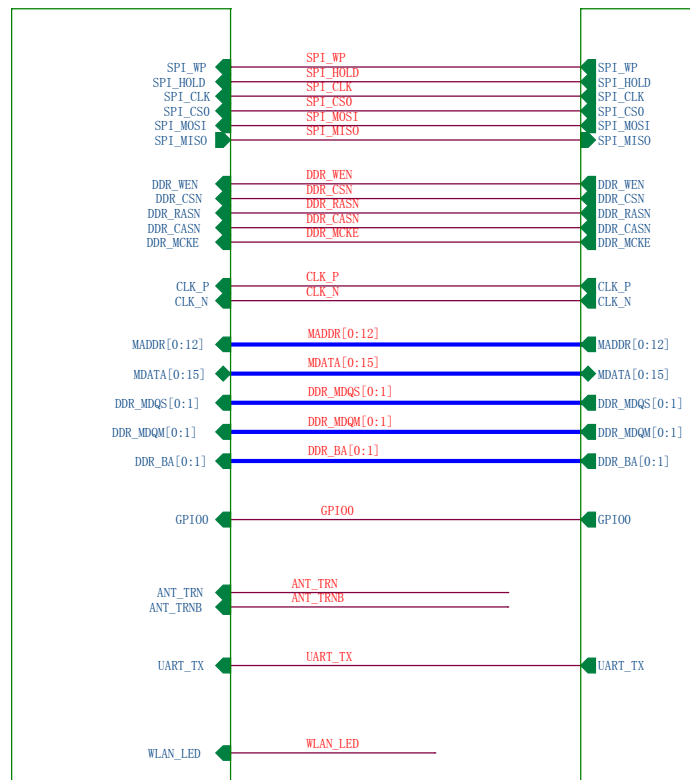
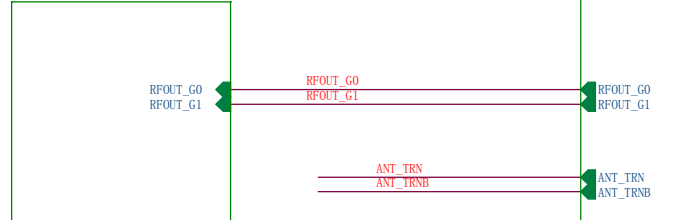


2-MEMORY



2-MEMORY

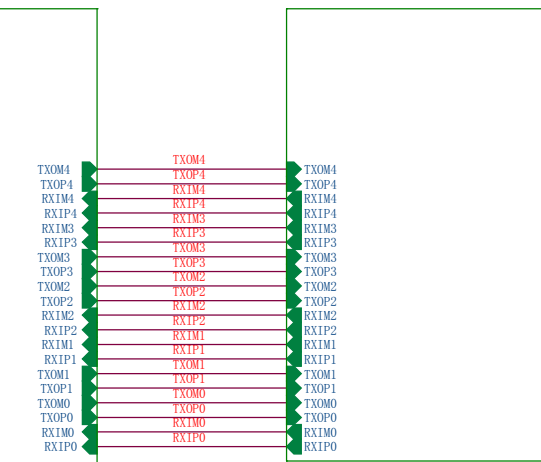
3-WLAN



3-WLAN

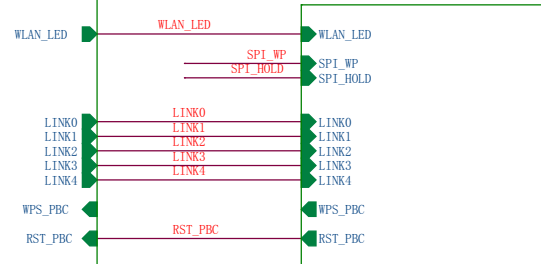
1-CPU-MT7620N

4-ETHERNET



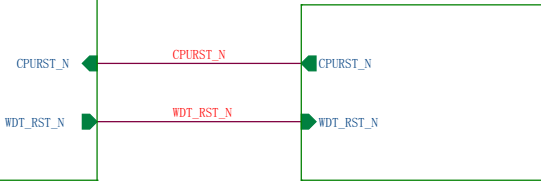
4-ETHERNET

6-LED



6-LED

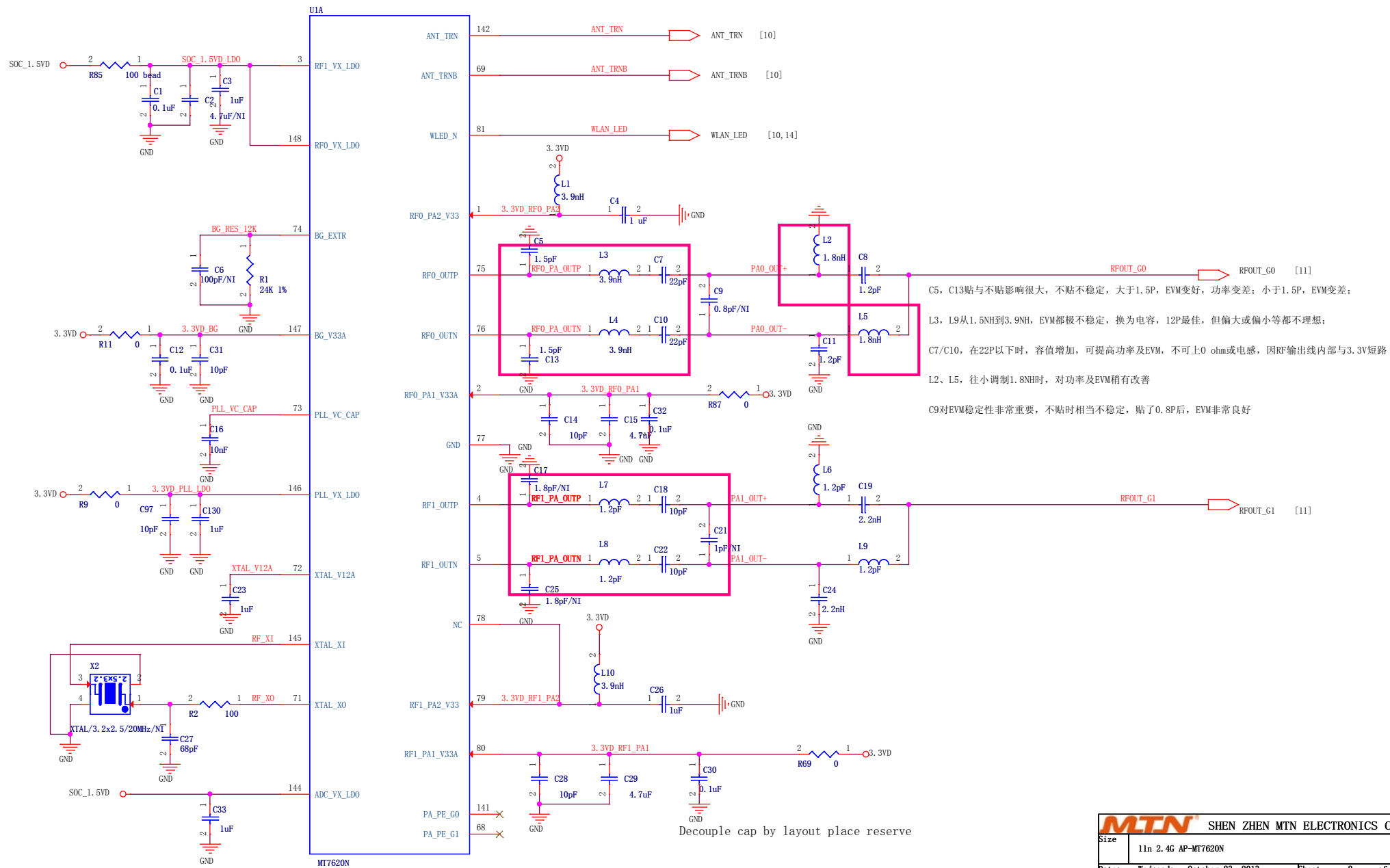
5-POWER



5-POWER

Filename:
 AP-MT7620N-V16-SPI-DDR1-2L-2X2-121004.DSN

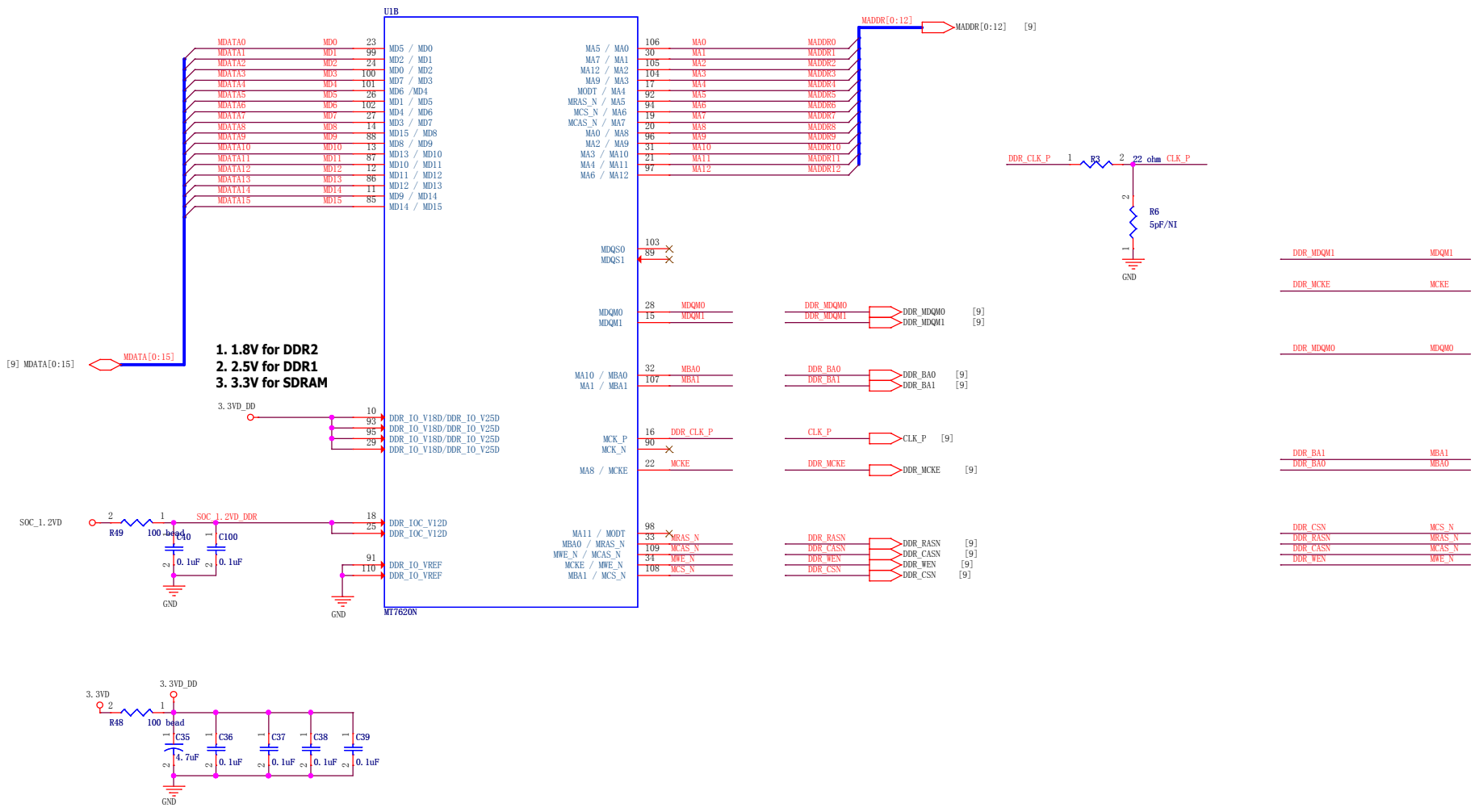
MTN SHEN ZHEN MTN ELECTRONICS CO., LTD		
Size	11n 2.4G AP-MT7620N	Rev 0
Date:	Tuesday, October 22, 2013	Sheet 1 of 15

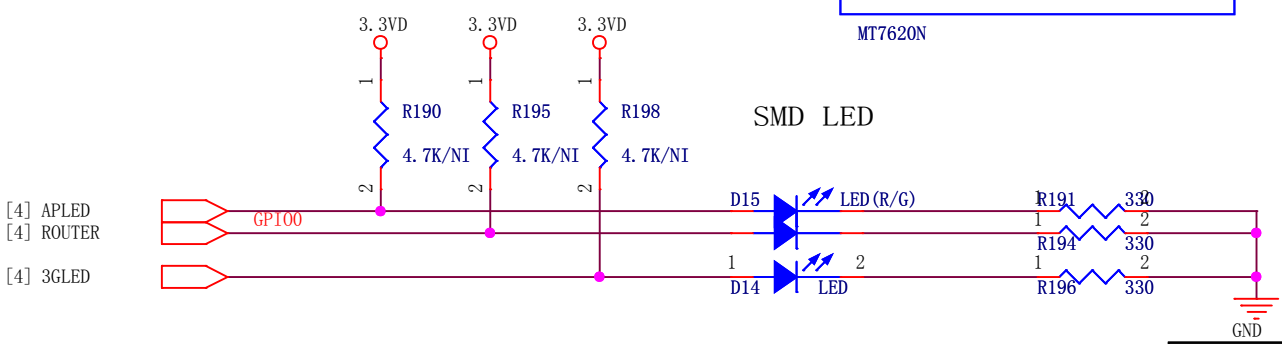
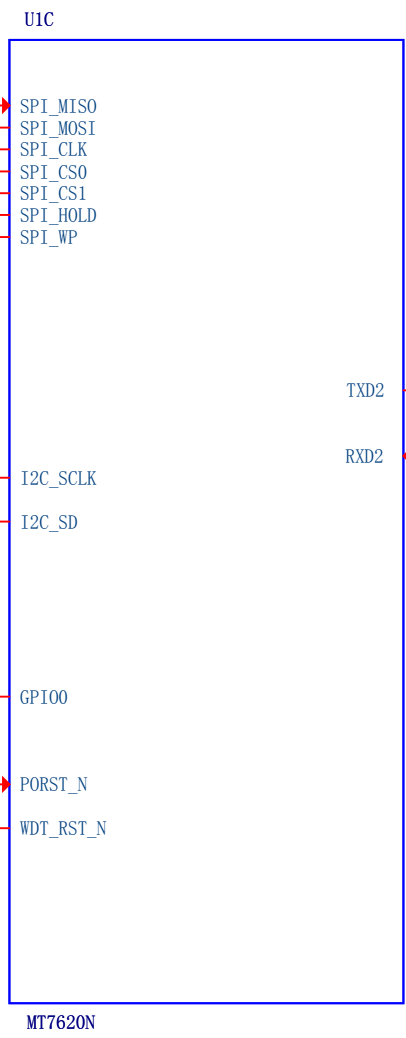
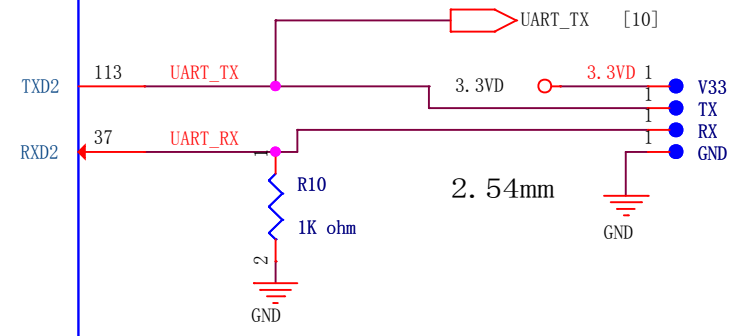
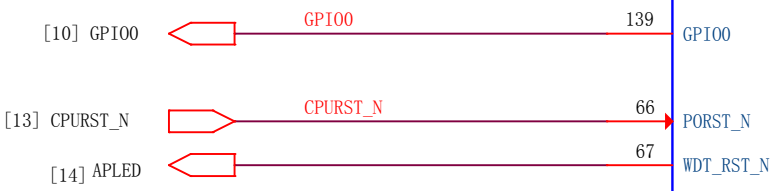
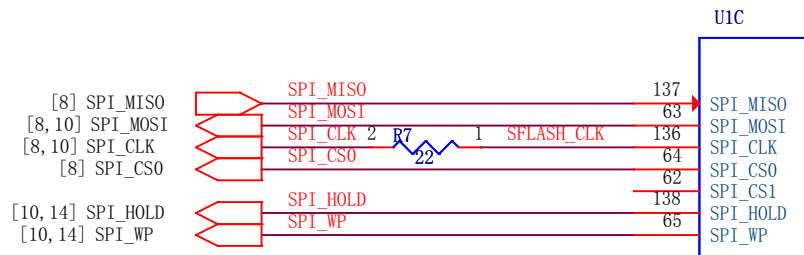


C5, C13贴与不贴影响很大, 不贴不稳定, 大于1.5P, EVM变好, 功率变差; 小于1.5P, EVM变差;
 L3, L9从1.5NH到3.9NH, EVM都极不稳定, 换为电容, 12P最佳, 但偏大或偏小等都不理想;
 C7/C10, 在22P以下时, 容值增加, 可提高功率及EVM, 不可上0 ohm或电感, 因RF输出线内部与3.3V短路
 L2、L5, 往小调制1.8NH时, 对功率及EVM稍有改善
 C9对EVM稳定性非常重要, 不贴时相当不稳定, 贴了0.8P后, EVM非常好

Decouple cap by layout place reserve

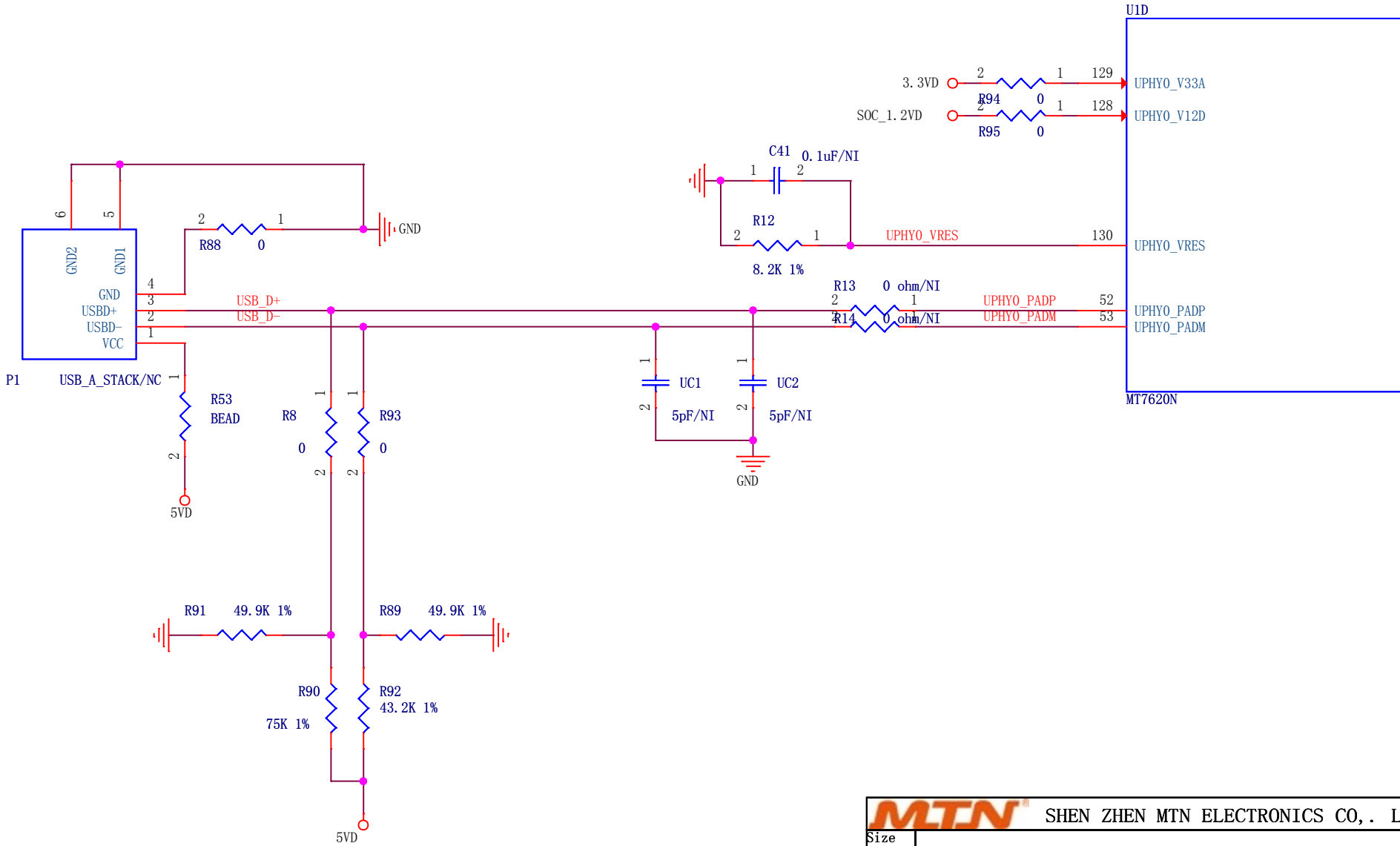
MTN SHEN ZHEN MTN ELECTRONICS CO., LTD		
Size	11n 2.4G AP-MT7620N	Rev 0
Date:	Wednesday, October 23, 2013	Sheet 2 of 15

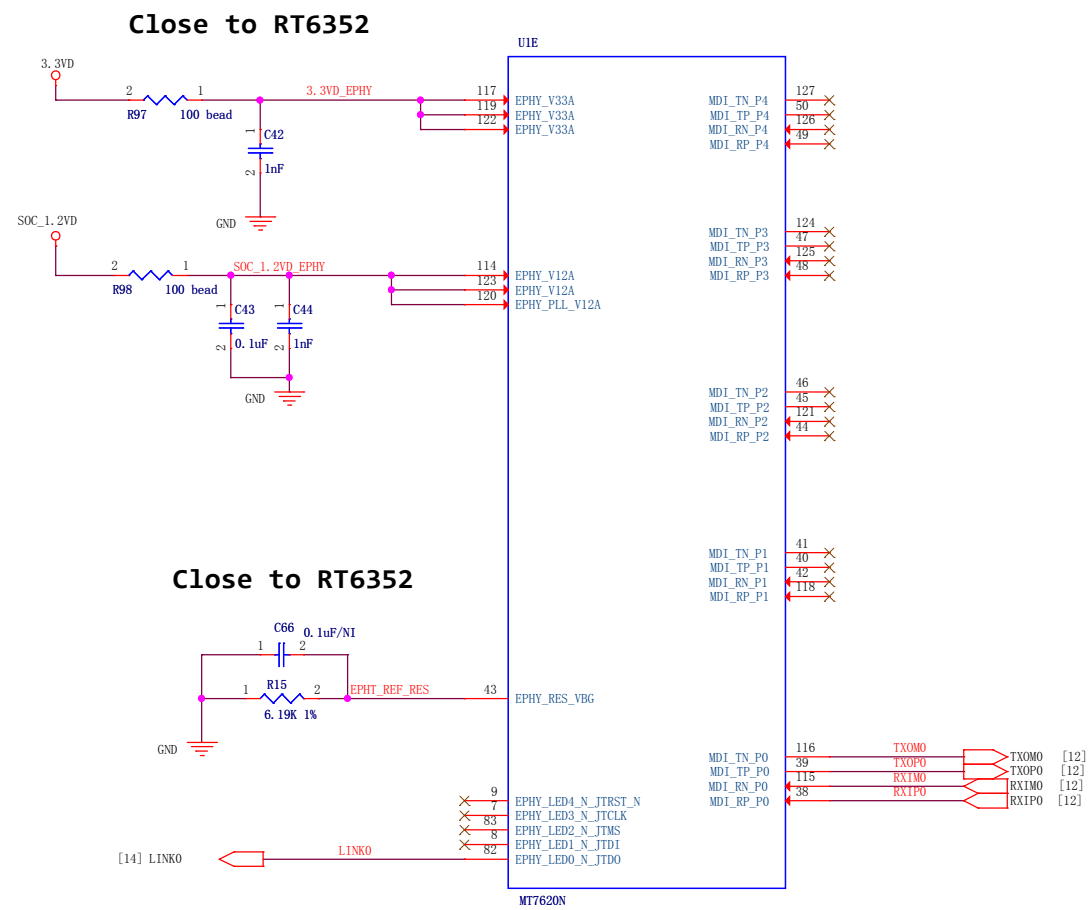


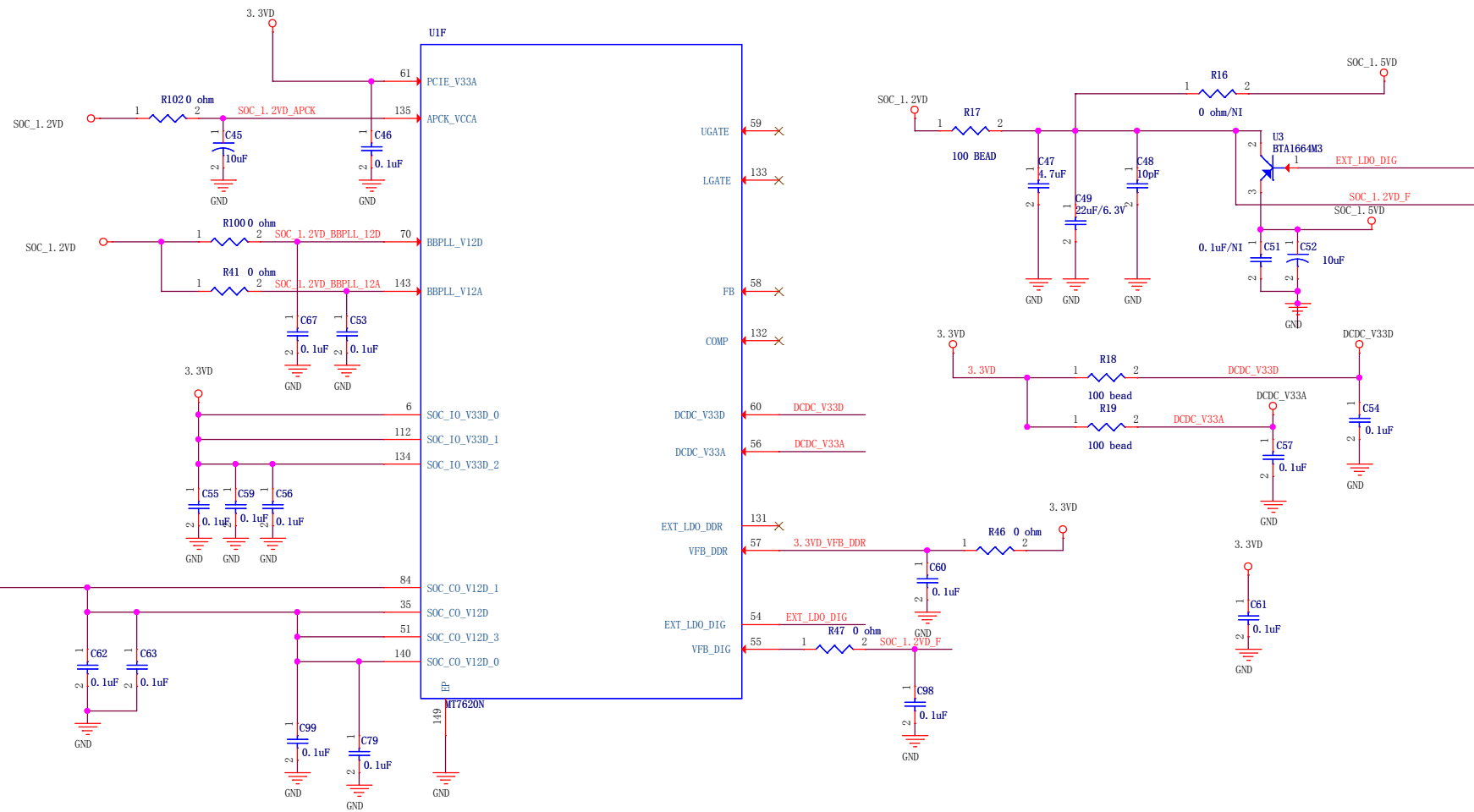


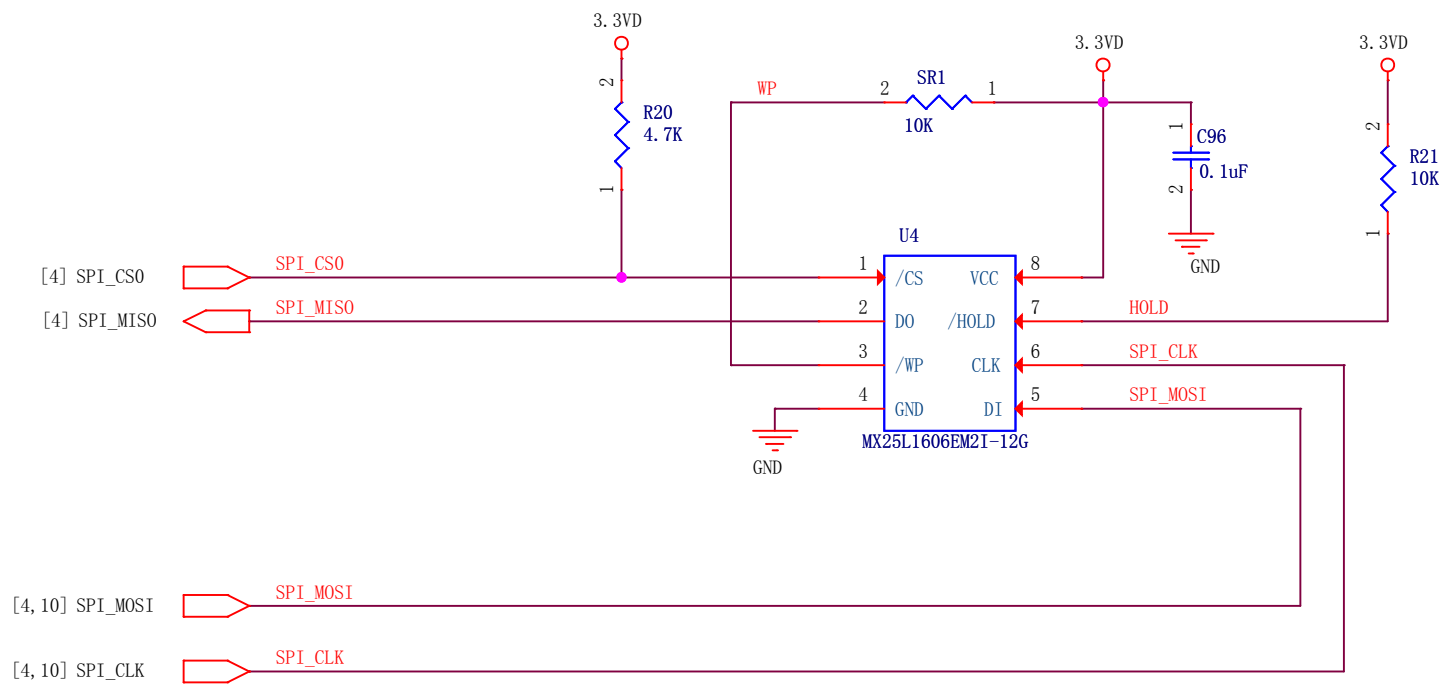
[4] APLED
[4] ROUTER
[4] 3GLED

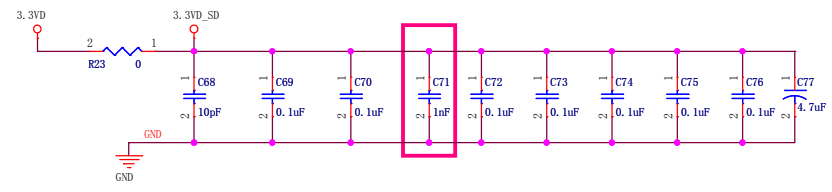
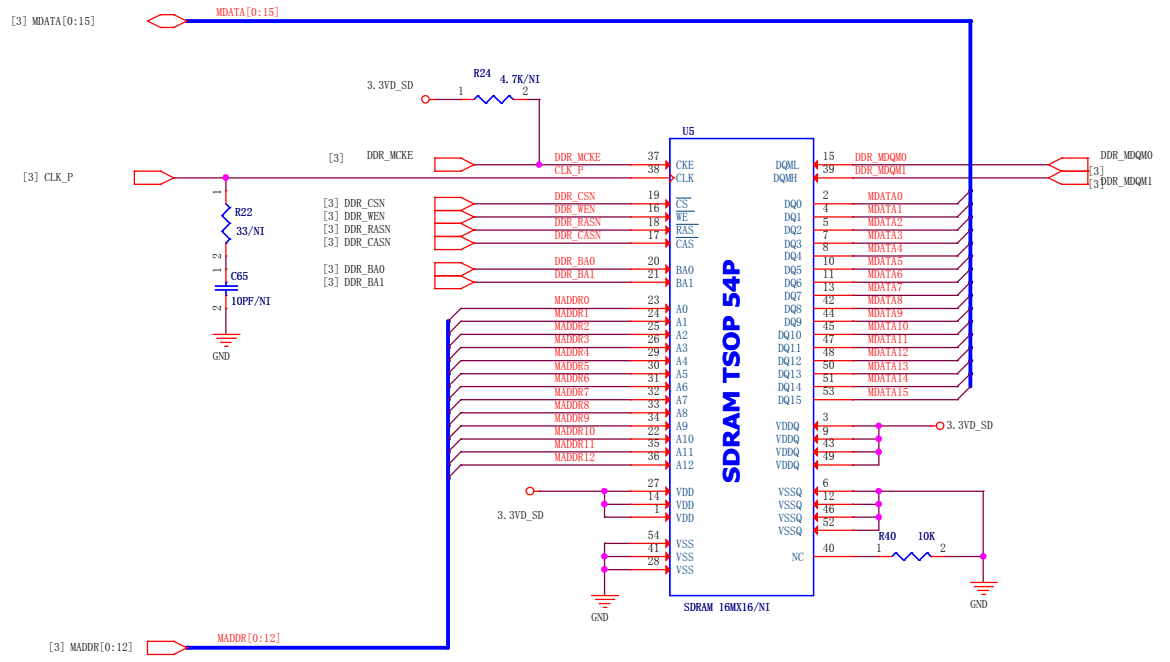
MTN SHEN ZHEN MTN ELECTRONICS CO., LTD		
Size	11n 2.4G AP-MT7620N	Rev 0
Date:	Thursday, October 24, 2013	Sheet 4 of 15

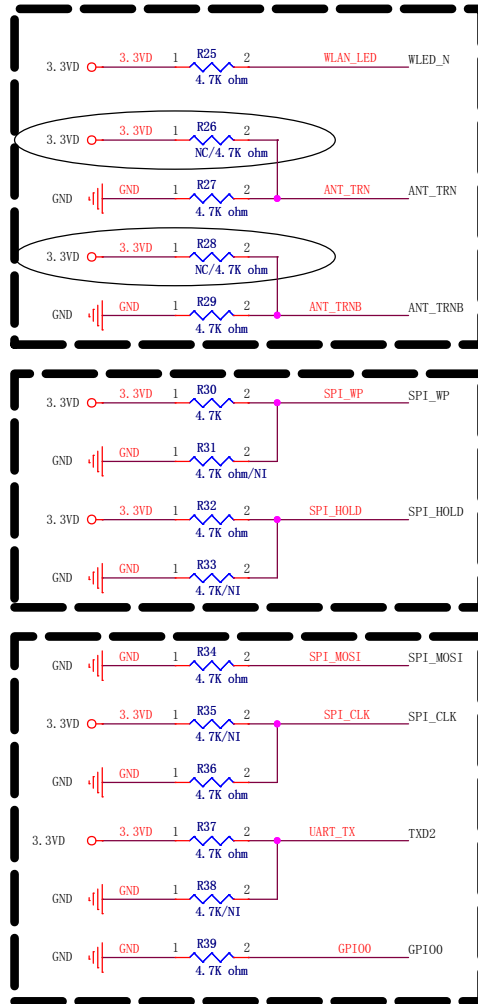
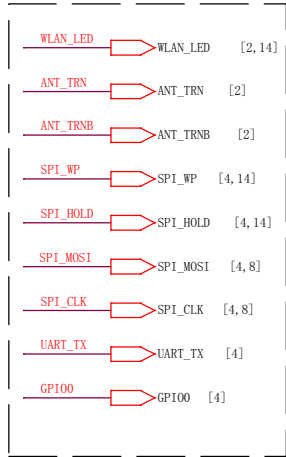








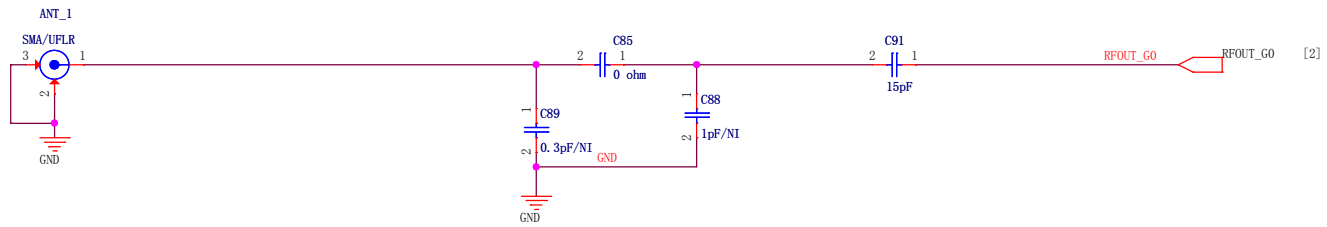
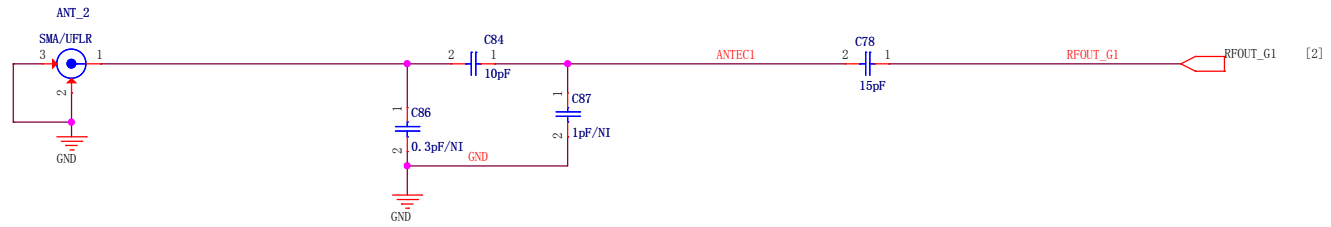




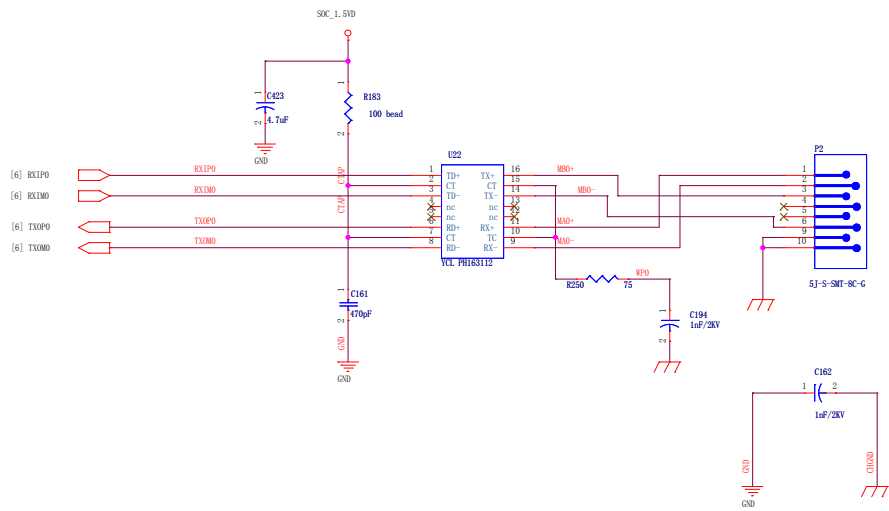
MT7620N Boot Up Strapping

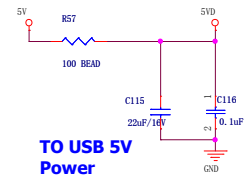
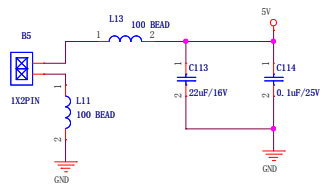
Pin Name	Description	Value
WLED_N	DRAM_FROM_EE For non scan mode:	0: DRAM configuration from EEPROM 1: DRAM configuration from Auto Detect
ANT_TRN	DBG_JTAG_MODE	0: EPHY_LED 1: JTAG MODE
ANT_TRNB	XTAL_FREQ_SEL	0: 20MHz 1: 40MHz
{SPI_WP, SPI_HOLD}	DRAM_TYPE	01: DDR1 (CPU/3) TSOP Package 10: DDR2 (CPU/3) FBGA Package 11: SDRAM (CPU/5) (LVTTL 3.3 V) TSOP Package
{SPI_MOSI SPI_CLK, TXD2, GP100 }	CHIP_MODE[3:0]	A vector to set chip function/test/debug modes.In non-test/debug operation, 0001: Normal mode (boot from ROM+NAND flash 4 cycle address) 0010: Normal mode (boot from SPI 3Byte Addr) 0011: Normal mode (boot from SPI 4Byte Addr) 0100 : iNIC RGMII mode(boot from ROM) 0101: iNIC MII mode(boot from ROM) 0110: iNIC RVMII mode(boot from ROM) 0111: iNIC PHY mode(boot from ROM) 1000: iNIC USB mode(boot from ROM) 1001: iNIC PCIe mode(boot from ROM)

(Printed ANTENNA_G1)



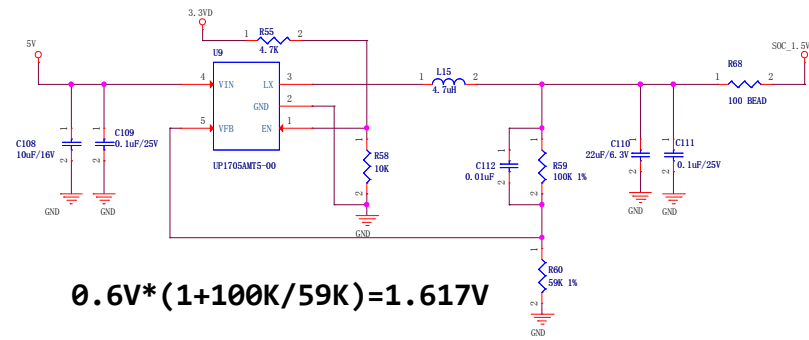
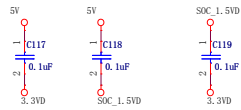
MTN SHEN ZHEN MTN ELECTRONICS CO., . LTD		
Size	11n 2.4G AP-MT7620N	Rev 0
Date:	Wednesday, October 23, 2013	Sheet 11 of 15



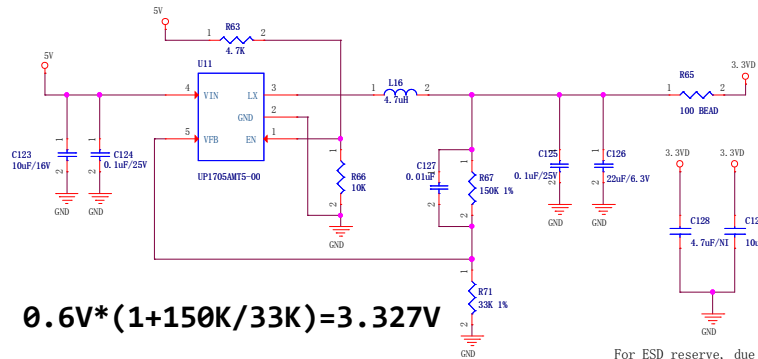


TO USB 5V Power

5V DC ADAPTER



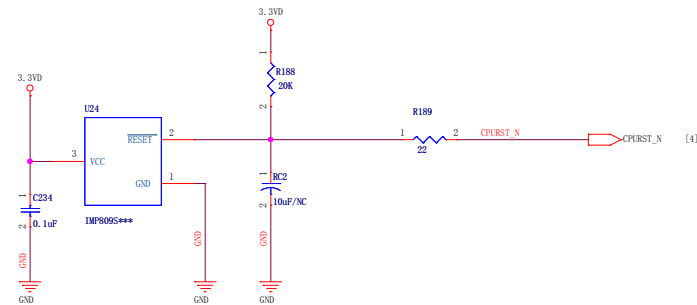
$$0.6V * (1 + 100K / 59K) = 1.617V$$

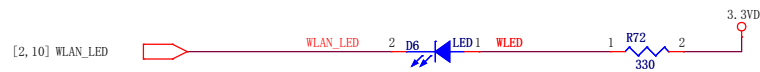


$$0.6V * (1 + 150K / 33K) = 3.327V$$

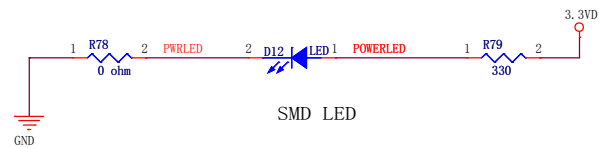
For ESD reserve, due to the 3.3V trace has to across the bottom of Ethernet transformer.

RESET

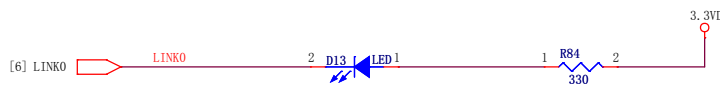




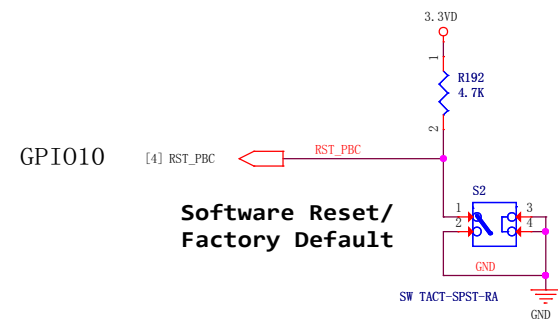
Wireless ACT LED



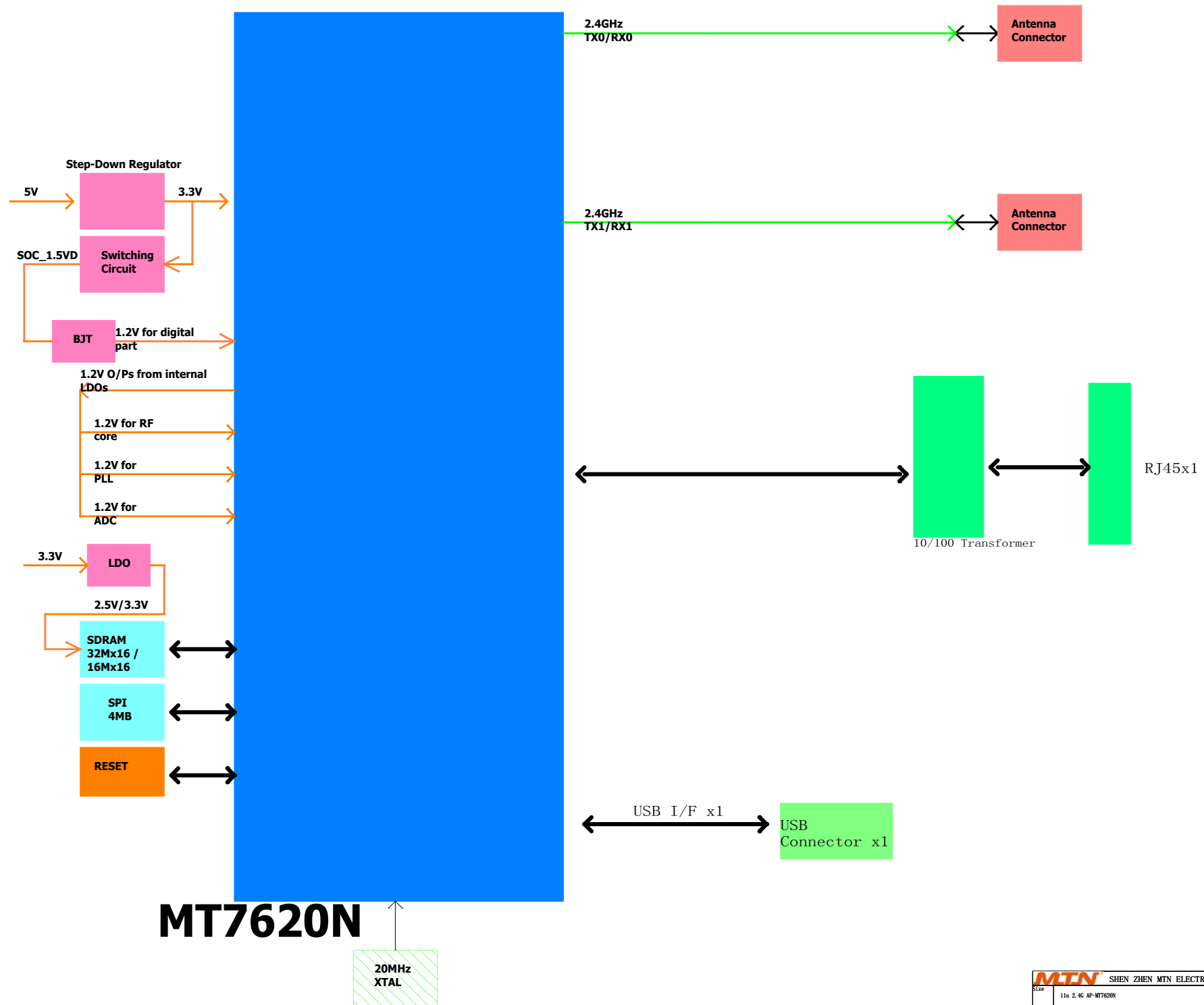
System/Power LED



WAN Port LED



Software Reset/
Factory Default



MT7620N

20MHz
XTAL