Compal Confidential

C640-13 (GLC3A)

UMA M/B Schematic Document

AMD Renoir Processor with DDR4 Memory Down

2020-07-23

LA-K211P

REV :1.0

Security Classification	Compal Secret Data		
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Title: Cover Page		
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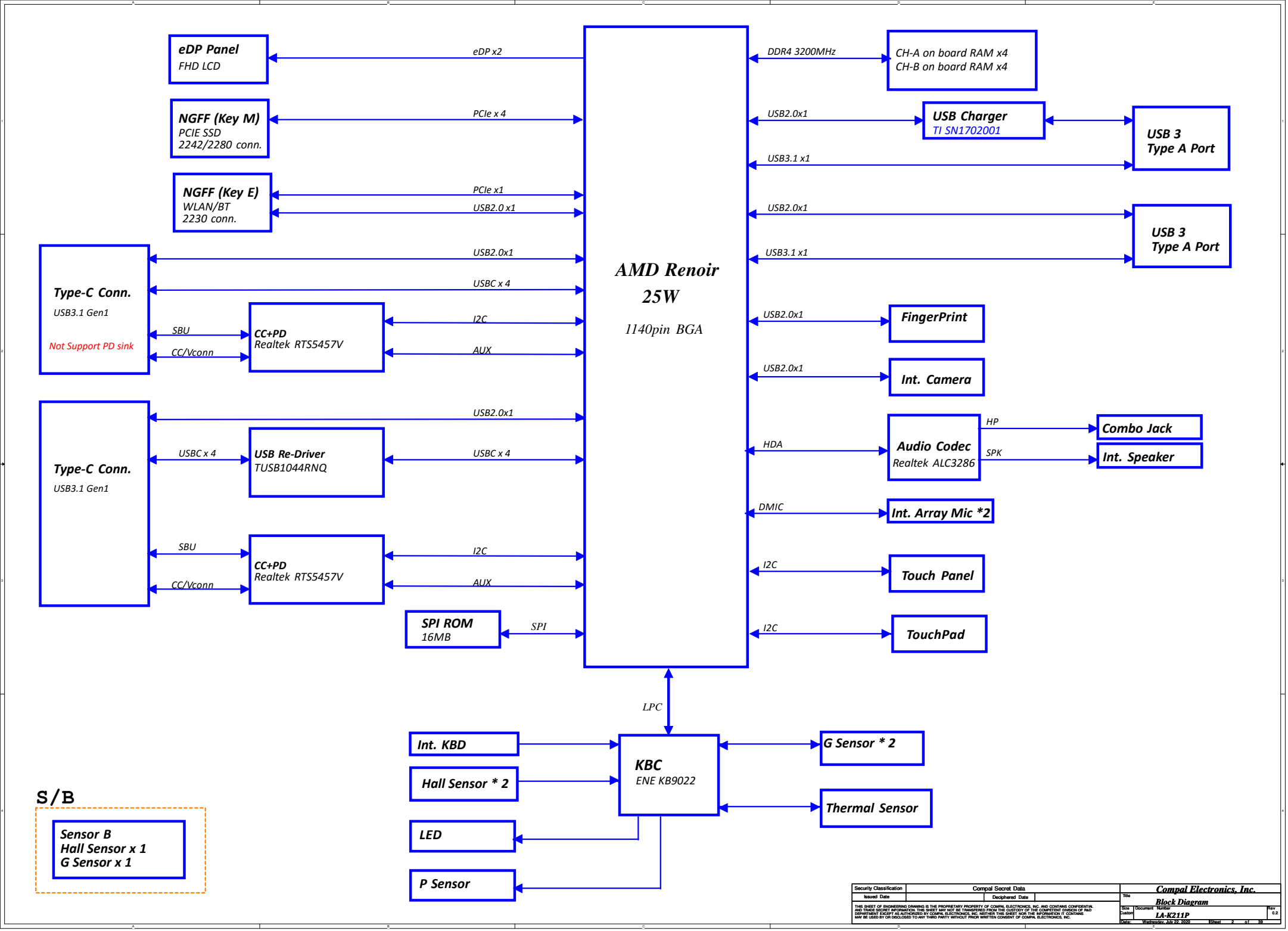
eDP Panel
FHD LCD
eDP x2
NGFF (Key M)
PCIE SSD
2242/2280 conn.
PCIe x 4
NGFF (Key E)
WLAN/BT
2230 conn.
PCIe x1
USB2.0 x1
Type-C Conn.
USB3.1 Gen1
Not Support PD sink
USB2.0x1
USBC x 4
SBU
CC/Vconn
CC+PD
Realtek RTS5457V
I2C
AUX
Type-C Conn.
USB3.1 Gen1
USB2.0x1
USBC x 4
USB Re-Driver
TUSB1044RNQ
USBC x 4
SBU
CC/Vconn
CC+PD
Realtek RTS5457V
I2C
AUX
SPI ROM
16MB
SPI
AMD Renoir
25W
1140pin BGA
DDR4 3200MHz
CH-A on board RAM x4
CH-B on board RAM x4
USB2.0x1
USB Charger
TI SN1702001
USB 3
Type A Port
USB3.1 x1
USB2.0x1
USB 3
Type A Port
USB3.1 x1
USB2.0x1
FingerPrint
USB2.0x1
Int. Camera
HDA
Audio Codec
Realtek ALC3286
HP
Combo Jack
SPK
Int. Speaker
DMIC
Int. Array Mic *2
I2C
Touch Panel
I2C
TouchPad
LPC
Int. KBD
Hall Sensor * 2
LED
P Sensor
KBC
ENE KB9022
G Sensor * 2
Thermal Sensor
S/B
Sensor B
Hall Sensor x 1
G Sensor x 1
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Block Diagram
LA-K211P
Wednesday, July 22, 2020

Voltage Rails

State \ power plane	+12.6VB	+5VALW +3VALW +1.8VALW +0.75VALW	+1.2V +2.5V	+5VS +3VS +1.8VS +0.75VS +0.6VS +APU_CORE +APU_CORE_SOC
S0	O	O	O	O
S3	O	O	O	X
S5 S4/AC	O	O	X	X
S5 S4/ Battery only	O	X	X	X
S5 S4/AC & Battery don't exist	X	X	X	X

BOM Structure Table

Item	BOM Structure
Memory Down - SDP Package	SDP@
Memory Down - DDP Package	DDP@
APU_R5	APU_R5@
APU_R7	APU_R7@
EMI pop	EMI@
EMI un-pop	@EMI@
ESD pop	ESD@
ESD un-pop	@ESD@
RF pop	RF@
RF un-pop	@RF@
Debug	HDT@
Keyboard BackLight	KBL@
CAMERA POWER CIRCUIT	CAM@
Touch Screen	TS@
Touch Screen resistor	TS_R@
Modern standby	MS@
	NON_MS@
SAMSUNG 8GB Memroy Down	S8G@
HYNIX 8GB Memroy Down	H8G@
MICRON 8GB Memroy Down	M8G@
SUMSUNG 16GB Memroy Down	S16G@
HYNIX 16GB Memroy Down	H16G@
MICRON 16GB Memroy Down	M16G@
TUSB1044	RE@
RTS5457V with SINK	SINK@
RTS5457V without SINK	NONSINK@

USB 2.0 Port Table

Port	External USB Port
0	USB2/3 Port (Type-C)
1	USB2/3 Port (Type A-L)
2	Camera
3	
4	USB2/3 Port (Type-C)
5	USB2/3 Port (Type A-R)
6	Fingrt Print
7	NGFF BT

USB 3.0 Port Table

Port	
0	USB2/3 Port (Type-C)
1	USB2/3 Port (TYPE A)
4	USB2/3 Port (Type-C)
5	USB2/3 Port (Type A)

DDI Port Table

Port	Lane
0	eDP
1	
2	TYPE C (PD + CC)
3	TYPE C (PD + CC)

GPP Port Table

Port	Lane	
0	0	SSD1
1	1	
2	2	
3	3	
4	4	
5	5	
6	6	
7	7	NGFF WLAN
8	8	
9	9	
10	10	
11	11	

EC SM Bus1 address

Device	Address
Smart Battery	0001 011x 16h
Charger (BQ25710)	0001 001x 12h

EC SM Bus2 address

Device	Address
Thermal Sensor (F75305M)	1001_101xb 9Ah

PCH SM Bus address

Device	Address	Device	Address
Touch pad			

SMBUS Control Table

	SOURCE	APU	BATT	CHARGER	KB9022	PD IC	Thermal Sensor
EC_SMB_CK1 EC_SMB_DA1	KB9022 +3VL	X	V +3VALW	V +19V_VIN	V	V	X
EC_SMB_CK2 EC_SMB_DA2	KB9022 +3VS	V +3VS	X	X	V +3VS	X	V +3VS

STATE \ SIGNAL	SLP_S1#	SLP_S3#	SLP_S4#	SLP_S5#	+VALW	+V	+VS	Clock
Full ON	HIGH	HIGH	HIGH	HIGH	ON	ON	ON	ON
S1(Power On Suspend)	LOW	HIGH	HIGH	HIGH	ON	ON	ON	LOW
S3 (Suspend to RAM)	LOW	LOW	HIGH	HIGH	ON	ON	OFF	OFF
S4 (Suspend to Disk)	LOW	LOW	LOW	HIGH	ON	OFF	OFF	OFF
S5 (Soft OFF)	LOW	LOW	LOW	LOW	ON	OFF	OFF	OFF

DDR4 BOM Config

Vendor	Size	GPIO_RESERVE2	OBRAM_ID2	OBRAM_ID1	OBRAM_ID0	
Samsung	8GB		RC123 S8G@	RC122 S8G@	RC121 S8G@	UD1 S8G@ SA0000CZ520 / UD2 S8G@ SA0000CZ520 / UD3 S8G@ SA0000CZ520 / UD4 S8G@ SA0000CZ520 / UD5 S8G@ SA0000CZ520 / UD6 S8G@ SA0000CZ520 / UD7 S8G@ SA0000CZ520 / UD8 S8G@ SA0000CZ520
Hynix			RC124 H8G@	RC119 H8G@	RC120 H8G@	UD1 H8G@ SA0000CZ320 / UD2 H8G@ SA0000CZ320 / UD3 H8G@ SA0000CZ320 / UD4 H8G@ SA0000CZ320 / UD5 H8G@ SA0000CZ320 / UD6 H8G@ SA0000CZ320 / UD7 H8G@ SA0000CZ320 / UD8 H8G@ SA0000CZ320
Micron			RC124 M8G@	RC119 M8G@	RC121 M8G@	UD1 M8G@ SA0000CMS10 / UD2 M8G@ SA0000CMS10 / UD3 M8G@ SA0000CMS10 / UD4 M8G@ SA0000CMS10 / UD5 M8G@ SA0000CMS10 / UD6 M8G@ SA0000CMS10 / UD7 M8G@ SA0000CMS10 / UD8 M8G@ SA0000CMS10
Samsung	16GB		RC123 S16G@	RC119 S16G@	RC120 S16G@	UD1 S16G@ SA0000CZ220 / UD2 S16G@ SA0000CZ220 / UD3 S16G@ SA0000CZ220 / UD4 S16G@ SA0000CZ220 / UD5 S16G@ SA0000CZ220 / UD6 S16G@ SA0000CZ220 / UD7 S16G@ SA0000CZ220 / UD8 S16G@ SA0000CZ220
Hynix			RC123 H16G@	RC119 H16G@	RC121 H16G@	UD1 H16G@ SA0000CZ120 / UD2 H16G@ SA0000CZ120 / UD3 H16G@ SA0000CZ120 / UD4 H16G@ SA0000CZ120 / UD5 H16G@ SA0000CZ120 / UD6 H16G@ SA0000CZ120 / UD7 H16G@ SA0000CZ120 / UD8 H16G@ SA0000CZ120
Micron			RC123 M16G@	RC122 M16G@	RC120 M16G@	UD1 M16G@ SA0000D3U00 / UD2 M16G@ SA0000D3U00 / UD3 M16G@ SA0000D3U00 / UD4 M16G@ SA0000D3U00 / UD5 M16G@ SA0000D3U00 / UD6 M16G@ SA0000D3U00 / UD7 M16G@ SA0000D3U00 / UD8 M16G@ SA0000D3U00

Renoir APU PR

UC1 APU_R5@
S IC RYZEN5 100-000000084 2.375G BGA APU
SA0000D4A80

UC1 APU_R7@
S IC RYZEN7 100-000000083 2G BGA1140 APU
SA0000D4960

ON BOARD RAM X76

ZZZ13_X76_S8G@ DRAM 8G SAMSUNG GLC3A X7688338L04
ZZZ15_X76_M8G@ DRAM 8G MICRON GLC3A X7688338L05
ZZZ14_X76_H8G@ DRAM 8G HYNIX GLC3A X7688338L06
ZZZ16_X76_S16G@ DRAM 16G SAMSUNG GLC3A X7688338L01
ZZZ17_X76_H16G@ DRAM 16G MICRON GLC3A X7688338L02
ZZZ18_X76_M16G@ DRAM 16G HYNIX GLC3A X7688338L03

PCB PN

ZZZ
PCB 36T LA-K211P REV0 M/B 1 S
DA8001NP000

X4E

ZZZ1
SMT EMC FOR EE AK211 GLC3A
X4EANL38L01

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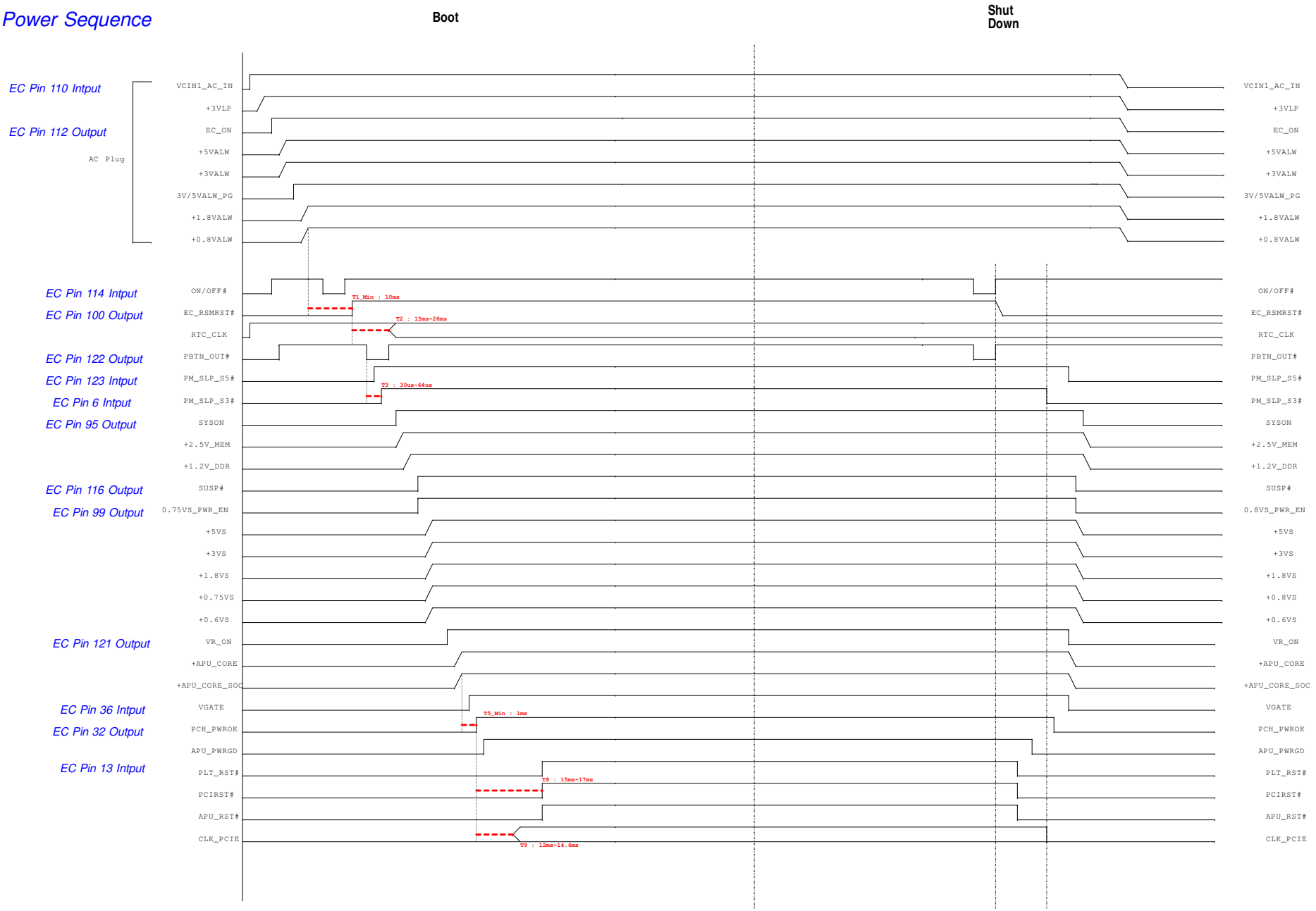
Power Sequence



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Title: Power Sequence

Size	Document Number	Rev
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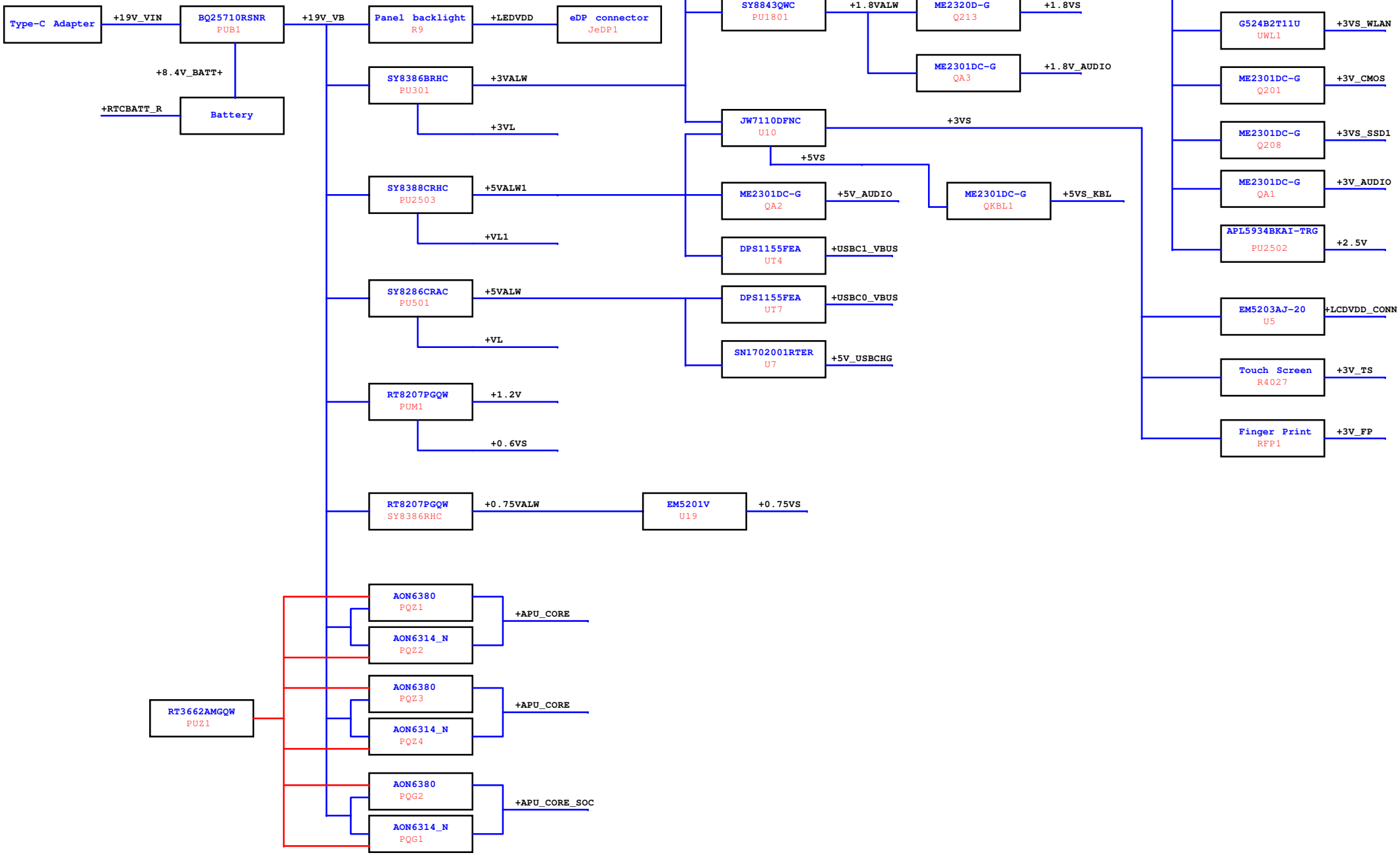

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Title: Power Map

Size	Document Number	Rev
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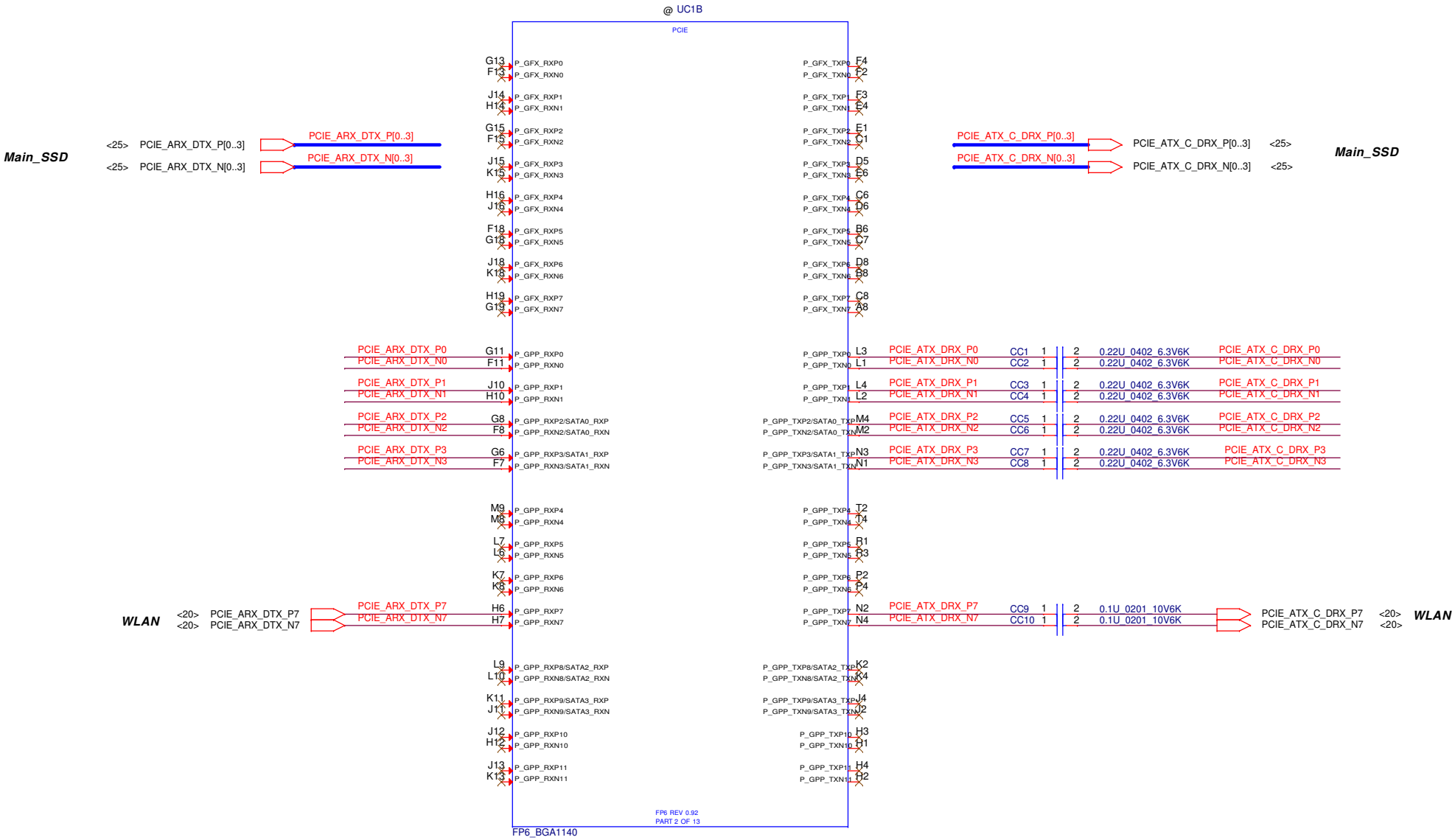
Main Func = CPU



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Title: FP6 PCIE/UMI

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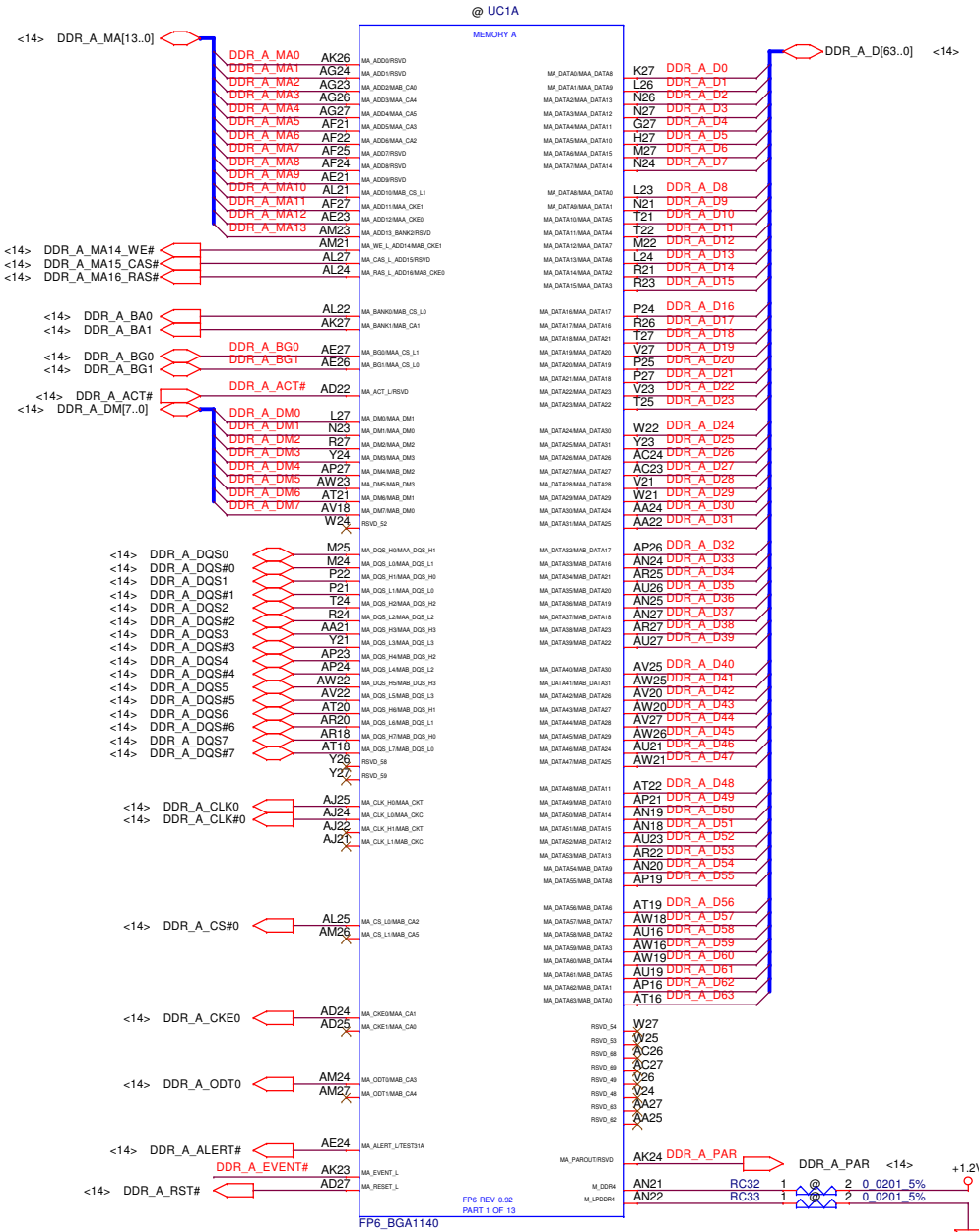
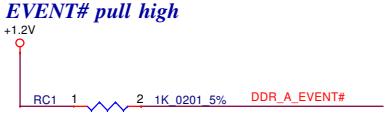
Main Func = CPU



EVENT# pull high



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Title: FP6(2/8)MEMORY A

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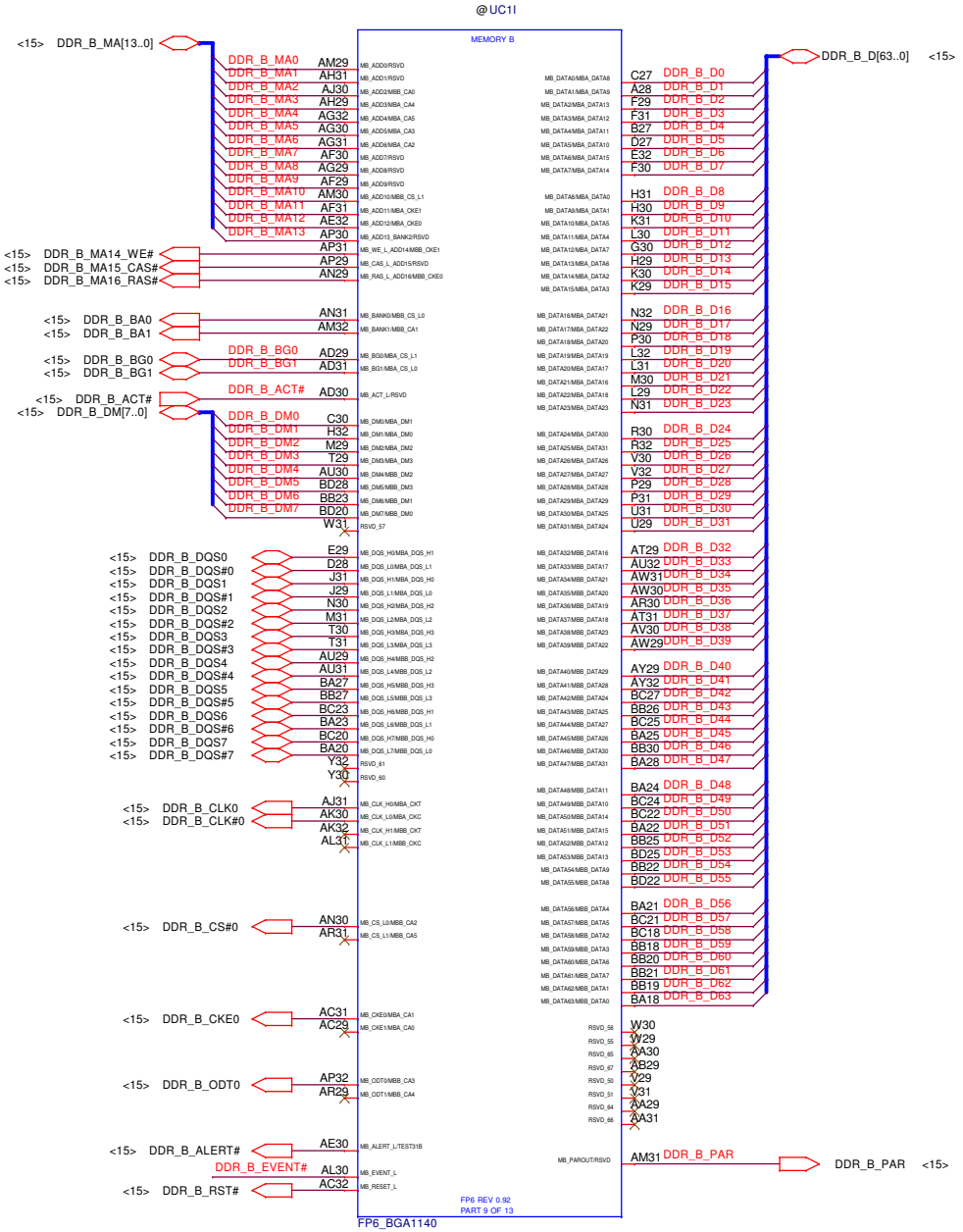
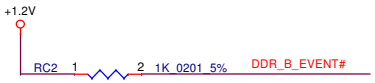
Main Func = CPU



EVENT# pull high



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Title: **FP6(3/8)MEMORY B**

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Main Func = CPU

DP0: eDP
DP1: Type-C
DP2: Type-C
DP3: N/A

@ UC1C

DISPLAY/SVID/JTAG/TEST

eDP

+LCDVDD_CONN PWR switch enable pin VIH=1.2V

TYPE-C PD(Right Port)

TYPE-C PD(Left Port)

FP6_BGA1140

Reserve for Sequence Tuning

ESD

HDT+ (debug + HDT@)

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Title	FP6 DISP/MISC/HDT
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Main Func = CPU

ON BOARD RAM ID

Touch Pad Level Shift

DMIC Level Shift

ESD

EMI

STRAPS

STRAPS	DEFINITION
SPI_CLK	1 : Use 48MHZ Crystal Clock and Generate both internal and external clocks (Default) 0 : Use 100MHZ PCIE clock as reference clock and generate internal clocks only
SYS_RST#	1 : Normal reset mode (Default) 0 : short reset mode

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Title	FP6 GPIO/AZ/MISC/STRAPS		
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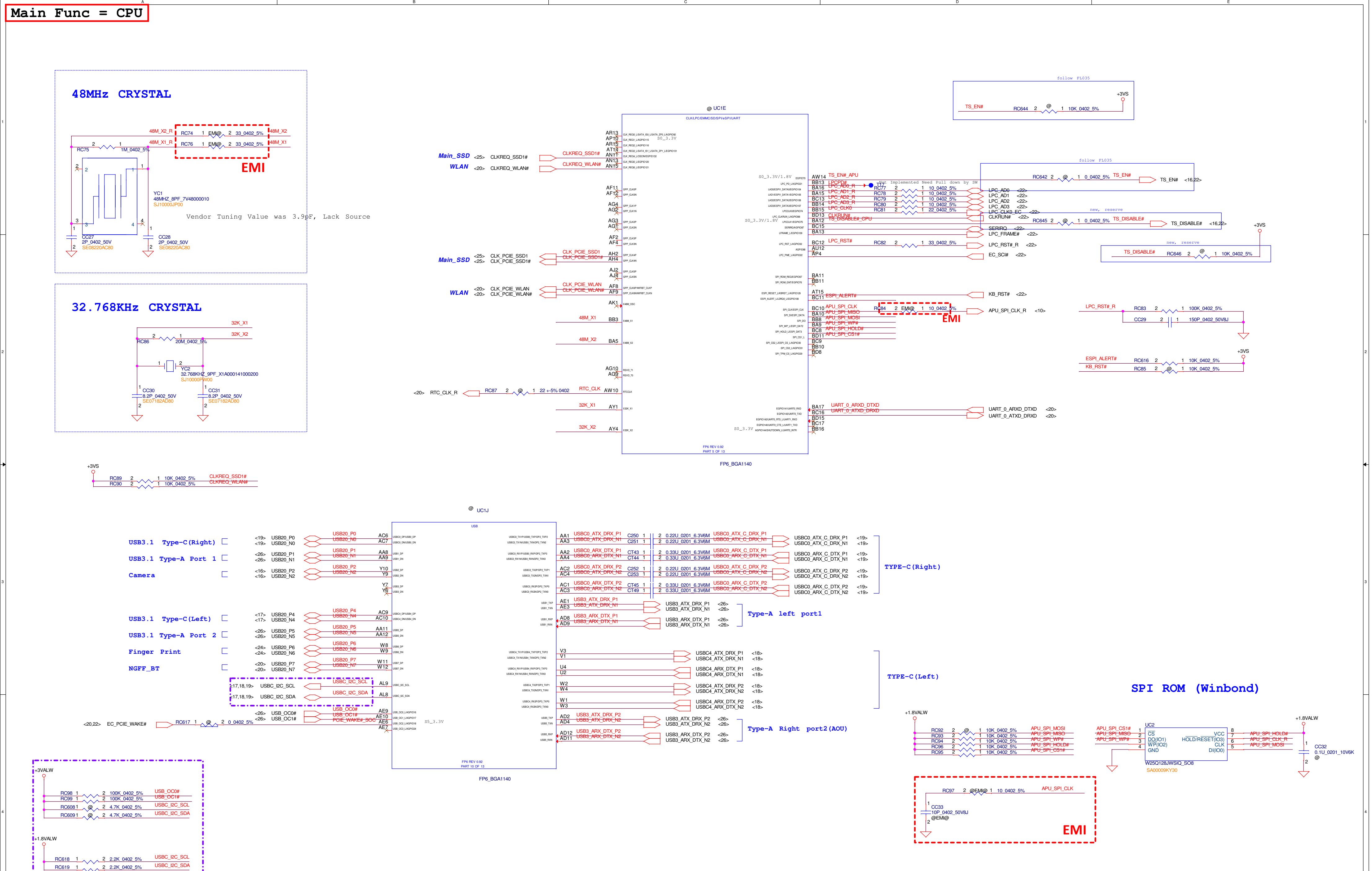
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48MHz CRYSTAL
EMI
RC74 1 EMI@ 2 33_0402_5%
RC76 1 EMI@ 2 33_0402_5%
48M_X2_R
48M_X1_R
48M_X2
48M_X1
RC75 1M_0402_5%
YC1
48MHZ_8PF_7V48000010
SJ10000JP00
Vendor Tuning Value was 3.9pF, Lack Source
CC27
2P_0402_50V
SE08220AC80
CC28
2P_0402_50V
SE08220AC80
32.768KHz CRYSTAL
32K_X1
32K_X2
RC86 20M_0402_5%
YC2
32.768KHZ_9PF_X1A000141000200
SJ10000PW00
CC30
8.2P_0402_50V
SE07182AD80
CC31
8.2P_0402_50V
SE07182AD80
+3VS
RC89 10K_0402_5% CLKREQ_SSD1#
RC90 10K_0402_5% CLKREQ_WLAN#
@ UC1E
Main_SSD CLKREQ_SSD1#
WLAN CLKREQ_WLAN#
Main_SSD CLK_PCIE_SSD1
CLK_PCIE_SSD1#
WLAN CLK_PCIE_WLAN
CLK_PCIE_WLAN#
RTC_CLK_R RC87 22_+-5%_0402 RTC_CLK
FP6_BGA1140
TS_EN# RC644 10K_0402_5%
follow FL035
RC642 0_0402_5% TS_EN#
LPC_AD0 LPC_AD1 LPC_AD2 LPC_AD3 LPC_CLK0_EC
CLKRUN#
RC645 0_0402_5% TS_DISABLE#
new, reserve
SERIRQ
LPC_FRAME#
LPC_RST#_R
EC_SCI#
TS_DISABLE# RC646 10K_0402_5%
KB_RST#
APU_SPI_CLK_R
RC84 EMI@ 10_0402_5%
LPC_RST#_R RC83 100K_0402_5%
CC29 150P_0402_50V8J
ESPI_ALERT# RC616 10K_0402_5%
KB_RST# RC85 10K_0402_5%
UART_0_ARXD_DTXD
UART_0_ATXD_DRXD
@ UC1J
USB3.1 Type-C(Right)
USB3.1 Type-A Port 1
Camera
USB3.1 Type-C(Left)
USB3.1 Type-A Port 2
Finger Print
NGFF_BT
USBC_I2C_SCL
USBC_I2C_SDA
USB_OC0#
USB_OC1#
EC_PCIE_WAKE# RC617 0_0402_5%
TYPE-C(Right)
Type-A left port1
TYPE-C(Left)
Type-A Right port2(AOU)
FP6_BGA1140
+3VALW
RC98 100K_0402_5% USB_OC0#
RC99 100K_0402_5% USB_OC1#
RC608 4.7K_0402_5% USBC_I2C_SCL
RC609 4.7K_0402_5% USBC_I2C_SDA
+1.8VALW
RC618 2.2K_0402_5% USBC_I2C_SCL
RC619 2.2K_0402_5% USBC_I2C_SDA
SPI ROM (Winbond)
+1.8VALW
RC92 10K_0402_5% APU_SPI_MOSI
RC93 10K_0402_5% APU_SPI_MISO
RC94 10K_0402_5% APU_SPI_WP#
RC96 10K_0402_5% APU_SPI_HOLD#
RC95 10K_0402_5% APU_SPI_CS1#
UC2
W25Q128JWSIQ_SO8
SA00009KY30
CC32
0.1U_0201_10V6K
RC97 EMI@ 10_0402_5% APU_SPI_CLK
CC33
10P_0402_50V8J
@EMI@
EMI

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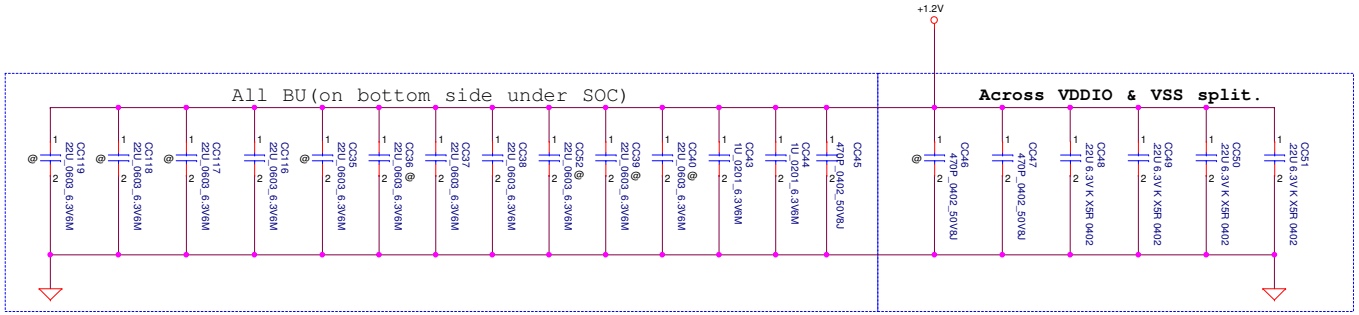
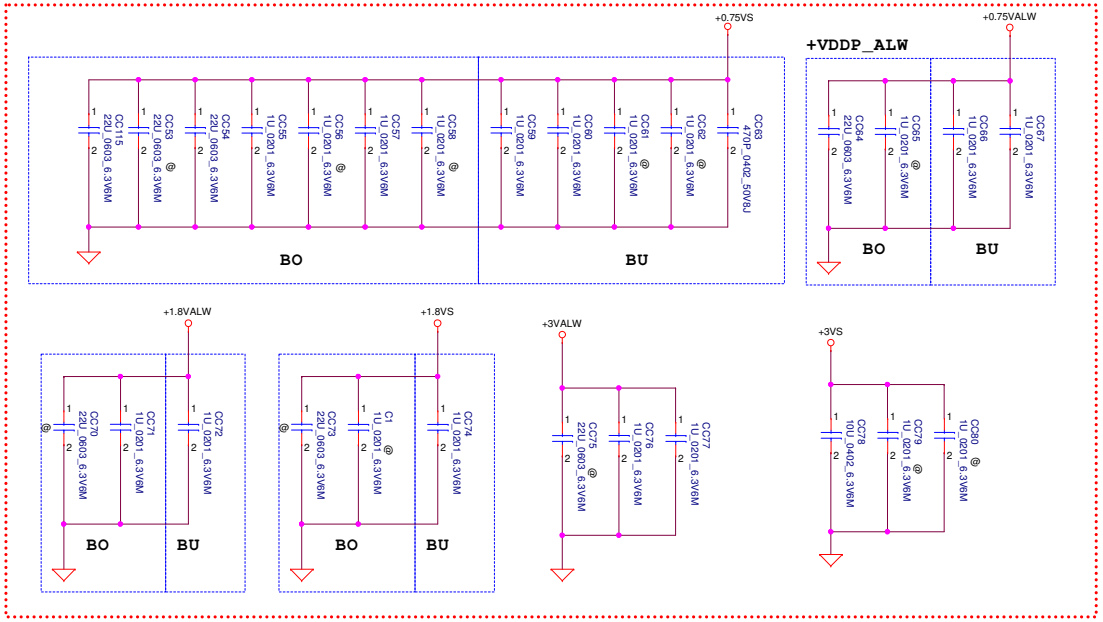
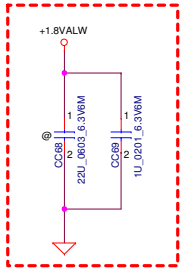
Main Func = CPU

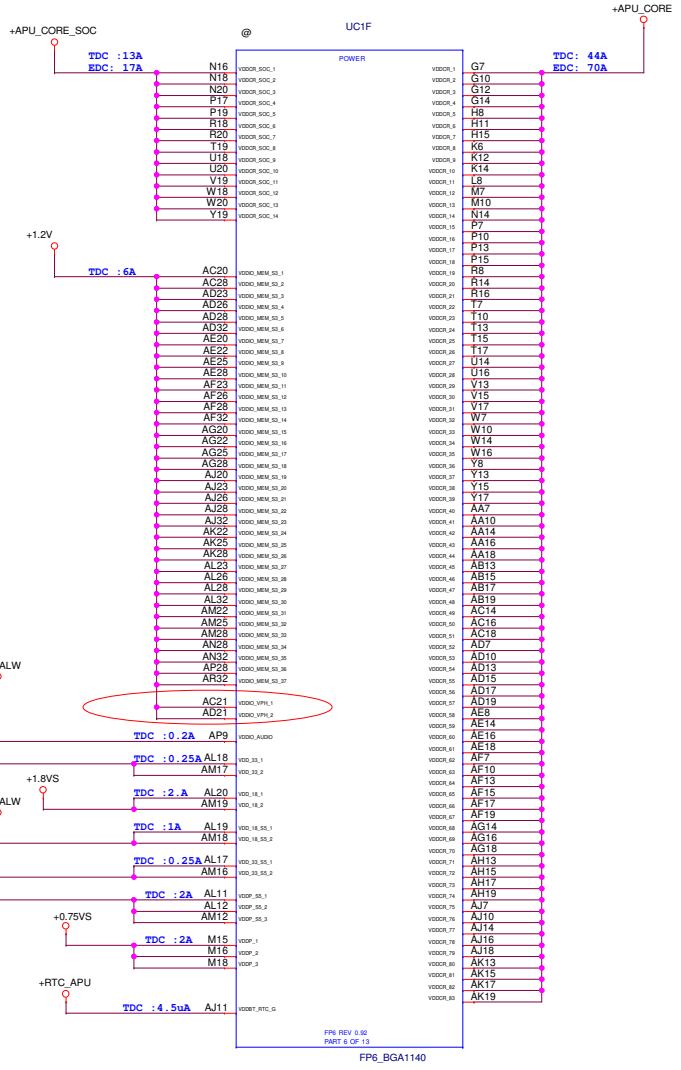


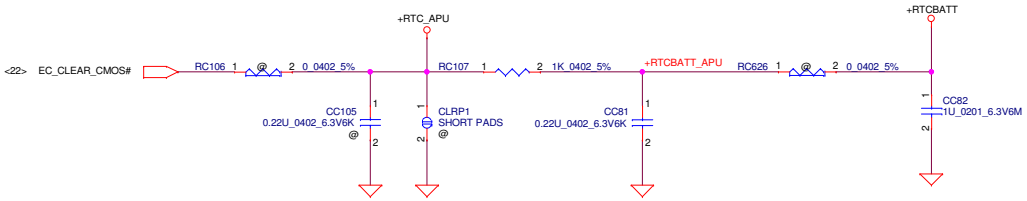


Note : Cap placemet need to close APU

Placed close UC1.AP9







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Title: FP6 PWR

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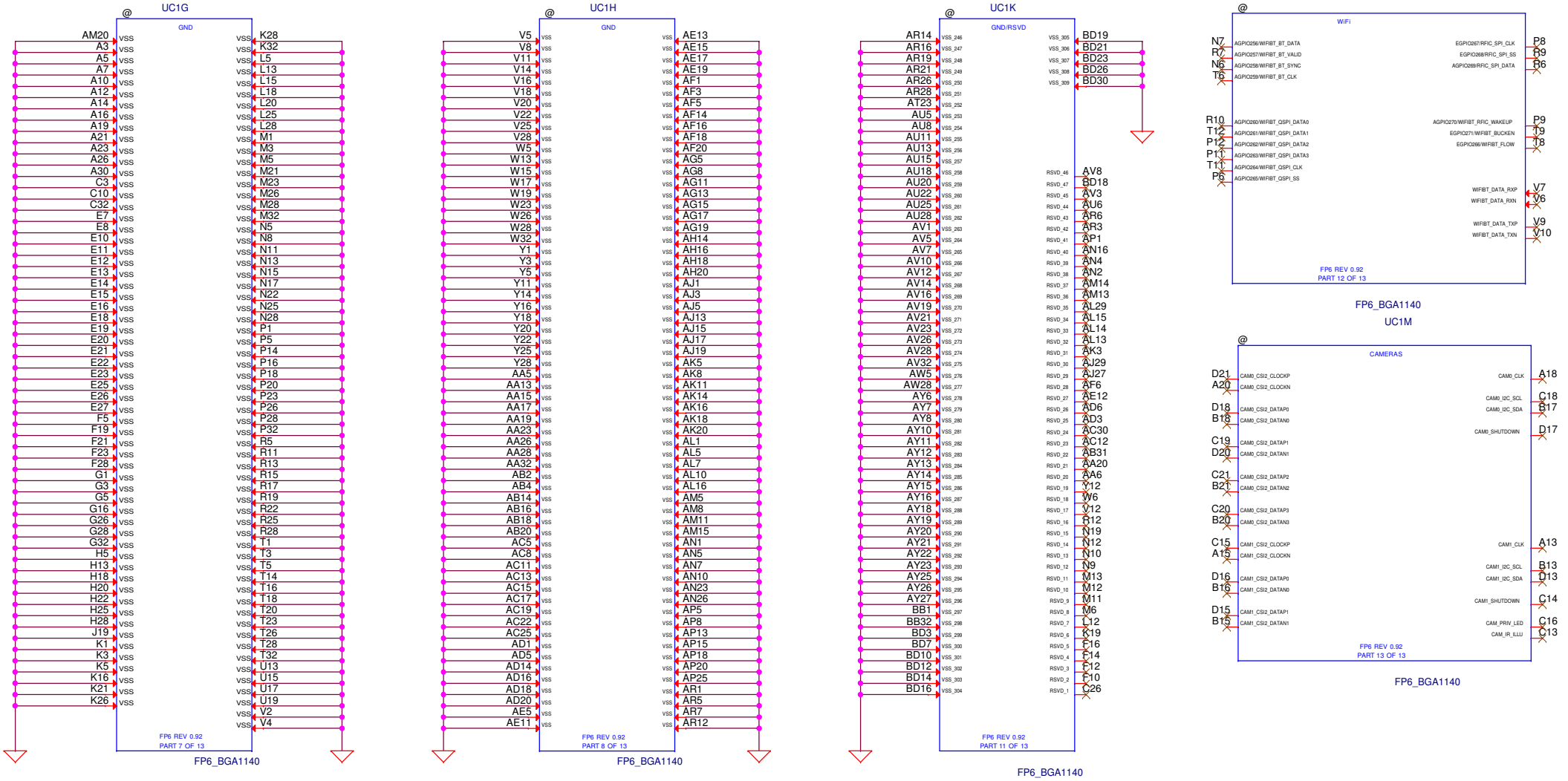

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Title: FP6 GND

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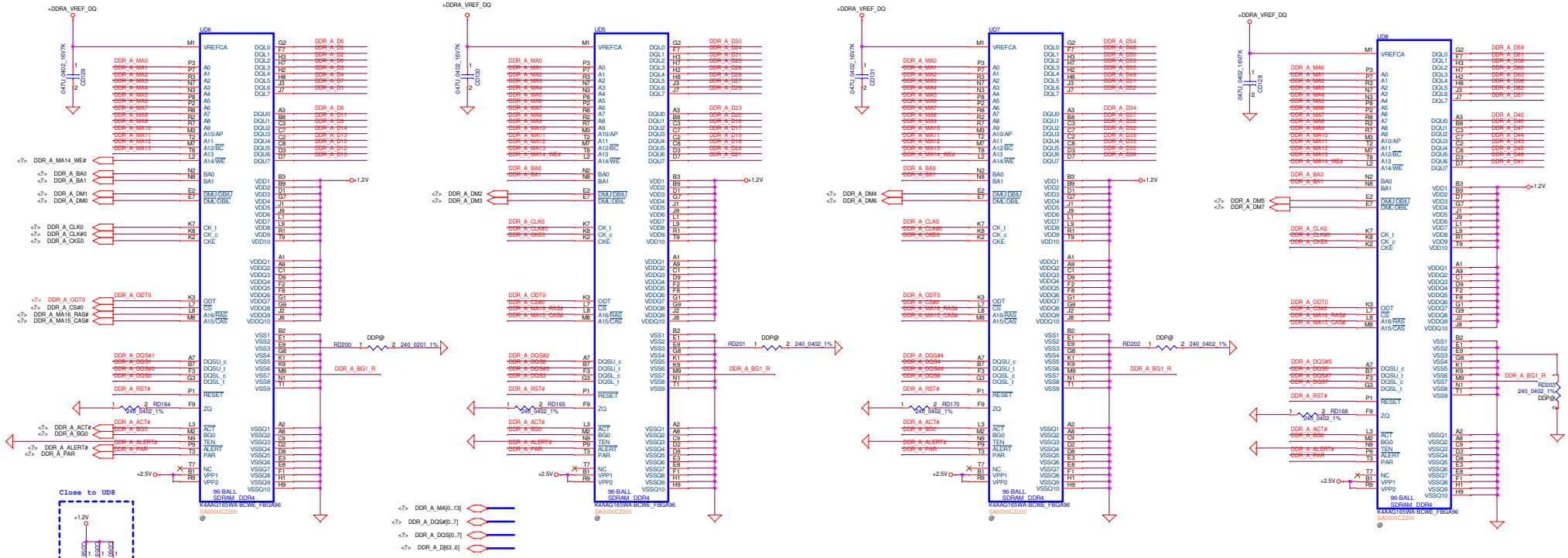
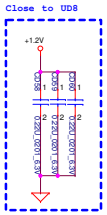
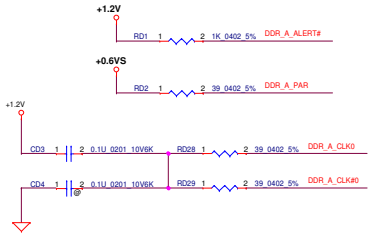
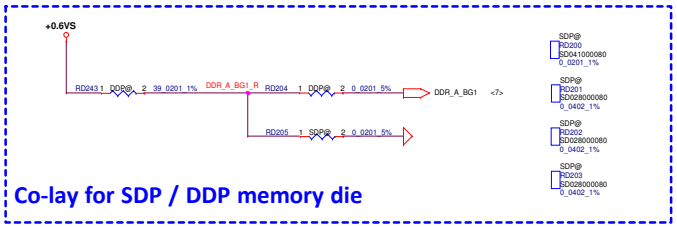
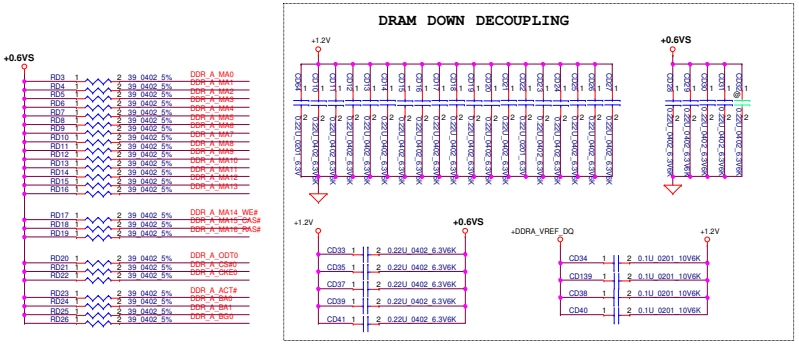


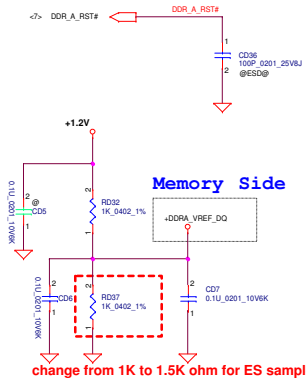


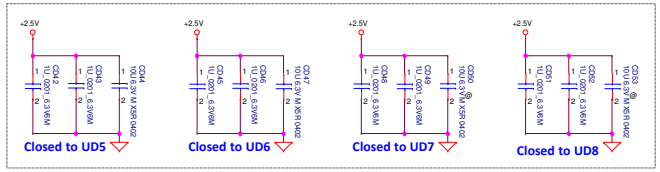




Co-lay for SDP / DDP memory die







Data mapping

U6	DQ	U5	DQ	U7	DQ	U8	DQ
DQL0	D14	DQL0	D23	DQL0	D51	DQL0	D47
DQL1	D10	DQL1	D19	DQL1	D55	DQL1	D45
DQL2	D15	DQL2	D18	DQL2	D50	DQL2	D42
DQL3	D11	DQL3	D22	DQL3	D54	DQL3	D44
DQL4	D12	DQL4	D21	DQL4	D49	DQL4	D43
DQL5	D8	DQL5	D16	DQL5	D52	DQL5	D41
DQL6	D13	DQL6	D17	DQL6	D48	DQL6	D46
DQL7	D9	DQL7	D20	DQL7	D53	DQL7	D40
DQU0	D7	DQU0	D27	DQU0	D34	DQU0	D63
DQU1	D5	DQU1	D31	DQU1	D33	DQU1	D57
DQU2	D3	DQU2	D29	DQU2	D38	DQU2	D59
DQU3	D4	DQU3	D28	DQU3	D39	DQU3	D56
DQU4	D2	DQU4	D30	DQU4	D37	DQU4	D62
DQU5	D1	DQU5	D25	DQU5	D35	DQU5	D60
DQU6	D6	DQU6	D26	DQU6	D36	DQU6	D58
DQU7	D0	DQU7	D24	DQU7	D32	DQU7	D61

Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.

Title: DDR4 Memory Down

Size: Custom | Document Number: LA-K211P | Rev: 0.2

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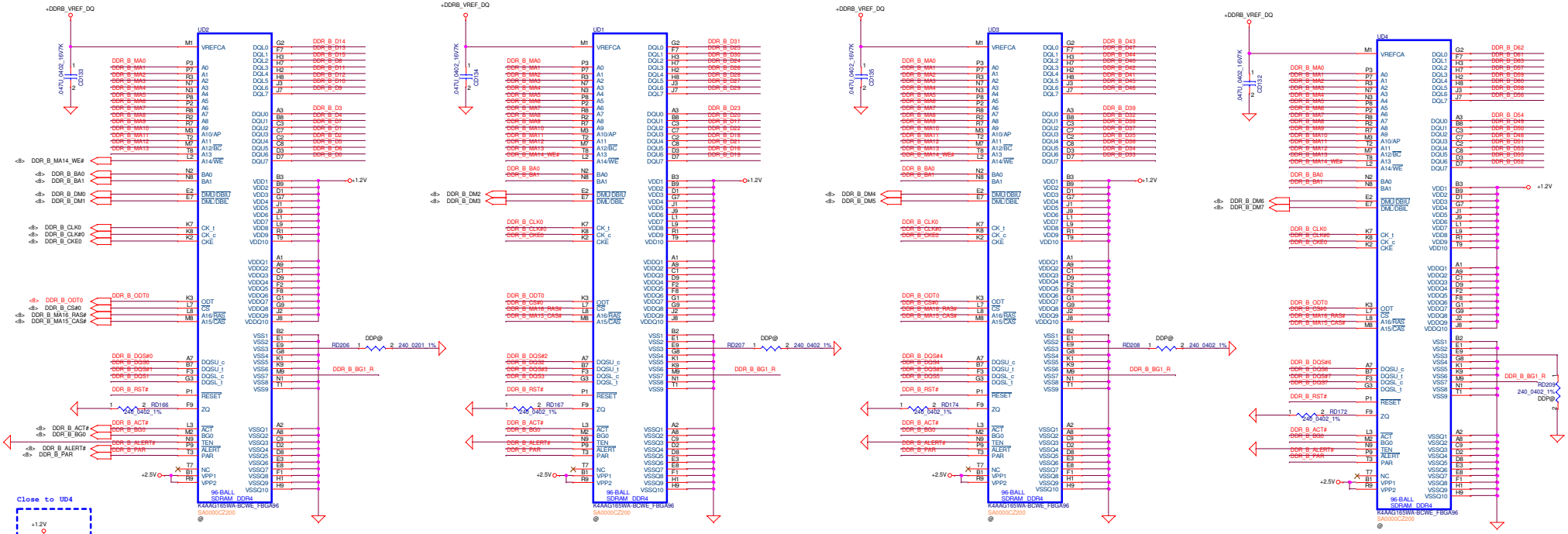

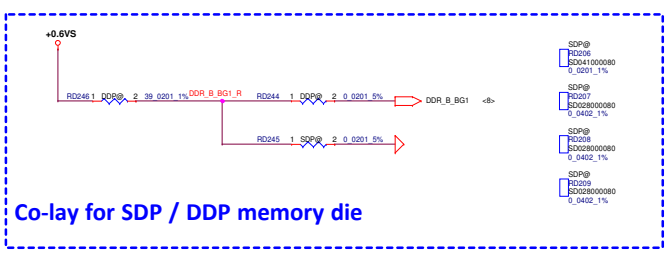

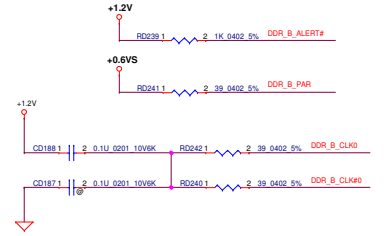

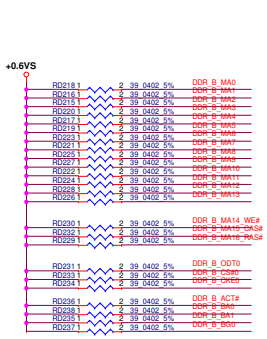

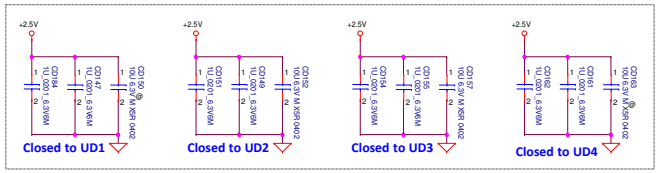

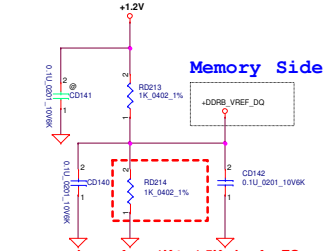

change from 1K to 1.5K ohm for ES sample only at DB
PV:11/19 change from 1.5K to 1K ohm for PR sample to MP

VREF traces should be at least 20mils wide
20mils spacing to other signals

Data mapping

U2	DQ	U1	DQ	U3	DQ	U4	DQ
DQL0	D15	DQL0	D22	DQL0	D45	DQL0	D54
DQL1	D12	DQL1	D21	DQL1	D47	DQL1	D48
DQL2	D14	DQL2	D23	DQL2	D44	DQL2	D50
DQL3	D13	DQL3	D20	DQL3	D46	DQL3	D49
DQL4	D11	DQL4	D19	DQL4	D43	DQL4	D51
DQL5	D9	DQL5	D17	DQL5	D41	DQL5	D53
DQL6	D10	DQL6	D18	DQL6	D42	DQL6	D55
DQL7	D8	DQL7	D16	DQL7	D40	DQL7	D52
DQU0	D7	DQU0	D35	DQU0	D31	DQU0	D62
DQU1	D0	DQU1	D37	DQU1	D26	DQU1	D57
DQU2	D6	DQU2	D38	DQU2	D30	DQU2	D59
DQU3	D5	DQU3	D32	DQU3	D27	DQU3	D56
DQU4	D2	DQU4	D34	DQU4	D25	DQU4	D58
DQU5	D1	DQU5	D33	DQU5	D29	DQU5	D60
DQU6	D3	DQU6	D39	DQU6	D24	DQU6	D63
DQU7	D4	DQU7	D36	DQU7	D28	DQU7	D61

Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.

Title: DDR4 Memory Down

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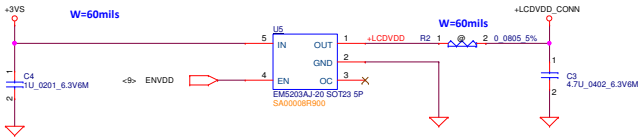
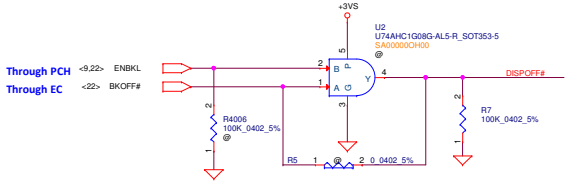
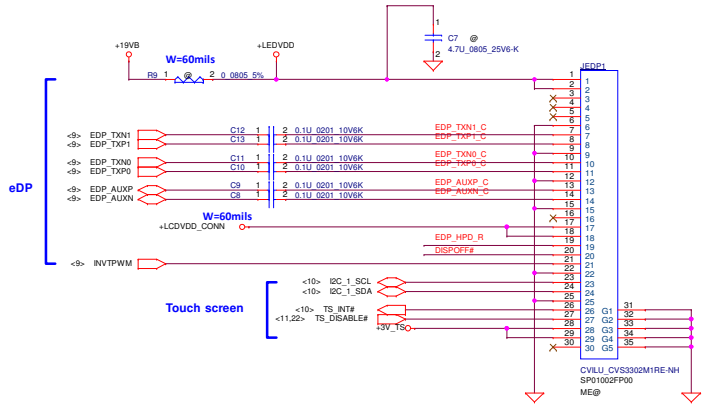
LCD POWER SWITCH



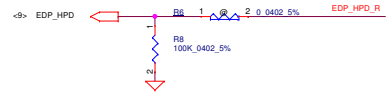
DISPLAY OFF



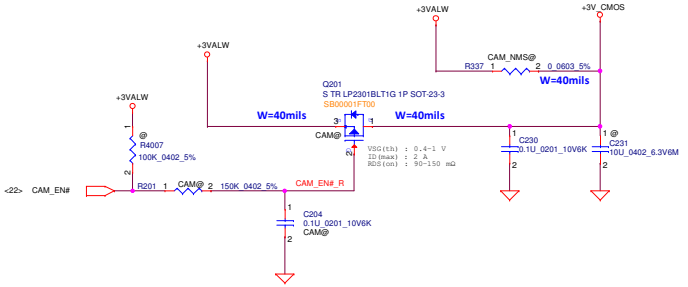
eDP CONNECTOR



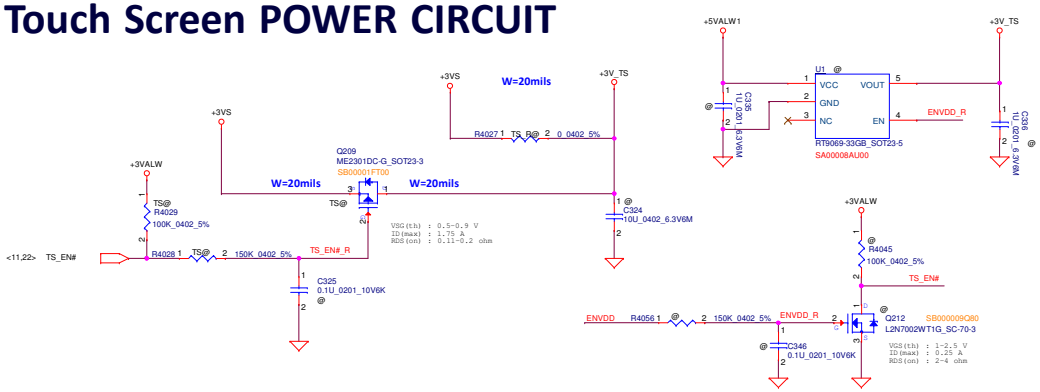
HOT PLUG DETECT



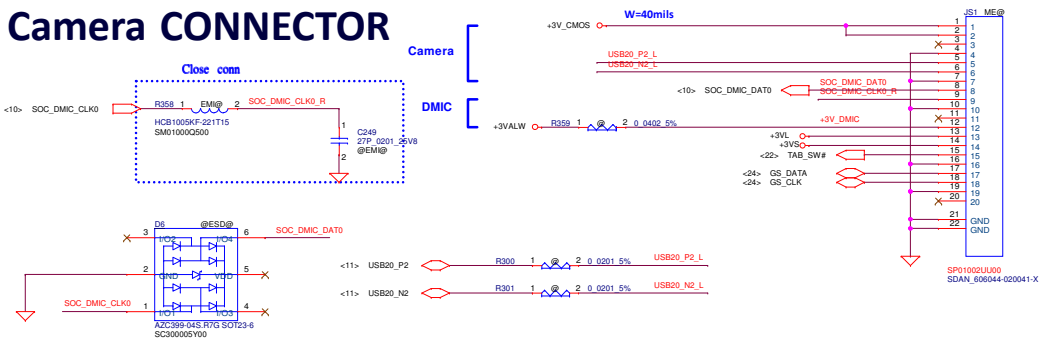
CAMERA POWER CIRCUIT



Touch Screen POWER CIRCUIT



Camera CONNECTOR



Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.

Title: eDP / Camera / Touch

Size: Custom | Document Number: LA-K211P | Rev: 0.2

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Slave Adderss setting

Slave Addr	Ra	Sh	Rb	Sh
addr0:0xCC	NC		10K	<0.2V
addr1:0xCE	75K		10K	>=0.2V&&<0.6V
addr2:0xD0	33K		10K	>=0.6V&&<1.0V
addr3:0xD2	10K		10K	>=1.0V

It's is used for SMBUS slave addr0/1/2/3 setting during power on initialization.

+LDO_3V3_5457V
RT22 10K_0402_5%
ADDR_CFG
RT23 10K_0402_1%

Local PWR Voltage Monitor

+5V_IN_PWR
RT37 200K_0402_1%
LOC_PWR_MON
RT38 10K_0402_1%

Close JUSBC2

DT3
USBC4_ARX_T_DTX_P1
USBC4_ARX_T_DTX_N1
USBC4_ATX_T_DRX_N2
USBC4_ATX_T_DRX_P2
AZ1245-04F.R7G
ESD@ SC300006T00

DT4
USBC4_ATX_T_DRX_P1
USBC4_ATX_T_DRX_N1
USBC4_ARX_T_DTX_N2
USBC4_ARX_T_DTX_P2
AZ1245-04F.R7G
ESD@ SC300006T00

VBUS Voltage/current Monitor

+USBC1_VBUS_F
RT40 200K_0402_1%
VMON
RT42 10K_0402_1%

VBUS Discharge

+USBC1_VBUS
RT69 75_0805_5%
VBUS_DSCHG
QT1 SB000009Q80 L2N7002WT1G_SC-70-3
VGS(th) : 1~2.5 V
ID(max) : 115 mA
RDS(on) : 3~4 ohm

+5VALW1
+5V_IN_PWR
RT35 0_0402_5%
QT3 S TR LP2301BLT1G 1P SOT-23-3
SB00001FT00
CT72 1U_0201_6.3V6M
VGS(th) : 0.4~1 V
ID(max) : 2 A
RDS(on) : 90~150 mΩ
RT70 100K_0402_5%
RT291 10K_0402_5%
<22> PD_PWR_EN
QT4 SB000009Q80 L2N7002WT1G_SC-70-3
RT71 47K_0402_5%
CT73 0.01U_0402_16V7K
VGS(th) : 1~2.5 V
ID(max) : 115 mA
RDS(on) : 3~4 ohm

To TUSB1044
<18> USBC1_C_AUXP
<18> USBC1_C_AUXN

PD CU

U11 SA000CY670
RTS5457V-GR_QFN40_5X5
ADDR_CFG
LOC_PWR_MON
VMON
USBC1_FLT#
ADDR_CFG/MGPIO17
LOC_PWR_MON/MGPIO16
VMON/MGPIO14
IMON/MGPIO15
DB_CFG
VBCAP
CC1
CC2
RT24 UN-POP: Enable Dead battery function
RT24 POP: Disable Dead battery function
RT24 0_0402_5%
RT27 2.2_0805_1%
CT34 0.1U_0402_25V6
RT28 200K_0402_1%
USBC1_CC1
USBC1_CC2

AUX MUX

<9> USBC1_AUXP
<9> USBC1_AUXN
CT35 0.1U_0201_10V6K
CT36 0.1U_0201_10V6K
RT25 100K_0402_5%
RT26 100K_0402_5%
+LDO_3V3_5457V
AUX_P/MGPIO8
AUX_N/MGPIO9
HPD/GPIO3
SBU1/MGPIO10
SBU2/MGPIO11
USBC1_SBU1
USBC1_SBU2
<9,18> USBC1_PD_HPD
RT1 100K_0402_5%

USB2.0 SWITCH

H_DP/MGPIO4
H_DM/MGPIO5
C_DP_A/MGPIO0
C_DM_A/MGPIO1
C_DP_B/MGPIO2
C_DM_B/MGPIO3
VR_ALERT# <9,19>
USBC1_CC1
CT37 220P_0201_25V7K
USBC1_CC2
CT01 220P_0201_25V7K

Billboard

BB_DP
BB_DM

GPIOs

<19,22,30,31> EC_SMB_CK1
<19,22,30,31> EC_SMB_DA1
<22> EC_PD2_INT
<29> USBC1_CHG_EN
SCL1/GPIO4
SDA1/GPIO5
INT1/GPIO6
SCL2/GPIO7
SDA2/GPIO8
INT2/GPIO9
USBC1_FO
VBUS_DSCHG
GPIO21
GPIO20
APU_RST#_R
USBC1_PWR_SW_EN
APU_RST#_R <9,19>
SCL4/GPIO13
SDA4/GPIO14
INT4/GPIO15
USBC_I2C_SCL
USBC_I2C_SDA
USBC_I2C_SCL <11,18,19>
USBC_I2C_SDA <11,18,19>
SCL3/GPIO10
SDA3/GPIO11
INT3/GPIO12
CTL0 <18>
FLIP <18>
CTL1 <18>
RT63 100K_0402_5%

Power

RT30 6.2K_0402_1%
REXT
EPAD
VCONN_IN
5V_IN
VBUS_IN
3V3_OUT
+5V_IN_PWR
CT46 10U_0402_6.3V6M
CT50 10U_0402_6.3V6M
CT51 0.1U_0201_10V6K
+LDO_3V3_5457V
CT47 0.1U_0201_10V6K
CT48 4.7U_0402_6.3V6M
RT294 47K_0402_5%
+USBC1_VBUS_F
R4021 4.7_1206_5%
CT52 0.1U_0402_25V7K
CT53 4.7U_0603_25V6K

From Re-Driver

<18> USBC4_ATX_T_DRX_P1
<18> USBC4_ATX_T_DRX_N1
<18> USBC4_ARX_T_DTX_P1
<18> USBC4_ARX_T_DTX_N1
<18> USBC4_ATX_T_DRX_P2
<18> USBC4_ATX_T_DRX_N2
<18> USBC4_ARX_T_DTX_P2
<18> USBC4_ARX_T_DTX_N2

USB2.0

<11> USB20_N4
<11> USB20_P4
LT2 EMI@
DLM0NSN900HY2D_4P
SM070005U00
USB20_N4_R
USB20_P4_R

USBC1_SBU2
USBC1_CC2
DT16 ESD@
CEST236LC5VU
SC300005Y00
USBC1_CC1
USBC1_SBU1
USB20_N4_R
DT1 ESD@
CEST236LC5VU
SC300005Y00
USB20_P4_R

5V Power Switch

VBUS Current Setting

16K_0402_1% RT67
PWR_SW_ILIM
PWR_SW_ILIM_R
+LDO_3V3_5457V
RT85 10K_0402_1%
RT68 75K_0402_1%
QT2 SB000009Q80 2N7002KW_SOT323-3
TYPEC_PWR_ILIM# <19,22>
VGS(th) : 1~2.5 V
ID(max) : 115 mA
RDS(on) : 3~4 ohm

+5VALW1
CT68 10U_0402_6.3V6M
DT2 SCS0000AJ00 NSR20F30NXT5G_DSN2-2
UT4
VIN VBUS C2
VIN VBUS D1
VBUS D2
VCP ILIM A3
VCP CAP D4
VCP
FLT
FO GND B3
EN GND C3
GND D3
NX5P3290UK_WLCSP16
+USBC1_VBUS_F
CT71 100P_0201_25V7K
CT69 10U_0603_25V6M
USBC1_FLT#
USBC1_FO
USBC1_PWR_SW_EN
+LDO_3V3_5457V
RT286 100K_0402_5%
RT60 100K_0402_5%
RT59 100K_0402_5%
RT58 100K_0402_5%
USBC1_PWR_SW_EN
VBUS_DSCHG
USBC1_FO

+USBC1_VBUS
+USBC1_VBUS
JUSBC2 ME@
DRAPH_UB11249-0500W-1H
USBC4_ATX_T_DRX_P1
USBC4_ATX_T_DRX_N1
USBC4_ATX_T_DRX_N2
USBC4_ATX_T_DRX_P2
USBC4_ARX_T_DTX_P1
USBC4_ARX_T_DTX_N1
USBC4_ARX_T_DTX_N2
USBC4_ARX_T_DTX_P2
CT54 2U_0402_25V6K
CT55 2U_0402_25V6K
CT56 2U_0402_25V6K
CT57 2U_0402_25V6K
USBC1_CC1
USBC1_SBU1
USBC1_SBU2
USBC1_CC2
USB20_P4_R
USB20_N4_R
ESD
DT6
CEST23NC24VU 3P C/A SOT23
SCA000004500
ESD@

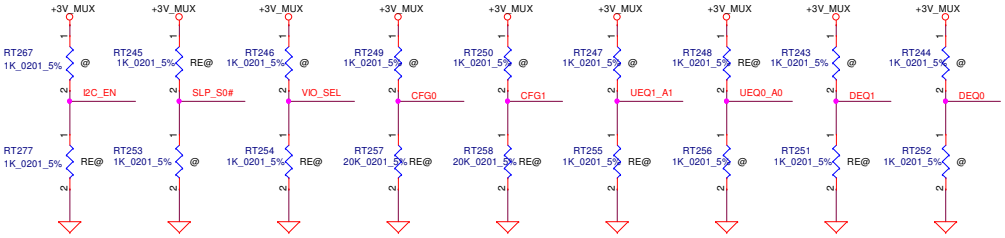
Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

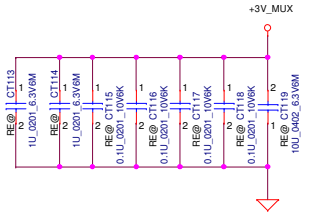
Compal Electronics, Inc.

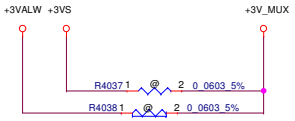
Title: PD IC RTS5457V

Size: Custom | Document Number: LA-K211P | Rev: 0.2

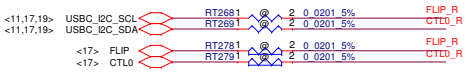
Date: Wednesday, July 22, 2020 | Sheet 17 of 39

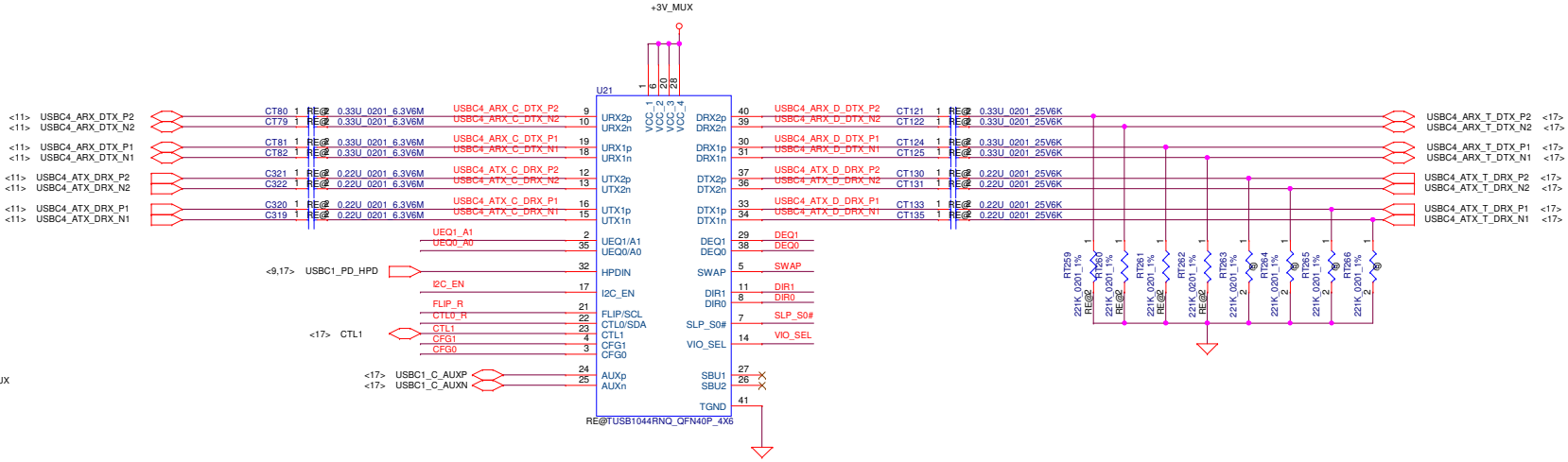


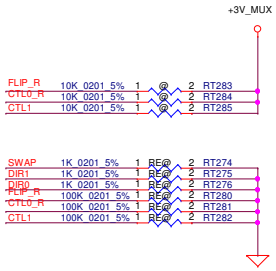




For GPIO/I2C Control (GPIO Default)







Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Title	TUSB1044		
Size	Document Number		Rev
Custom	LA-K211P		0.2
Date:	Wednesday, July 22, 2020	Sheet	18 of 39

Slave Adderss setting

Slave Addr	Ra	Sa	Rb	Sb	
addr0:0xCC	NC		10K		<0.2V
addr1:0xCE	75K		10K		>=0.2V&&<0.6V
addr2:0xD0	33K		10K		>=0.6V&&<1.0V
addr3:0xD2	10K		10K		>=1.0V

It's is used for SMBUS slave addr0/1/2/3 setting during power on initialization.

+LDO_3V3_5457V_B
RT215 75K_0402_5%
ADDR_CFG_B
RT217 10K_0402_1%

Local PWR Voltage Monitor

+5V_IN_PWR_B
RT216 200K_0402_1%
LOC_PWR_MON_B
RT218 10K_0402_1%

Close JUSBC1

USBC0_ATX_C_DRX_P2
USBC0_ATX_C_DRX_N2
USBC0_ARX_C_DTX_N1
USBC0_ARX_C_DTX_P1
DT17
AZ124S-04F.R7G
ESD@ SC300006T00

USBC0_ATX_C_DRX_P1
USBC0_ATX_C_DRX_N1
USBC0_ARX_C_DTX_N2
USBC0_ARX_C_DTX_P2
DT18
AZ124S-04F.R7G
ESD@ SC300006T00

VBUS Voltage/current Monitor

+USBC0_VBUS
RT219 200K_0402_1%
VMON_B
RT222 10K_0402_1%

VBUS Discharge

+USBC0_VBUS
RT220 75_0805_5%
VBUS_DSCHG_B
QT5 L2N7002WT1G_SC-70-3
SB000009Q80
VGS(th) : 1~2.5 V
ID(max) : 115 mA
RDS(on) : 3~4 ohm

+5VALW
RT223 0_0402_5%
+5V_IN_PWR_B
QT6 S TR LP2301BLT1G 1P SOT-23-3
SB00001FT00
CT94 1U_0201_6.3V6M
VSG(th) : 0.4~1 V
ID(max) : 2 A
RDS(on) : 90~150 mΩ
RT228 100K_0402_5%
RT292 10K_0402_5%
<22> USBC0_PWR_EN
QT7 L2N7002WT1G_SC-70-3
SB000009Q80
RT295 47K_0402_5%
CT95 0.01U_0402_16V7K
VGS(th) : 1~2.5 V
ID(max) : 115 mA
RDS(on) : 3~4 ohm

PD CU

UT6 SA000CY680
RTS5457V-GR_QFN40_5X5
RT224 UN-POP: Enable Dead battery function
RT224 POP: Disable Dead battery function
ADDR_CFG_B
LOC_PWR_MON_B
VMON_B
USBC0_FLT#
DB_CFG
VBCAP_B
USBC0_CC1
USBC0_CC2
RT225 2.2_0805_1%
CT91 0.1U_0402_25V6
RT226 200K_0402_1%

AUX MUX

100K_0402_5%
RT227
<9> USBC0_AUXP
<9> USBC0_AUXN
CT92 0.1U_0201_10V6K
CT93 0.1U_0201_10V6K
USBC0_C_AUXP
USBC0_C_AUXN
+LDO_3V3_5457V_B
RT229 100K_0402_5%
<9> USBC0_PD_HPD
RT230 100K_0402_5%
SBU1/MGPIO10
SBU2/MGPIO11
USBC0_SBU1
USBC0_SBU2

USB2.0 SWITCH

H_DP/MGPIO4
H_DM/MGPIO5
C_DP_A/MGPIO0
C_DM_A/MGPIO1
C_DP_B/MGPIO2
C_DM_B/MGPIO3
USBC0_CC1
CT96 220P_0201_25V7K
USBC0_CC2
CT97 220P_0201_25V7K

Billboard

BB_DP
BB_DM

GPIOs

<17,22,30,31> EC_SMB_CK1
<17,22,30,31> EC_SMB_DA1
<22> EC_PD_INT
SCL1/GPIO4
SDA1/GPIO5
INT1/GPIO6
SCL2/GPIO7
SDA2/GPIO8
INT2/GPIO9
USBC0_CHG_EN
USBC0_FO
VBUS_DSCHG_B
GPIO21
GPIO20
APU_RST#_R
USBC0_PWR_SW_EN
APU_RST#_R <9,17>
SCL4/GPIO13
SDA4/GPIO14
INT4/GPIO15
USBC_I2C_SCL
USBC_I2C_SDA
PD_B_GPIO13
USBC_I2C_SCL <11,17,18>
USBC_I2C_SDA <11,17,18>
SCL3/GPIO10
SDA3/GPIO11
INT3/GPIO12
PD_B_GPIO10
PD_B_GPIO11
VR_ALERT#
VR_ALERT# <9,17>
RT231 100K_0402_5%
RT232 6.2K_0402_1%

Power

REXT
EPAD
VCONN_IN
5V_IN
VBUS_IN
3V3_OUT
+5V_IN_PWR_B
+LDO_3V3_5457V_B
PD_B_GPIO10 RT233 10K_0402_1%
PD_B_GPIO11 RT234 10K_0402_1%
PD_B_GPIO15 RT235 10K_0402_1%
CT98 10U_0402_6.3V6M
CT99 0.1U_0201_10V6K
CT100 4.7U_0402_6.3V6M
RT293 47K_0402_5%
CT101 10U_0402_6.3V6M
CT102 0.1U_0201_10V6K
+USBC0_VBUS
R4030 4.7_1206_5%
SINK@
CT103 0.1U_0402_25V7K
CT104 4.7U_0603_25V6K

USB2.0

<11> USB20_N0
<11> USB20_P0
LT3 EMI@
DLM0NSN900HY2D_4P
SM070005U00
USB20_N0_R
USB20_P0_R

From CPU

<11> USBC0_ATX_C_DRX_P1
<11> USBC0_ATX_C_DRX_N1
<11> USBC0_ARX_C_DTX_P1
<11> USBC0_ARX_C_DTX_N1
<11> USBC0_ATX_C_DRX_P2
<11> USBC0_ARX_C_DTX_N2
<11> USBC0_ATX_C_DRX_P2
<11> USBC0_ARX_C_DTX_P2

USBC0_SBU1
USBC0_CC2
USBC0_CC1
USBC0_SBU2
DT19 ESD@
CEST236LC5VU
SC300005Y00
USB20_P0_R
USB20_N0_R
DT20 ESD@
CEST236LC5VU
SC300005Y00

USBC Power Switch

VBUS Current Setting

+5VALW
16K_0402_1%
RT237
PWR_SW_ILIM_B
+LDO_3V3_5457V_B
RT241 10K_0402_1%
TYPEC_PWR_ILIM# <17,22>
QT8 2N7002KW_SOT323-3
SB000009Q80
VGS(th) : 1~2.5 V
ID(max) : 115 mA
RDS(on) : 3~4 ohm

SCS0000AJ00
NSR20F30NXT5G_DSN2-2
DT21
UT7
NX5P3290UK_WLCSP16
VIN VBUS VCP ILIM CAP FLT FO EN GND
USBC0_FLT#
USBC0_FO
USBC0_PWR_SW_EN
CT109 10U_0402_6.3V6M
CT110 10U_0603_25V6M
CT111 1000P_0201_50V7K
+LDO_3V3_5457V_B
RT290 100K_0402_5%
RT238 100K_0402_5%
VBUS_DSCHG_B
RT239 100K_0402_5%
RT240 100K_0402_5%

+USBC0_VBUS
JUSBC1 ME@ SP062002180
HIGHS_UB11249-0500B-1H
USBC0_ATX_C_DRX_P1
USBC0_ATX_C_DRX_N1
USBC0_ARX_C_DTX_P1
USBC0_ARX_C_DTX_N1
USBC0_CC1
USBP0_P0_R
USBP0_N0_R
USBC0_SBU1
USBC0_ARX_C_DTX_N2
USBC0_ARX_C_DTX_P2
USBC0_SBU2
USBP0_N0_R
USBP0_P0_R
USBC0_CC2
CT105 1U_0402_25V6K
CT106 1U_0402_25V6K
CT107 1U_0402_25V6K
CT108 1U_0402_25V6K
ESD
DT22
CEST23NC24VU 3P C/A SOT23
SCA00004500
ESD@

Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.
Title: PD IC RTS5457V
Size: Custom | Document Number: LA-K211P | Rev: 0.2
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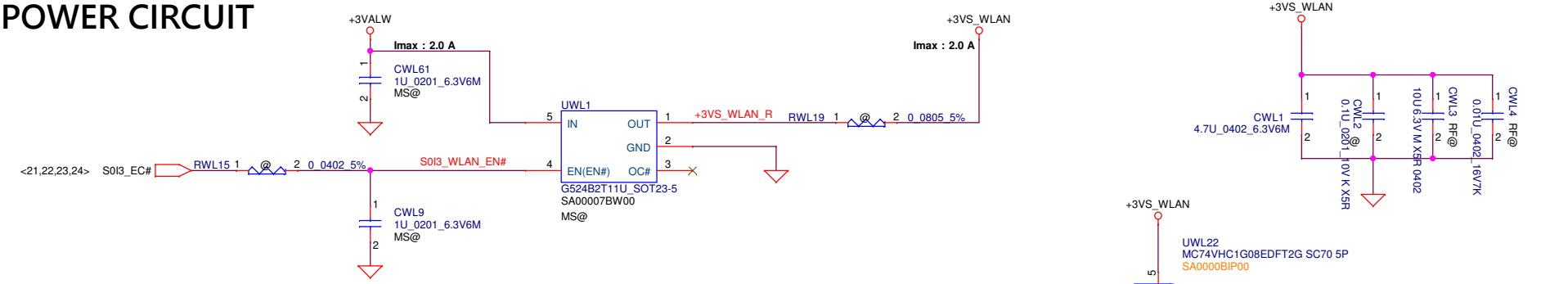
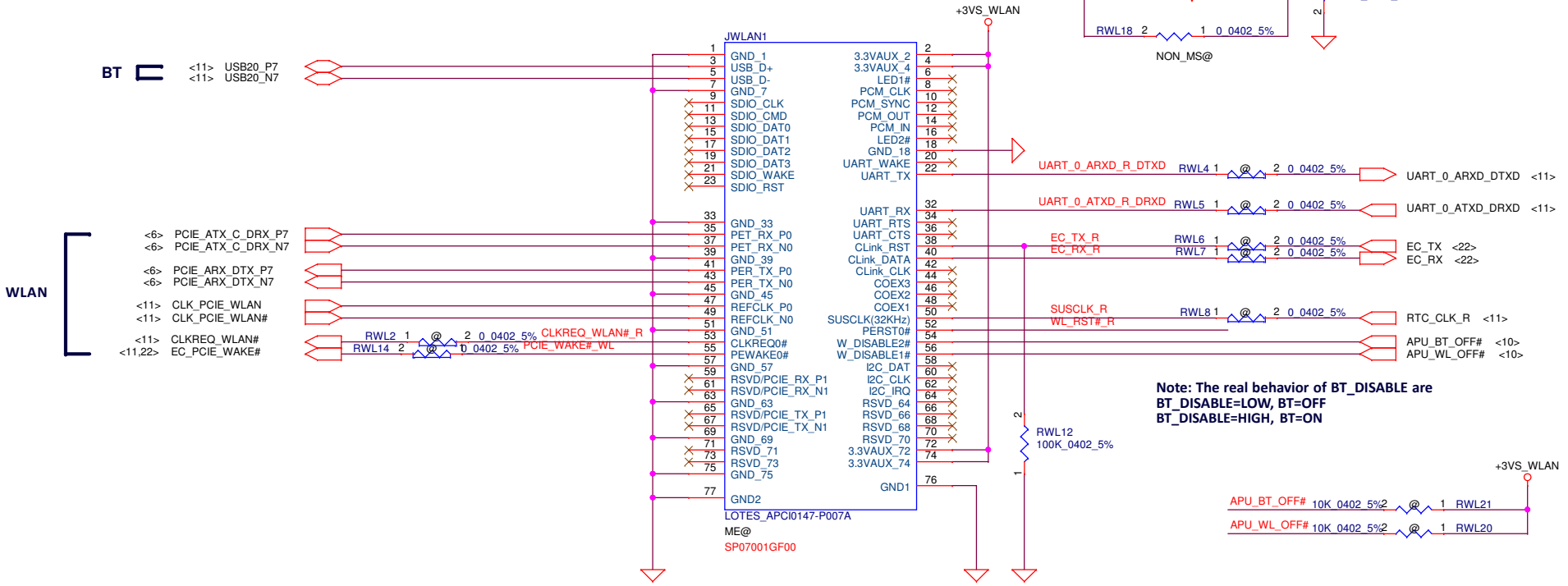
WLAN POWER CIRCUIT



NGFF - WLAN / BT CONNECTOR (KEY-E)



Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.

Title: **WLAN/BT**

Size	Document Number	Rev
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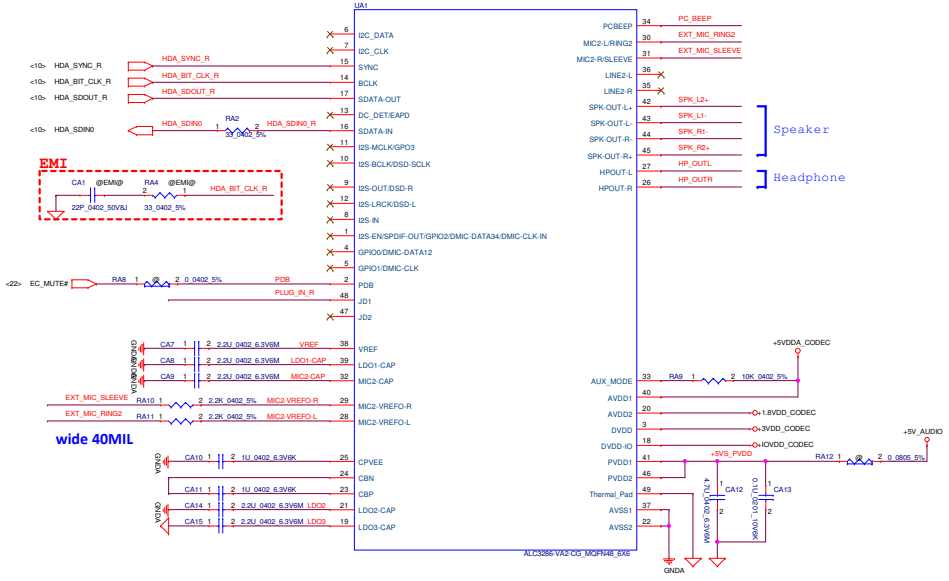
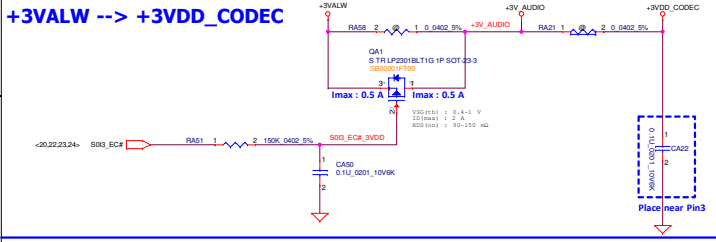
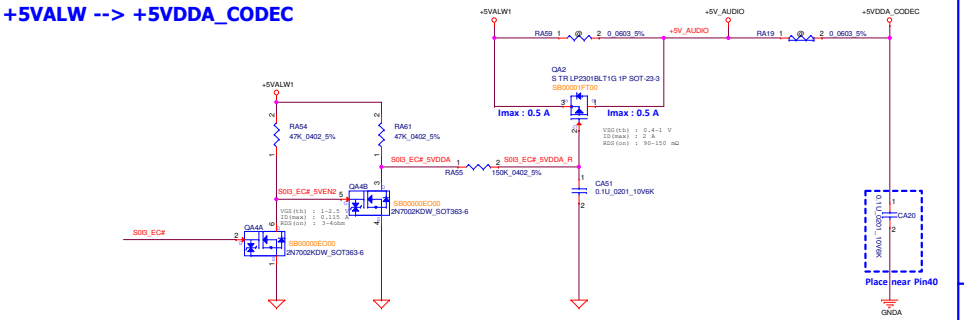
ALC3286



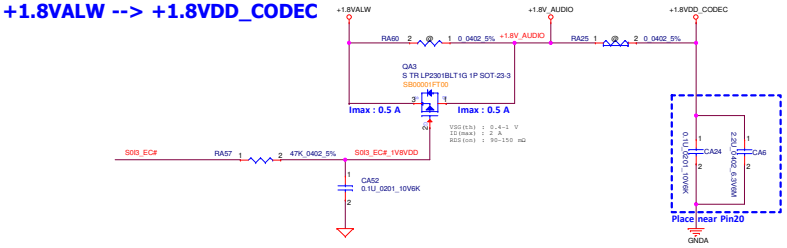
+3VALW --> +3VDD_CODEC



+5VALW --> +5VDDA_CODEC

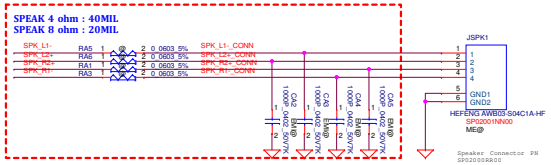


+1.8VALW --> +1.8VDD_CODEC

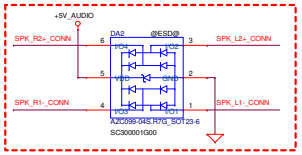


Speaker

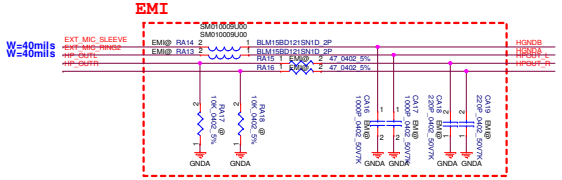
EMI



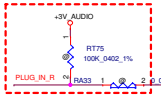
ESD



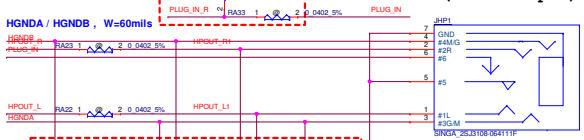
EMI



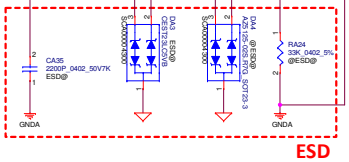
Close Audio codec



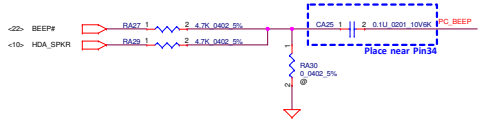
Combo Jack (Normal Open)



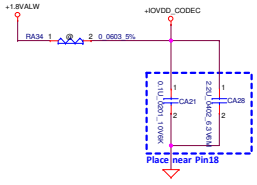
ESD



PC Beep



+1.8VALW --> +IOVDD_CODEC



Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.			
Title	Audio Codec Realtek ALC3287		
Size	Document Number	LA-K211P	Rev 0.2
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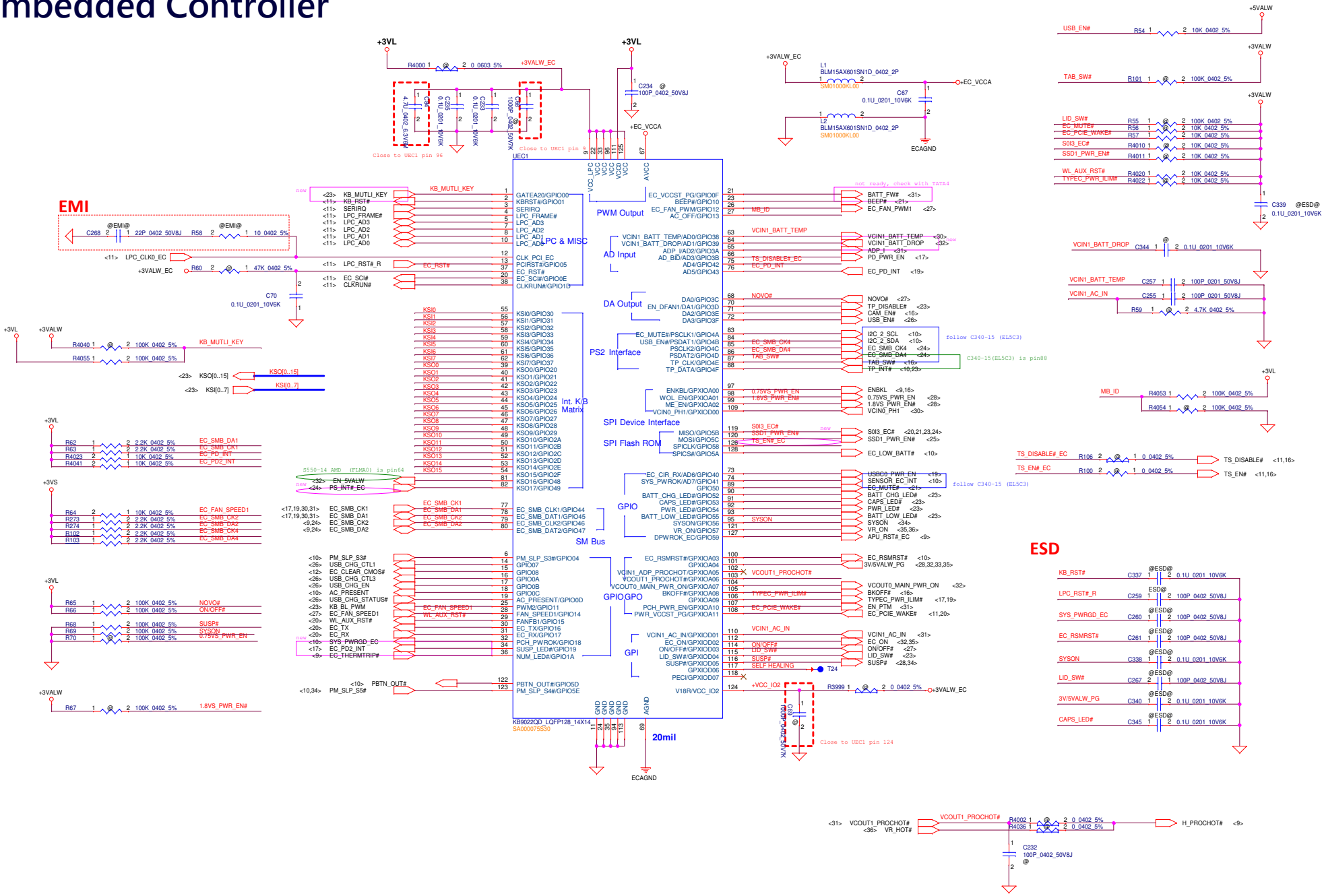
Embedded Controller



Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.	
Title	EC_ENE_KB9022
Size	C
Document Number	LA-K211P
Rev	0.2
Date:	Wednesday, July 22, 2020
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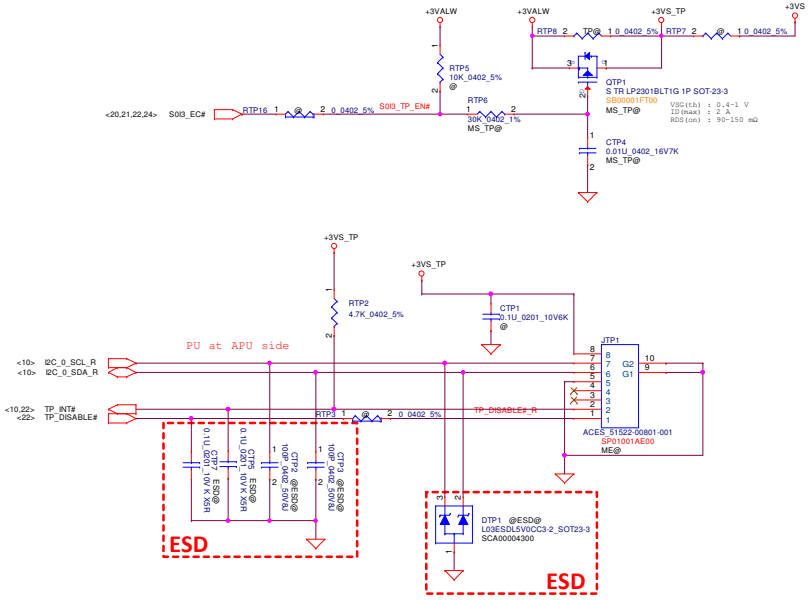
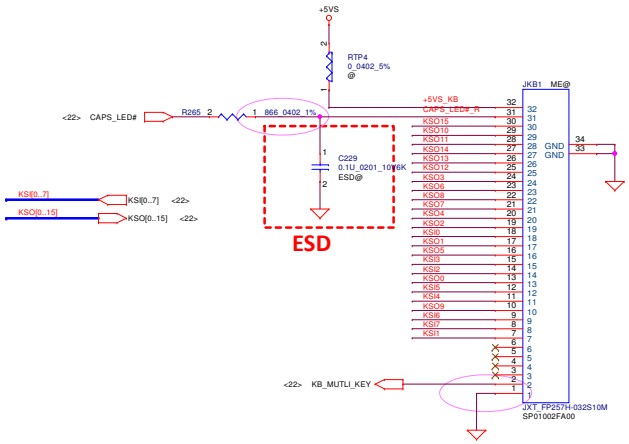
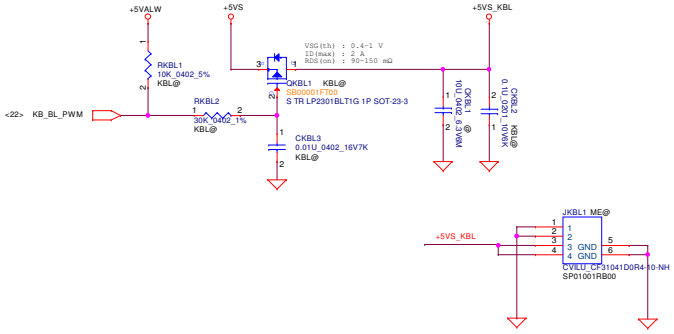
Touch Pad



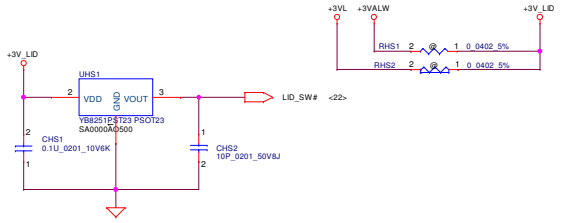
Keyboard



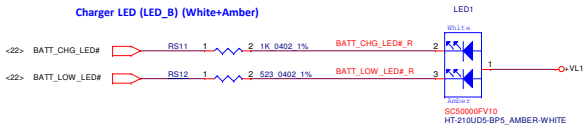
Keyboard Backlight



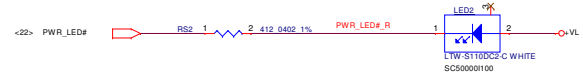
LID



BATT LED



Status LED



Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.

Title: KB / LED / TP / LID

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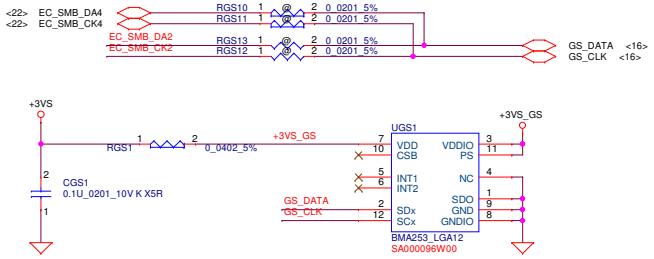
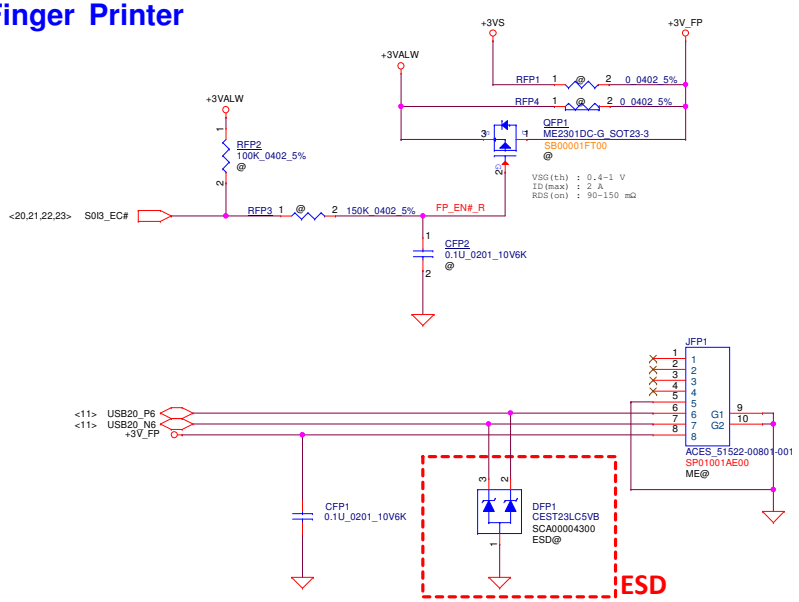
G-Sensor

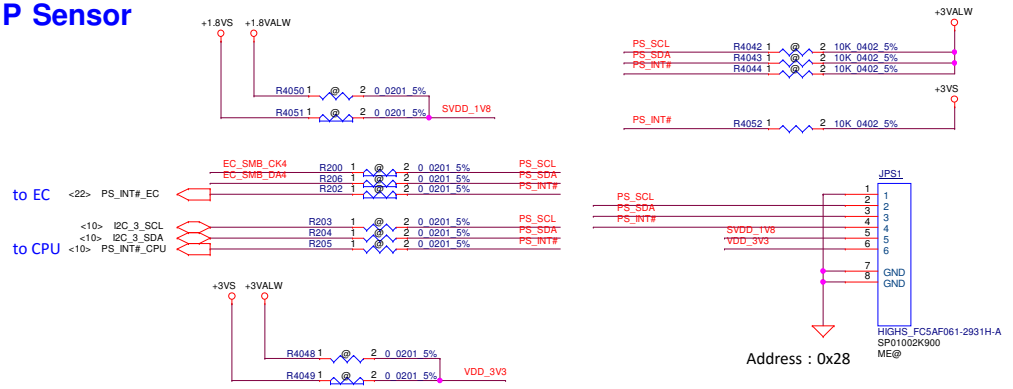


Address: 0x18

Finger Printer

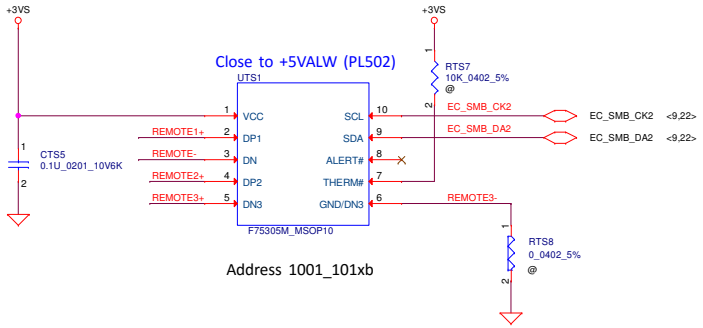


P Sensor

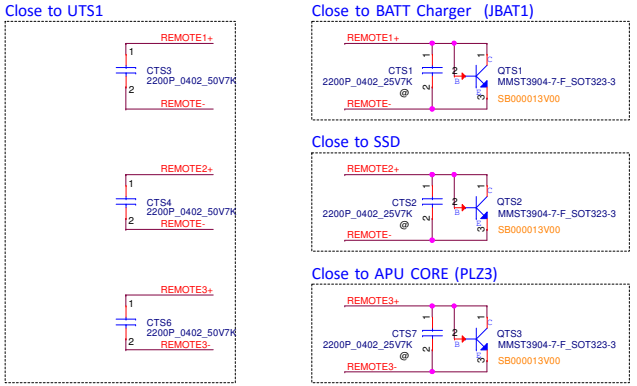


Address : 0x28

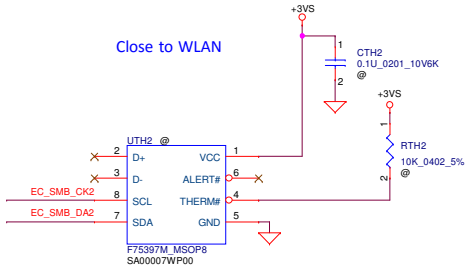
Thermal Sensor



Address 1001_101xb

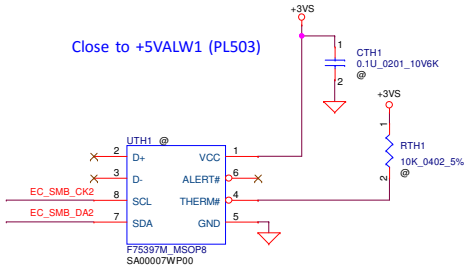


REMOTE1,2,3 (+/-) :
Trace width/space:10/10 mil
Trace length:<8"



Address 1001_100xb

REMOTE4(+/-) :
Trace width/space:10/10 mil
Trace length:<8"



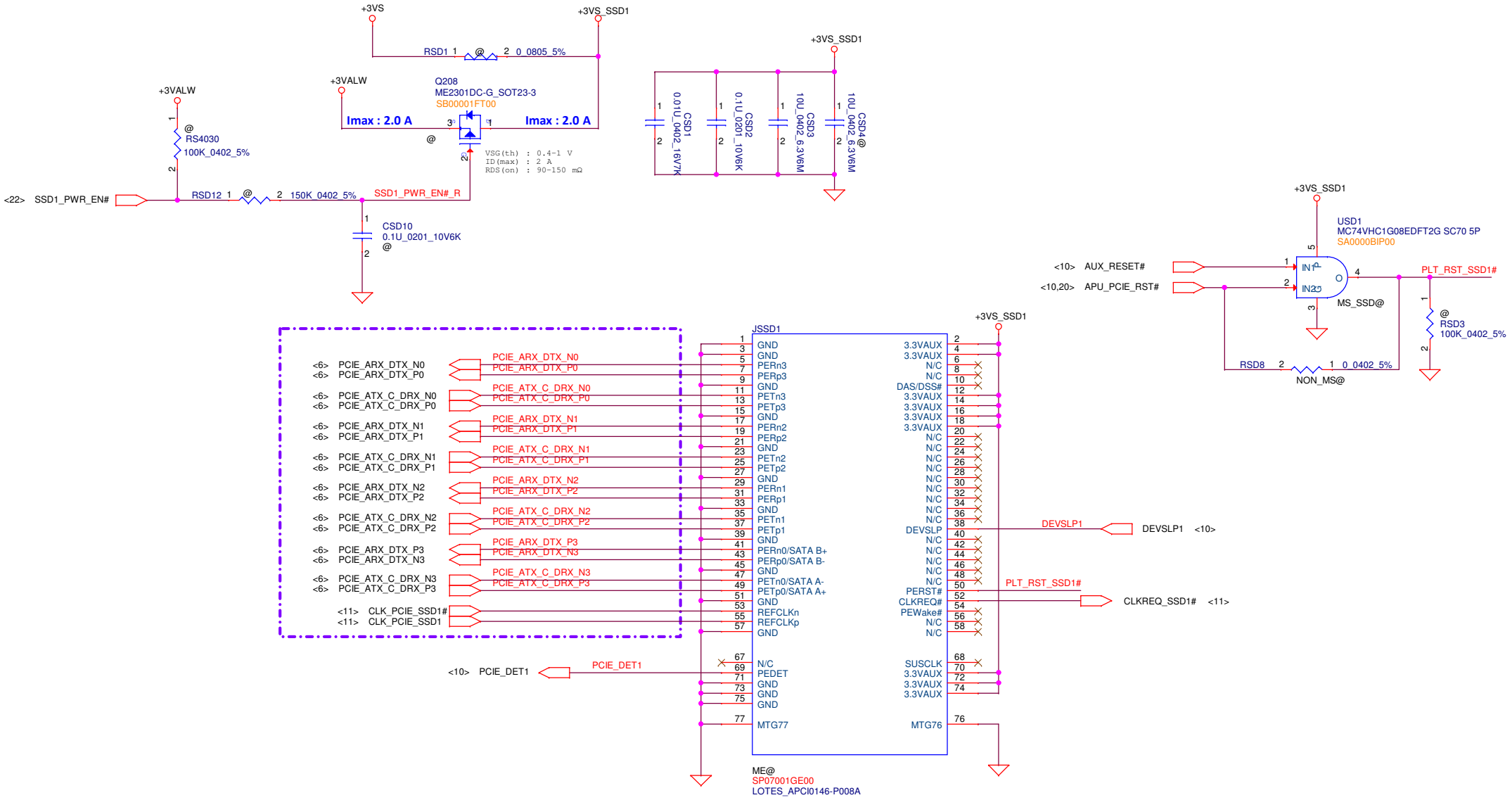
Address 1001_100xb

REMOTE4(+/-) :
Trace width/space:10/10 mil
Trace length:<8"

Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.			
Title: Thermal / Finger Printer			
Size: Custom	Document Number: LA-K211P		Rev: 0.2
Date: Wednesday, July 22, 2020	Sheet 24 of 39		

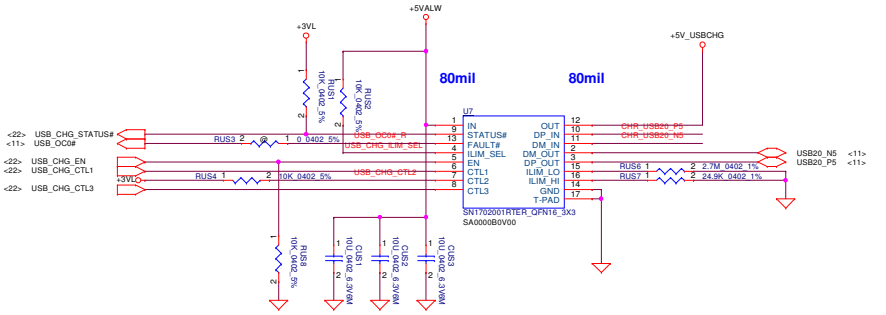
SSD_2280 (TYPE M)

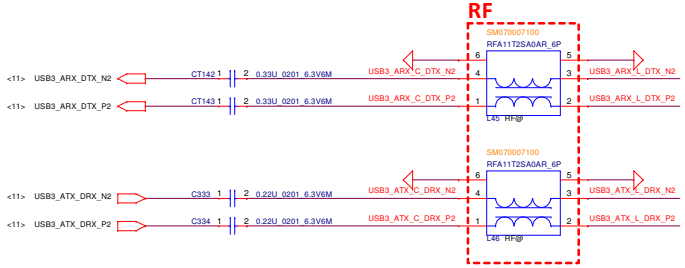


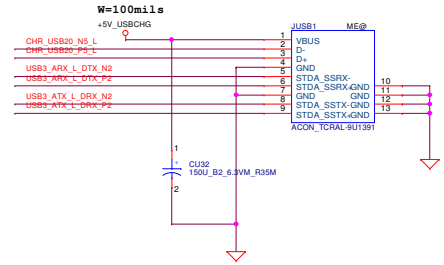
Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.			
Title	NGFF SSD		
Size	Document Number LA-K211P		Rev 0.2
Date: Wednesday, July 22, 2020	Sheet 25 of 39		

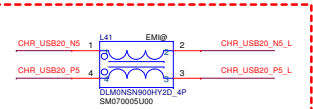
USB3.0_Port (AOU_Port)



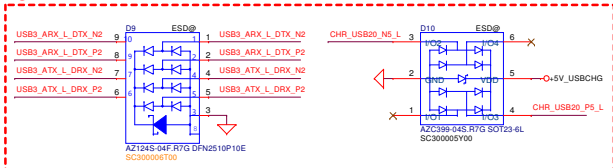




EMI

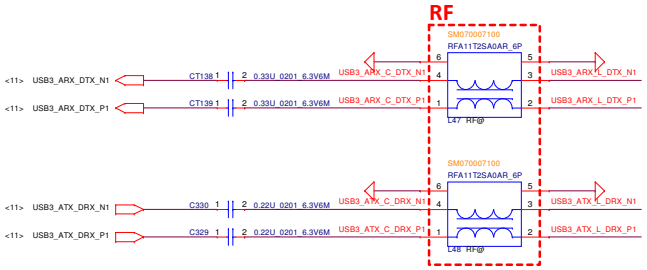


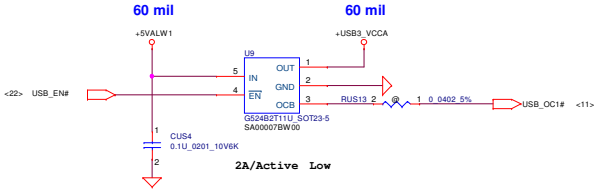
ESD

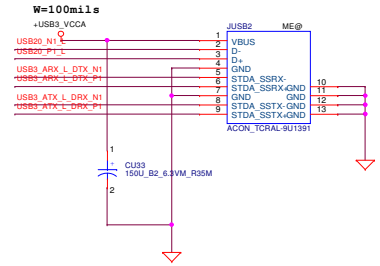


ESD protection needs to be placed near connector side

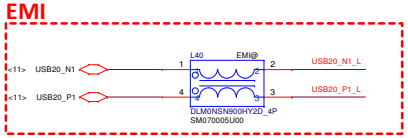
USB3.0_Port (Non-AOU_Port)



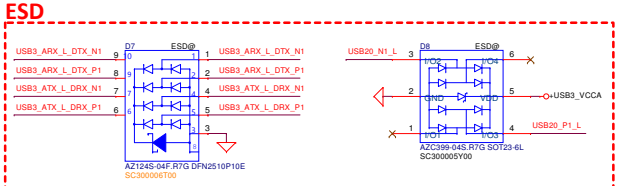




EMI



ESD



ESD protection needs to be placed near connector side

Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.	
Title	USB3 / IO board Conn.
Size / Custom	Document Number: LA-K211P
Rev	0.2
Date:	Wednesday, July 22, 2020
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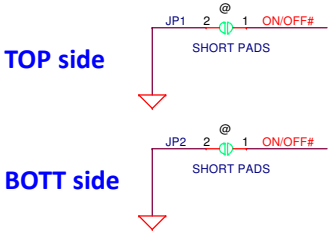
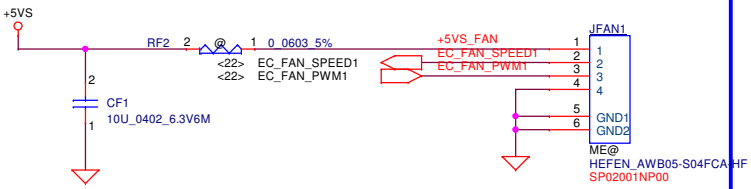
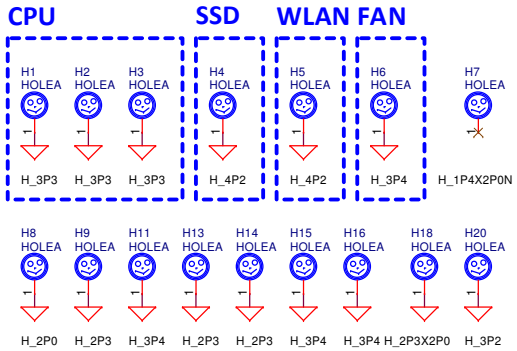
ON/OFF# SHORT PAD



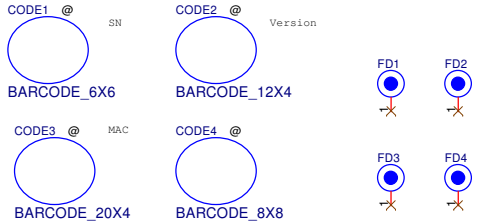
+5V FAN



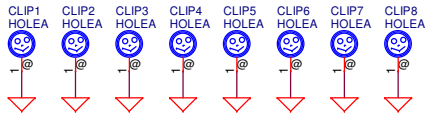
SCREW



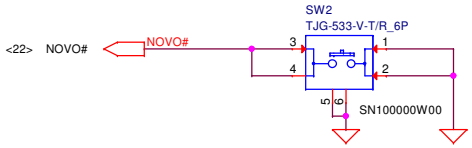
LASER BARCODE



Smaller

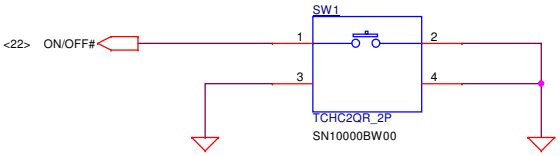


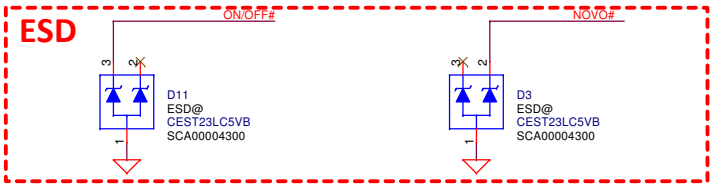
NOVO BUTTON



PWR BUTTON

Pull up at EC side

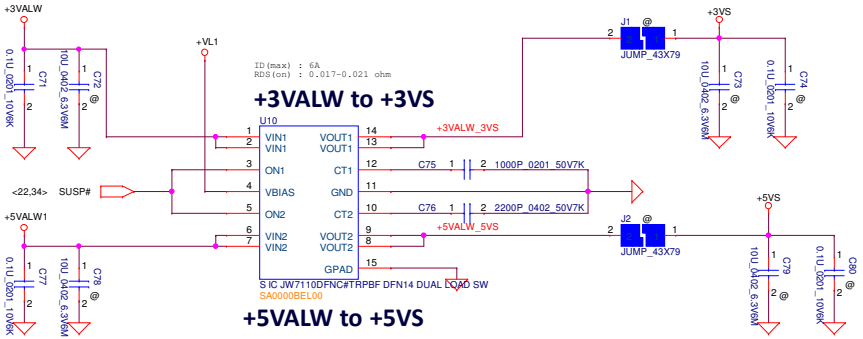




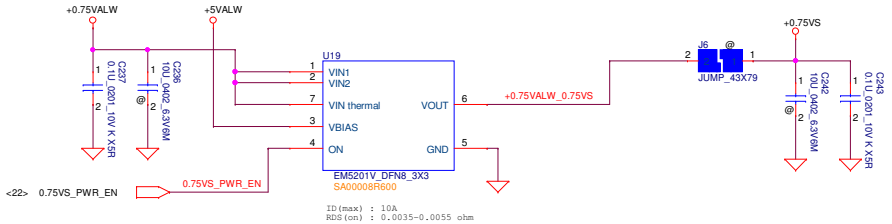
Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.			
Title	PCB PN / SCREW / FAN		
Size: Custom	Document Number: LA-K211P		Rev: 0.2
Date: Wednesday, July 22, 2020		Sheet 27 of 39	

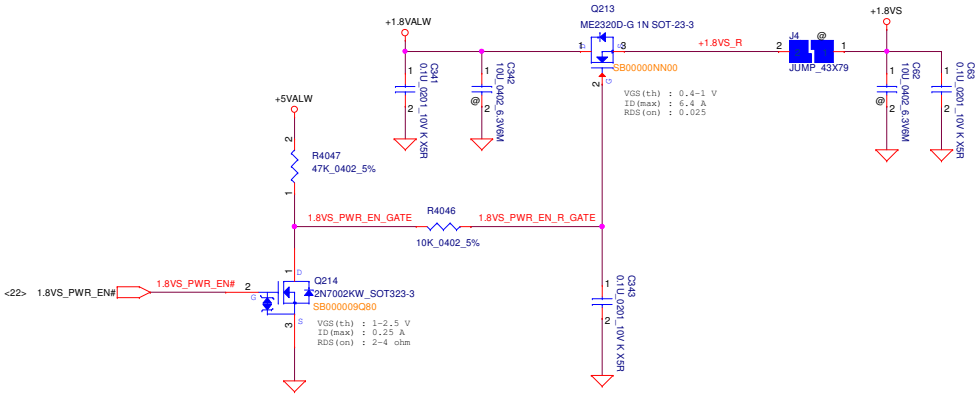
+3VALW to +3VS / +5VALW to +5VS



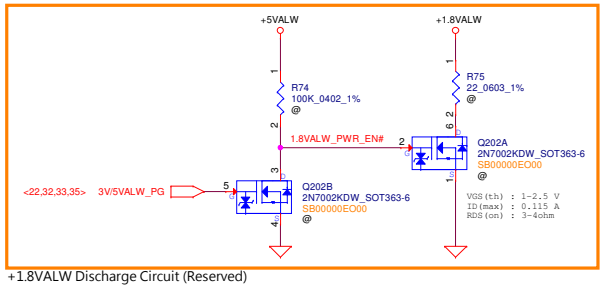
+0.75VALW to +0.75VS



+1.8VALW to +1.8VS



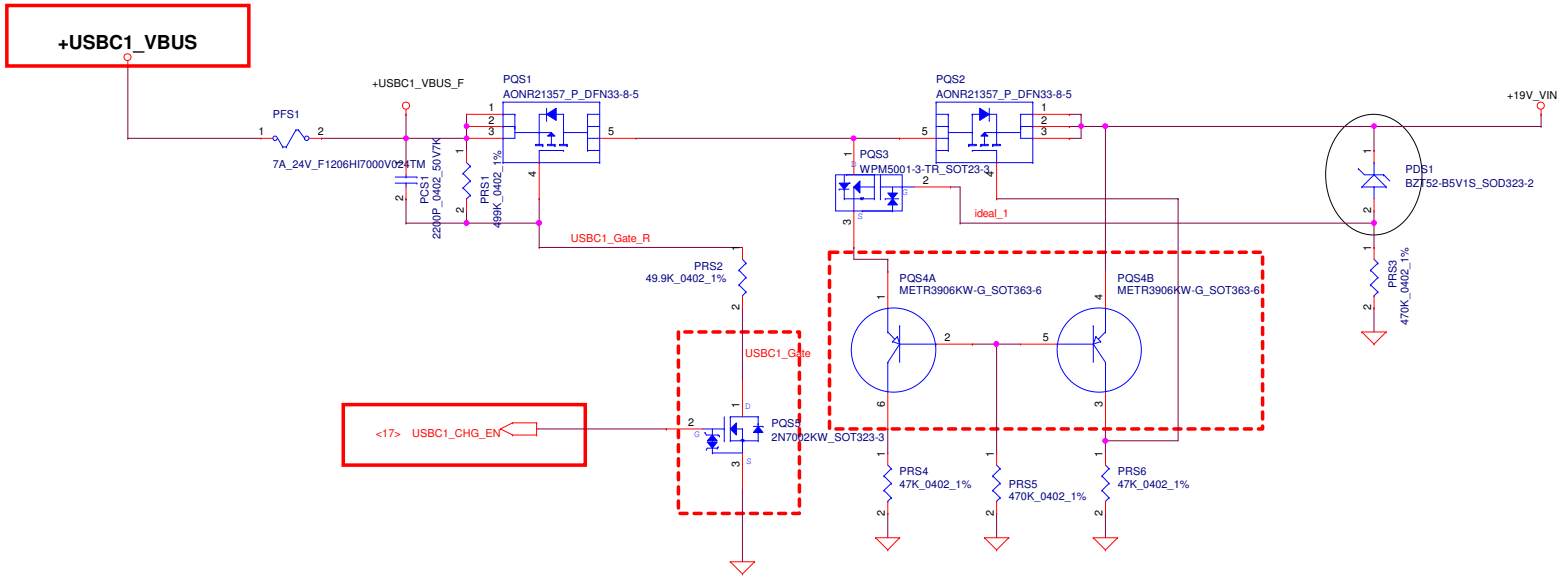
DISCHARGE CIRCUIT



+1.8VALW Discharge Circuit (Reserved)

Security Classification	Compal Secret Data		
Issued Date	2020/02/25	Deciphered Date	2021/02/25

Compal Electronics, Inc.			
Title: DC to DC			
Size: Custom	Document Number: LA-K211P		Rev: 0.2
Date: Wednesday, July 22, 2020	Sheet 28 of 39		



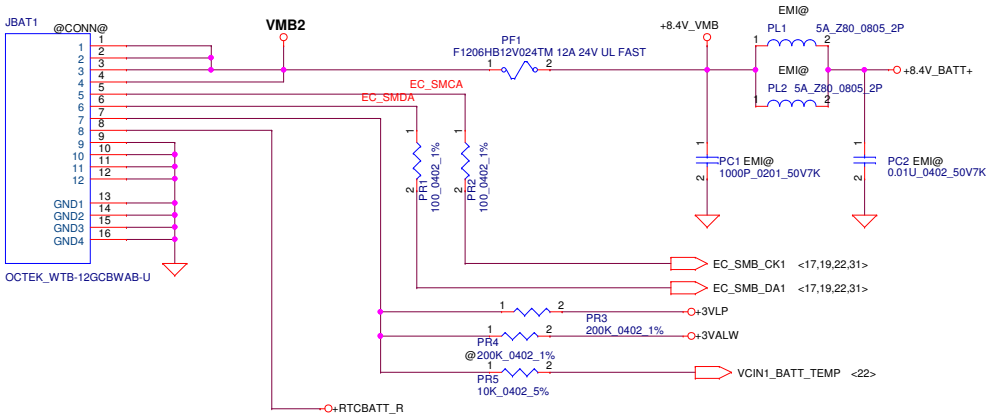
Security Classification	Compal Secret Data		
Issued Date	2015/07/27	Deciphered Date	2016/07/27

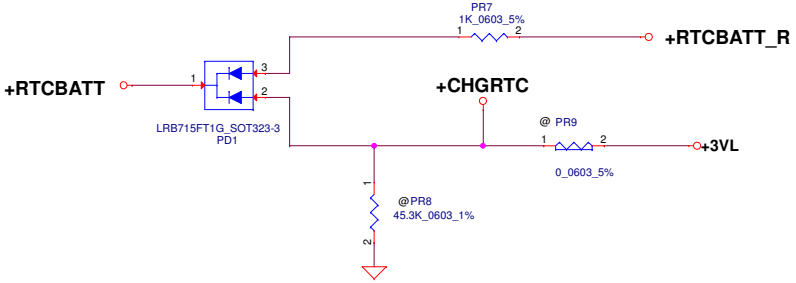
Compal Electronics, Inc.

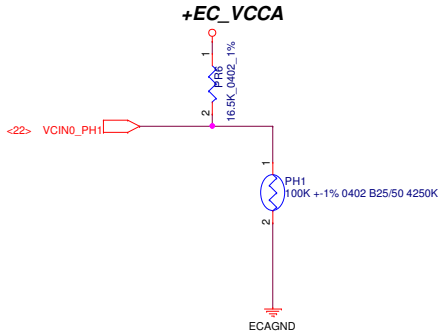
Title: PWR- DCIN / Vin Detector

Size	Document Number	Rev
Custom	SKL	0.1

Date: Wednesday, July 22, 2020 Sheet 29 of 40

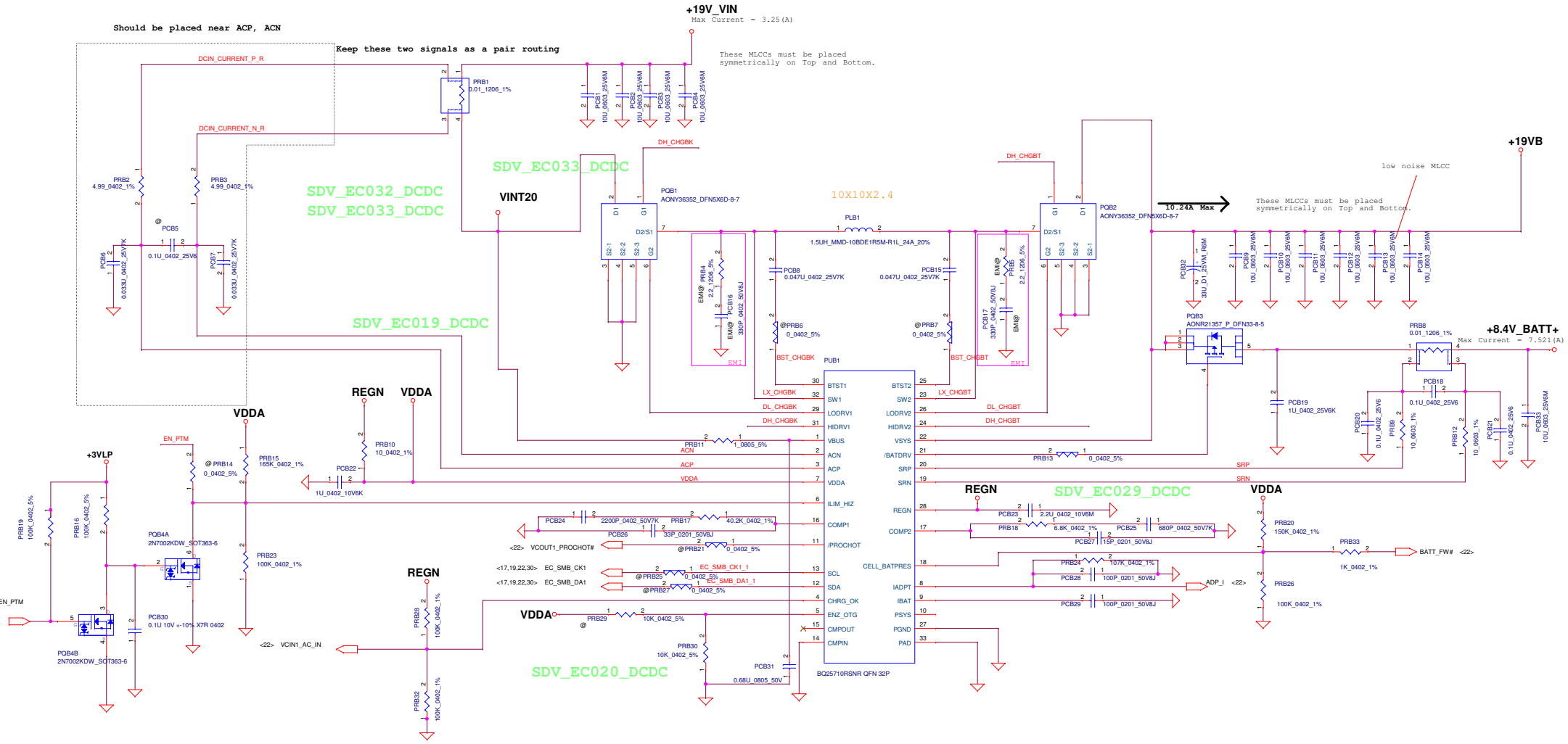






PH201 under CPU botten side :
CPU thermal protection at 93 +-3 degree C
Recovery at 56 +-3 degree C

Title	<Title>		
Size: Custom	Document Number: LA-K211P		Rev: 0.1
Date: Wednesday, July 22, 2020	Sheet 30 of 40		



Security Classification	Compal Secret Data		
Issued Date	2016/06.23	Deciphered Date	2017/06/23

Compal Electronics, Inc.	
Title	BATTERY CHARGER(BQ25700)
Size: Custom	Document Number: LA-K211P
Rev	0.1
Date: Wednesday, July 22, 2020	Sheet 31 of 40

Module model information

SY8286B_V3_single.mdd
SY8286B_V3_dual.mdd

+19VB
EMI@ PL301 5A_Z80_0805_2P
+19VB_3V
PC303 0.1U_0402_25V6
PC304 2200P_0402_50V7K
PC305 10U_0603_25V6M
PC306 10U_0603_25V6M
BST_3V
PR301 0_0402_5%
PC302 0.1U_0402_25V6
BST_3V_R
keep short pad, snubber is for EMI only.
Use 7x7x3 size when the layout space is enough.
PU301 SY8386BRHC_QFN16_2P5X2P5
IN3 IN2 IN1 BS
LX GND PG EN2 EN1 FF OUT TEST
EP LX2 LX1 GND1 LDO
LX_3V
PL302 1.5UH_6A_20%_5X5X3_M
+3VALWP
PC307 22U_0603_6.3V6M
PC308 22U_0603_6.3V6M
PC301 22U_0603_6.3V6M
PC309 22U_0603_6.3V6M
+3VL
Check pull up resistor of SPOK at HW side
PR303 100K_0402_5%
<22,28,33,35> 3V/5VALW_PG
ENLDO_3V5V
+3VLP
PC310 4.7U_0402_6.3V6M
@PC311 4.7U_0402_6.3V6M
EMI@ PR302 4.7_1206_5%
3V_SN
EMI@ PC312 680P_0402_50V7K
Vout is 3.234V~3.366V
TDC=6A
Iocp=10A
3.3V LDO 150mA~300mA
Fsw : 600K Hz
EN1 and EN2 dont't be floating.
EN :H>0.8V ; L<0.4V
5V_3V_EN
@ PR305 0_0402_5%
<35> 1.8VALW_PG2
PC313 1000P_0402_50V7K
3V_FB
3V_FB_1
PR304 1K_0402_1%
+3VALWP
@ PJ301 JUMP_43X118
+3VALW
+3VLP
@ PJP301 JUMP_43X39
+3VL

+19VB_5V +19VB_5V-2
+19VB
EMI@ PL501 5A_Z80_0805_2P
+19VB_5V
PR537 52.3K_0402_1%
PR539 52.3K_0402_1%
VCIN1_BATT_DROP <22>
Trigger = 6.2V
PC539 0.1U_0402_25V6
PR538 10K_0402_1%
PC535 10U_0603_25V6M
PC536 10U_0603_25V6M
PC503 10U_0603_25V6M
PC504 10U_0603_25V6M
EMI@ PC505 2200P_0402_50V7K
@EMI@ PC506 0.1U_0402_25V6
@PR501 0_0402_5%
PC502 0.1U_0402_25V6
BST_5V
BST_5V_R
PU501 SY8286CRAC_QFN20_3X3
IN IN IN IN BS
LX GND GND PG NC EN2 EN1 FF OUT LDO
LX GND GND VCC NC GND
LX_5V
SPOK_5V
PR503 0_0402_5%
PL502 1.5UH_MMD-05AHN1R5M-M1L_6.2A_20%
+5VALWP
PC507 2.2U_0402_6.3V6M
VCC_5V
PC508 22U_0603_6.3V6M
PC509 22U_0603_6.3V6M
PC501 22U_0603_6.3V6M
PC510 22U_0603_6.3V6M
PC511 22U_0603_6.3V6M
PC512 22U_0603_6.3V6M
EMI@ PR502 4.7_1206_5%
5V_SN
EMI@ PC513 680P_0402_50V7K
+5VLP
5V LDO 150mA~300mA
PC514 4.7U_0402_6.3V6M
Vout is 4.998V~5.202V
TDC=8A
Iocp=10A
ENLDO_3V5V
@PR504 0_0402_5%
+3VL
@ PR505 100K_0402_1%
3V/5VALW_PG
PR520 @0_0402_5%
5V_EN
@PR506 100K_0402_1%
PR521 @ 0_0402_5%
5V_3V_EN
@ PC515 4.7U_0402_6.3V6M
EN1 and EN2 dont't be floating.
EN :H>0.8V ; L<0.4V
PC516 1000P_0402_50V8_J
5V_FB
5V_FB_1
PR507 1K_0402_1%
Module model information
SY8286C_V3_single.mdd
SY8286C_V3_dual.mdd
Iocp>12A
+5VALWP
@ PJ501 JUMP_43X118
+5VALW
+5VLP
@ PJP501 JUMP_43X39
+VL

+19VB
PR508 499K_0402_1%
ENLDO_3V5V
ENLDO_3V5V <33>
PR510 150K_0402_1%
PC517 1U_0201_6.3V6M
<22> EN_5VALW
+3VL
PR509 100K_0402_5%
@PR511 0_0402_5%
5V_EN
5V_EN <33>
PR512 @ 100K_0402_5%
PR513 2.2K_0402_5%
@PC518 4.7U_0402_6.3V6M
<22,35> EC_ON
VCOUT0_MAIN_PWR_ON
@ PR514 0_0402_5%
5V_3V_EN
PR515 1M_0402_1%
PC519 4.7U_0402_6.3V6M
EN1 and EN2 dont't be floating.
EN :H>0.8V ; L<0.4V
Fsw : 600K Hz

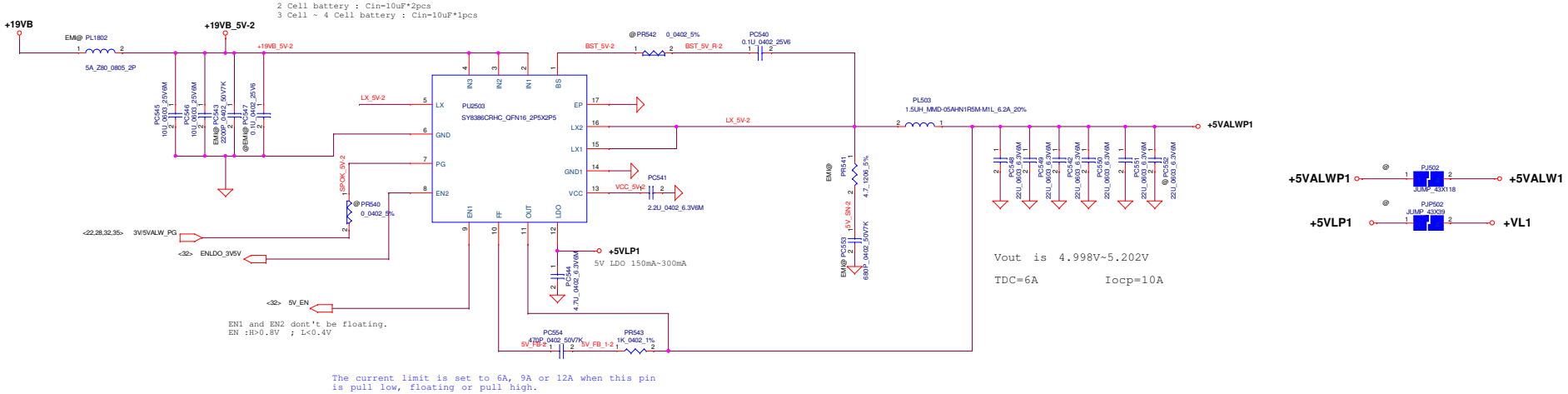
Security Classification	Compal Secret Data		
Issued Date	2019/12/19	Deciphered Date	2020/12/31

Compal Electronics, Inc.

Title: PWR- 3VALW/5VALW1

Size	Document Number	Rev
Custom		0.1

Date: Wednesday, July 22, 2020 Sheet 32 of 40



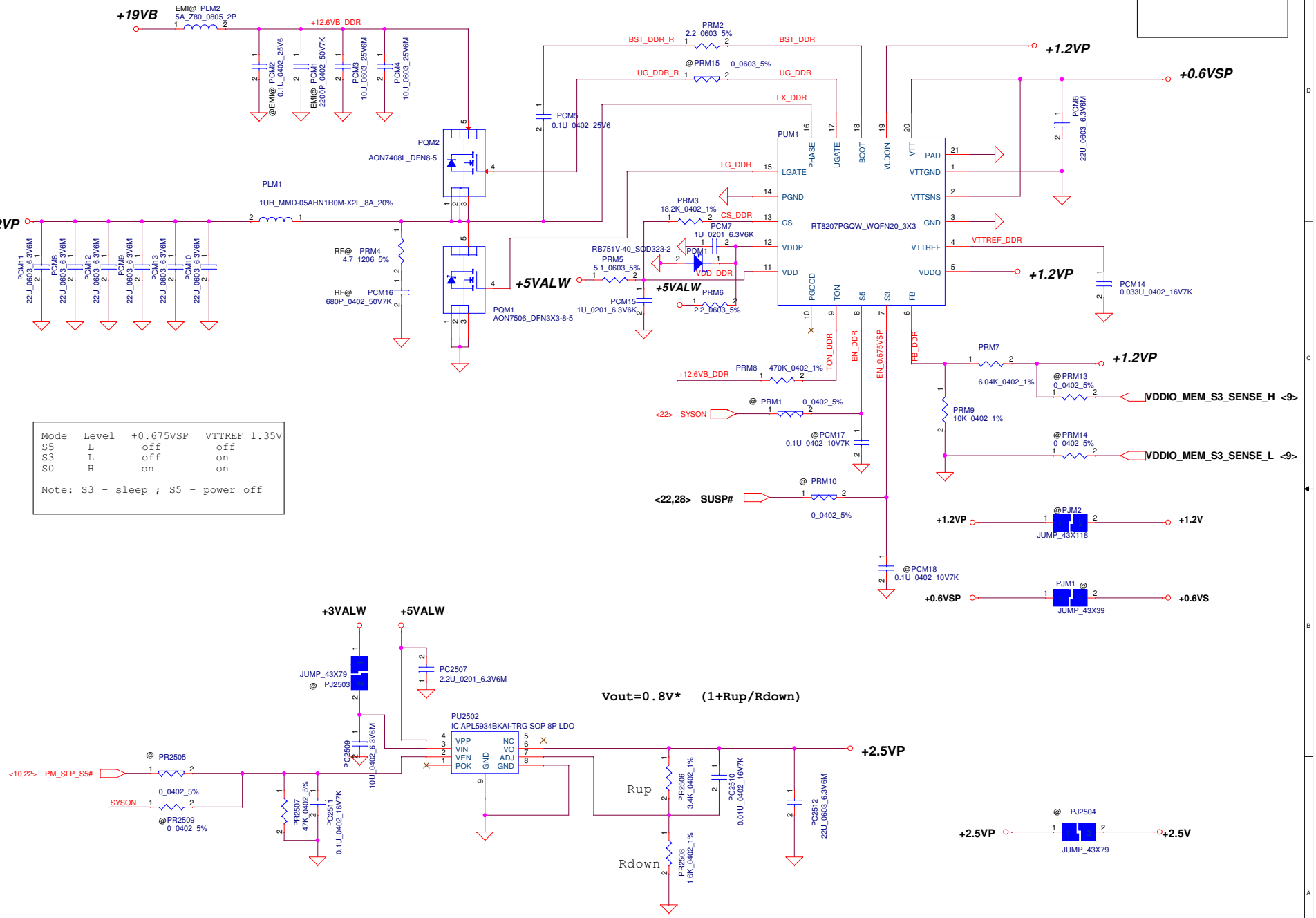
Security Classification	Compal Secret Data		
Issued Date	2011/06/13	Deciphered Date	2012/06/13

Compal Electronics, Inc.

Title: APL5930

Size: Custom | Document Number | Rev: 0.1

Date: Wednesday, July 22, 2020 | Sheet 33 of 40



Mode	Level	+0.675VSP	VTTREF_1.35V
S5	L	off	off
S3	L	off	on
S0	H	on	on

Note: S3 - sleep ; S5 - power off

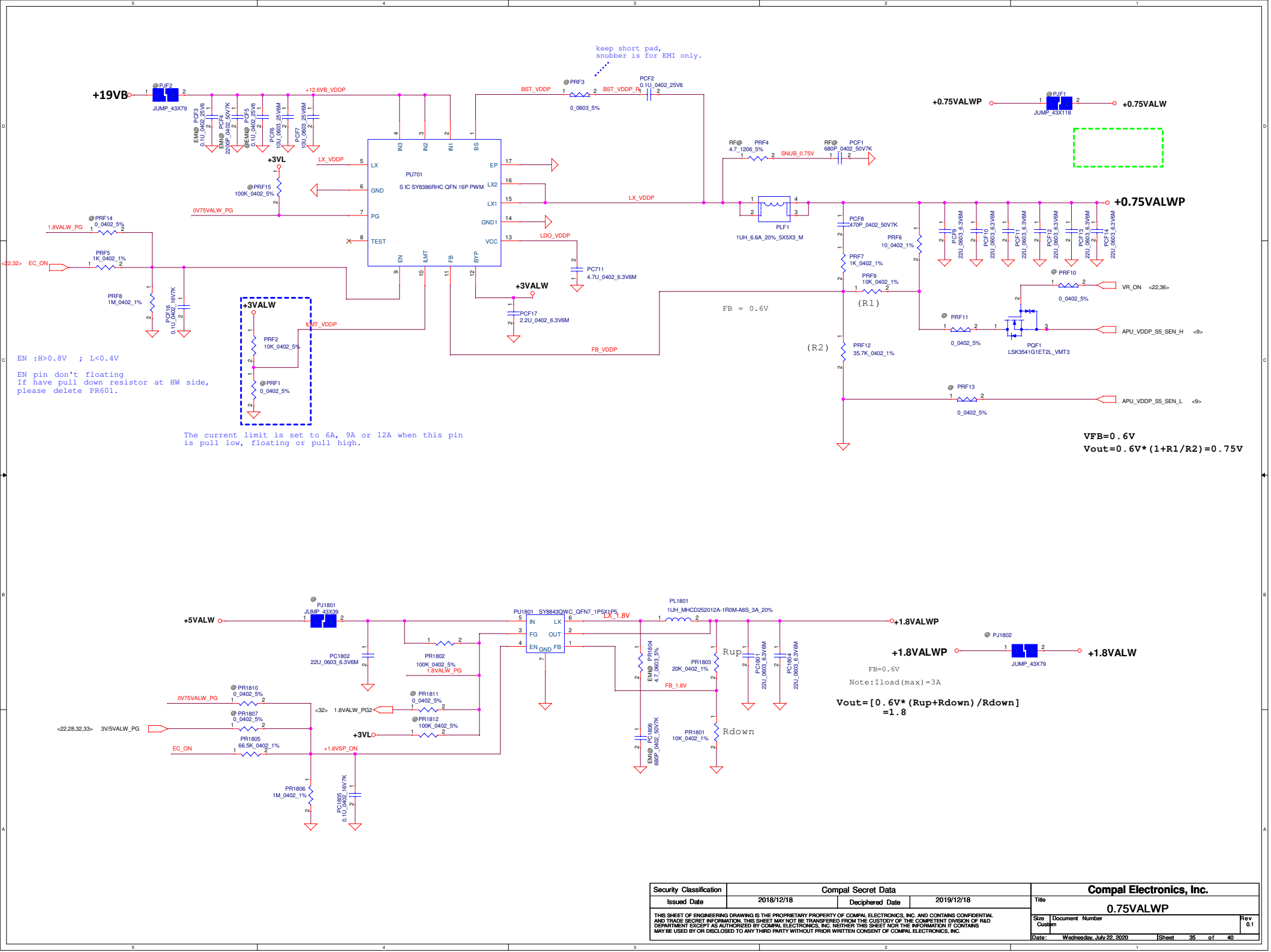
Security Classification	Compal Secret Data		
Issued Date	2019/05/15	Deciphered Date	2020/05/15

Compal Electronics, Inc.

Title: **RT8207P**

Size	Document Number	Rev
Custom		1.0

Date: Wednesday, July 22, 2020 | Sheet 34 of 40



Security Classification	Compal Secret Data		
Issued Date	2018/12/18	Deciphered Date	2019/12/18

Compal Electronics, Inc.

Title: 0.75VALWP

Size	Document Number	Rev
Custom		0.1

Date: Wednesday, July 22, 2020 | Sheet 35 of 40

Close IC

Module model information

RT3662A_V2A.mdd for IC portion
RT3662A_V2B.mdd for SW portion

PR1002 and PR1003 are for debug only.
APU_VDD_RUN_FB_L APU_VDDCR_SEN need other resistor at HW side.

LL(Rdroop)=0.7m

LL_NB(Rdroop)=2.1m

APU_SVD and APU_SVC RC filter put CPU side.
APU_SVT RC filter put controller side.

PR1050 is for debug only.
APU_VDDSOC_SEN needs other resistor at HW side.

+APU_VDDCORE
TDC 35A(1H1L)
Peak current 45A
OCP current > 55A

FSW=400kHz
DCR 1.19mohm +/-5%

+APU_VDDSOC
TDC 19A(1H1L)
Peak current 13A
OCP current > 16A

FSW=400kHz
DCR 1.19mohm +/-5%

Table 7. 2-Bit Boot VID Code

Initial Startup VID (Boot VID)		
SVC	SVD	VDD/VDDNB Output Voltage (V)
0	0	1.1
0	1	1.0
1	0	0.9
1	1	0.8

Table 5. FP5 Processor Voltage Supply Currents

Supply [1]	Nominal Voltage at Pkg Ball (V) [2]	Condition	SYSTEM_CONFIGURATION 1 12W	2 15W	3 25W	4 35W	5 45W	6 54W
VDDCR_VDD	Variable (0.65–TBD) [5]	TDC [3]	29	35		53	65	
		EDC	38	45		70	85	
		Max Loadstep [4]	35	35		56	68	
VDDCR_SOC	Variable (0.72–TBD) [5]	TDC [3]	10					
		EDC	13					
		Max Loadstep [4]	10					

Security Classification	Compal Secret Data		Compal Electronics, Inc.
Issued Date	2017/03/11	Deciphered Date	2019/03/11
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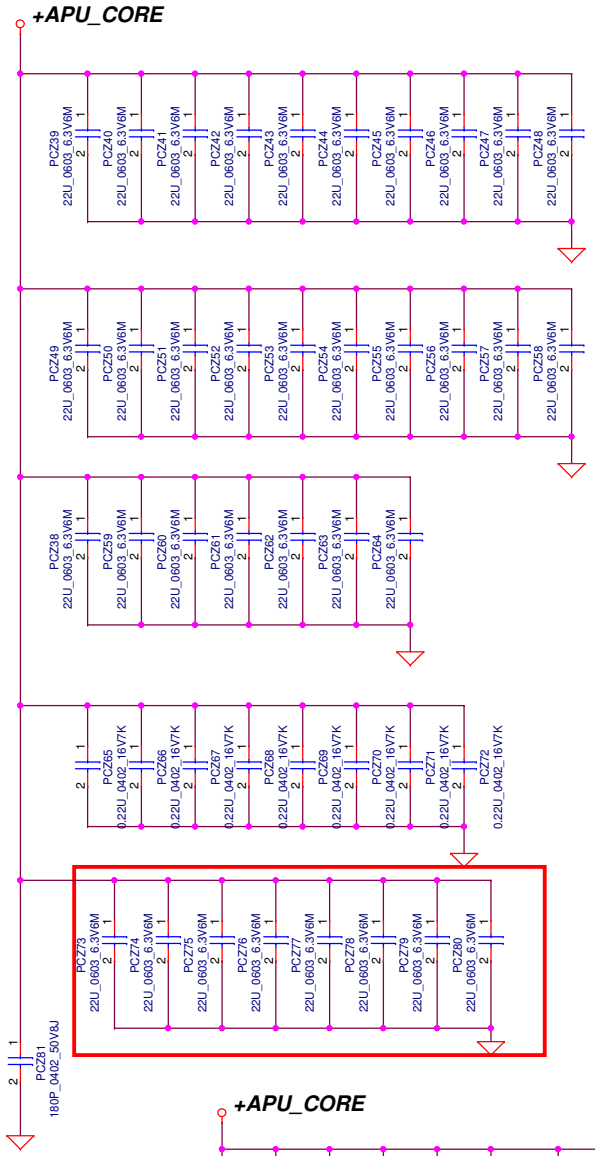
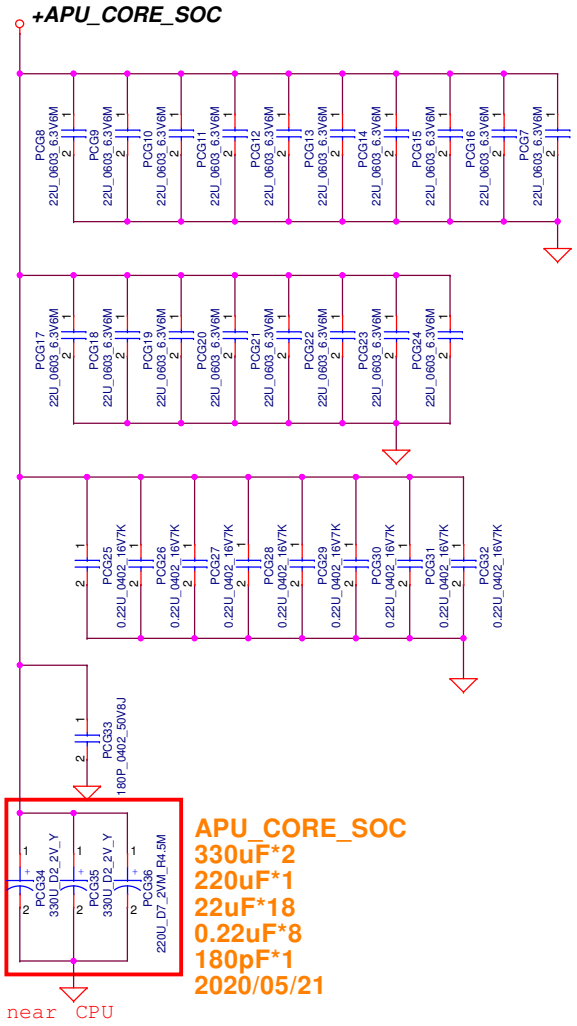
			Size: Document Number: Rev: 0.1
			Date: Wednesday, July 29, 2020 Sheet 38 of 48

+APU_CORE



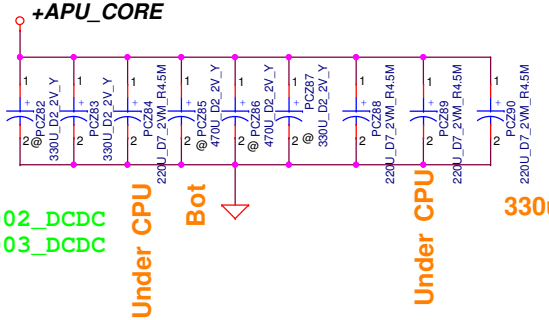
+APU_CORE_SOC



APU_CORE_SOC
330uF*2
220uF*1
22uF*18
0.22uF*8
180pF*1
2020/05/21

near CPU

330u is common part SGA00009S00



APU_CORE
330uF*1
220uF *4
22uF*35
0.22uF*8
180pF*1
2020/05/21

330u is common part SGA00009S00

SIV_EC002_DCDC
SIV_EC003_DCDC

Under CPU

Bot

Under CPU

Security Classification	Compal Secret Data		
Issued Date	2018/12/18	Deciphered Date	2019/12/18

Compal Electronics, Inc.

Title: +APU_CORE Cap

Size: Custom | Document Number: LA-K211P | Rev: 0.1

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Version change list (P.I.R. List)

Item	Reason for change	PG#	Modify List	Date	Phase
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					

Compal Electronics, Inc.

Title: HW- PIR

Size: Custom | Document Number: LA-K211P | Rev: 0.2

Date: Wednesday, July 22, 2020 | Sheet 38 of 39

Version change list (P.I.R. List)

Item	Reason for change	PG#	Modify List	Date	Phase
1	Change Choke from 4mm to 3mm. Tuning APU controller value.	34	1. PR826, PR841 change to 2k 2. PR816 change to 9.31K 3. PR821 change to 11.5K 4. PR825 change to 15k 5. PR809 change to 2.43K 6. PR818 change to 13.7K 7. PR822 change to 9.53K 8. PR823 change to 16.9k	2019/8/8	EVT
2	Net- name correction	32	Chagne from +19VB to +12.6VB	2019/8/8	EVT
3	Footprint change for down size	31	1.PC251 change from 1U_0603_10V6K to 2.2U_0402_10V6M 2.PC256 change from 10U_0603_6.3V6M to 10U_0402_6.3V6M 3.Add PC257 10U_0402_6.3V6M 4.PCM18 change from 22U_0603_6.3V6M to 10U_0402_6.3V6M 5.Add PCM19 10U_0402_6.3V6M	2019/8/14	EVT
4	Footprint change for down size	34	1.PC818, PC819 change from 10U_0805_25V6K to 10U_0603_25V6M 2.PC839, PC840 change from 10U_0805_25V6K to 10U_0603_25V6M 3.PC847, PC848 change from 10U_0805_25V6K to 10U_0603_25V6M 4.PC803, PC804 change from 10U_0805_25V6K to 10U_0603_25V6M 5. PL803 footprint change	2019/8/14	EVT
5	Material tuning	33	1.PC615 change from 1U_0402_10V6K to 2.2U_0402_6.3V6M 2.PL1802 change from 1UH_MLV-FY12N1R0M-C1L_4.9A_20% to 1.5UH_TMPC0412HP-1R5M-Z02_3A_20%	2019/8/14	EVT
6	Material tuning	33	1.PC612 change from 2.2U_0402_6.3V to 4.7U_0402_6.3V 2. Add add PR611 1k_0402_5% resistor connect with PC613	2019/8/20	EVT
7	Material tuning	32	1.PC726 change from 4.7U_0402_6.3V to 2.2U_0402_6.3V	2019/8/29	EVT
8	Material tuning_NB_CORE OCP from 24A to 32A	34	1. PR818 change from 13.7K to 8.25K 2. PR822 change from 9.53K to 11.8K 3. PR823 change from 16.9K to 14.3K 4. PR831 change from 76.8K to 56.2K	2019/8/29	EVT
9	RF request	36	1.Mount PR855 & PC849 2. Change PU801 from RT3663BH oto RT3663BM	2019/9/03	EVT
1	EMI request	27	PCD1 from 1000P_0402_50V7K to 2200P_0402_50V7K	2019/10/01	SIV
2	CPU output cap	35	1.Add PC9117 220U_D7 2. PC9097, PC9098 change from 330u to 470u	2019/10/01	SIV
3	CPU output cap	35	Add PC9118, PC9095 to un-mount	2019/10/04	SIV
4	CPU controller tuning	34	1. PR806 change from 53.6K to 63.4K 2. PC807 change from 330pF to 470pF 3. PR806 change from 52.6K to 59K 4. PC830 change from 330pF to 390pF	2019/10/08	SIV
5	Change material	34	PQ801 from AON6962 to AON6994	2019/10/08	SIV

Compal Electronics, Inc.

Title: PWR- PIR

Size: Custom | Document Number: LA-K211P | Rev: 0.2

Date: Wednesday, July 22, 2020 | Sheet 39 of 39