


DRIFT_CML
VER 1.0
2019/8/1

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- 108.DC/DC IMVP8 (MP2949AGQKT)
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- 110.DC/DC VCCGFXCORE_I (MP86901)
- 111.DC/DC VCCSA (MP86901A)
- 112.DC/DC VCC1R2A(NB687)
- 113.DC/DC VCC1R05_SUS(NB693)
- 114.DC/DC VCC1R0VIDEO(BD9B304)
- 115.DC/DC VCCGFXCORE_D (NCP8127)
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- 124.LOAD SW B
- 125.LOAD SW WLAN

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Issued Date	2018/01	Declassified Date	2018/08/01	TITLE PAGE	
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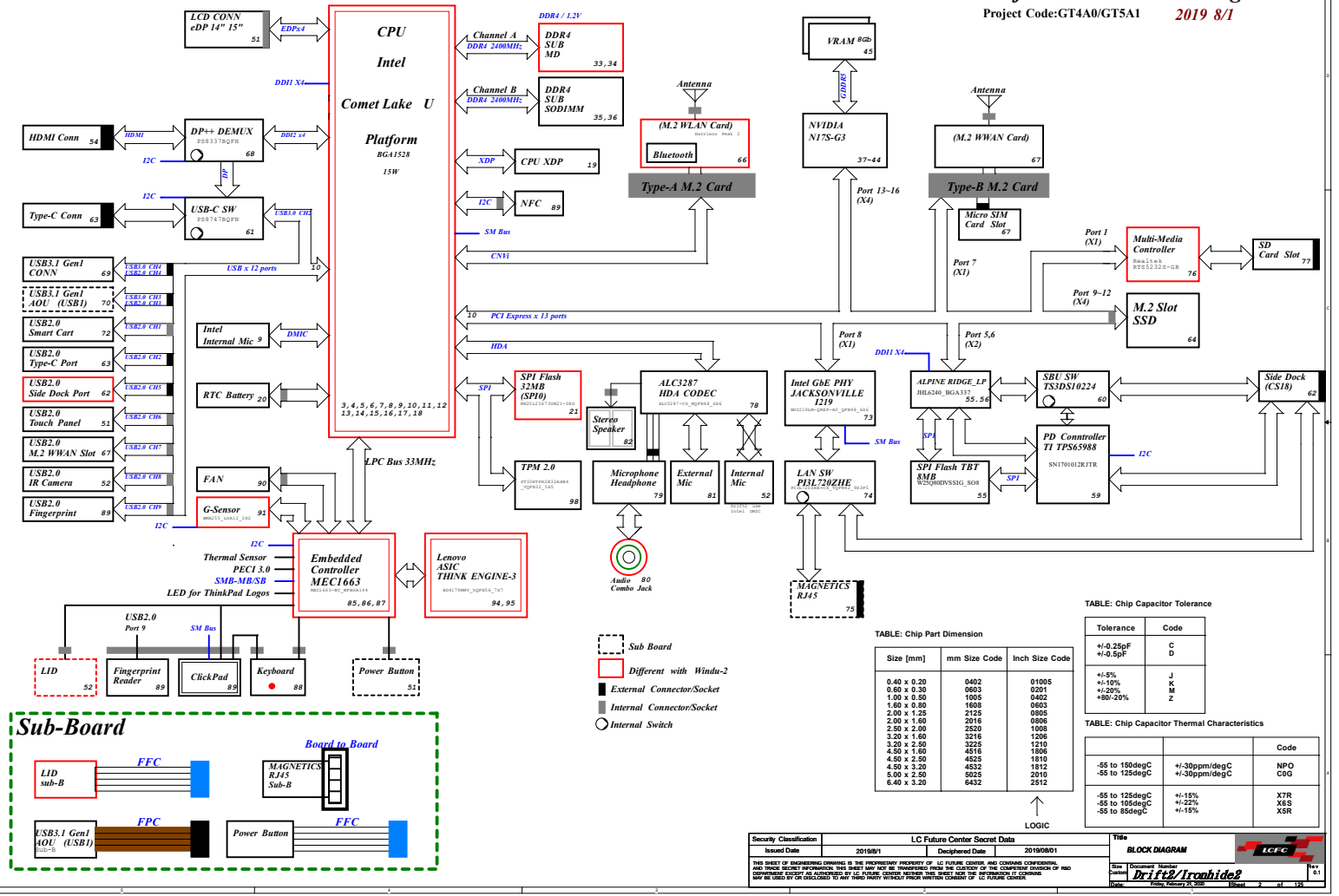


TABLE: Chip Part Dimension

Size [mm]	mm Size Code	Inch Size Code
0.40 x 0.20	0402	01005
0.60 x 0.30	0603	0201
1.00 x 0.50	1005	0402
1.60 x 0.80	1608	0603
2.00 x 1.25	2125	0805
2.00 x 1.60	2016	0806
2.50 x 2.50	2520	1008
3.20 x 1.60	3216	1206
3.20 x 2.50	3225	1210
4.50 x 1.60	4516	1806
4.50 x 2.50	4525	1810
4.50 x 3.20	4532	1812
8.00 x 2.50	8025	2010
6.40 x 3.20	6432	2512

TABLE: Chip Capacitor Tolerance

Tolerance	Code
+/-0.25pF	C
+/-0.5pF	D
+/-5%	J
+/-10%	K
+/-20%	M
+80/-20%	Z

TABLE: Chip Capacitor Thermal Characteristics

	Code
-55 to 150degC	+/-30ppm/degC
-55 to 125degC	+/-30ppm/degC
-55 to 125degC	+/-15%
-55 to 105degC	+/-22%
-55 to 85degC	+/-15%
	NPO
	C0G
	X7R
	X8S
	X8R

TABLE : Functional Strap

GPP_E19/DDPB_CTRLDATA/CNV_BT_IF_SELECT (Display Port B Detected)

HIGH Port B is detected

LOW Port B is not detected (Default)

TABLE : Functional Strap

GPP_E21/DDPC_CTRLDATA (Display Port C Detected)

HIGH Port C is detected

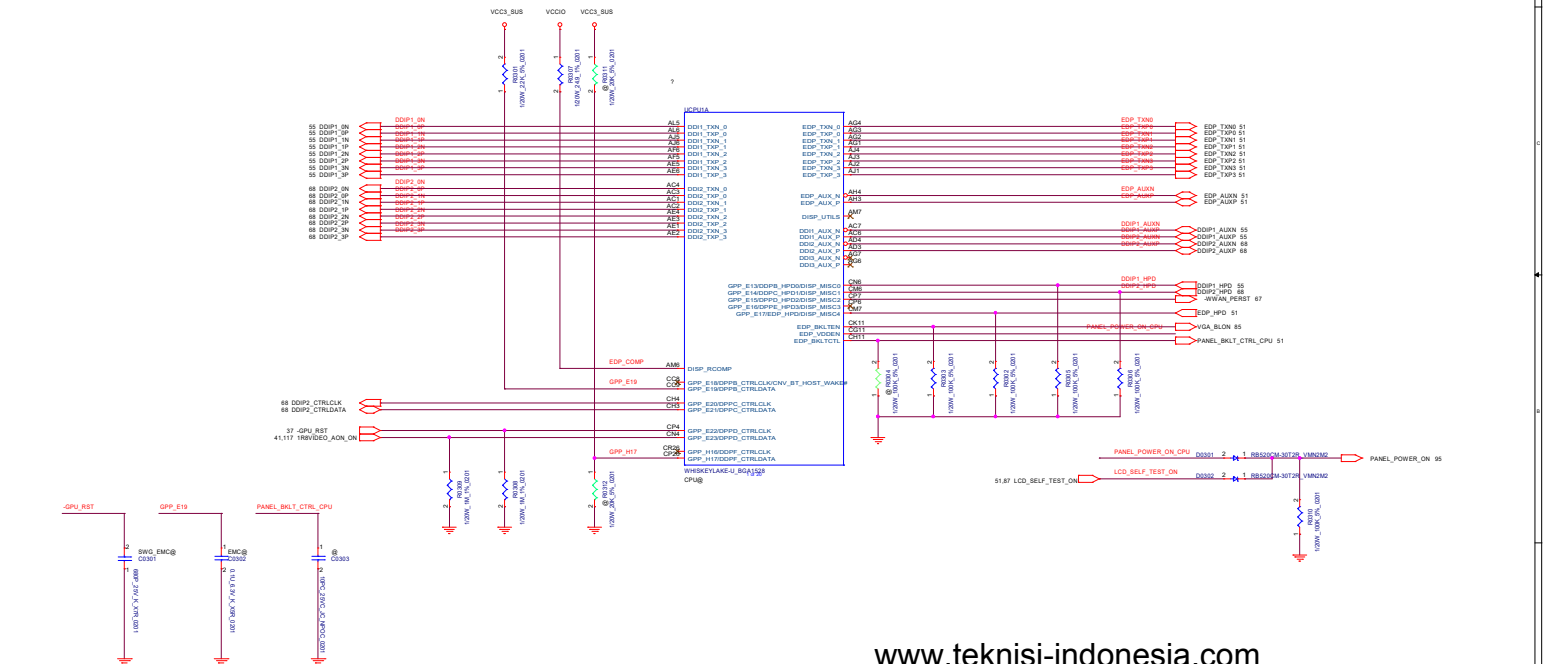
LOW Port C is not detected (Default)

TABLE : Functional Strap

GPP_E23/DDPD_CTRLDATA (Display Port D Detected)

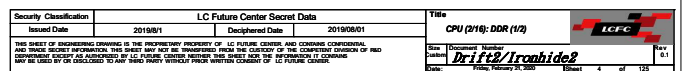
HIGH Port D is detected

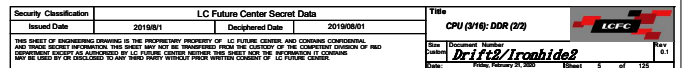
LOW Port D is not detected (Default)

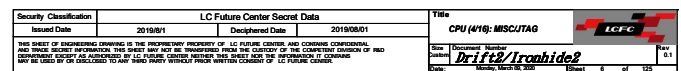


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Rev	Document Number	Rev	Rev
01	Drift2/Ironhide2	01	0.1
Rev	Rev	Rev	Rev











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Size	Document Number		Rev
			1.1
Date			
			

TABLE : Only WHL Function Strap

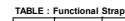
**TABLE : Only WHL Function Strap**

TABLE : CML Intel D-MIC
Note: This components near



HDA_SDO/I2S0_TXD

Flash Descriptor Security Override

Diagram illustrating the test pad layout on the bottom side of the PCB. The layout shows the test point (TP9062) on the bottom side, which is connected to the top side via a via. The test point is labeled "TEST PAD BOTTOM SIDE DO NOT MOVE AFTER FIX". The diagram also shows the test point (TP9061) on the bottom side, which is connected to the top side via a via. The test point is labeled "TEST PAD BOTTOM SIDE DO NOT MOVE AFTER FIX".

Title	CPU (7/16): AUDIO/SDXC
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Size	Document Number	Rev
Custom	<i>Drift2/Ironhide2</i>	0.1
Date:	Thursday, March 05, 2003	Sheet 9 of 125

Pin Assignment Summary:

- PCIe Port Assignment:**
 - PCIe 1: Media Card Controller
 - PCIe 2: PCIe 2
 - PCIe 3: PCIe 3
 - PCIe 4: PCIe 4
 - PCIe 5 (x2): Alpine Ridge-DP
 - PCIe 7: WWAN
 - PCIe 8: QM WDR219
 - PCIe 9 (x4): Nvidia GPU
 - PCIe 13 (x4): NVMe SSD
- USB 2.0 Port Assignment:**
 - USB2_1: Smart Card
 - USB2_2: Type-C Port C
 - USB2_3: Type-A Port (AOU)
 - USB2_4: Type-A Port (DCI)
 - USB2_5: TBT Type-C Port
 - USB2_6: Touch Panel
 - USB2_7: WWAN Card
 - USB2_8: RGB / IR Hybrid Camera
 - USB2_9: Fingerprint Reader
 - USB2_10: (Reserved for Bluetooth)
- USB 3.0 Port Assignment:**
 - USB3_1: Type-C Port C
 - USB3_2: Type-A Port (AOU)
 - USB3_4: Type-A Port (Std A)
 - USB3_5
 - USB3_6
- SATA Port Assignment:**
 - SATA 0
 - SATA 1A
 - SATA 1B
 - SATA 2
 - SATA SSD

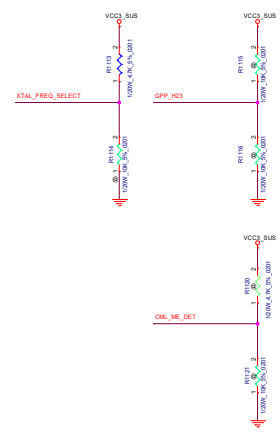
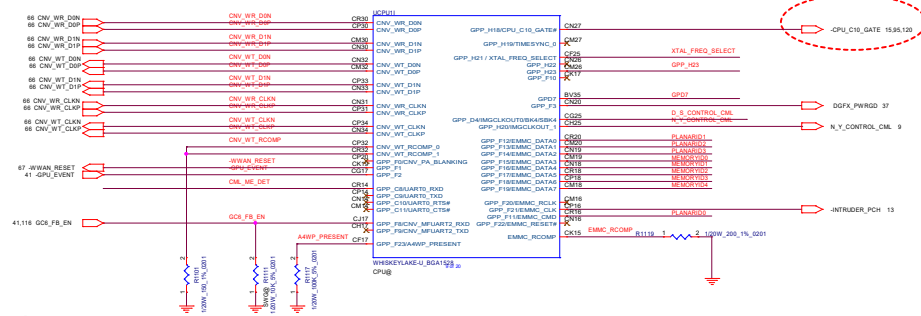
Electrical Schematic Details:

- Power and Ground:** VCC3_BUS, VCC3_B, VCC3_C, VCC3_D, VCC3_E, VCC3_F, VCC3_G, VCC3_H, VCC3_I, VCC3_J, VCC3_K, VCC3_L, VCC3_M, VCC3_N, VCC3_O, VCC3_P, VCC3_Q, VCC3_R, VCC3_S, VCC3_T, VCC3_U, VCC3_V, VCC3_W, VCC3_X, VCC3_Y, VCC3_Z, VCC3_AA, VCC3_AB, VCC3_AC, VCC3_AD, VCC3_AE, VCC3_AF, VCC3_AG, VCC3_AH, VCC3_AI, VCC3_AJ, VCC3_AK, VCC3_AL, VCC3_AM, VCC3_AN, VCC3_AO, VCC3_AP, VCC3_AQ, VCC3_AR, VCC3_AS, VCC3_AT, VCC3_AU, VCC3_AV, VCC3_AW, VCC3_AX, VCC3_AY, VCC3_AZ, VCC3_BA, VCC3_BB, VCC3_BC, VCC3_BD, VCC3_BE, VCC3_BF, VCC3_BG, VCC3_BH, VCC3_BI, VCC3_BJ, VCC3_BK, VCC3_BL, VCC3_BM, VCC3_BN, VCC3_BO, VCC3_BP, VCC3_BQ, VCC3_BR, VCC3_BS, VCC3_BT, VCC3_BU, VCC3_BV, VCC3_BW, VCC3_BX, VCC3_BY, VCC3_BZ, VCC3_CA, VCC3_CB, VCC3_CC, VCC3_CD, VCC3_CE, VCC3_CF, VCC3_CG, VCC3_CH, VCC3_CI, VCC3_CJ, VCC3_CK, VCC3_CL, VCC3_CM, VCC3_CN, VCC3_CO, VCC3_CP, VCC3_CQ, VCC3_CR, VCC3_CS, VCC3_CT, VCC3_CU, VCC3_CV, VCC3_CW, VCC3_CX, VCC3_CY, VCC3_CZ, VCC3_DA, VCC3_DB, VCC3_DC, VCC3_DD, VCC3_DE, VCC3_DF, VCC3_DG, VCC3_DH, VCC3_DI, VCC3_DJ, VCC3_DK, VCC3_DL, VCC3_DM, VCC3_DN, VCC3_DO, VCC3_DP, VCC3_DQ, VCC3_DR, VCC3_DS, VCC3_DT, VCC3_DU, VCC3_DV, VCC3_DW, VCC3_DX, VCC3_DY, VCC3_DZ, VCC3_EA, VCC3_EB, VCC3_EC, VCC3_ED, VCC3_EE, VCC3_EF, VCC3_EG, VCC3_EH, VCC3_EI, VCC3_EJ, VCC3_EK, VCC3_EL, VCC3_EM, VCC3_EN, VCC3_EO, VCC3_EP, VCC3_EQ, VCC3_ER, VCC3_ES, VCC3_ET, VCC3_EU, VCC3_EV, VCC3_EW, VCC3_EX, VCC3_EY, VCC3_EZ, VCC3_FA, VCC3_FB, VCC3_FC, VCC3_FD, VCC3_FE, VCC3_FF, VCC3_FG, VCC3_FH, VCC3_FI, VCC3_FJ, VCC3_FK, VCC3_FL, VCC3_FM, VCC3_FN, VCC3_FO, VCC3_FP, VCC3_FQ, VCC3_FR, VCC3_FS, VCC3_FT, VCC3_FU, VCC3_FV, VCC3_FW, VCC3_FX, VCC3_FY, VCC3_FZ, VCC3_GA, VCC3_GB, VCC3_GC, VCC3_GD, VCC3_GE, VCC3_GF, VCC3_GG, VCC3_GH, VCC3_GI, VCC3_GJ, VCC3_GK, VCC3_GL, VCC3_GM, VCC3_GN, VCC3_GO, VCC3_GP, VCC3_GQ, VCC3_GR, VCC3_GS, VCC3_GT, VCC3_GU, VCC3_GV, VCC3_GW, VCC3_GX, VCC3_GY, VCC3_GZ, VCC3_HA, VCC3_HB, VCC3_HC, VCC3_HD, VCC3_HE, VCC3_HF, VCC3_HG, VCC3_HH, VCC3_HI, VCC3_HJ, VCC3_HK, VCC3_HL, VCC3_HM, VCC3_HN, 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VCC3_LW, VCC3_LX, VCC3_LY, VCC3_LZ, VCC3_MA, VCC3_MB, VCC3_MC, VCC3_MD, VCC3_ME, VCC3_MF, VCC3_MG, VCC3_MH, VCC3_MI, VCC3_MJ, VCC3_MK, VCC3_ML, VCC3_MM, VCC3_MN, VCC3_MO, VCC3_MP, VCC3_MQ, VCC3_MR, VCC3_MS, VCC3_MT, VCC3_MU, VCC3_MV, VCC3_MW, VCC3_MX, VCC3_MY, VCC3_MZ, VCC3_NA, VCC3_NB, VCC3_NC, VCC3_ND, VCC3_NE, VCC3_NF, VCC3_NG, VCC3_NH, VCC3_NI, VCC3_NJ, VCC3_NK, VCC3_NL, VCC3_NM, VCC3>NN, VCC3_NO, VCC3_NP, VCC3_NQ, VCC3_NR, VCC3_NS, VCC3_NT, VCC3_NU, VCC3_NV, VCC3_NW, VCC3_NX, VCC3_NY, VCC3_NZ, VCC3_OA, VCC3_OB, VCC3_OC, VCC3_OD, VCC3_OE, VCC3_OF, VCC3_OG, VCC3_OH, VCC3_OI, VCC3_OJ, VCC3_OK, VCC3_OL, VCC3_OM, VCC3_ON, VCC3_OO, VCC3_OP, VCC3_OQ, VCC3_OR, VCC3_OS, VCC3_OT, VCC3_OU, VCC3_OV, VCC3_OW, VCC3_OX, VCC3_OY, VCC3_OZ, VCC3_PA, VCC3_PB, VCC3_PC, VCC3_PD, VCC3_PE, VCC3_PF, VCC3_PG, VCC3_PH, VCC3_PI, VCC3_PJ, VCC3_PK, VCC3_PL, VCC3_PM, VCC3_PN, VCC3_PO, VCC3_PP, VCC3_PQ, VCC3_PR, VCC3_PS, VCC3_PT, VCC3_PU, VCC3_PV, VCC3_PW, VCC3_PX, VCC3_PY, VCC3_PZ, VCC3_QA, VCC3_QB, VCC3_QC, 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VCC3_UK, VCC3_UL, VCC3_UM, VCC3_UN, VCC3_UO, VCC3_UP, VCC3_UQ, VCC3_UR, VCC3_US, VCC3_UT, VCC3_UU, VCC3_UV, VCC3_UW, VCC3_UX, VCC3_UY, VCC3_UZ, VCC3_VA, VCC3_VB, VCC3_VC, VCC3_VD, VCC3_VE, VCC3_VF, VCC3_VG, VCC3_VH, VCC3_VI, VCC3_VJ, VCC3_VK, VCC3_VL, VCC3_VM, VCC3_VN, VCC3_VO, VCC3_VP, VCC3_VQ, VCC3_VR, VCC3_VS, VCC3_VT, VCC3_VU, VCC3_VV, VCC3_VW, VCC3_VX, VCC3_VY, VCC3_VZ, VCC3_WA, VCC3_WB, VCC3_WC, VCC3_WD, VCC3_WE, VCC3_WF, VCC3_WG, VCC3_WH, VCC3_WI, VCC3_WJ, VCC3_WK, VCC3_WL, VCC3_WM, VCC3_W

TABLE : Functional Strap		
GPP_H21 (XTAL Frequency Select)		
HIGH	24.0MHz	← LOGIC
LOW	38.4MHz (Default)	

TABLE : Functional Strap		
GPP_H23 (eSPI Flash Sharing Mode)		
HIGH	Master Attached Flash Sharing (MAFS) enabled	← LOGIC
LOW	Master Attached Flash Sharing (MAFS) disabled (Default)	

TABLE : Functional Strap	
GPD7 (Reserved)	
External pull-up is required. Recommend 100 kohm.	

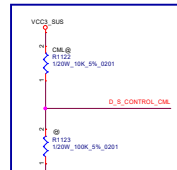
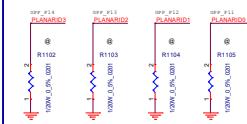
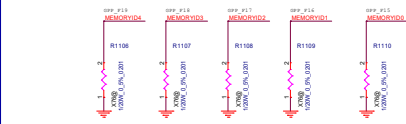


teknisi-indonesia.com

TABLE: MEMORYID							
MEMORYID[4:0]	Vendor	U3391, U3392, U3393, U3394			Capacity		
		Part Number	Component	Qty	Channel-0	Channel-1	At least
05h (00101b)	Micron	MT40A1G16KD-062E:E	16Gbit DDP	4pcs	8GB	SO-DIMM	8GB
04h (00100b)		MT40A2G16SKL-062E:B	32Gbit DDP	4pcs	16GB	SO-DIMM	16GB
08h (01000b)	Samsung	K4AAG16WA-BCWE	16Gbit DDP	4pcs	8GB	SO-DIMM	8GB
09h (01001b)		K4ABG16WA-MCWE	32Gbit DDP	4pcs	16GB	SO-DIMM	16GB
0Ah (01010b)	SK hynix	H5ANAG16MCR-XNC	16Gbit DDP	4pcs	8GB	SO-DIMM	8GB
0Ch (01100b)							
0Dh (01101b)							
0Fh (01111b)							
06h (00110b)							
07h (00111b)							

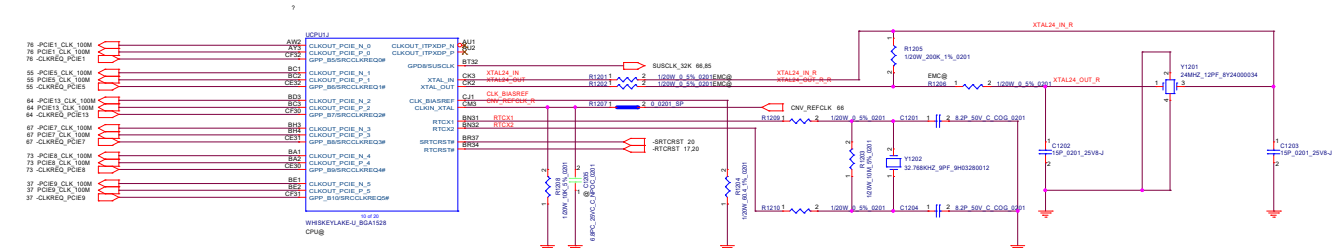
TABLE: PLANARID	
PLANARID[3:0]	PHASE
0h (0000b)	PRE-EVT
0h (0000b)	EVT
1h (0001b)	FVT
2h (0010b)	SIT
Fh (1111b)	SVT-ThinkPad
Eh (1110b)	SVT-HealthCare

TABLE : Only CML Function Strap				
GPP_D4	D_S_CONTROL	ASM	NO ASM	
HIGH	DRIFT/IRONHIDE	R909	R912	★
LOW	JAZZ/SIDEWIPE	R912	R909	



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				Rev	Document Number





Title			
CPU (10/16): CLOCK SIGNALS			
Size	Document Number	Rev	
Custom		0.1	
Date		Sheet	
Monday, March 05, 2006		12 of 125	

TABLE of U1301			
Vendor	P/N	LCFC PIN	
ON	NL17SZ1XV5T2G	SA000050U00	
TOSHIBA	TC7SG17FE	SA00005T00J	
TI	SN74LVC1G17DRLR	SA00005MG00	

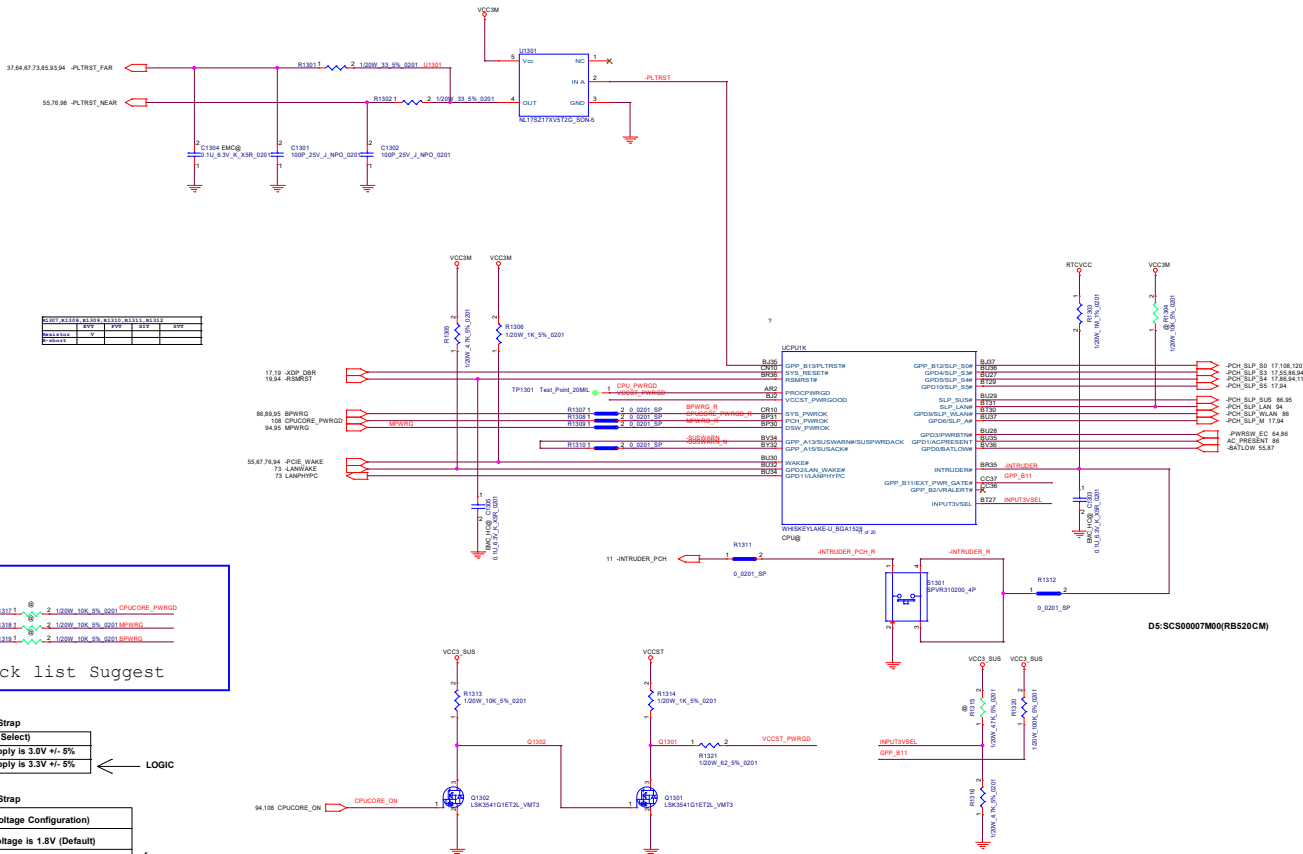
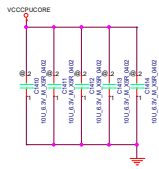
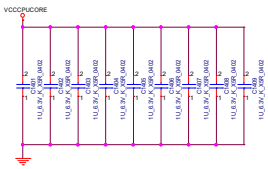


TABLE : Functional Strap	
INPUT3VSEL (3.0V Select)	
HIGH	3.3V supply is 3.0V +/- 5%
LOW	3.3V supply is 3.3V +/- 5%

← LOGIC

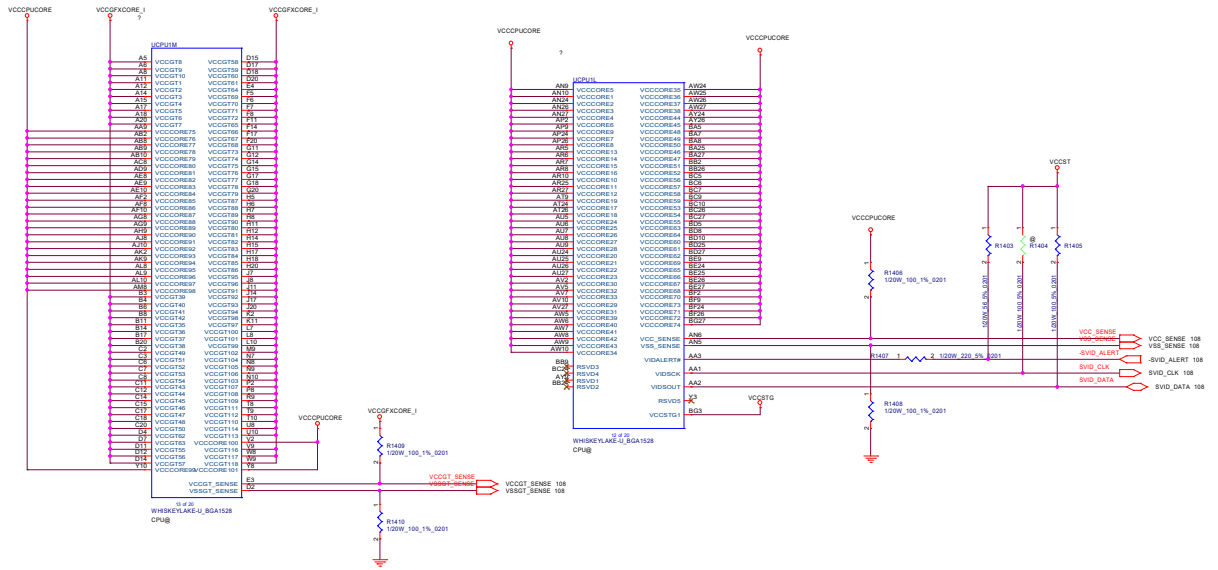
TABLE : Functional Strap	
INTRUDER (SPI Voltage Configuration)	
HIGH	SPI Voltage is 1.8V (Default)
LOW	SPI Voltage is 3.3V

←

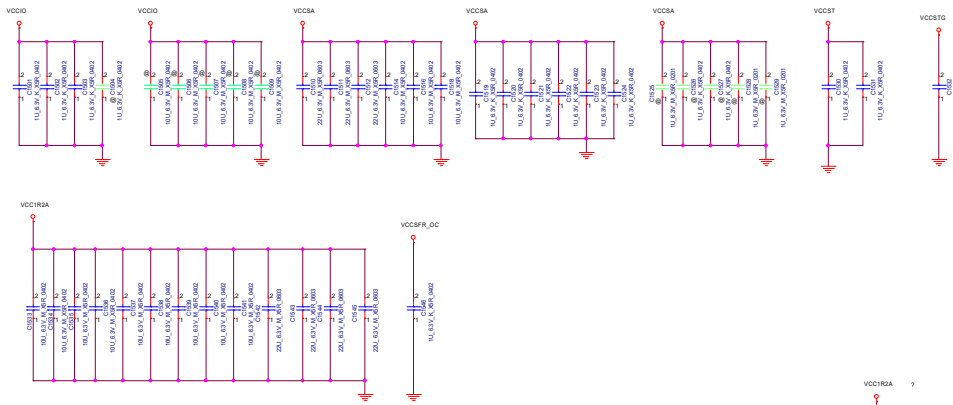


VccGT	PDG	LCFC
47uF_0805	4	NW:0/PWR:0
22uF_0603	15	NW:0/PWR:24
10uF_0402	15	NW:5/PWR:10
1uF_0402/0201	11	NW:0/PWR:10

VccCORE	PDG	PDG
47uF_0805	18	NW:0/PWR:0
22uF_0603	9	NW:0/PWR:24
10uF_0402	22	NW:0/PWR:10
1uF_0402/0201	42	NW:0/PWR:10



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001	001	001		01



VccSA	PDG	LCFC
47uF_0805	2	HW:0/PWR:0
22uF_0805	0	HW:0/PWR:8
10uF_0402	13	HW:6/PWR:7
1uF_0402	0	HW:6/PWR:7

VDDO	PDG	LCFC
47uF_0805	0	HW:0/PWR:0
22uF_0805	1	HW:4/PWR:6
10uF_0402	9	HW:9/PWR:0
1uF_0402	4	HW:0/PWR:0

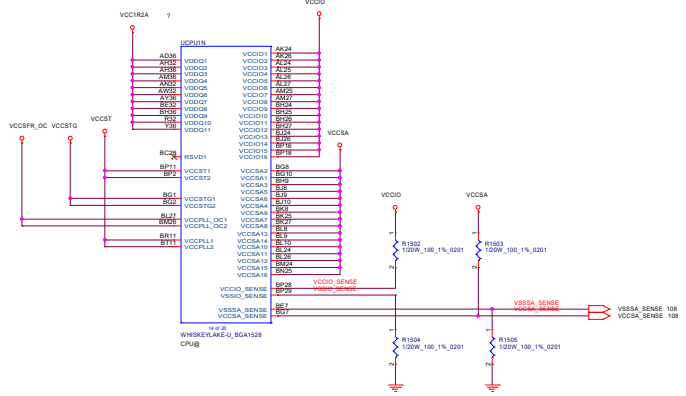
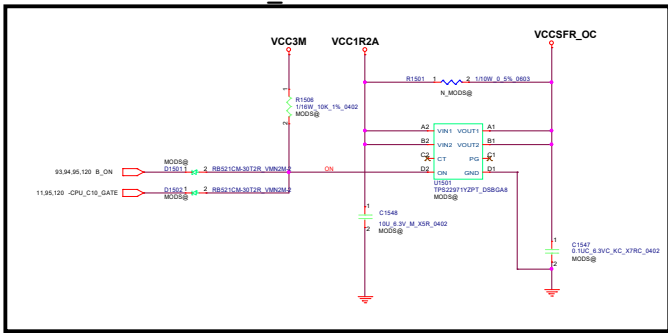
VccIO	PDG	LCFC
47uF_0805	0	HW:0/PWR:0
22uF_0805	0	HW:0/PWR:4
10uF_0402	6	HW:0/PWR:0
1uF_0402	4	HW:3/PWR:0

VccPLL	PDG	LCFC
1uF_0402	1	HW:2/PWR:0
0.1uF_0201	1	HW:0/PWR:0

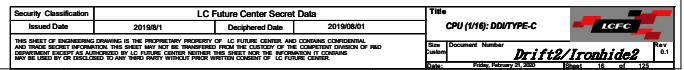
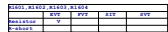
VccPLL_OC	PDG	LCFC
1uF_0402	1	HW:1/PWR:0

Power Switch VCCPLL_OC

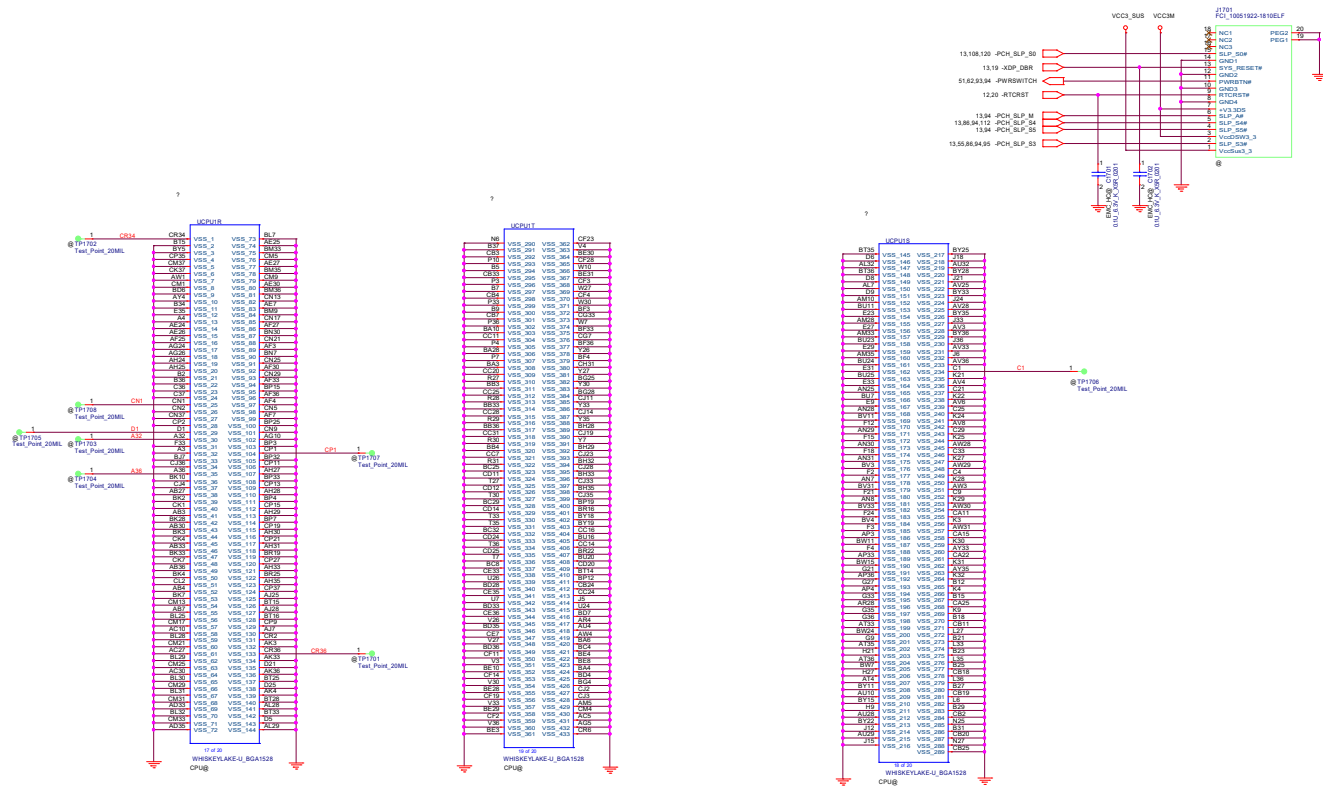
1.10V & 0.169 A




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CPU (13/16): CPU POWER (2/2)				Rev 0.1	
C				Rev 0.1	
Date				2019/08/01	

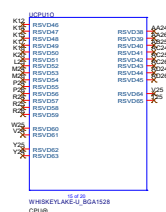
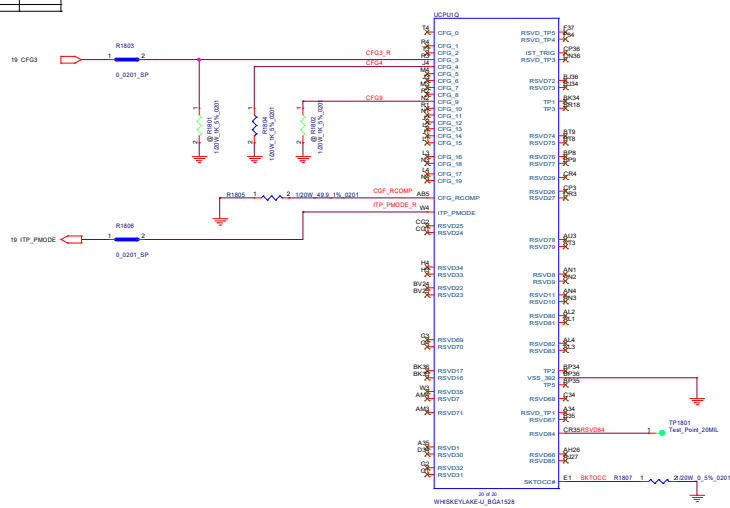



APS/PETS Interface




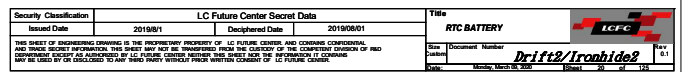
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		Date		Revision	
		Friday, January 25, 2020		Sheet 1 of 125	

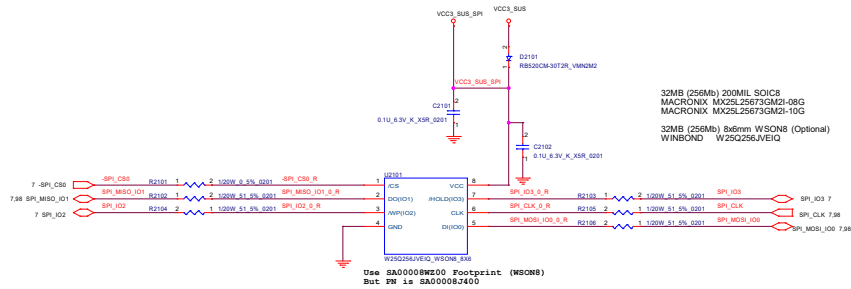
R1003, R1004				
	RVE	FVE	AV	RT
Resistor	V			
Capacitor				



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			<i>Drift2/Ironhide2</i>		
			Date Friday, February 26, 2020	Sheet 1 of 125	





TABLE

SPI100 PIN HEADER INTERFACE (TOP VIEW)					
1	VCC	D12.1	GND	GND	2
2	CS#	R102.2	R101.2	CLK	4
3	MISO	R104.2	R103.2	MOSI	6
4	(NC)	N/A	N/A	(RESET)	8

ON BOARD MEMORY

HSANAGN6CMR-XNC
X7848C1001
8Q8@
H4010A2C10

K4AAG16SWA-BCWE
X7848C1002
8Q8@
H4010A2C10

MT40A1G16KNR-075:E
X7848C1003
8Q8@
H4010A2C10

K4A8G16SWAMCTD
X7848C1004
16Q8@
H4010A2C10

HSANAGN6CMR-VKC
X7848C1005
16Q8@
H4010A2C10

Media card select

RTS5232S-GR
SA00077K00
H@

GL9750-OYL3
SA00009JG10
S@

GBE

WG01SLM SLKJ2
SA000073020
GBE_V@

WG01TV SLKJ4
SA000072210
GBE_W@

PCB

DA215001100
PCB@

Harrison Peak 2 AX201 Non vPro

UMLAN1
Harrison Peak 2 AX201 Non vPro
PC25501E00
CNV_W@

UMLAN1
Harrison Peak 2 AX201 Non vPro
PC25501E10
MP_CNV_W@

N17-G3 VX76

MCRCN G3 V2G
X7848C1008
S17G3@

HYNDX G3 V2G
X7848C1007
H17G3@

SAMBUNG G3 V2G
X7848C1008
S17G3@

N19M-Q1 VX76

Micron ZG
X7848B01002
M19Q@

Hyntex ZG
X7848B01001
H19Q@

CML Vpro CPU Config

UCPU1
CML_E_10310U
SA0000A4000
OS_10310@

UCPU1
CML_T_10610U
SA0000A0900
OS_10610@

UCPU1
CML_T_10810U
SA0000A4A00
OS_10810@

UCPU1
CML_E_10310U
SA0000A0910
MP_10310@

UCPU1
CML_T_10610U
SA0000A0910
MP_10610@

UCPU1
CML_T_10810U
SA0000A4A10
MP_10810@

CML non Vpro CPU Config

UCPU1
CML_E_10210U
SA0000A0G00
OS_10210@

UCPU1
CML_T_10510U
SA0000A1E00
OS_10510@

UCPU1
CML_T_10710U
SA0000A4B10
OS_10710@

UCPU1
CML_E_10210U
SA0000A0G20
MP_10210@

UCPU1
CML_T_10510U
SA0000A1E20
MP_10510@

UCPU1
CML_T_10710U
SA0000A4B20
MP_10710@

Harrison Peak 2 AX201 vPro


UMLAN1
Harrison Peak 2 AX201 vPro
PC25501D00
OS_CNV_V@

UMLAN1
Harrison Peak 2 AX201 vPro
PC25501D10
MP_CNV_V@


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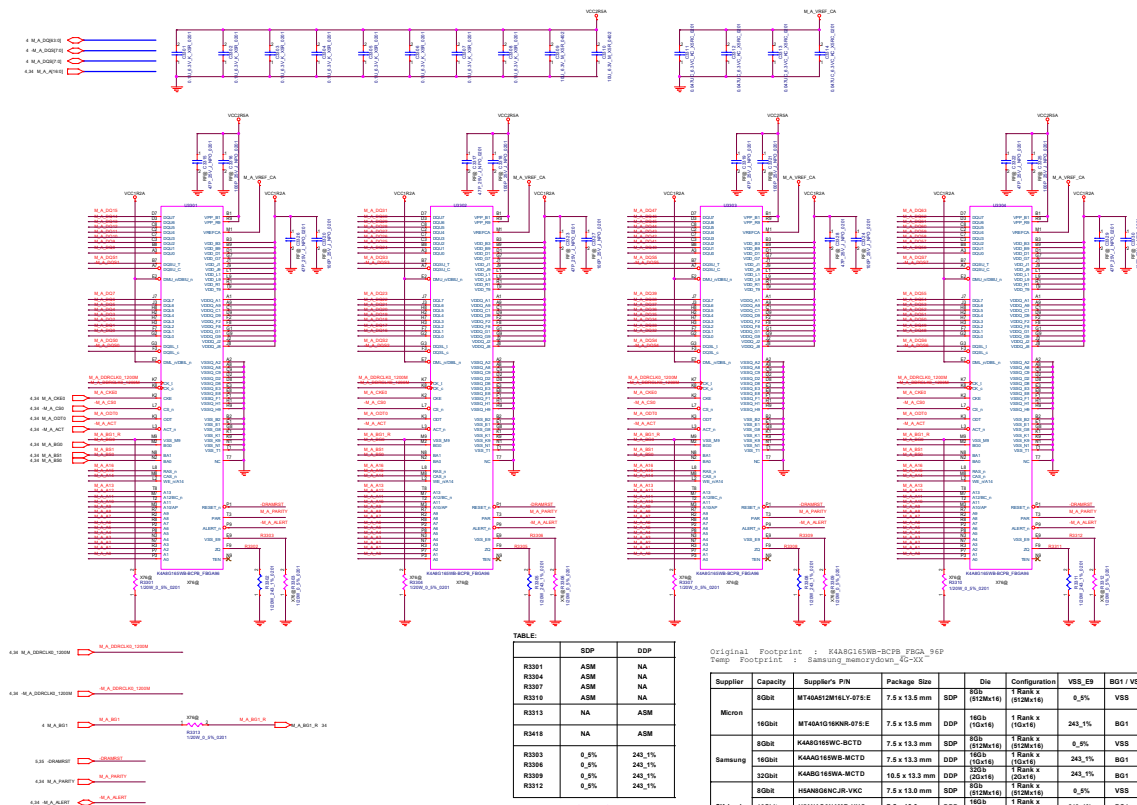
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<small>Author: Katelyn M. 2019</small>				<small>Sheet: 36 of 124</small>	



TABLE

	SDP	DDP
R3001	ASM	NA
R3004	ASM	NA
R3007	ASM	NA
R3010	ASM	NA
R3013	NA	ASM
R3016	NA	ASM
R3003	0,5%	243,1%
R3006	0,5%	243,1%
R3009	0,5%	243,1%
R3012	0,5%	243,1%

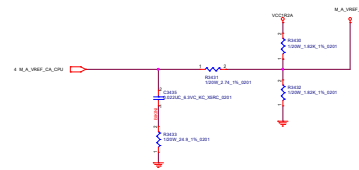
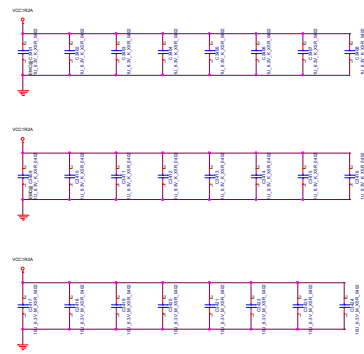
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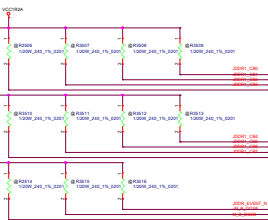
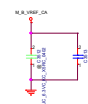
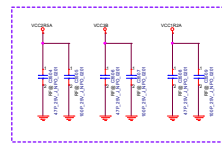
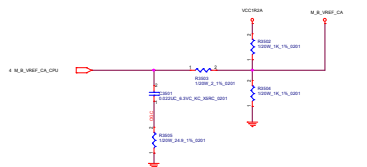
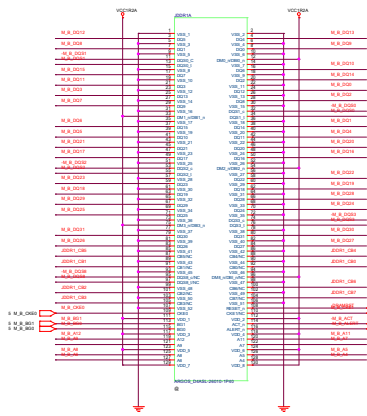
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Temp Footprint : Samsung_memorydown_40-XX

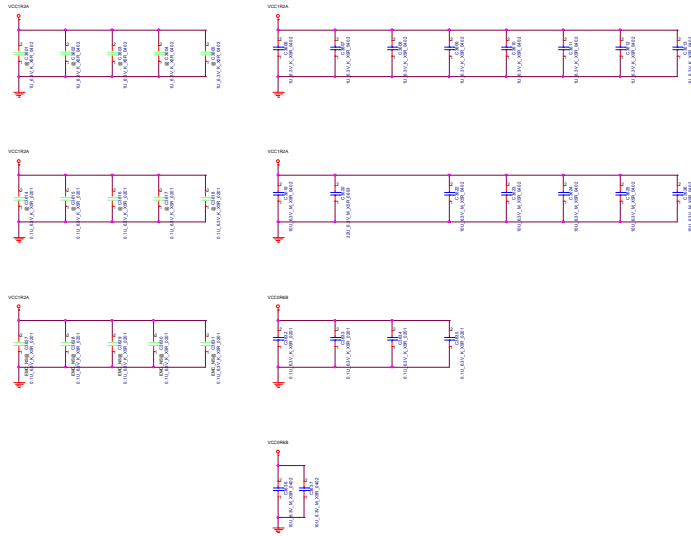
Supplier	Capacity	Supplier's PN	Package Stu	Die	Configuration	VSS_EB	BD1 / VBS	Ch. A	Ch. B
Micron	8Gb	MT46A016M16LY-075-E	7.5 x 13.5 mm	SDP	8Gb (10x16)	0,5%	VSS	40B	SC0MM
	16Gb	MT46A016M16LY-075-E	7.5 x 13.5 mm	DDP	16Gb (10x16)	243,1%	BD1	80B	SC0MM
Samsung	8Gb	KA8G165WC-BCTD	7.5 x 13.3 mm	SDP	8Gb (10x16)	0,5%	VSS	40B	SC0MM
	16Gb	KA8G165WB-MCTD	7.5 x 13.3 mm	DDP	16Gb (10x16)	243,1%	BD1	80B	SC0MM
SK hynix	8Gb	HSAN65NC-JR-VKC	7.5 x 13.0 mm	SDP	8Gb (10x16)	0,5%	VSS	40B	SC0MM
	16Gb	HSAN65NCJR-UHC	7.5 x 13.0 mm	DDP	16Gb (10x16)	243,1%	BD1	80B	SC0MM
SMART	8Gb	EQC8G8W16XCTDBN1T	7.5 x 13.5 mm	SDP	8Gb (10x16)	0,5%	VSS	40B	SC0MM
	16Gb	HTHAN65NFR-VKD	7.5 x 13.5 mm	DDP	16Gb (10x16)	243,1%	VSS	40B	SC0MM

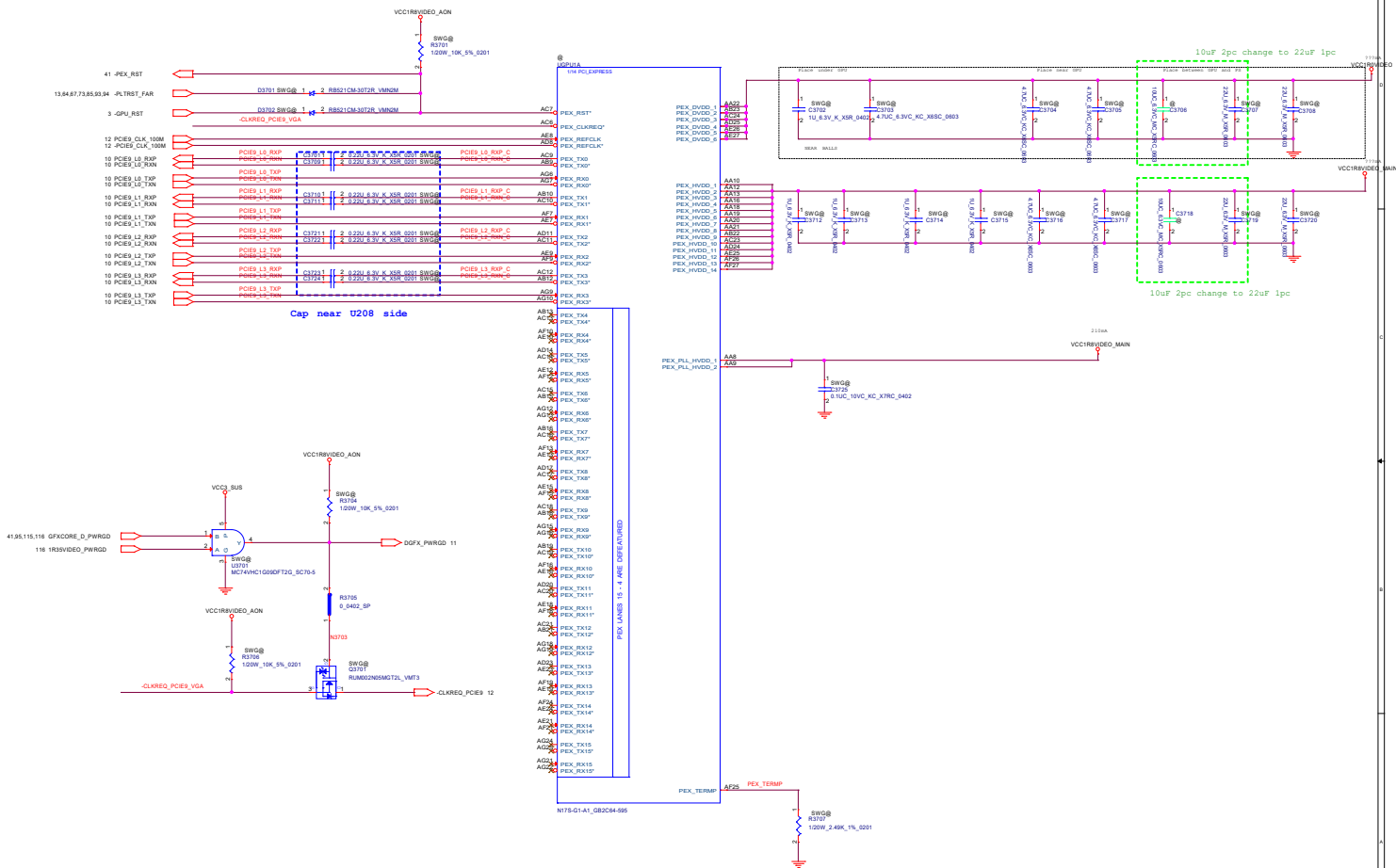
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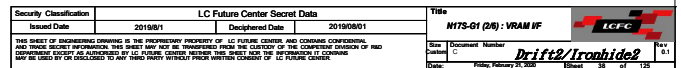


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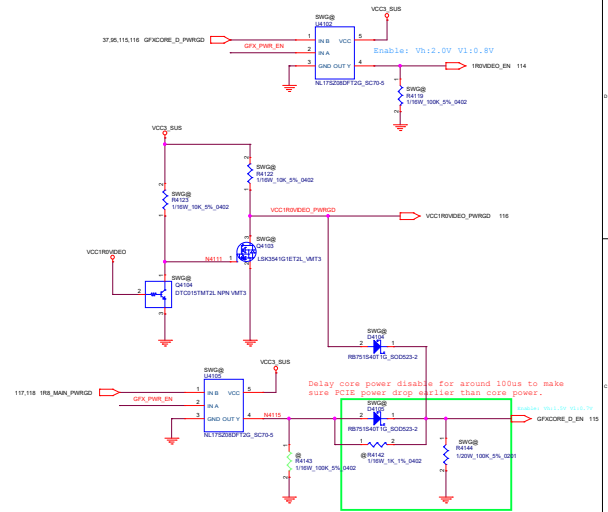


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Issued Date		Deciphered Date		MTS-G1 (V4) : PEG IF	
2019/01		2019/08/01			
Rev		Document Number		Drift2/Ironhide2	
0				Rev 6.1	
Date		File		File	




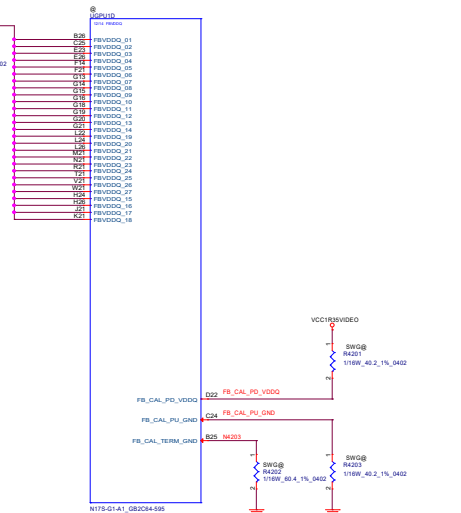
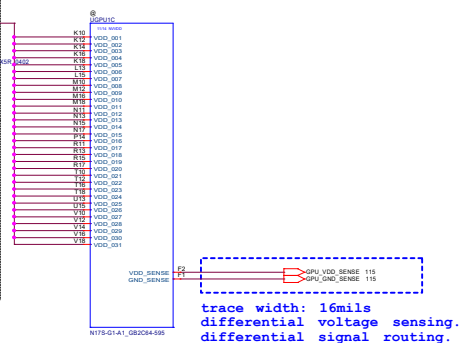
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Size	Document Number	Rev.			
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Author	Editor	Checker	Approver	Date	



Strap Pins ^{see Note}			RAMCFG Setting Number
STRAP2	STRAP1	STRAP0	(see Memory RVL for memory configs corresponding to these numbers)
L	L	L	0 (0x0000)
L	L	H	1 (0x0001)
L	H	L	2 (0x0002)
L	H	H	3 (0x0003)
H	L	L	4 (0x0004)
H	L	H	5 (0x0005)
H	H	L	6 (0x0006)
H	H	H	7 (0x0007)
L	L	M	8 (0x0008)
L	H	M	9 (0x0009)
L	M	L	10 (0x000A)
L	M	H	11 (0x000B)
M	L	L	12 (0x000C)
M	L	H	13 (0x000D)

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<p>DATE: Friday, February 21, 2020</p>			<p>DIFF: 41 47 50</p>		



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Author		Kenny Mak		2019/08/01	
Revised		20		1/1	

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			Sheet 24 of 124

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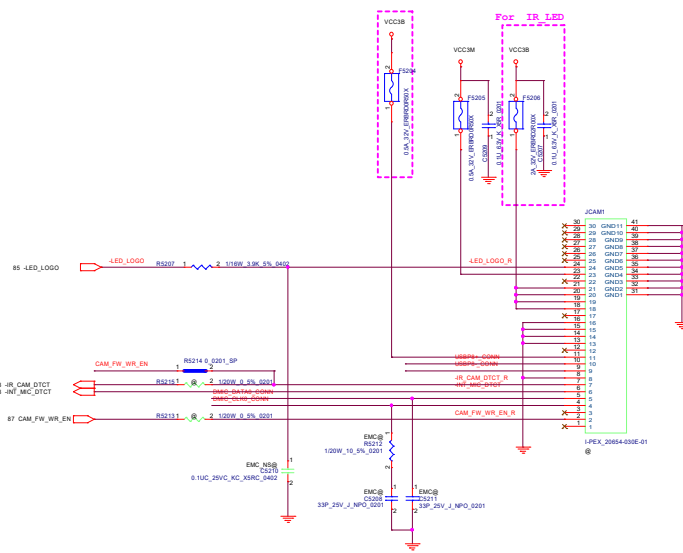
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Unit	Drift2/Ironhide2		01		
Author	Kenny Mak		2019/08/01	Sheet 01 of 01	

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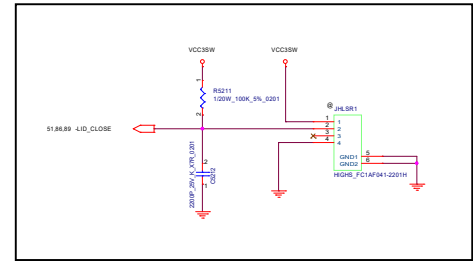
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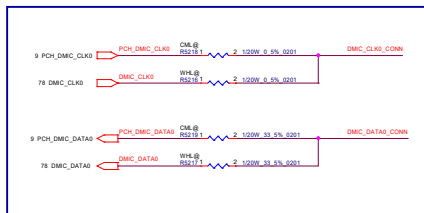
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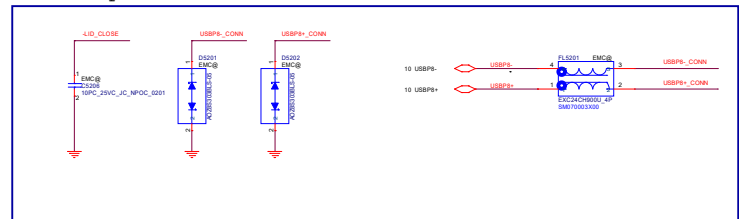
Connector To LID Board



Select Intel D-MIC or Audio Codec D-MIC



EMC Components Part

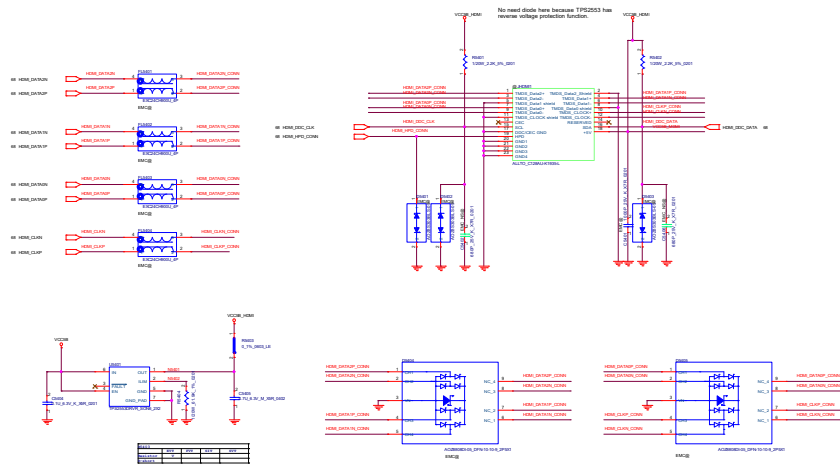


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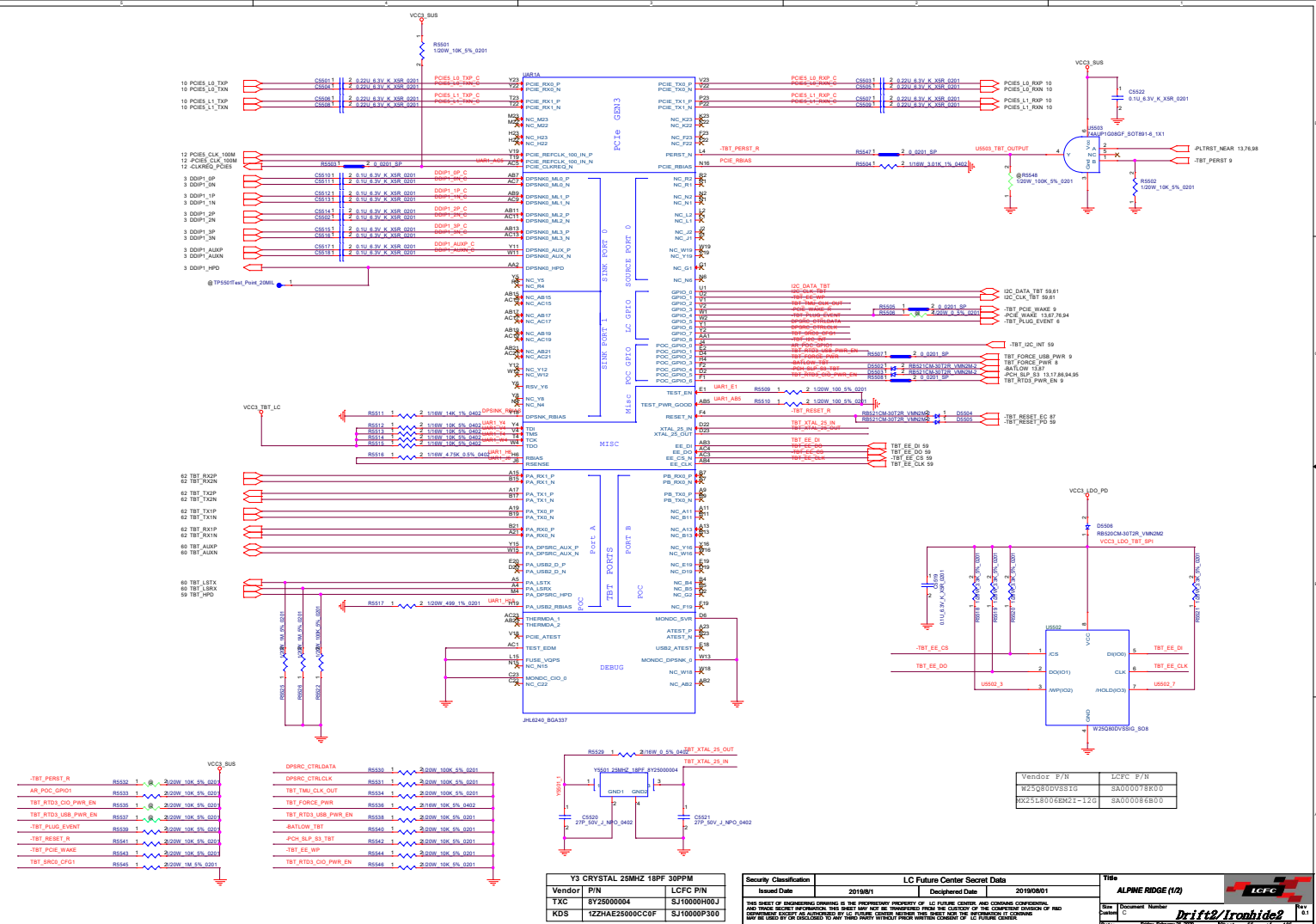
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<small>Author</small>				<small>Issue History 1, 2019</small>	
<small>Issue</small>				<small>Sheet 36 of 124</small>	



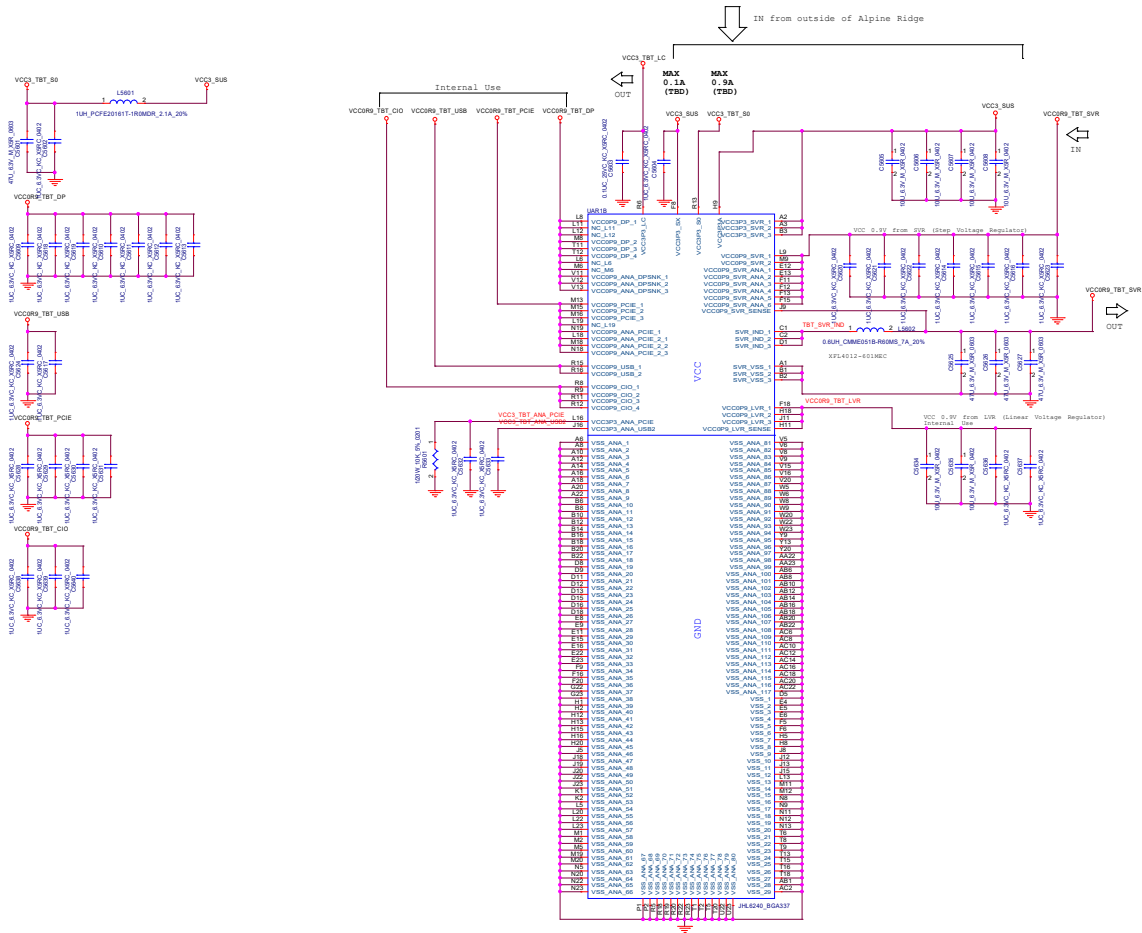
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Y3 CRYSTAL 25MHZ 18PF 30PPM		
Vendor	P/N	LCFC P/N
TXC	8Y25000004	SJ10000H00J
KDS	1ZZHAE25000CC0F	SJ10000P300

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			Author Kenny Yip/2019/8/1
			Sheet 01 of 01

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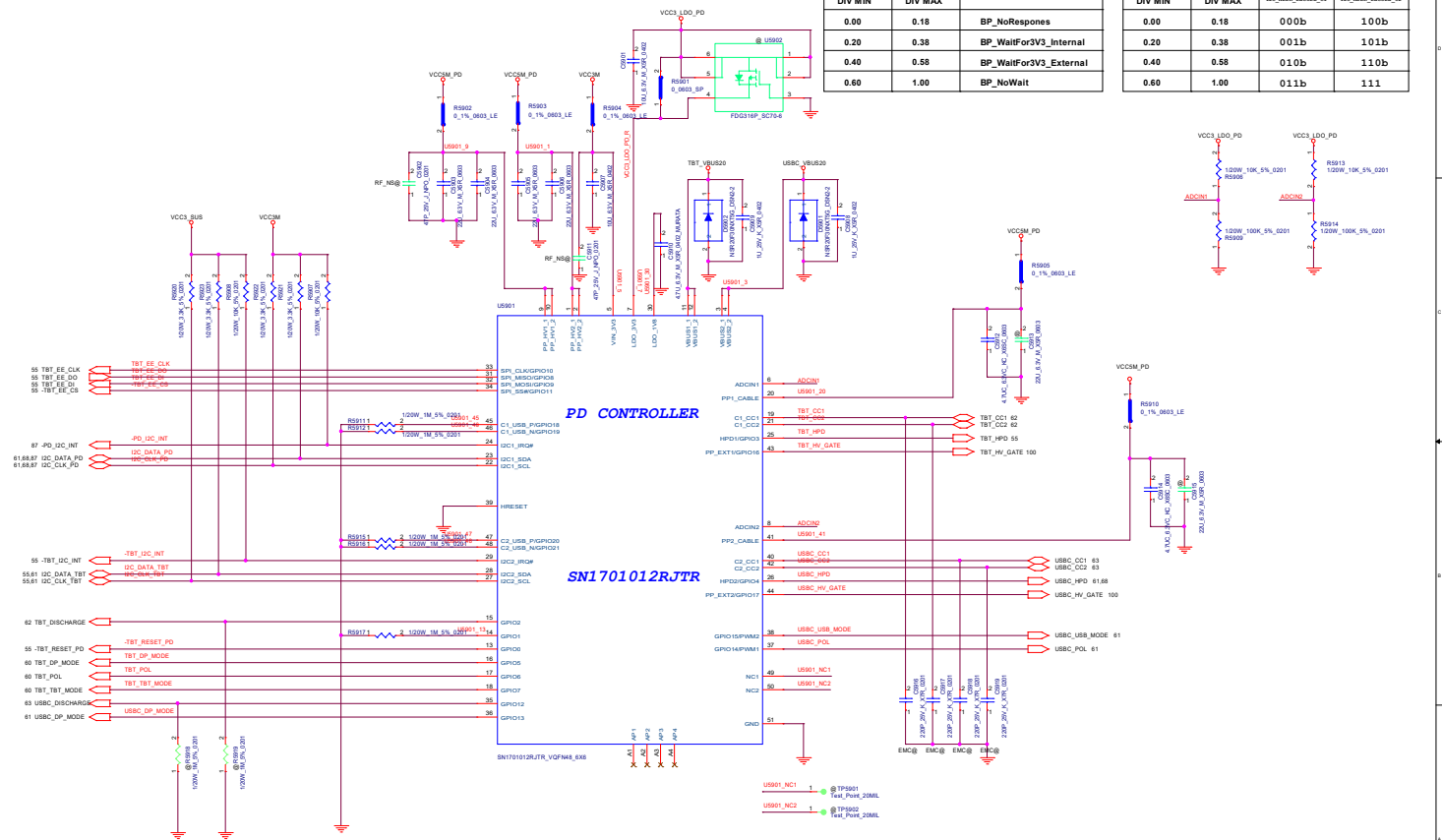
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			Document Number Drift2/Ironhide2
			Rev 01
			Author Kenny Mak Date 2019/08/01
			Sheet 01 of 01

TABLE BUSPOWER Configuration - ADCIN1

DIV = R2/ (R1+R2)		Configuration
DIV MIN	DIV MAX	
0.00	0.18	BP_NoResponses
0.20	0.38	BP_WaitFor3V3_Internal
0.40	0.58	BP_WaitFor3V3_External
0.60	1.00	BP_NoWait

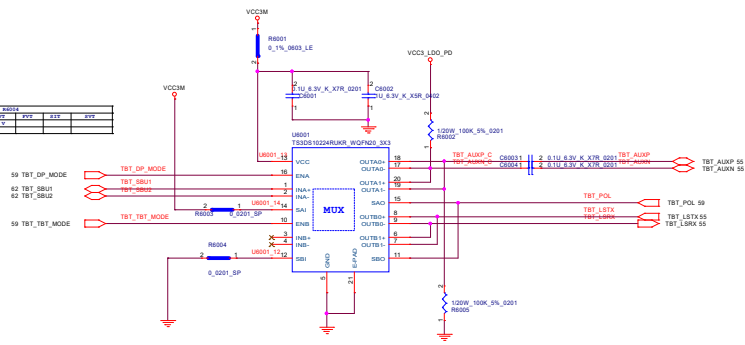
TABLE BUSPOWER Configuration - ADCIN2

DIV = R2/ (R1+R2)		I2C Unique Address [3:1]	
DIV MIN	DIV MAX	I2C_ADDR_ADDR0000_01	I2C_ADDR_ADDR0000_02
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0.20	0.38	001b	101b
0.40	0.58	010b	110b
0.60	1.00	011b	111

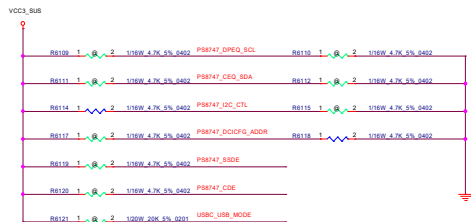
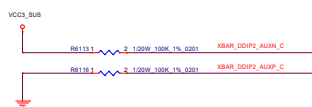
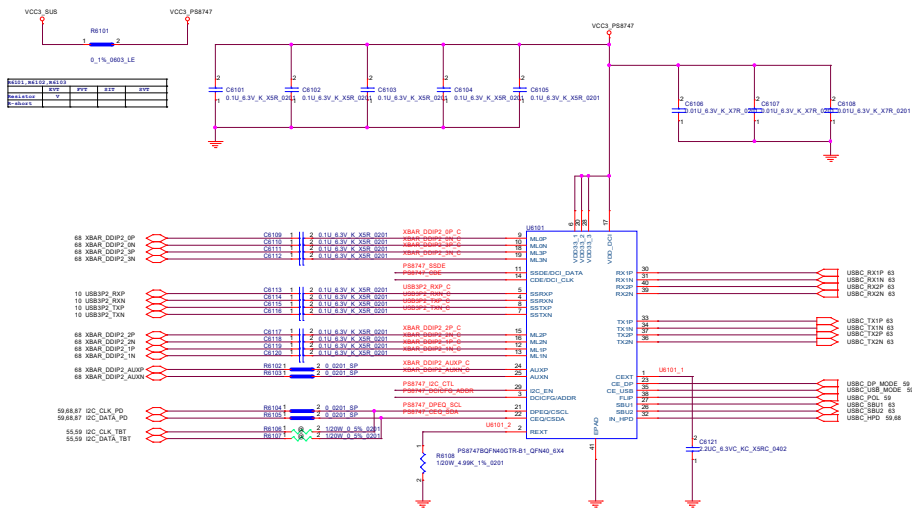


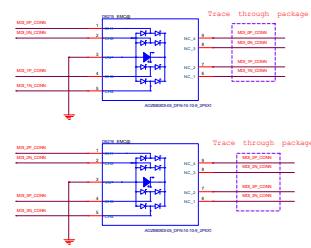
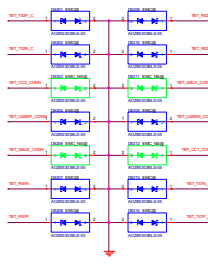
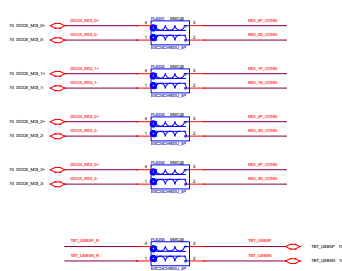
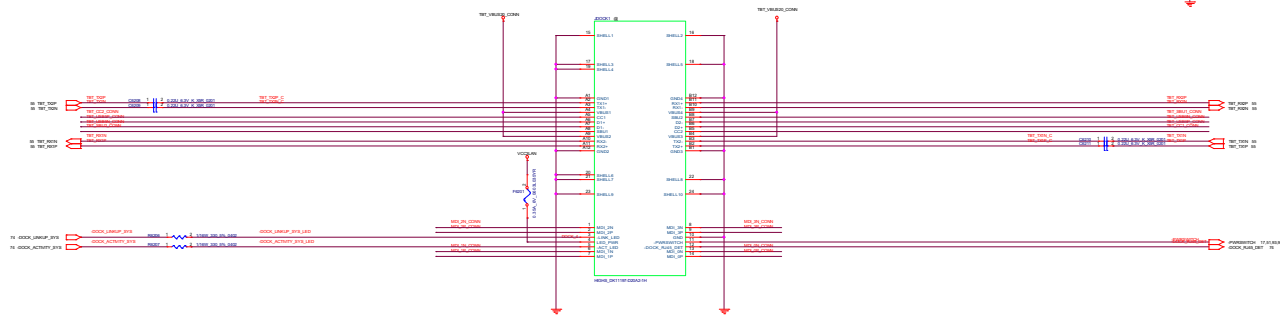
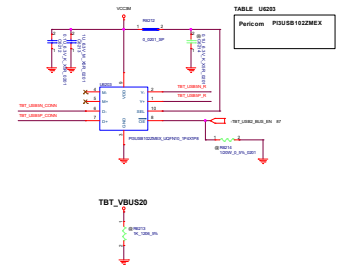
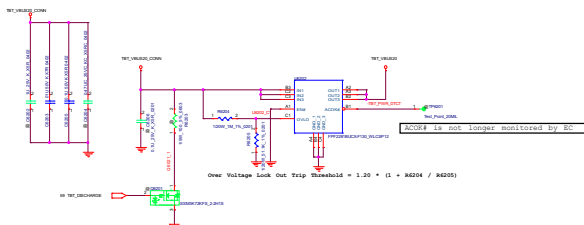
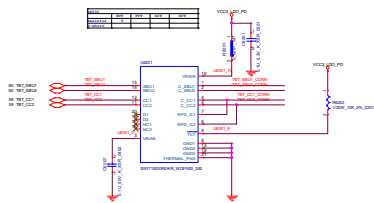
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Author	LCFC	Rev	01

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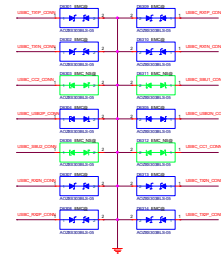
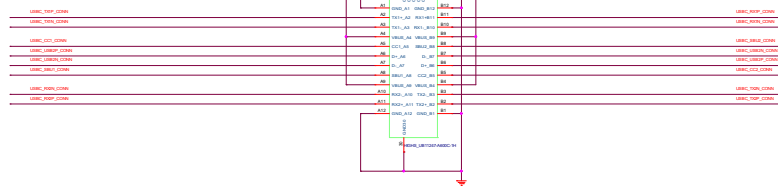


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Author		Date		Sheet	
Kings, Anthony D. 2019		2019/08/01		01 of 01	



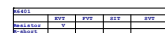



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Size	Standard	Number	C	Rev	6.1
<p><i>Drift2/Ironhide2</i></p>				<p>Feb 14 2019</p>	
<p>Friday, February 23, 2020</p>				<p>12:00 PM</p>	

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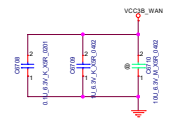
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Date		Friday, February 25, 2022		Sheet 01 of 100	




H=2.00mm Connector

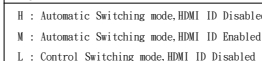
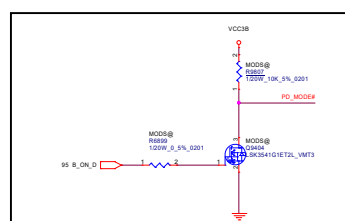



State # ¹	Module Configuration Decodes				Module Type and Main Host Interface	Port Configuration	Module
	CONFIG_0 ² (Pin 21)	CONFIG_1 ³ (Pin 22)	CONFIG_2 ⁴ (Pin 75)	CONFIG_3 ⁵ (Pin 69)			
0	GND	GND	GND	GND	SSD - SATA	N/A	
1	GND	GND	GND	NC	SSD - PCIe	N/A	
2	GND	GND	NC	GND	WWAN - PCIe	0	
3	GND	GND	NC	NC	WWAN - PCIe	1	
4	GND	NC	GND	GND	WWAN - PCIe, USB 3.1 Gen1	0	WWAN L850
5	GND	NC	GND	NC	WWAN - PCIe, USB 3.1 Gen1	1	
6	GND	NC	NC	GND	WWAN - PCIe, USB 3.1 Gen1	2	
7	GND	NC	NC	NC	WWAN - PCIe, USB 3.1 Gen1	3	
8	NC	GND	GND	GND	WWAN - SSIC	0	WWAN L830
9	NC	GND	GND	NC	WWAN - SSIC	1	
10	NC	GND	NC	GND	WWAN - SSIC	2	
11	GND	GND	NC	NC	WWAN - PCIe	3	
12	NC	NC	GND	GND	WWAN - PCIe	0	
13	NC	NC	GND	NC	WWAN - PCIe	3	
14	NC	NC	NC	GND	WWAN - PCIe, USB 3.1 Gen1	Vendor Defined	WWAN L860
15	NC	NC	NC	NC	No Module Present	N/A	



M.2 module side	Description	MIMO mode
L850-GL,L830-EB	#68=NC	2
L860-GL (#68= antenna cfg)	#68=internal pull up(100KΩ)	4

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Date:	Friday, February 23, 2020	Signal	7	of	125



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			Docu. Name Draw. Name	Rev. Name Rev. Date

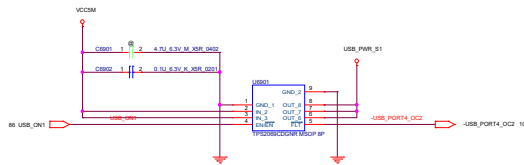
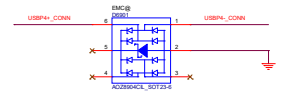
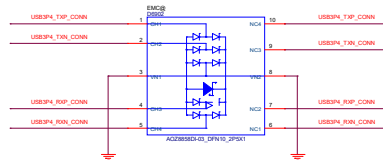
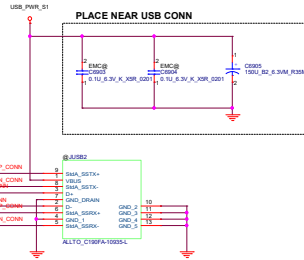
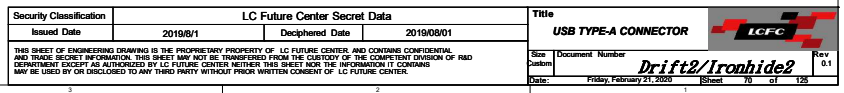


TABLE of USB3.0 Single (U6901)		
Vendor	PIN	LCFC PIN
T1	TPS2069CDGNR	SA00005TE00
Rohm	BD82032FVJ-GE2	SA000084S00


TPS2069CDGNR	BD82032FVJ-GE2	SA00005TE00	SA000084S00
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
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9	9	9	9
10	10	10	10

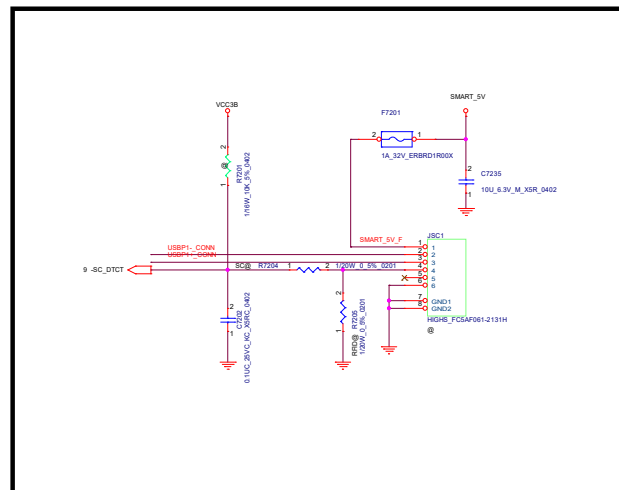



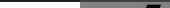
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Rev	Revision	Rev	Revision	Rev	
Date		Friday, February 2, 2020		Sheet	61 of 172



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Date		Friday, February 24, 2020			
				175	

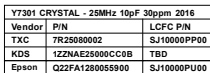
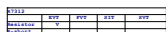


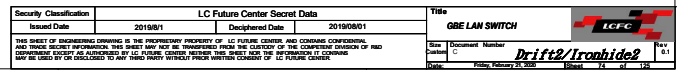


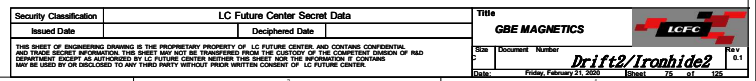
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vPro Capability		
GbE PHY	Yes	No
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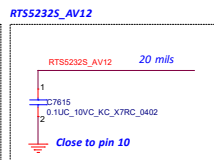
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SKU	Description	LCFC P/N
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non-vPRO	WGI219V SLKJ4	SA000072Z10

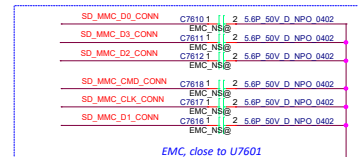
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				Friday, February 25, 2021		Sheet 13 of 16	





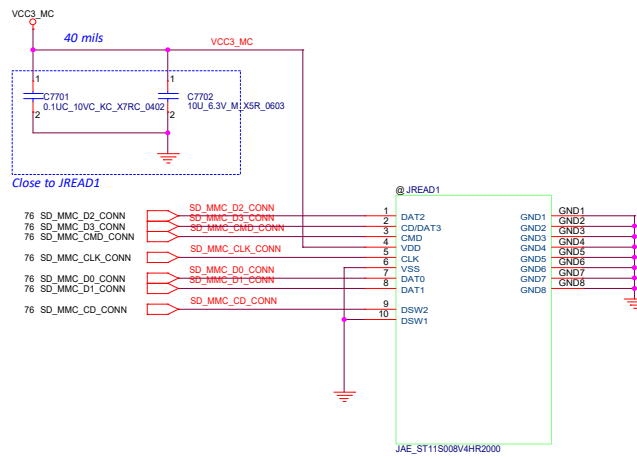


	R7607	R7620
non-RTD3	ASM	non-ASM
RTD3	non-ASM	ASM



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Title			
MEDIA CARD CONTROLLER			
Size	Document Number	Rev	
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Issued Date		2019/8/1		Deciphered Date		2019/08/01		Size	
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TABLE MIC HW ENABLE/DISABLE

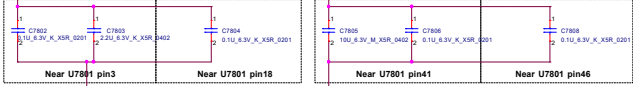
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R0805

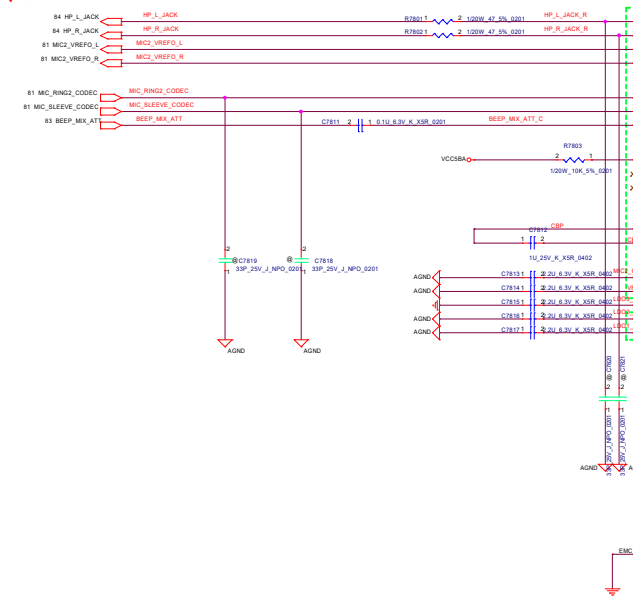
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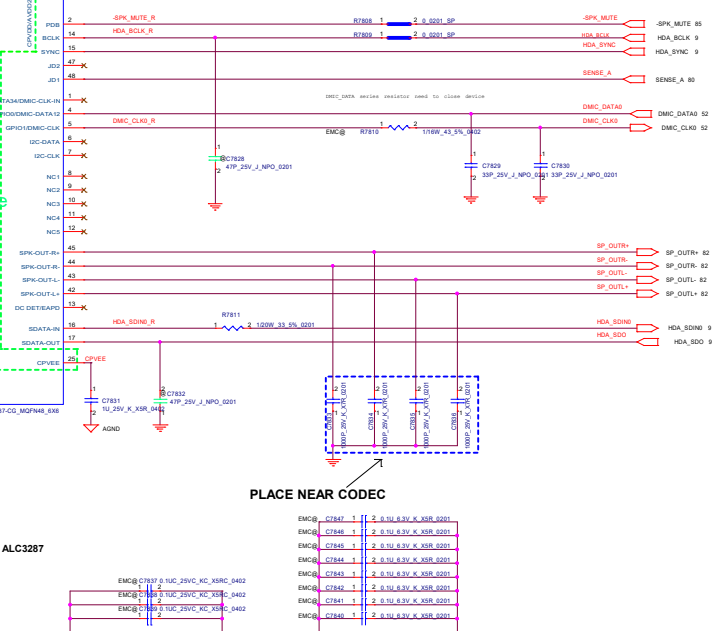
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Analog Plane

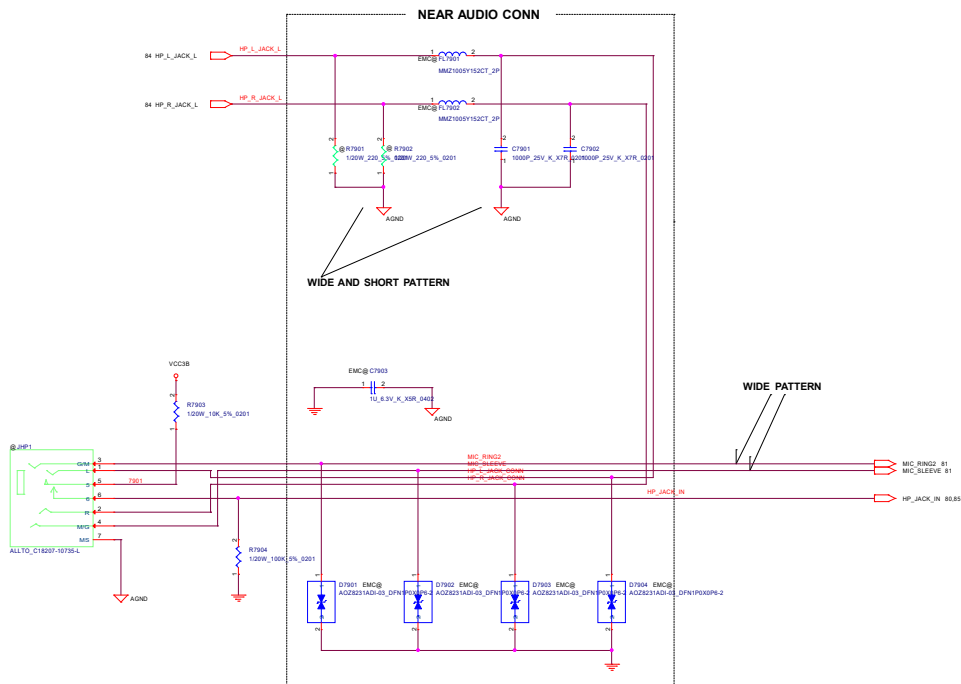


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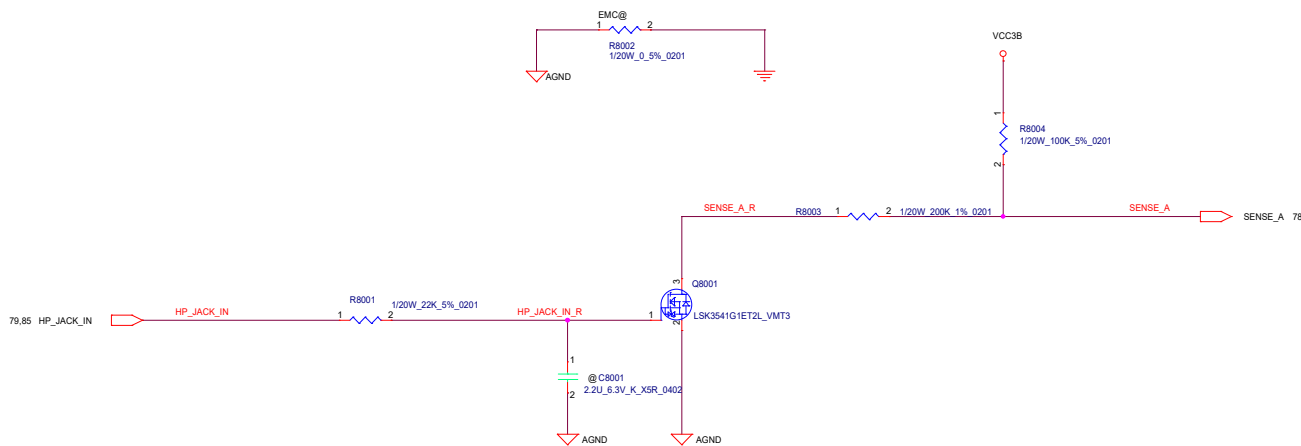
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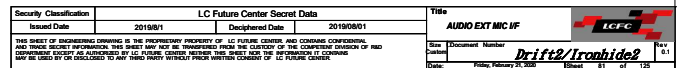


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AUDIO CONNECTOR			Rev 1 Drift2/Ironhide2 81




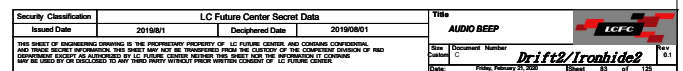
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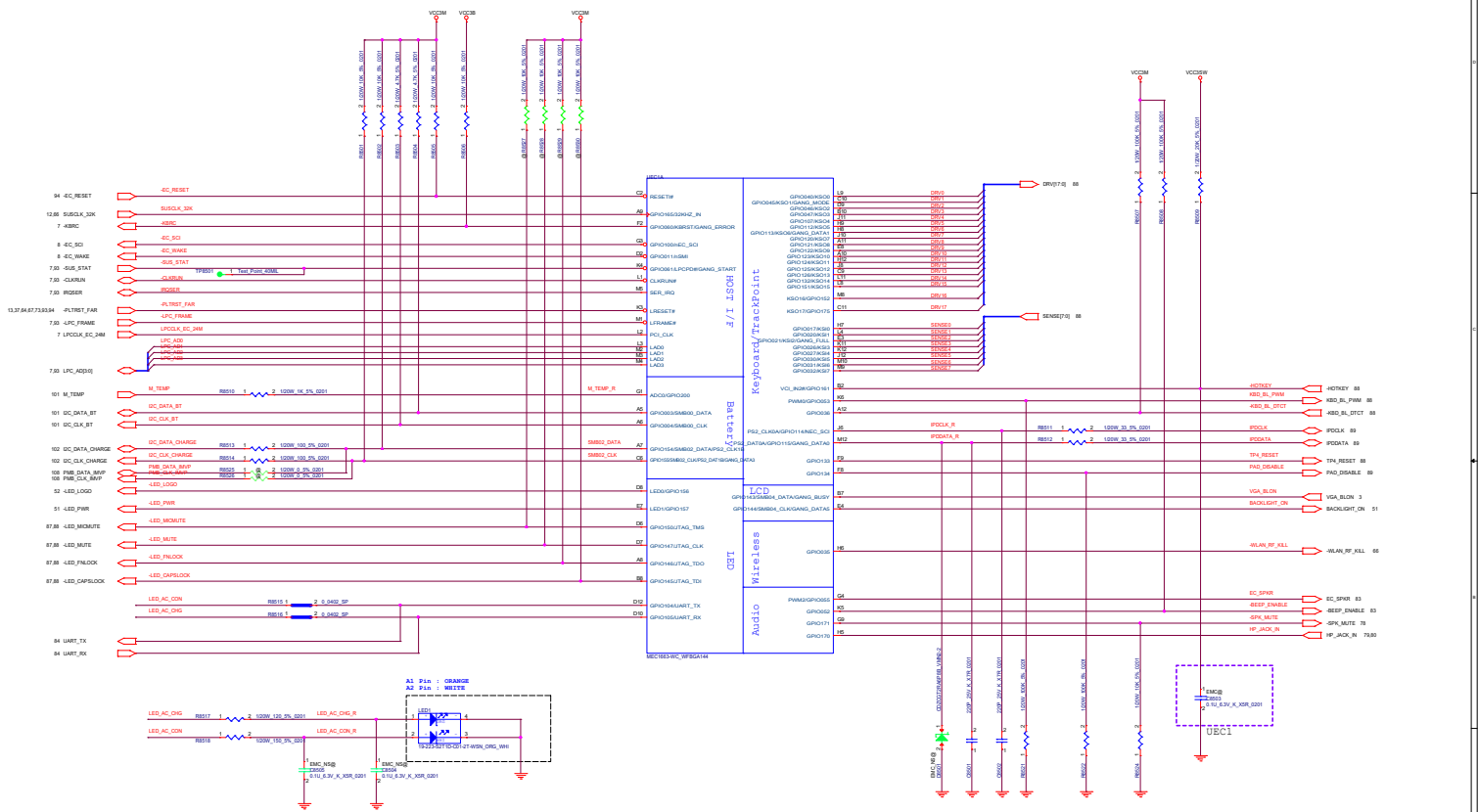
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Size	Document Number	<i>Drift2/Ironhide2</i>	
Date:	Friday, February 21, 2020	Sheet	60 of 125
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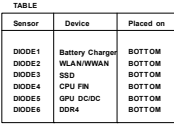


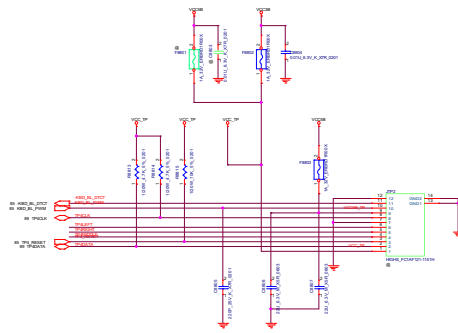
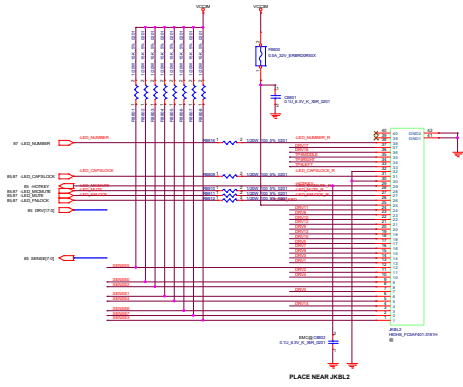
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Size		Document Number		Rev	
Drawing		Date		6.1	
C		Friday, August 2, 2020		Sheet 6 of 25	





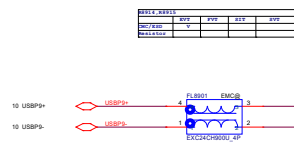
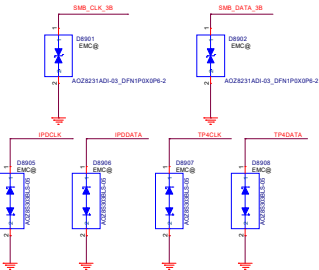
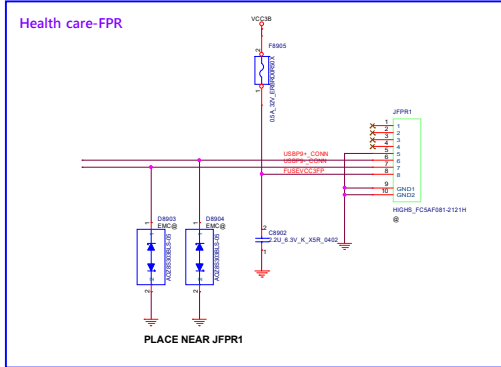
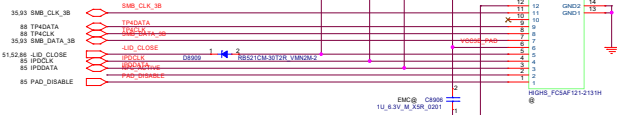
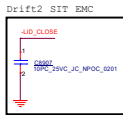
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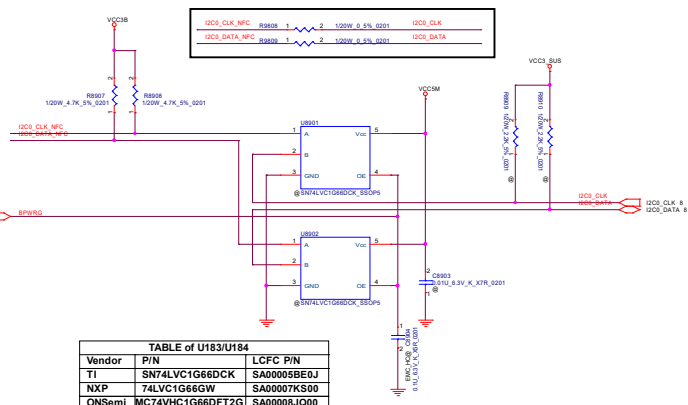
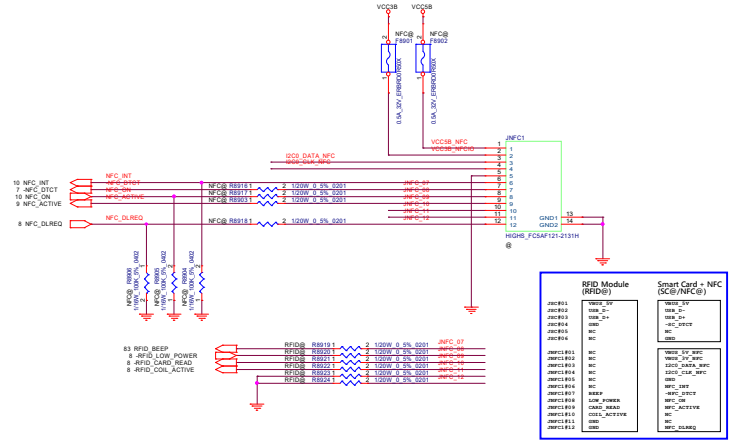


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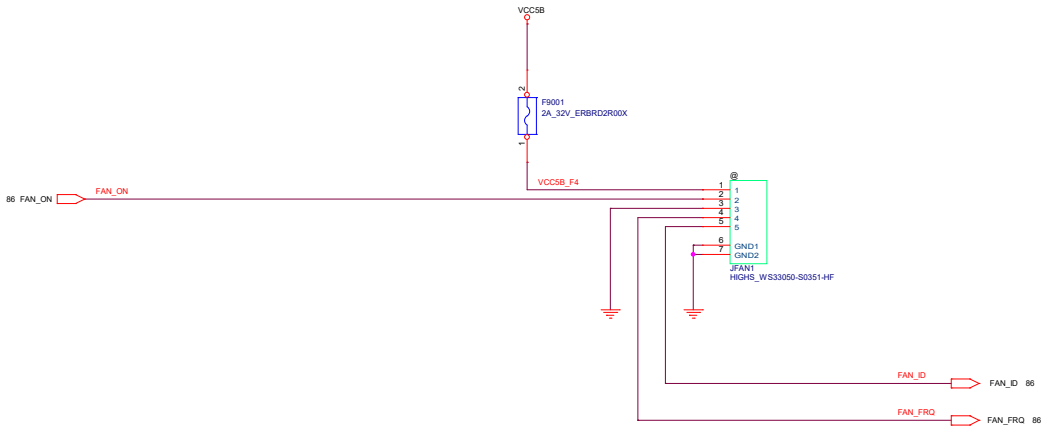


PLACE NEAR JFPR1



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NXP	74LVC1G66GW	SA00007KS00
ONsemi	MC74VHC1G66DFT2G	SA00008JQ00

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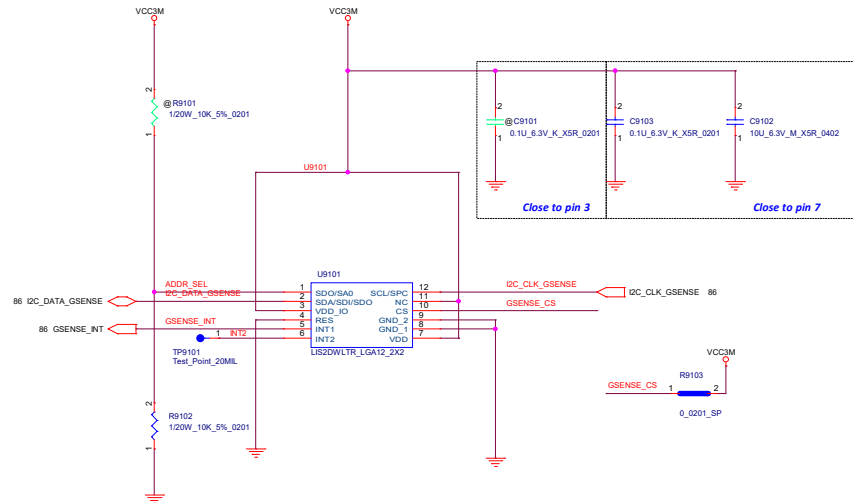
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Issued Date	2019/8/1	Deciphered Date
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Title		FAN CONNECTOR		LCFC	
Size	Document Number	Drift2/Ironhide2		Rev	0.1
Custom					
Date	Friday, February 21, 2020	Sheet	80	of	125

HDD Support	VCC3M
SSD Only	VCC3B

P/N	ADDR_SEL	Address
LIS2DWLTR	H	32h (W) & 33h (R)
	L	30h (W) & 31h (R)
KX022-1020	H	3Eh (W) & 3Fh (R)
	L	3Ch (W) & 3Dh (R)

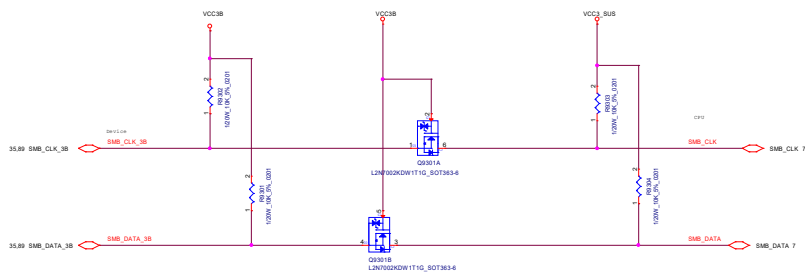
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				Custom	<i>Drift2/Ironhide2</i>		0.1
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			Document Number Drift2/Ironhide2
			Rev 01
			Author Kenny Yeh
			Check W
			Draw W
			Rev W

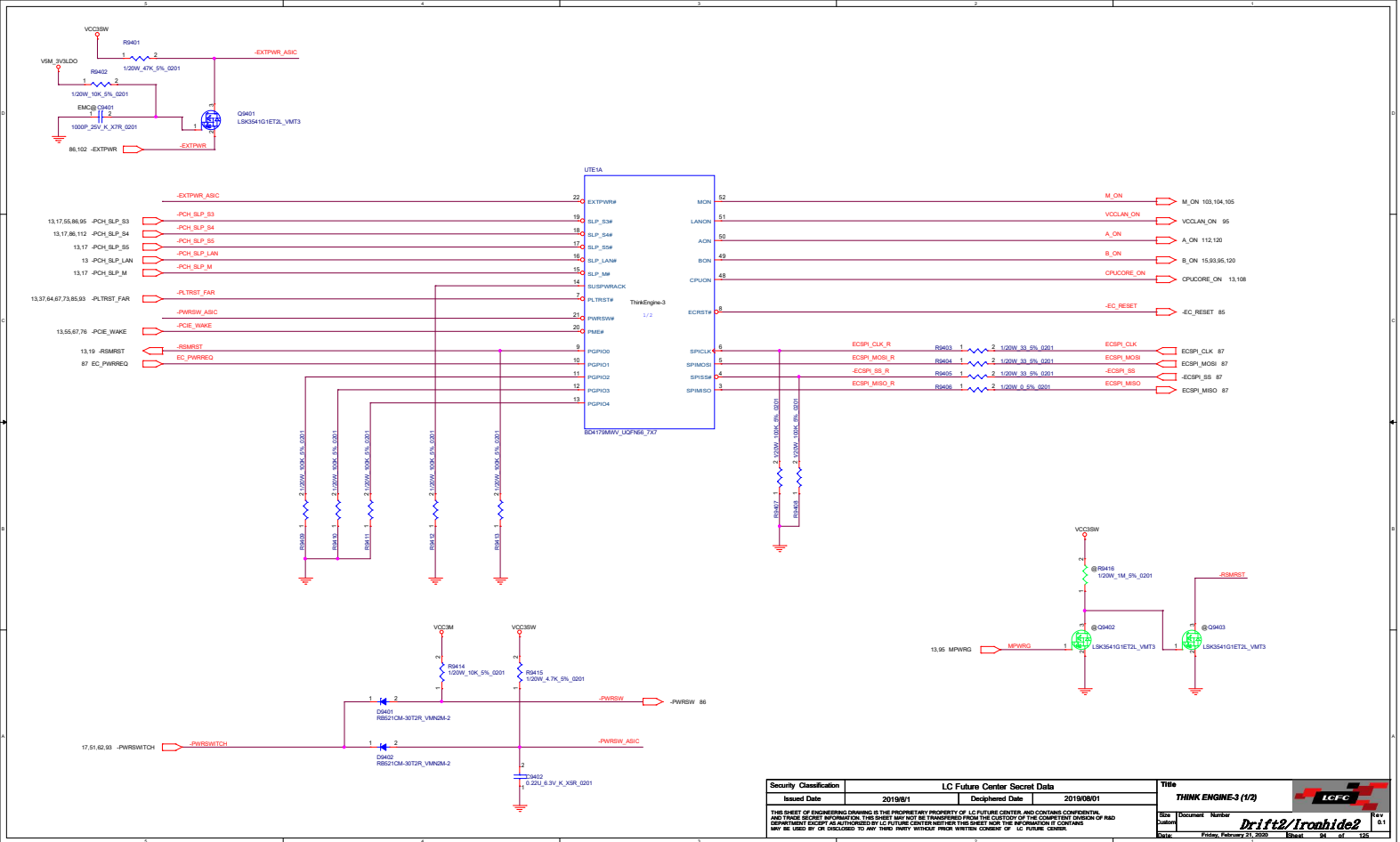



TABLE

REF DES	ENABLE	DISABLE
J5	ASM	NO_ASM
R220	ASM	NO_ASM

LOGIC






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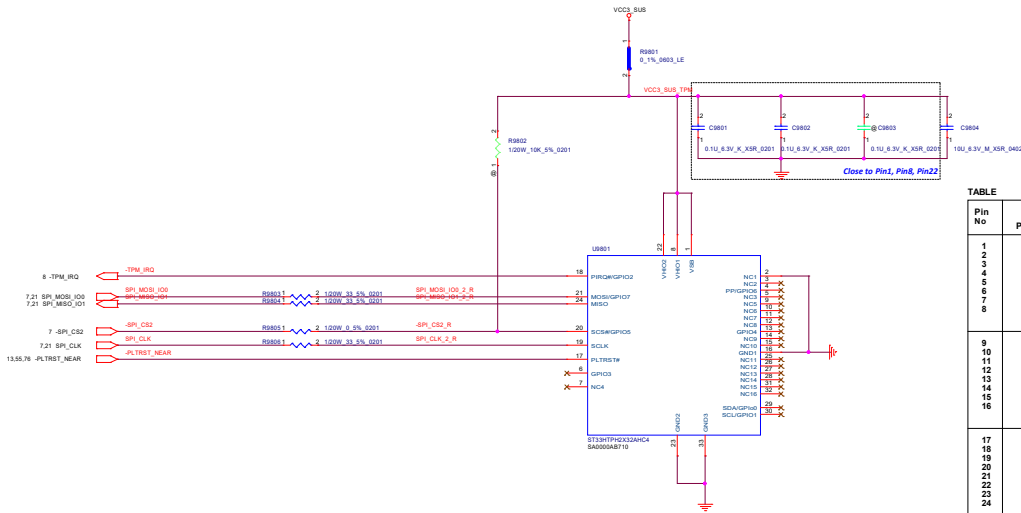


TABLE of TPM (U9801)			
Vendor	PIN	LCFC PIN	
Nuvoton	NPCT750LABYX	SA00008KS20	
ST Micro	ST33HTPH2X32AHC4	SA0000AB710	Drift2 FVT SMT on board

Pin No	TCG PTP Spec (v38)	Nuvoton NPCT750LABYX	ST Micro ST33HTPH2E32AHC0
1	VDD	VSB	NC
2	GND	NC	GND
3	NC	NC	NC
4	GPIO	GPIO/PP	PP
5	NC	NC	NC
6	GPIO	GPIO3	NC
7	GPIO	NC	GPIO
8	VDD	VHIO	NC
9	NC	NC	NC
10	NC	NC	NC
11	NC	NC	NC
12	NC	NC	NC
13	GPIO	GPIO4	NC
14	NC	NC	NC
15	NC	NC	NC
16	GND	GND	NC
17	SPI_RST#	RST#	SPI_RST#
18	SPI_PIOCS#	PIROM/GPIO2	SPI_PIOCS#
19	SPI_CLK	SCL	SPI_CLK
20	SPI_CS#	SCS/GPIO5	SPI_CS#
21	MOSI	MOSI/GPIO7	MOSI
22	VDD	VHIO	VPS
23	GND	GND	NC
24	MISO	MISO	MISO
25	NC	NC	NC
26	NC	NC	NC
27	NC	NC	NC
28	NC	NC	NC
29	SDA/GPIO1	SDA/GPIO1	NC
30	SDA/GPIO0	SDA/GPIO0	NC
31	NC	NC	NC
32	NC	NC	NC

Pin	1	2	3	4	5
Signal	VDD	VDD	VDD	VDD	VDD
Power	V	V	V	V	V

Security Classification	LC Future Center Secret Data		Title	
Issued Date	2019/8/1	Deciphered Date	2019/08/01	DISCRETE TPM 2.0
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Drift2/Ironhide2				Rev. 01

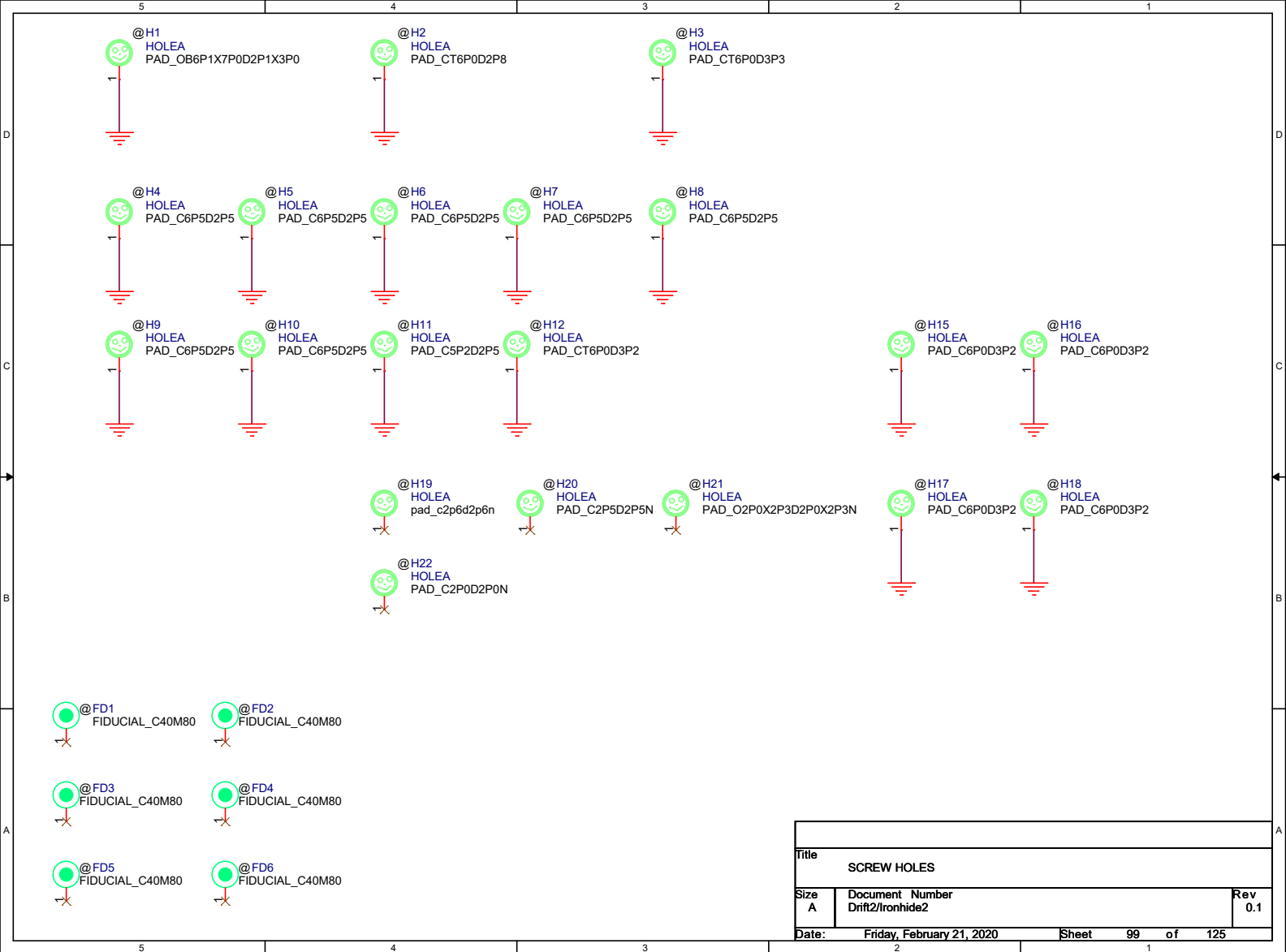


TABLE PQ0001,PQ0002

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AOS: AON7409

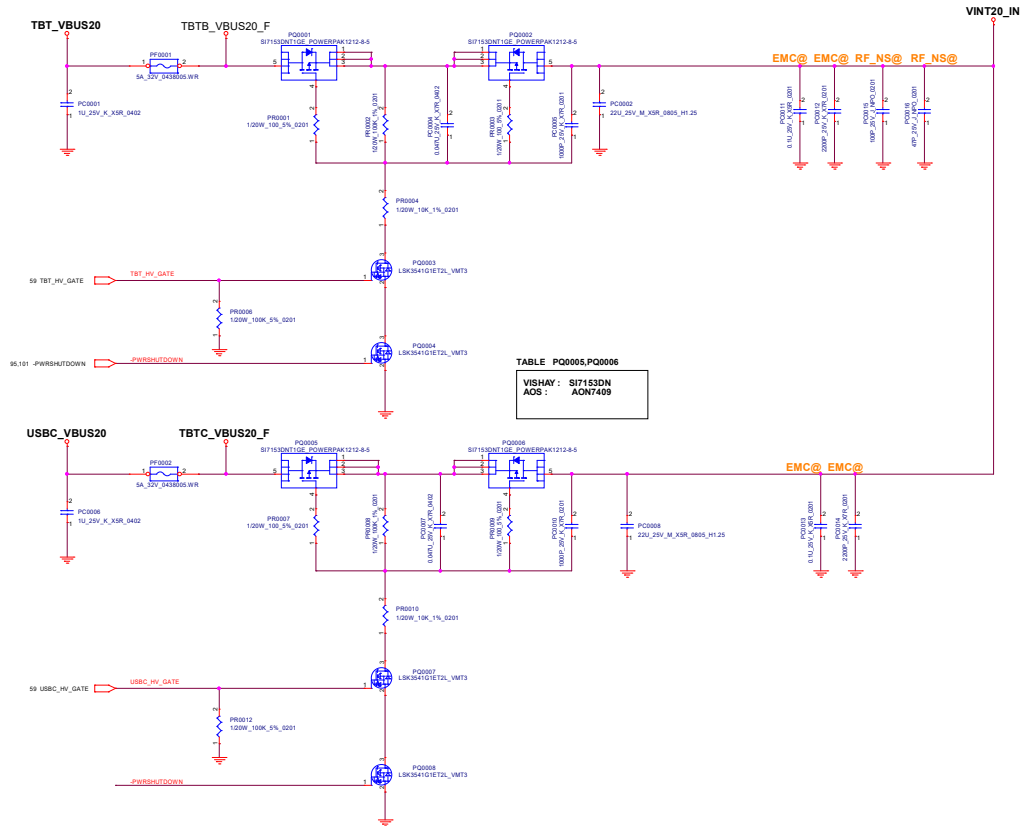


TABLE PQ0005,PQ0006

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AOS: AON7409

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Issued Date	Deciphered Date		DC-IN
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Size	Document Number	Rev	81
Scale	Issue History	Issue	100



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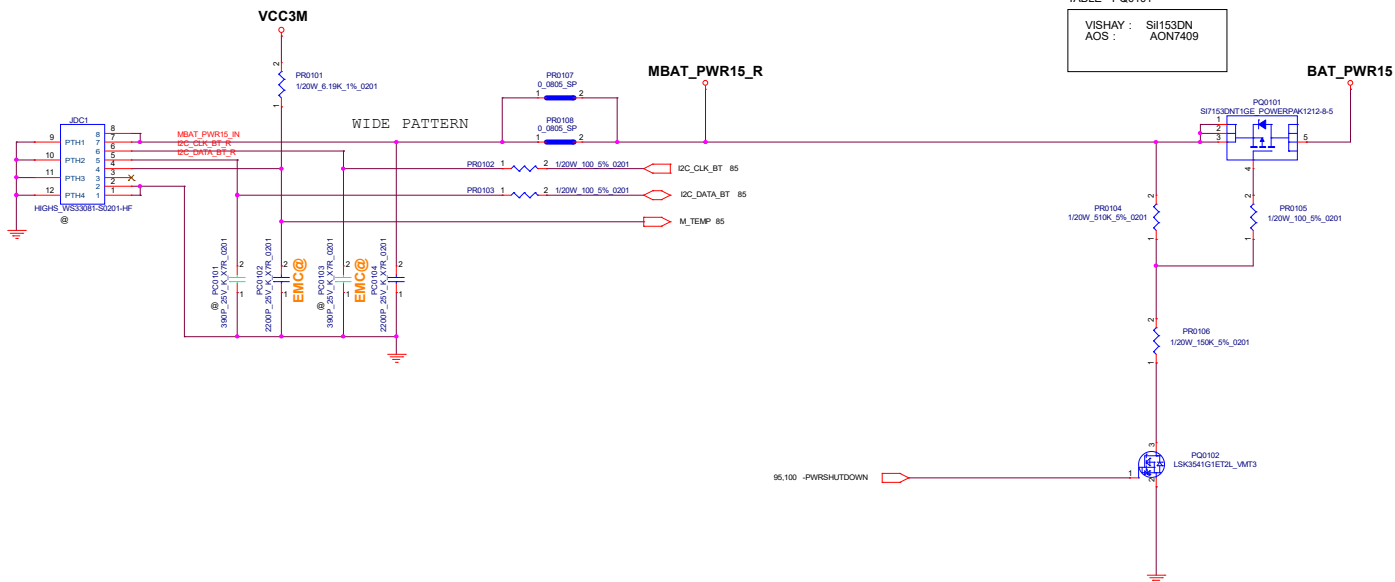

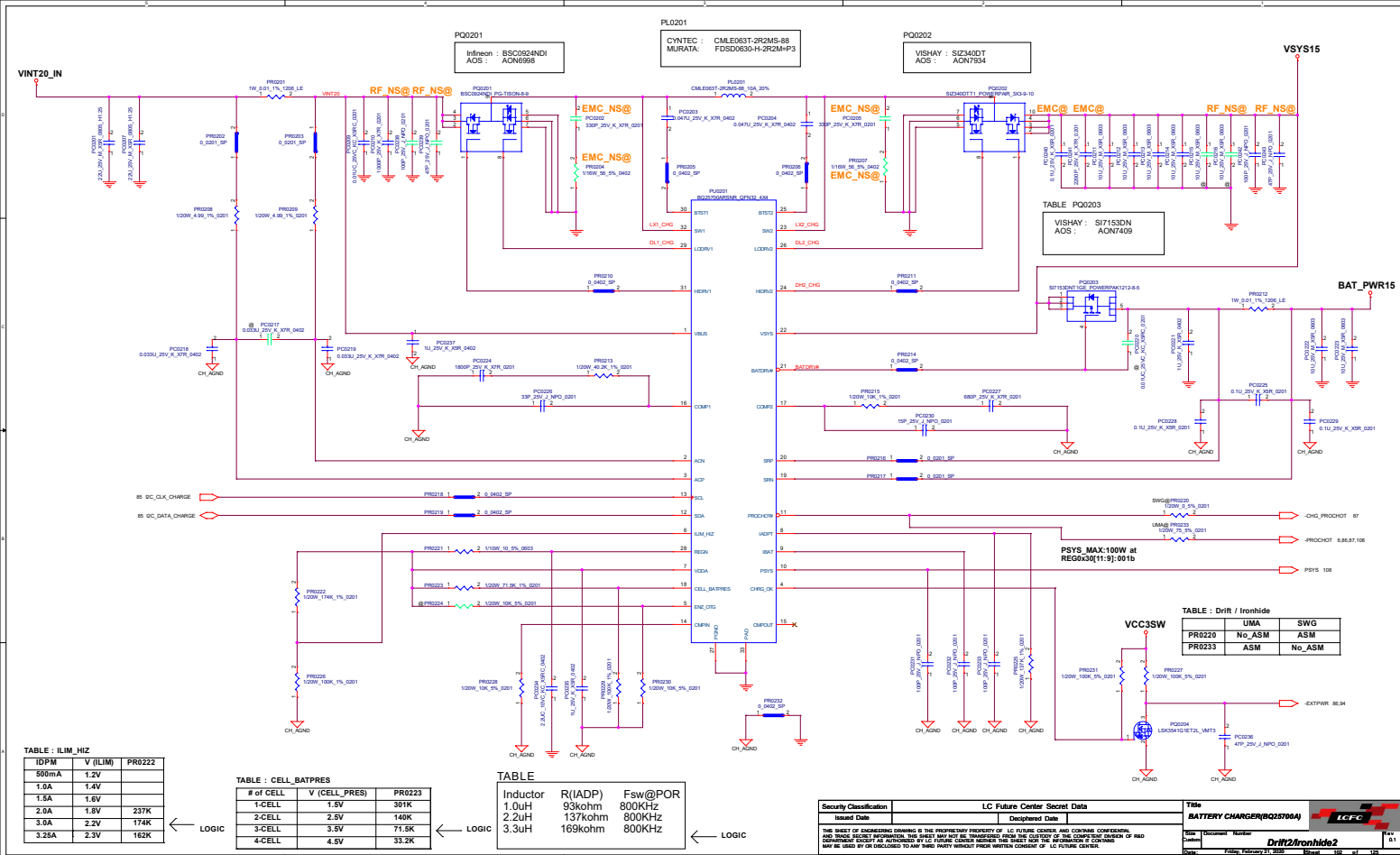
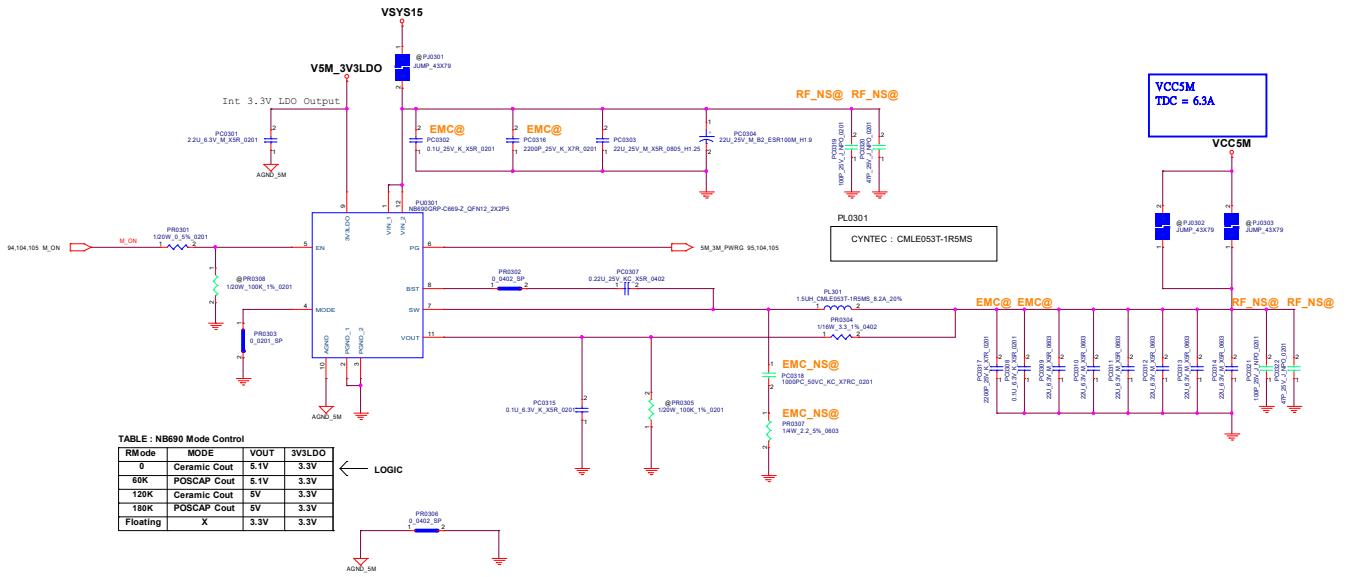


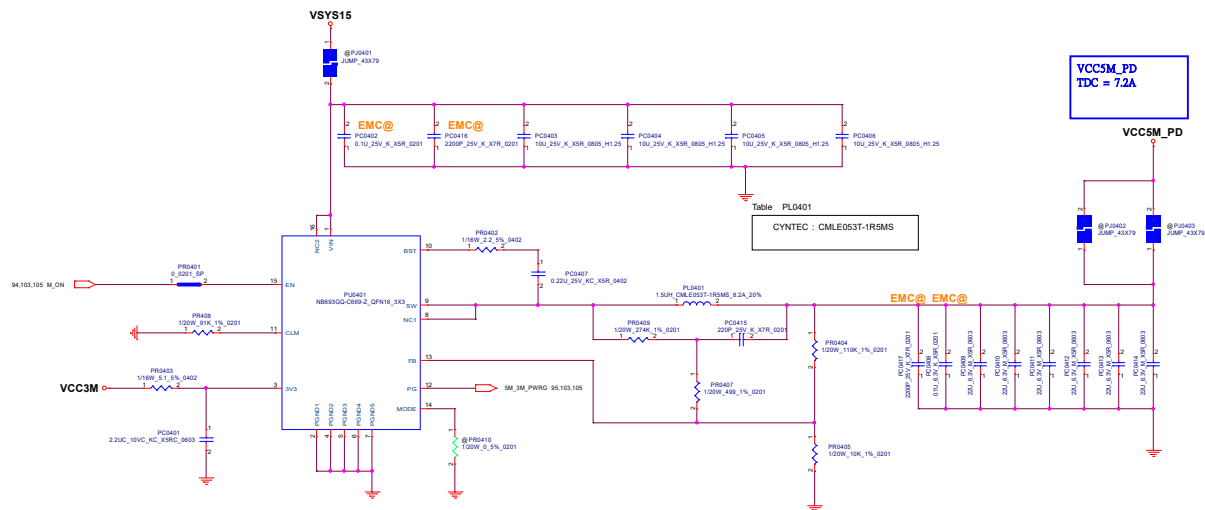
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AOS : AON7409

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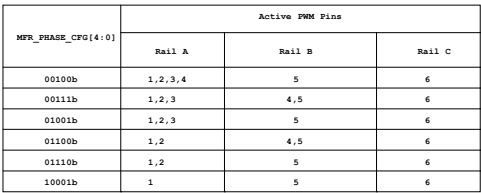


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				Rev	
				8.1	
Date		Friday, February 21, 2008		Sheet 108 of 105	



	WHL- U42
PU401	NP2979A0QKT-0042-C669-E
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FR0836	0_0201_5%
FR0838	1.5K_0201_1%
FR0832	2.1K_0201_1%
FR0831	51.1K_0201_1%
PC0807	330P_0201_25V7-K
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Table PC0901.PC0902.PC0903
Panasonic: 25TQC68MYF
KEMET: T521D68M025ATE070

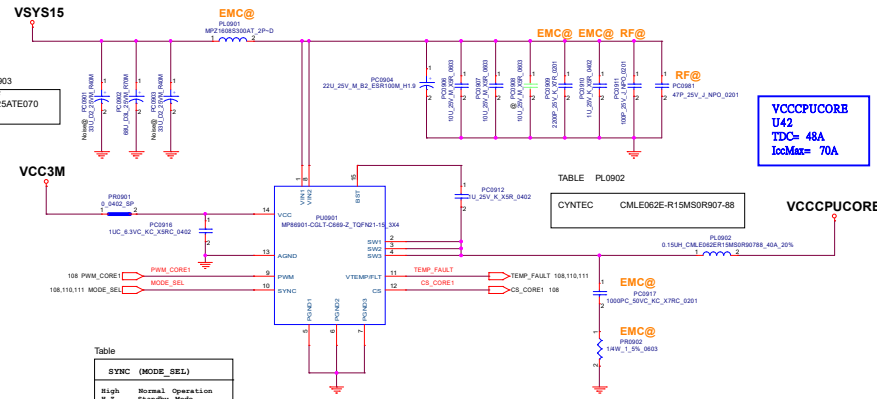
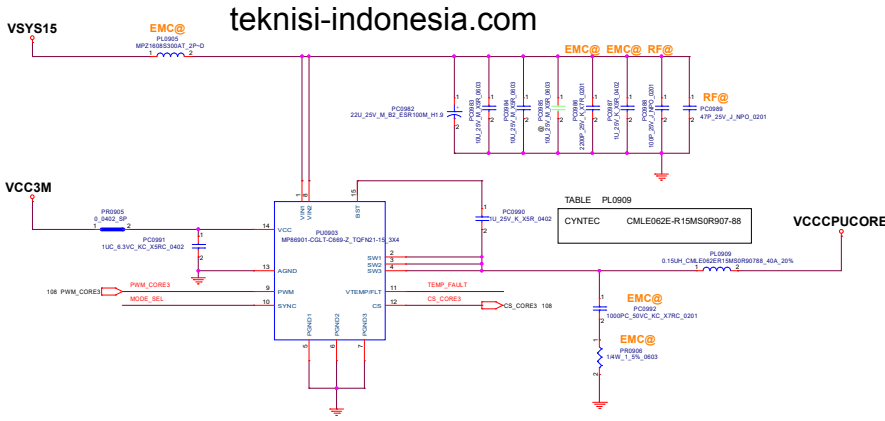
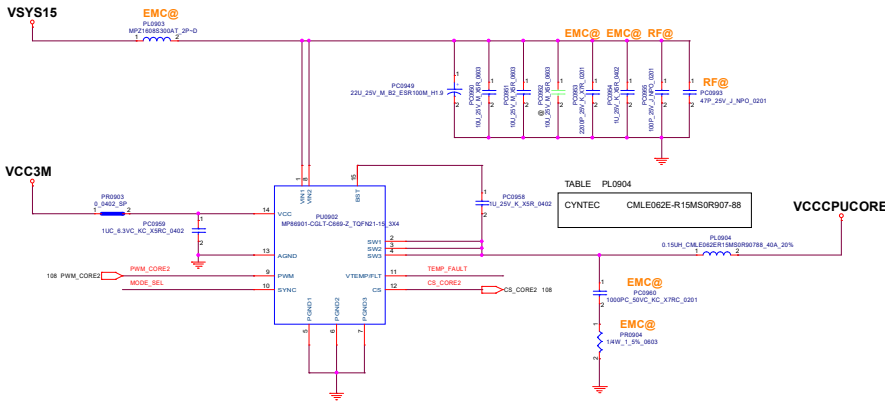


Table	SYNC (MODE_SEL)
High	Normal Operation
S.S.	Standby Mode
Low	Simulation Mode



teknisi-indonesia.com

For WHL VCCCPUCORE
2pcs 330uF +18pcs 22uF+4pcs 10uF+10pcs 1uF

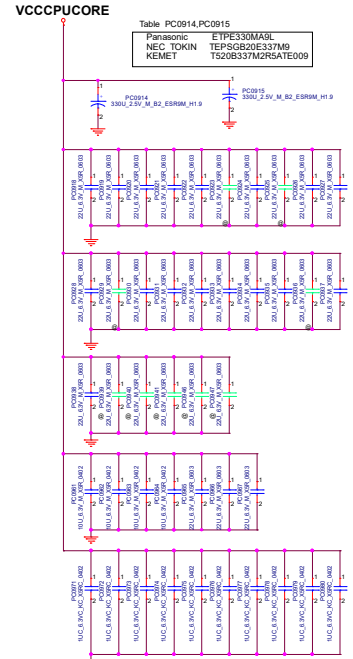
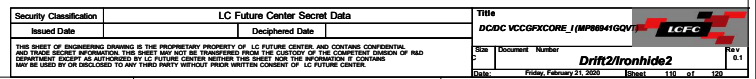


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Panasonic: ETYPE330MA9L
NEC TOKIN: TEPSGR020337M9
KEMET: T520B337MGRATE009

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VCCGFXCORE_I



VSYS15

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MPZ1608S300AT_2P-D

VCC3M

PR1101
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108 PWM_SA

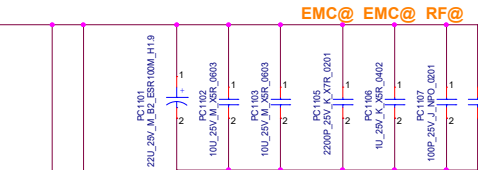
PVM_SA

108,109,110 MODE_SEL

MODE_SEL

Table

SYNC (MODE_SEL)	
High	Normal Operation
H.Z.	Standby Mode
Low	Diode Emulation Mode

TABLE PL1102
CYNTEC: CMLB042T-R47MS
TDK: SPM4020T-R47M-LR

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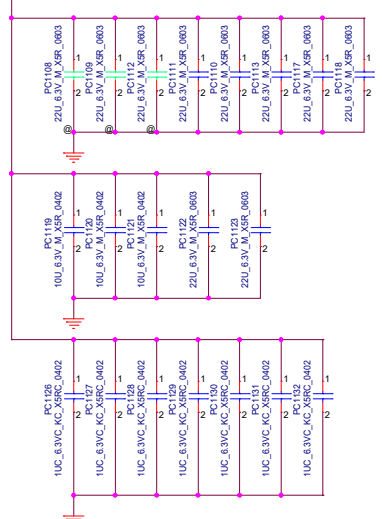
For WHL VCCSA


7pcs 22uF+3pcs 10uF+7pcs 1uF

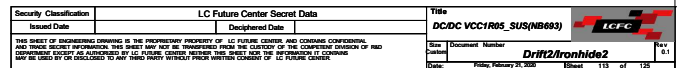
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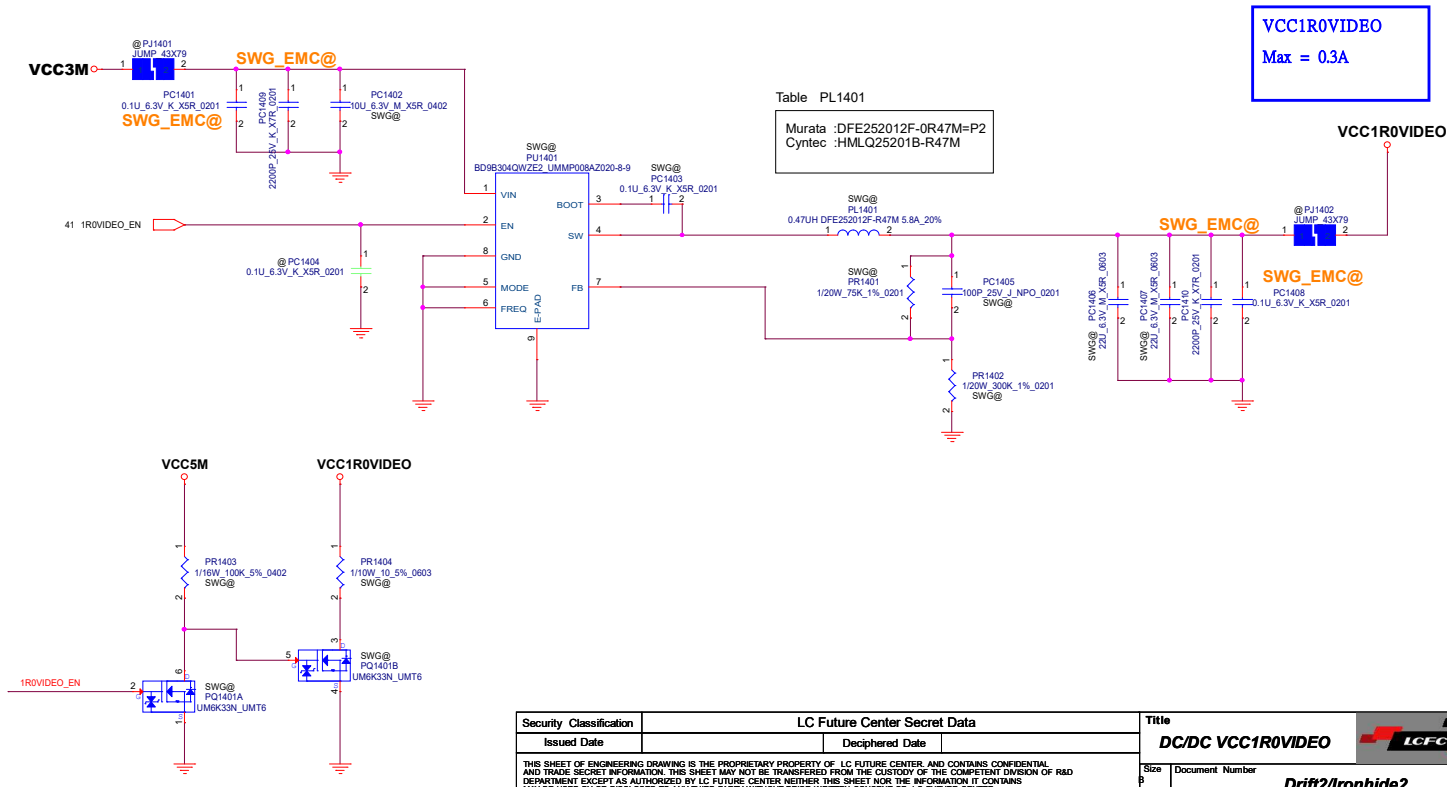
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TDC= 4A


VCCSA

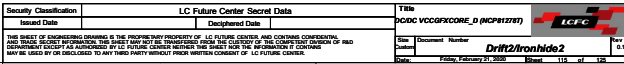


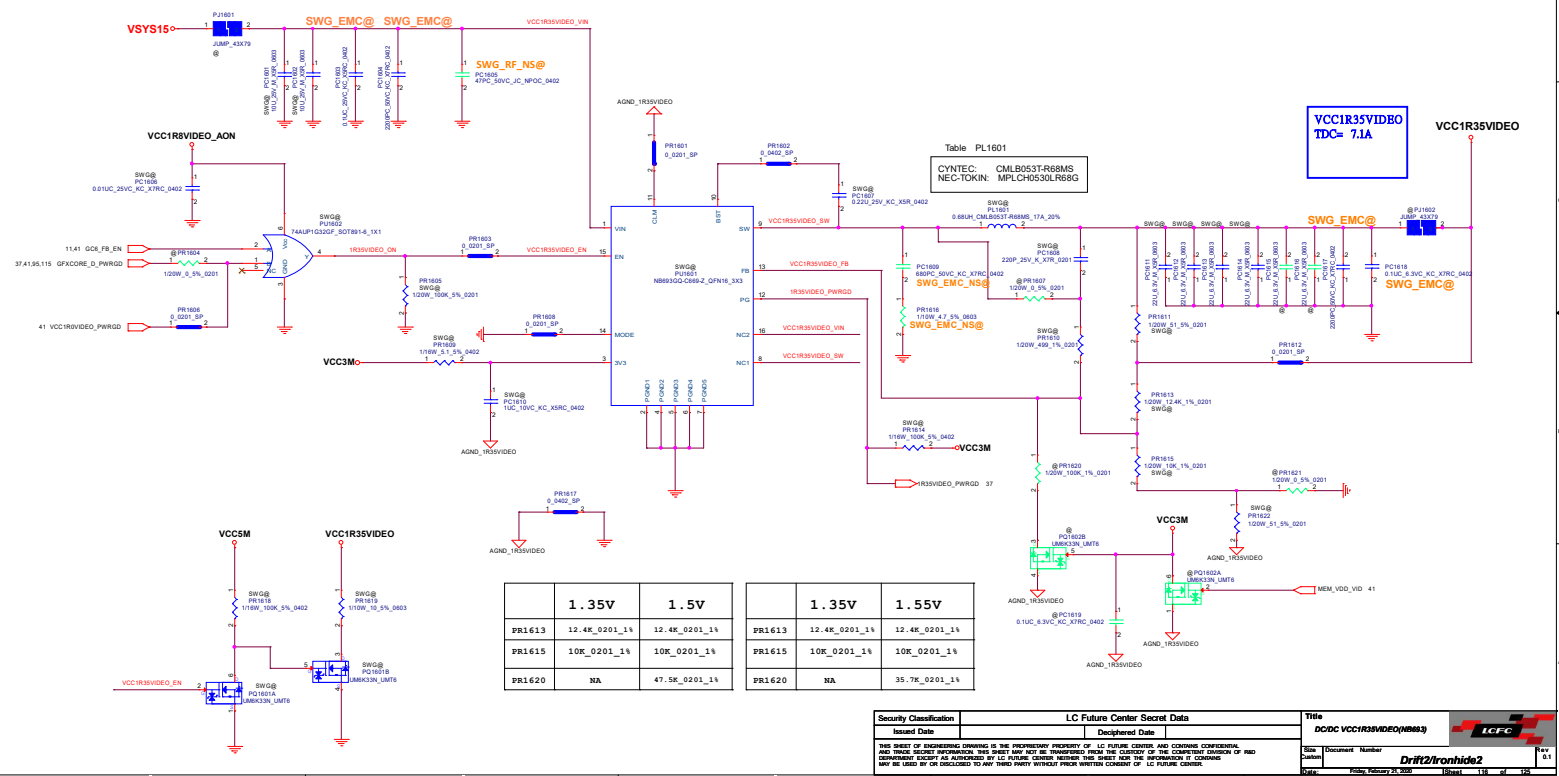
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	1.35V	1.5V		1.35V	1.55V
PR1613	12.4K_0201_14	12.4K_0201_14	PR1613	12.4K_0201_14	12.4K_0201_14
PR1615	10K_0201_14	10K_0201_14	PR1615	10K_0201_14	10K_0201_14
PR1620	NA	47.5K_0201_14	PR1620	NA	35.7K_0201_14

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Deciphered Date

Title

D0DC VCCIR35VIDEO/9883

Rev

Document Number

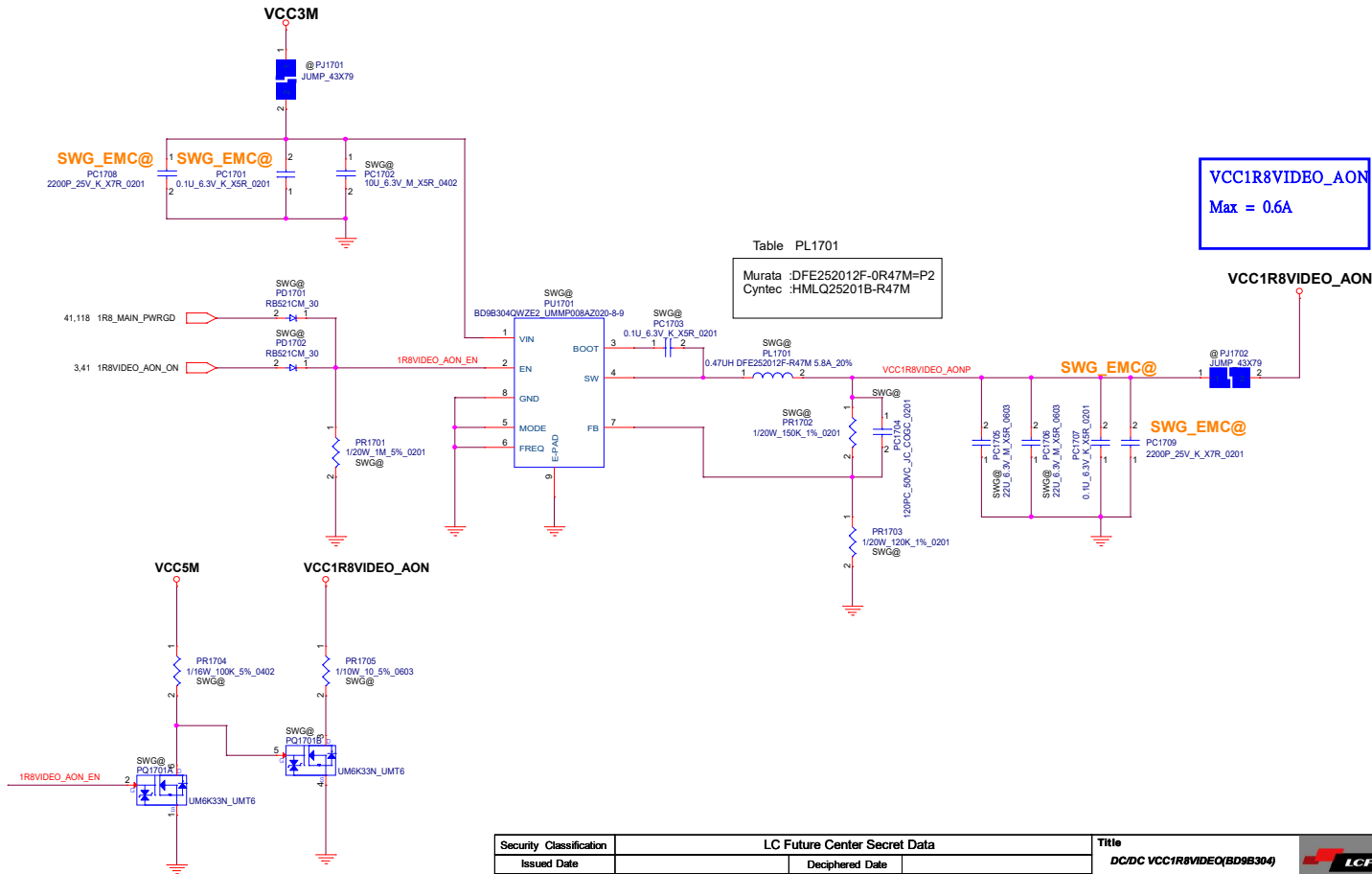
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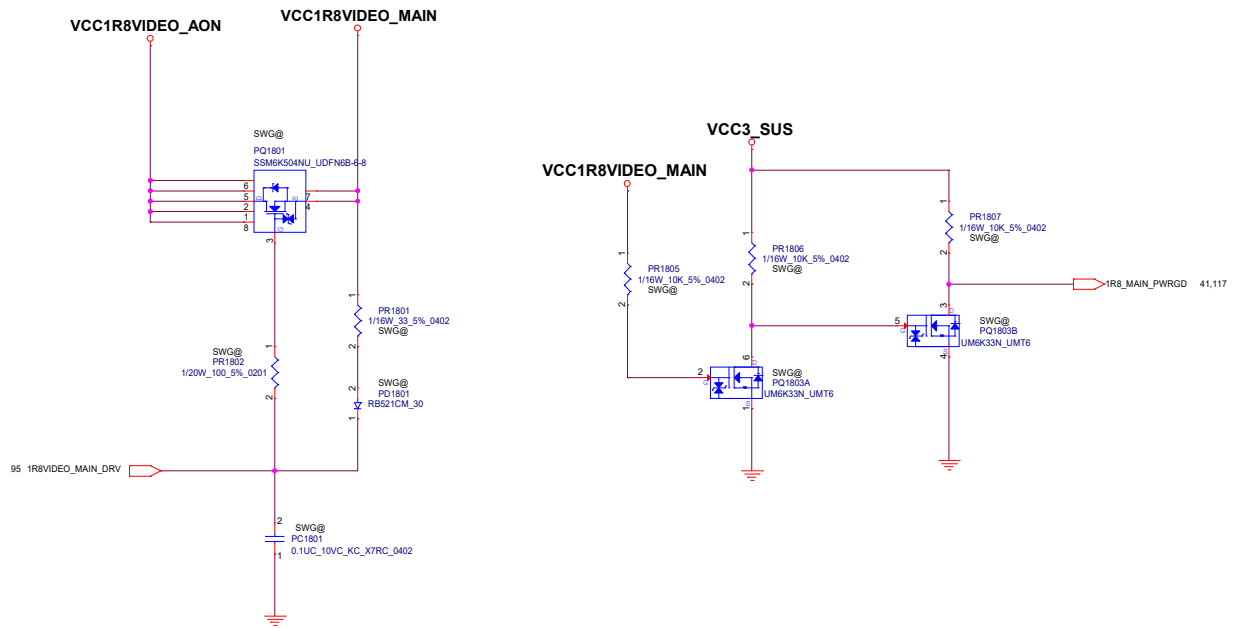
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					0.1



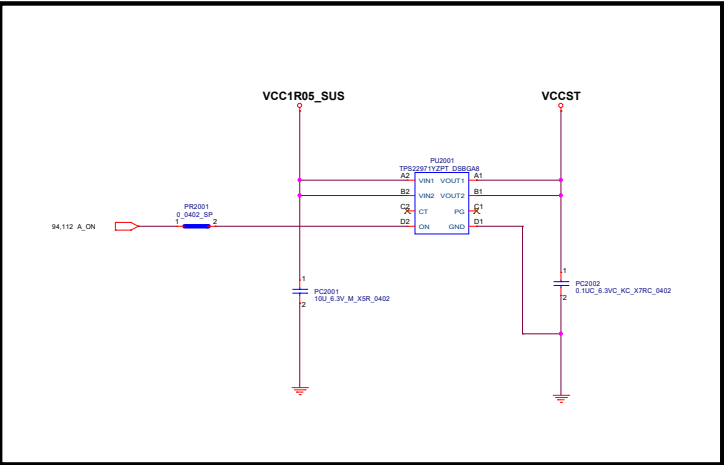
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				Drift2/Ironhide2		Rev 0.1
Date:		Friday, February 21, 2020		Sheet	118 of 125	

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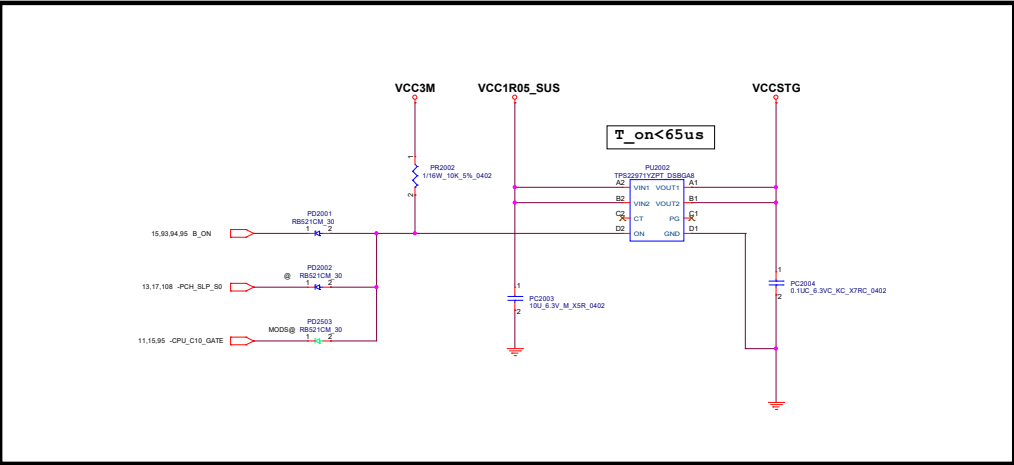



Power Switch VCCST 1.05V & 0.190 A

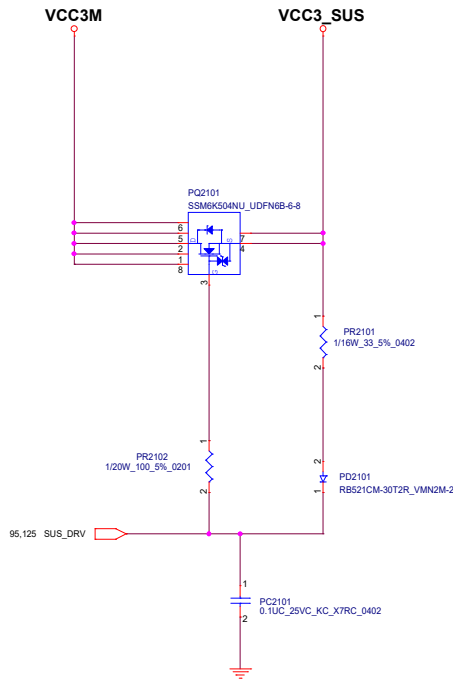



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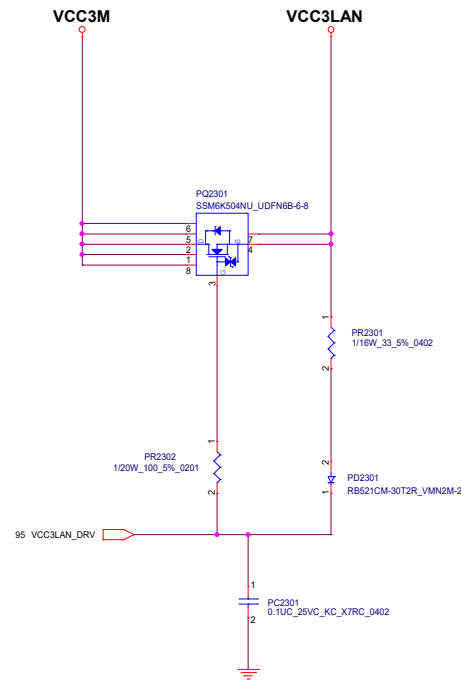
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