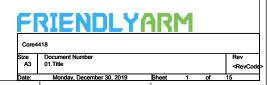
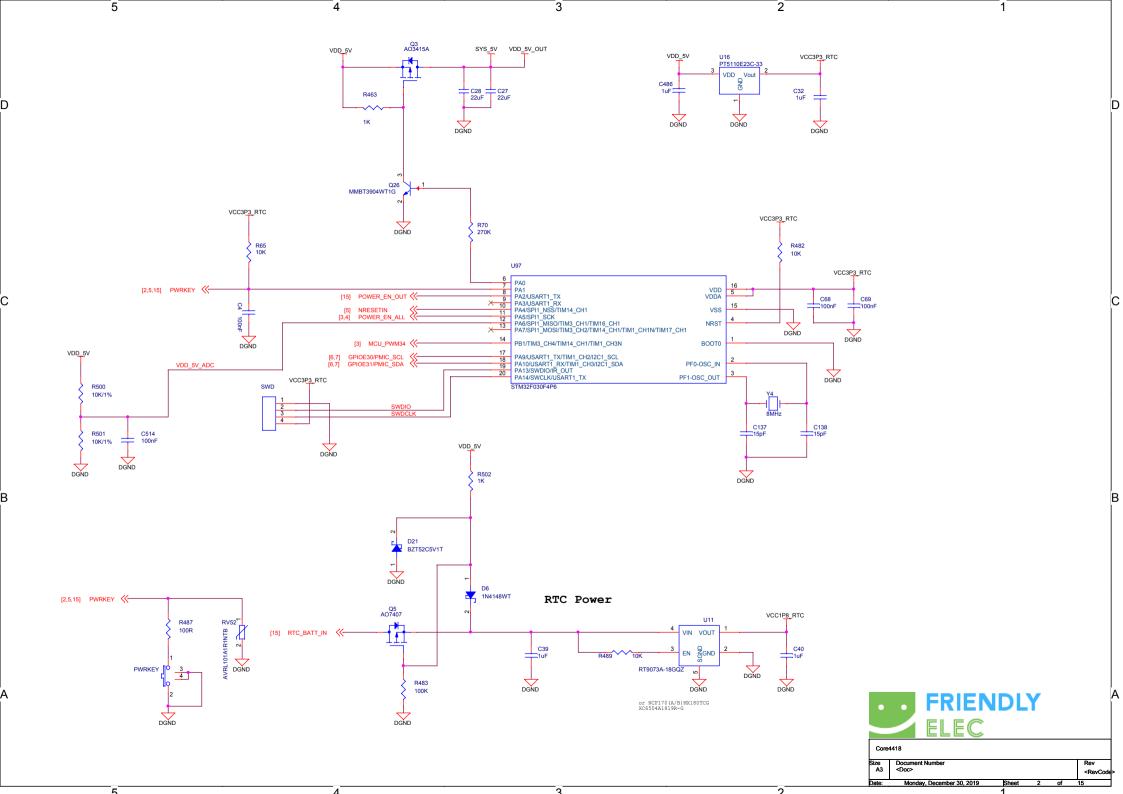
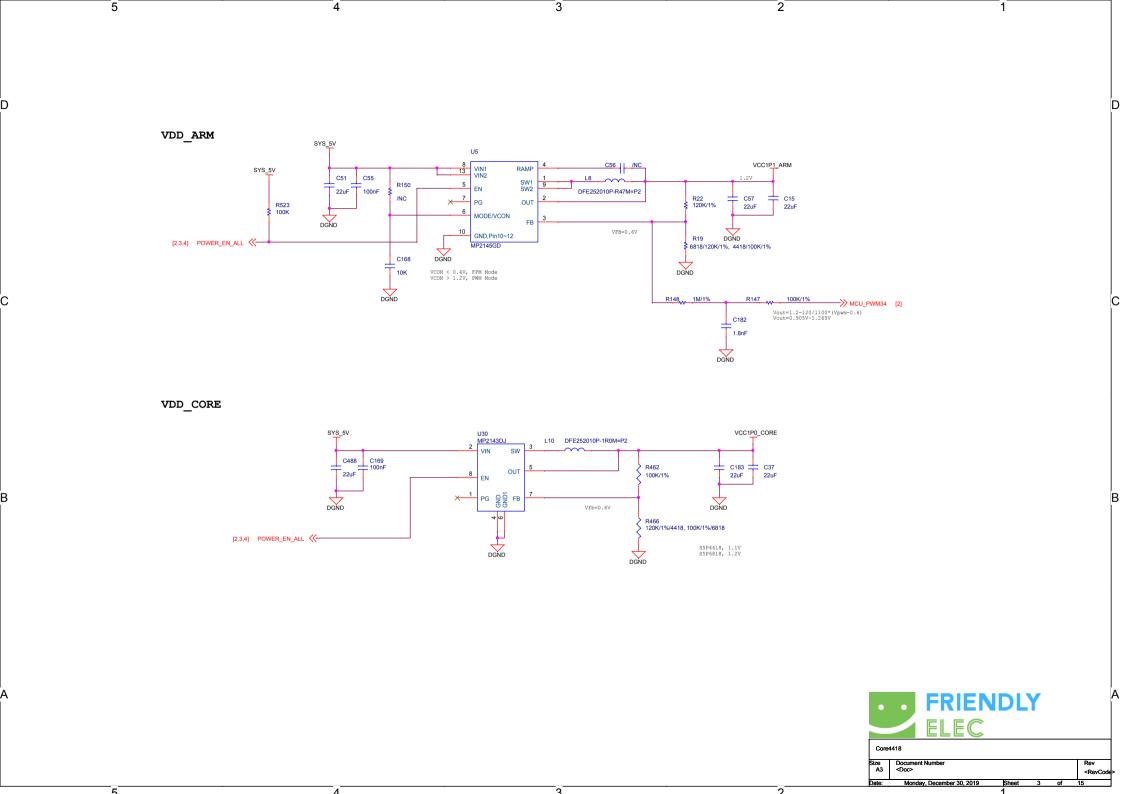
# Core4418/6818

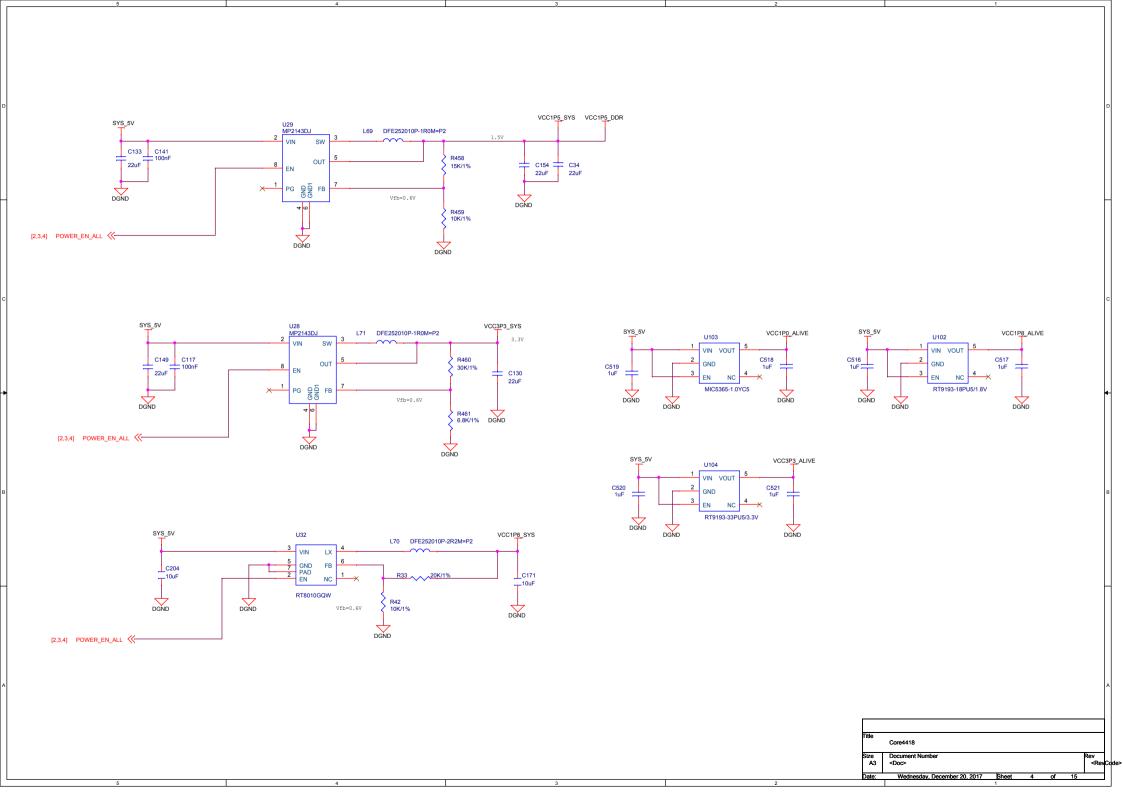
Revision

1711 , First Release 2019/12/23: R70 -> 270K, R463->1K, R150->NC, C168->10K, R19->(6818/120K/1%,4418/100K/1%)

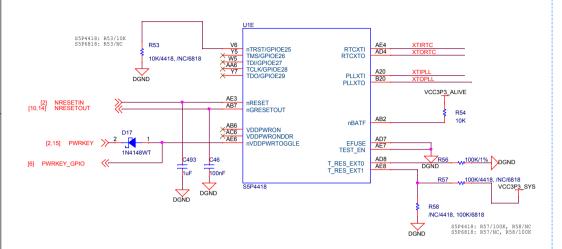


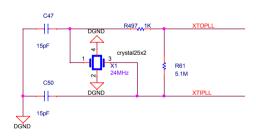


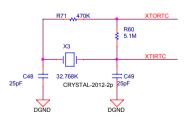




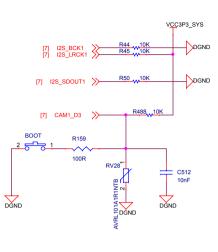


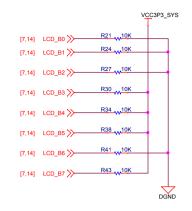






## Boot Mode Config





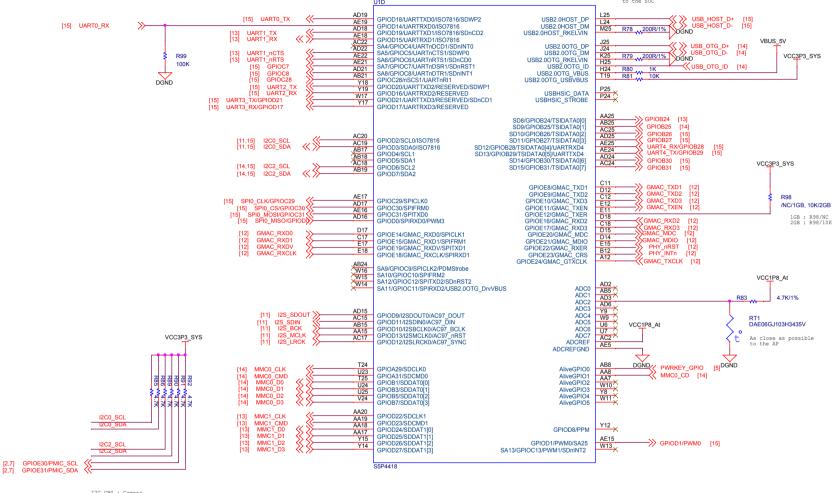
#### BOOT MODE OPTION

	eMMC	SPI	USB	NAND	
SD0	HIGH	LOW	LOW	HIGH	
SD1	LOW	LOW	HIGH	HIGH	
SD2	HIGH	HIGH	HIGH	HIGH	
SD4	LOW	HIGH			
SD5	LOW	LOW			

Boot media port select (SPI, eMMC)

_			
	CH0	CH1	CH2
SD3	LOW	HIGH	LOW
CAM1_D3	LOW	LOW	HIGH

### AP Peripherals



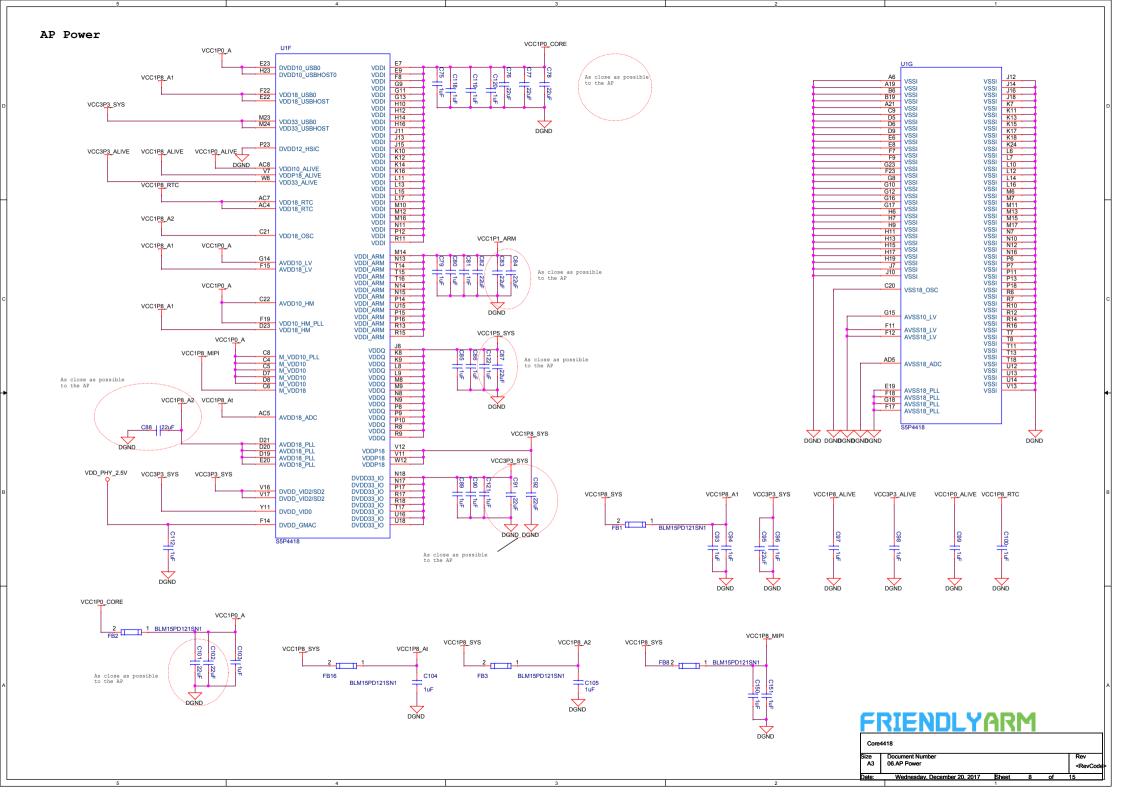
R78,R79 is as close as possible

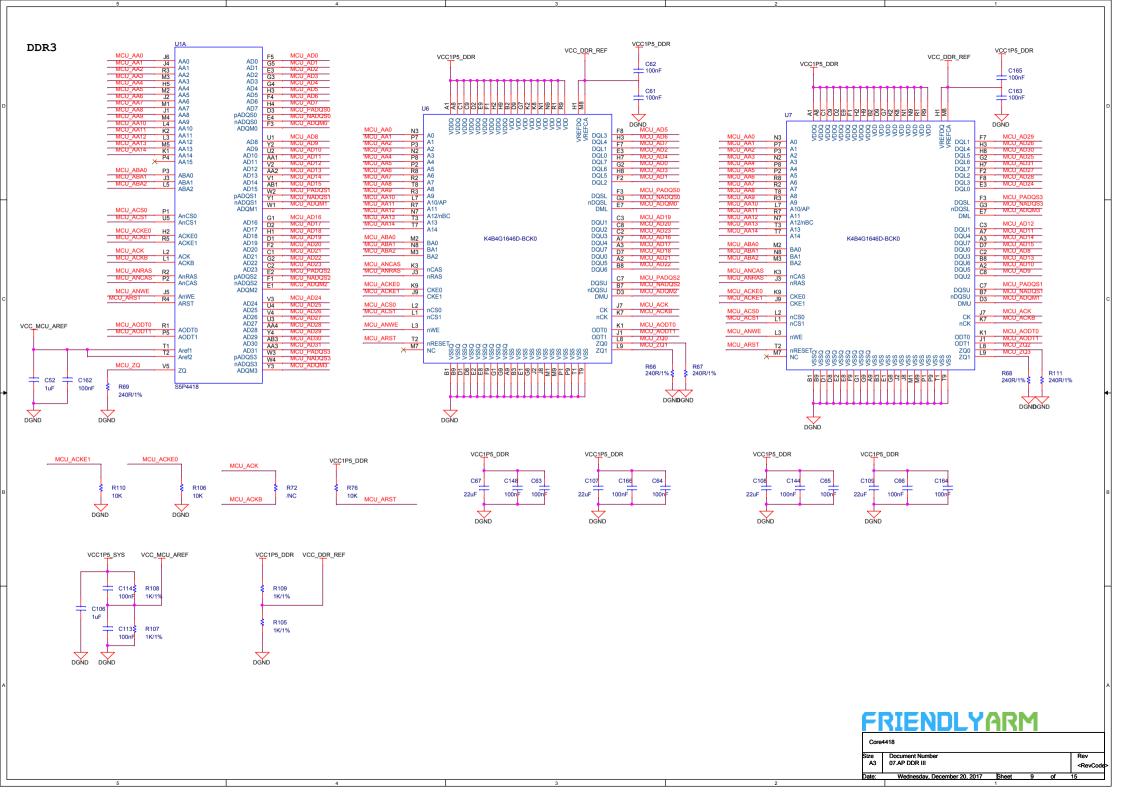
I2C CHO : Camera I2C CH1 : HDMI EDID I2C CH2 : Touch

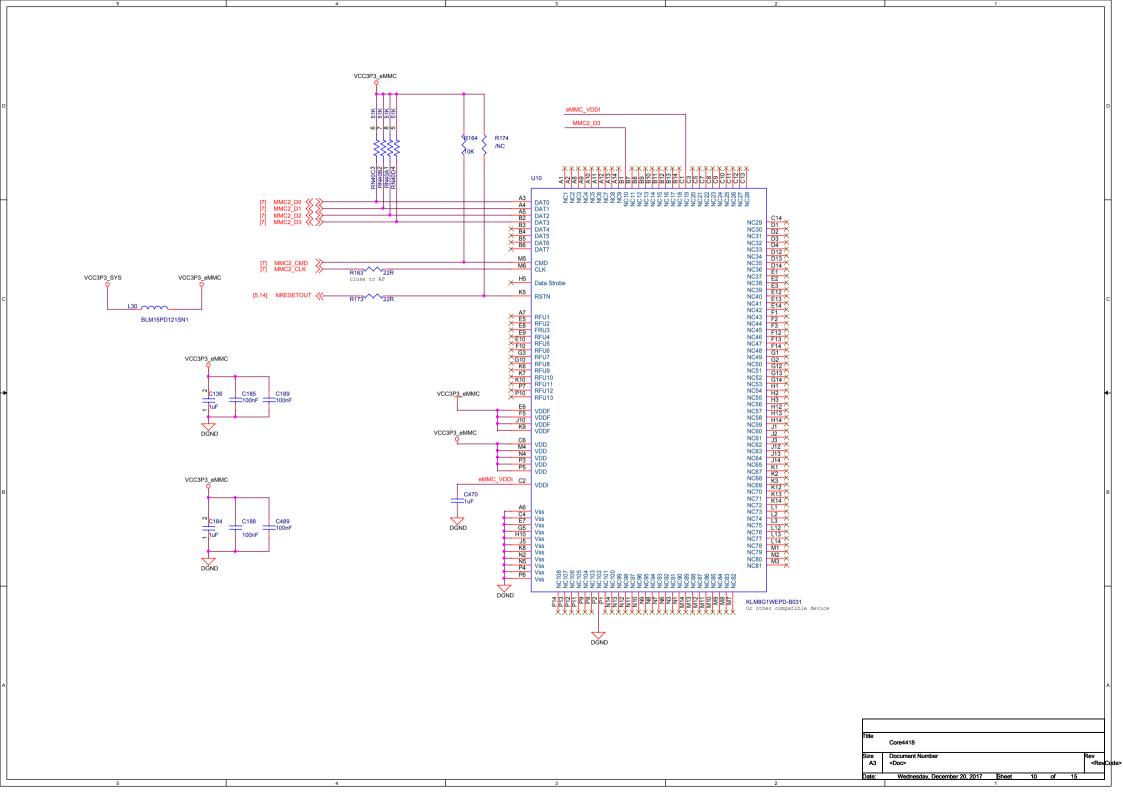
**FRIENDLYARM** 

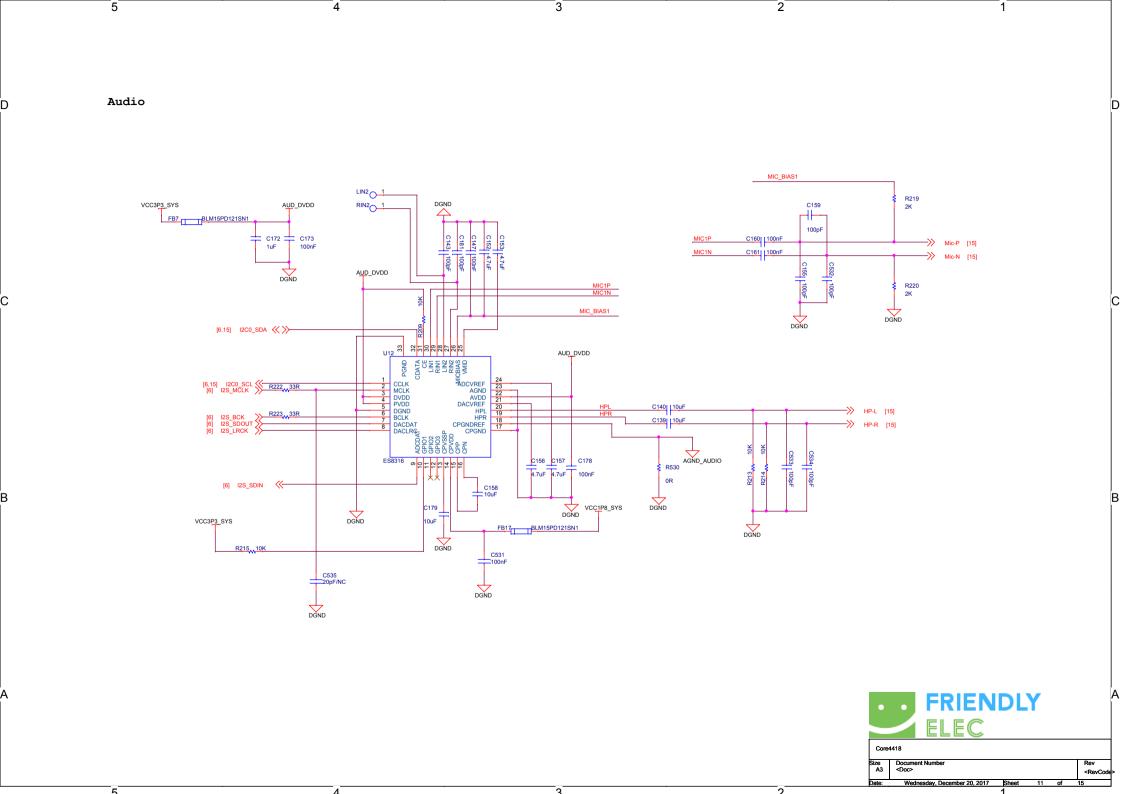
| Core4418 | Size | Document Number | Rev | A3 | O4.AP Peripherals | Rev | RevCode | C4.AP | C4.AP | C5.AP | C

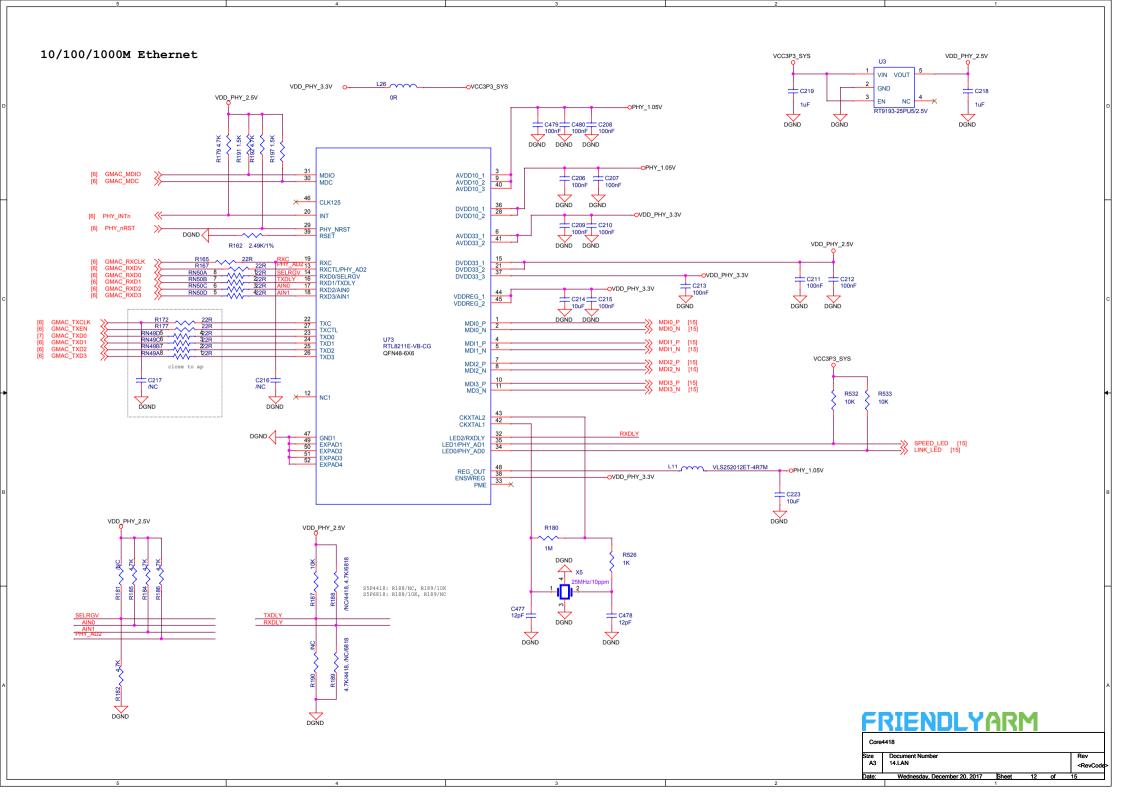
#### AP VIP&Display Reserved Function U1C GPIOA30/VID1[0]/SDEX0/I2SBCLK1 GPIOB0/VID1[1]/SDEX1/I2SLRCK1 GPIOB2/VID1[2]/SDEX2/I2SBCLK2 J23 G21 GPIOA1/DISDO LCD\_B0 LCD\_B1 LCD\_B2 LCD\_B3 LCD\_B5 LCD\_B6 LCD\_B7 LCD\_G0 LCD\_G1 LCD\_G2 LCD\_G3 LCD\_G4 LCD\_G5 LCD\_G6 LCD\_G7 LCD\_R0 LCD\_R1 LCD\_R1 LCD\_R2 LCD\_R3 LCD\_R3 LCD\_R3 LCD\_R3 LCD\_R4 LCD\_R5 LCD\_R6 LCD\_R6 LCD\_R6 LCD\_R1 LCD\_R1 LCD\_R6 LCD\_R1 LCD\_R6 LCD\_R1 LCD\_R6 LC GPIOA2/DISD1 DGND ( GPIOA3/DISD2 R20 VCC1P1 ARM GPIOB4/VID1[3]/SDFX3/I2SI RCK2 GPIOA4/DISD3 S5P4418: R93/NC, R95/NC, R94/OR, R96/OR I2S SDOUT GPIOB6/VID1[4]/SDEX4/I2SDOUT1 GPIOA5/DISD4 S5P6818: R93/OR, R95/OR, R94/NC, R96/NC R93 , /NC/4418, 0R/6818 [13] GPIOB8 GPIOB8/VID1[5]/SDEX5/I2SDOUT2 GPIOB9/VID1[6]/SDEX6/I2SDIN1 GPIOA6/DISD5 × U20 V19 GPIOA7/DISD6 R94 0R/4418, /NC/6818 VCC3P3\_SYS |-GPIOB10/VID1[7]/SDEX7/I2SDIN2 GPIOA28/VICLK1/I2SMCLK2/I2SMCLK1 GPIOAR/DISD7 R103 10K GPIOA9/DISD8 U1H GPIOE13/GMAC\_COL/VIHSYNC1 GPIOE7/GMAC\_TXD0/VIVSYNC1 GPIOA10/DISD9 GPIOA11/DISD10 R122 10K [12] GMAC\_TXD0 >> D11 C24 DCND NC1 VDDI ARM VCC1P0\_CORE GPIOA12/DISD11 GPIOA13/DISD12 VDDI ARM ΔΔ14 R95 \_\_\_/NC/4418, 0R/6818 SA17/GPIOC17/TSIDP0/VID2[0] [10] [10] [10] [10] [10] AB12 SA18/GPIOC17/13/DFU/VID2[0] AB14 SA19/GPIOC19/SDCMD2/VID2[2] GPIOA15/DISD13 GPIOA15/DISD14 MMC2 CLK R96 0R/4418, /NC/6818 MMC2\_CLK MMC2\_CMD MMC2\_D0 MMC2\_D1 MMC2\_D2 VDDI L23 M21 SA20/GPIOC20/SDDAT2[0]/VID2[3 GPIOA16/DISD15 VDDI SA21/GPIOC21/SDDAT2[1]/VID2[4 GPIOA17/DISD16 AC14 DGND SA22/GPIOC22/SDDAT2[2]/VID2[ GPIOA18/DISD17 R97 VCC1P0 CORE VDDI GPIOA10/DISD18 GPIOA20/DISD19 VDDI 0R [15] GPIOC14/PWM2 GPIOA21/DISD20 VDDI [14] GPIOC15 SA15/GPIOC15/TSICLK0/VIHSYNC2 GPIOA21/DISD20 AE14 V9 V10 As close as possible to the AP [14,15] GPIOC16 SA16/GPIOC16/TSISYNC0/VIVSYNC2 GPIOA23/DISD22 VDDI ARM GPIOA23/DISD22 GPIOA24/DISD23 VSSI LCD\_CLK [14] LCD\_VSYNC LCD\_HSYNC GPIOA0/DISCLK AC1 AD1 AE1 AE2 GPIOA25/DISVSYNC IRFF VSSI AA9 AC9 AD9 AC11 AB9 GPIOD28/VID0[0]/TSIDATA1[0]/SA24 GPIOD29/VID0[1]/TSIDATA1[1] GPIOD30/VID0[2]/TSIDATA1[2] VSSI VSSI VSSI GPIOA26/DISHSYNC GPIOA27/DISDE COMP LCD\_DE [14] Y21 CVBS GPIOD31/VID0i31/TSIDATA1i3 ABS | GPIOD31/NID03/JTSIDATA1[3] | AE3 | GPIOE0VID0[4]/TSIDATA1[5] | AE10 | GPIOE1/NID0[6]/TSIDATA1[5] | AE11 | GPIOE2/VID0[6]/TSIDATA1[6] | AE11 | GPIOE3/VID07[7/TSIDATA1[6] | AE11 | GPIOE3/VID07[7/TSIDATA1[7] | AD11 | GPIOE6/VIHSYNC0/TSICK1 | GPIOE6/VIHSYNC0/TSIDP1 | GPIOE6/VIHSYNC0/TSIDP1 | DGND S5P4418 DGND LVDS\_TP0 LVDS\_TN0 LVDS\_TP1 LVDS\_TN1 LVDS Y0P [15] LVDS\_Y0P [15] LVDS\_Y0M [15] LVDS\_Y1P [15] LVDS\_Y1M [15] LVDS\_Y2P [15] LVDS\_Y2P [15] LVDS\_Y3P [15] LVDS\_Y3M [15] A14 LVDS\_TP2 LVDS\_TN2 B2 A2 MIPICSI\_DP0 MIPICSI\_DN0 MIPICSI\_DN1 MIPICSI\_DN1 MIPICSI\_DN1 LVDS\_TN2 LVDS\_TN3 LVDS\_TP4 LVDS\_TN4 LVDS\_TPCLK A18 × LVDS\_CLKP [15] LVDS TNCLK LVDS\_ROUT R100 4.3K/1% R100 is as close as possible to the AP DGND B24 A24 B23 A23 A22 A22 A22 B25 A25 M18 W18 HDMI\_TXP0 HDMI\_TXN0 HDMI\_TXP1 HDMI TXN1 HDMI\_TXP2 HDMI\_TXN2 HDMI\_TXPCLK HDMI\_TXNCLK SA3/GPIOC3/HDMI\_CEC/SDnRST0 HDMI\_HOT5V HDMI REXT S5P4418 R524 4.7K/1% R525 C167 is as close as possible to the AP 10K VCC3P3 SYS DGND DGND U1B AD20 AB20 AE20 AB23 AA24 AC21 SD0/GPIOB13 nSCS0 nSWE/GPIOE31 R492 R490 GPIOE31/PMIC\_SDA [2,6] W22 V23 V22 W21 V21 SD1/GPIOB15 GPIOE31/PMIC\_SDA GPIOE30/PMIC\_SCL GPIOC26/PCB1 [14 GPIOC27/PCB2 [14 nSOE/GPIOE30 RDnWR/GPIOC26/PDMDATA0 SD3/GPIOR19 SD4/GPIOB20 nSDQM/GPIOC27/PDMDATA1 R495 SPIOC25/PCB3 SD5/GPIOR21 nSWAIT/GPIOC25/SPDIFTX R491 ¥ U22 SD7/GPIOR23 Y25 Y25 Y24 W24 W25 V25 Y22 AA23 nNCS0 nNCS1 ALE0/ALE1/GPIOB12 SA0/GPIOC0/TSIERR0 ->> LED1 [15] DGND SA1/GPIOC1/TSIERR1 SA2/GPIOC2 CLE0/CLE1/GPIOB11 nNFWE0/nNFWE1/GPIOB18 nNFOE0/nNFOE1/GPIOB16 RnB0/RnB1/GPIOB14 S5P4418 Core4418 Document Numbe Rev 05.AP VIP&Display <RevCode Wednesday, December 20, 2017 Sheet



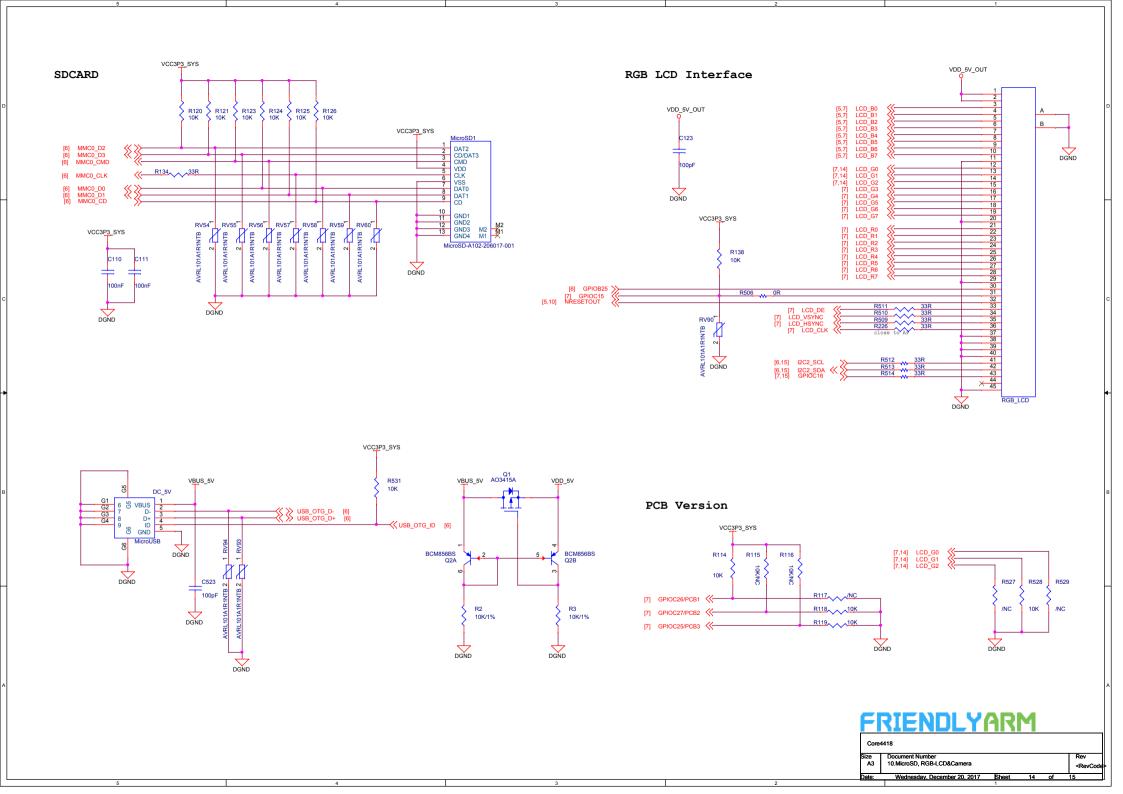








## Wi-Fi/Bluetooth VCC3P3\_SYS R139 R140 R141 R142 R143 30K 30K 30K 30K 30K U17 ANT1 C176 12pF 12 WL\_REG\_ON WL\_HOST\_WAKE WL\_BT\_ANT WL\_HOSI\_WAKE 17 16 18 SDIO\_DATA\_CLK SDIO\_DATA\_CMD SDIO\_DATA\_0 SDIO\_DATA\_1 41 15 SDIO\_DATA\_2 SDIO\_DATA\_2 SDIO\_DATA\_3 R145 33R [6] MMC1\_CLK S-VCC3P3\_AP6212 MMC1\_D0 MMC1\_D1 MMC1\_D2 MMC1\_D3 close to AP DGND ± C194 6 34 BT\_WAKE BT\_RST\_N BT\_HOST\_WAKE /NC 21 L89 VLS252012ET-4R7M [7] GPIOB8 >> VIN\_LDO\_OUT DGND 41 UART\_RTS\_N UART\_TXD UART\_RXD UART\_CTS\_N VIN\_LDO [6] UART1\_nCTS [6] UART1\_RX [6] UART1\_TX [6] UART1\_nRTS VCC3P3\_AP6212 GND GND GND GND GND GND 25 PCM\_OUT PCM\_CLK PCM\_IN PCM\_SYNC C192 100nF C492 : 22uF C177 = 22uF C191 100nF × 30 × 24 TCXO\_IN LPO DGND DGND X 38 BT\_XTAL\_OUT BT\_XTAL\_IN U19 VCC3P3\_SYS VCC3P3\_AP6212 AP6212 1 IN A1\_ OUT Y1 VCC3P3\_SYS Vcc GND MPZ1608S101ATAH0 DGND ( C196 15pF DGND X6 26MHz/10ppn 2 3 IN A2\_ OUT Y2 DGND NL27WZU04DF R149 32.768K C134DGND C491 C197 15pF R486 12pF 12pF Core4418 Document Number Size A3 Wednesday, December 20, 2017 Sheet



#### 2.54mm Header 2 AVRL101A1R1NTB 2 AVRL101A1R1NTB 2 AVRL101A1R1NTB UART3\_RX/GPIOD21 [6,15] AVRL101A1R1NTB 1 2 RV66 AVRL101A1R1NTB 1 2 RV67 AVRL101A1R1NTB 1 2 RV68 [2,15] POWER EN OUT [6,11,15] I2C0\_SDA 《 [6,11,15] I2C0\_SCL CON2 VDD\_5V GPIOC14/PWM2 [7,15] [2,15] POWER\_EN\_OUT ( ) [6,11,15] I2CO\_SDA ( ) [6,15] UART4 TX/GPIOB29 [6,15] GPIOB30 [6,15] GPIOB31 UART4\_RX/GPIOB28 [6,15] SPI0\_CS/GPIOC30 [6,15] GPIOB26 [6,15] [6,11,15] I2C0 SCL UART3\_TX/GPIOD21 [6,15] UART3\_RX/GPIOD17 [6,15] AVRI 101A1R1NTB SPI0\_MOSI/GPIOC31 SPI0\_MISO/GPIOD0 [6,15] UART4\_TX/GPIOB29 >> R519 R518 → GPIODT/PWM0 [6,15] 1 2 AVRL101A1R1NTB GPIOC28 [6,15] [6,15] GPIOB30 [6,15] GPIOB31 [6,15] SPI0 CLK/GPIOC29 ₩ 33R →>> GPIOC14/PWM2 [7,15] AVRL101A1R1NTB 1 2 RV86 AVRL101A1R1NTB 1 2 RV87 [6,15] GPIOC8 ⟨⟨ GPIOB27 [6,15] SPI0\_MOSI/GPIOC31 SPI0\_MISO/GPIOD0 [6,15] GPIOC7 23 25 27 29 31 33 35 37 39 41 43 45 ✓ ✓ USB\_HOST\_D- [6] GPIOC28 [6,15] [6,15] GPIOC7 RV62 RV61 AGND\_AUDIO [6,15] UART2\_TX [6,15] UART2\_RX DGND HP-R [11] HP-L [11] Mic-N [11] AVRL101A1R1NTB 7 Z DGND [11] Mic-P Debug UART DGND VDD 5V VDD\_5V DBG\_UART HDR-2.54mm-2x22P C515 [6] UARTO\_TX 100pF DGND DGND DGND DGND RV63 RV64 Lan Signal: 10/100M: LAN\_MDI1\_N/P=RX-/+, LAN\_MDI0\_N/P=TX-/+ 2 1A1R1NTB [12,15] SPEED\_LED <<-[12,15] LINK\_LED < TPD4E05U06 [7,15] LVDS\_Y0M << IN1 OUT1 —>>> LVDS\_Y0M [7,15] RV88 TPD4E05U06 RV89 [7,15] LVDS\_Y0P << IN2 OUT2 1A1R1NTB [12,15] MDI2\_P OUT1 DGND [7,15] LVDS\_Y1M OUT3 LVDS\_Y1M [7,15] IN2 OUT2 [7,15] LVDS\_Y1P ( IN40 0 OUT4 ->> LVDS\_Y1P [7,15] IN3- OUT3 LVDS DGND E DGND VDD\_5V\_OUT LVDS L51 MPZ1608S101ATAH0 DGND DGND C490 C243 TPD4E05U06 [7,15] LVDS\_Y1M [7,15] LVDS\_Y1P 22uF IN1 [7,15] LVDS\_Y2M << OUT1 ->> LVDS\_Y2M [7,15] VCC3P3 SYS VCC3P3\_SYS [7,15] LVDS\_Y2M [7,15] LVDS\_Y2P [7,15] LVDS\_Y2P ( IN2 OUT ->> LVDS\_Y2P [7,15] [7,15] LVDS\_CLKM IN3 OUT3 LVDS\_CLKM [7,15] DGND TPD4F05U06 [7,15] LVDS\_CLKM [7,15] LVDS\_CLKP IN45 5 OUT4 --->> MDI0\_P [12,15] [7,15] LVDS\_CLKP <<-IN1 OUT1 ->> LVDS\_CLKP [7,15] R203 R202 1K 1K [7,15] LVDS\_Y3M [7,15] LVDS\_Y3P OUT2 IN2 IN3 OUT3 →>>> MDI1\_P [12,15] --->> MDI1\_N [12,15] [12,15] MDI1\_N IN45 5 OUT4 R503 W PWR STAT [6,14,15] I2C2\_SCL [6,14,15] I2C2\_SDA << Red LED Green LED LEDs [7,14] GPIOC16 RV65 TPD4E05U06 ⟨ LED1 [7] [7,15] LVDS\_Y3M << OUT1 \_>>> LVDS\_Y3M [7,15] [7,15] LVDS\_Y3P <<-IN2 OUT2 ──>>> LVDS\_Y3P [7,15] DGND [6,14,15] I2C2\_SCL >> -( I2C2\_SCL [6,14,15] IN3<sub>E №</sub> OUT3 IN45 5 OUT4 [6,14,15] I2C2\_SDA << >> Rev 16.Header, USB, LEDs, Buttons, LVDS <RevCode

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