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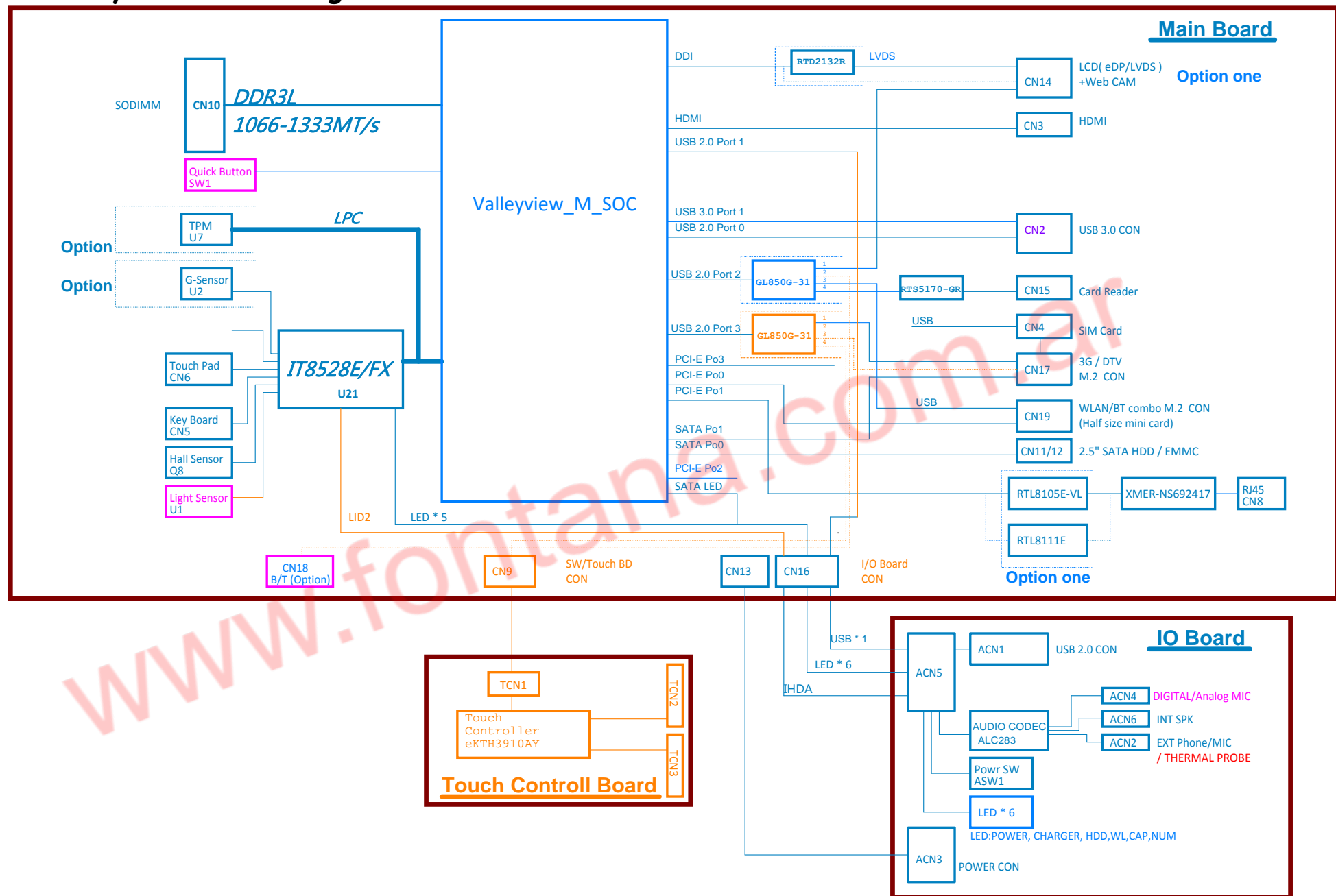


EF10M12 M/B REV:01, P/N: 15BFU9-011000



EF10M12 IO/B REV:01, P/N: 15BFU9-051000

EF10MIX System Block Diagram



Power Block Diagram

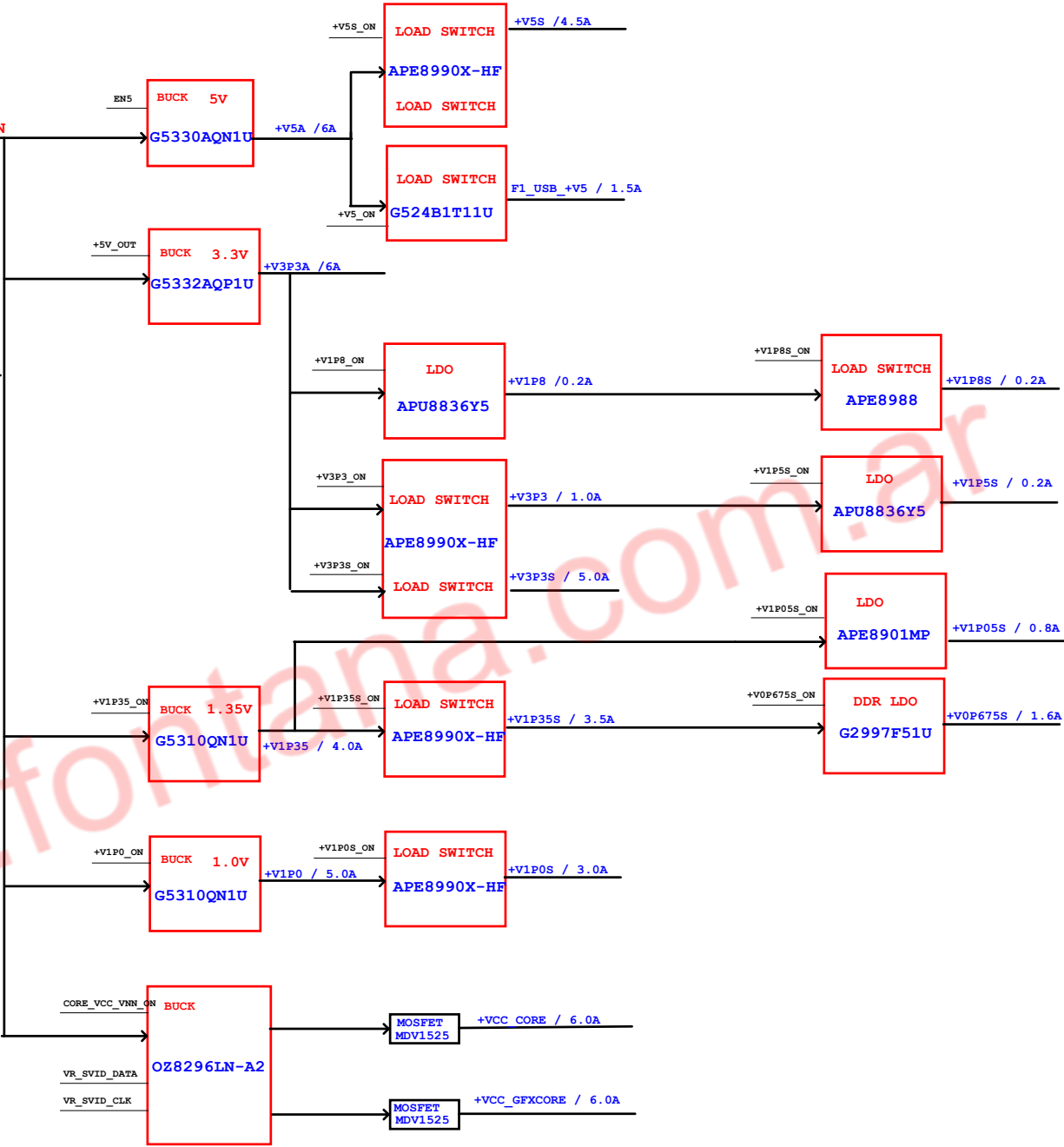
Platform Power Rail State :

Mode	+V**A	+V**	+V**S /+VCC
AC/DC S0/Moff (Full On)	ON	ON	ON
AC/DC S3/Moff (STR)	ON	ON	OFF
AC/DC S4/Moff (STD)	ON	OFF	OFF
AC S5/Moff (Soft Off)	ON	OFF	OFF
DC S5/Moff (Soft Off)	OFF	OFF	OFF

Power Rail

+VCC_CORE	Core voltage for Processor(off in S3-S5)
+VCC_GFXCORE	GFX voltage for Processor(off in S3-S5)
+V1P0S	1.0V switched power rail (off in S3-S5)
+V1P0	1.0V power rail (off in S4-S5)
+V1P0S5	1.05V switched power rail (off in S3-S5)
+V1P3S	1.35V power rail (off in S4-S5)
+V1P3S5	1.35V switched power rail (off in S3-S5)
+V1P5S	1.5V switched power rail (off in S3-S5)
+V1P8	1.8V power rail (off in S4-S5)
+V1P8S	1.8V switched power rail (off in S3-S5)
+V3P3A	3.3V always on power rail
+V3P3	3.3V switched power rail (off in S3-S5)
+V3P3S	3.3V power rail (off in S4-S5)
+V5A	5V always on power rail
F1_USB_+V5	5V power rail (off in S4-S5)
+V5S	5V switched power rail (off in S3-S5)

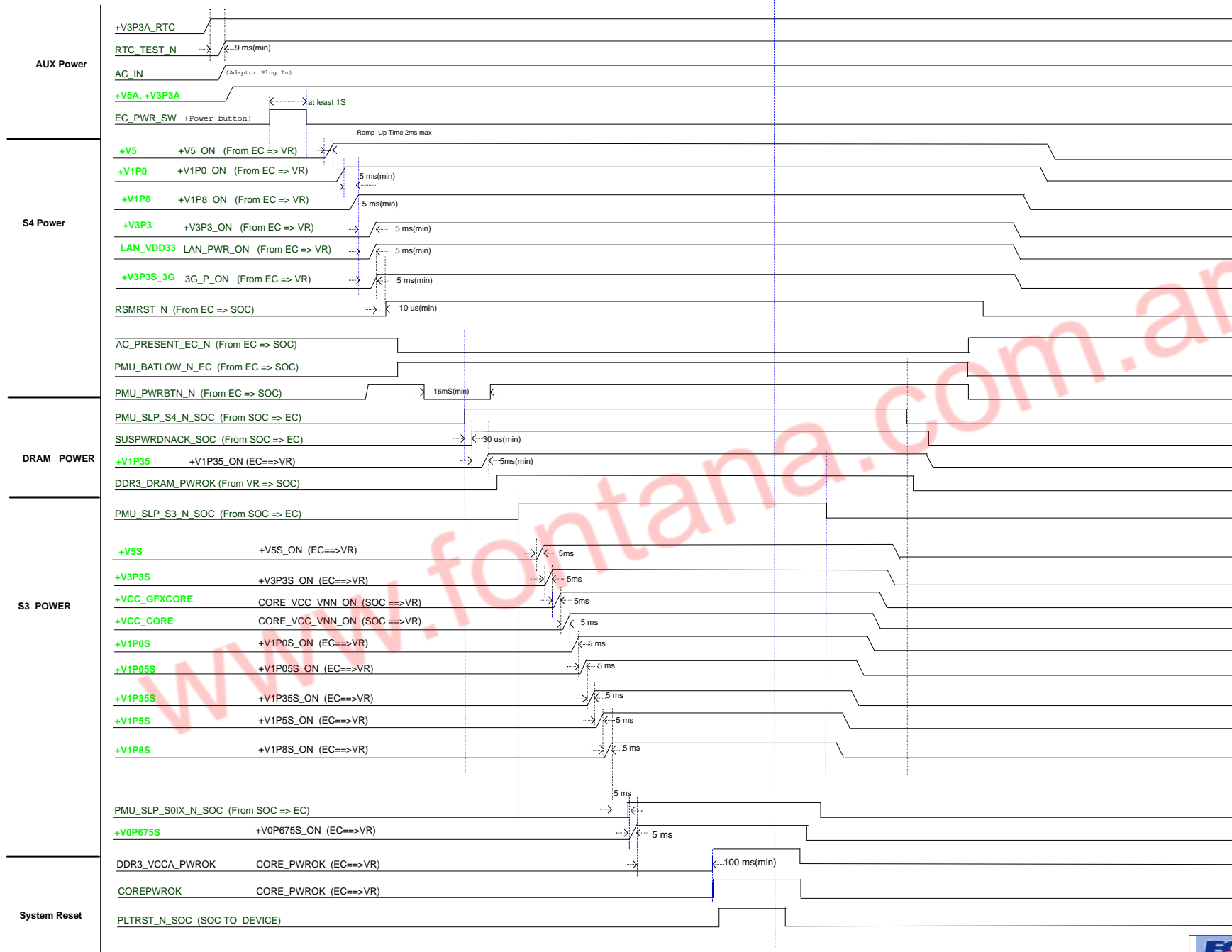
+V□□A	Always on power rail
+V□□	Switched power rail (off in S4 - S5)
+V□□s *	Switched power rail (off in S3 - S5)

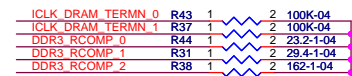
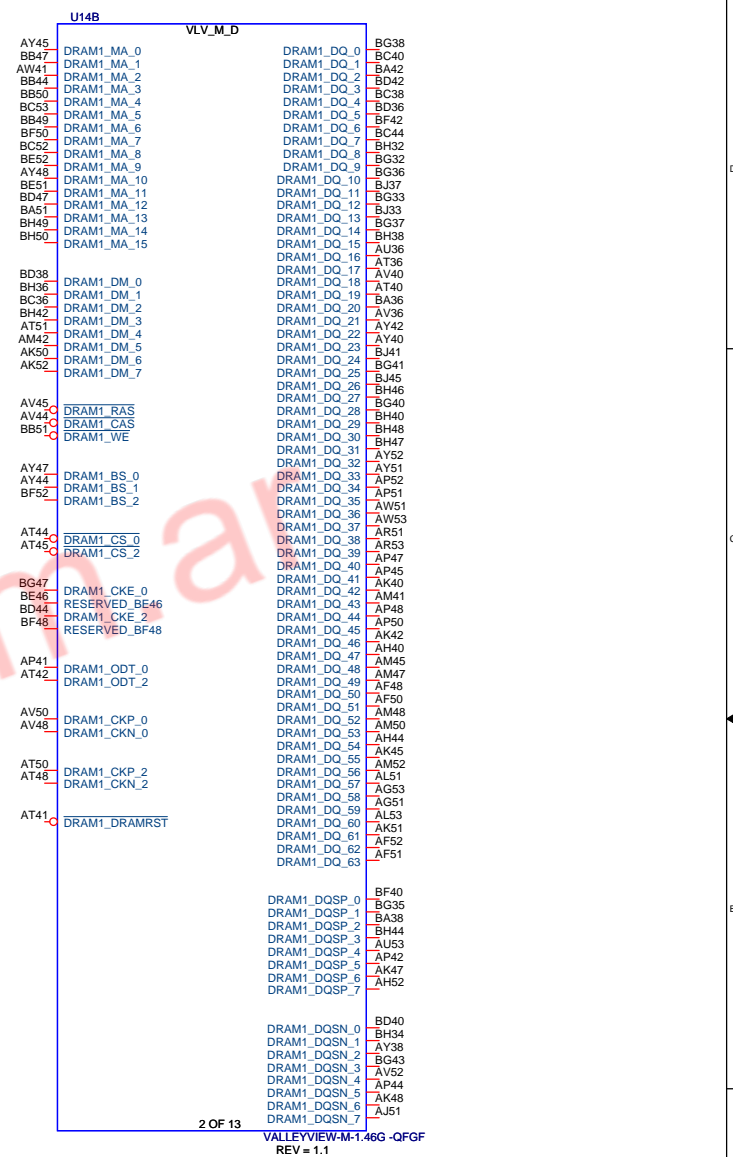
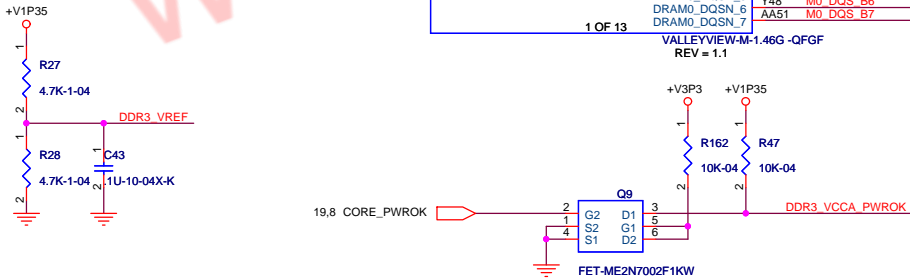
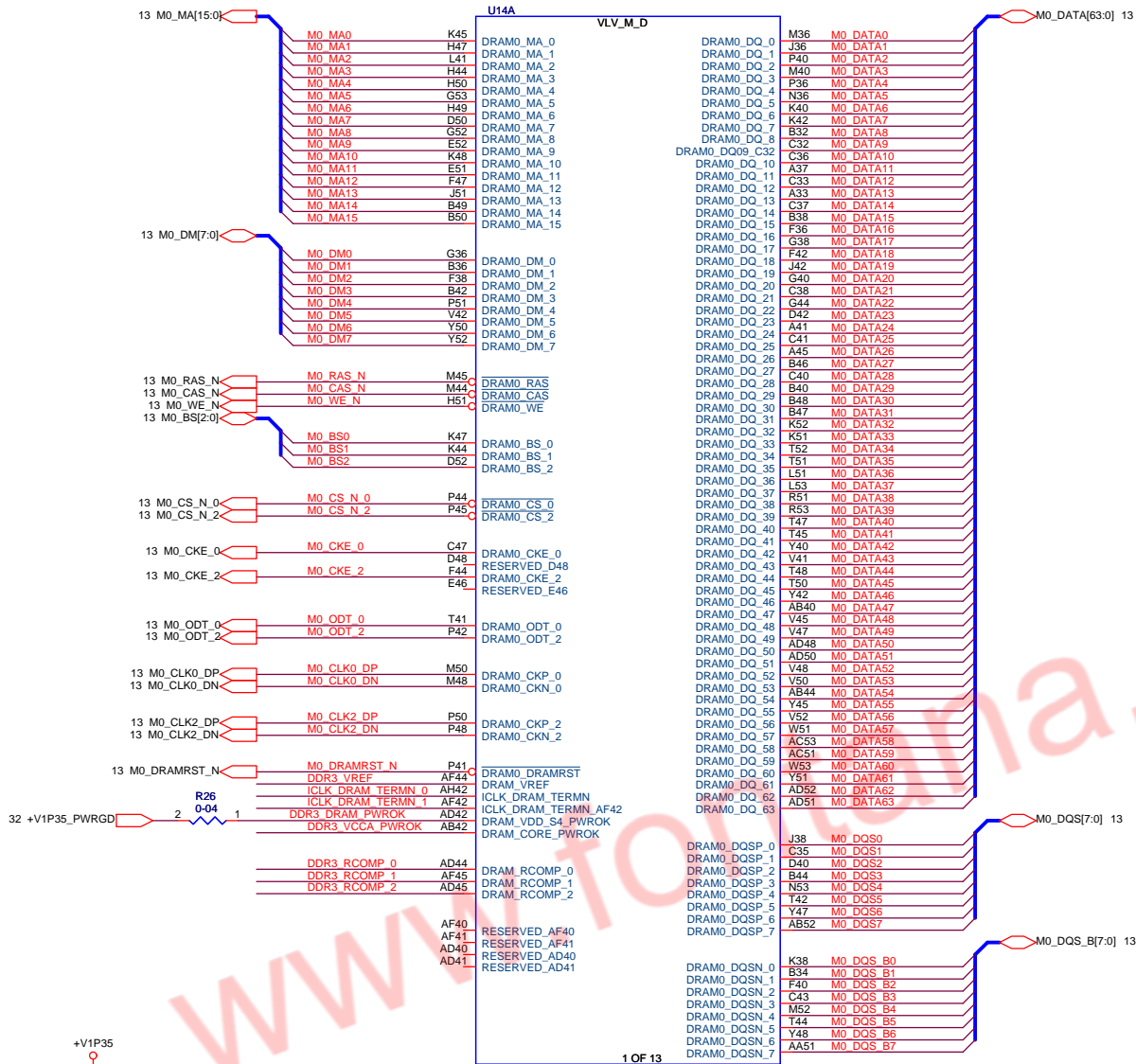


System Poewr On/Off Sequence

Power On Timing

Power Off Timing

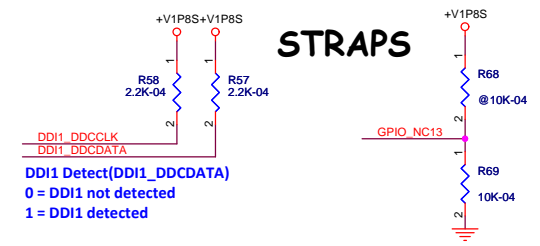
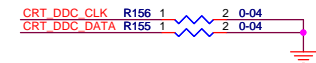
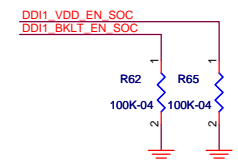
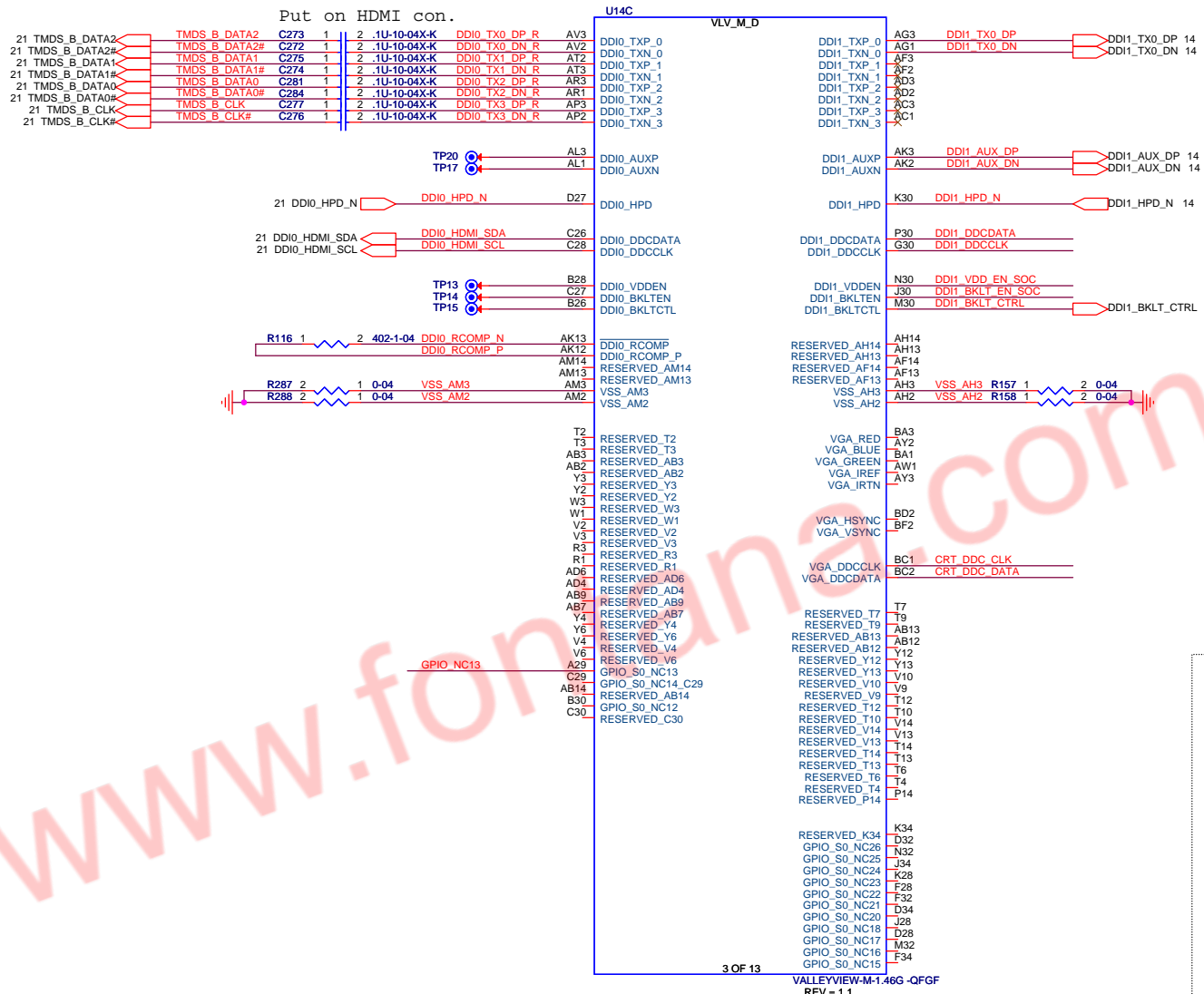


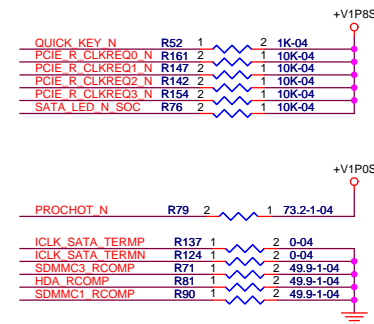
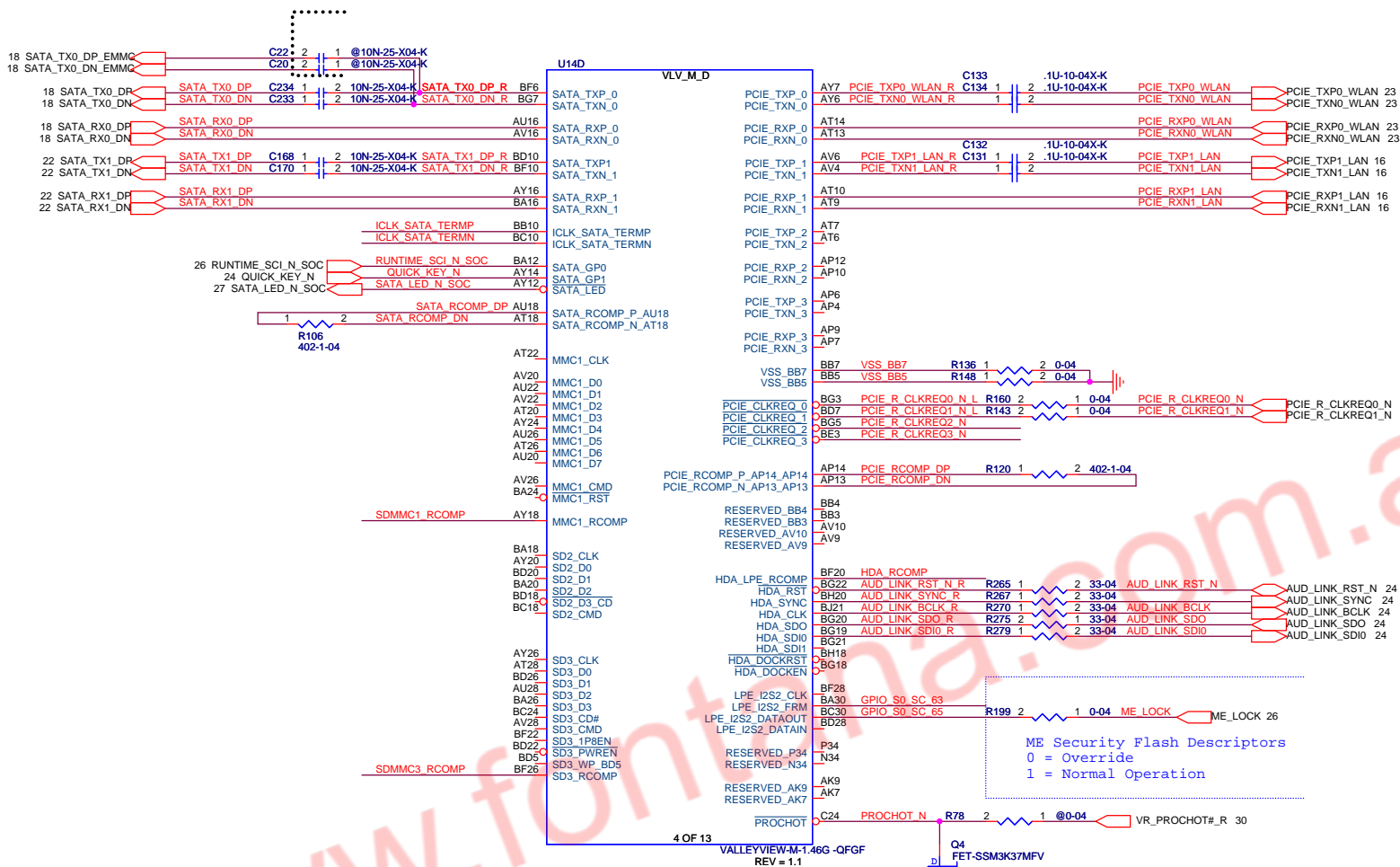


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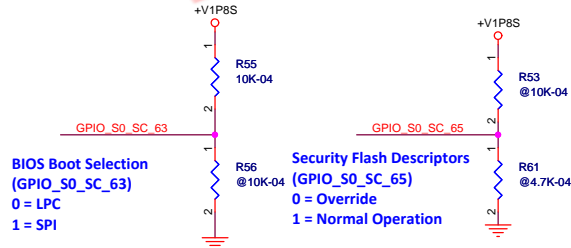
Project : EF10MIX

Size	Document Number	Rev
	CPU_DDR0	01
Date:	Thursday, December 12, 2013	Sheet 5 of 35





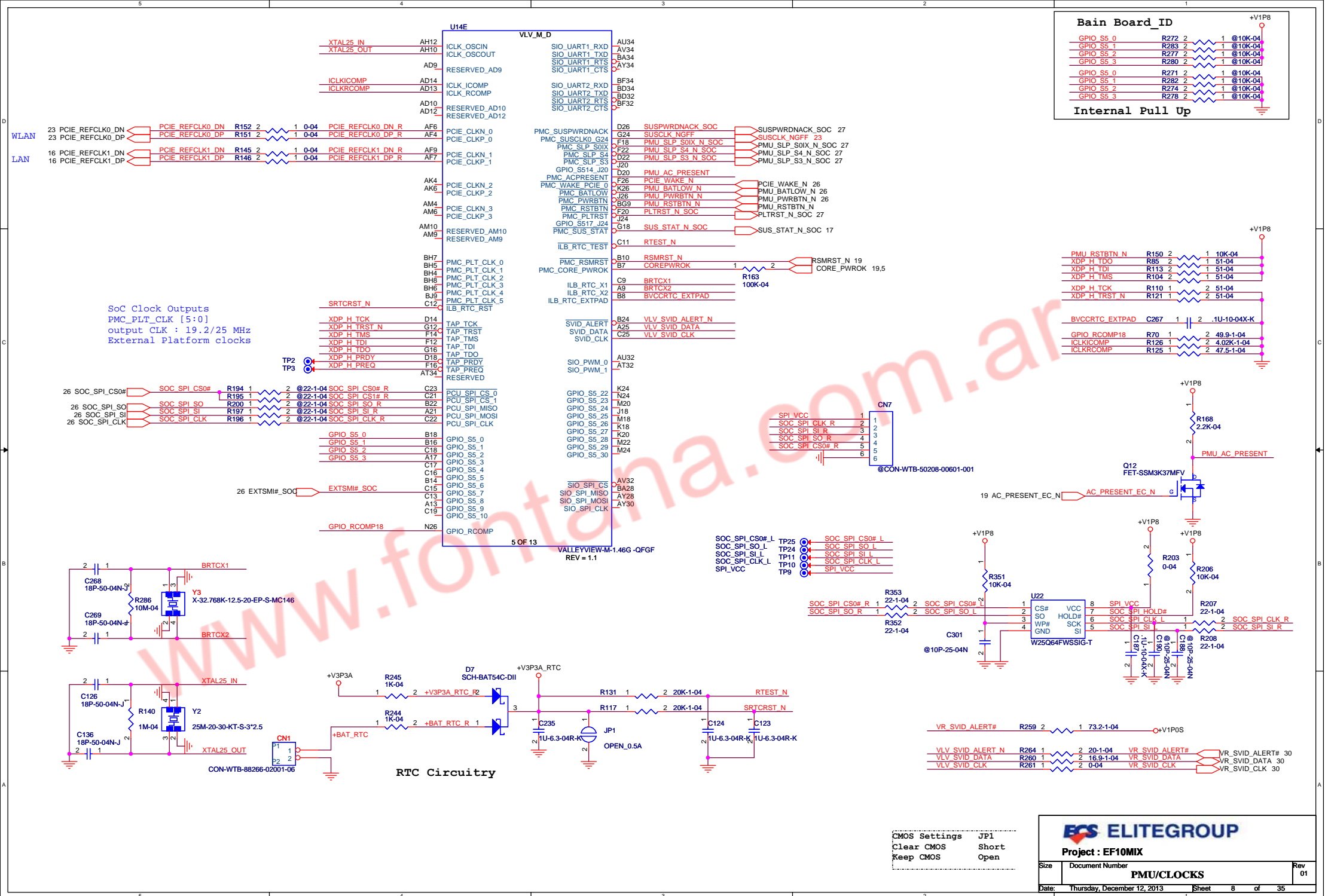
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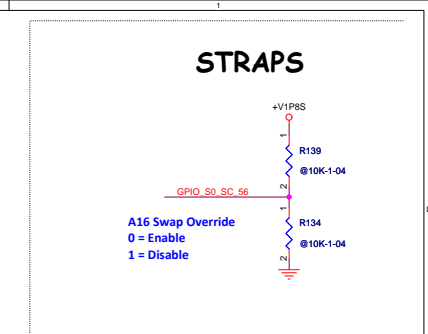


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Project : EF10MIX

Size	Document Number	Rev
	CPU_SATA/PCIE	01
Date:	Thursday, December 12, 2013	Sheet 7 of 35





Device ID----

Device ID	GPIO_TPM
W/TPM	HIGH
W/O TPM	Low

Device ID----

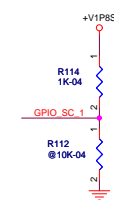
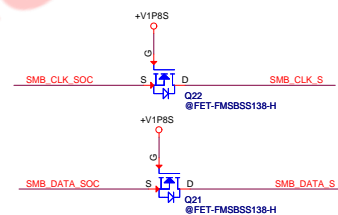
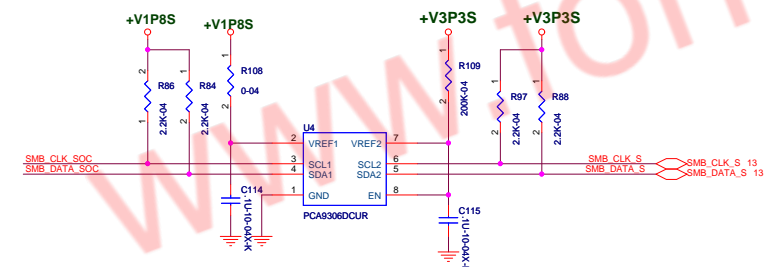
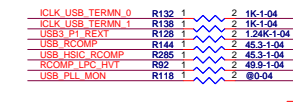
Device ID	GPIO_3G#
W/3G	HIGH
W/DTV	Low

Device ID-----

Device ID	GPIO_LS
W/LS	HIGH
W/O LS	Low

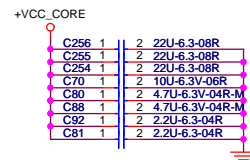
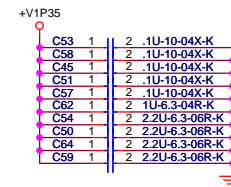
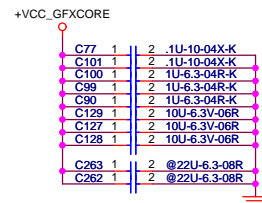
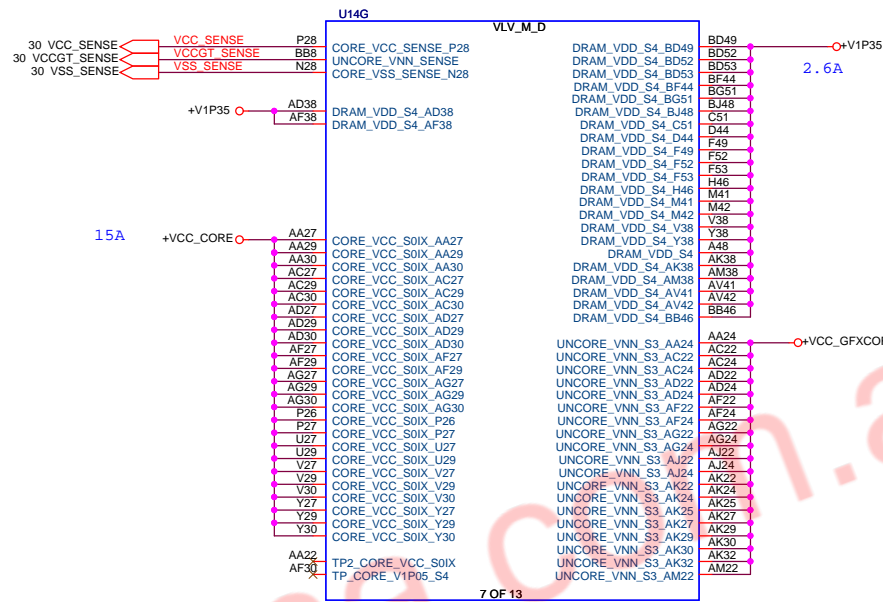
Device ID----

Device ID	GPIO_G-Sensor
W/G-Sensor	HIGH
W/O G-Sensor	Low



USB 2.0	Port 0	Port 1	Port 2	Port 3	HUB 1.1	HUB 1.2	HUB 1.3	HUB 1.4
DEVICE	USB 3.0 / 2.0 port	USB 2.0 Port	USB HUB 1	USB 2.0 Port	COMBO BT	Touch/S	WEBCAM	Card Reader

USB 2.0	0	1	2	3	HUB 1.1	HUB 1.2	HUB 1.3	HUB 1.4
DEVICE	USB 3.0 / 2.0 port	USB 2.0 Port	USB HUB 1	USB HUB 2	DTV / 3G	USB 2.0 Port	SIM Card	Sensor HUB



U14I VLV_M_D

A11	VSS1	VSS36	AC36
A15	VSS2	VSS37	AC38
A19	VSS3	VSS38	AD19
A23	VSS4	VSS39	AD21
A27	VSS5	VSS40	AD25
A31	VSS6	VSS41	AD32
A35	VSS7	VSS42	AD33
A39	VSS8	VSS43	AD47
A43	VSS9	VSS44	AE1
A47	VSS10	VSS45	AE11
AA1	VSS11	VSS46	AE12
AA16	VSS12	VSS47	AE14
AA19	VSS13	VSS48	AE3
AA21	VSS14	VSS49	AE4
AA3	VSS15	VSS50	AE40
AA32	VSS16	VSS51	AE42
AA35	VSS17	VSS52	AE43
AA38	VSS18	VSS53	AE45
AA53	VSS19	VSS54	AE46
AB10	VSS20	VSS55	AE48
AB4	VSS21	VSS56	AE50
AB41	VSS22	VSS57	AE51
AB45	VSS23	VSS58	AE53
AB47	VSS24	VSS59	AE6
AB48	VSS25	VSS60	AE9
AB50	VSS26	VSS61	AF9
AB51	VSS27	VSS62	AF10
AB6	VSS28	VSS63	AF12
AC16	VSS29	VSS64	AF25
AC18	VSS30	VSS65	AF32
AC19	VSS31	VSS66	AF47
AC21	VSS32	VSS67	AG16
AC25	VSS33	VSS68	AG25
AC33	VSS34	VSS69	AG36
AC35	VSS35	VSS70	

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VALLEYVIEW-M-1.46G-QFGF
REV = 1.1

U14J VLV_M_D

AG38	VSS71	VSS106	AH47
AH4	VSS72	VSS107	AH48
AH41	VSS73	VSS108	AH50
AH45	VSS74	VSS109	AH51
AH7	VSS75	VSS110	AH6
AH9	VSS76	VSS111	AM44
AJ1	VSS77	VSS112	AM51
AJ16	VSS78	VSS113	AM7
AJ21	VSS79	VSS114	AN1
AJ25	VSS80	VSS115	AN11
AJ27	VSS81	VSS116	AN12
AJ29	VSS82	VSS117	AN14
AJ3	VSS83	VSS118	AN22
AJ30	VSS84	VSS119	AN3
AJ32	VSS85	VSS120	AN33
AJ33	VSS86	VSS121	AN35
AJ35	VSS87	VSS122	AN36
AJ38	VSS88	VSS123	AN38
AJ53	VSS89	VSS124	AN40
AK10	VSS90	VSS125	AN42
AK14	VSS91	VSS126	AN43
AK16	VSS92	VSS127	AN46
AK33	VSS93	VSS128	AN48
AK41	VSS94	VSS129	AN49
AK44	VSS95	VSS130	AN5
AM12	VSS96	VSS131	AN51
AM19	VSS97	VSS132	AN53
AM24	VSS98	VSS133	AN6
AM25	VSS99	VSS134	AN6
AM29	VSS100	VSS135	AN8
AM33	VSS101	VSS136	AN9
AM35	VSS102	VSS137	AT12
AM36	VSS103	VSS138	AT16
AM40	VSS104	VSS139	AT19
M28	VSS105	VSS140	

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VALLEYVIEW-M-1.46G-QFGF
REV = 1.1

U14K VLV_M_D

AT24	VSS141	VSS176	AY36
AT27	VSS142	VSS177	AY4
AT30	VSS143	VSS178	AY50
AT35	VSS144	VSS179	AY9
AT38	VSS145	VSS180	BA14
AT4	VSS146	VSS181	BA19
AT47	VSS147	VSS182	BA22
AT52	VSS148	VSS183	BA27
AU1	VSS149	VSS184	BA32
AU24	VSS150	VSS185	BA35
AU3	VSS151	VSS186	BA40
AU30	VSS152	VSS187	BA53
AU38	VSS153	VSS188	BB19
AU51	VSS154	VSS189	BB27
AV12	VSS155	VSS190	BB35
AV13	VSS156	VSS191	BC20
AV14	VSS157	VSS192	BC22
AV18	VSS158	VSS193	BC26
AV19	VSS159	VSS194	BC28
AV24	VSS160	VSS195	BC32
AV27	VSS161	VSS196	BC34
AV30	VSS162	VSS197	BC42
AV35	VSS163	VSS198	BD19
AV38	VSS164	VSS199	BD24
AV47	VSS165	VSS200	BD27
AV51	VSS166	VSS201	BD30
AV7	VSS167	VSS202	BD35
AW13	VSS168	VSS203	BE19
AW19	VSS169	VSS204	BE2
AW27	VSS170	VSS205	BE35
AW3	VSS171	VSS206	BF5
AW35	VSS172	VSS207	BF12
AY10	VSS173	VSS208	BF16
AY22	VSS174	VSS209	BF24
AY32	VSS175	VSS210	BF38

11 OF 13
VALLEYVIEW-M-1.46G-QFGF
REV = 1.1

U14L VLV_M_D

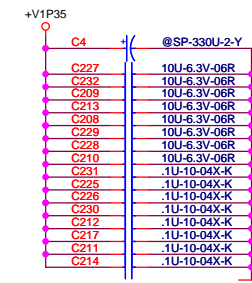
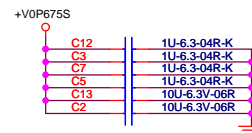
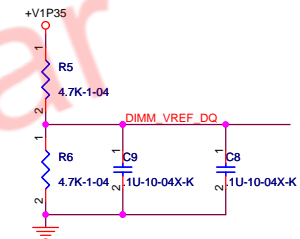
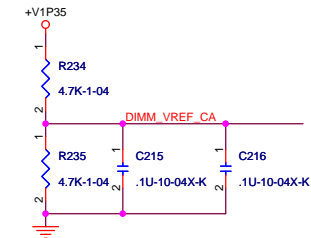
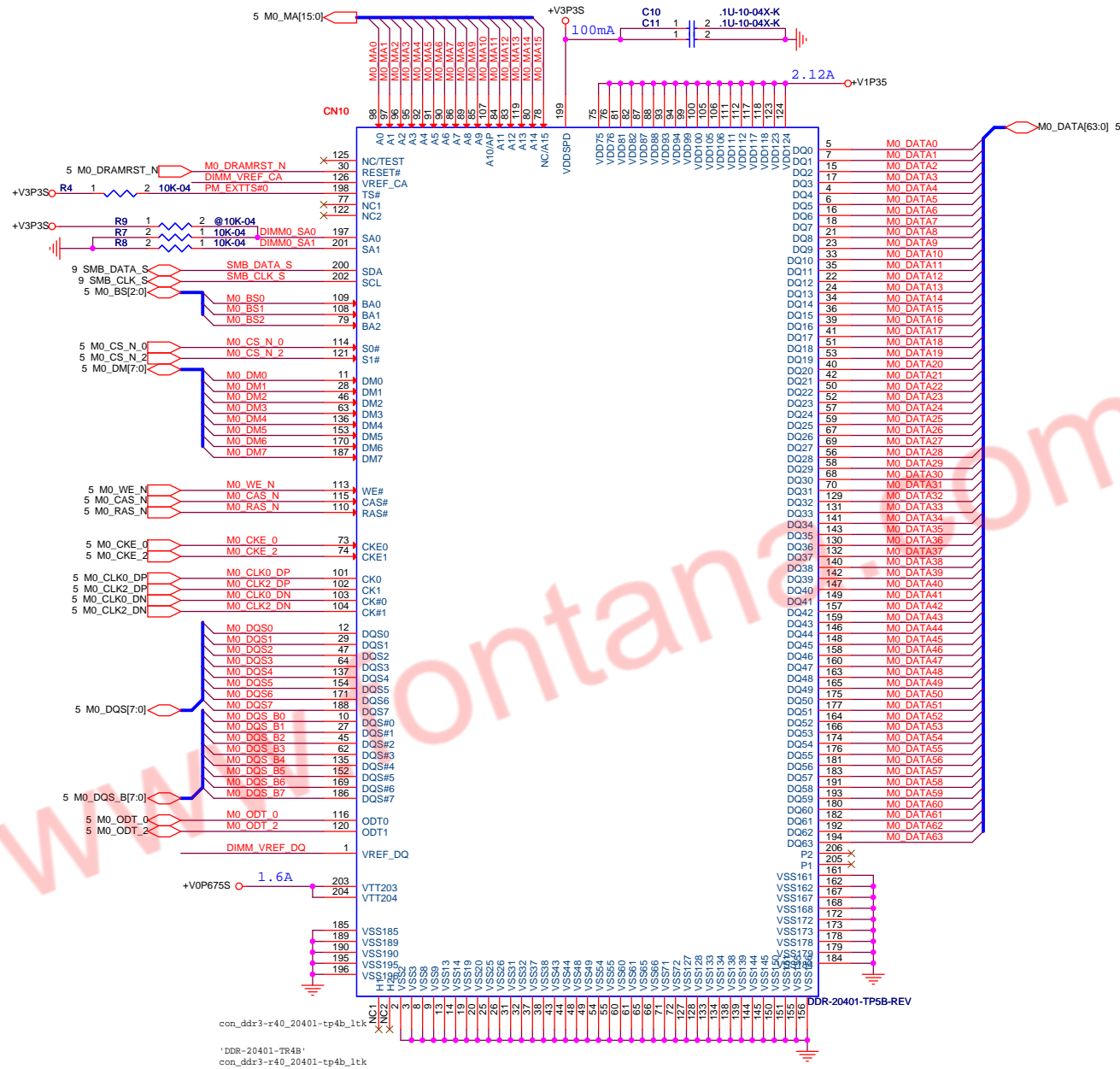
BF30	VSS211	VSS246	E8
BF36	VSS212	VSS247	F19
BF4	VSS213	VSS248	F2
BG31	VSS214	VSS249	F24
BG34	VSS215	VSS250	F27
BG39	VSS216	VSS251	F30
BG42	VSS217	VSS252	F35
BG45	VSS218	VSS253	F5
BG49	VSS219	VSS254	F7
BJ11	VSS220	VSS255	G10
BJ15	VSS221	VSS256	G20
BJ19	VSS222	VSS257	G22
BJ23	VSS223	VSS258	G26
BJ27	VSS224	VSS259	G28
BJ31	VSS225	VSS260	G32
BJ35	VSS226	VSS261	G34
BJ39	VSS227	VSS262	G42
BJ43	VSS228	VSS263	H19
BJ47	VSS229	VSS264	H27
BJ7	VSS230	VSS265	H35
C14	VSS231	VSS266	J1
C31	VSS232	VSS267	J16
C34	VSS233	VSS268	J19
C39	VSS234	VSS269	J22
C42	VSS235	VSS270	J27
C45	VSS236	VSS271	J32
C49	VSS237	VSS272	J35
D12	VSS238	VSS273	J40
D16	VSS239	VSS274	J53
D24	VSS240	VSS275	K14
D30	VSS241	VSS276	K22
D36	VSS242	VSS277	K32
D38	VSS243	VSS278	K36
E19	VSS244	VSS279	K4
E35	VSS245	VSS280	K50

12 OF 13
VALLEYVIEW-M-1.46G-QFGF
REV = 1.1

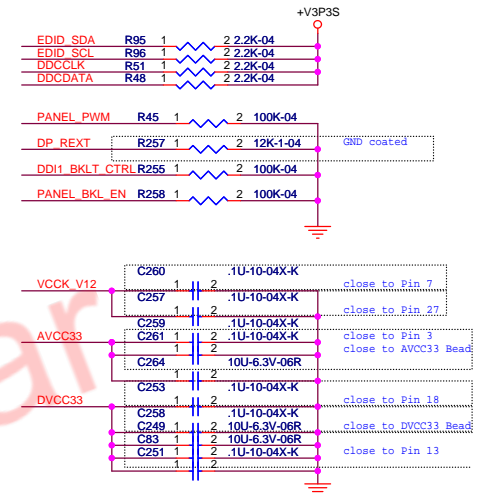
U14M VLV_M_D

K9	VSS281	VSS316	U3
L13	VSS282	VSS317	U30
L19	VSS283	VSS318	U32
L27	VSS284	VSS319	U40
L35	VSS285	VSS320	U42
M19	VSS286	VSS321	U43
M26	VSS287	VSS322	U45
M27	VSS288	VSS323	U46
M34	VSS289	VSS324	U48
M35	VSS290	VSS325	U49
M38	VSS291	VSS326	U5
M47	VSS292	VSS327	U51
M51	VSS293	VSS328	U53
N1	VSS294	VSS329	U6
N16	VSS295	VSS330	U8
N35	VSS296	VSS331	U9
N51	VSS297	VSS332	V12
P13	VSS298	VSS333	V16
P16	VSS299	VSS334	V19
P19	VSS300	VSS335	V21
P20	VSS301	VSS336	V35
P24	VSS302	VSS337	V40
P32	VSS303	VSS338	V41
P35	VSS304	VSS339	V51
P38	VSS305	VSS340	V7
P4	VSS306	VSS341	Y10
P47	VSS307	VSS342	Y14
P52	VSS308	VSS343	Y16
P9	VSS309	VSS344	Y21
T40	VSS310	VSS345	Y25
U1	VSS311	VSS346	Y33
U11	VSS312	VSS347	Y41
U12	VSS313	VSS348	Y44
U14	VSS314	VSS349	Y7
U21	VSS315	VSS350	Y9

13 OF 13
VALLEYVIEW-M-1.46G-QFGF
REV = 1.1

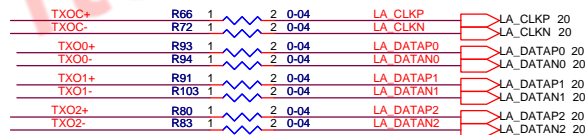
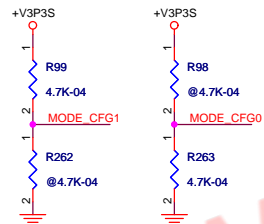


eDP / LVDS Select

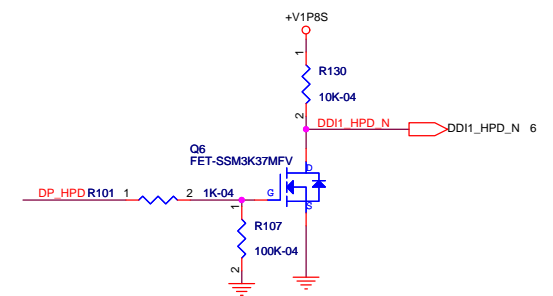
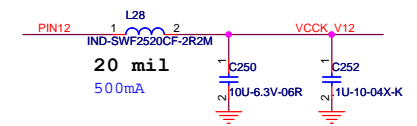


17,19 SMB_CLK_MULT   R50 2  1 @0-04 DDCCLK

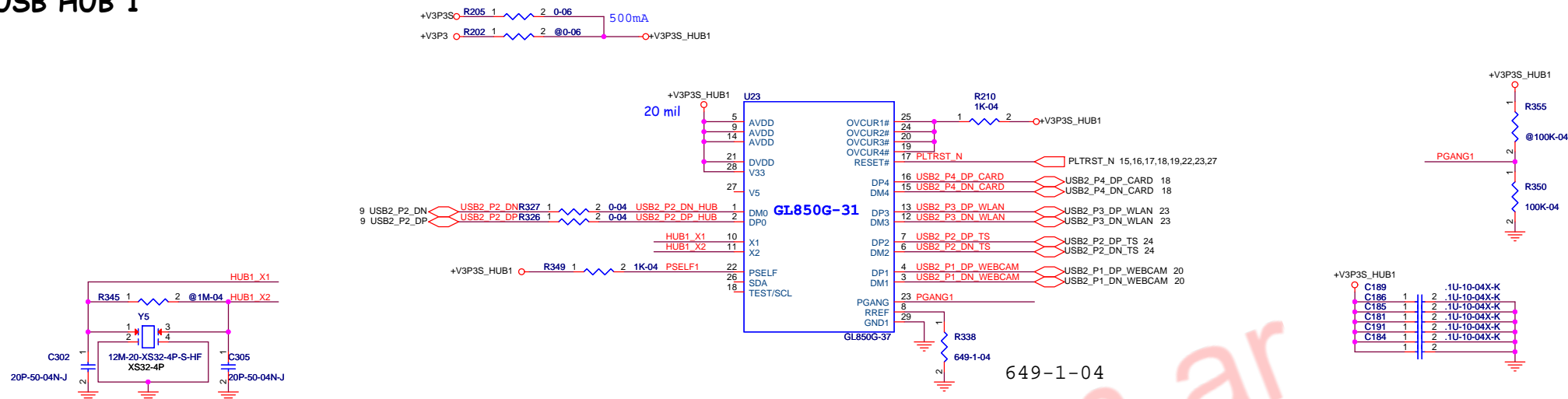
17,19 SMB_DATA_MULT R49 2 1 @0-04 DDCDATA



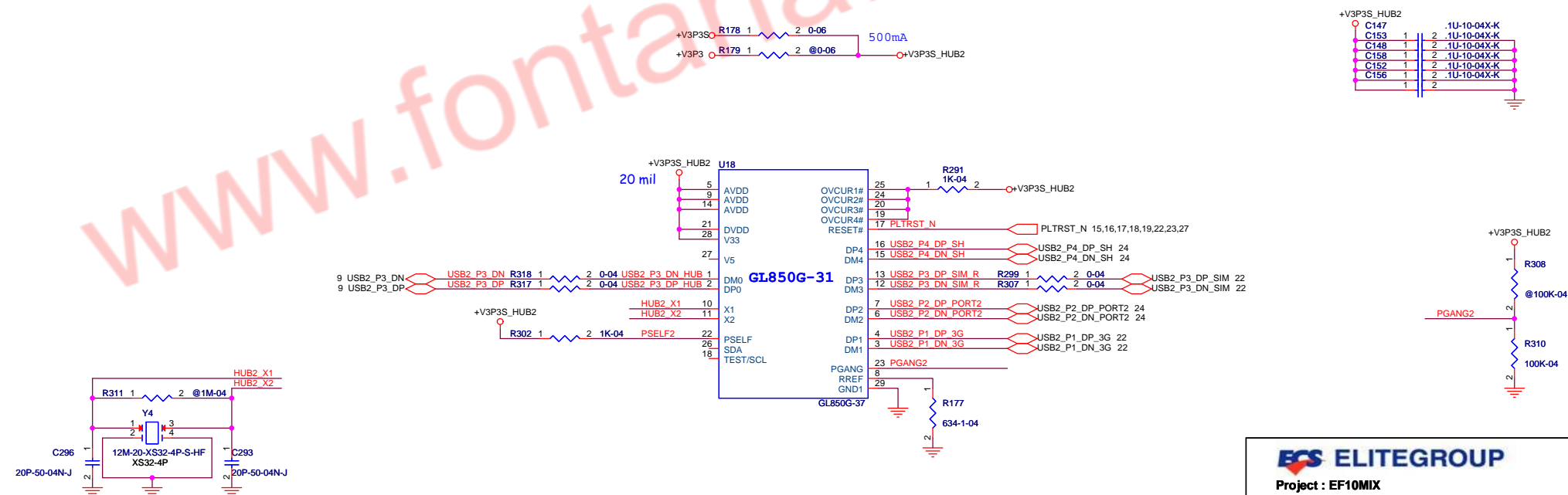
		MODE_CFG0(PIN30)	
		0	1
MODE_CFG1 (PIN31)	0	X	EP MODE
	1	ROM ONLY MODE	EEPROM MODE



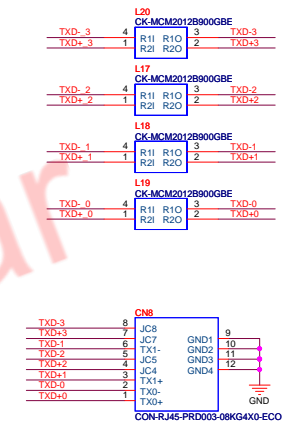
USB HUB 1



USB HUB 2

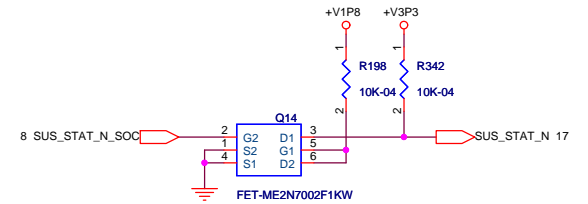
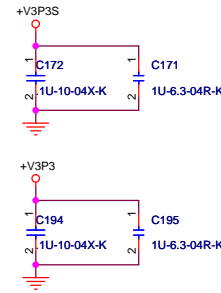
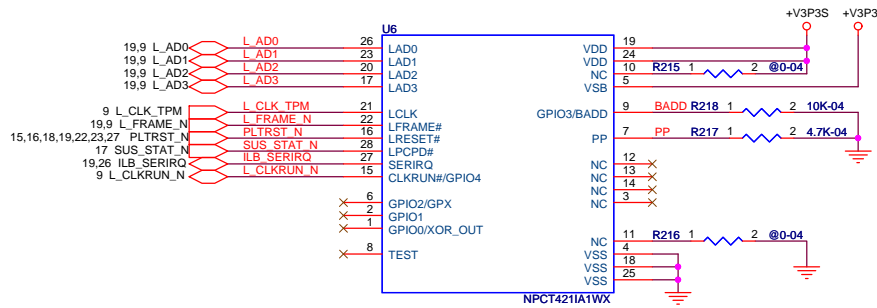


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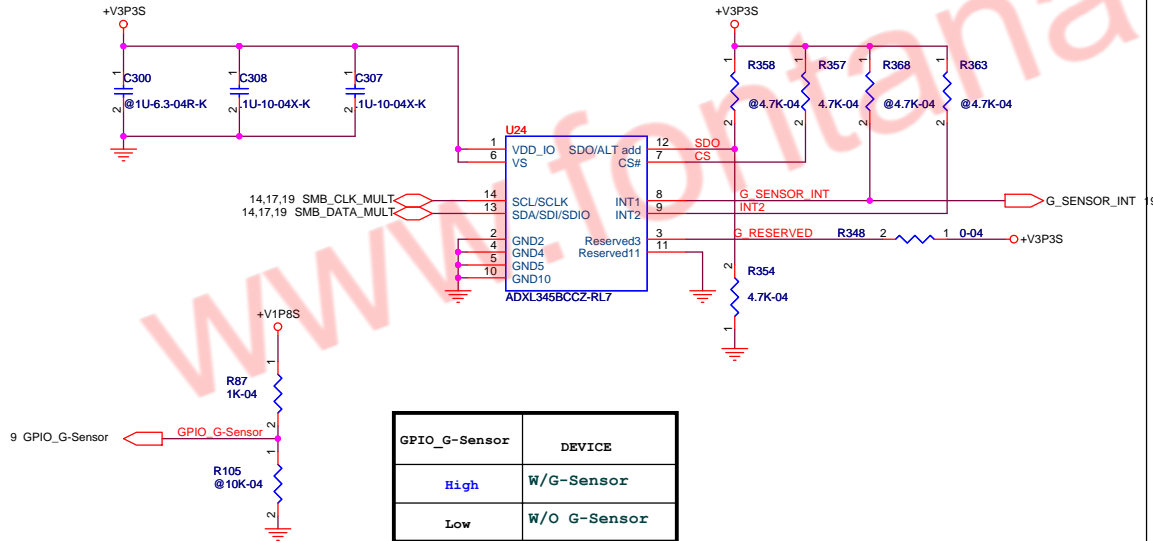


TPM

	WPCT201	NPCT620
R203	X	✓
R204	X	✓

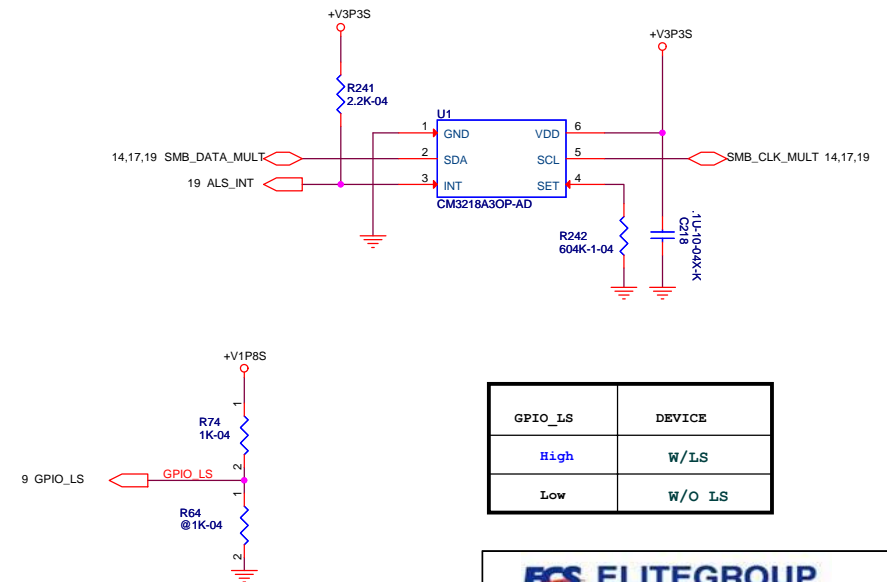


G-Sensor



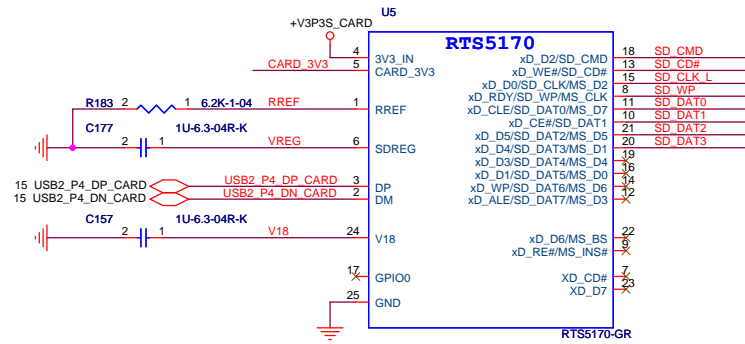
GPIO_G-Sensor	DEVICE
High	W/G-Sensor
Low	W/O G-Sensor

Light-Sensor

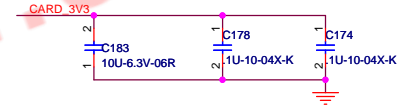
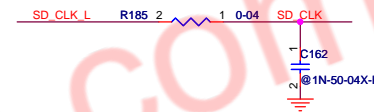
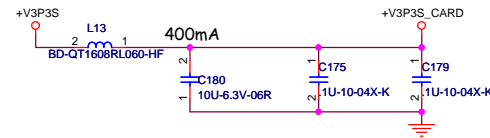
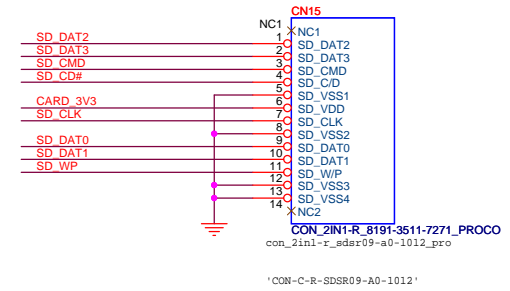


GPIO_LS	DEVICE
High	W/LS
Low	W/O LS

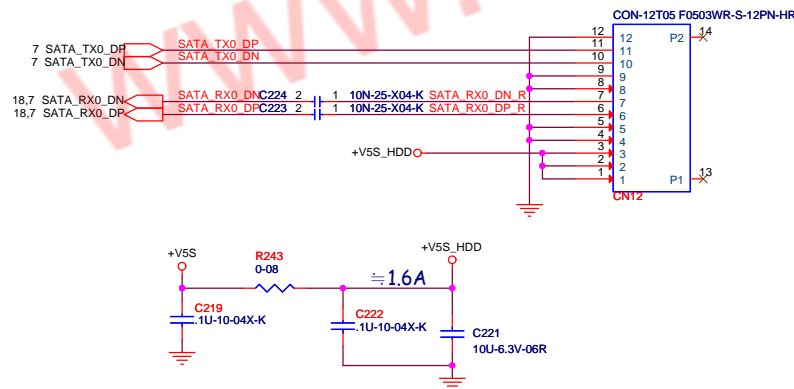
CARD READER



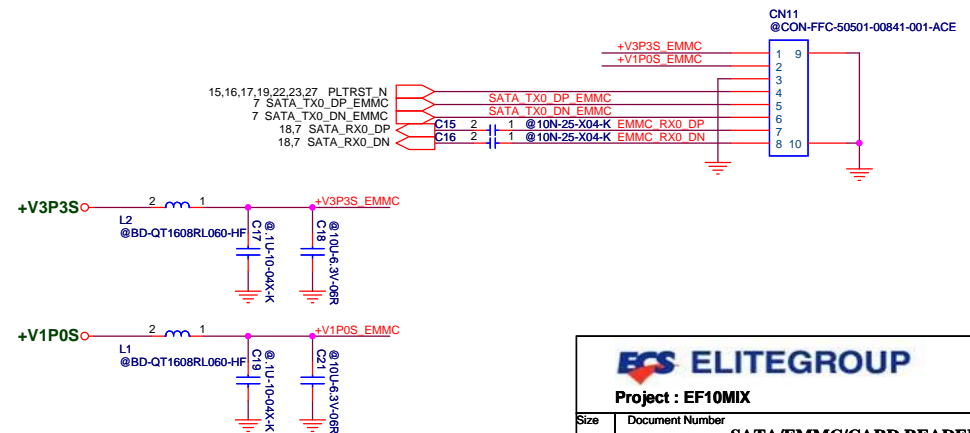
1. SD/MMC Card: 400mA

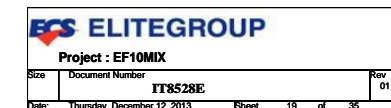


SATA HDD

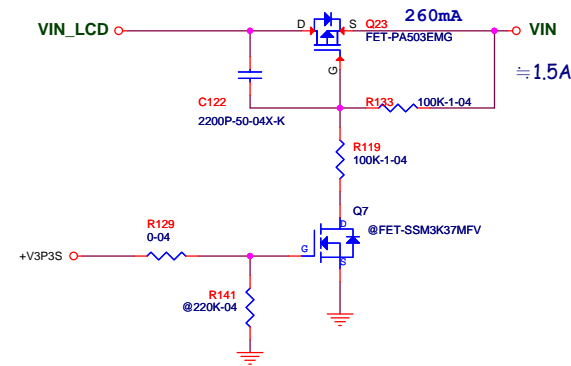
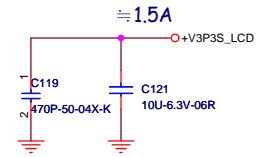
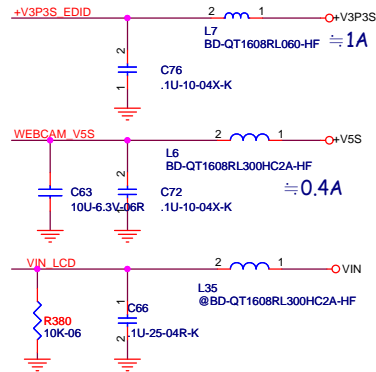
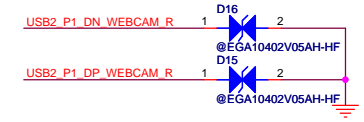
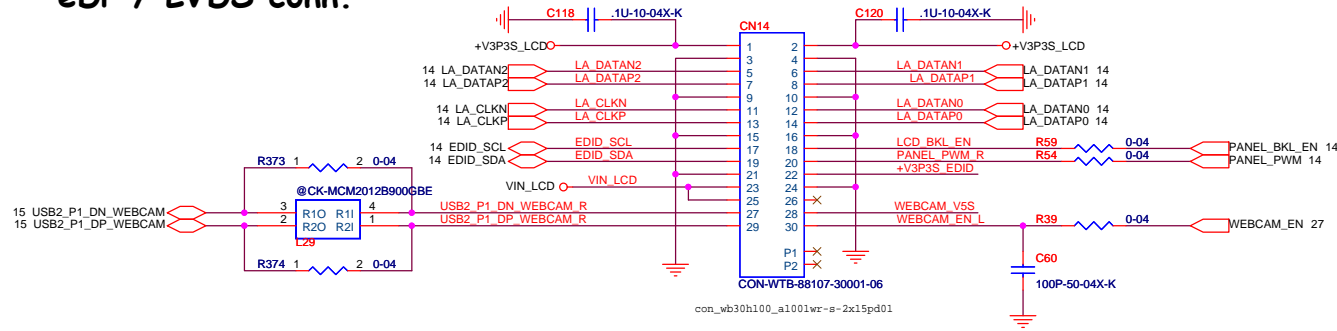


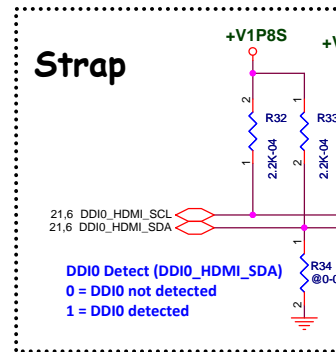
EMMC (Option)



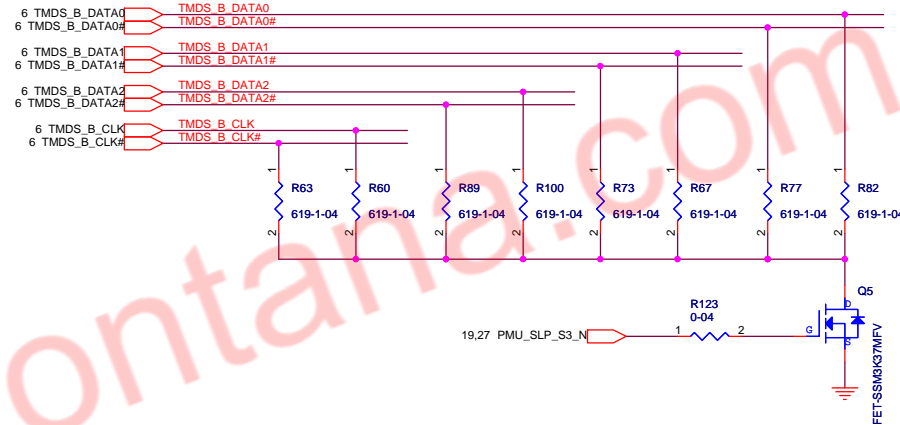


eDP / LVDS conn.

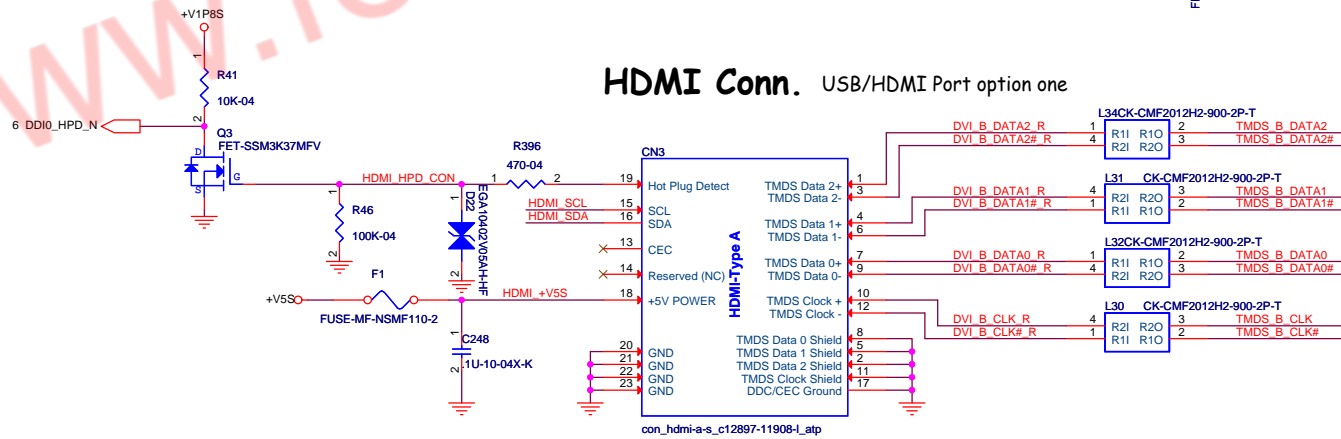




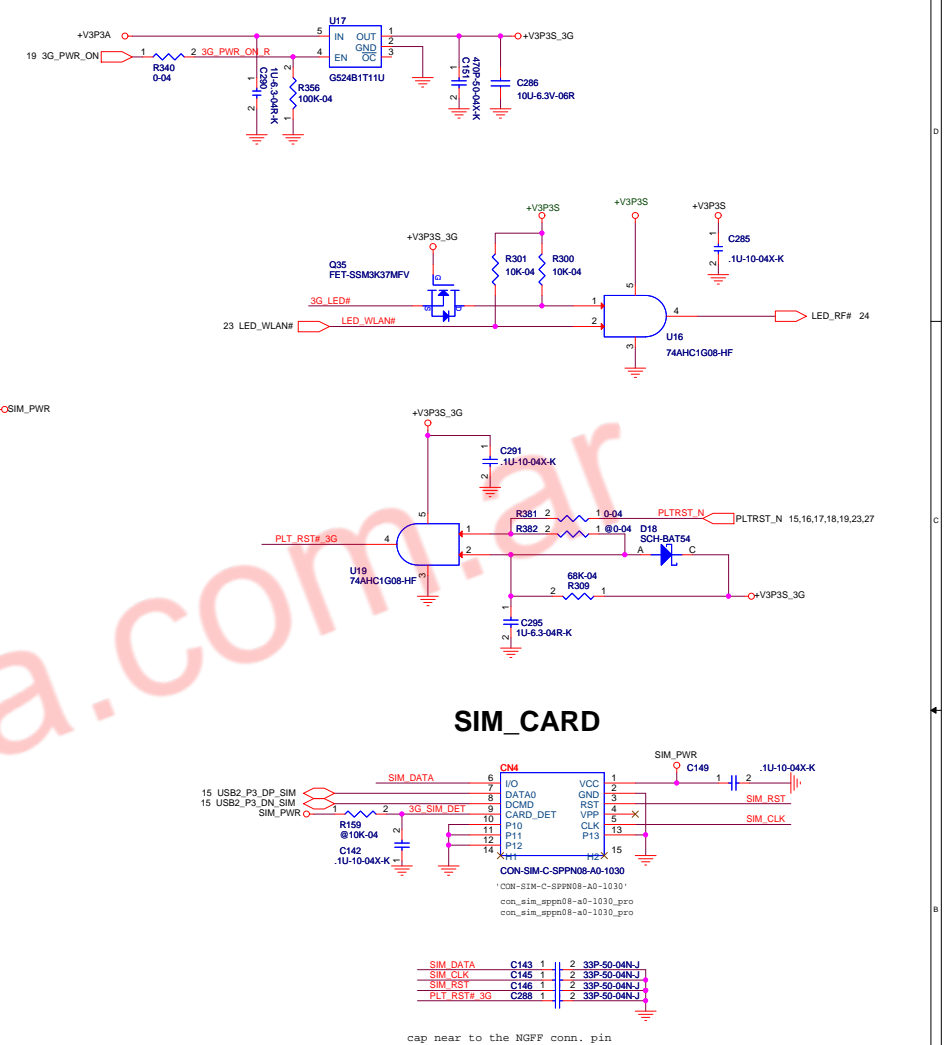
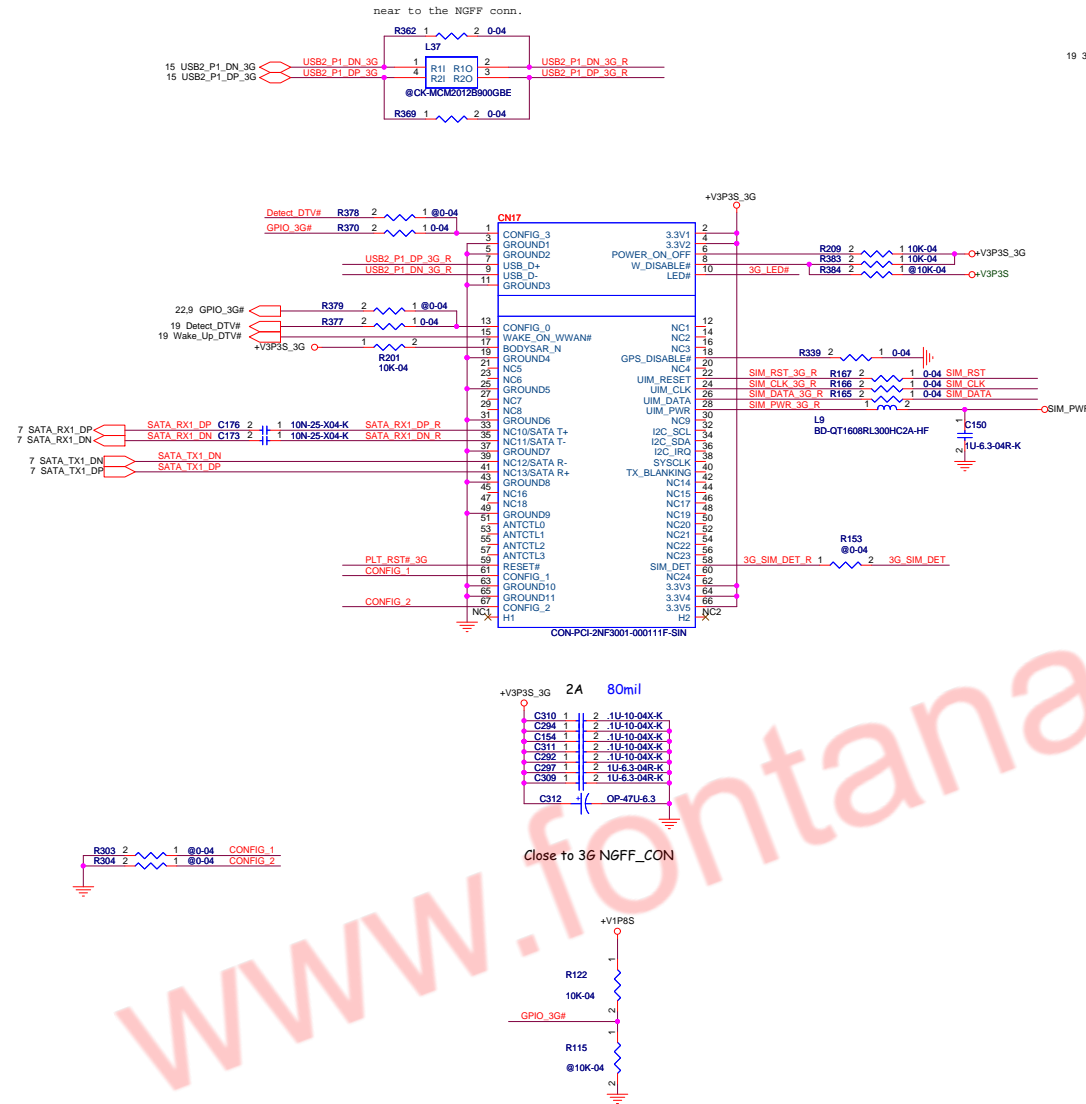
HDMI Cost Reduced Level Shifter



HDMI Conn. USB/HDMI Port option one



NGFF_3G / DTV



Module type and Main host interface	CONFIG_0 (Pin 13) 21	CONFIG_1 (Pin 61) 69	CONFIG_2 (Pin 67) 75	CONFIG_3 (Pin 1)
SSD-SATA (SSD)	NC	GROUND GROUND	GROUND GROUND	GROUND GROUND
WWAN-PCIE	GROUND	GROUND	NC	GROUND
WWAN-SSIC (3G)	NC	GROUND	GROUND	GROUND
WWAN-USB3.0	GROUND	GROUND	GROUND	NC
WWAN-USB3.0 (DTV)	GROUND	NC	NC	NC

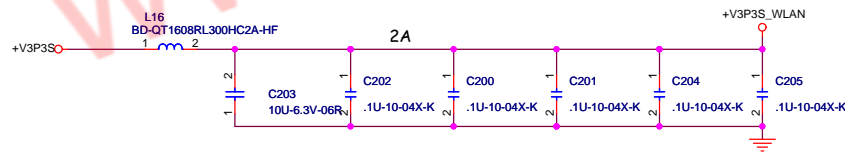
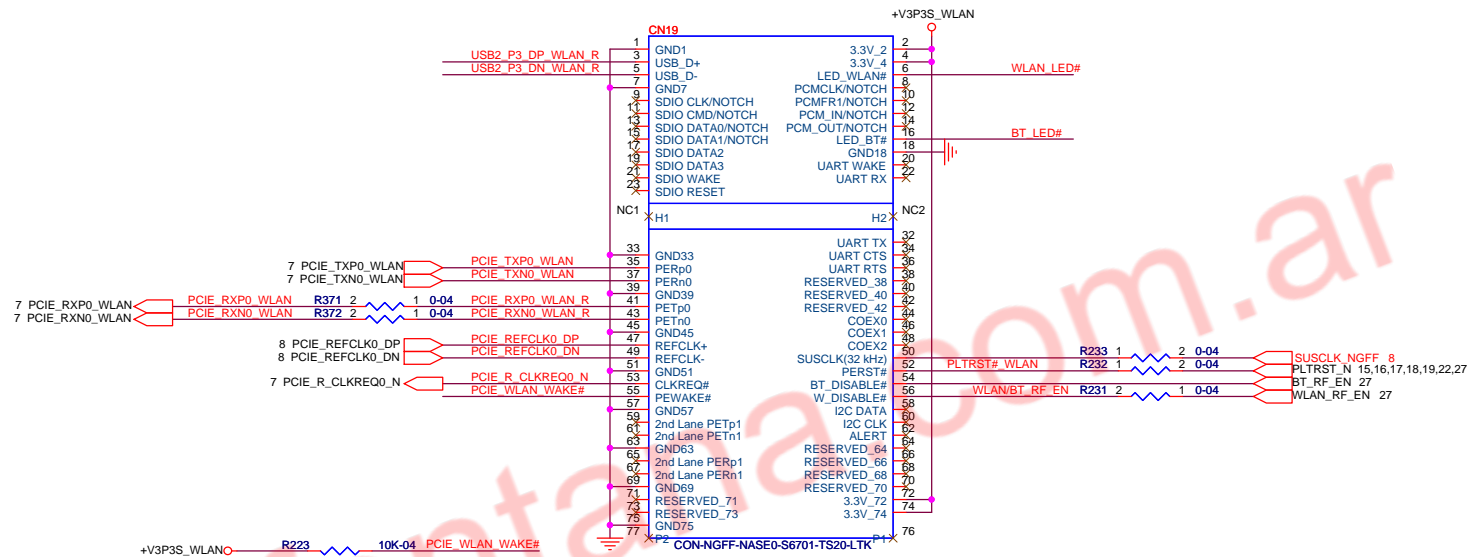
GPIO_3G	DEVICE
High	DTV
Low	3G/SSD

15 USB2_P3_DP_WLAN
15 USB2_P3_DN_WLAN

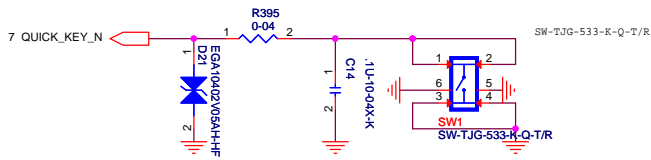
USB2_P3_DP_WLAN
USB2_P3_DN_WLAN

R225 1 2 0-04
4 3
1 2
R21 R20
R11 R10
15
R224 1 2 0-04

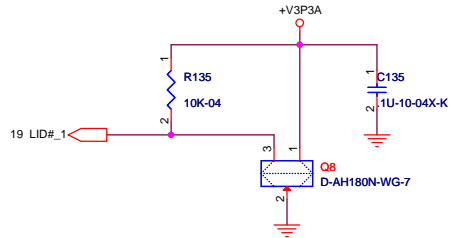
USB2_P3_DP_WLAN_R
USB2_P3_DN_WLAN_R



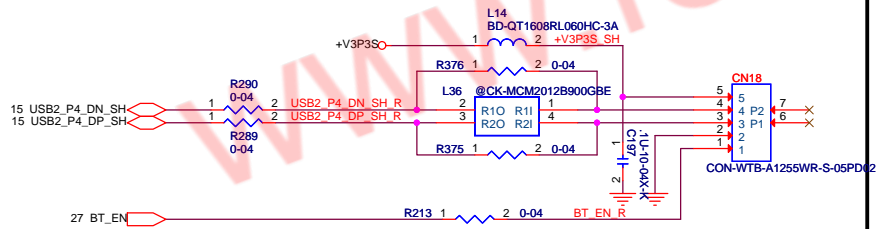
Quick Key



HALL Sensor

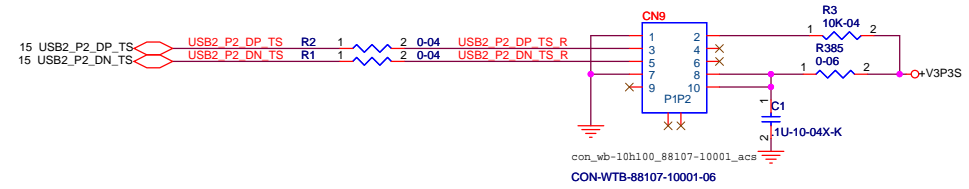


Sensor Hub

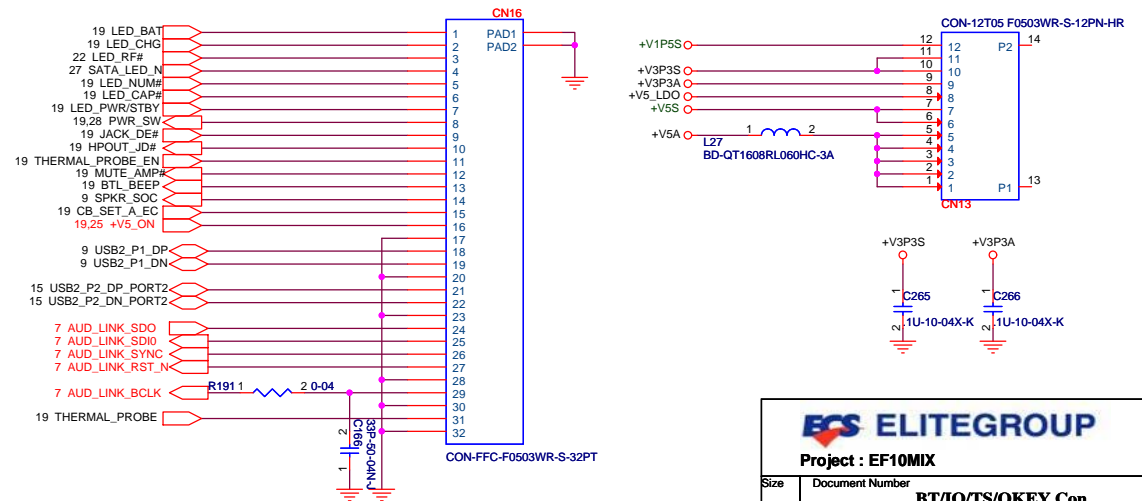


BT_EN = low disable BT.
BT_EN = high enable BT.

Touch panel



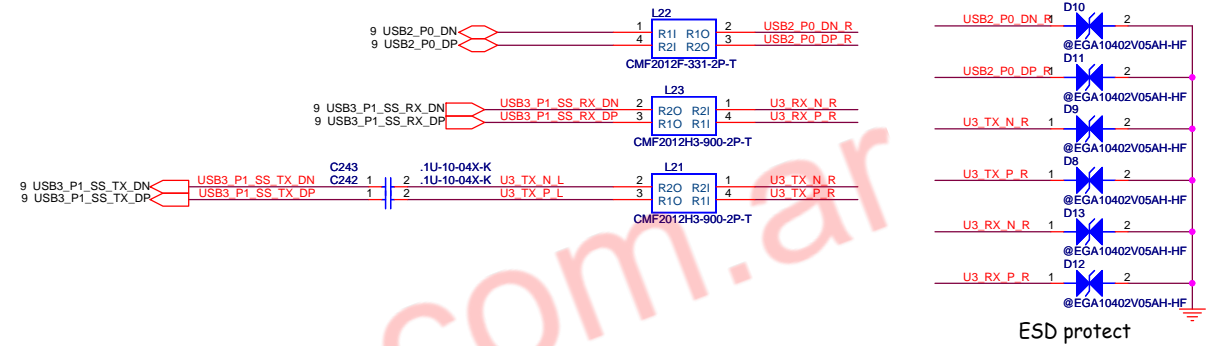
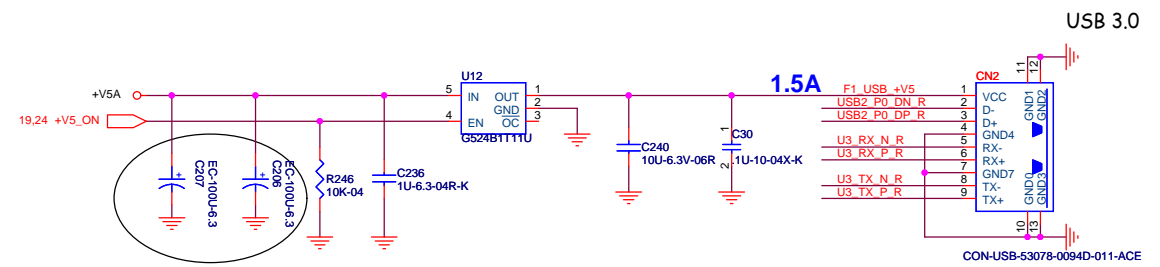
IO CONN.



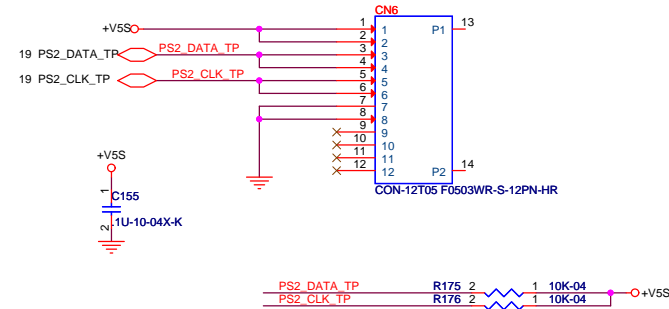
ELITEGROUP

Project : EF10MIX

Size	Document Number	Rev
	BT/IO/TS/QKEY Con.	01
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Touch PAD

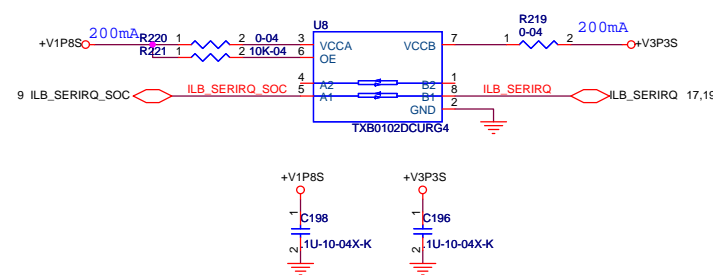
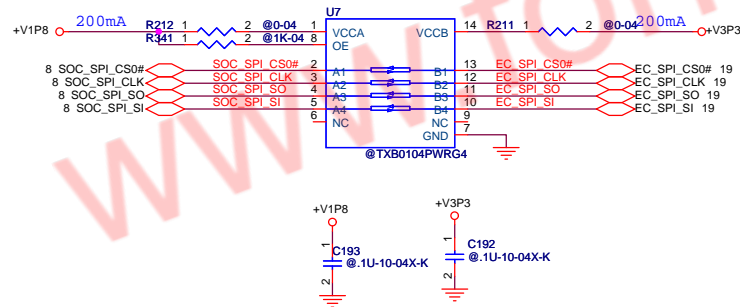
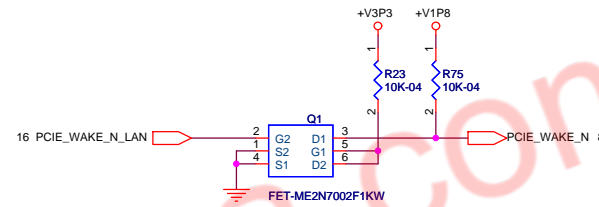
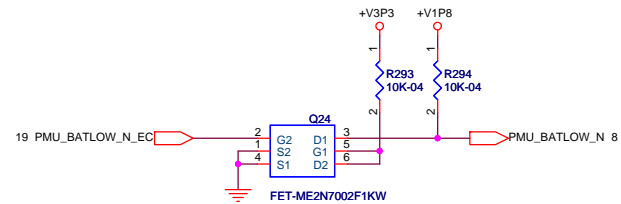
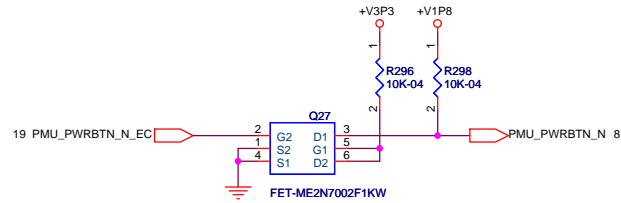
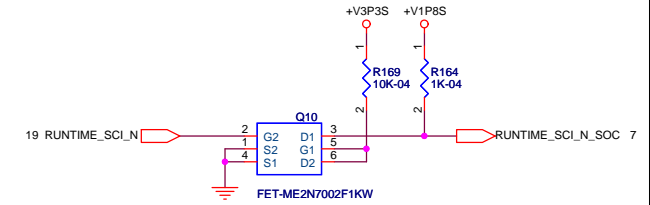
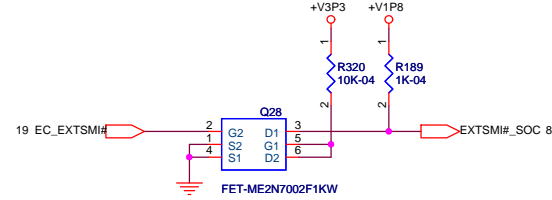
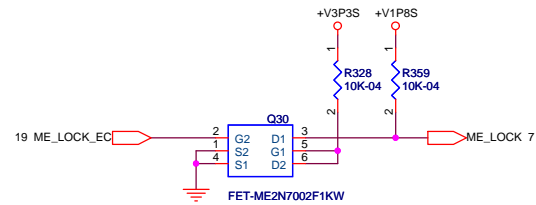


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	USB3.0/TP/Bottom	01
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EC to SOC

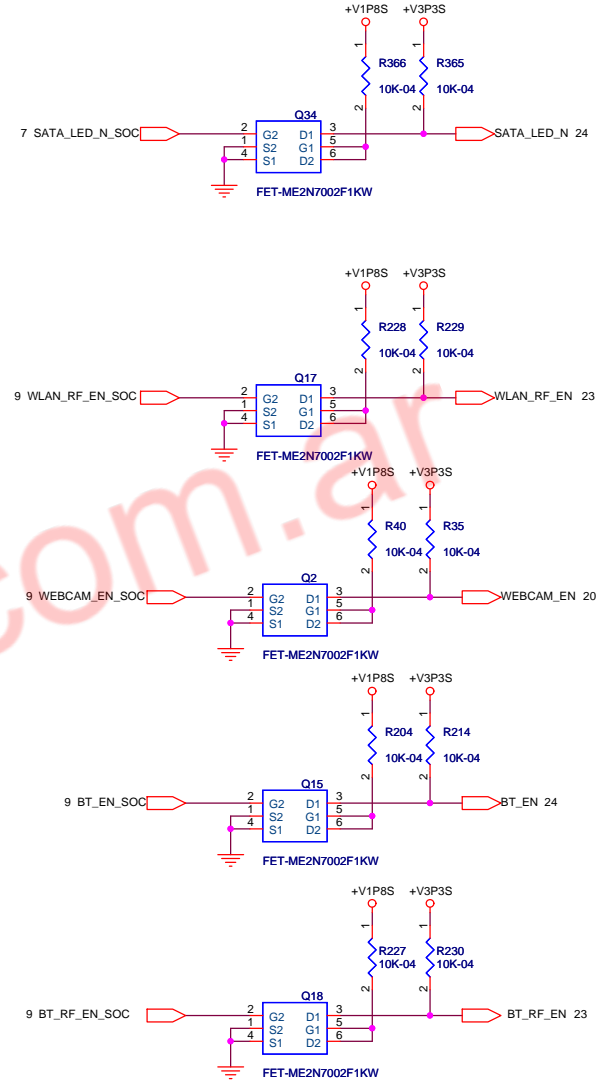
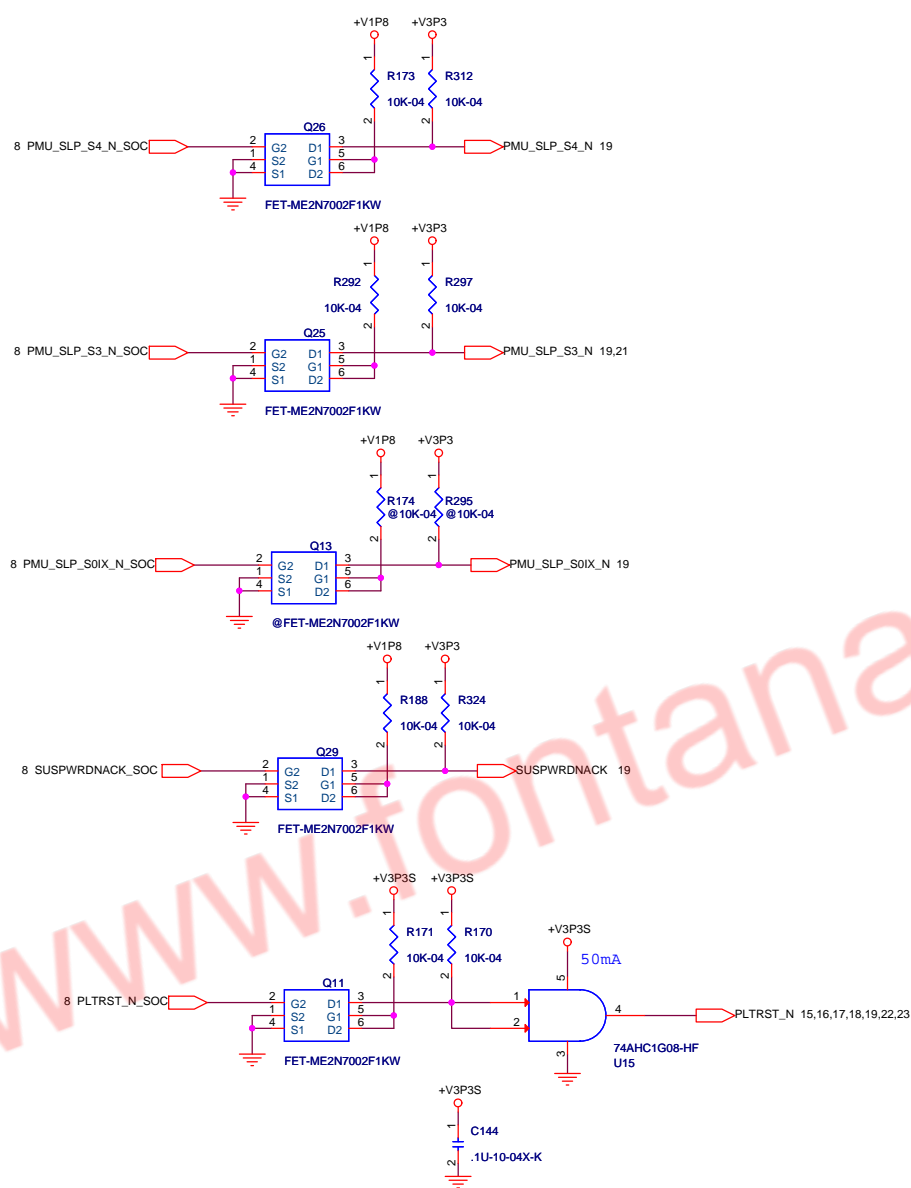


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Size	Document Number	Rev
	LEVEL SHIFT (EC)	01
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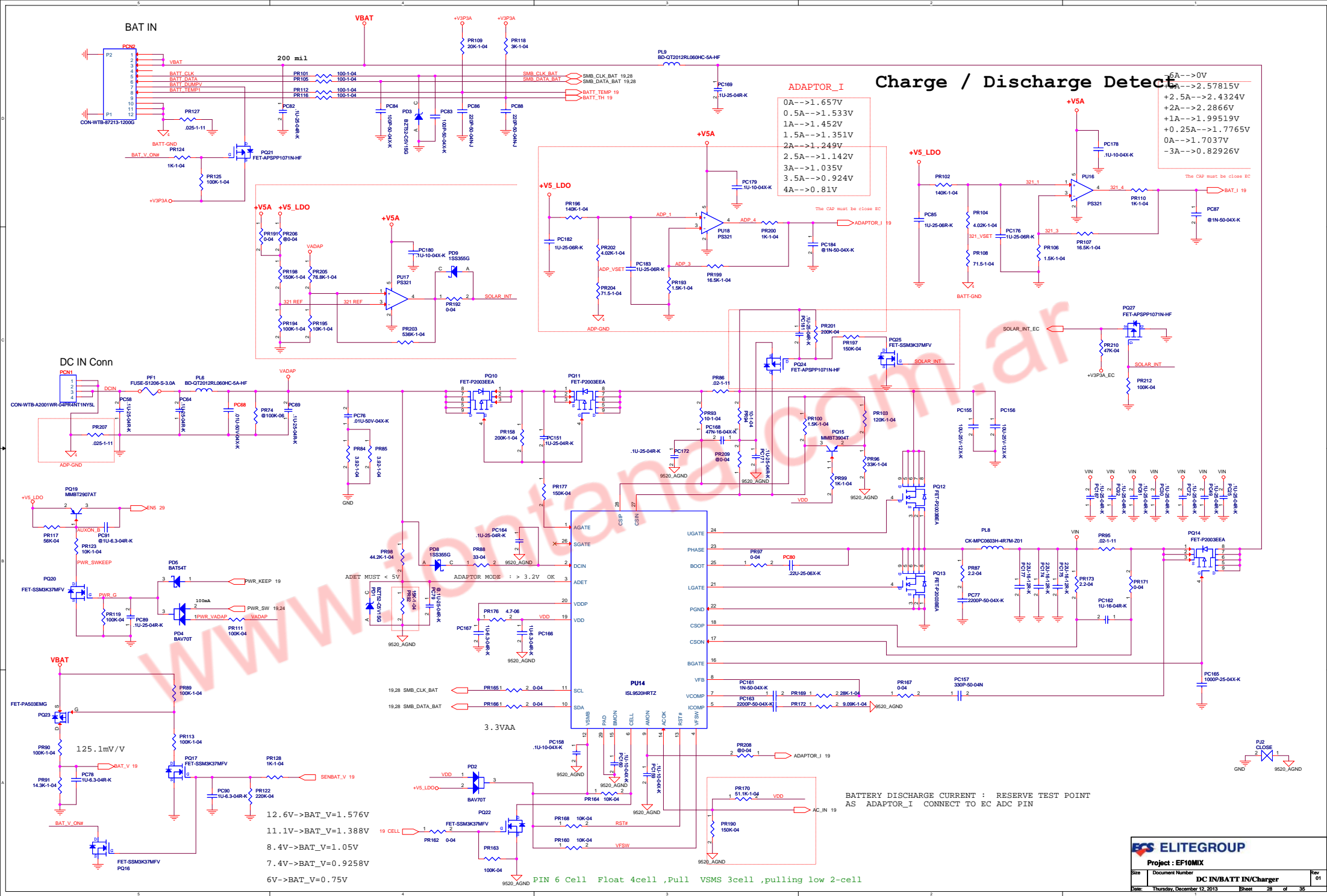
SOC to EC

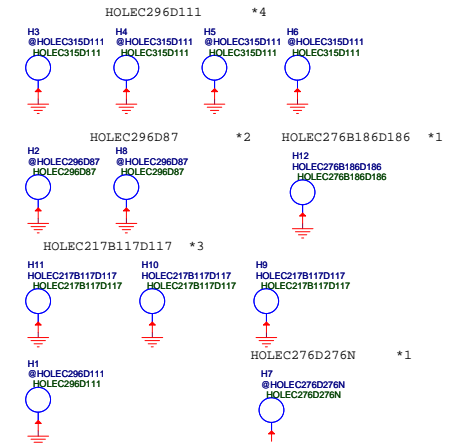
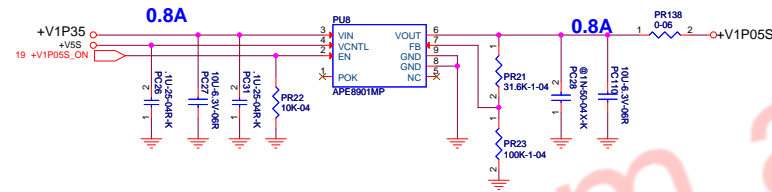
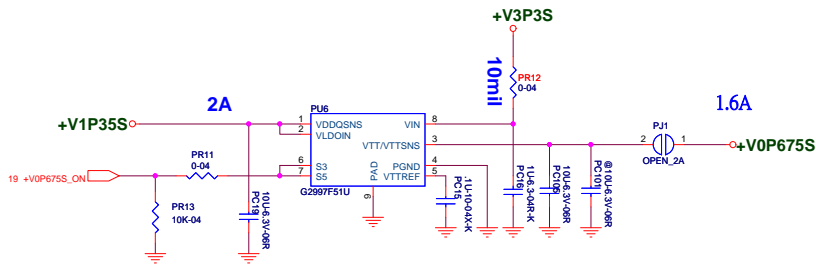
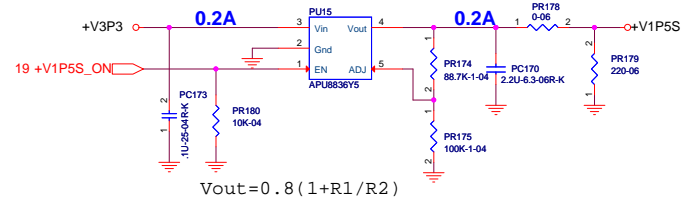
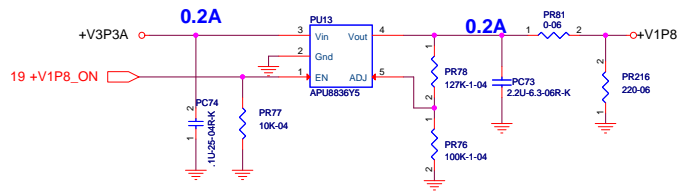


ELITEGROUP

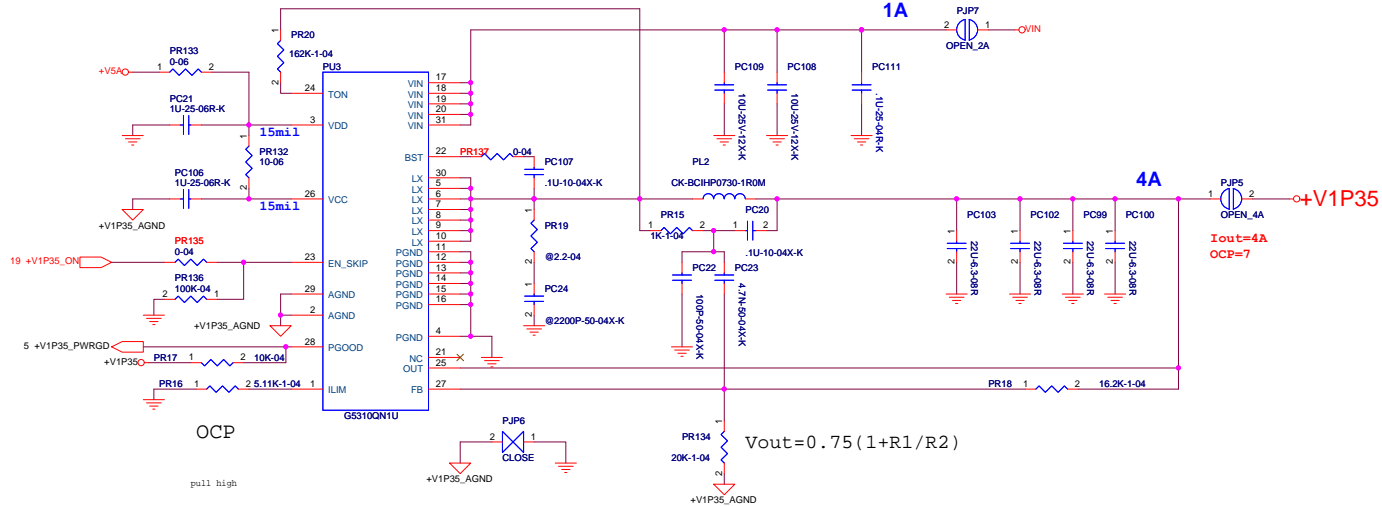
Project : EF10MIX

Size	Document Number	Rev
	LEVEL SHIFT (SOC)	01
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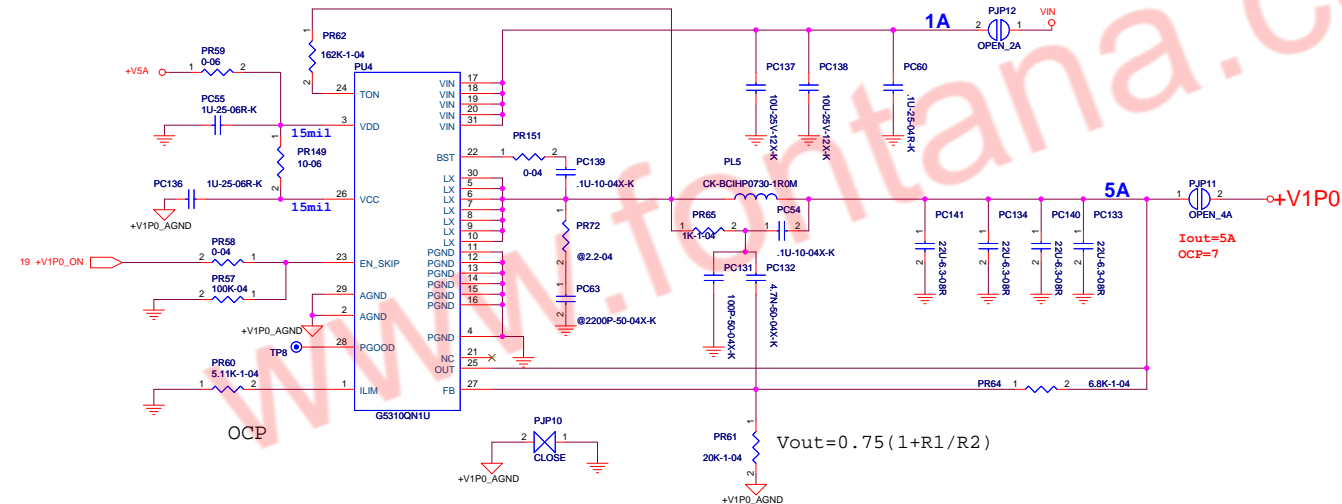




Freq



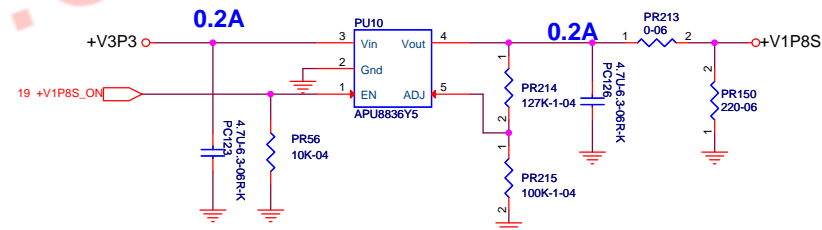
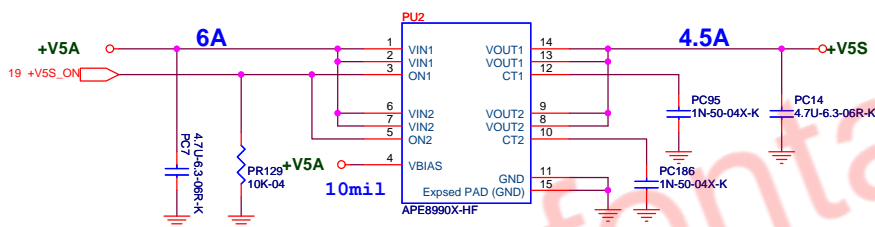
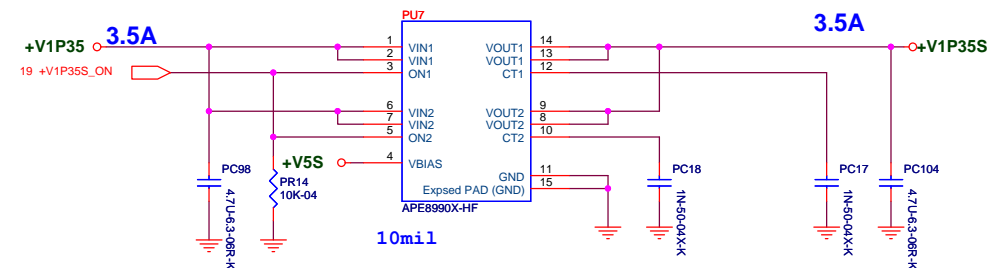
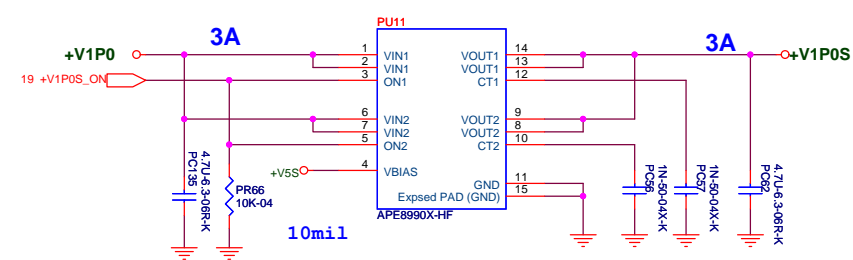
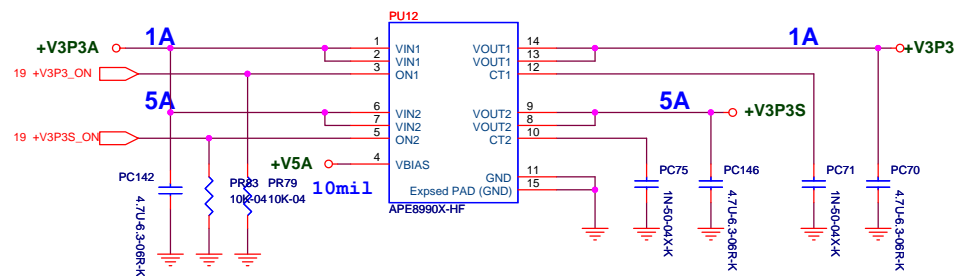
Freq



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	+V1P35 /+V1P0A	01
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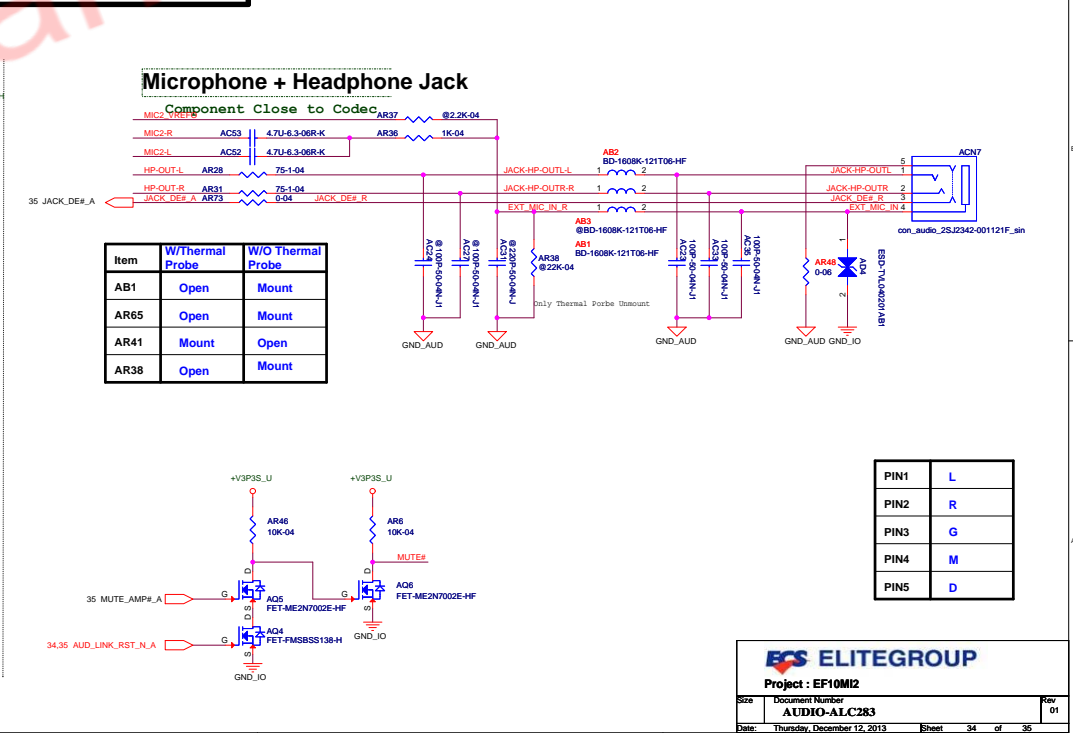
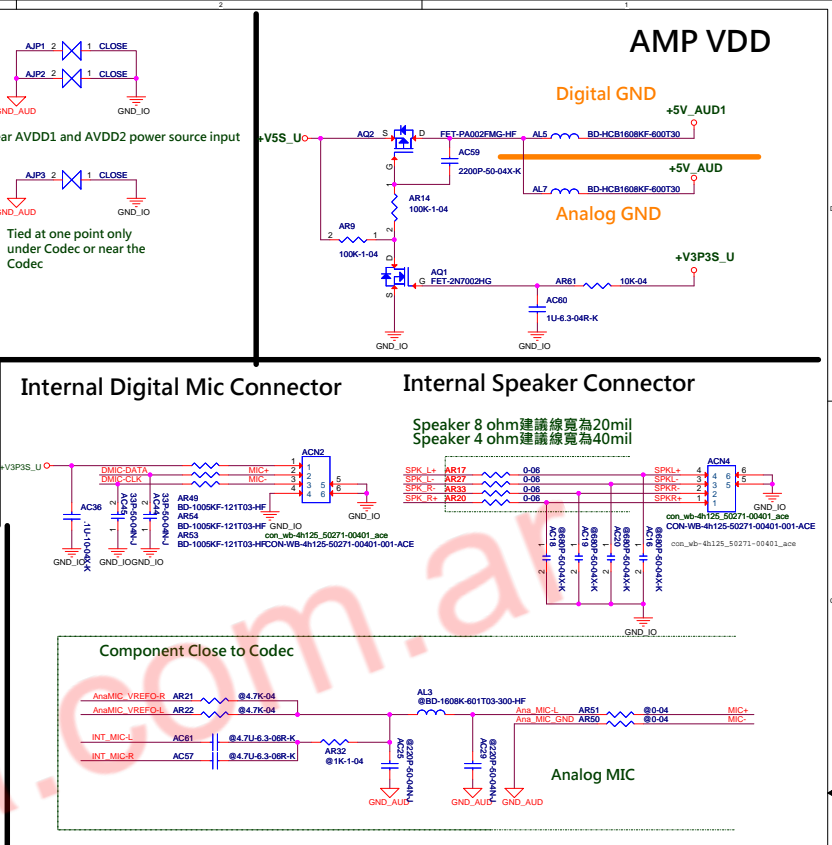


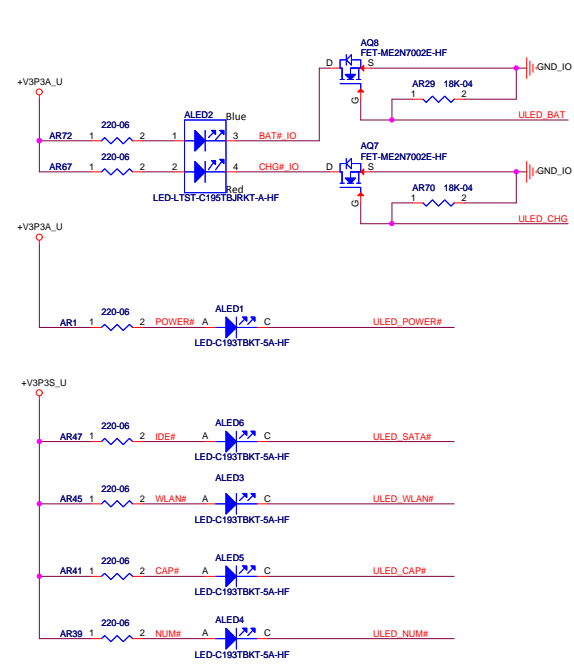
$$V_{out} = 0.8(1 + R1/R2)$$

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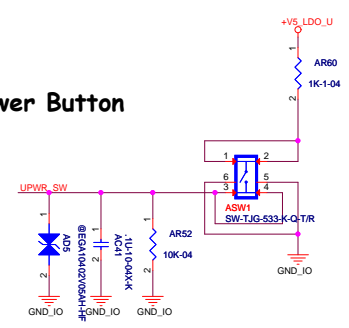
Project : EF10MIX

Size	Document Number	Rev
	Power Switch	01
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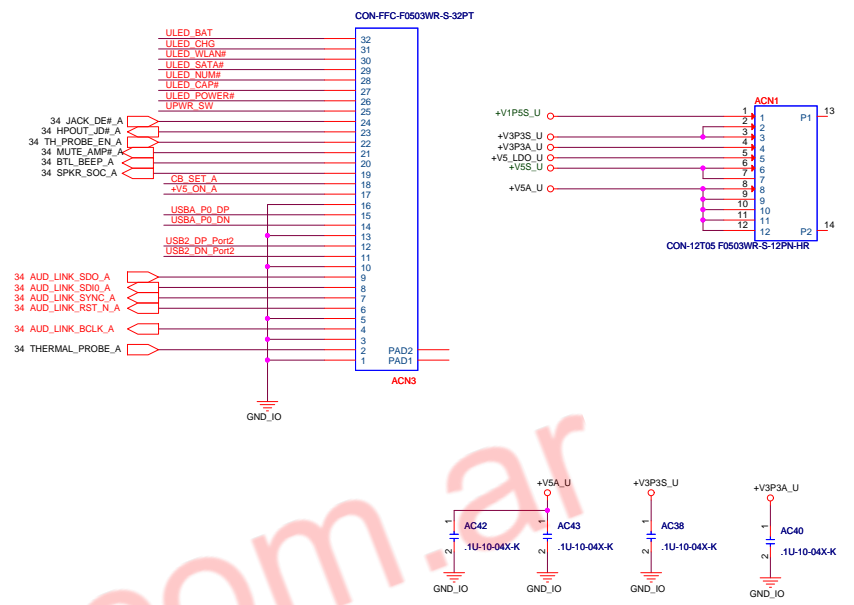




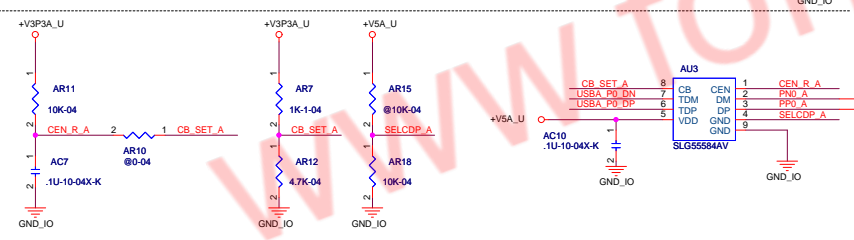
Power Button



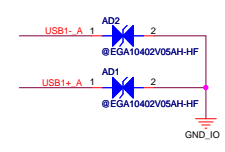
USB_LED CONN.



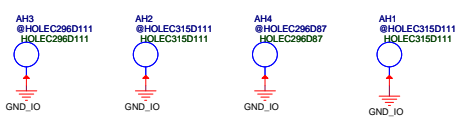
USB R-Port



IO CONN.



USB_A_P0_DP	AR64	1	2	@0-04	PNO_A
USB_A_P0_DP	AR65	1	2	@0-04	PP0_A
+V5_ON_A	AR75	1	2	@0-04	CEN_R_A



IO CONN.

