

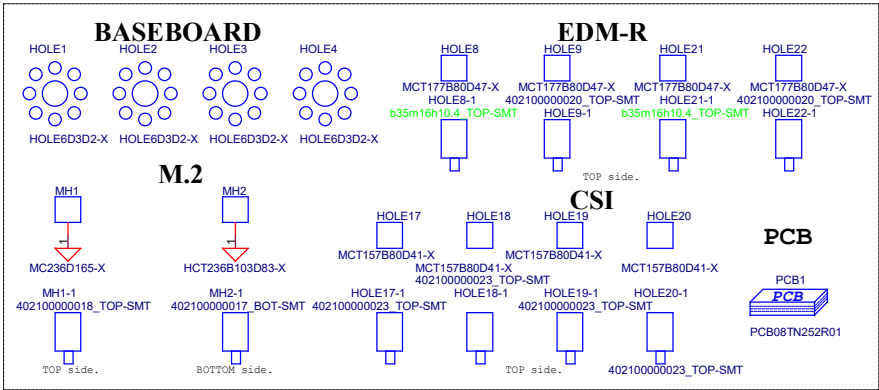
EDM-G-WB REV:A1

L= 8, 125 x 85mm

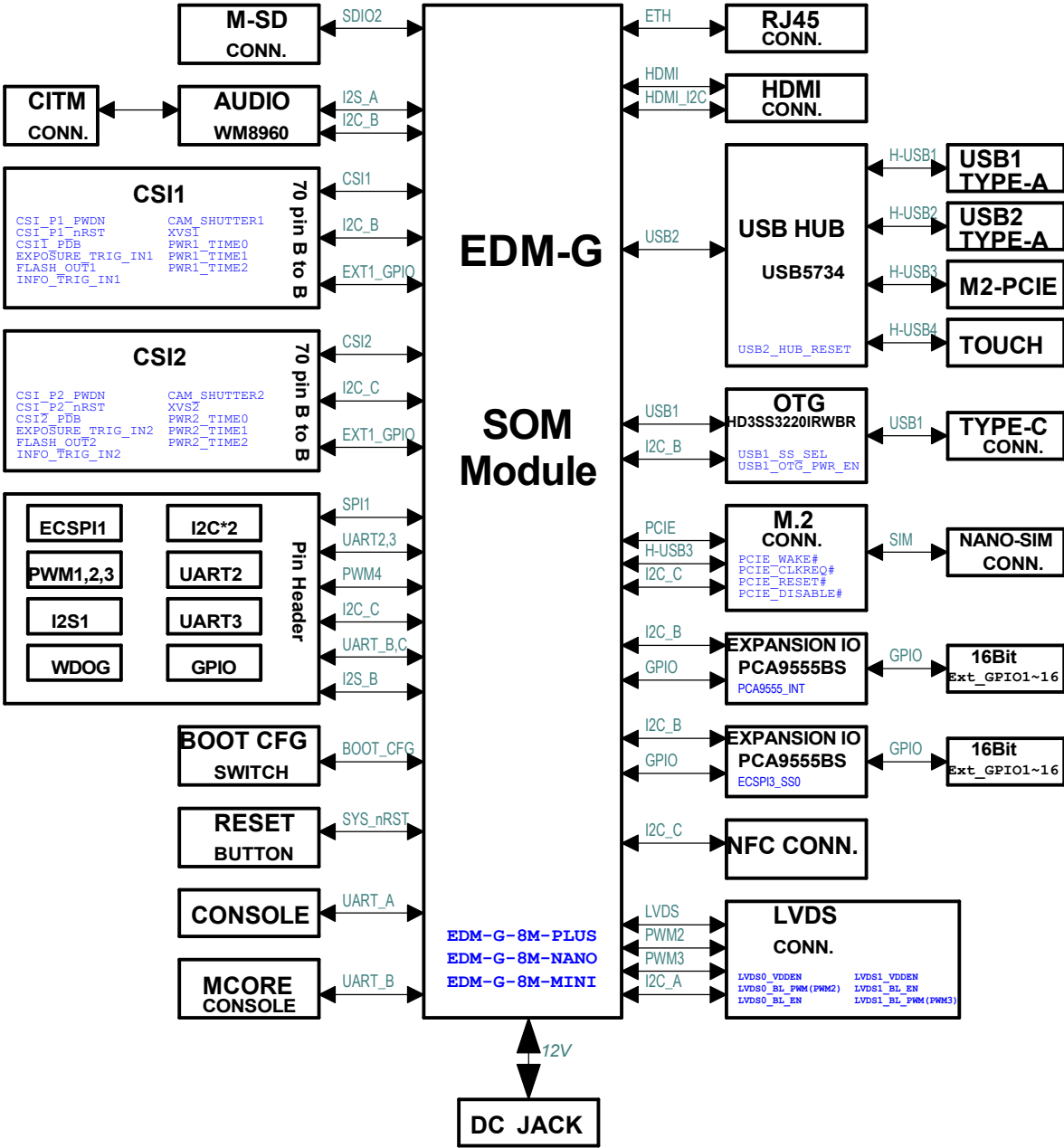
| PAGE | TITLE |
|------|--------------------|
| P01 | INDEX |
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| P05 | USB TYPE C & HDMI |
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Components marked -X are not populated (DNP)



BLOCK DIAGRAM



| | | |
|------------|------------------------------|---------------|
| TechNexion | | |
| Title | | |
| INDEX | | |
| Size | Document Number | Rev |
| Custom | EDM-G-WB | A1 |
| Date: | Wednesday, December 02, 2020 | Sheet 1 of 13 |

BOARD TO BOARD

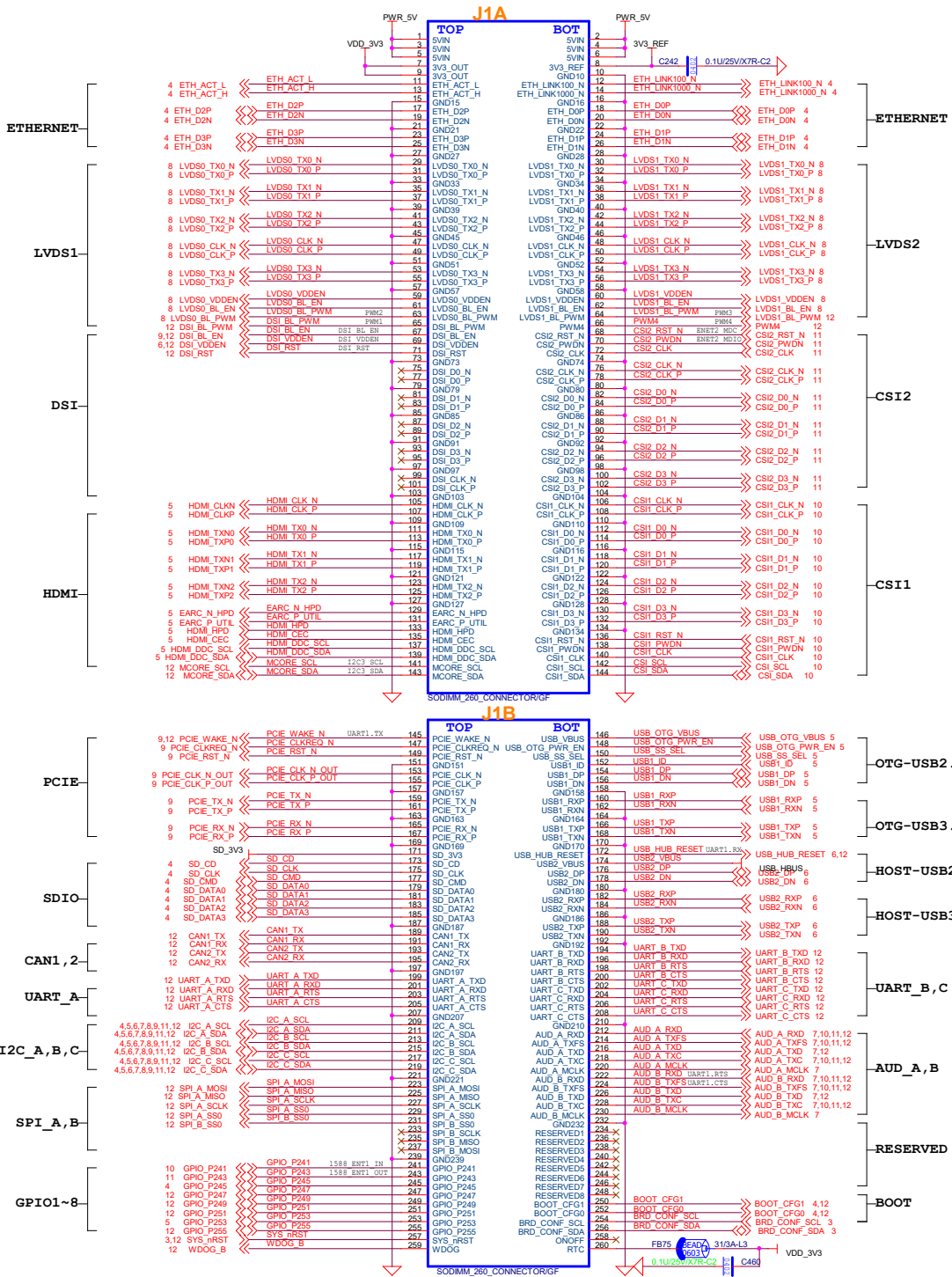
| SOM Module GPIO | |
|-----------------|-------------|
| GPIO_P241 | CS11_INT |
| GPIO_P243 | CS12_INT |
| GPIO_P245 | NFC_INT |
| GPIO_P247 | PCA9555_INT |
| GPIO_P249 | TOUCH_RST |
| GPIO_P251 | TOUCH_INT |
| GPIO_P253 | TUSB320_INT |
| GPIO_P255 | RTC_INT |

| EXPANSION GPIO(PCA9555-1) | |
|---------------------------|----------------|
| EXT_GPIO0 | PCIE_DISABLE_N |
| EXT_GPIO1 | LED_EN |
| EXT_GPIO2 | DSI_TE |
| EXT_GPIO3 | DSI_INT |
| EXT_GPIO4 | DONKEY_EN |
| EXT_GPIO5 | POWER_EN |
| EXT_GPIO6 | EXT_GPIO6C |
| EXT_GPIO7 | USB_OTG_OC |
| EXT_GPIO8 | EXT_GPIO8 |
| EXT_GPIO9 | EXT_GPIO9 |
| EXT_GPIO10 | EXT_GPIO10 |
| EXT_GPIO11 | EXT_GPIO11 |
| EXT_GPIO12 | EXT_GPIO12 |
| EXT_GPIO13 | CS11_PDB |
| EXT_GPIO14 | CS12_PDB |
| EXT_GPIO15 | PD_FAULT |

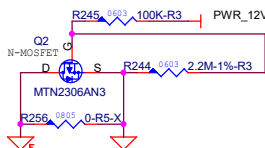
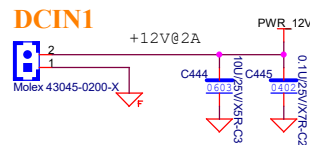
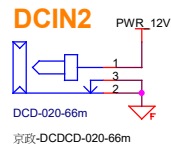
| EXPANSION GPIO(PCA9555-2) | |
|---------------------------|-------------------|
| EXT1_GPIO0 | EXPOSURE_TRIG_IN1 |
| EXT1_GPIO1 | FLASH_OUT1 |
| EXT1_GPIO2 | INFO_TRIG_IN1 |
| EXT1_GPIO3 | CAM_SHUTTER1 |
| EXT1_GPIO4 | XVS1 |
| EXT1_GPIO5 | PWR1_TIME0 |
| EXT1_GPIO6 | PWR1_TIME1 |
| EXT1_GPIO7 | PWR1_TIME2 |
| EXT1_GPIO8 | EXPOSURE_TRIG_IN2 |
| EXT1_GPIO9 | FLASH_OUT2 |
| EXT1_GPIO10 | INFO_TRIG_IN2 |
| EXT1_GPIO11 | CAM_SHUTTER2 |
| EXT1_GPIO12 | XVS2 |
| EXT1_GPIO13 | PWR2_TIME0 |
| EXT1_GPIO14 | PWR2_TIME1 |
| EXT1_GPIO15 | PWR2_TIME2 |

| I2C | | | |
|--------|-----------|------------------|------------------|
| PLUS | I2C1 | I2C2 | I2C5 |
| MINI | I2C1 | I2C2 | I2C3 |
| NANO | I2C1 | I2C2 | I2C3 |
| B.B. | I2C_A | I2C_B | I2C_C |
| DEVICE | RTC(400K) | CS11-70pin(400K) | CS12-70pin(400K) |
| | LVDS | DS11-70pin(400K) | DS12-70pin(400K) |
| | | HD3SS3220(10M) | TOUCH(400K) |
| | | PCA9555-1(100K) | NFC(27.12M) |
| | | PCA9555-2(100K) | CLK GEN(400K) |
| | | SN6DS184(400K) | MINI-PCIE |
| | | WM8960(526K) | HEADER |
| | | Donkey Car | |

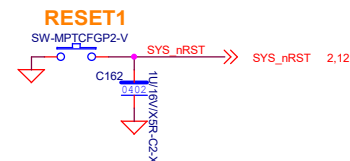
Green: ROBOT ARM



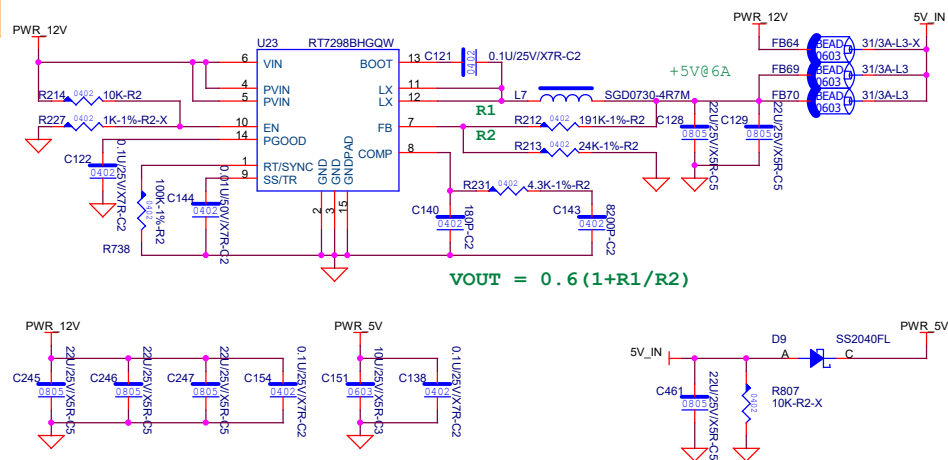
DC-IN



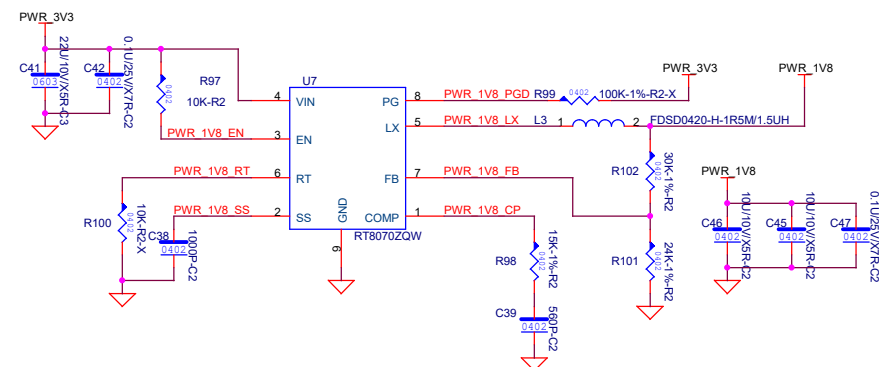
RESET



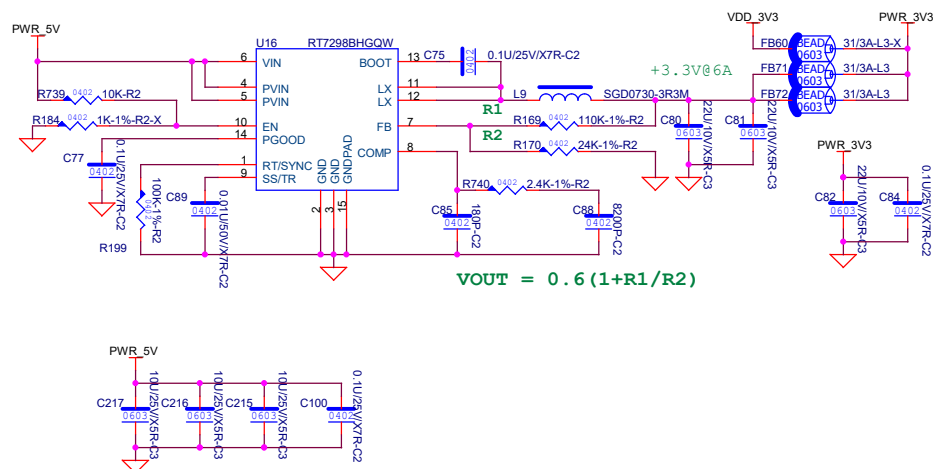
5V



1.8V

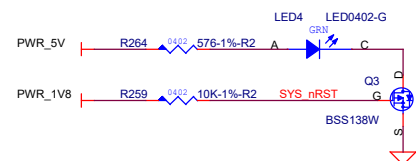


3.3V

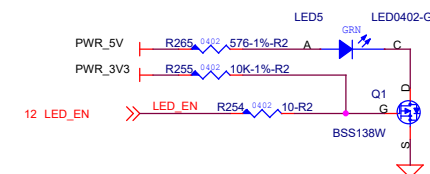


LED

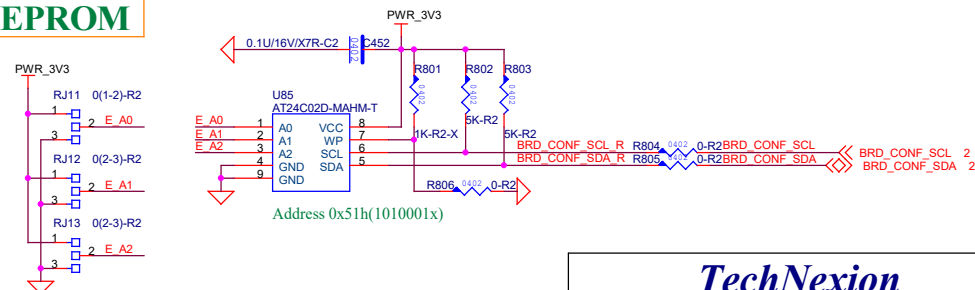
LED for PWR



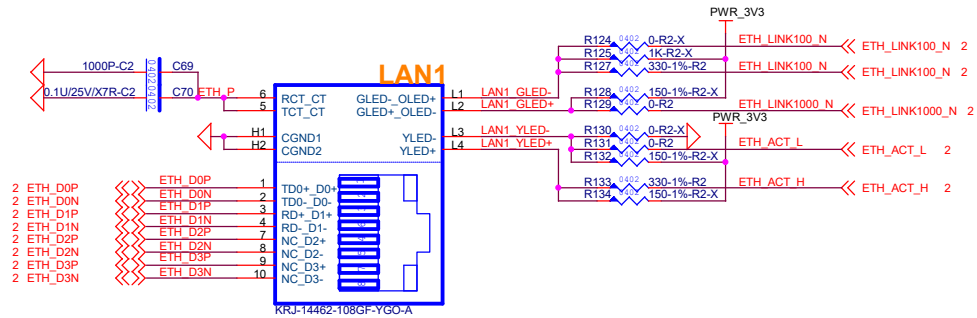
LED for GPIO



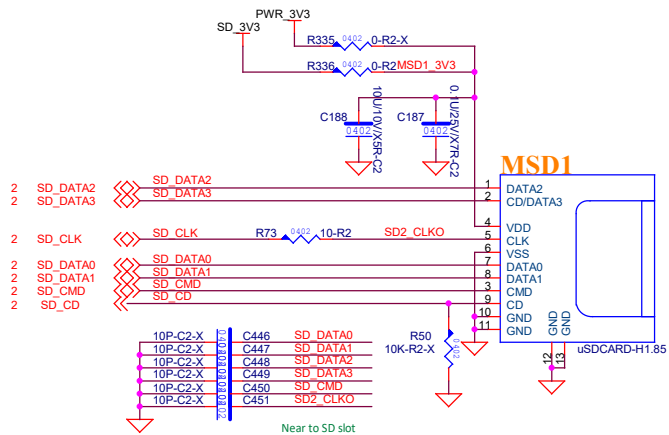
EEPROM



ETHERNET



M-SD

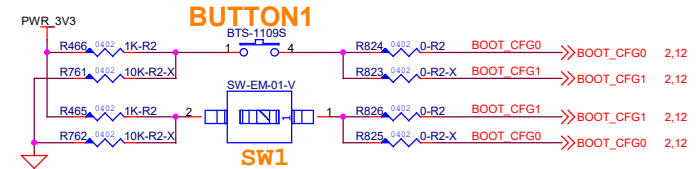


BOOT CFG SETTING

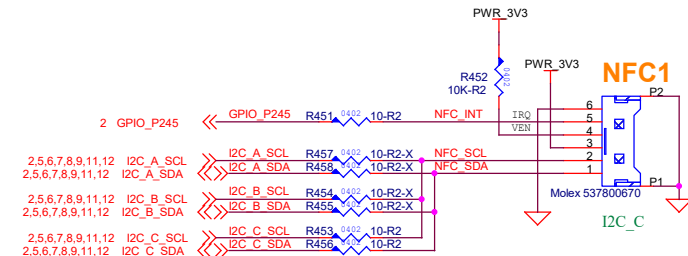
| PLUS BOOT CFG [1:0] | BOOT_CFG1 SW1 | BOOT_CFG0 BUTTON1 | NANO BOOT CFG [1:0] | BOOT_CFG1 SW1 | BOOT_CFG0 BUTTON1 |
|---|------------------|----------------------|---|------------------|----------------------|
| eMMC (Default) | 0 | 0 | eMMC (Default) | 0 | 0 |
| SD2 boot from SW1-ON (BOOT_MODE[1:0] = BOOT_CFG[1:0] = 1 0) | 1 | 0 | SD2 boot from SW1-ON (BOOT_MODE[1:0] = BOOT_CFG[1:0] = 1 0) | 1 | 0 |
| Serial downloader from push button1 (BOOT_MODE[1:0] is driven to 0 1 by the 74LVC2G126 when BOOT_CFG1 is high | 0 | 1 | Serial downloader from push button1 (BOOT_MODE[1:0] is driven to 0 1 by the 74LVC2G126 when BOOT_CFG1 is high | 0 | 1 |

| MINI BOOT CFG [1:0] | BOOT CFG1 SW1 | BOOT CFG0 BUTTON1 |
|-------------------------------------|---------------|-------------------|
| eMMC (Default) | 0 | 0 |
| SD2 boot from SW1-ON | 1 | 0 |
| Serial downloader from push BUTTON1 | 0 | 1 |

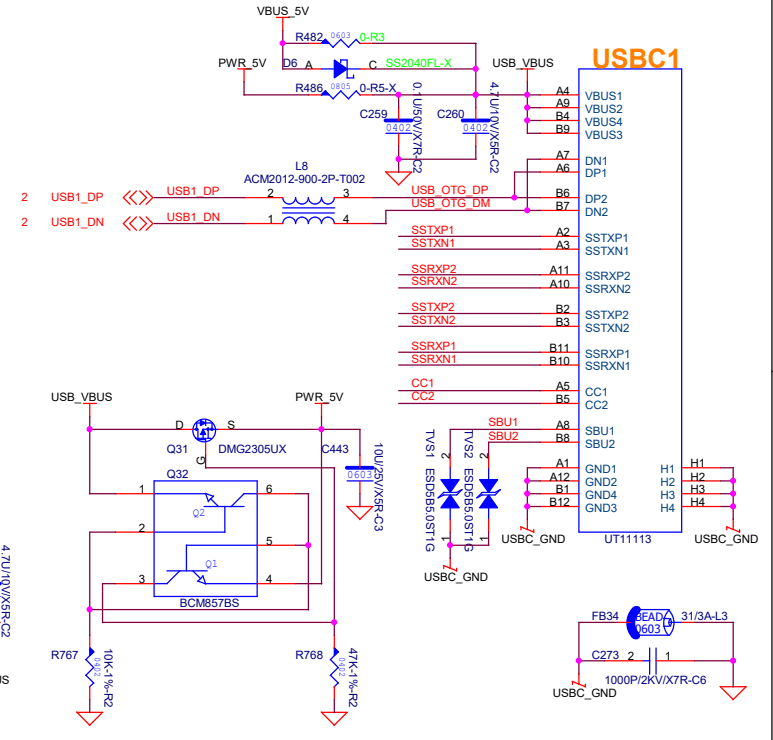
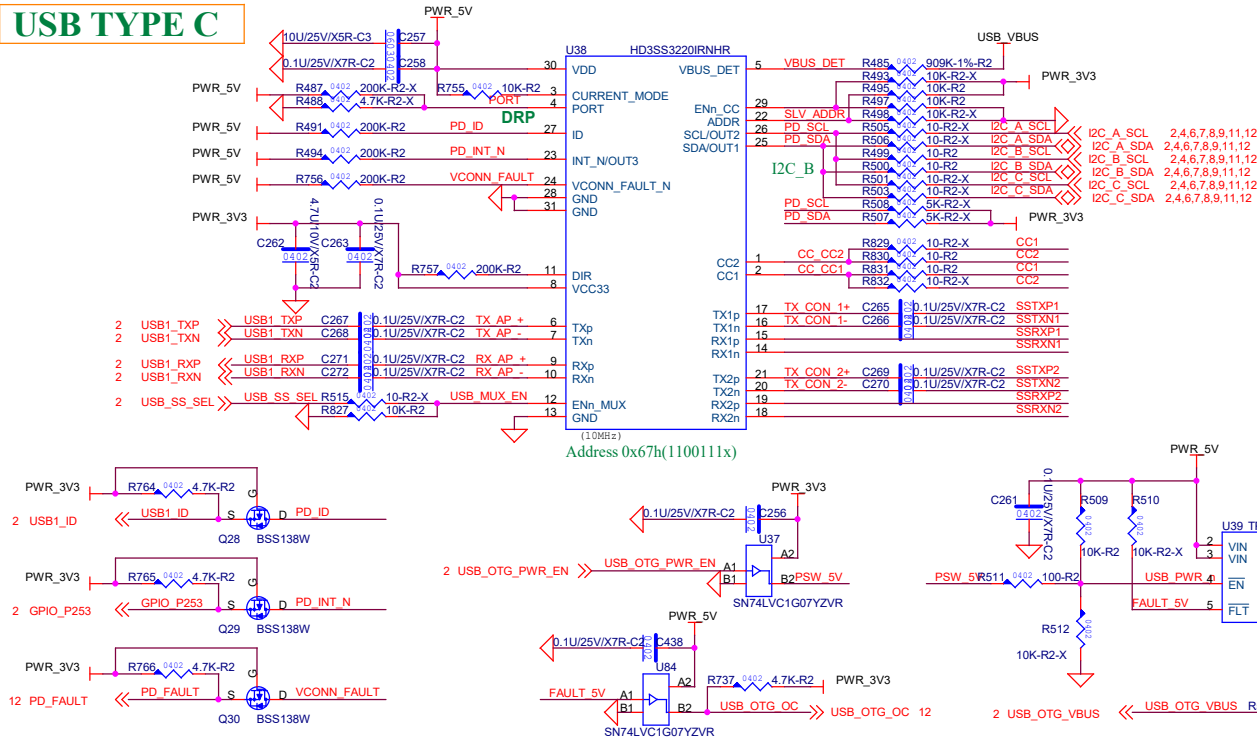
SERIAL DOWNLOADER MODE
PUST BUTTON1



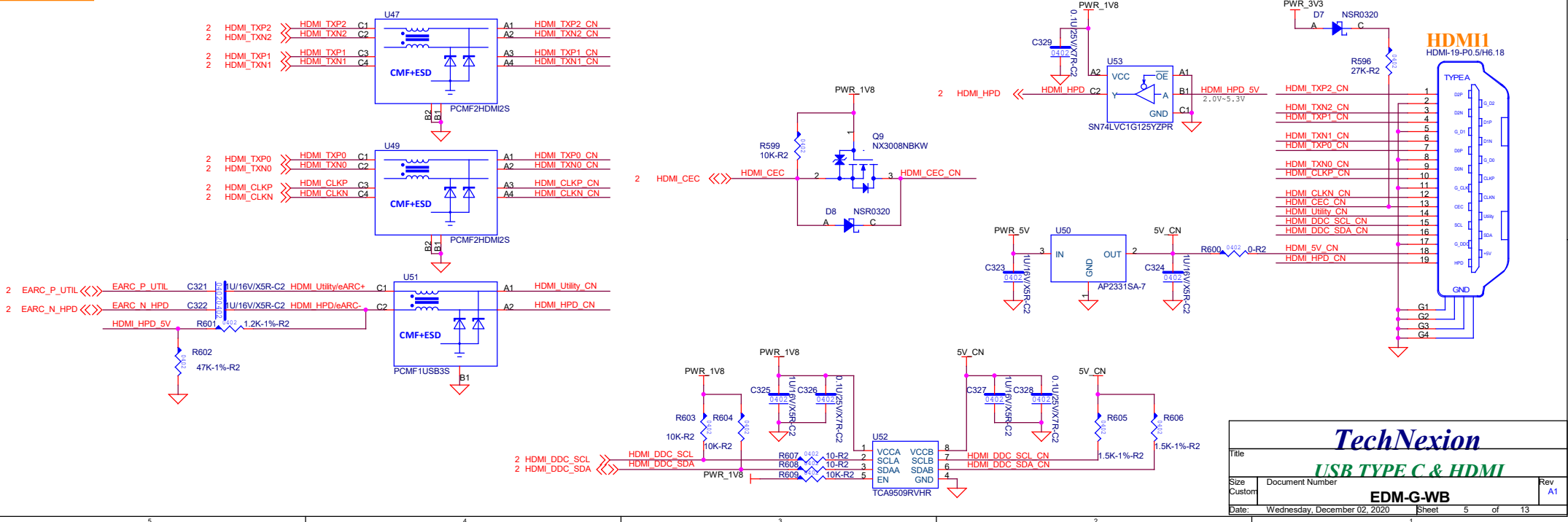
NFC



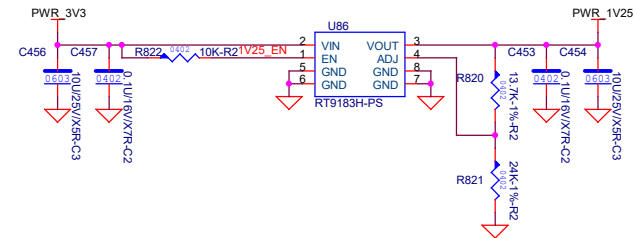
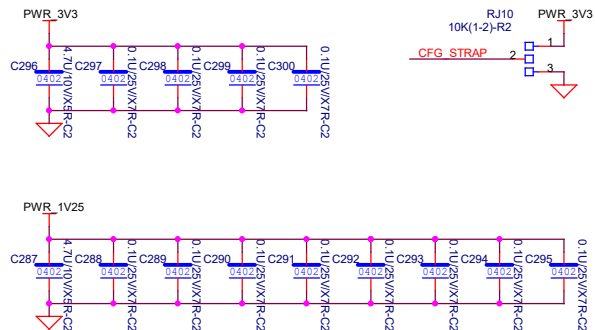
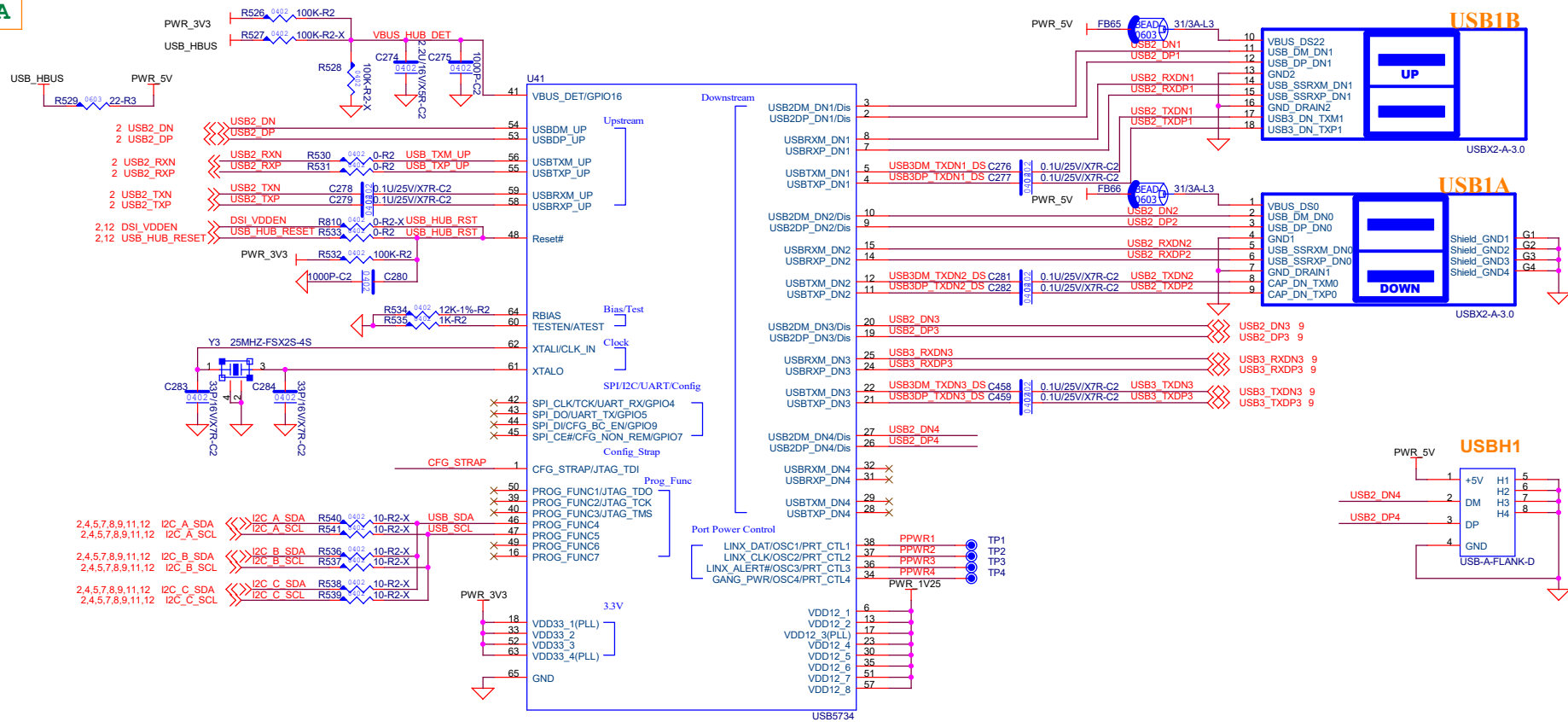
USB TYPE C



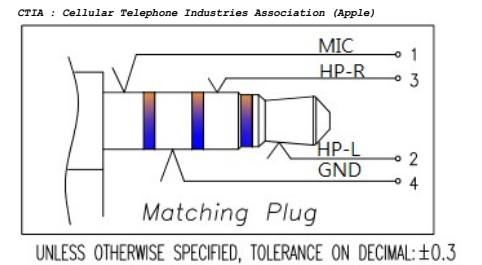
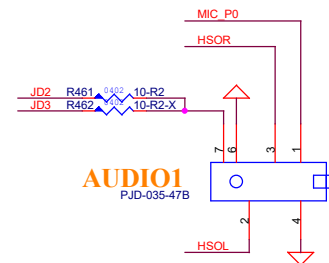
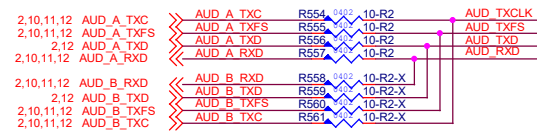
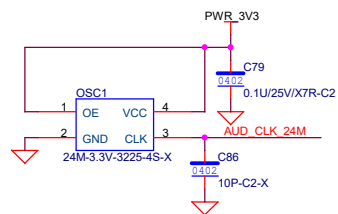
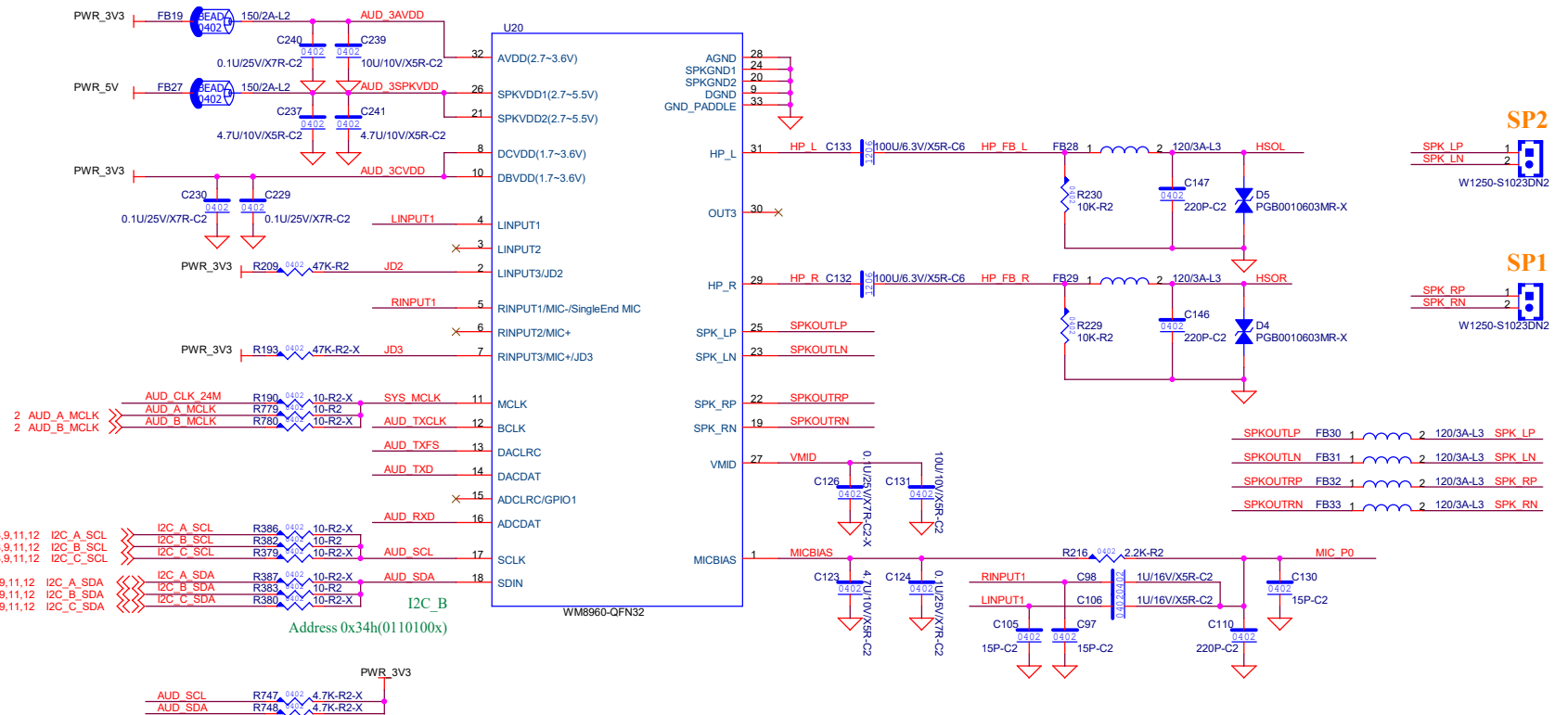
HDMI



USB TYPE A



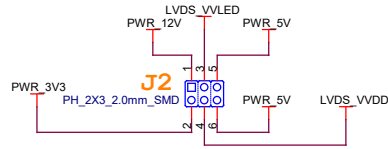
AUDIO



LVDS

J2(3-5)1
JUMPER200

| J2 | VLED Voltage Select |
|-----|---------------------|
| 1-3 | 12V |
| 3-5 | 5V |



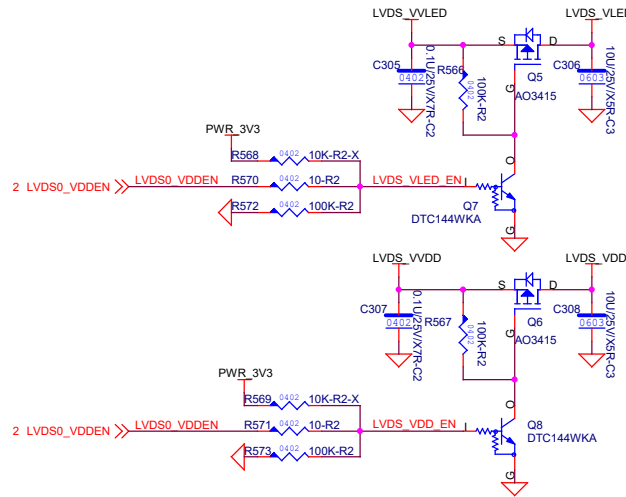
J2(2-4)1
JUMPER200

| J2 | VDD Voltage Select |
|-----|--------------------|
| 2-4 | 3.3V |
| 4-6 | 5V |

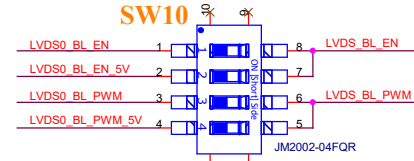
10 " VL101-12880YL-C01;
J2 (1-3, 2-4) ;
SW10 (1-8, 3-6) ;
SW11 (1-4) .

15" VL156-13676YL-C01;
J2 (1-3, 4-6) ;
SW10 (2-7, 3-6) ;
SW11 (NC) .

21" G215HVN01;
J2 (1-3, 4-6) ;
SW10 (2-7, 4-5) ;
SW11 (NC) .

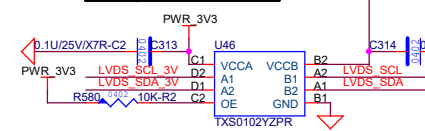


| SW10 | Backlight Enable Voltage Select |
|------|---------------------------------|
| 1-8 | 3.3V |
| 2-7 | 5V |

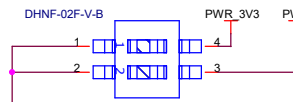


| SW10 | Backlight PWM Voltage Select |
|------|------------------------------|
| 3-6 | 3.3V |
| 4-5 | 5V |

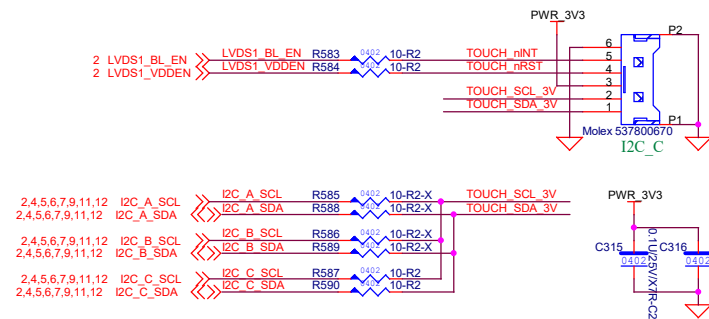
| SW11 | I2C Voltage Select |
|------|--------------------|
| 1-4 | 3.3V |
| 2-3 | 5V |



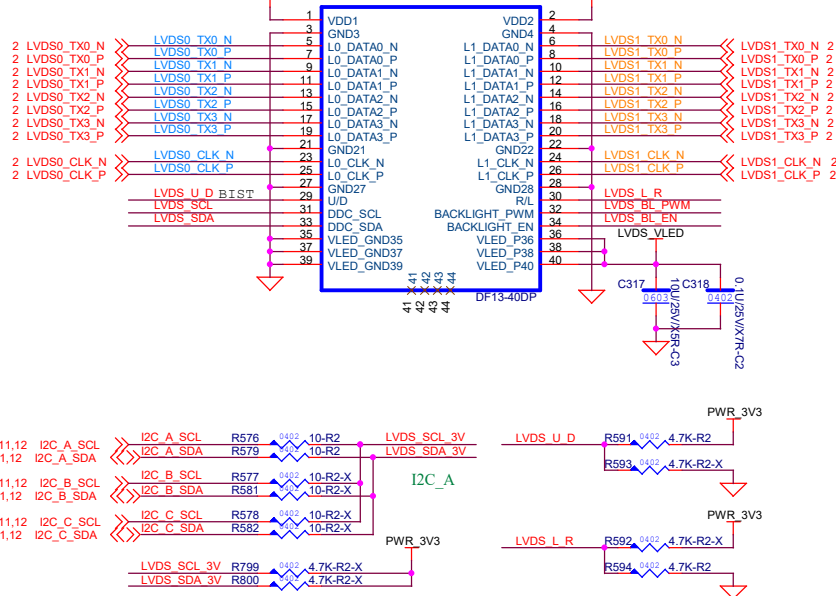
SW11



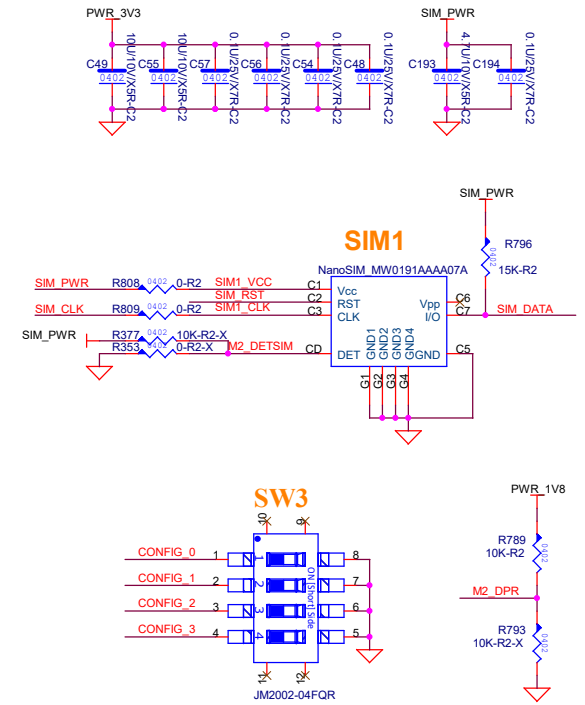
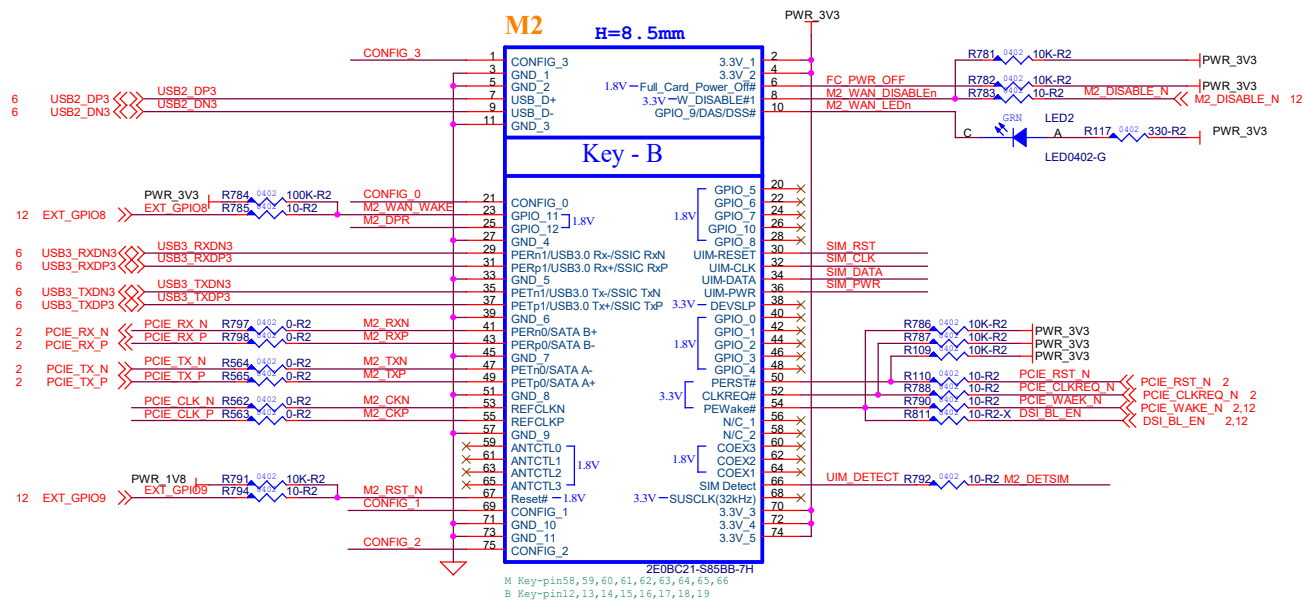
I2C-TOUCH1



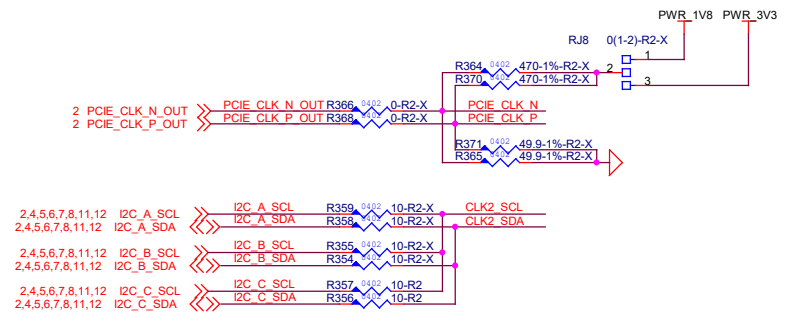
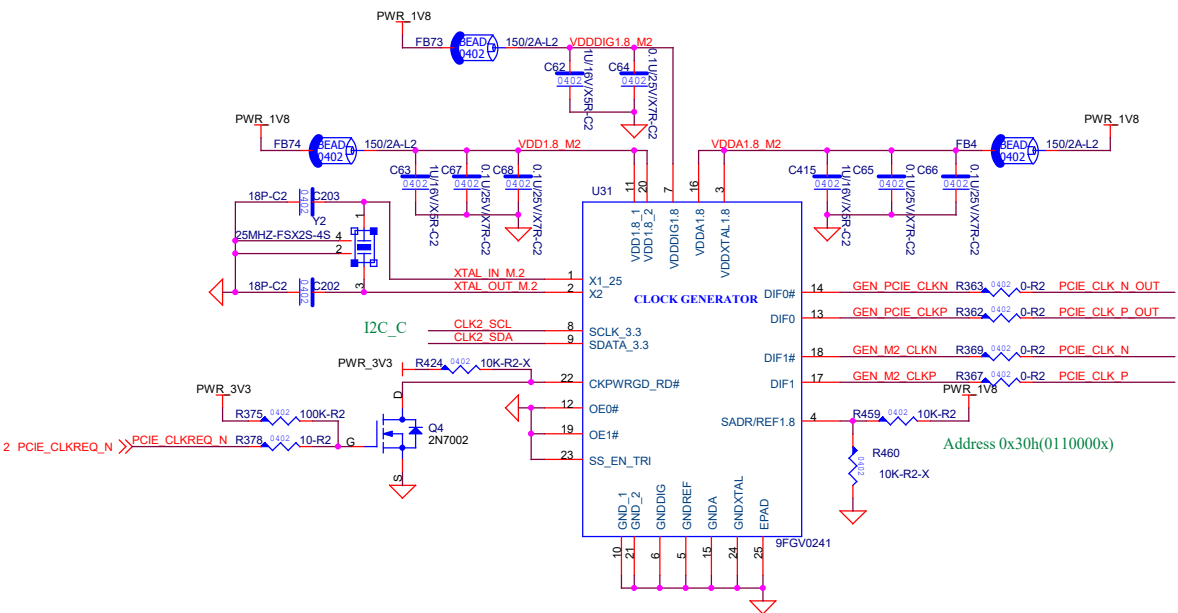
LVDS1



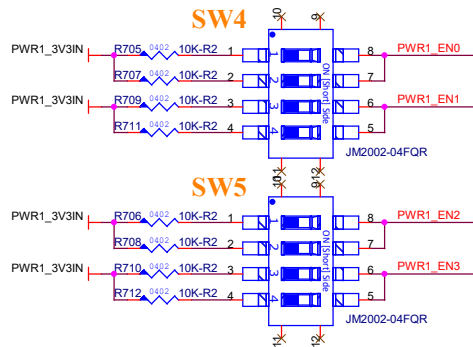
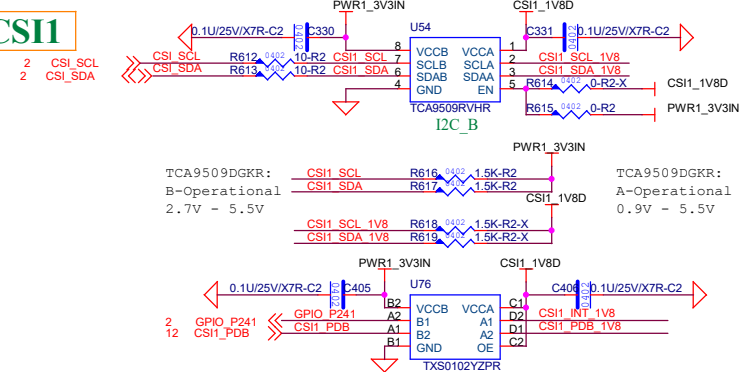
M.2



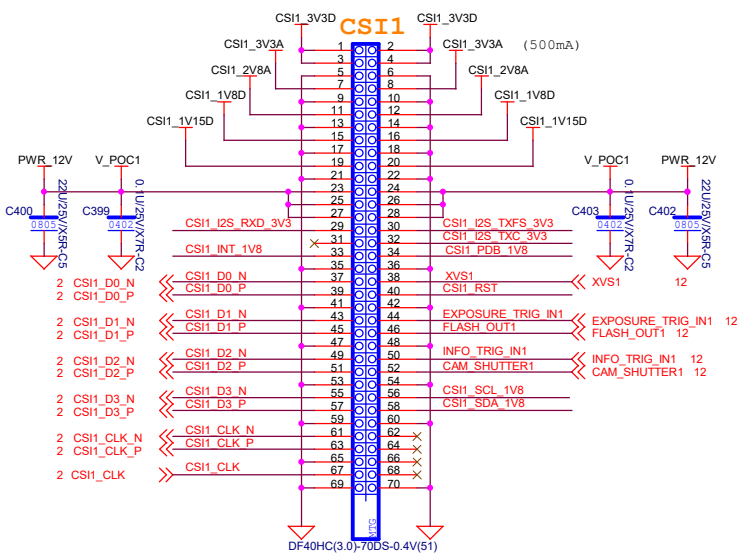
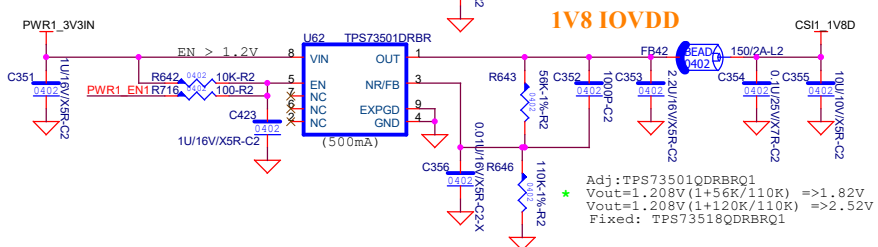
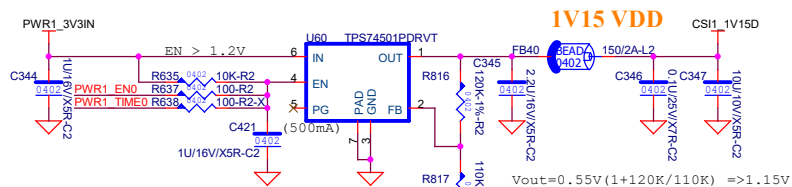
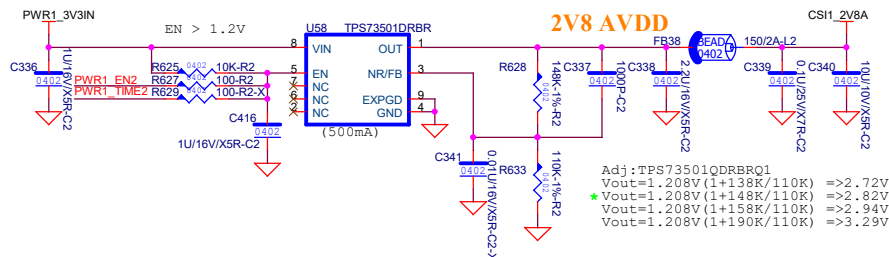
PCIE CLOCK



CSI1



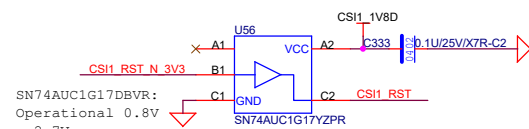
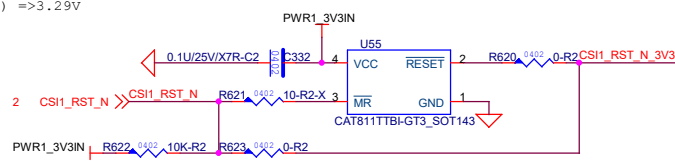
| Power up sequence | SW4 | | SW5 | |
|-------------------|----------|----------|----------|------|
| | 1.15V | 1.8V | 2.8V | 3.3V |
| AR0144CS | 1-8 | | 1-8, 2-7 | |
| AR0521 | 1-8 | 3-6, 4-5 | | |
| AR0234 | | 3-6 | 1-8, 2-7 | |
| AR0821 | | 3-6, 4-5 | 1-8 | |
| OV5640 | | 3-6, 4-5 | 1-8 | |
| E2V | 1-8, 2-7 | | | 3-6 |
| IMX | 1-8, 2-7 | 3-6 | | |



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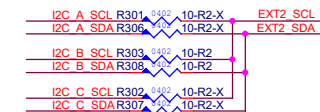
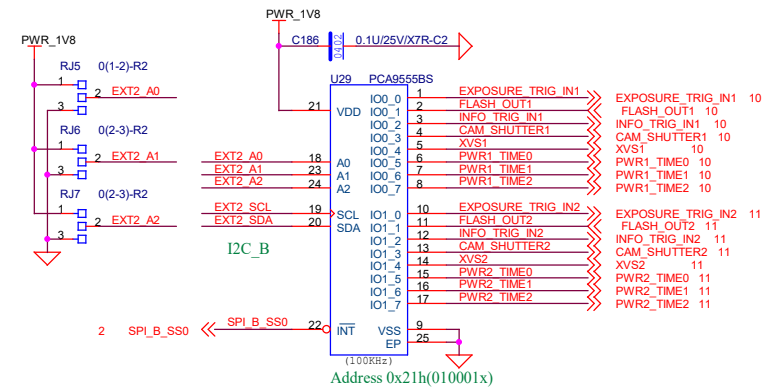
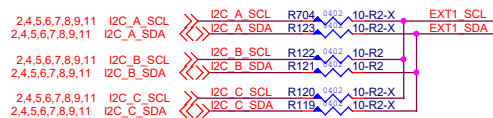
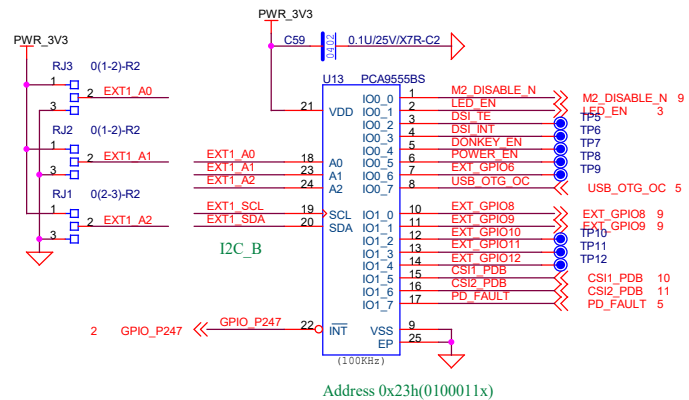
1.AR0144CS 2.8V->1.8V->1.15V Power up timing(T0->T1 typ = 10us, Max --)
2.AR0521 1.8V->1.15V->2.8V Power up timing(T0->T1min = 1ms, Max --)
3.AR0234 2.8V->1.8V->1.15V Power up timing(T0->T1 typ = 100us, Max --)
4.AR0821 1.8V->2.8V->1.15V Power up timing(T0->T1 typ = 100us, Max --)
5.E2V-S2/5M 1.2V-> 3.3V; Analog -> Digital, no requirement data for Power up timing
6.IMX335 1.15V->1.8V->2.8V Power up timing(T0->T1min = 0us, Max --), (T0 -> T2 Max=200ms)
7.IMX290 1.15V->1.8V->2.8V Power up timing(T0->T1 min = 100us, Max --), (T0 -> T2 Max=200ms)
8.IMX447 1.15V->1.8V->2.8V Power up timing(T0->T1 min = Max = 0us)

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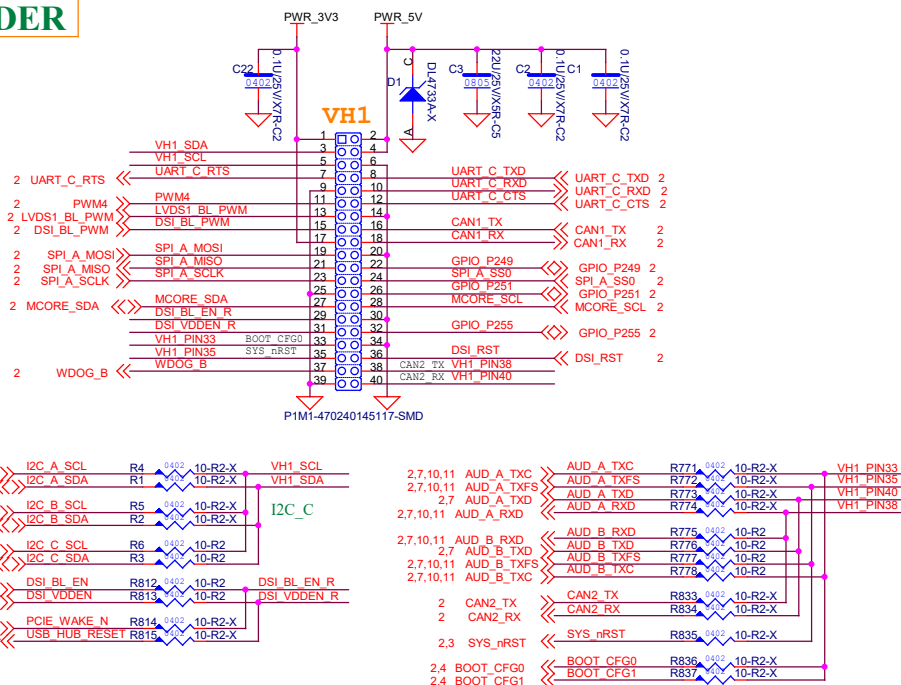




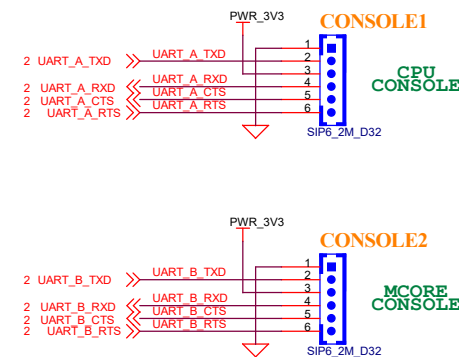
## EXPANSION



## PIN HEADER



## CONSOLE



# Revision History

| Revision | Date       | Change Description |
|----------|------------|--------------------|
| A1       | 2020-11-12 | First Release      |