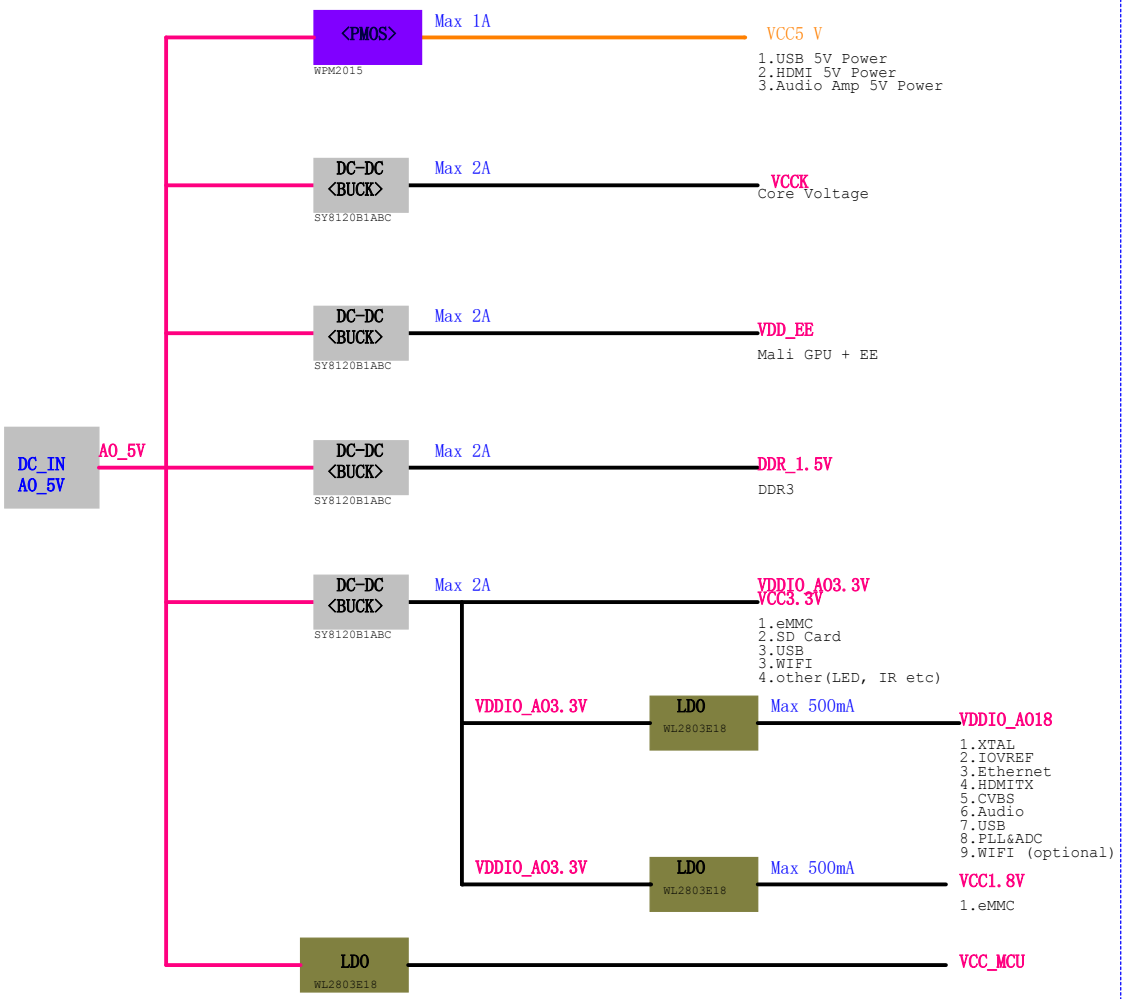
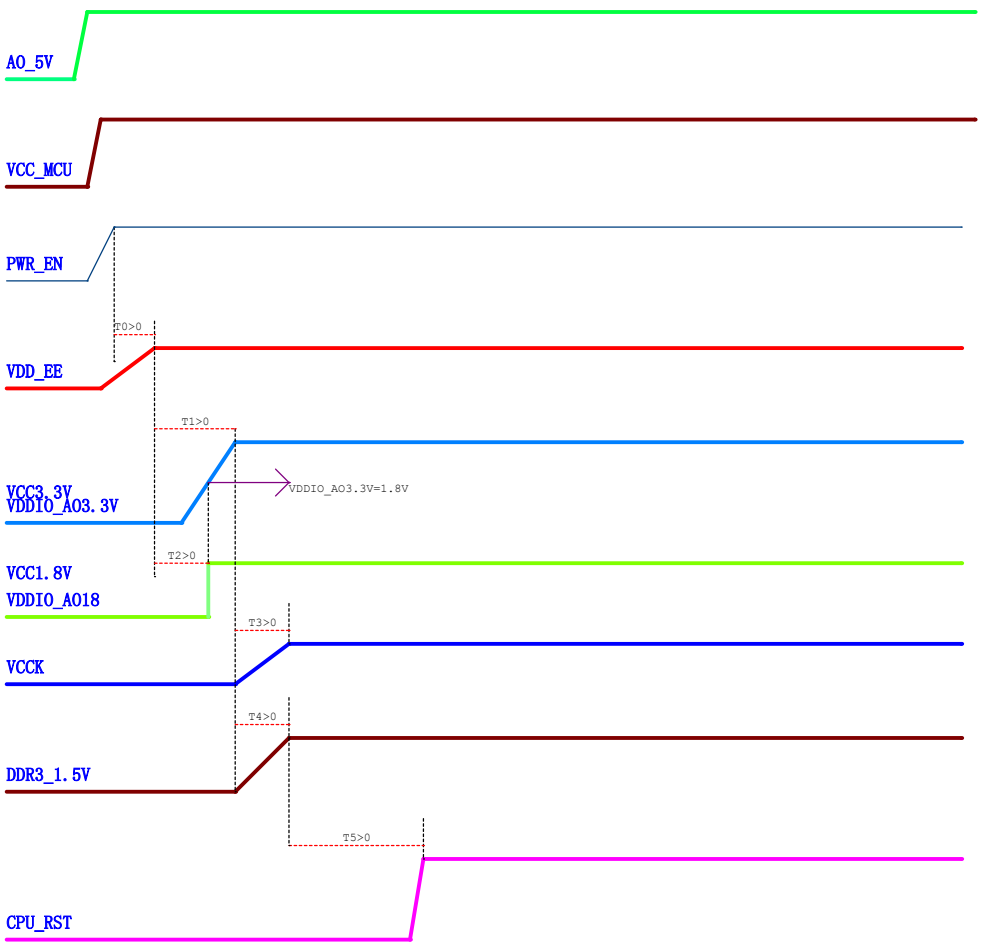
Vim

Project:	**Vim**		
Desc:	**Power tree & timings**		
Date:	Wednesday, August 17, 2016	Rev:	V1.1
Author:	Gouwa	Page:	1 of 10

Power Tree :



Power On Sequence :



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P02 Power Timings
P03 POWER
P04 CPU & IR & Keys & RTC
P05 DDR3
P06 eMMC & GPIO
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P08 USB & SDCard
P09 WIFI & BT
P10 HDMI & CVBS

Project:	Vim		
Desc:	Power tree & timings		
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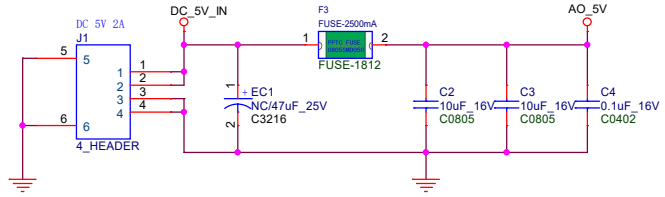

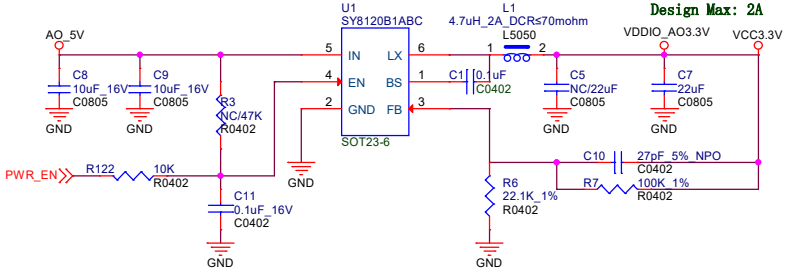

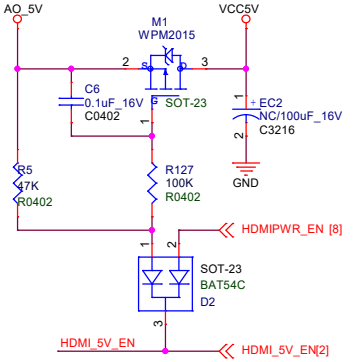

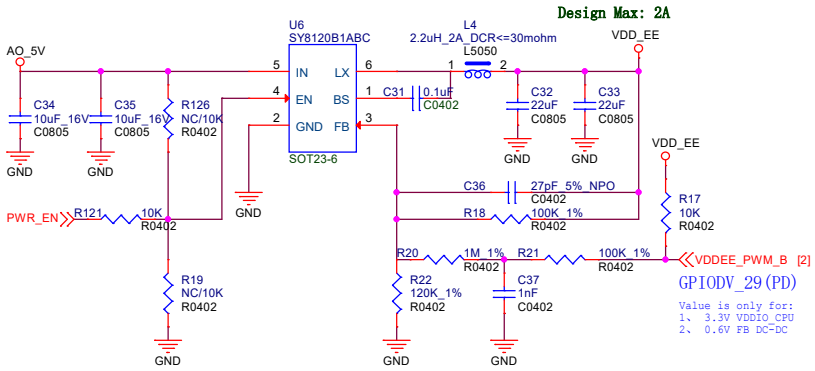

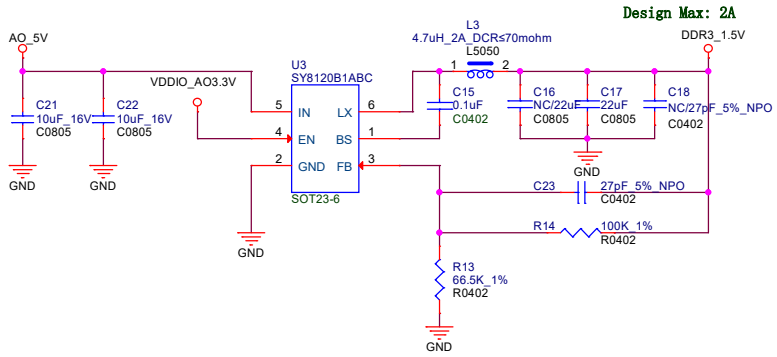

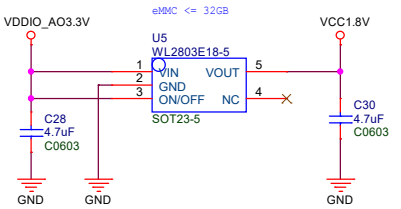

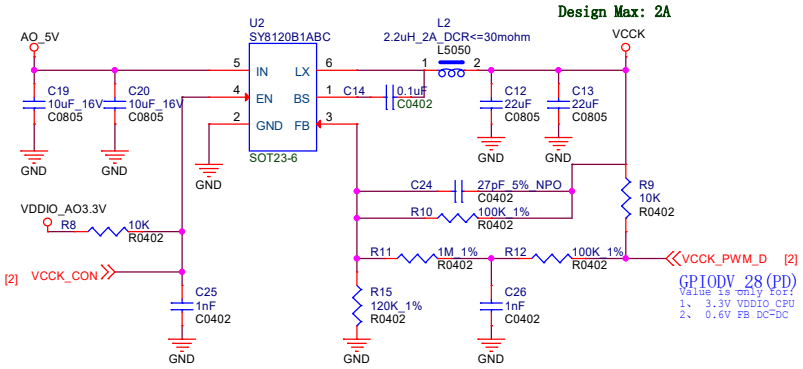

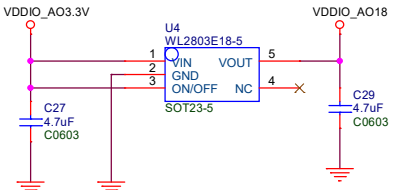

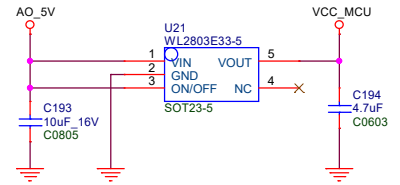

Project:	Vim		
Desc:	Power		
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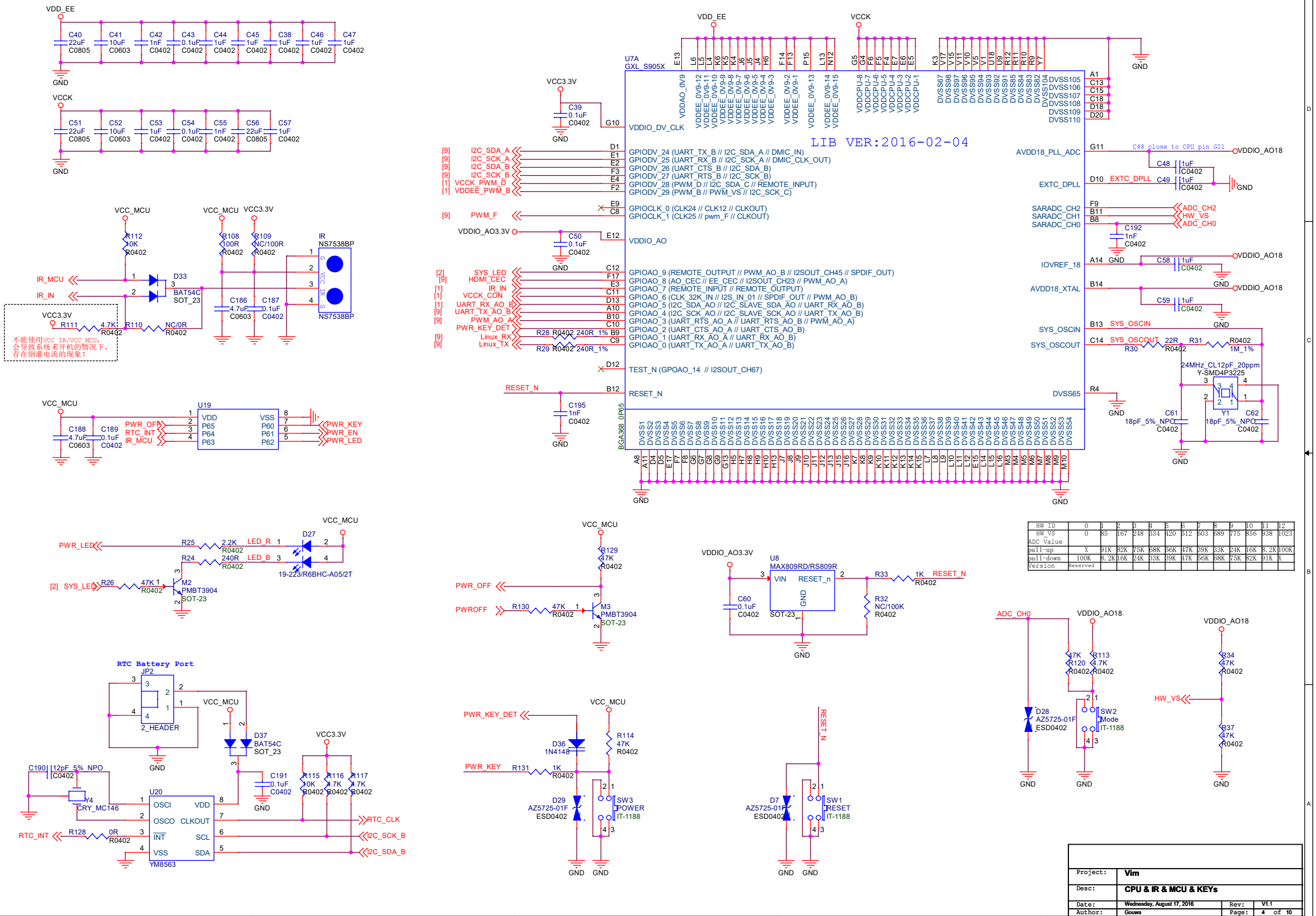
VDD_EE
C40 22uF C0805
C41 10uF C0603
C42 1nF C0402
C43 0.1uF C0402
C44 1uF C0402
C45 1uF C0402
C38 1uF C0402
C46 1uF C0402
C47 1uF C0402
GND
VCCK
C51 22uF C0805
C52 10uF C0603
C53 1uF C0402
C54 0.1uF C0402
C55 1nF C0402
C56 22uF C0805
C57 1uF C0402
GND
VCC_MCU
R112 10K R0402
IR_MCU
IR_IN
D33 BAT54C SOT_23
VCC3.3V
R111 4.7K R0402
R110 NC/0R R0402
不能使用VCC_IR/VCC_MCU，会导致系统术开机的情况下，存在倒灌电流的现象！
VCC_MCU
VCC3.3V
R108 100R R0402
R109 NC/100R R0402
C186 4.7uF C0603
C187 0.1uF C0402
IR
NS7538BP
NS7538BP
VCC_MCU
U19
C188 4.7uF C0603
C189 0.1uF C0402
PWR_OFF
RTC_INT
IR_MCU
VDD
P65
P64
P63
VSS
P60
P61
P62
PWR_KEY
PWR_EN
PWR_LED
VCC_MCU
PWR_LED
R25 2.2K R0402
LED_R
D27
R24 240R R0402
LED_B
19-223/R6BHC-A05/2T
[2] SYS_LED
R26 47K R0402
M2 PMBT3904 SOT-23
RTC Battery Port
JP2
2_HEADER
GND
VCC_MCU
D37 BAT54C SOT_23
VCC3.3V
C190 12pF_5%_NPO C0402
Y4 CRY_MC146
U20
OSCI
OSCO
INT
VSS
VDD
CLKOUT
SCL
SDA
YM8563
C191 0.1uF C0402
R115 10K R0402
R116 4.7K R0402
R117 4.7K R0402
RTC_CLK
I2C_SCK_B
I2C_SDA_B
RTC_INT
R128 0R R0402
VDD_EE
VCCK
U7A
GXL_S905X
VDDAO_0V9
VDDEE_0V9-12
VDDEE_0V9-11
VDDEE_0V9-10
VDDEE_0V9-9
VDDEE_0V9-8
VDDEE_0V9-7
VDDEE_0V9-6
VDDEE_0V9-5
VDDEE_0V9-4
VDDEE_0V9-3
VDDEE_0V9-2
VDDEE_0V9-1
VDDEE_0V9-13
VDDEE_0V9-14
VDDEE_0V9-15
VDDCPU-8
VDDCPU-7
VDDCPU-6
VDDCPU-5
VDDCPU-4
VDDCPU-3
VDDCPU-2
VDDCPU-1
DVSS67
DVSS98
DVSS97
DVSS96
DVSS95
DVSS94
DVSS93
DVSS92
DVSS91
DVSS85
DVSS84
DVSS83
DVSS82
DVSS104
DVSS105
DVSS106
DVSS107
DVSS108
DVSS109
DVSS110
GND
VCC3.3V
C39 0.1uF C0402
GND
VDDIO_DV_CLK
LIB VER:2016-02-04
[9] I2C_SDA_A
[9] I2C_SCK_A
[9] I2C_SDA_B
[9] I2C_SCK_B
[1] VCCK_PWM_D
[1] VDDEE_PWM_B
GPIODV_24 (UART_TX_B // I2C_SDA_A // DMIC_IN)
GPIODV_25 (UART_RX_B // I2C_SCK_A // DMIC_CLK_OUT)
GPIODV_26 (UART_CTS_B // I2C_SDA_B)
GPIODV_27 (UART_RTS_B // I2C_SCK_B)
GPIODV_28 (PWM_D // I2C_SDA_C // REMOTE_INPUT)
GPIODV_29 (PWM_B // PWM_VS // I2C_SCK_C)
[9] PWM_F
GPIOCLK_0 (CLK24 // CLK12 // CLKOUT)
GPIOCLK_1 (CLK25 // pwm_F // CLKOUT)
VDDIO_AO3.3V
C50 0.1uF C0402
VDDIO_AO
GND
[2] SYS_LED
[9] HDMI_CEC
[1] IR_IN
[1] VCCK_CON
[1] UART_RX_AO_B
[9] UART_TX_AO_B
[9] PWM_AO_A
PWR_KEY_DET
[9] Linux_RX
[9] Linux_TX
R28 R0402 240R_1%
R29 R0402 240R_1%
GPIOAO_9 (REMOTE_OUTPUT // PWM_AO_B // I2SOUT_CH45 // SPDIF_OUT)
GPIOAO_8 (AO_CEC // EE_CEC // I2SOUT_CH23 // PWM_AO_A)
GPIOAO_7 (REMOTE_INPUT // REMOTE_OUTPUT)
GPIOAO_6 (CLK_32K_IN // I2S_IN_01 // SPDIF_OUT // PWM_AO_B)
GPIOAO_5 (I2C_SDA_AO // I2C_SLAVE_SDA_AO // UART_RX_AO_B)
GPIOAO_4 (I2C_SCK_AO // I2C_SLAVE_SCK_AO // UART_TX_AO_B)
GPIOAO_3 (UART_RTS_AO_A // UART_RTS_AO_B // PWM_AO_A)
GPIOAO_2 (UART_CTS_AO_A // UART_CTS_AO_B)
GPIOAO_1 (UART_RX_AO_A // UART_RX_AO_B)
GPIOAO_0 (UART_TX_AO_A // UART_TX_AO_B)
TEST_N (GPOAO_14 // I2SOUT_CH67)
RESET_N
C195 1nF C0402
GND
BGA368_0P65
DVSS1 DVSS2 DVSS3 DVSS4 DVSS5 DVSS6 DVSS7 DVSS8 DVSS9 DVSS10 DVSS11 DVSS12 DVSS13 DVSS14 DVSS15 DVSS16 DVSS17 DVSS18 DVSS19 DVSS20 DVSS21 DVSS22 DVSS23 DVSS24 DVSS25 DVSS26 DVSS27 DVSS28 DVSS29 DVSS30 DVSS31 DVSS32 DVSS33 DVSS34 DVSS35 DVSS36 DVSS37 DVSS38 DVSS39 DVSS40 DVSS41 DVSS42 DVSS43 DVSS44 DVSS45 DVSS46 DVSS47 DVSS48 DVSS49 DVSS50 DVSS51 DVSS52 DVSS53 DVSS54
GND
AVDD18_PLL_ADC
C48 close to CPU pin G11
C48 1uF C0402
EXTC_DPLL
C49 1uF C0402
SARADC_CH2
SARADC_CH1
SARADC_CH0
ADC_CH2
HW_VS
ADC_CH0
C192 1nF C0402
IOVREF_18
C58 1uF C0402
AVDD18_XTAL
C59 1uF C0402
SYS_OSCIN
SYS_OSCOUT
C14 SYS_OSCOUT 22R R30 R0402
R31 R0402 1M_1%
24MHz_CL12pF_20ppm Y-SMD4P3225
Y1
C61 18pF_5%_NPO C0402
C62 18pF_5%_NPO C0402
DVSS65
R4
VCC_MCU
R129 47K R0402
PWR_OFF
PWROFF
R130 47K R0402
M3 PMBT3904 SOT-23
VDDIO_AO3.3V
U8
MAX809RD/RS809R
VIN
RESET_n
GND
C60 0.1uF C0402
SOT-23
R33 1K RESET_N R0402
R32 NC/100K R0402
HW_ID 0 1 2 3 4 5 6 7 8 9 10 11 12
HW_VS ADC Value 0 85 167 248 334 420 512 603 689 775 856 938 1023
pull-up X 91K 82K 75K 68K 56K 47K 39K 33K 24K 16K 8.2K 100K
pull-down 100K 8.2K 16K 24K 33K 39K 47K 56K 68K 75K 82K 91K X
Version Reserved
ADC_CH0
VDDIO_AO18
R120 47K R0402
R113 4.7K R0402
D28 AZ5725-01F ESD0402
SW2 Mode IT-1188
GND
VDDIO_AO18
HW_VS
R34 47K R0402
R37 47K R0402
GND
VCC_MCU
PWR_KEY_DET
D36 1N4148
R114 47K R0402
PWR_KEY
R131 1K R0402
D29 AZ5725-01F ESD0402
SW3 POWER IT-1188
GND
GND
RESET_N
D7 AZ5725-01F ESD0402
SW1 RESET IT-1188
GND
GND
Project: Vim
Desc: CPU & IR & MCU & KEYs
Date: Wednesday, August 17, 2016
Rev: V1.1
Author: Gouwa
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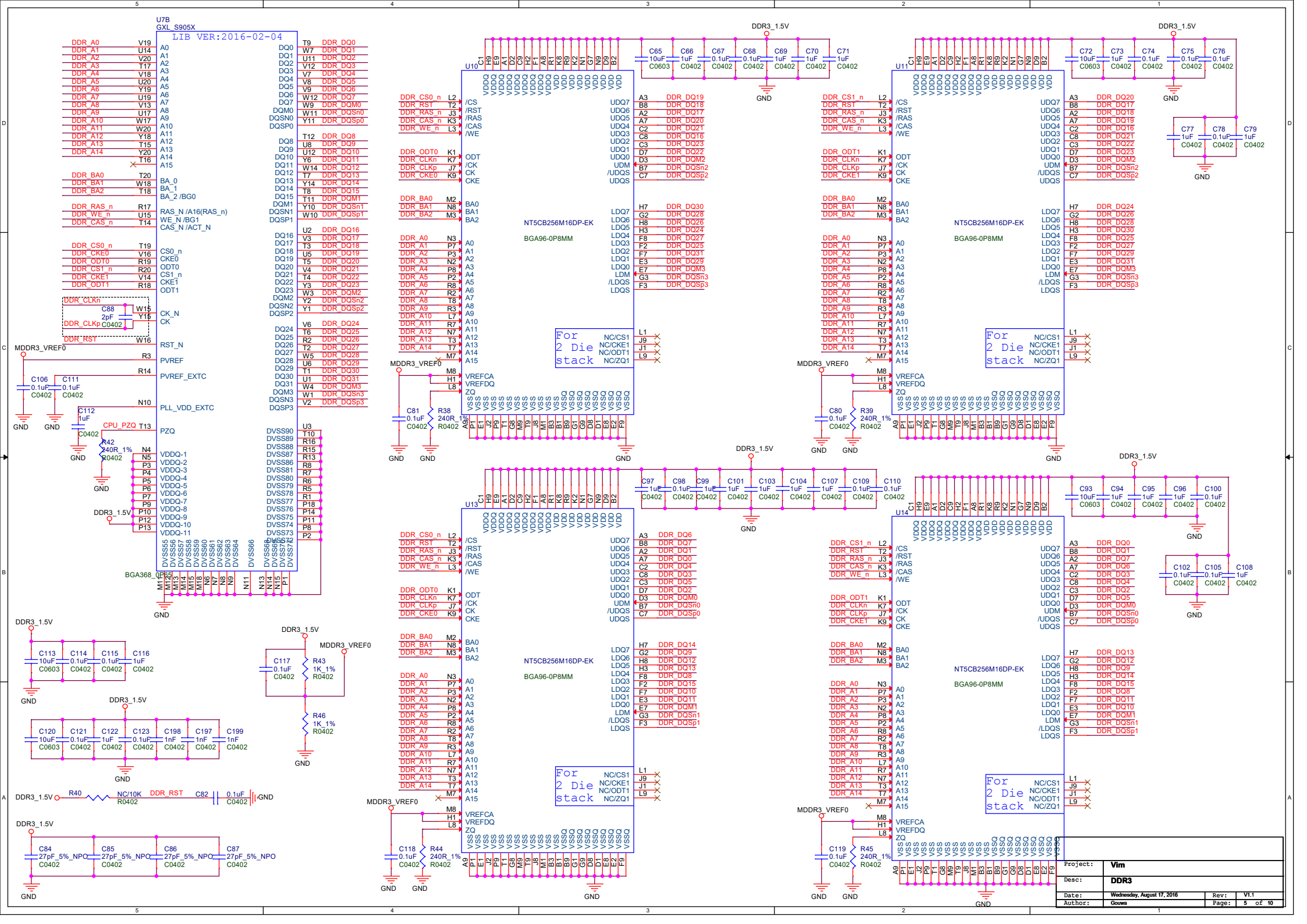
U7B
GXL_S905X
LIB VER:2016-02-04
BGA368_QFP
DDR_A0
DDR_A1
DDR_A2
DDR_A3
DDR_A4
DDR_A5
DDR_A6
DDR_A7
DDR_A8
DDR_A9
DDR_A10
DDR_A11
DDR_A12
DDR_A13
DDR_A14
DDR_BA0
DDR_BA1
DDR_BA2
DDR_RAS_n
DDR_WE_n
DDR_CAS_n
DDR_CS0_n
DDR_CKE0
DDR_ODT0
DDR_CS1_n
DDR_CKE1
DDR_ODT1
DDR_CLKn
DDR_CLKp
DDR_RST
MDDR3_VREF0
CPU_PZQ
DDR_DQ0
DDR_DQ1
DDR_DQ2
DDR_DQ3
DDR_DQ4
DDR_DQ5
DDR_DQ6
DDR_DQ7
DDR_DQM0
DDR_DQSn0
DDR_DQSp0
DDR_DQ8
DDR_DQ9
DDR_DQ10
DDR_DQ11
DDR_DQ12
DDR_DQ13
DDR_DQ14
DDR_DQ15
DDR_DQM1
DDR_DQSn1
DDR_DQSp1
DDR_DQ16
DDR_DQ17
DDR_DQ18
DDR_DQ19
DDR_DQ20
DDR_DQ21
DDR_DQ22
DDR_DQ23
DDR_DQM2
DDR_DQSn2
DDR_DQSp2
DDR_DQ24
DDR_DQ25
DDR_DQ26
DDR_DQ27
DDR_DQ28
DDR_DQ29
DDR_DQ30
DDR_DQ31
DDR_DQM3
DDR_DQSn3
DDR_DQSp3
U10
U11
U13
U14
NT5CB256M16DP-EK
BGA96-0P8MM
For 2 Die Stack
NC/CS1
NC/CKE1
NC/ODT1
NC/ZQ1
DDR3_1.5V
GND
Project: Vim
Desc: DDR3
Date: Wednesday, August 17, 2016
Rev: V1.1
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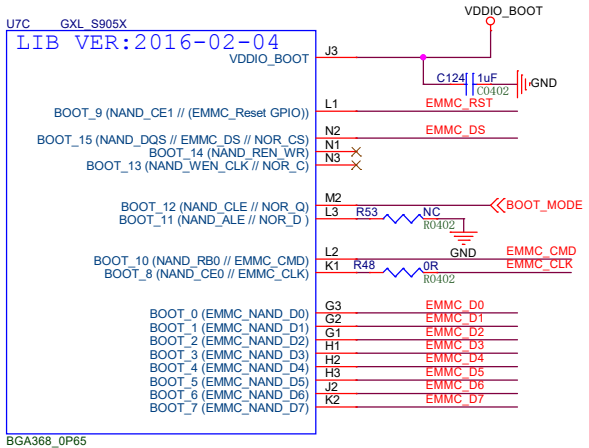

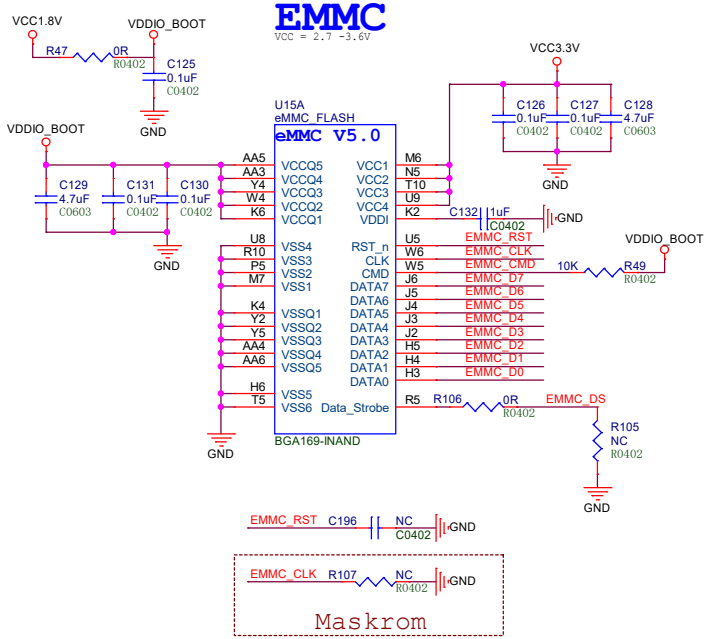

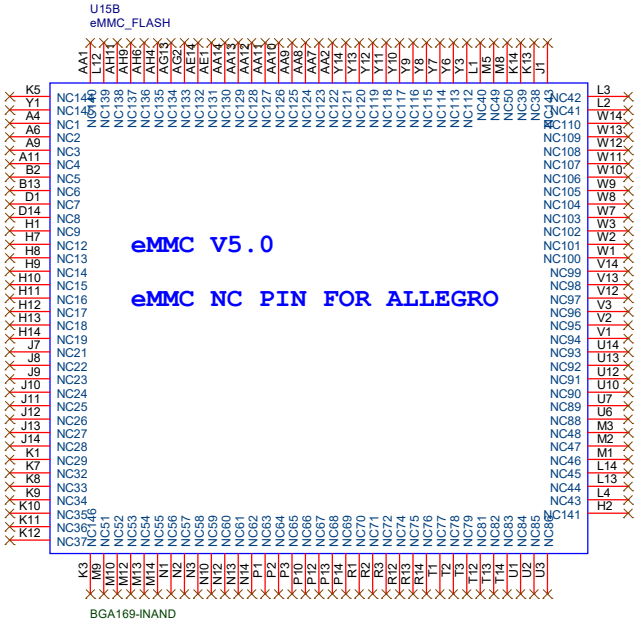

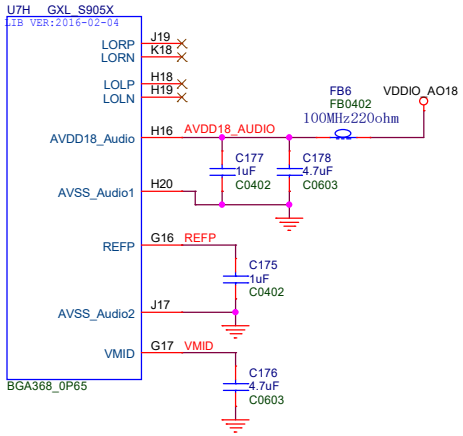

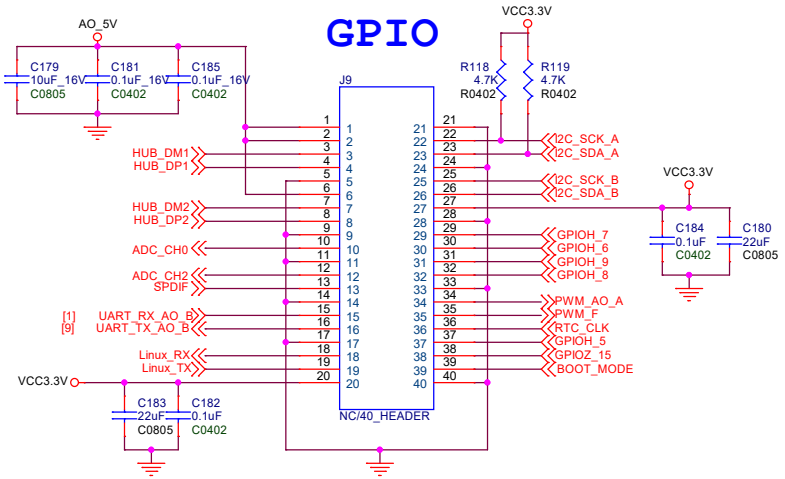

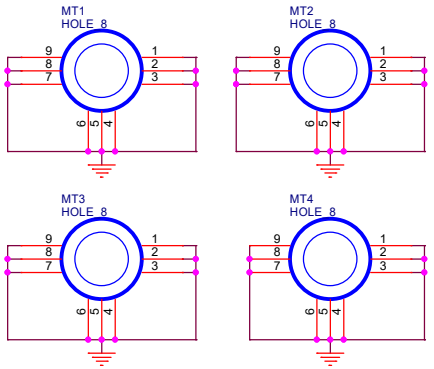

Project:	Vim
Desc:	EMMC & GPIOs
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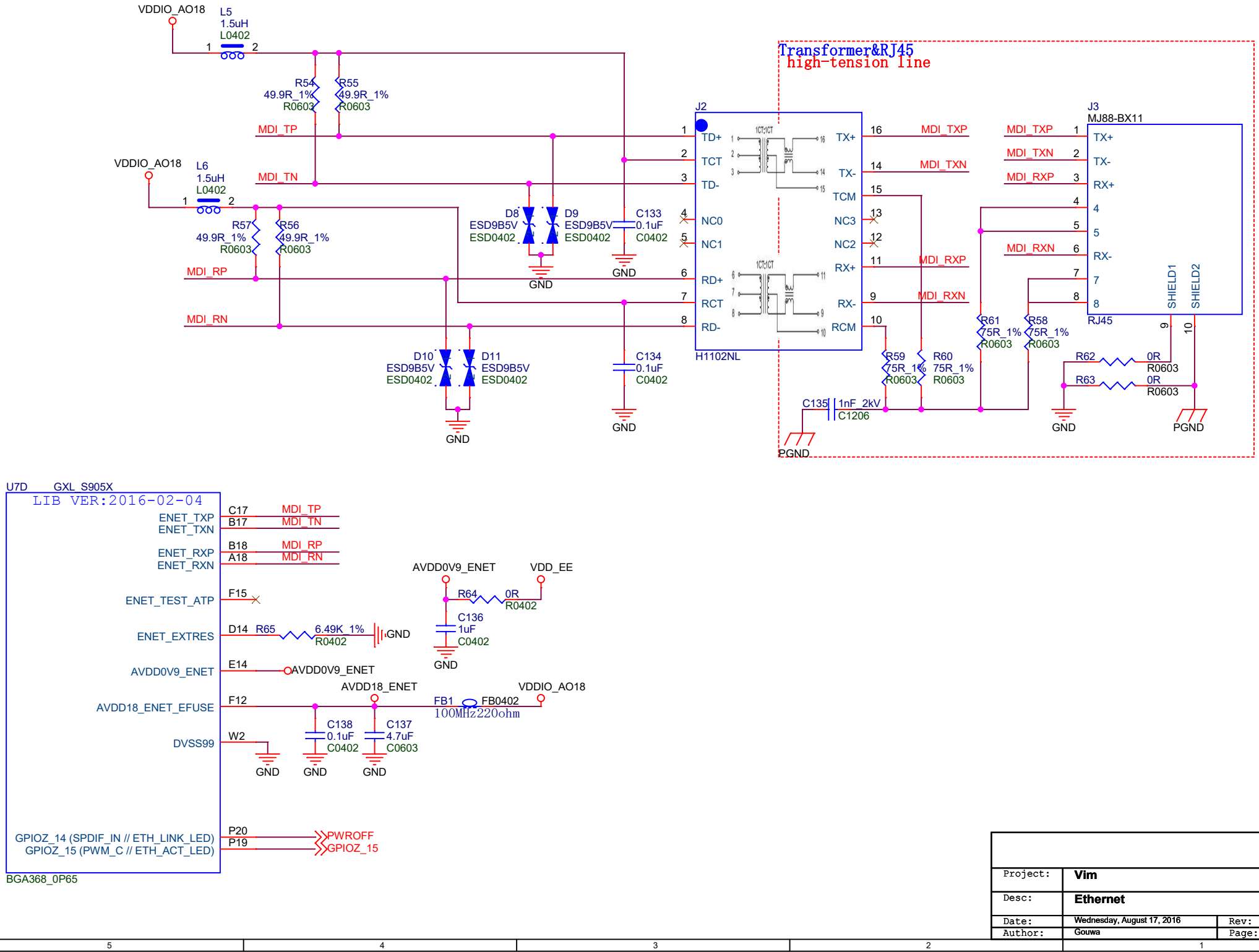

Project:	Vim		
Desc:	Ethernet		
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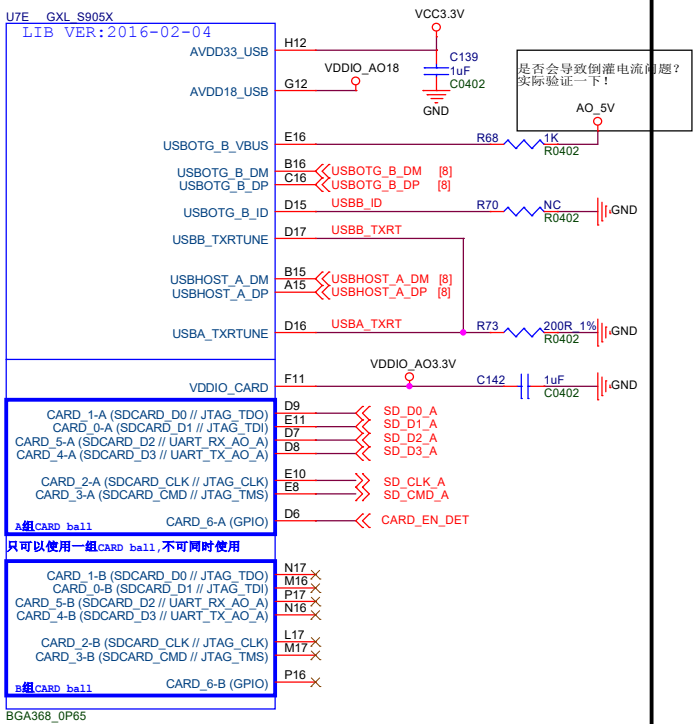
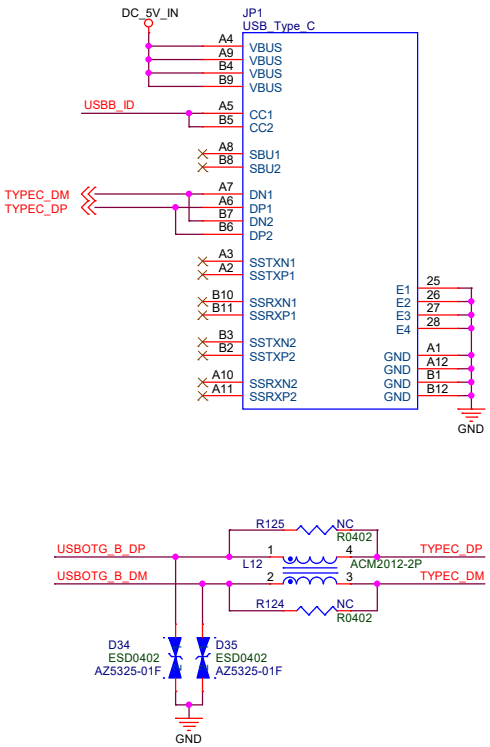
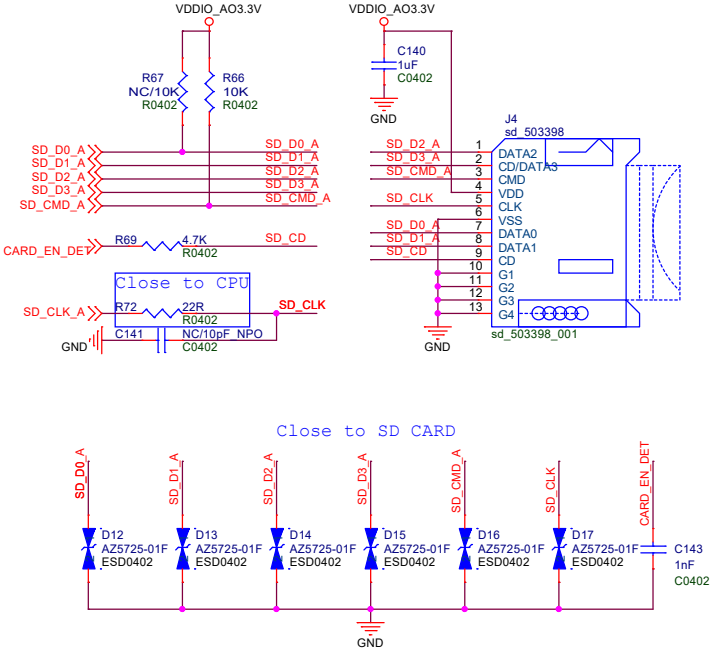
Card Power



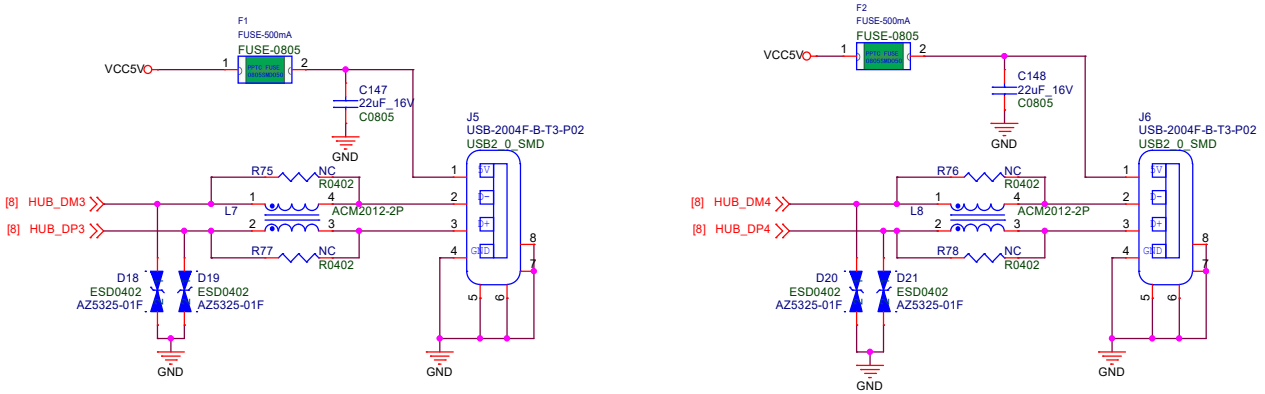
Type-C

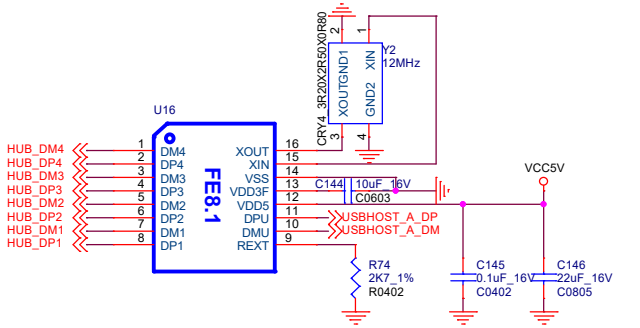


SD card



USB Host





Project:	Vim		
Desc:	USB & SDCard		
Date:	Wednesday, August 17, 2016	Rev:	V1.1
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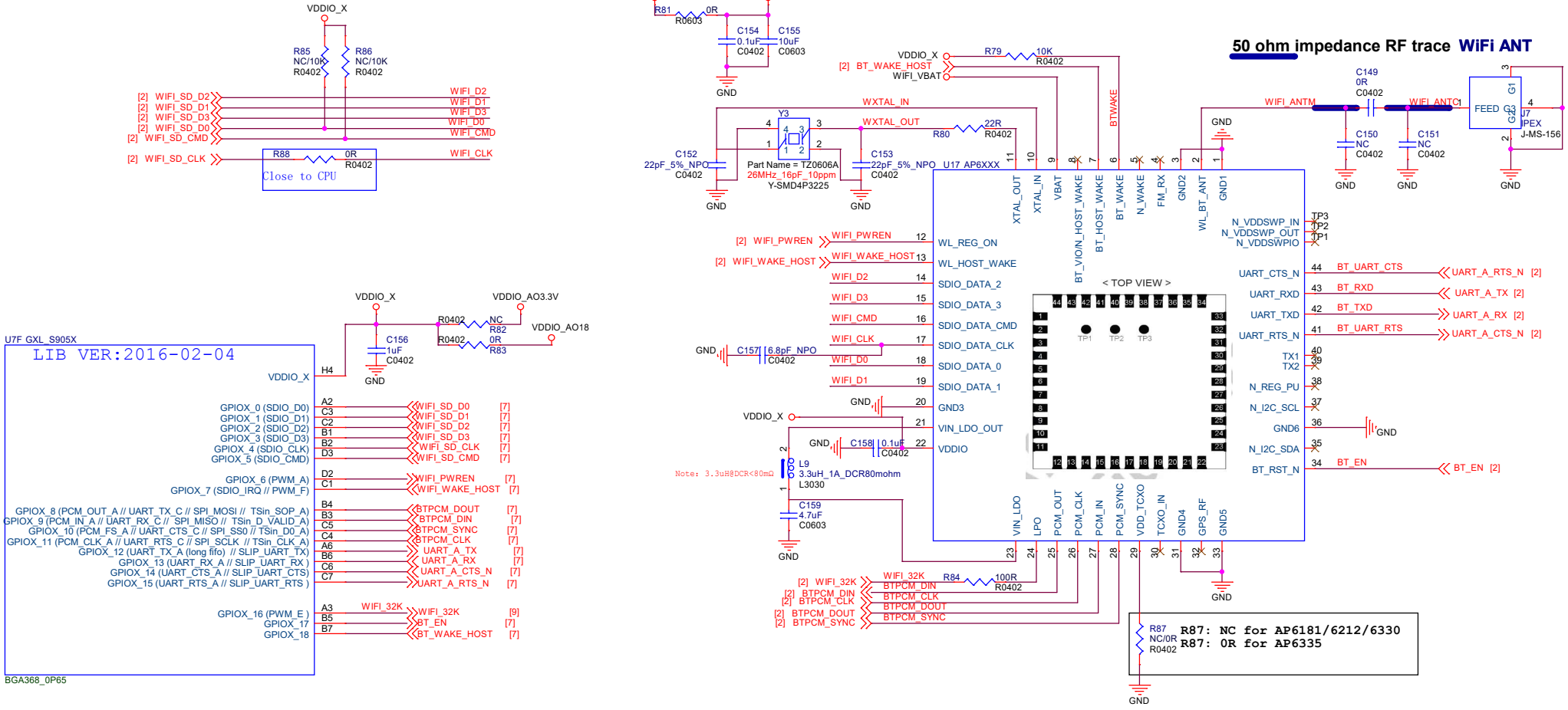
NOTE:
AP6335 OSC use 37.4MHZ
Others AMPAK OSC use 26MH
50 ohm impedance RF trace WiFi ANT
Close to WIFI PIN 9
Close to CPU
U7F GXL_S905X
LIB VER:2016-02-04
BGA368_0P65
U17 AP6XXX
< TOP VIEW >
Part Name = TZ0606A
26MHz_16pF_10ppm
Y-SMD4P3225
R87: NC for AP6181/6212/6330
R87: 0R for AP6335
Project: Vim
Desc: WIFI & BT
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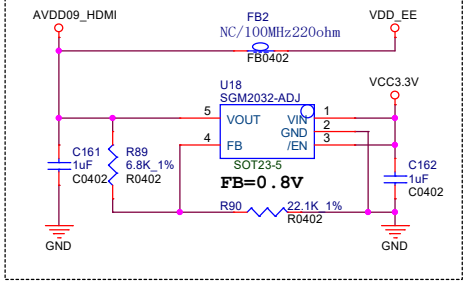
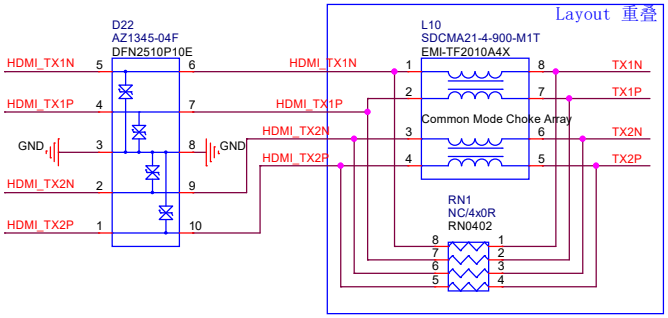
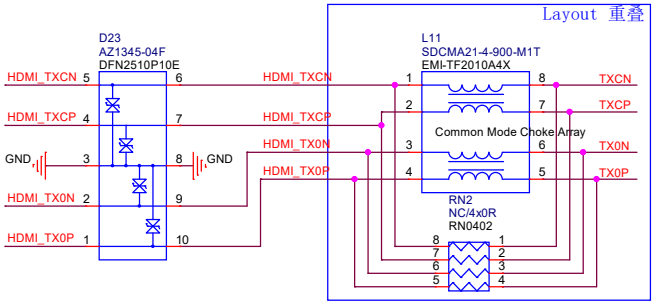
Used LDO for HDMI 4K compliance
Used FB for low cost solution

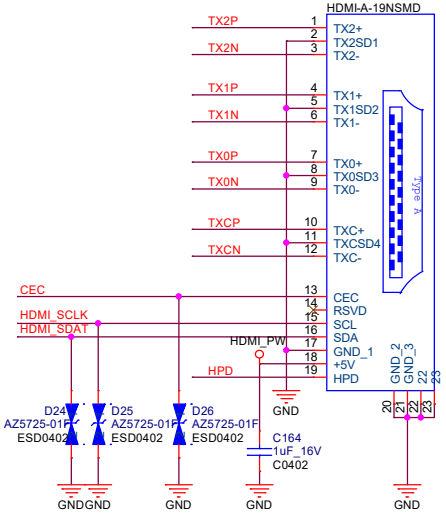


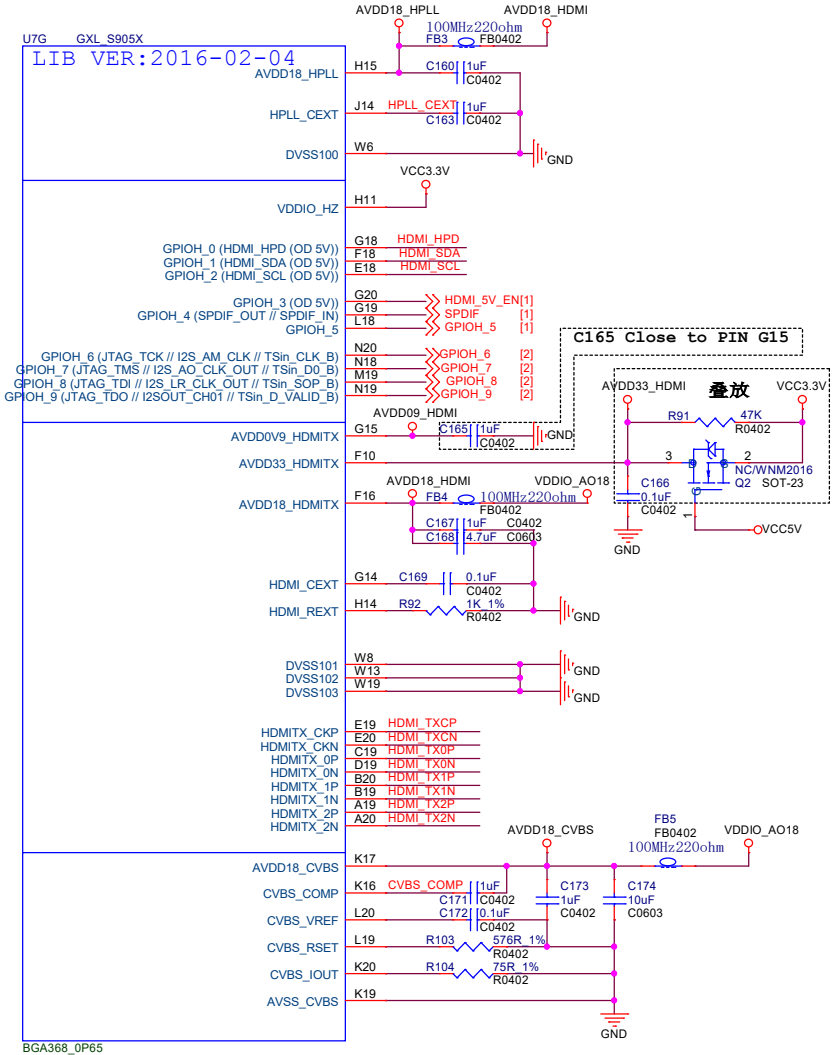
HDMI output



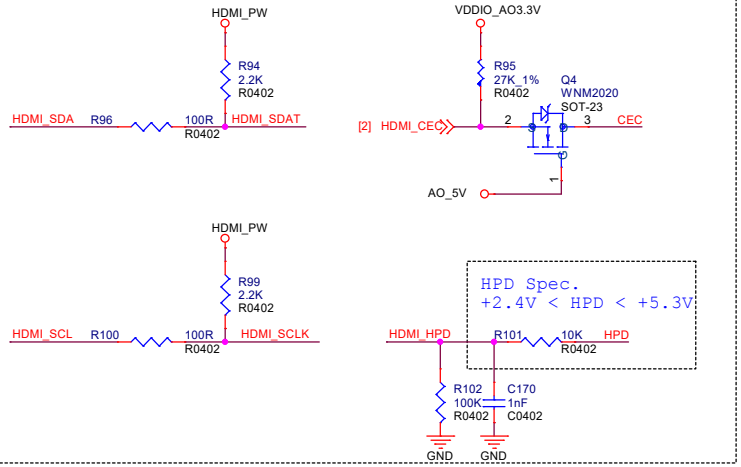


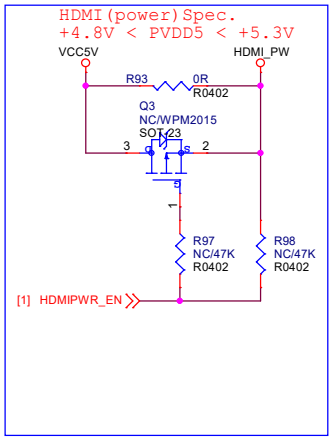
Type A





Q4防倒灌电路、R101/R102分压电路不可删除





Project:	Vim		
Desc:	HDMI		
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