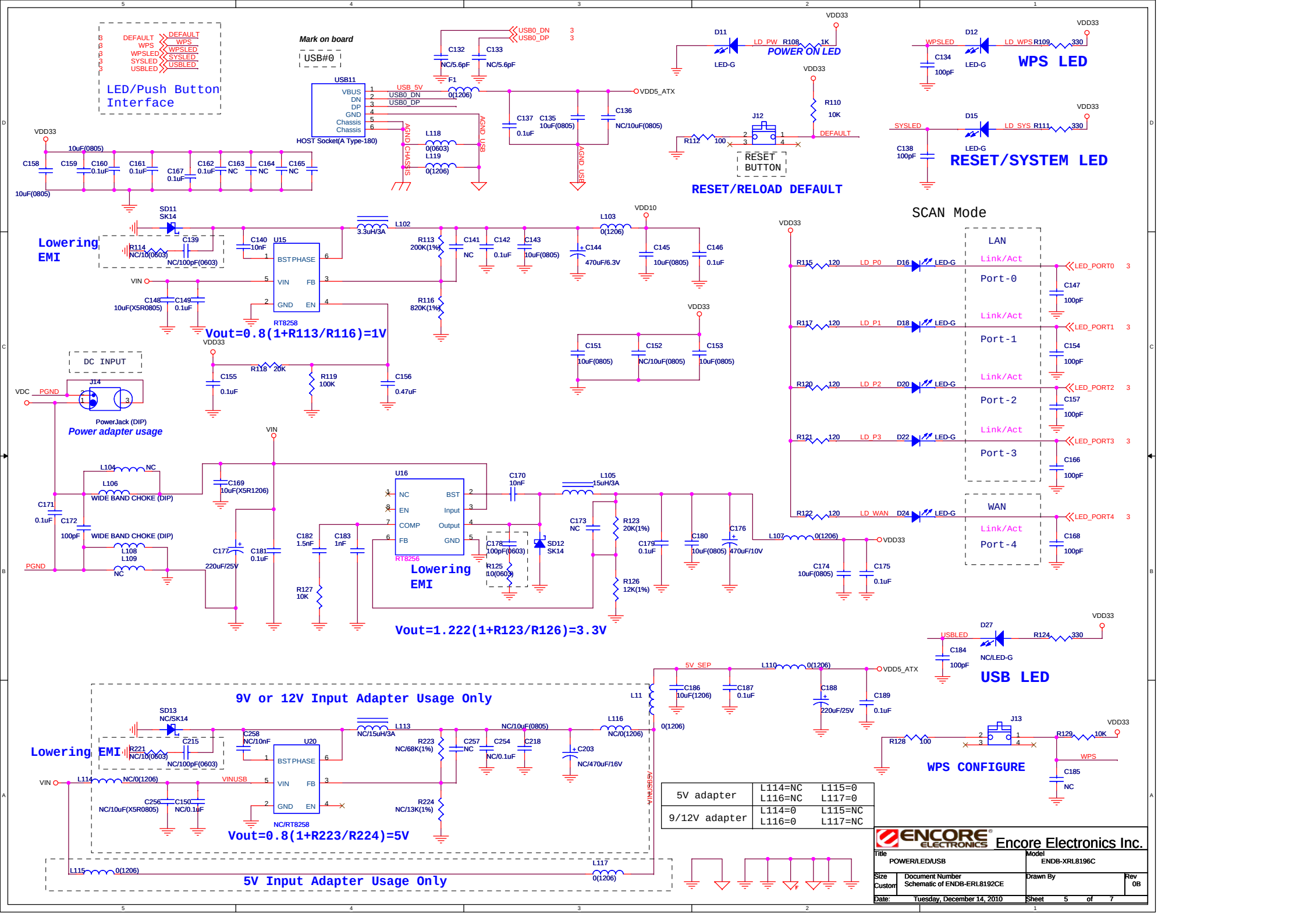
H4



Reserbed shielding frame hole

Encore Electronics Inc.

Title: CONFIGURE INTERFACE		Model: ENDB-XRL8196C	
Size: A	Document Number: Schematic of ENDB-ERL8192CE	Drawn By:	Rev: 0B
Date: Tuesday, December 14, 2010		Sheet 4 of 7	


LED/Push Button Interface
DEFAULT
WPS
WPSLED
SYSLED
USBLED
Mark on board
USB#0
USB11
HOST Socket(A Type-180)
POWER ON LED
WPS LED
RESET/RELOAD DEFAULT
RESET/SYSTEM LED
RESET BUTTON
SCAN Mode
LAN
WAN
Link/Act
Port-0
Port-1
Port-2
Port-3
Port-4
Lowering EMI
RT8258
Vout=0.8(1+R113/R116)=1V
DC INPUT
PowerJack (DIP)
Power adapter usage
WIDE BAND CHOKE (DIP)
RT8256
Vout=1.222(1+R123/R126)=3.3V
USB LED
WPS CONFIGURE
9V or 12V Input Adapter Usage Only
NC/RT8258
Vout=0.8(1+R223/R224)=5V
5V Input Adapter Usage Only
5V adapter
L114=NC L115=0
L116=NC L117=0
9/12V adapter
L114=0 L115=NC
L116=0 L117=NC
Encore Electronics Inc.
Title
POWER/LED/USB
Model
ENDB-XRL8196C
Size
Custom
Document Number
Schematic of ENDB-ERL8192CE
Drawn By
Rev
0B
Date:
Tuesday, December 14, 2010
Sheet
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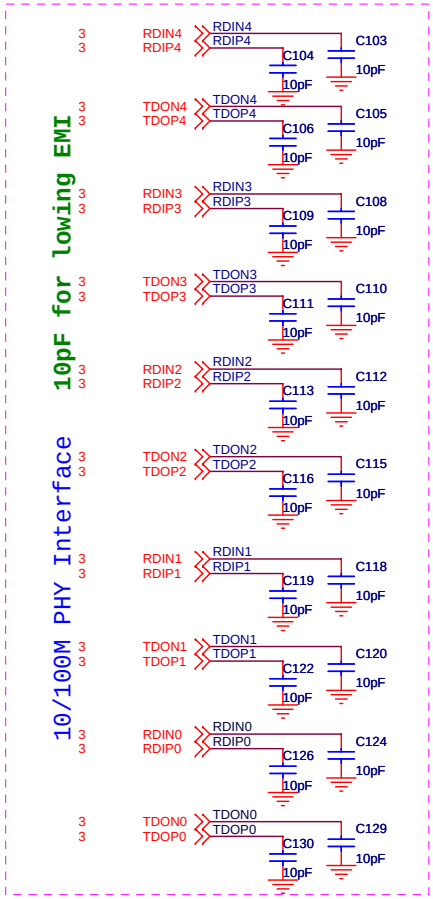
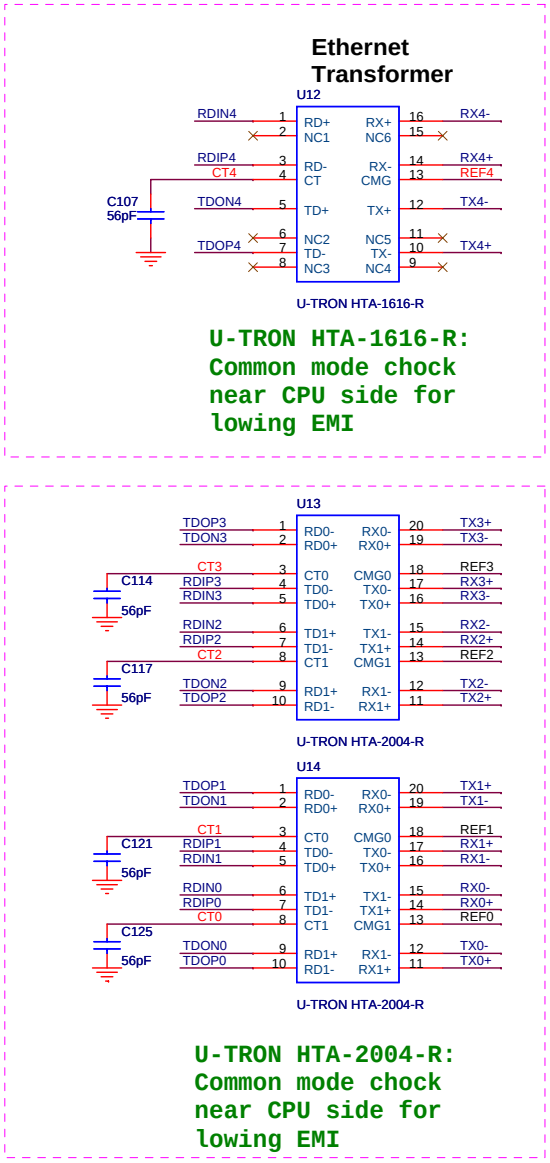
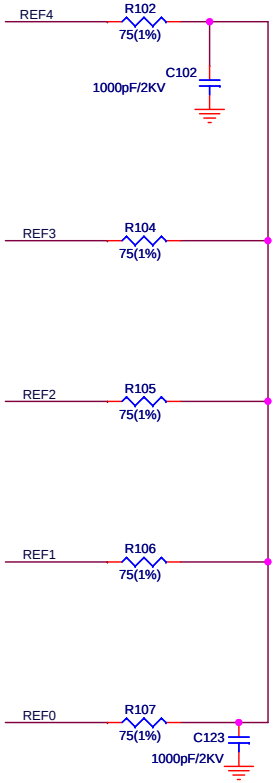
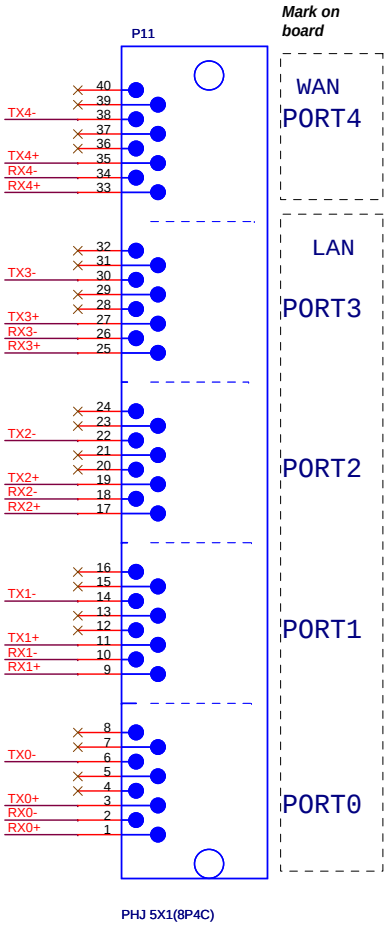
7

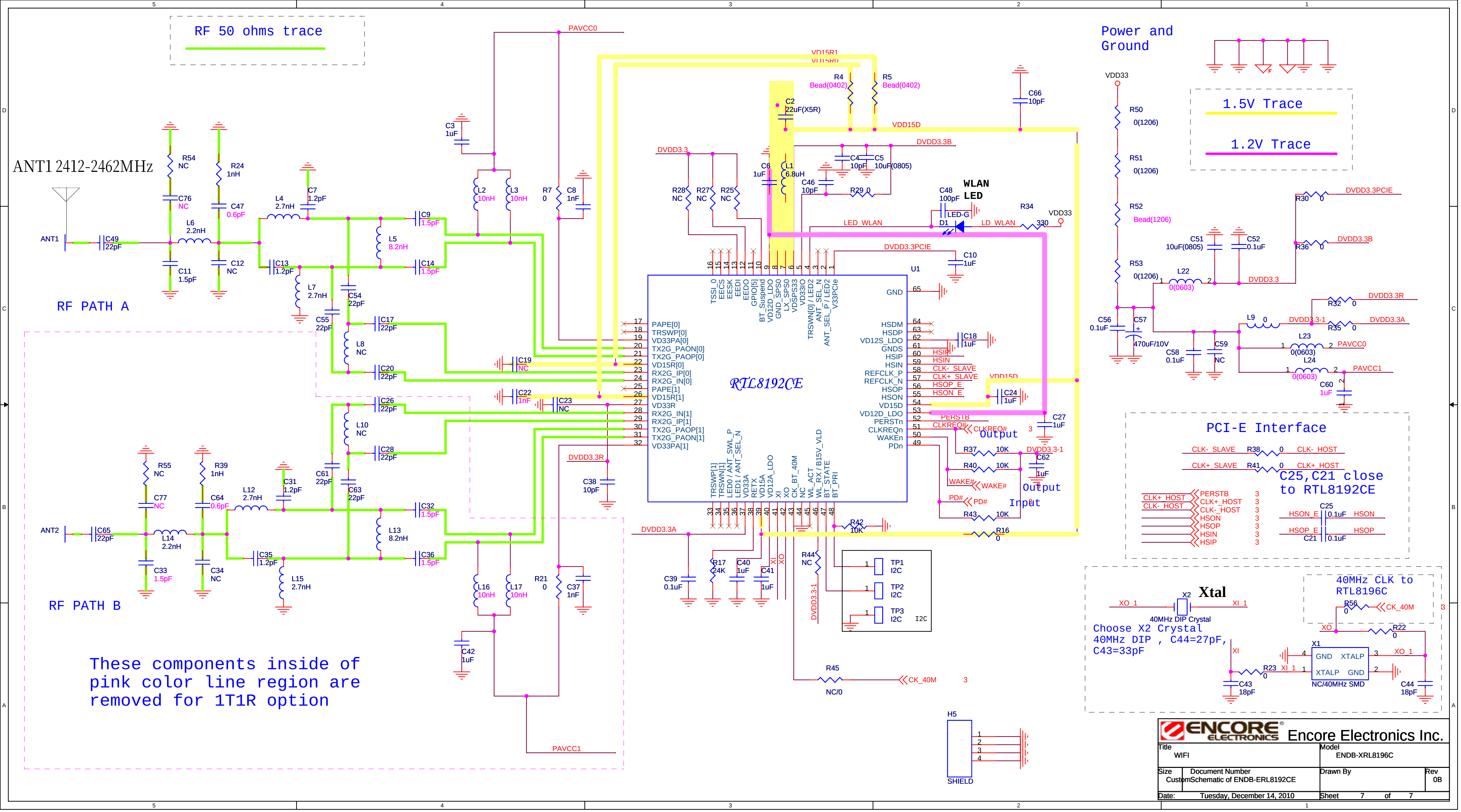








Encore Electronics Inc.			
Title: MDI 10/100M		Model: ENDB-XRL8196C	
Size: B	Document Number: Schematic of ENDB-ERL8192CE	Drawn By:	Rev: 0B
Date: Tuesday, December 14, 2010		Sheet 6 of 7	



RF 50 ohms trace
Power and Ground
1.5V Trace
1.2V Trace
ANT1 2412-2462MHz
RF PATH A
RF PATH B
WLAN LED
RTL8192CE
PCI-E Interface
C25,C21 close to RTL8192CE
Output
Input
Xtal
40MHz DIP Crystal
Choose X2 Crystal 40MHz DIP , C44=27pF, C43=33pF
40MHz CLK to RTL8196C
NC/40MHz SMD
These components inside of pink color line region are removed for 1T1R option
SHIELD
ENCORE ELECTRONICS
Encore Electronics Inc.
Title WIFI
Model ENDB-XRL8196C
Size Custom
Document Number Schematic of ENDB-ERL8192CE
Drawn By
Rev 0B
Date: Tuesday, December 14, 2010
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