VERSION HISTORY

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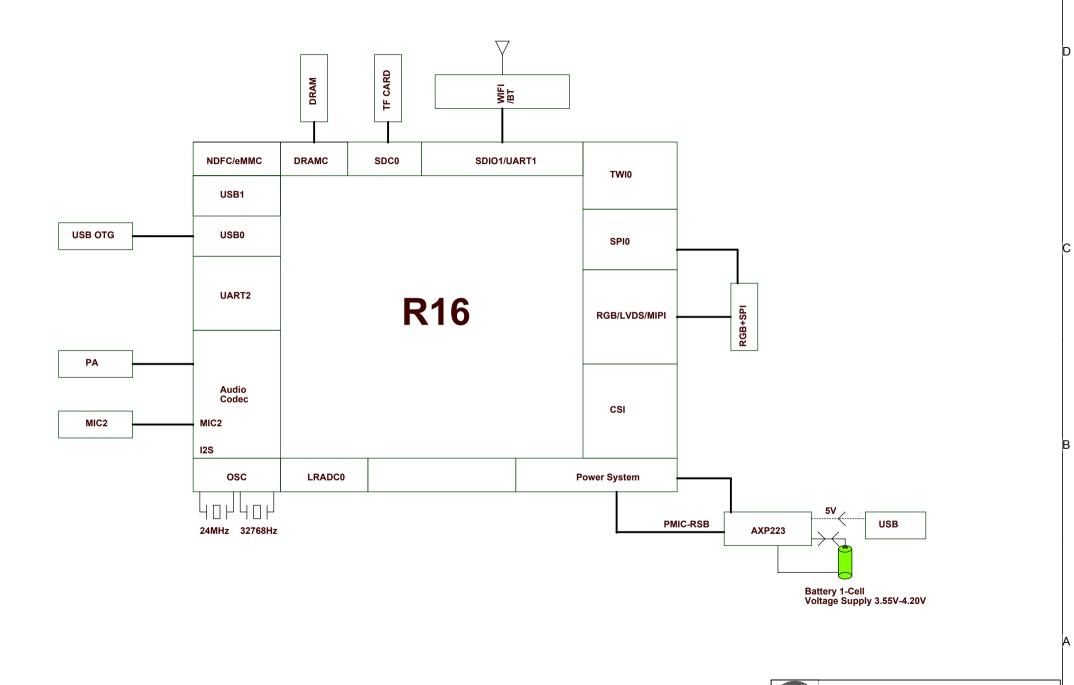
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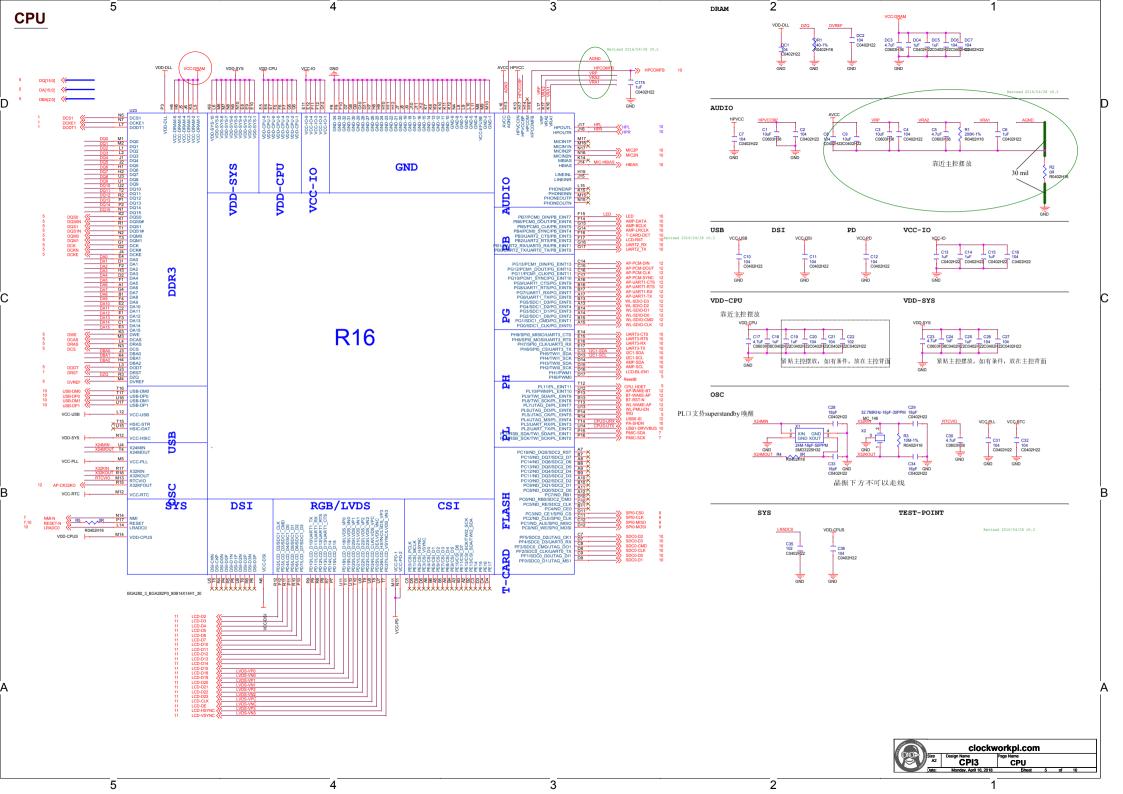
BLOCK DIAGRAM



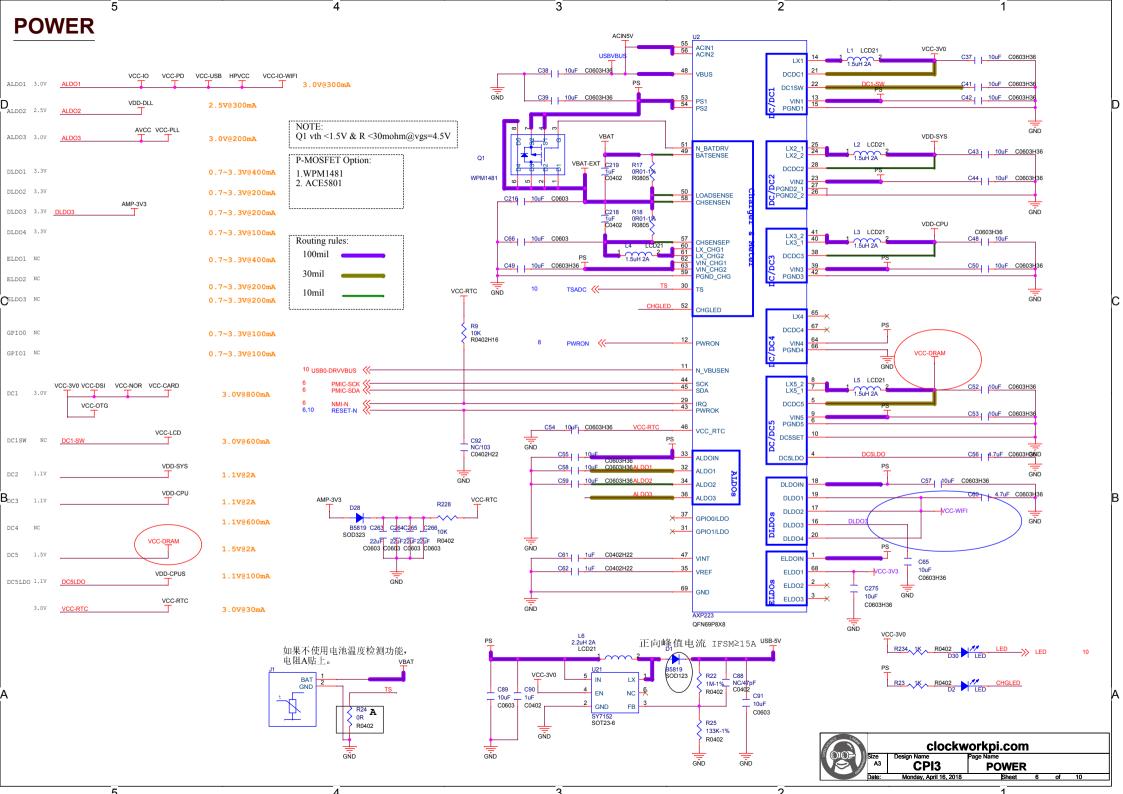
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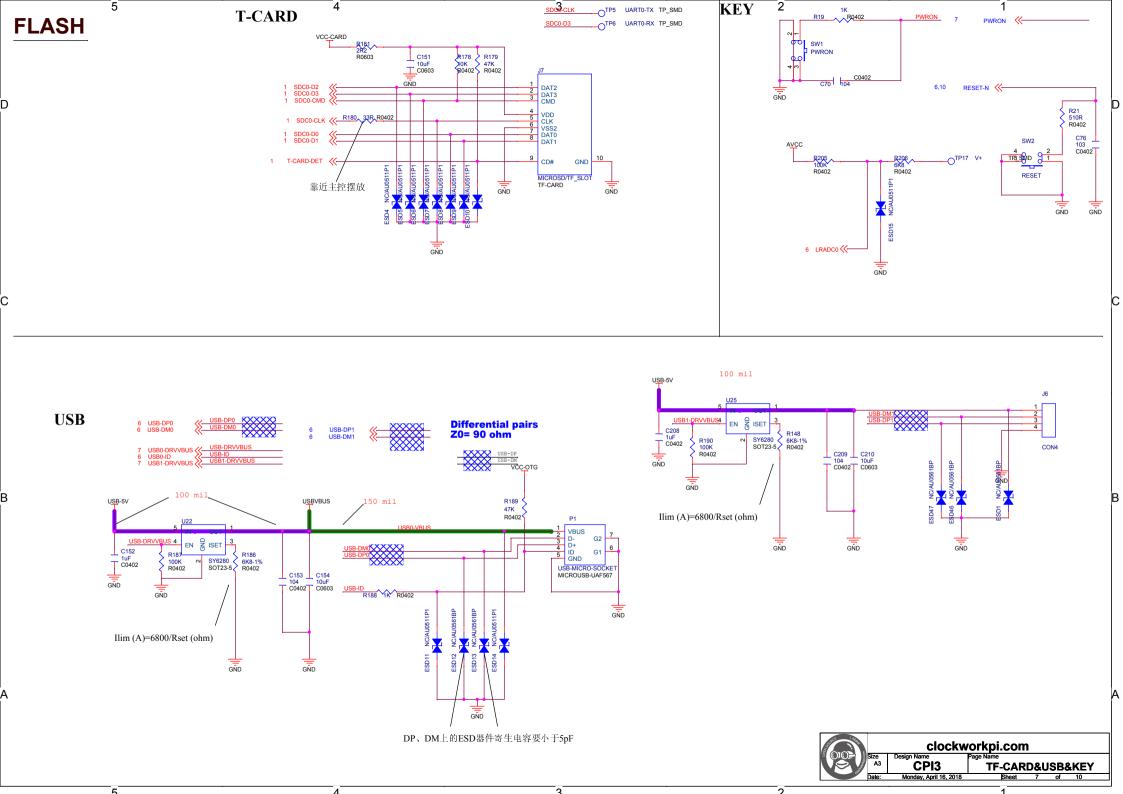
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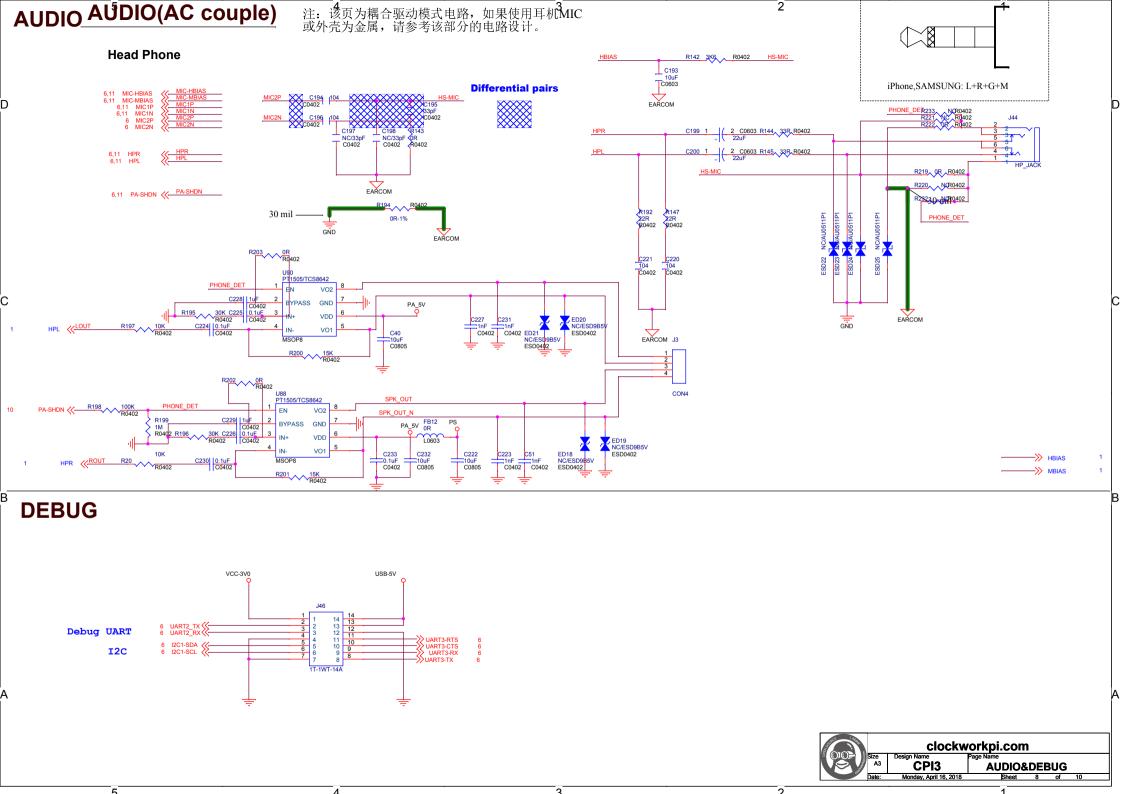
POWER TREE DC/DC 3.5V~5V@2A **AXP223** PS 5V 3.0V@800mA DC/DC1 VCC 3.0V for external device (ON) 3.0V@600mA 5V@1A DC/DC1 SW USB Host 1.1V@2A VDD 1.1V for GPU and SYS(ON) DC/DC2 1.1V@2A DC/DC3 VDD 1.1V for CPU (ON) DC/DC4 1.5V@2A DC/DC5 VCC 1.5V for DRAM (ON) 1.1V@100mA DC5LD0 VDD 1.1V for CPUS (ON) 3.0V@30mA VCC 3.0V for RTC & Port PL(ON) VCC-RTC 3.0V@300mA Battery ALDO1 VCC 3.0V FOR VCC-IO&PD&USB&HP(ON) Charger 2.5V@300mA USB 5V@2.5A ALDO2 VDD 2.5V For DRAM DLL (ON) Power 3.0V@200mA Detect ALDO3 VCC 3.0V for AVCC&PLL(ON) 3.5~4.2V BAT 3.3V@400mA DLD01 VCC 3.3V for WIFI 3.3V@200mA DLDO2 VCC 3.3V for WIFI 0.7~3.0V@200mA VCC 3.3V for RTC DLD03 3.3V@100mA DLDO4 VCC 3.3V for WIFI ELD01 VCC 3.3V for HDMI $0.7 \sim 3.0 \lor 0.200 \text{ mA}$ ELDO2 ELDO3 0.7~3.0V@100mA GPIO0/LDO clockworkpi.com 0.7~3.0V@100mA GPIO1/LDO CPI3 **POWER TREE**



DRAM DDR3 16x1 DQ[15:0] < DBA[2:0] < DCS <<-DCK DCKN DQS0 DQS0N DQS1 DQM1 N3 A0 P7 A1 P3 A1 N2 A2 P8 A3 P2 A4 R8 A5 R2 A6 T8 A7 T8 A7 A9 R7 A10 R7 A11 N7 A11 M7 A13 M7 A14 DQL0 DQL1 DQL2 DQL3 DQL6 DQL5 DQL6 DQL7 DQU0 DQU1 DQU2 DQU3 DQU4 DQU5 DQU4 DQU5 DWE DRAS DCAS VCC-DRAM VCC-DRAM DC10 DC11 DC12 DC13 DC14 DC15 4.7uF 1uF 1uF 104 104 104 C0603 C0402 C0402 C0402 C0402 C0402 DRST 2K-1% DC9 104 R0402 C0402 DVREF 를 GND DR5 DCKE1 DODT1 C0402 BA0 BA1 BA2 CK CK# DQSL DQSL# DQSU R0402 DCK DR6 NC-50R R0402 L3 WE RAS# CAS# CS# CKE 를 GND DQSU# DML DMU DCKN DR7 NC-50R R0402 DC17 NC-104 C0402 ODT1 CS1# CKE1 VREFCA VREFDQ ODT DC8 104 C0402 A1 VDD#1 RESET T2 FT1 VDD#1 RESET T8 D2 VDD0#4 RESET T8 D2 VDD0#4 RESET T8 HB VDD0#6 VSS0#1 D6 HB VDD0#6 VSS0#1 D7 D6 VDD0#6 VSS0#6 D7 D7 VDD0#6 VSS0#6 D7 D7 VDD0#1 VSS0#6 D8 D7 VDD0#1 VSS0#6 D8 D7 VDD0#1 VSS0#6 D8 D7 VDD#1 VSS#6 D8 D7 VSS#6 D8 D7 VSS#6 D8 D7 VSS#6 D8 D7 VSS#6 D9 D7 V ZQ1 DRST GND VCC-DRAM DR2 240-1% R0402 OR3 240-1% R0402 GND GND GND DDR3-FBGA96 DDR3_1_FBGA96C80P9X13_DDR3-FBGA clockworkpi.com Design Name CPI3 **DRAM DDR3** Monday, April 16, 2018 Sheet 5 of 11







SDIO WIFI&BT AP-PCM-CLK
AP-PCM-SYNC
AP-PCM-DOLIT
BT-PCM-SYNC
BT-PCM-DIN AP-PCM-DIN AP-UART1-CTS
AP-UART1-RTS
BT-UART-CTS
BT-UART-TX
AP-UART1-RX
BT-UART-TX
BT-UART-TX 50 omh option:使用2节锂电池时,WIFI供电使用PMU多路LDO并联供电。2016/04/28 v0.2 WL-SDIO-D3 WL-SDIO-CMD VCC-WIFI ANT+周围净空 WL-SDIO-CLK WL-SDIO-D0 WL-SDIO-D1 C156 10uF C0603H36 GND1 R87_0R_R0402H16 FEED GND3 WL-PMU-EN VCC-IO-WIFI WI-WAKE-AP GND2 C158 NC C0402H22 C159 NC C0402H22 GND RT-WAKE-AP ANT J-MS-156 AP-WAKE-BT C160 ___ 1uF C0402H22 GNDGND GND AP-CK32KO

AP-CK32KO GND GND VCC-IO-WIFI U10 AP6212 GND 33**X** 33X N_VDDSWP_IN N_VDDSWP_OUT N_VDDSWPIO R0402HR6402H16 WL-REG-ON 12 13 WL_REG_ON 14 WL_HOST_WAKE 50IO_DATA_2 50IO_DATA_3 В BT-UART-CTS BT-UART-RX BT-UART-TX BT-UART-RTS UART_CTS_N UART_RXD UART_TXD XTAL-IN R97 0R R0402H16 R98 OR XTAL-OUT 16 SDIO_DATA_3
17 SDIO_DATA_CMD
8 SDIO_DATA_CLK
19 SDIO_DATA_0
20 SDIO_DATA_1
21 GND3 UART_RTS_N TX1 R99 33R R0402H16 N_REG_PU N_I2C_SCL GND6 N_I2C_SDA 12mm x 12mm 39 38 37 36 35 34 GND • R100 100R R0402H16 21 VIN_LDO_OUT VDDIO 26MHz CL=16pF VCC-IO-WIFI BT-RST-N BT_RST_N Ε C162 22pF C0402H22 C161 Ε C0402H22 4.7uF L14 3.3uH 0.7A C0603H36 SMDB225H32 R101 100K SMD2520 R0402H16 GND GND GND GND VCC-IO-WIFI C164 4.7uF C0603H36 GNDGND Е R102 10K R0402H16 VCC-IO-WIFI R230 VCC-IO-WIFI VCC-IO-WIFI AP-WAKE-BT BT-RST-N R103 OR R0402H16 R231 R104 R0402H16 R105 NC/100K **€NC/100K** С R0402H16 R0402H16 NC BT-RST-N R106 R107 R0402H16 GND R0402H16 R0402H16 WL-REG-ON GND clockworkpi.com CPI3 **SDIO WIFI&BT** Monday, April 16, 2018 Sheet 9 of

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