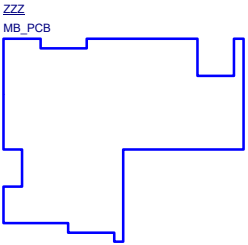


MODEL NAME : *APRDDDB2000*
PCB NO : *LA-G661P*
BOM P/N : *431ADH31L0**



Dell/Compal Confidential

Schematic Document

Augusta Whiskey Lake U

WWW.ATTECH1.RU

BOM Structure

@ : Nopop Component
RF@ : RF Component
@RF@ : RF Nopop Component
EMC@ : EMI Component
@EMC@ : EMI Nopop Component
ST@ : ST TPM
750@ : Nuvoton TPM
NRTD3@ : non RTD3 support
RTD3@ : RTD3 support
XDP@ : XDP Component
DB@ : Debug Component
BreakDown@ : Breakdown Component
U22@ : CPU U22 identify for BIOS
U42@ : CPU U42 identify for BIOS
U22EC@ : CPU U22 identify for EC
U42EC@ : CPU U42 identify for EC
5105@ : Option for MEC5105
5106@ : Option for MEC5106

NDS3@ : non Deep sleep Support
DS@ : Support Deep sleep
CPUI7@ : I7 CPU identify for BIOS
CPUI5@ : I5 CPU identify for BIOS
CPUI7EC@ : I7 CPU identify for EC
CPUI5EC@ : I5 CPU identify for EC
TPS79801QDGNR@ : Camera sensor AVDD main LDO
TPS7A1601DGNR@ : Camera sensor AVDD 2nd LDO
GIGADEVICE@ : BIOS ROM Option
WINBOND@ : BIOS ROM Option
MXIC@ : BIOS ROM Option

2019-03-05

Rev: 0.4 (X03)
PVT

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	20190508	Deciphered Date	20190508	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Size	Document Number
			Date	Rev
			Tuesday, March 05, 2019	04
			Sheet 1	of 100





Vcc	3.3V +/- 5%		
Board ID	R	C	REV
0	240K +/- 5%	4700p	EXT1
1	130K +/- 5%	4700p	DVT1
2	62K +/- 5%	4700p	DVT2
3	33K +/- 5%	4700p	PVT
4	8.2K +/- 5%	4700p	
5	4.3K +/- 5%	4700p	
6	2K +/- 5%	4700p	
7	NC		

Figure 1: Schematic representation of the experimental design. The diagram shows a sequence of six blocks. Each block contains a fixation cross (X) and a stimulus (a word in a box). The stimuli are: 'XOQO', 'XOQO', 'XOQO', 'XOQO', 'XOQO', and 'XOQO'. Below each stimulus, the word 'XOQO' is written, followed by a percentage: 20%, 30%, 40%, 50%, 60%, and 70%.

USB 2.0 PORT#	DESTINATION
1	TBT1
2	TBT2
3	USB Type-A
4	Dock
5	IR Camera
6	UF Camera
7	WWAN
8	USH
9	FPR
10	BT

DDI	DDI PORT#	DESTINATION
	1	TBT Alpine Ridge
	2	
eDP	1	FHD

Board ID	PCB Revision
0	0.1
1	0.2
2	0.3
3	0.4
4	0.5
5	1.0
6	
7	

- @ : means de-pop
-  : means Digital Ground
-  : means Analog Ground

Flexible I/O	Interface	DESTINATION
1	PCI-E#1 / USB 3.0#1	
2	PCI-E#2 / USB 3.0#2	WF Camera
3	PCI-E#3 / USB 3.0#3	USB3.0 Type-A
4	PCI-E#4 / USB 3.0#4	NGFF (WWAN)
5	PCI-E#5 / USB 3.0#5	
6	PCI-E#6 / USB 3.0#6	
7	PCI-E #7	TBT Alpine Ridge
8	PCI-E #8	
9	PCI-E #9	Card reader
10	PCI-E #10	WLAN PCIe Gen2
11	PCI-E #11 /SATA #0	
12	PCI-E #12 /SATA #1A	WWAN (2nd SSD)
13	PCI-E #13	
14	PCI-E #14	
15	PCI-E #15 /SATA #1B	
16	PCI-E #16 /SATA #2	Main SSD (2230)

CLK	DIFFERENTIAL	DESTINATION
	CLKOUT_PCIE0	TBT AR
	CLKOUT_PCIE1	Main SSD
	CLKOUT_PCIE2	WWAN (2nd SSD)
	CLKOUT_PCIE3	WLAN PCIe Gen2
	CLKOUT_PCIE4	Card Reader
	CLKOUT_PCIE5	N/A

[illegible]

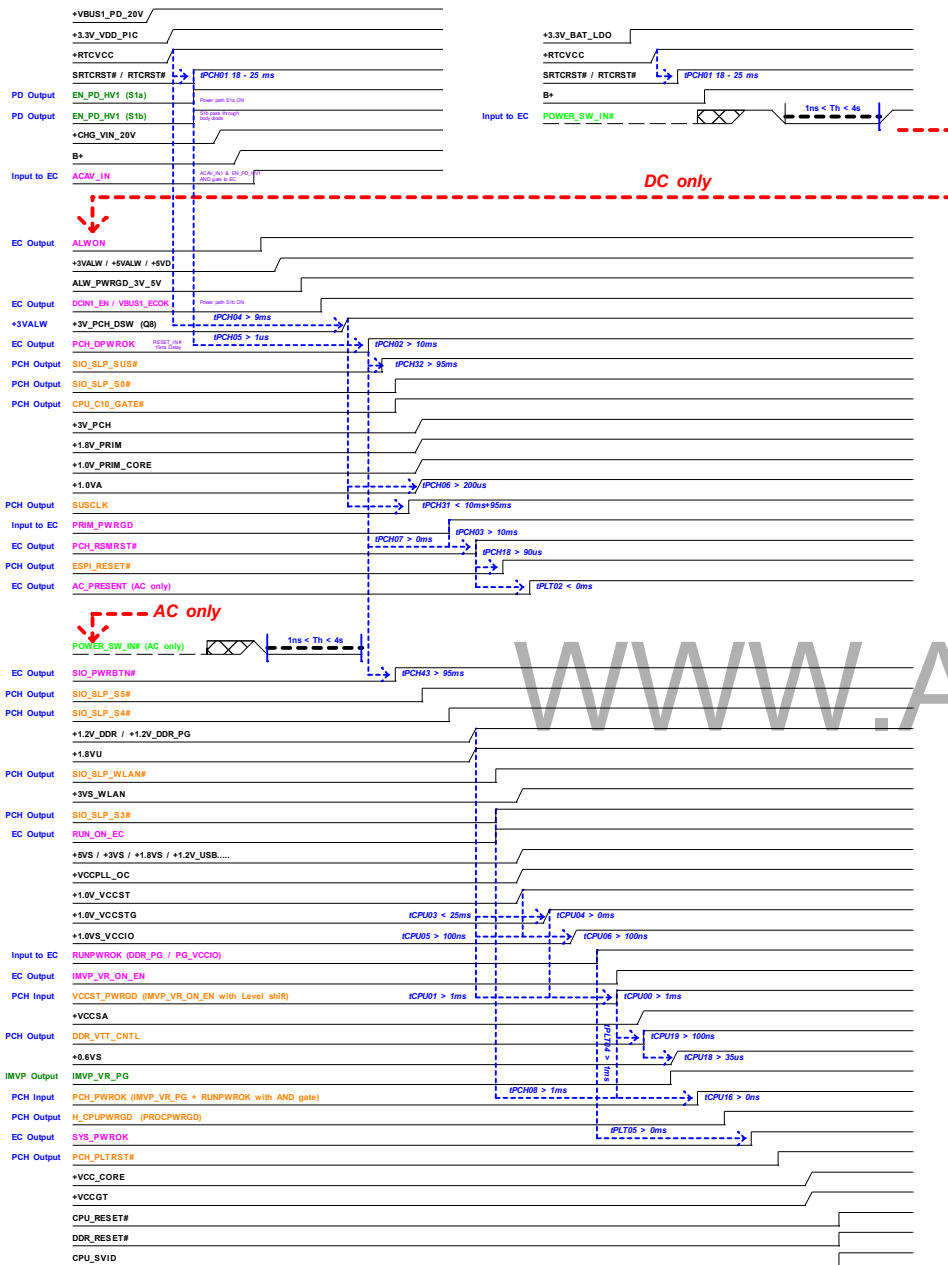
CPU Option		PVT	
<div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div> <div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div>	<div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div> <div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div>	<div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div> <div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div>	<div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div> <div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div>
<div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div> <div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div>	<div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div> <div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div>	<div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div> <div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div>	<div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div> <div> <div> </div> <div> Intel® Xeon® E5-2680 v4 20C/40T/160GB </div> </div>

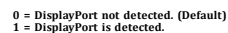
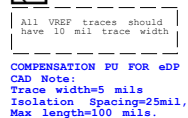
Flex I/O Lane	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
High Speed I/O (HSIO) Type and Lane	USB3.1 Gen1/Gen2 #1	USB3.1 Gen1/Gen2 #2	USB3.1 Gen1/Gen2 #3	USB3.1 Gen1/Gen2 #4	USB3.1 Gen1/Gen2 #5	USB3.1 Gen1/Gen2 #6	PCIe* #7	PCIe* #8	PCIe* #9	PCIe* #10	PCIe* #11	PCIe* #12	PCIe* #13	PCIe* #14	PCIe* #15	PCIe* #16
				PCIe* #4	PCIe* #5	PCIe* #6										SATA 2
Intel® RST Support	No Support			No Support				GBe		GBe		SATA 1a		SATA 1b		Yes

Deep Sleep

[AC in] (remove RTC)

[Battery only, AC absent] (remove RTC)





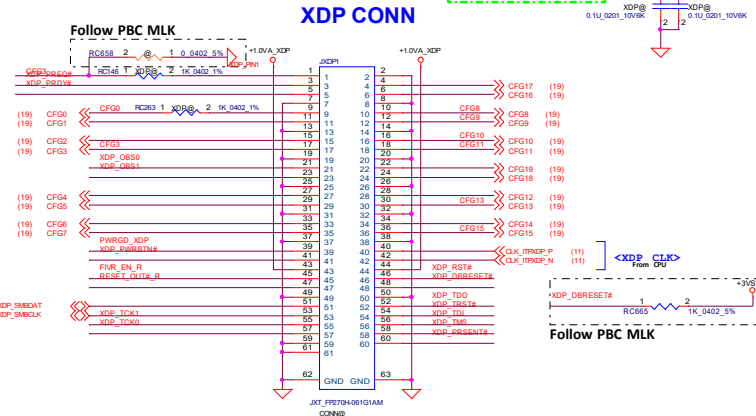
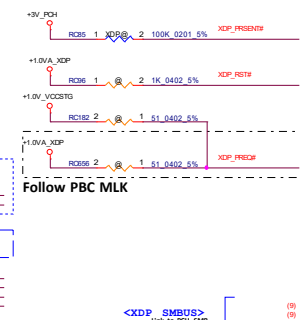
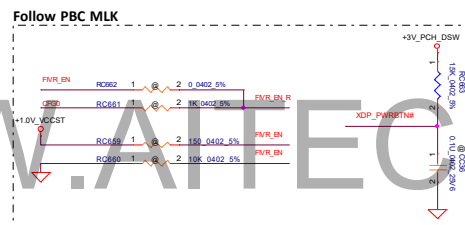
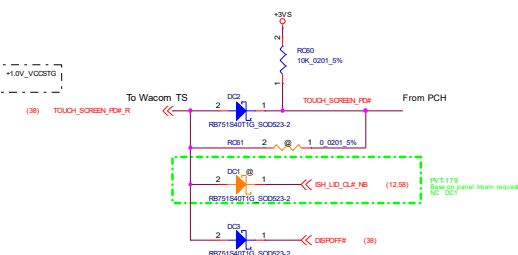
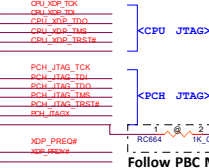
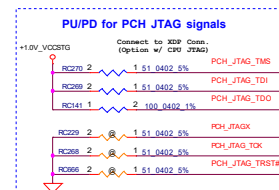
Reserved

GPP_H17 (WEAK INTERNAL PD)

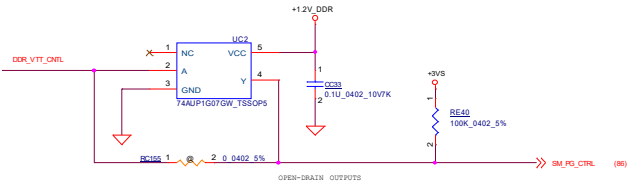
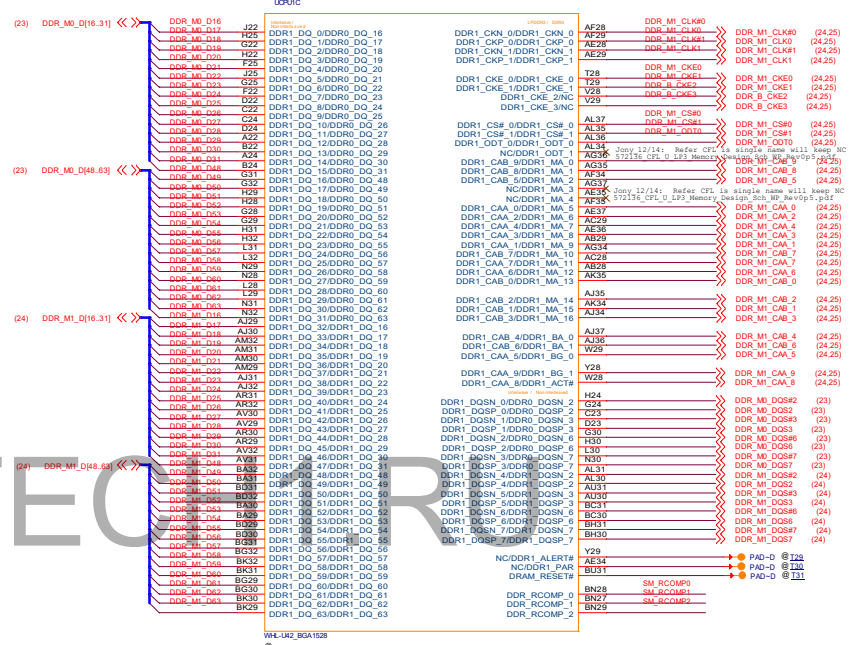
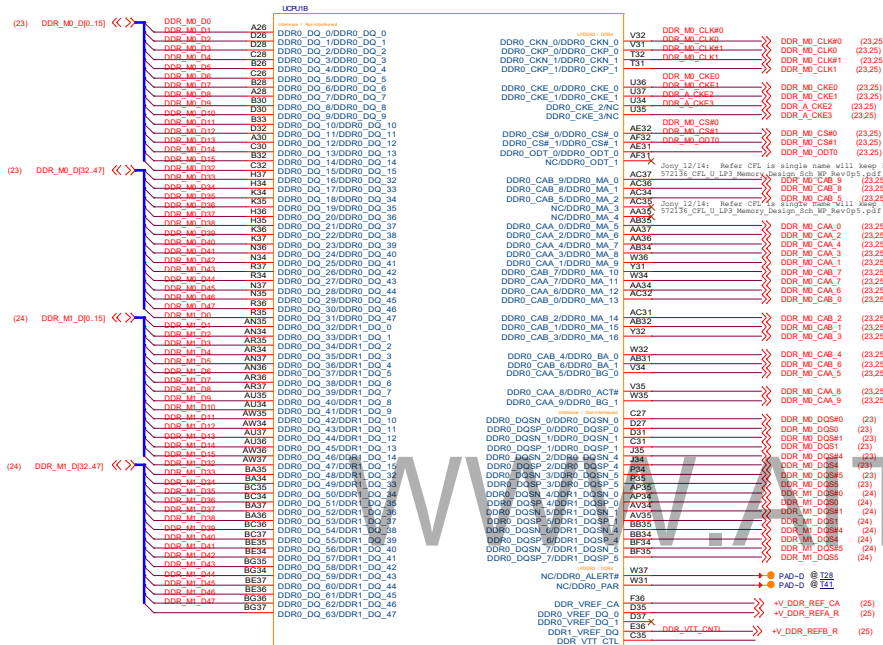
This signal has a weak internal pull-down. This strap should sample LOW. There should NOT be any on-board device driving it to opposite direction during strap sampling.



Security Classification	Compul Secret Data		Title	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	
<p>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPUL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL INFORMATION. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM COMPUL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPUL ELECTRONICS, INC.</p>			<p>P006 - WHL-U(1/14)DDI,EDP</p>	
<p>Size</p>			<p>Drawing Number</p>	
<p>Date:</p>			<p>Rev</p>	
<p>Monday, May 28, 2019</p>			<p>0.0</p>	
<p>Sheet</p>			<p>6 of 50</p>	



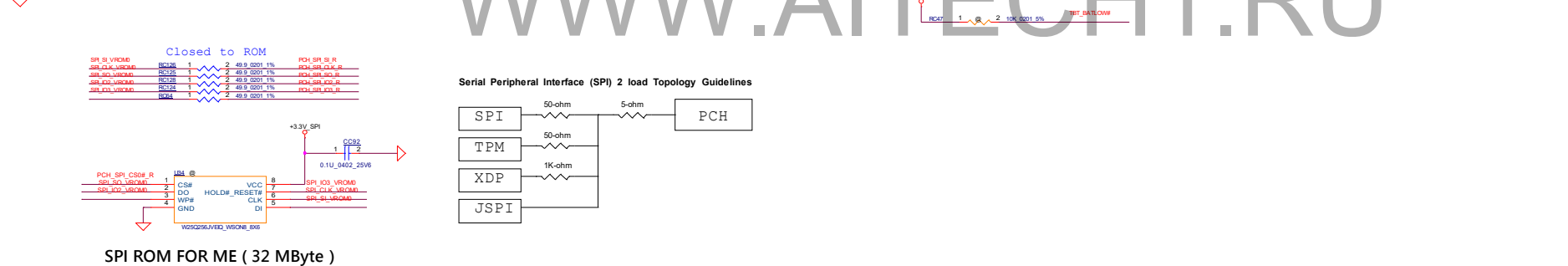
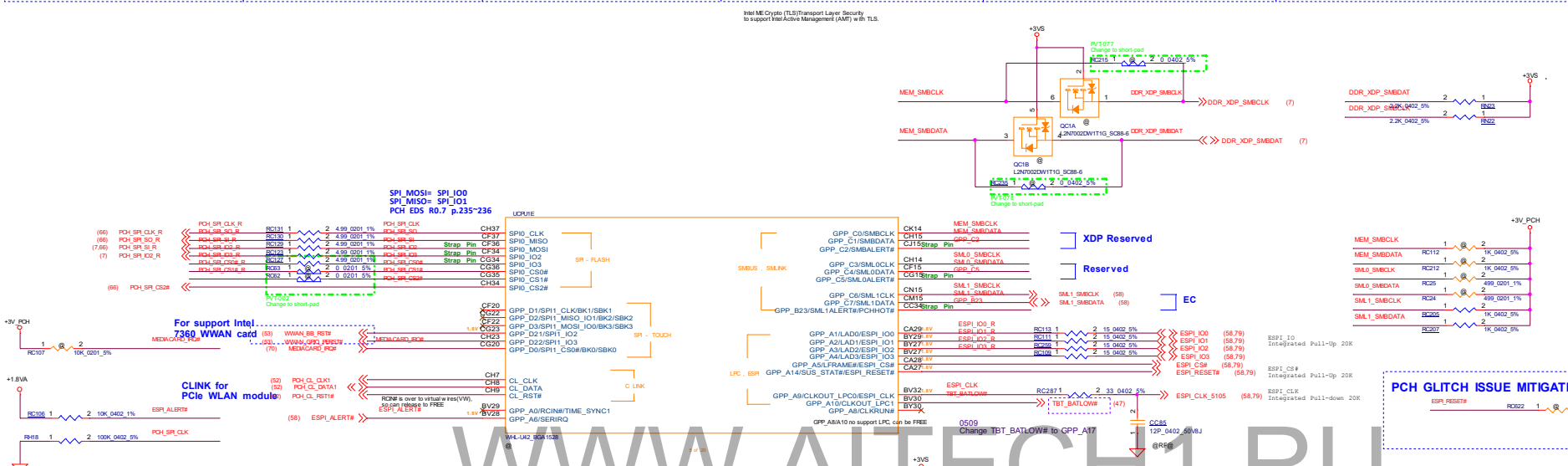
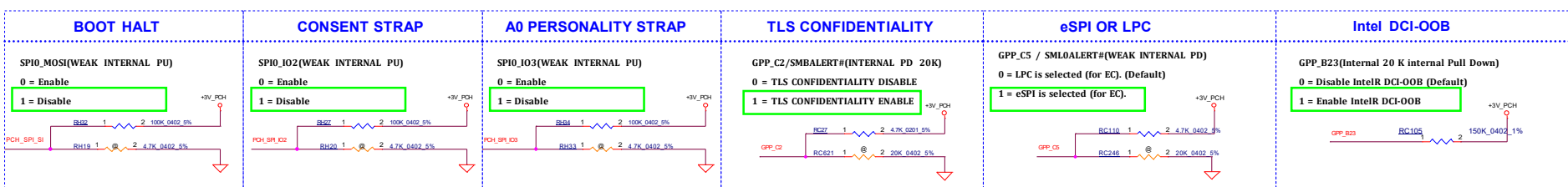
LPDDR3,non- Interleave



LPDDR3 COMPENSATION SIGNALS

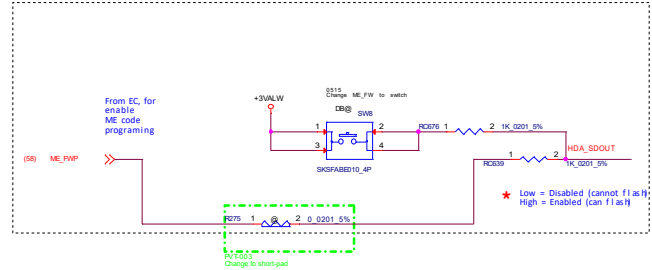
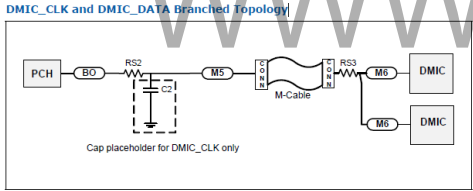
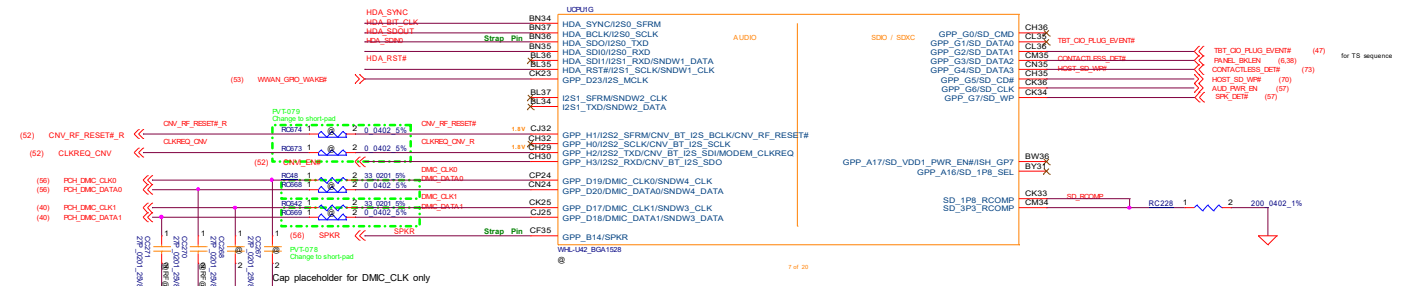
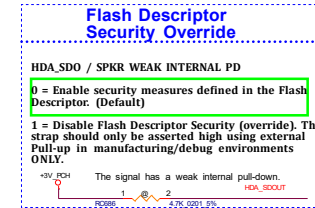
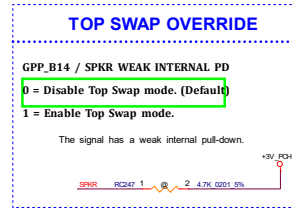
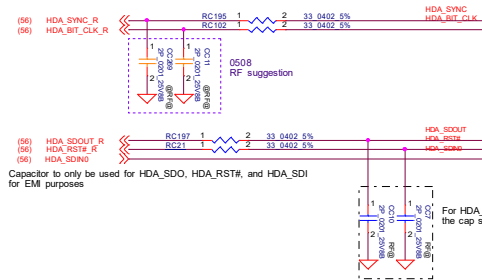
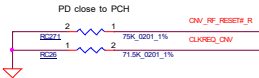
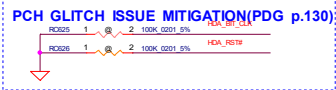


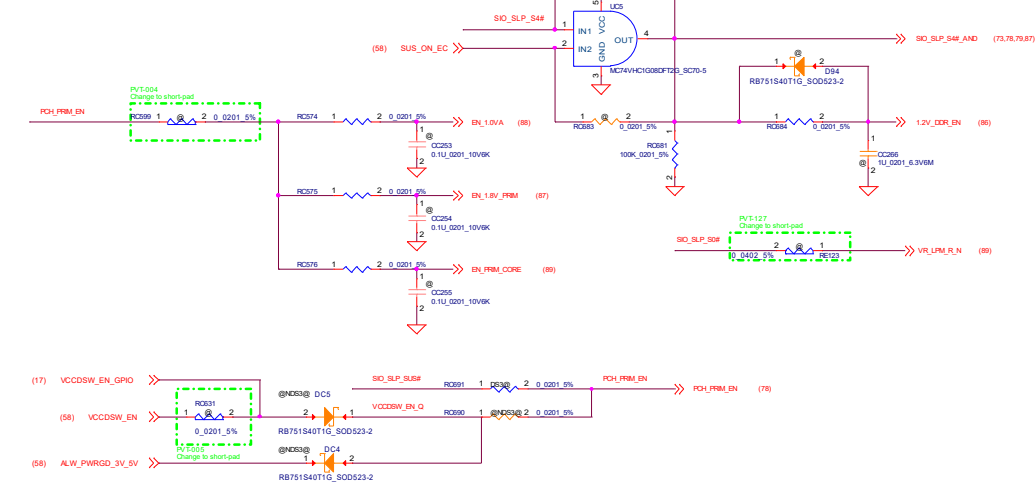
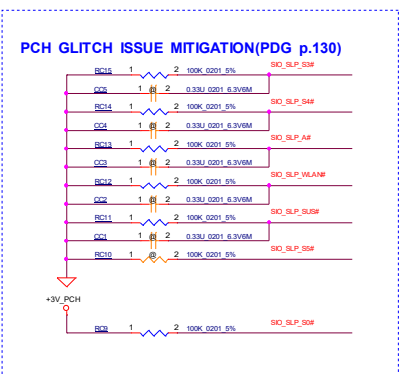
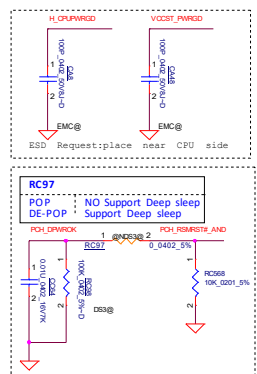
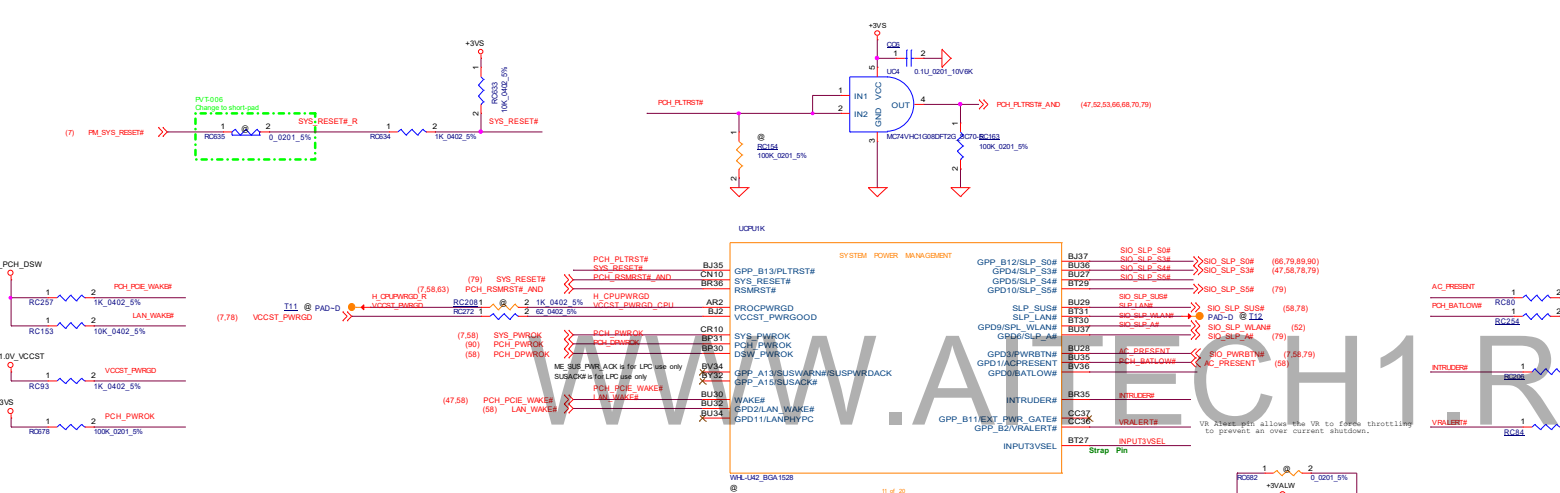
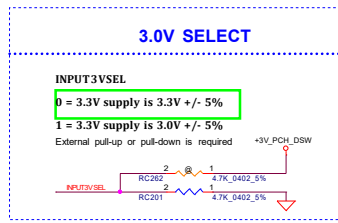
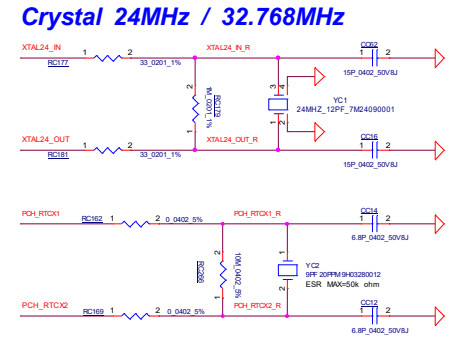
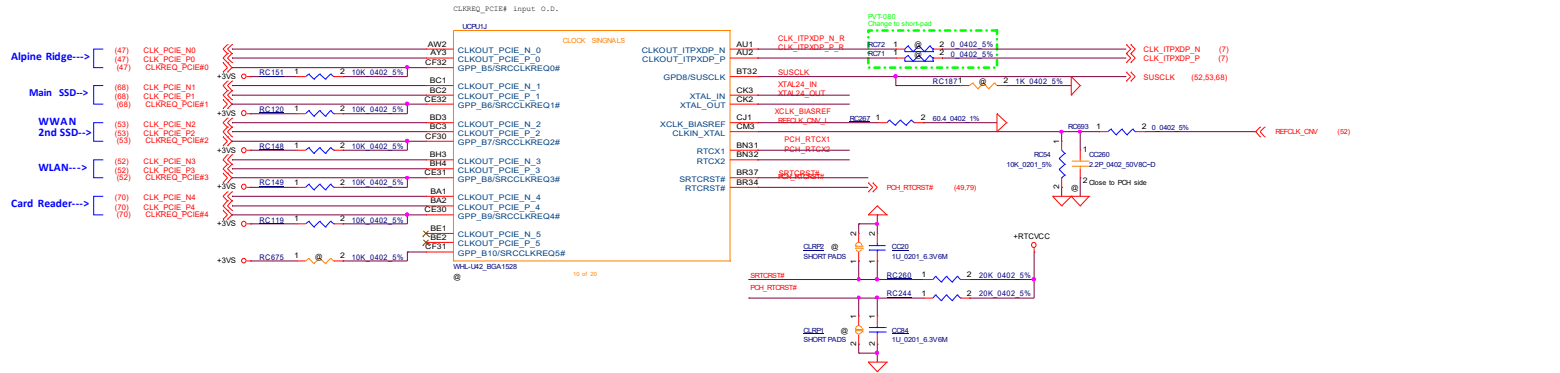
CAD Note:
Trace width=12~15 mil, Spacing=20 mils
Max trace length= 500 mil



Serial Peripheral Interface (SPI) 2 load Topology Guidelines					
SPI	50-ohm	5-ohm	PCH		
TPM	50-ohm				
XDP	1K-ohm				
JSPI					

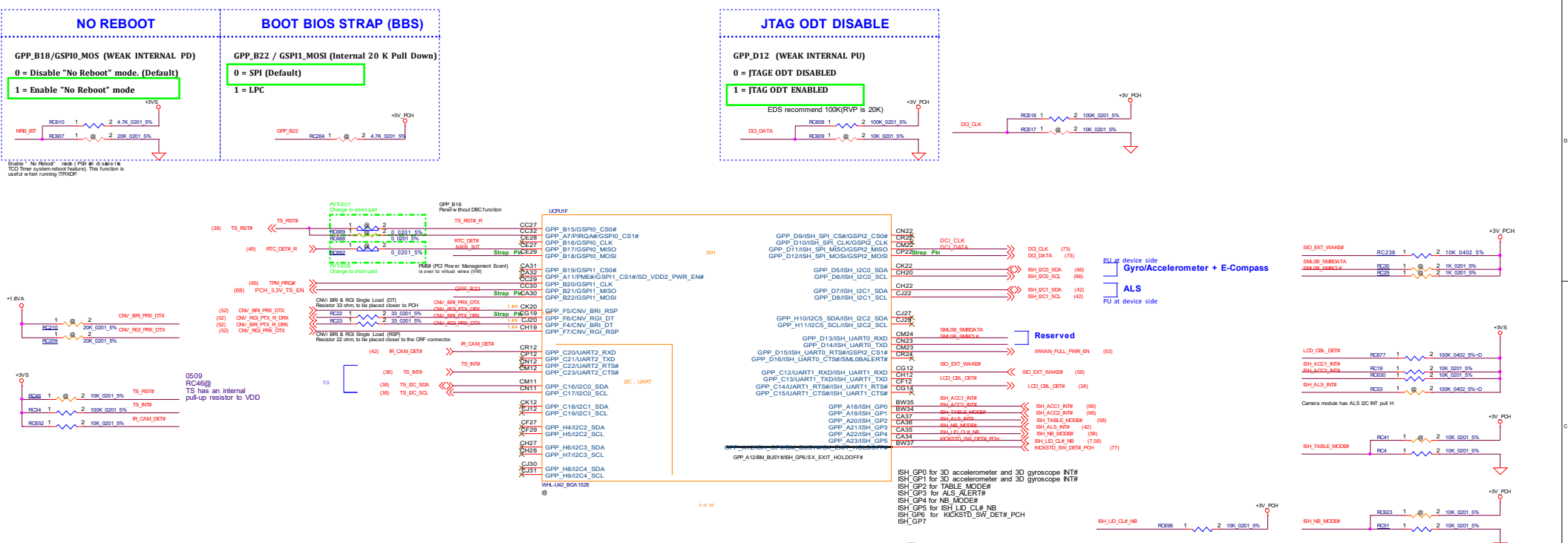
BIOS ROM Option					
CPU	EC chipset	EC code	BIOS code	BIOS ROM source	BIOS File name
QS consumer	5105	Legacy	code 5	GIGADEVICE SA0000BGM00	AUG020_QS_5105_L.bin
QS consumer	5105	RTOS	code 3	WINBOND SA00009RI10	AUG020_QS_5105_R.bin
QS consumer	5106	RTOS	code 4	WINBOND SA00009RI10	AUG020_QS_5106_R.bin
ES corp.	5105	RTOS	code 1	WINBOND SA00009RI10	AUG020_ES_5105_R.bin
ES corp.	5106	RTOS	code 2	MXIC SA0000BCD00	AUG020_ES_5106_R.bin





DELL CONFIDENTIAL/PROPRIETARY

Security Classification		Compal Secret Data		Title	
Issued Date	2019/05/08	Deciphered Date	2019/05/08	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSMITTED, REPRODUCED, COPIED, OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P011 - WHL-U(6/14)CLK,PM,RTC	
Date:				Sheet	11 of 100



WWW.AITECH1.RU

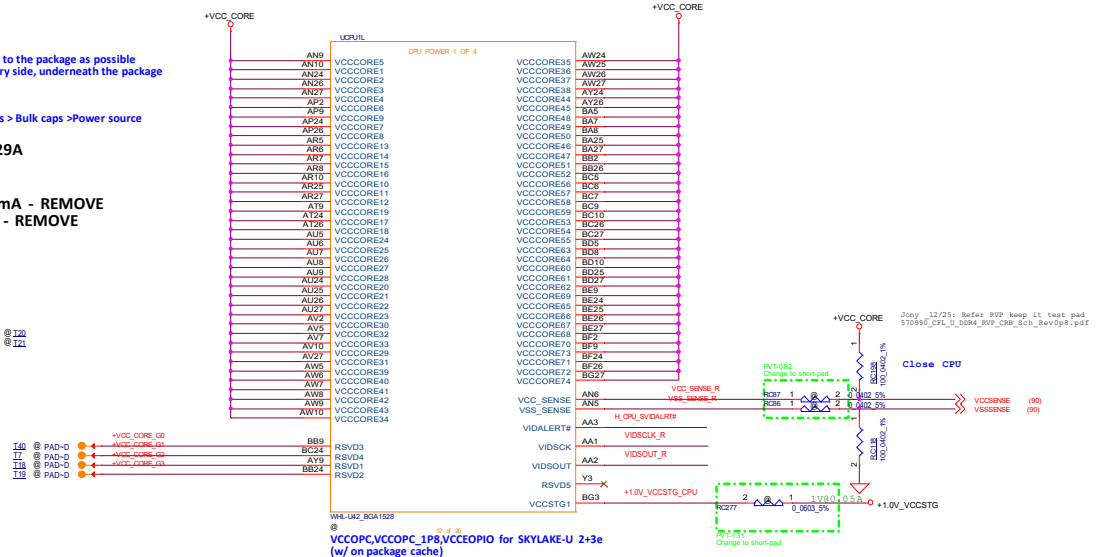
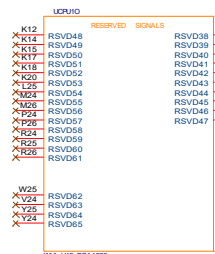
Pin Number	Cell	Q141e	WHL U42 Q6/Production	CNL U42/WHL U42 Q50
AH05	ZMM	RSVD	RSVD	
T25	VCCOPD1_0N5E	RSVD	RSVD	
V35	VCCOPD1_0N5E	RSVD	RSVD	
AA34	VCCOPD1	RSVD	RSVD	
AA36	VCCOPD1	RSVD	RSVD	
AA25	VCCOPD1	RSVD	RSVD	
AA24	VCCOPD1	RSVD	RSVD	
AA25	VCCOPD1	RSVD	RSVD	
AA26	VCCOPD1	RSVD	RSVD	
AA27	VCCOPD1	RSVD	RSVD	
AA28	VCCOPD1	RSVD	RSVD	
AA29	VCCOPD1	RSVD	RSVD	
AA30	VCCOPD1	RSVD	RSVD	
AA31	VCCOPD1	RSVD	RSVD	
AA32	VCCOPD1	RSVD	RSVD	
AA33	VCCOPD1	RSVD	RSVD	
AA34	VCCOPD1	RSVD	RSVD	
AA35	VCCOPD1	RSVD	RSVD	
AA36	VCCOPD1	RSVD	RSVD	
AA37	VCCOPD1	RSVD	RSVD	
AA38	VCCOPD1	RSVD	RSVD	
AA39	VCCOPD1	RSVD	RSVD	
AA40	VCCOPD1	RSVD	RSVD	
AA41	VCCOPD1	RSVD	RSVD	
AA42	VCCOPD1	RSVD	RSVD	
AA43	VCCOPD1	RSVD	RSVD	
AA44	VCCOPD1	RSVD	RSVD	
AA45	VCCOPD1	RSVD	RSVD	
AA46	VCCOPD1	RSVD	RSVD	
AA47	VCCOPD1	RSVD	RSVD	
AA48	VCCOPD1	RSVD	RSVD	
AA49	VCCOPD1	RSVD	RSVD	
AA50	VCCOPD1	RSVD	RSVD	
AA51	VCCOPD1	RSVD	RSVD	
AA52	VCCOPD1	RSVD	RSVD	
AA53	VCCOPD1	RSVD	RSVD	
AA54	VCCOPD1	RSVD	RSVD	
AA55	VCCOPD1	RSVD	RSVD	
AA56	VCCOPD1	RSVD	RSVD	
AA57	VCCOPD1	RSVD	RSVD	
AA58	VCCOPD1	RSVD	RSVD	
AA59	VCCOPD1	RSVD	RSVD	
AA60	VCCOPD1	RSVD	RSVD	
AA61	VCCOPD1	RSVD	RSVD	
AA62	VCCOPD1	RSVD	RSVD	
AA63	VCCOPD1	RSVD	RSVD	
AA64	VCCOPD1	RSVD	RSVD	
AA65	VCCOPD1	RSVD	RSVD	
AA66	VCCOPD1	RSVD	RSVD	
AA67	VCCOPD1	RSVD	RSVD	
AA68	VCCOPD1	RSVD	RSVD	
AA69	VCCOPD1	RSVD	RSVD	
AA70	VCCOPD1	RSVD	RSVD	
AA71	VCCOPD1	RSVD	RSVD	
AA72	VCCOPD1	RSVD	RSVD	
AA73	VCCOPD1	RSVD	RSVD	
AA74	VCCOPD1	RSVD	RSVD	
AA75	VCCOPD1	RSVD	RSVD	
AA76	VCCOPD1	RSVD	RSVD	
AA77	VCCOPD1	RSVD	RSVD	
AA78	VCCOPD1	RSVD	RSVD	
AA79	VCCOPD1	RSVD	RSVD	
AA80	VCCOPD1	RSVD	RSVD	
AA81	VCCOPD1	RSVD	RSVD	
AA82	VCCOPD1	RSVD	RSVD	
AA83	VCCOPD1	RSVD	RSVD	
AA84	VCCOPD1	RSVD	RSVD	
AA85	VCCOPD1	RSVD	RSVD	
AA86	VCCOPD1	RSVD	RSVD	
AA87	VCCOPD1	RSVD	RSVD	
AA88	VCCOPD1	RSVD	RSVD	
AA89	VCCOPD1	RSVD	RSVD	
AA90	VCCOPD1	RSVD	RSVD	
AA91	VCCOPD1	RSVD	RSVD	
AA92	VCCOPD1	RSVD	RSVD	
AA93	VCCOPD1	RSVD	RSVD	
AA94	VCCOPD1	RSVD	RSVD	
AA95	VCCOPD1	RSVD	RSVD	
AA96	VCCOPD1	RSVD	RSVD	
AA97	VCCOPD1	RSVD	RSVD	
AA98	VCCOPD1	RSVD	RSVD	
AA99	VCCOPD1	RSVD	RSVD	
AA00	VCCOPD1	RSVD	RSVD	

PSC(Primary side cap) : Place as close to the package as possible
BSC(Backside cap) : Place on secondary side, underneath the package

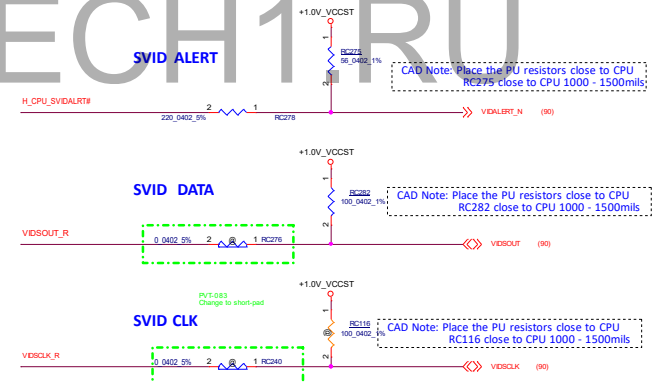
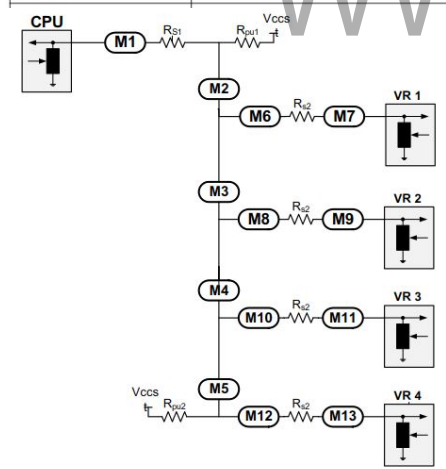
Component placement order:
Package edge > 0402 caps > 0805 caps > Bulk caps > Power source

+VCC_CORE: 0.55~1.5V, 29A
+VCC_EDRAM: 1V, 2.5A

+V1.8S_EDRAM: 1.8V, 50mA - REMOVE
+VCC_EOPIO: 0.8~1V, 2A - REMOVE



VIDSOUT platform resistors	Rpu1=100Ω, Rpu2=100Ω, Rs1=0Ω, Rs2=10Ω
VIDSCK platform resistors	Rpu1=Empty, Rpu2=45Ω, Rs1=0Ω, Rs2=49.9Ω
VIDSALERT# platform resistors	Rpu1=56Ω, Rpu2=Empty, Rs1=220Ω, Rs2=0Ω

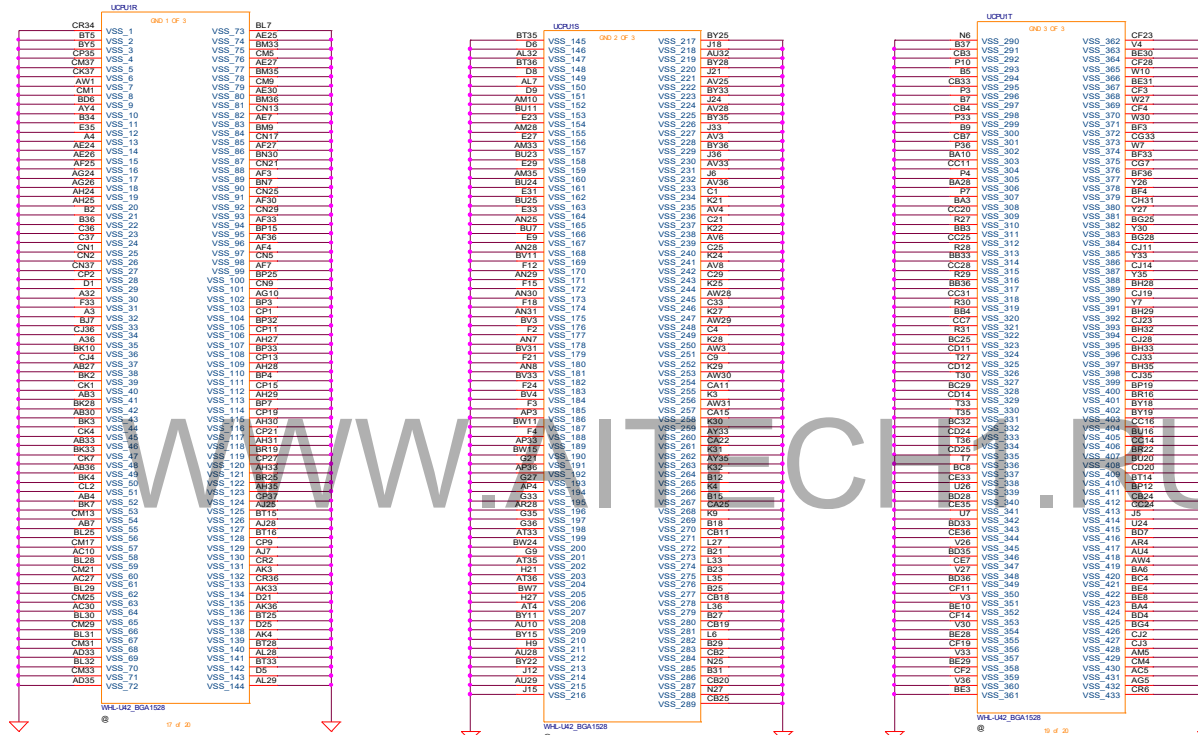


DELL CONFIDENTIAL/PROPRIETARY

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC.				Size
				Document Number
				LA-G661P
				Rev
				04
				Date
				Monday, January 28, 2019
				Sheet
				15 of 100

Compal Electronics, Inc.			
Title P016 - WHL-U(11/14)Power GT,IO			
Size	Document Number LA-G661P		Rev 0.4
Date:	Thursday, January 31, 2019	Sheet	18 of 100

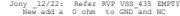
Note1: VCCPRIM_CORE Implementation with PCH CORE_V D Recommendation



DELL CONFIDENTIAL/PROPRIETARY
Compal Electronics, Inc.

Security Classification		Compal Secret Data		2019/05/08	
Issued Date	2019/05/08	Deciphered Date	2019/05/08	Title	
				P018 - WHL-U(13/14)GND	
				Size	0.4
				Date	Monday, January 28, 2019
				Sheet	18 of 100

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THE SHEET MAY NOT BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. ANY VIOLATION OF THIS NOTICE IS SUBJECT TO LEGAL ACTION.



WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P020 - Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Monday, January 28, 2019	Sheet 20 of 100

WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P021 - Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Monday, January 28, 2019	Sheet 21 of 100

WWW.AITECH1.RU

Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2018/05/08		Deciphered Date		2018/05/08		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.						P022 - Reserve					
						Size		Document Number		Rev	
						LA-G661P		0.4			
						Date: Monday, January 28, 2019		Sheet 22 of 100			

WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date		2018/05/08	Deciphered Date	2018/05/08	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Title	
				P026 - Reserve	
				Size	Document Number
				LA-G661P	
				Date:	Monday, January 28, 2019
		Sheet	26	of	100

WWW.AITECH1.RU

Security Classification		Compal Secret Data		DELL CONFIDENTIAL/PROPRIETARY	
Issued Date		Deciphered Date		Title	
2018/05/08		2018/05/08		P027 - Reserve	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		Size		Document Number	Rev
				LA-G661P	0.4
Date:		Monday, January 28, 2019		Sheet	27 of 100

WWW.AITECH1.RU

Security Classification		Compal Secret Data		DELL CONFIDENTIAL/PROPRIETARY	
Issued Date		Deciphered Date		Title	
2018/05/08		2018/05/08		P028 - Reserve	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		Size		Document Number	Rev
				LA-G661P	0.4
Date:		Monday, January 28, 2019		Sheet	28 of 100

WWW.AITECH1.RU

Security Classification		Compal Secret Data		DELL CONFIDENTIAL/PROPRIETARY	
Issued Date		Deciphered Date		Title	
2018/05/08		2018/05/08		P029 - Reserve	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		Size		Document Number	Rev
				LA-G661P	0.4
Date:		Monday, January 28, 2019		Sheet	29 of 100

WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.					
Issued Date		2018/05/08	Deciphered Date	2018/05/08		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.						P030 - Reserve			
						Size	Document Number		Rev
						LA-G661P			0.4
						Date:	Monday, January 28, 2019		Sheet 30 of 100

WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title		
<p>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</p>				P031 - Reserve		
				Size	Document Number	Rev
				LA-G661P		0.4
				Date:	Monday, January 28, 2019	Sheet 31 of 100

WWW.AITECH1.RU

Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2018/05/08		Deciphered Date		2018/05/08		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.						P032 - Reserve					
						Size		Document Number		Rev	
						LA-G661P		0.4			
						Date: Monday, January 28, 2019		Sheet 32 of 100			

WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P033 - Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Monday, January 28, 2019	Sheet 33 of 100

WWW.AITECH1.RU

Security Classification		Compal Secret Data				Compal Electronics, Inc.					
Issued Date		2018/05/08		Deciphered Date		2018/05/08		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.						P034 - Reserve					
						Size		Document Number		Rev	
						LA-G661P				0.4	
						Date: Monday, January 28, 2019		Sheet 34 of 100			

WWW.AITECH1.RU

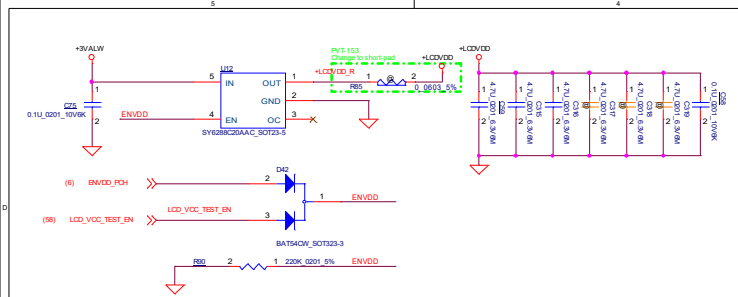
Security Classification		Compal Secret Data		Compal Electronics, Inc.					
Issued Date		2018/05/08	Deciphered Date	2018/05/08		Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.						P035 - Reserve			
						Size	Document Number		Rev
						LA-G661P			0.4
						Date:	Monday, January 28, 2019		Sheet 35 of 100

WWW.AITECH1.RU

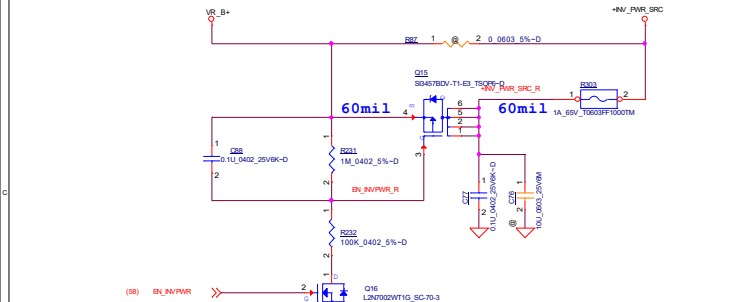
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date		2018/05/08	Deciphered Date		2018/05/08	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Title		
				P036 - Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Monday, January 28, 2019	Sheet 36 of 100

WWW.AITECH1.RU

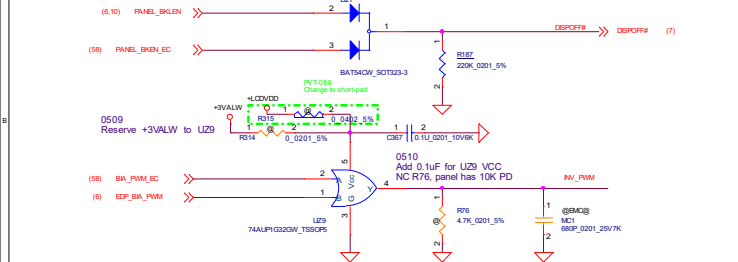
Security Classification		Compal Secret Data		DELL CONFIDENTIAL/PROPRIETARY	
Issued Date		Deciphered Date		Title	
2018/05/08		2018/05/08		P037 - Reserve	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		Size		Document Number	Rev
				LA-G661P	0.4
Date:		Monday, January 28, 2019		Sheet	37 of 100



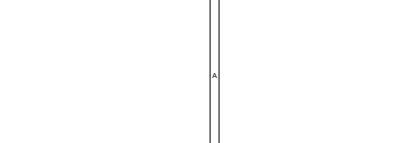
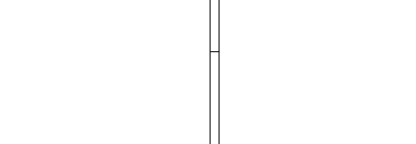
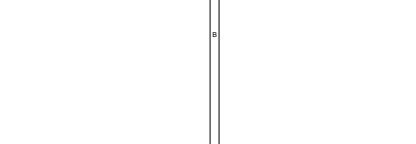
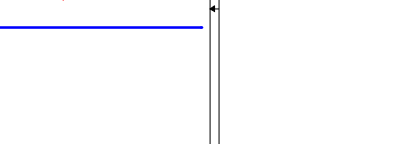
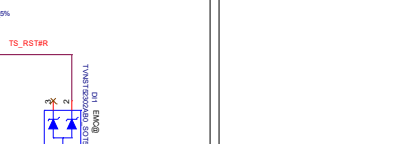
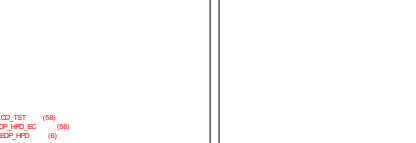
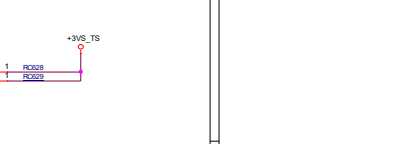
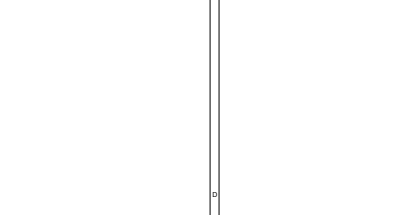
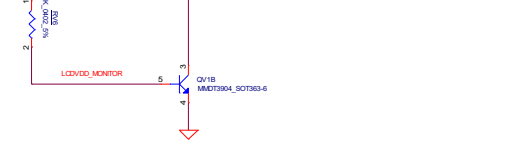
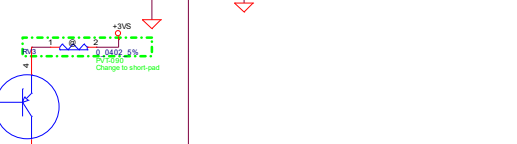
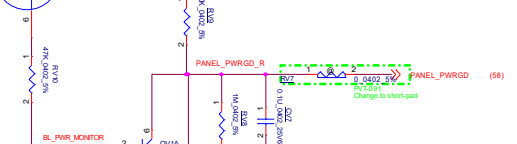
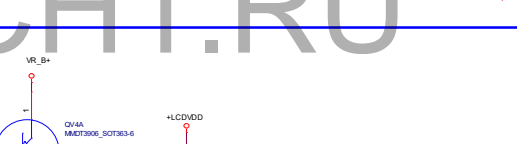
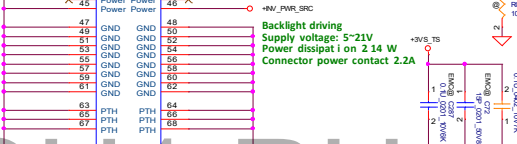
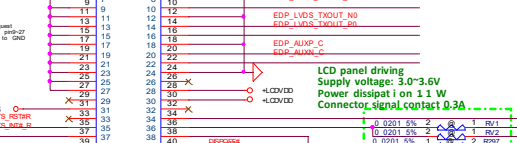
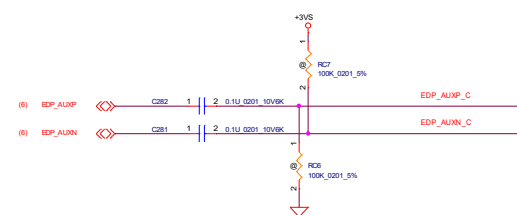
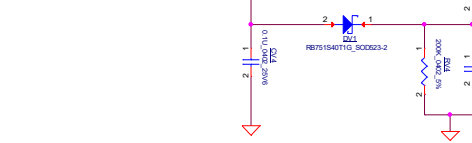
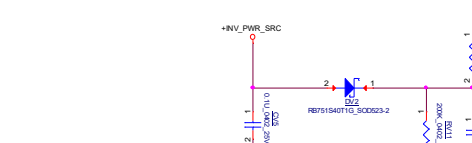
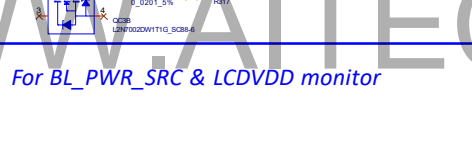
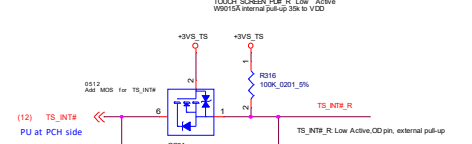
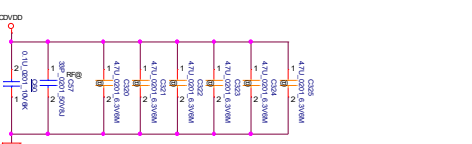
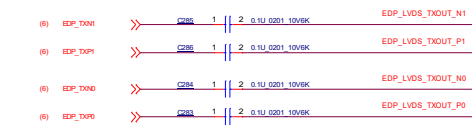
eDP BackLight Power



BackLight PWM Control



eDP Conn

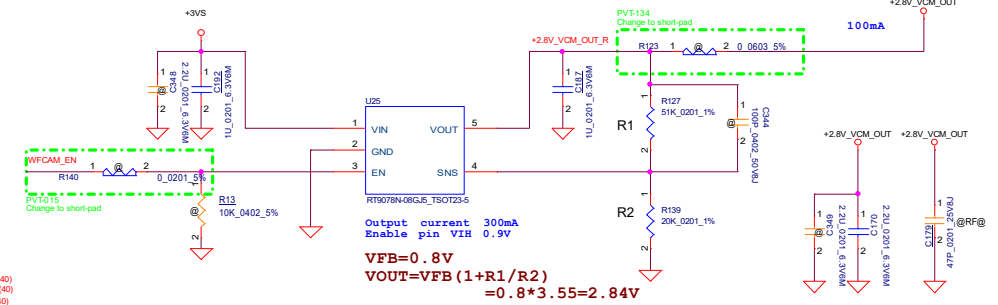


WWW.AITECH1.RU

For BL_PWR_SRC & LCDVDD monitor

Security Classification	Compal Secret Data		Title	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Document Number
THE SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSMITTED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Rev 84
Date: Monday, January 28, 2019				Sheet 38 of 88

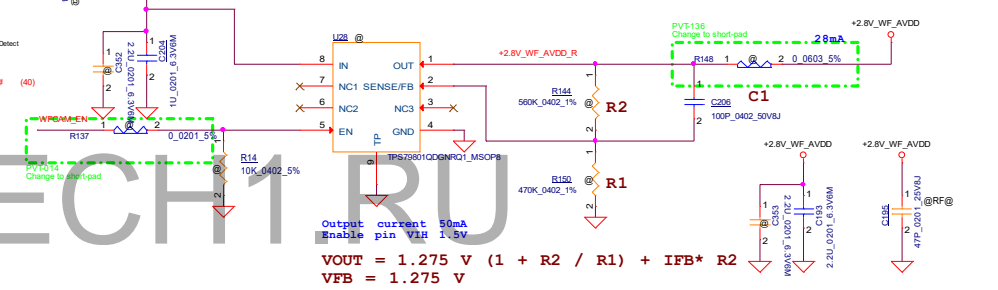
(+2.8V_VCM_OUT) For Rear Camera VCM



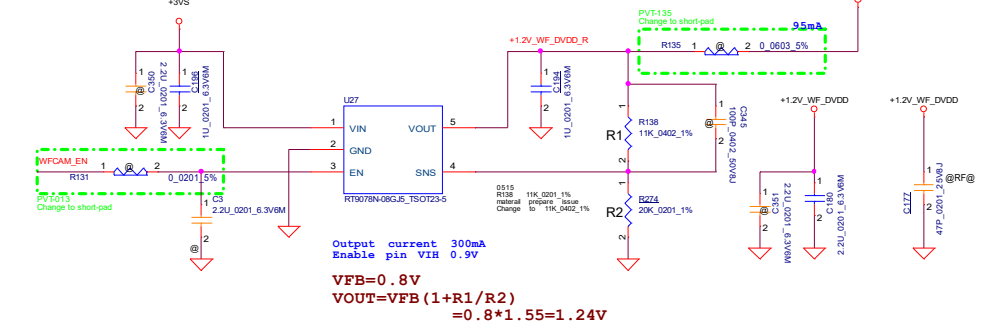
LDO IC	TPS79801QDGMR
U28	TPS79801QDGMR@ SA000040000
Vref=1.275 V	

LDO IC	TPS7A1601DGMR
U29	TPS7A1601DGMR@ SA000040000
Vref=1.193V	

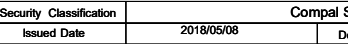
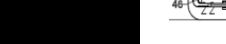
(+2.8V_WF_AVDD) For Rear Camera



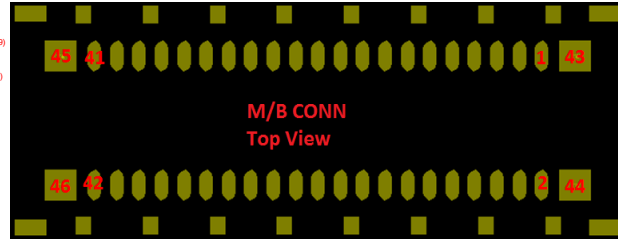
(+1.2V_WF_DVDD) For Rear Camera

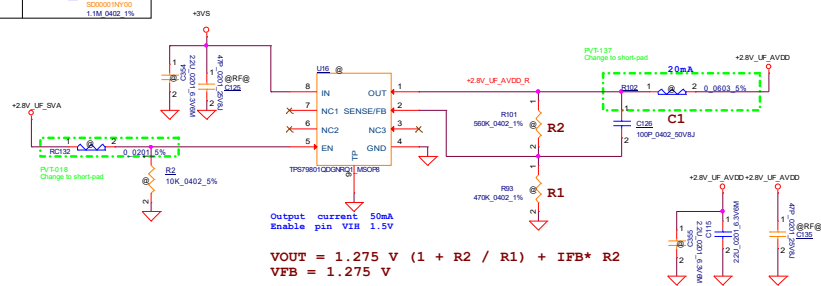
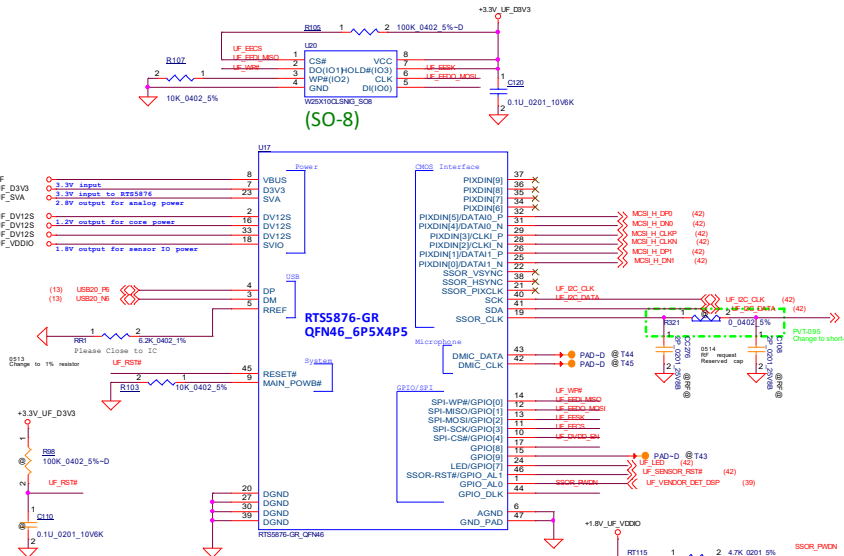
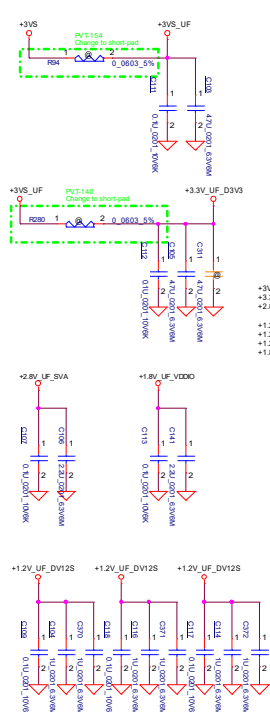


Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				<p>P039 - WF RTSS5880</p> <p>Size Document Number LA-G661P</p> <p>Date: Monday, January 28, 2019 Sheet 39 of 100</p>

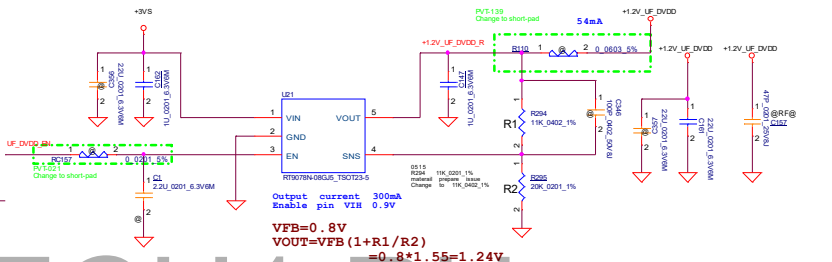


Security Classification		Compal Secret Data		Title	
2018/05/08		Deciphered Data		P040 - WF Sensor CONN	
<p>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF ROAD AND TRANSPORTATION BUILDINGS DEPARTMENT AS SUBJECT AS COMPAL ELECTRONICS, INC. WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. ANY REPRODUCTION OR DISCLOSURE TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</p>				<p>Size Document Number</p> <p>LA-G661P</p>	
<p>Date: 2018/05/08</p>				<p>Rev 0.4</p>	

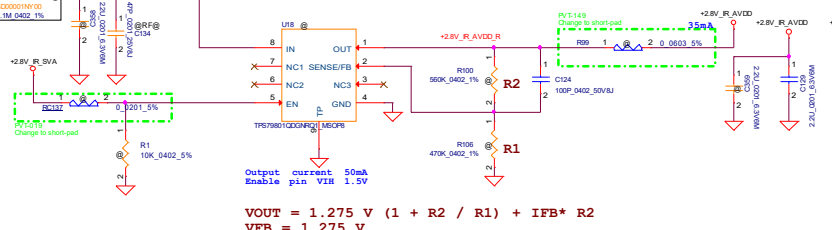




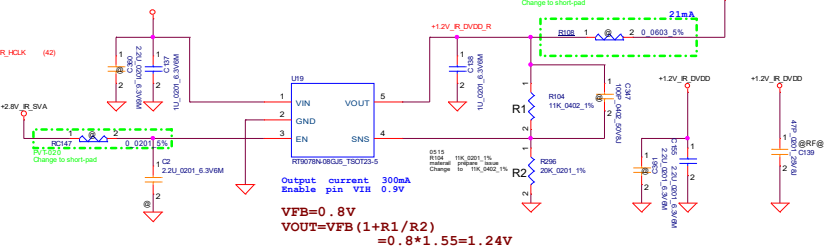
(+1.2V_UF_DVDD) For Front Camera



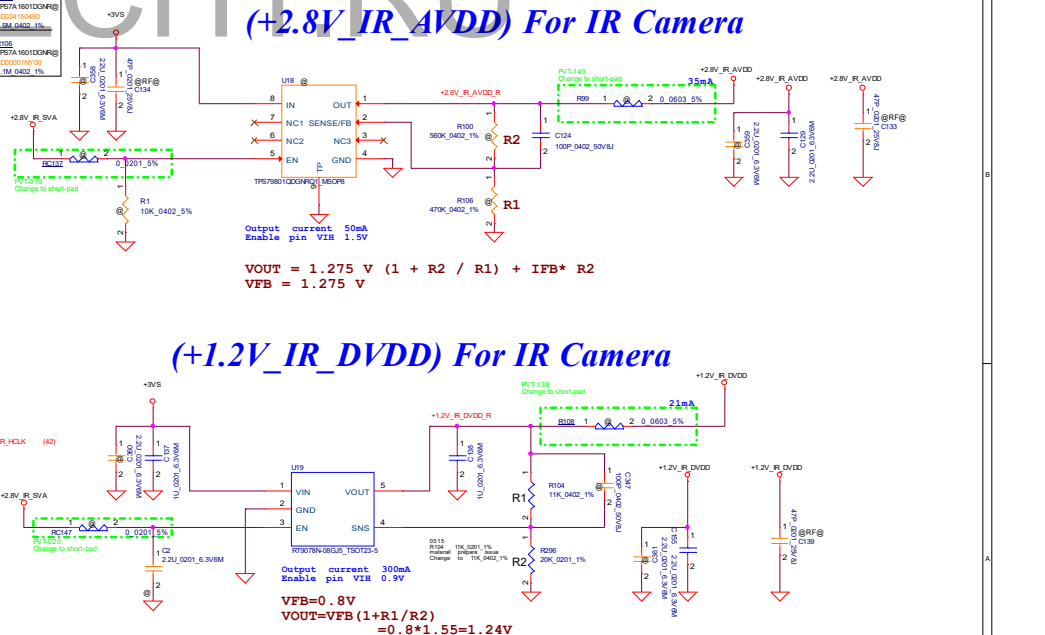
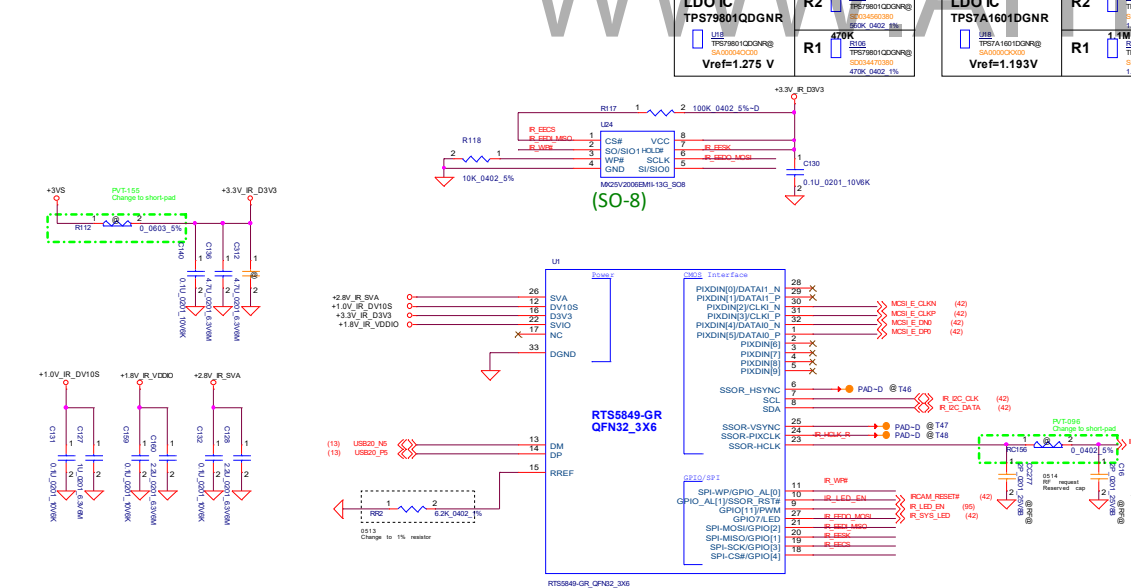
(+2.8V_IR_AVDD) For IR Camera

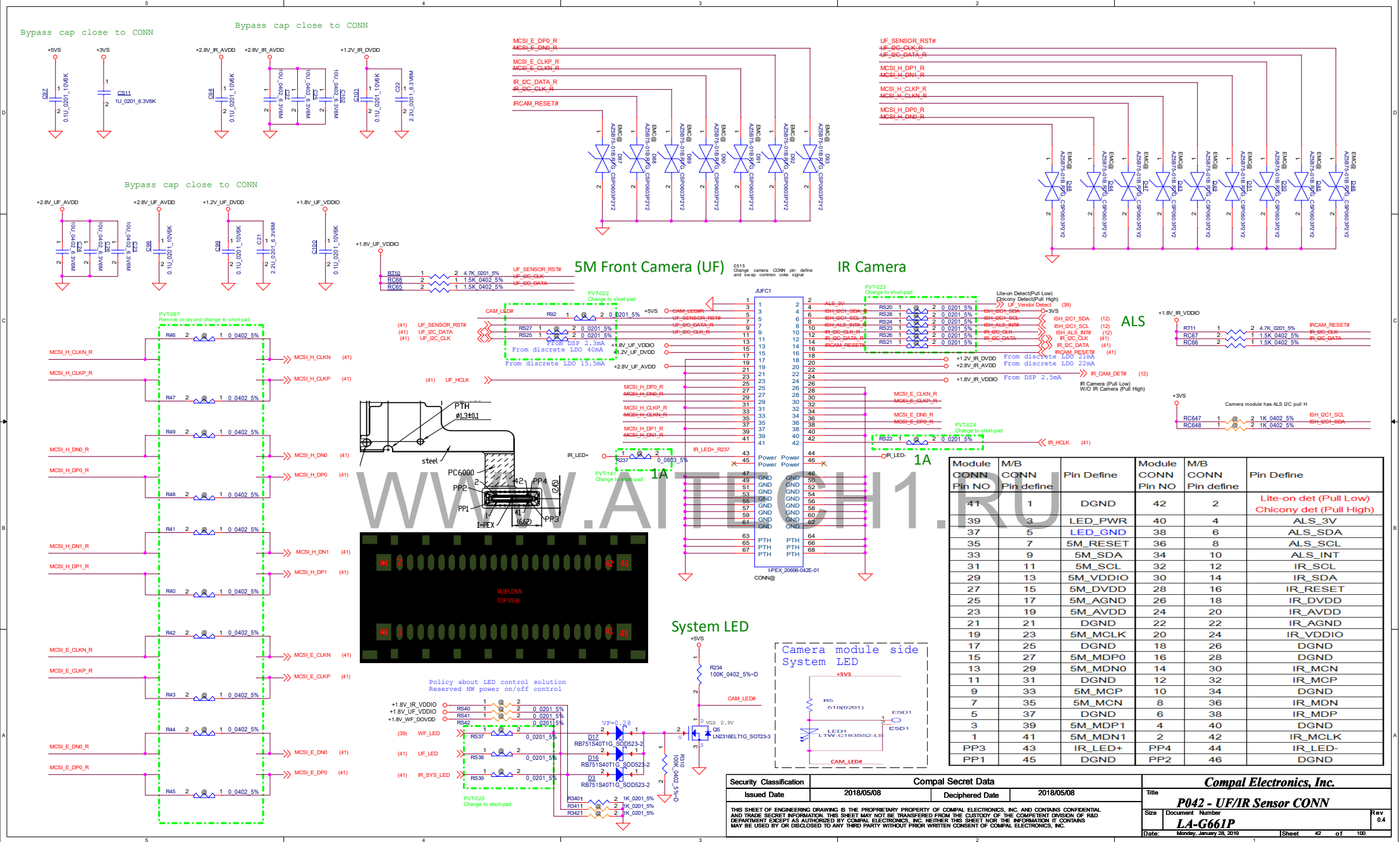


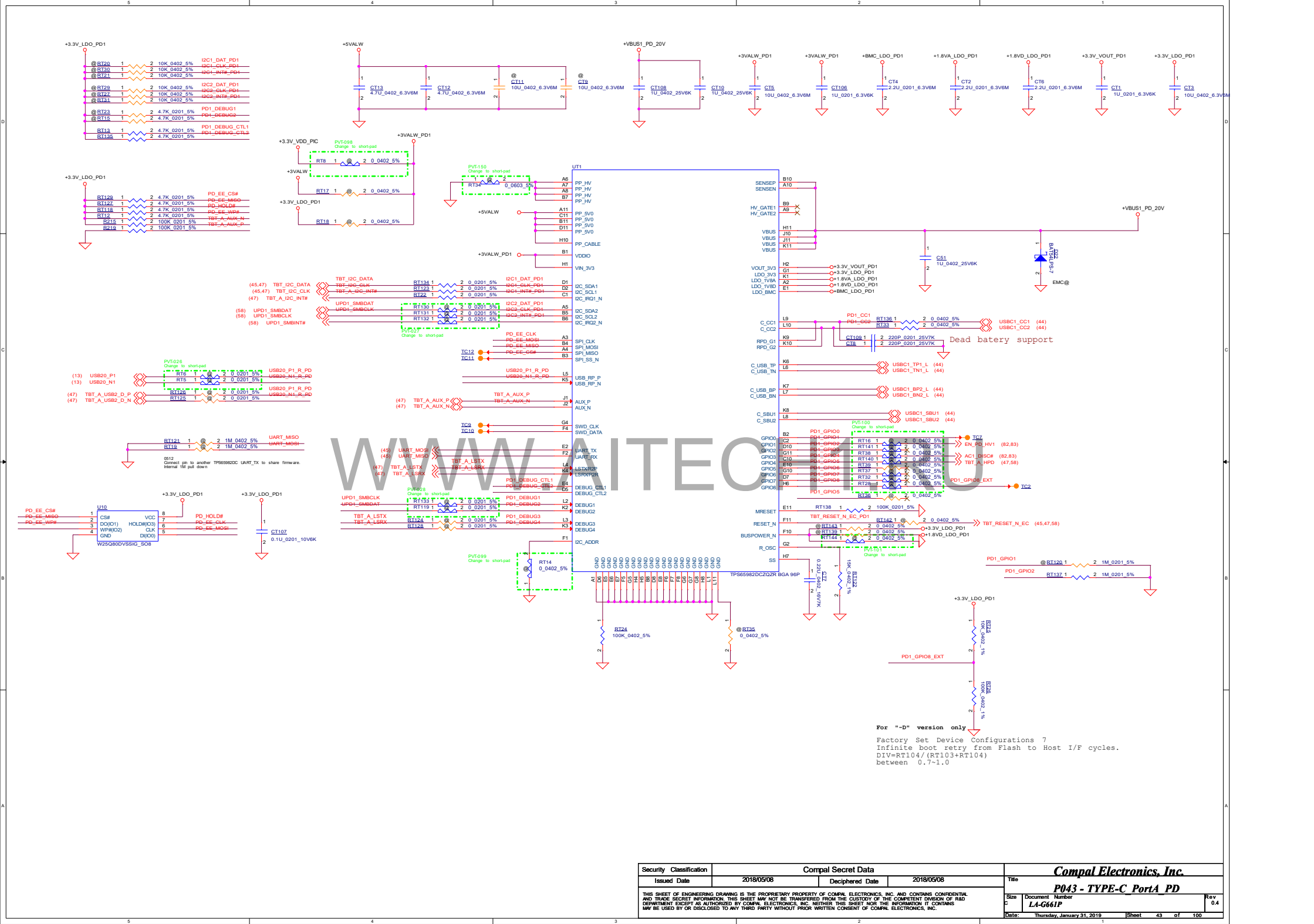
(+1.2V_IR_DVDD) For IR Camera

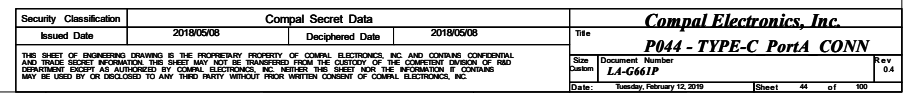
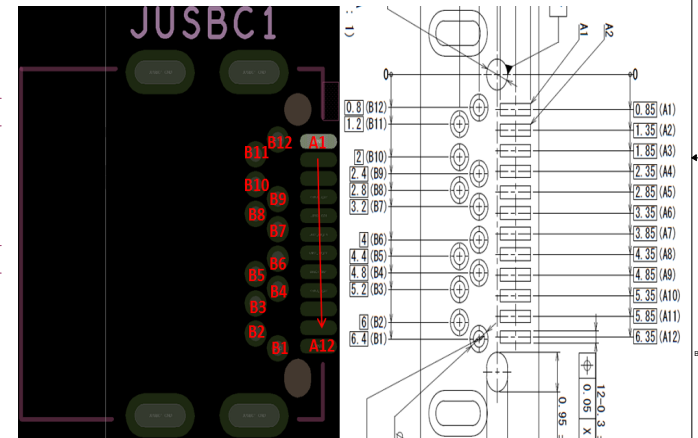


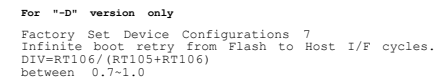
WWW.ALTECH1.RU



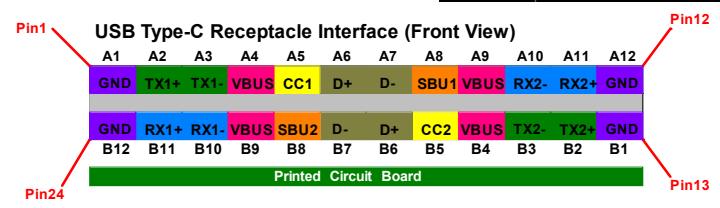
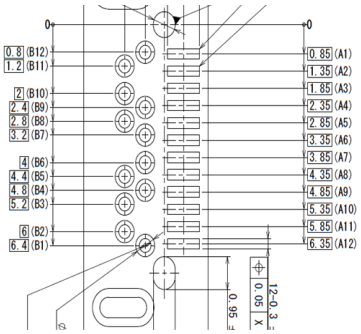
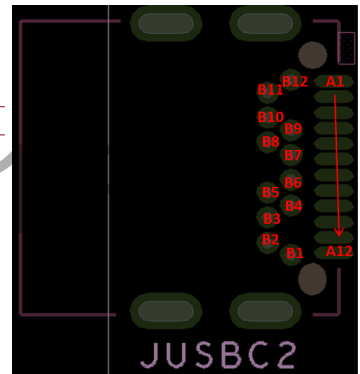
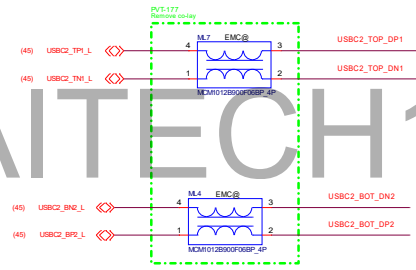
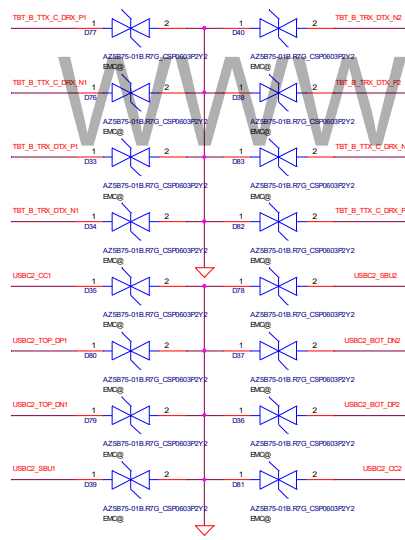
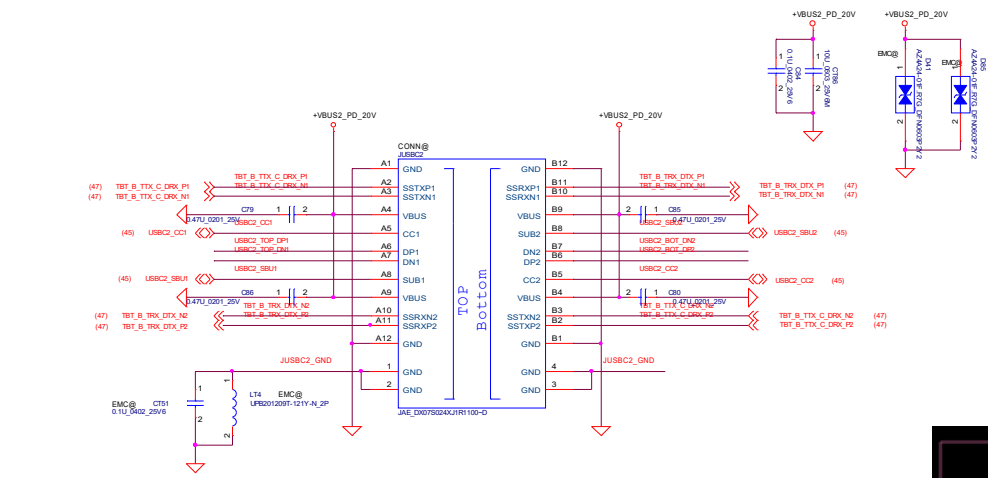


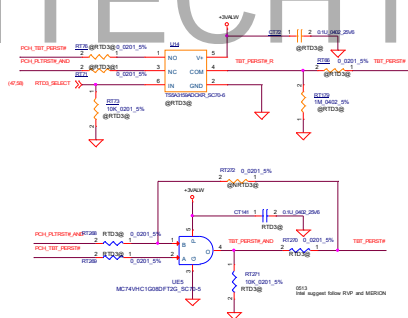
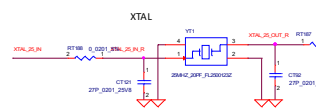
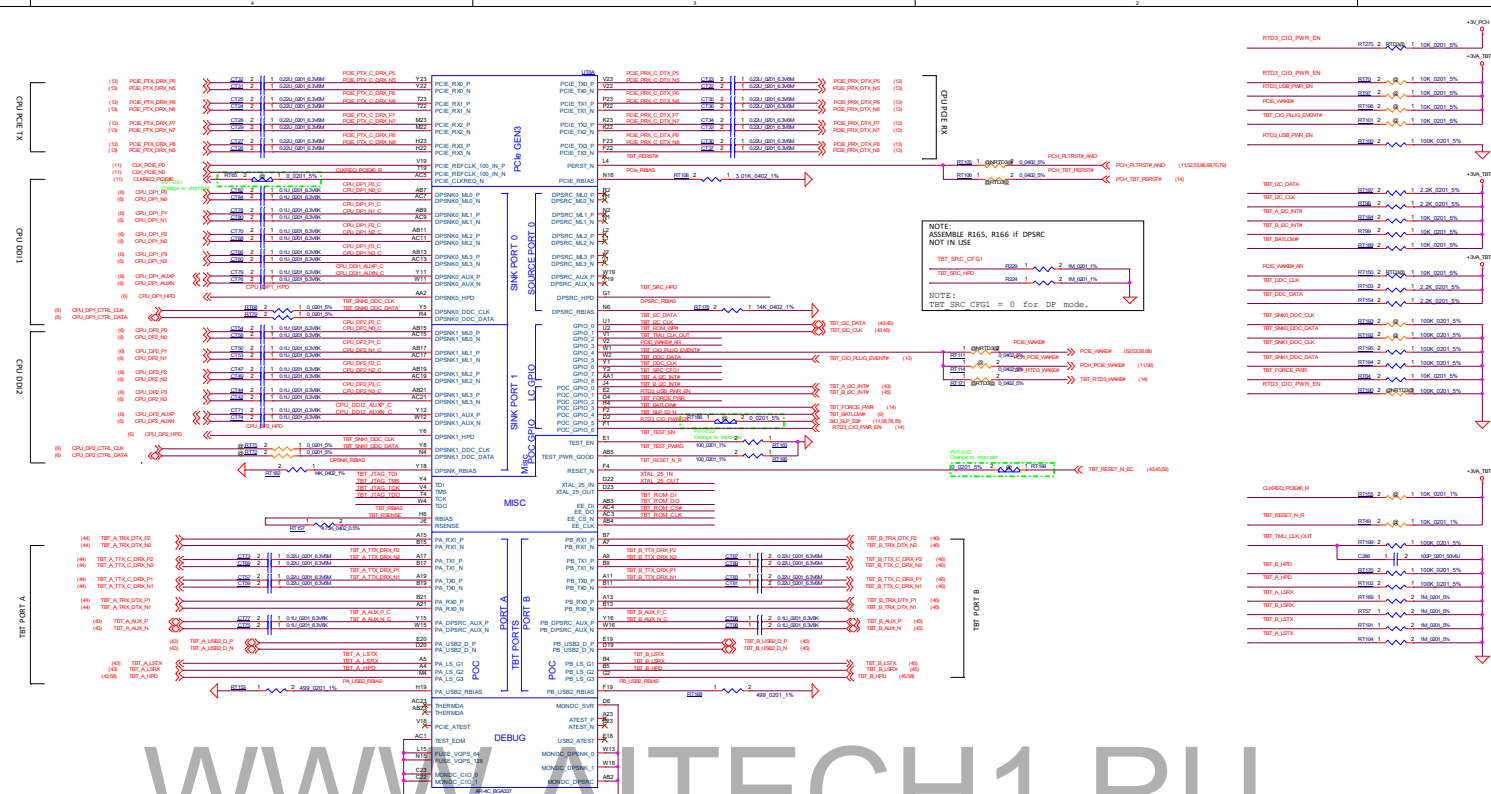
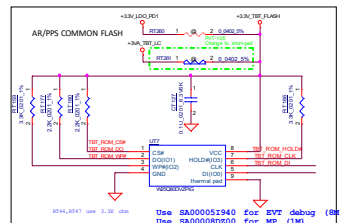




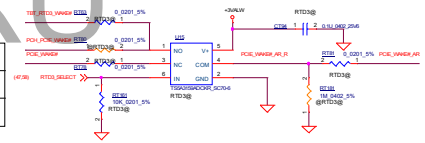


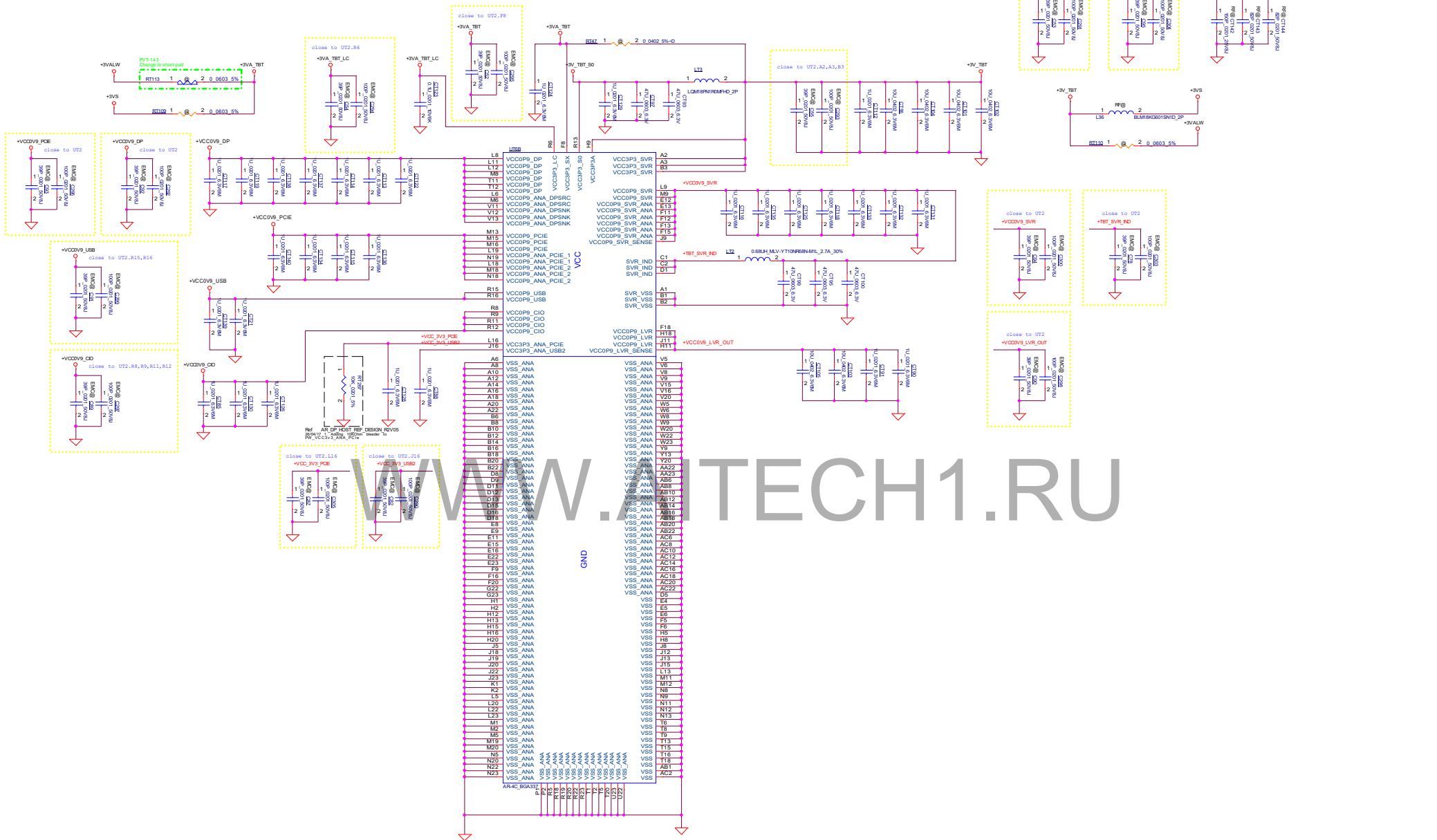
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAQ ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAQ ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAQ ELECTRONICS, INC.





IN	NC	NO
L	COM	X
H	X	COM





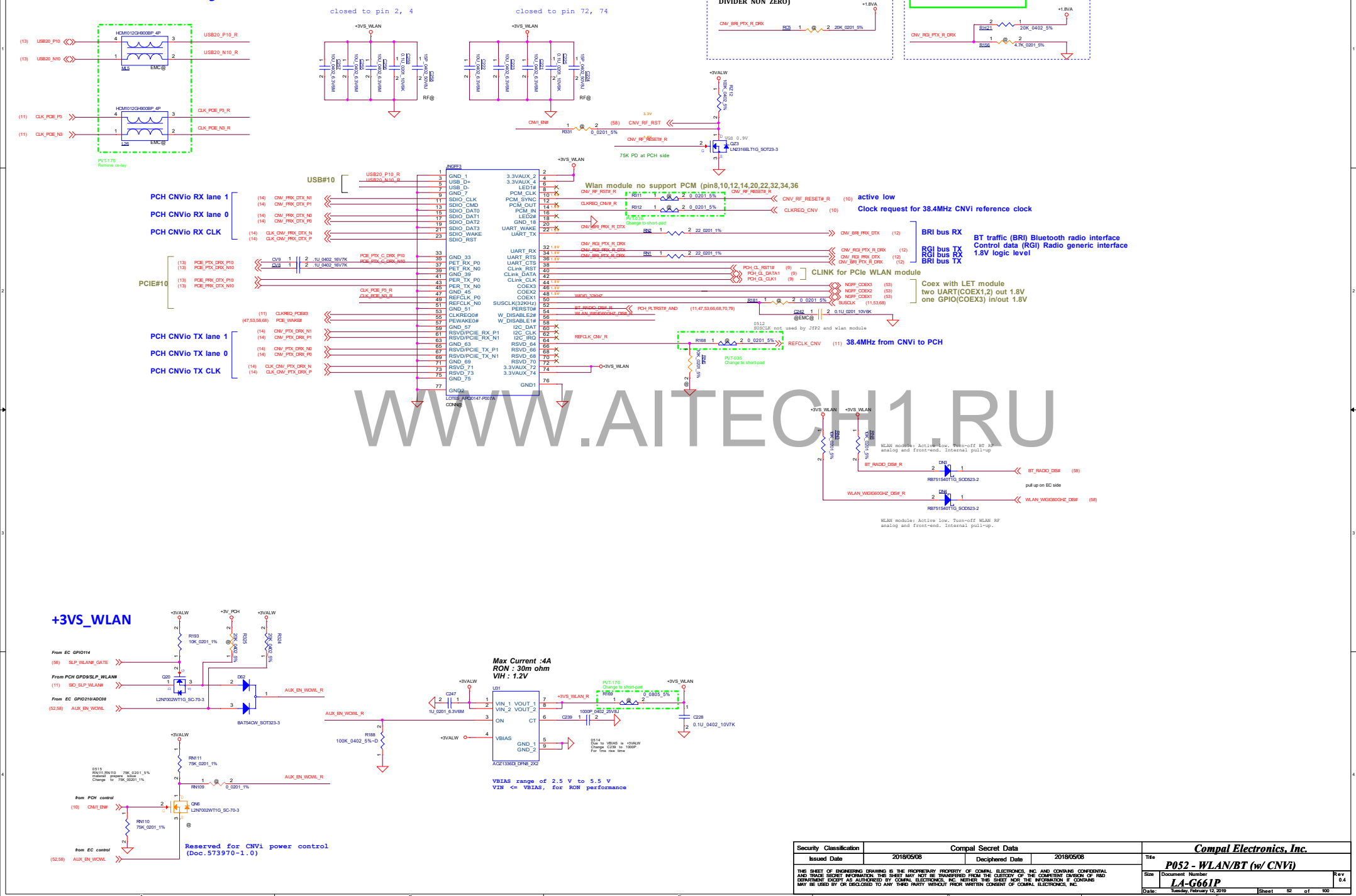
WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P050 - Reserve		
				Size	Document Number	Rev
				LA-G661P		0.4
				Date:	Monday, January 28, 2019	Sheet

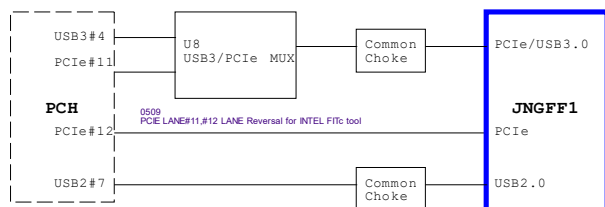
WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P051 - Reserve		
				Size	Document Number	Rev
				LA-G661P		0.4
				Date:	Monday, January 28, 2019	Sheet 51 of 100

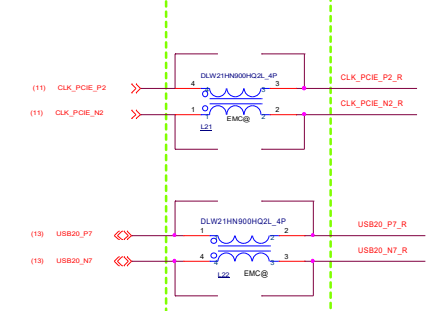
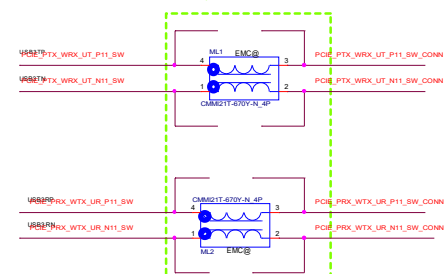
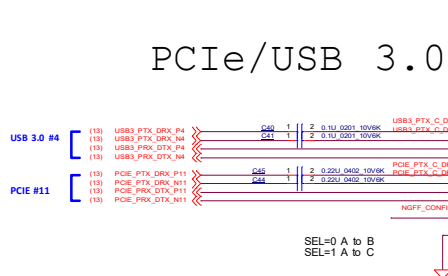
WLAN/BT/CNVi/PCIe M.2 2230 Key-E



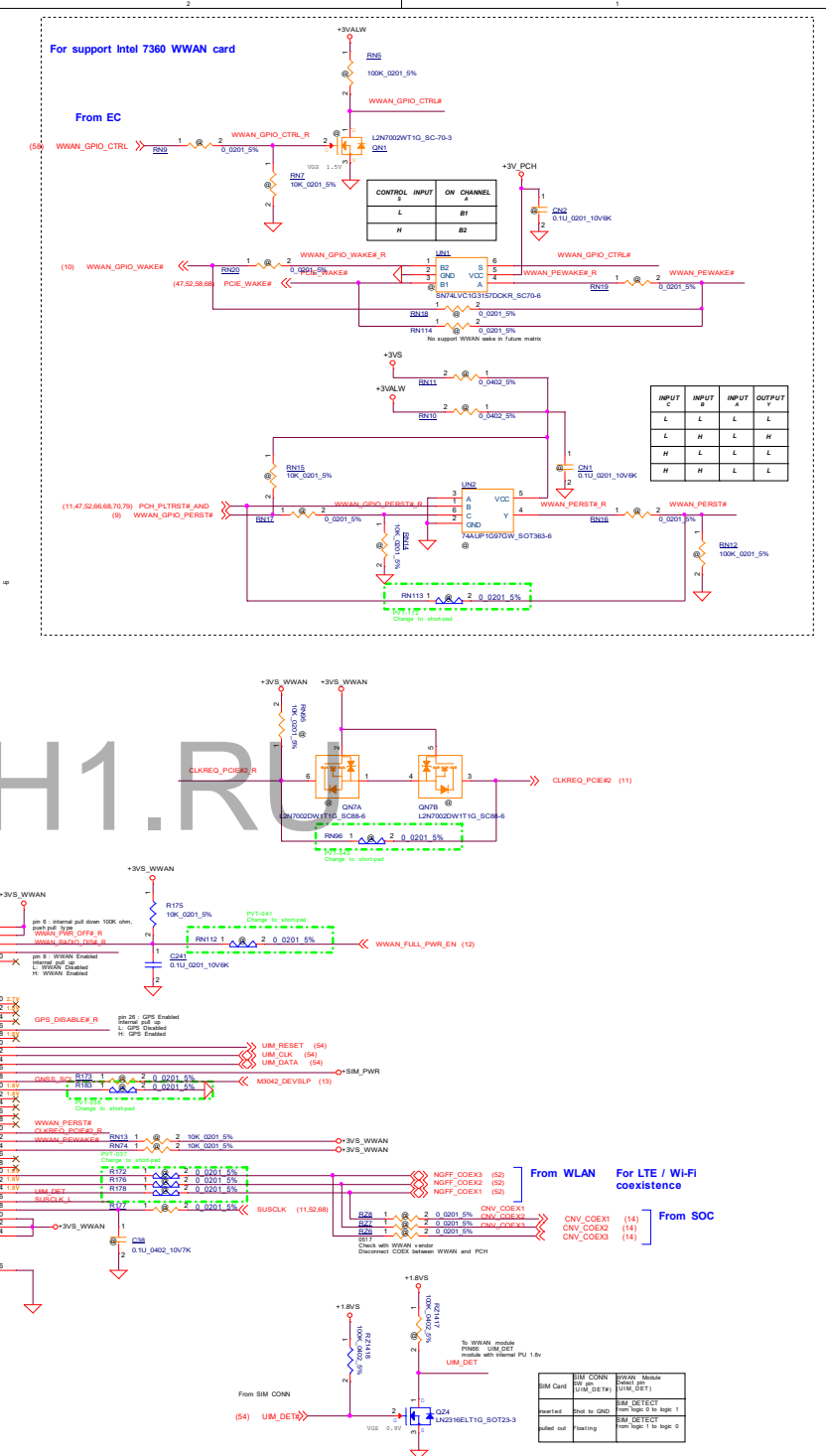
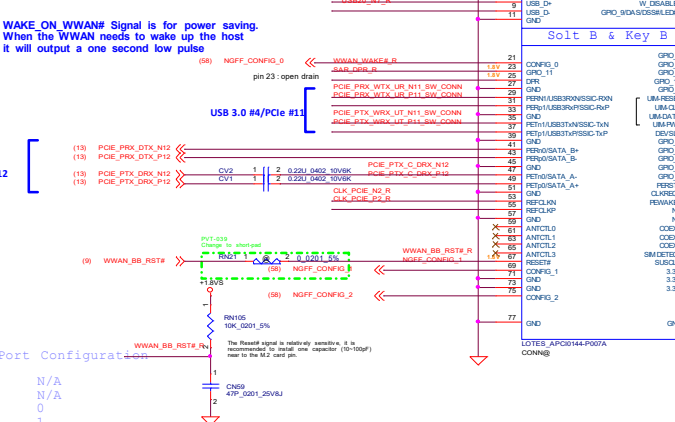
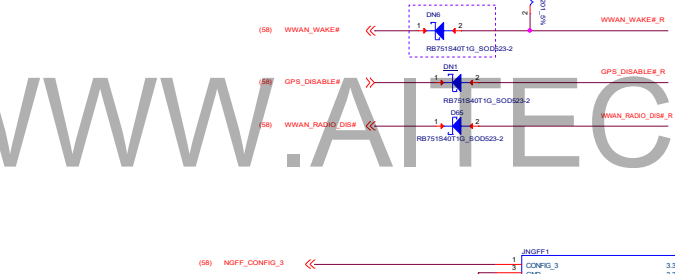
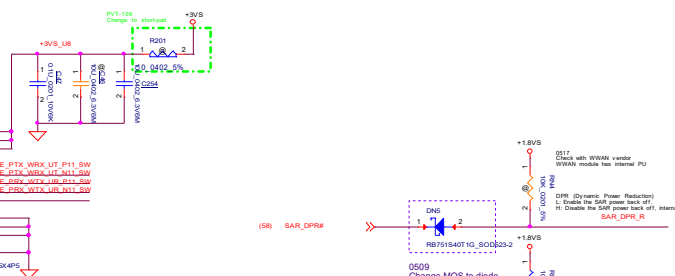
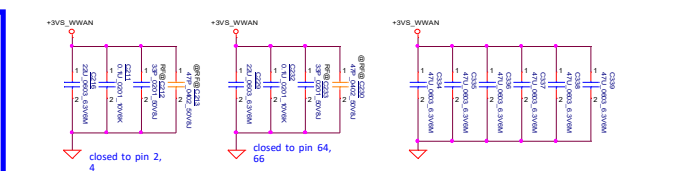
WWAN USB or 2nd SSD PCIe
M.2 3042 Key-B




PCIe/USB 3.0 Mux



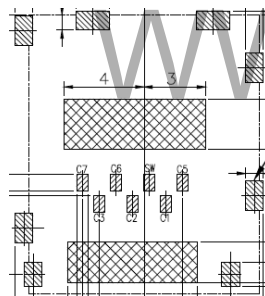
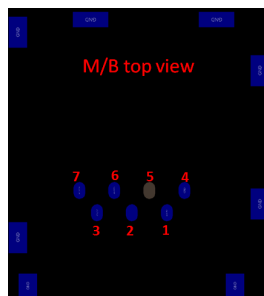
State#	CONFIG 0 (Pin 21)	CONFIG 1 (Pin 69)	CONFIG 2 (Pin 73)	CONFIG 3 (Pin 1)	Module Type	Port	Configuration
0	GND	GND	GND	GND	SSD - SATA		N/A
1	GND	HIGH	GND	GND	SSD - PCIe		N/A
2	GND	GND	HIGH	GND	WWAN - PCIe		0
3	GND	HIGH	HIGH	GND	WWAN - PCIe		1
4	GND	GND	GND	HIGH	WWAN - USB 3.0		0
5	GND	HIGH	GND	HIGH	WWAN - USB 3.0		1
6	GND	GND	HIGH	HIGH	WWAN - USB 3.0		2
7	GND	HIGH	HIGH	HIGH	WWAN - USB 3.0		3
8	HIGH	GND	GND	GND	WWAN - SSIC		0
9	HIGH	HIGH	GND	GND	WWAN - SSIC		1
10	HIGH	GND	HIGH	GND	WWAN - SSIC		2
11	HIGH	HIGH	HIGH	GND	WWAN - SSIC		3
12	HIGH	GND	GND	HIGH	WWAN - PCIe		2
13	HIGH	HIGH	GND	HIGH	WWAN - PCIe		3
14	HIGH	GND	HIGH	HIGH	DDP/HCA - PCIe		N/A
15	HIGH	HIGH	HIGH	HIGH	No Module		N/A



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title	P053 - WWAN / 2nd SSD
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL INFORMATION. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC. ANY UNAUTHORIZED REPRODUCTION OR USE OF THIS INFORMATION IS STRICTLY PROHIBITED. THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED AND IS NOT TO BE RELEASED OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Rev	0.4
				Part	LA-G661P
				Ver.	2018
				Issued	05 / 08 / 2018

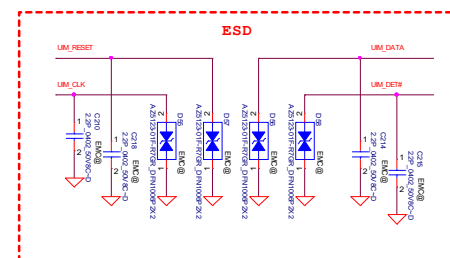
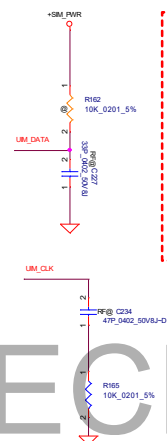
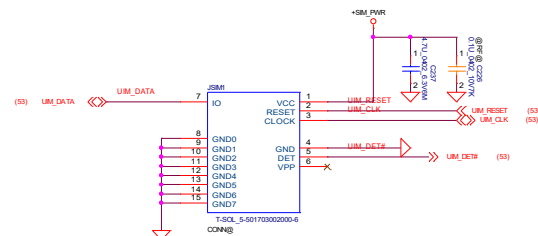
COMPOSITION OF DETECTION	
CARD DETECT(SW)	
C5  SW	
CARD DETECTION/SWITCH	
CARD INSTALLATION:ON	
NON CARD:OFF	

NANO SIM normal Open CONN.
 No Card: SW floating
 Card install: SW shot to GND(C5)



WWW.AITECH1.RU
 SIM Card Pin Assignments

NANO SIM CARD	
C1	Vcc
C2	RST
C3	CLK
C5	GND
SW	CD/SW
C6	Vpp
C7	DATA

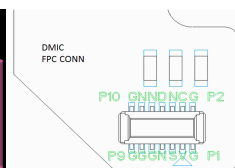
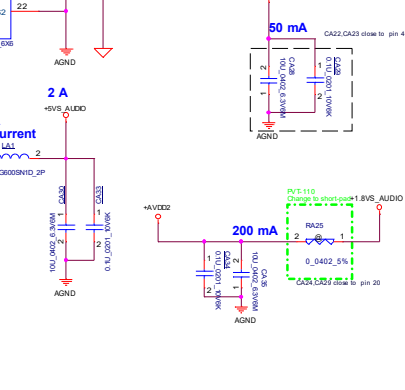
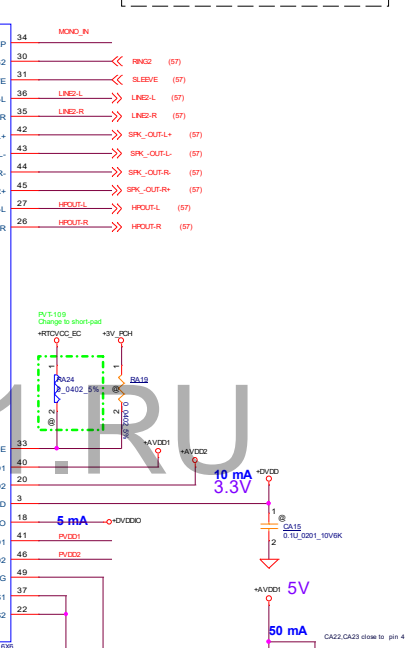
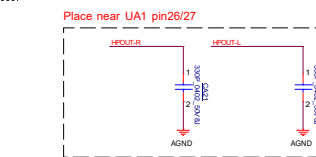


DELL CONFIDENTIAL/PROPRIETARY

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	20190508	Deciphered Date	20190508	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETITIVE DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THE SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size
				Document Number
				Rev
				4
				Date
				Monday, January 28, 2019
				Sheet
				94 of 100

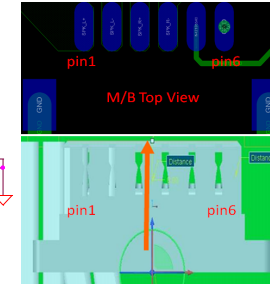
WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title			
<p>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</p>				P055 - Reserve			
				Size	Document Number	Rev	
				LA-G661P		0.4	
				Date:	Monday, January 28, 2019	Sheet	55 of 100



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title	P056 - Audio ALC3254
THIS SET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D MANAGEMENT AND USED AS AN INSTRUMENT AUTHORIZED BY COMAL ELECTRONICS, INC. NEITHER THE SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMAL ELECTRONICS, INC.				Size	Document Number LA-C661P
Date:	Wednesday, 27/2/2019	Sheet	56 of 100	Rev	04

40mil = For 4ohm 3W Speaker

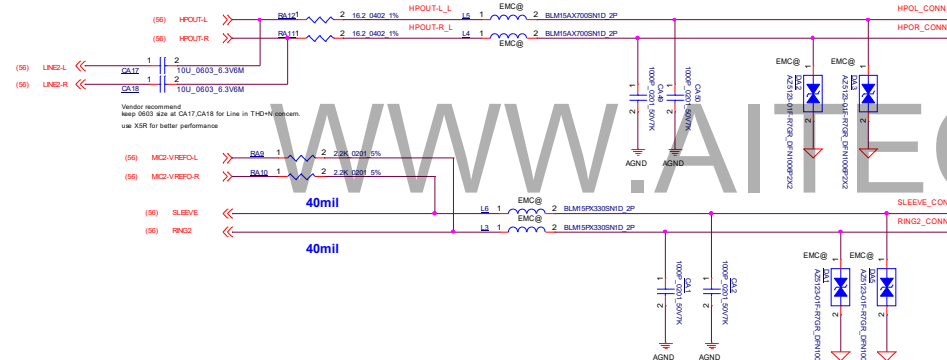


Conn Pin	Net name	Cable color
Pin 6	N/A	N/A
Pin 5	N/A	N/A
Pin 4	SPK R-	Black
Pin 3	SPK R+	Red
Pin 2	SPK L-	Blue
Pin 1	SPK L+	White

YC

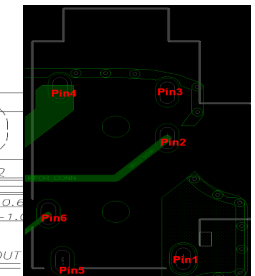
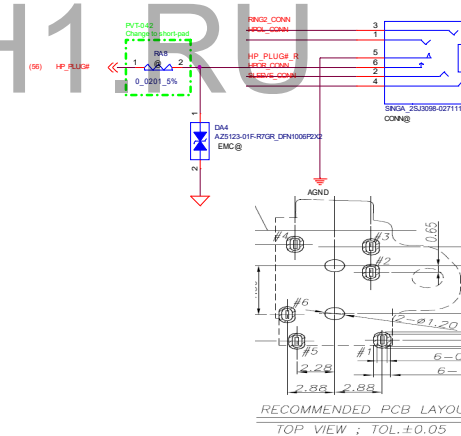
Conn Pin	Net name	Cable color
Pin 6	Loop with 5	Green
Pin 5	Loop with 6	Green
Pin 4	SPK R-	Black
Pin 3	SPK R+	Red
Pin 2	SPK L-	Blue
Pin 1	SPK L+	White

Technical drawing of a mechanical assembly showing a cross-section of a shaft with various components labeled M/G, G/M, R, and L. Dimensions include diameters of 3 and 3.5, and a length of 3-0.70.

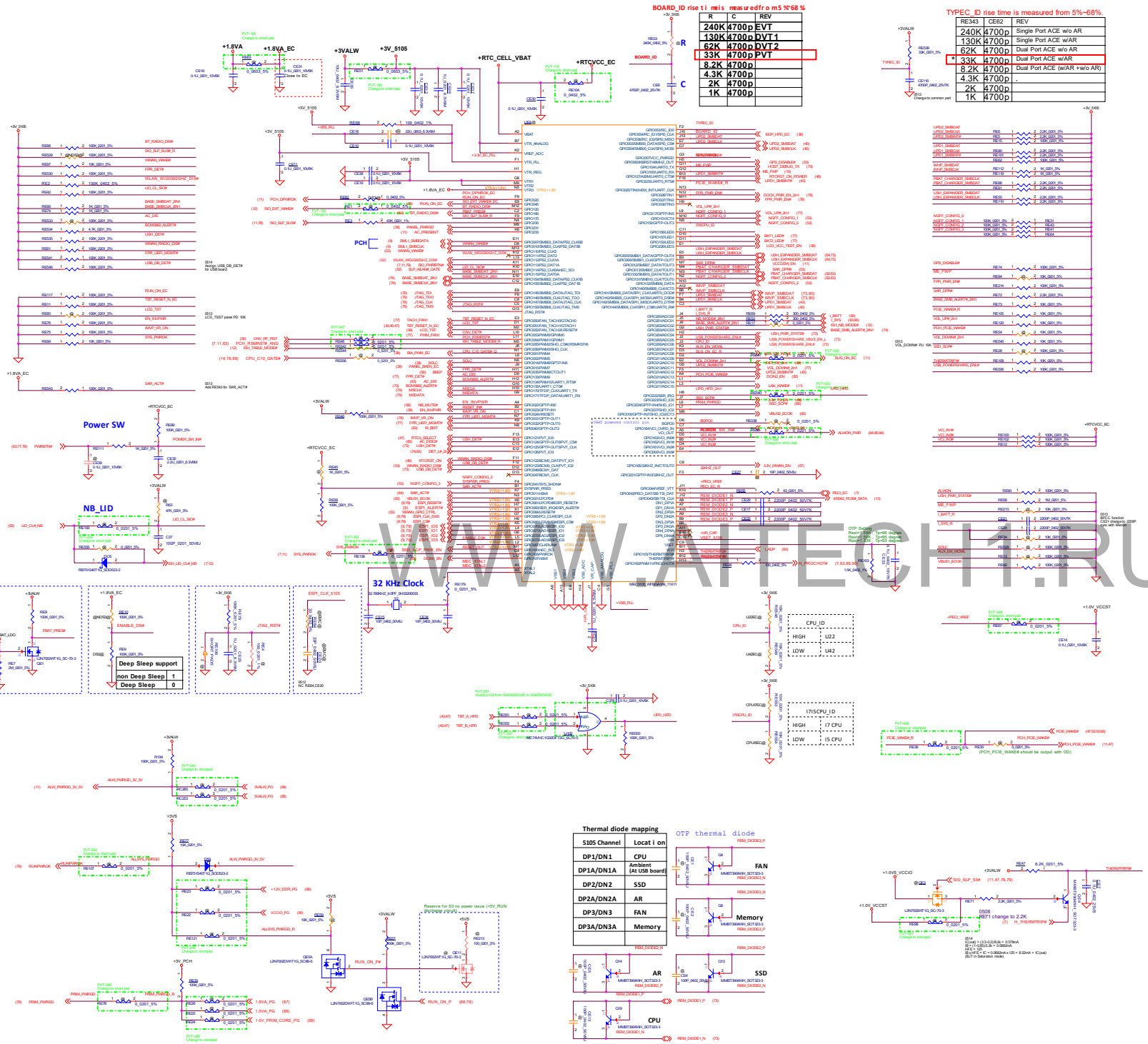


/M	 Singatron Enterprise Co., Ltd. 信音企業股份有限公司	
	TITLE	#3.50 AUDIO JACK
/G	DWN Qing	PART NO.2S43098-027111F
	CHKD Bruce	SCALE 4:1 UNIT: mm 
	APVD Liao	SIZE: A3 SHEET:1 OF 1 REV: 1
CUSTOMER COPY		

Audio Signal	Audio CONN	Pin
RING2_CONN	#3	G/M
HPOL_CONN	#1	L/R
HPOR_CONN	#2	R/L
SLEEVE_CONN	#4	M/G
HP PLUG#_R	#5	
AGND	#5	

[illegible]

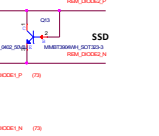
Security Classification	Compal Secret Data		Title	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	
THIS SHEET OF ENGINEERING DRAWINGS IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND SECRET INFORMATION. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY MANNER WITHOUT THE WRITTEN CONSENT AND DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Rev 0.4	
Size Drawing Number LA-G661P			Date: Monday, January 26, 2019 Sheet 57 of 100	



BOARD_ID rise t1 mls measured 5%~68%		
R	C	REV
240K	4700p	EVT
130K	4700p	DVT1
82K	4700p	DVT2
33K	4700p	PVT
8.2K	4700p	
4.3K	4700p	
2K	4700p	
1K	4700p	

TYPEC_ID rise time is measured from 5%~68%		
RES43	CEB2	REV
240K	4700p	Single Port ACE w/o AR
130K	4700p	Single Port ACE w/AR
62K	4700p	Dual Port ACE w/o AR
33K	4700p	Dual Port ACE w/AR
8.2K	4700p	Dual Port ACE w/AR
4.3K	4700p	Dual Port ACE (w/AR +w/o AR)
2K	4700p	
1K	4700p	

Thermal diode mapping	
S05S Channel	Locat i on
DP1/DN1	CPU
DP1A/DN1A	LAN USB board
DP2/DN2	SSD
DP2A/DN2A	FAN
DP3/DN3	FAN
DP3A/DN3A	Memory



WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title P059 - Reserve	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date:	Monday, January 28, 2019
				Sheet	50 of 100
				Rev	0.4
				LA-G661P	

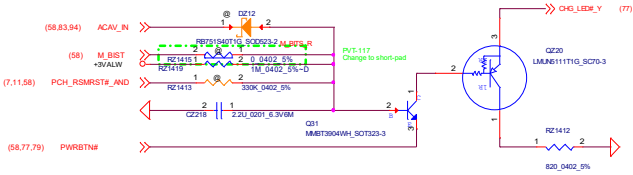
WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title P060 - Reserve	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Document Number LA-G661P	Rev 0.4
Date: Monday, January 28, 2019		Sheet 60 of 100			

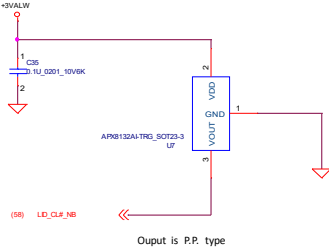
WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P062 - Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Monday, January 28, 2019	Sheet 62 of 100

M-BITS



Hall sensor

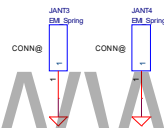
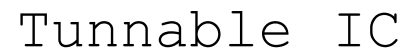


Magnetic field enters the Hall sensor, output turns on (output is high)
Magnetic field release point, output turns off (output is high)

WWW.AITECH1.RU

DELL CONFIDENTIAL/PROPRIETARY

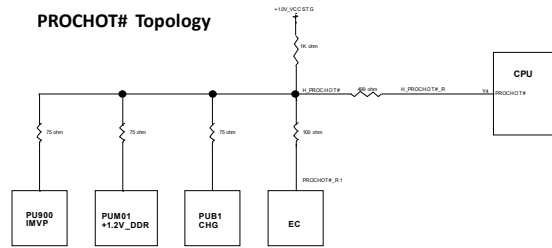
Security Classification	Compal Secret Data		Title	
Issued Date	2019/05/08	Deciphered Date	2019/05/08	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETITIVE DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Rev
Date: Monday, January 28, 2019				0.4
Sheet 63 of 100				



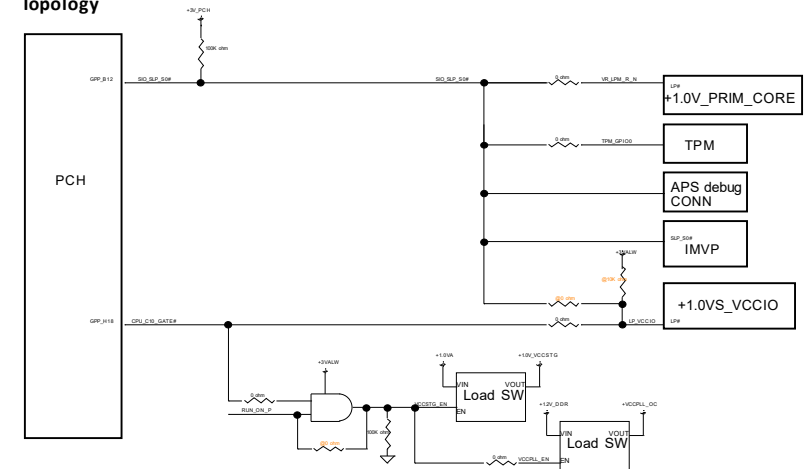
WWW.AITECH1.RU

Security Classification	Compal Secret Data		Title	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL INFORMATION. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC.			Size Document: 11.0 x 8.5 in. LA-G661P	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL INFORMATION. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC.			Date: <u>Monday, January 25, 2019</u> Sheet: <u>64</u> of <u>100</u>	

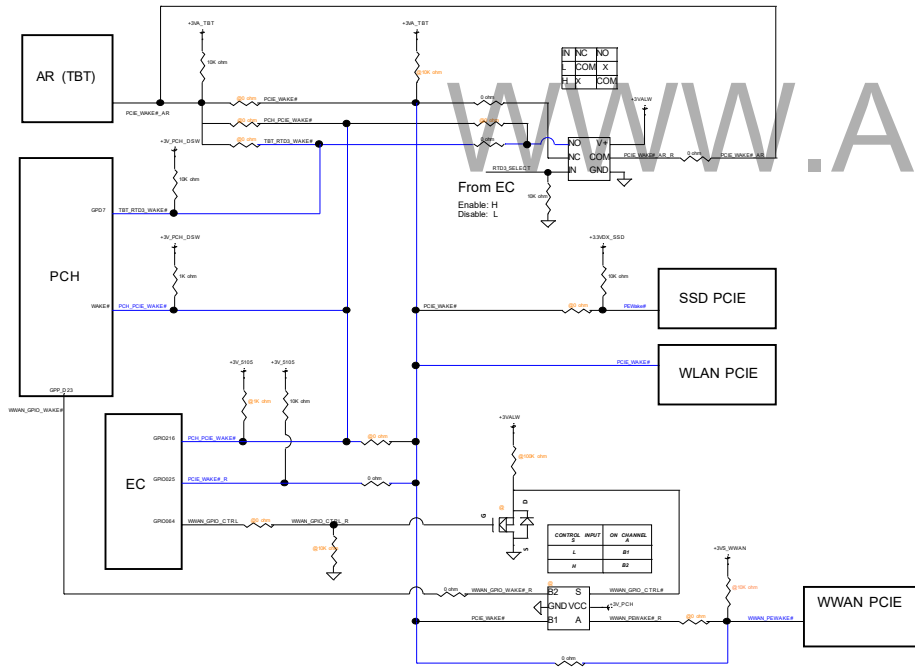
PROCHOT# Topology



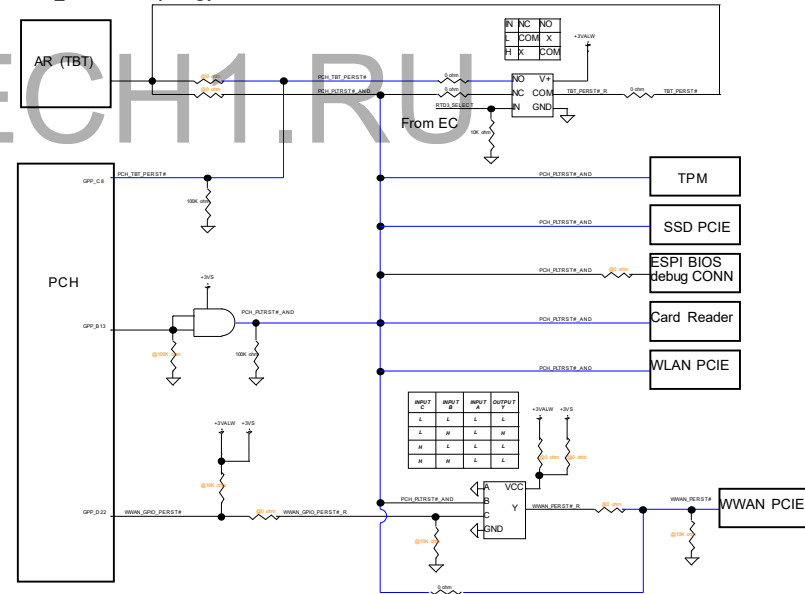
SIO_SLP_S0# CPU_C10_GATE# Topology



PCH_PCIE_WAKE# Topology



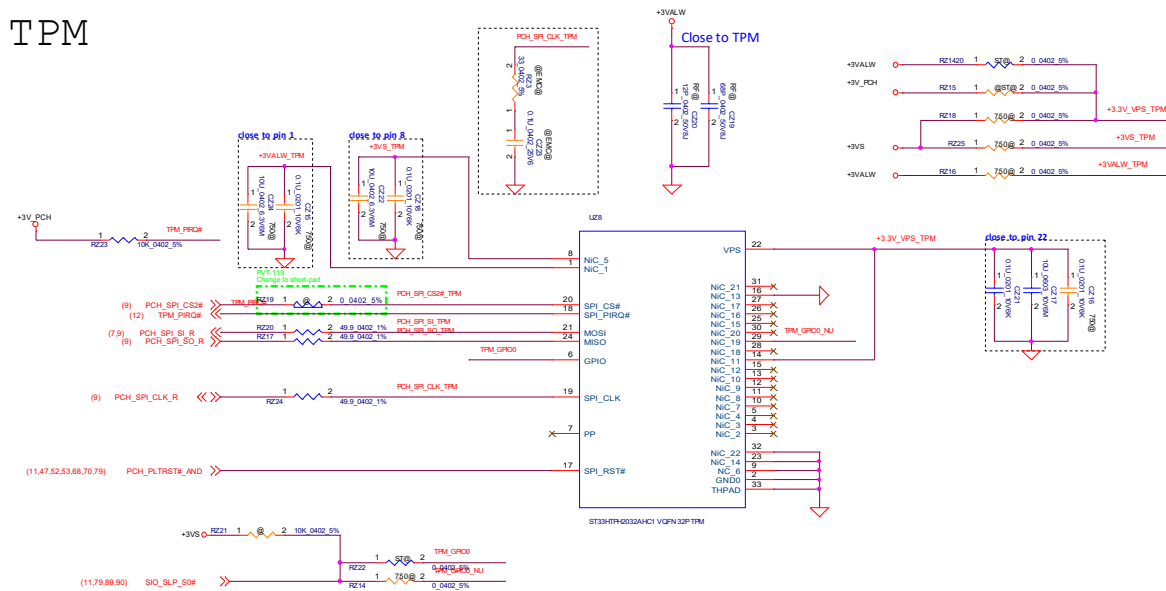
PCH_PLTRST# Topology



DELL CONFIDENTIAL/PROPRIETARY

Security Classification		Compal Secret Data	
Issued Date	2018/05/08	Designated Date	2018/05/08
The sheet of engineering drawings is the proprietary property of Compal Electronics, Inc. and contains confidential and trade secret information. No part of this drawing may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Compal Electronics, Inc.		Title	
		P065 - Topology	
		Rev	
		LA-G661P	
		Date	
		Rev	

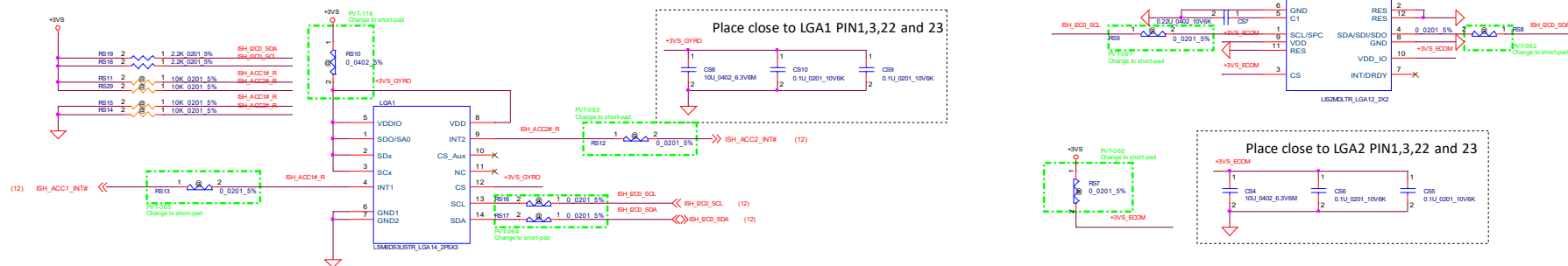
TPM



WWW.AITECH1.RU

3D accelerometer and 3D gyroscope

E-Compass



DELL CONFIDENTIAL/PROPRIETARY

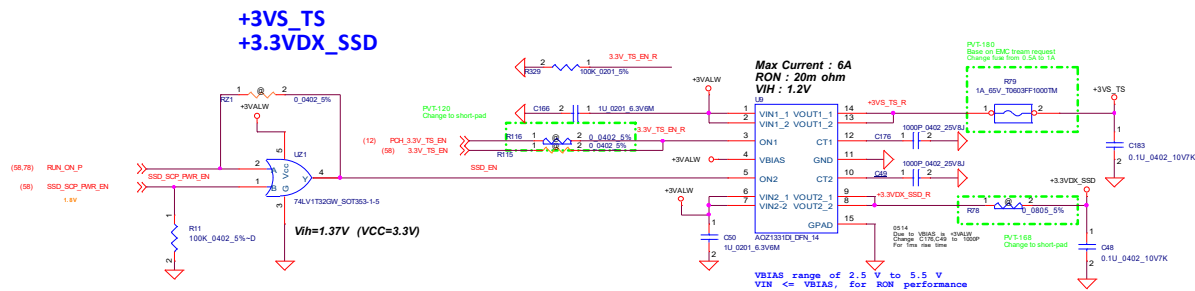
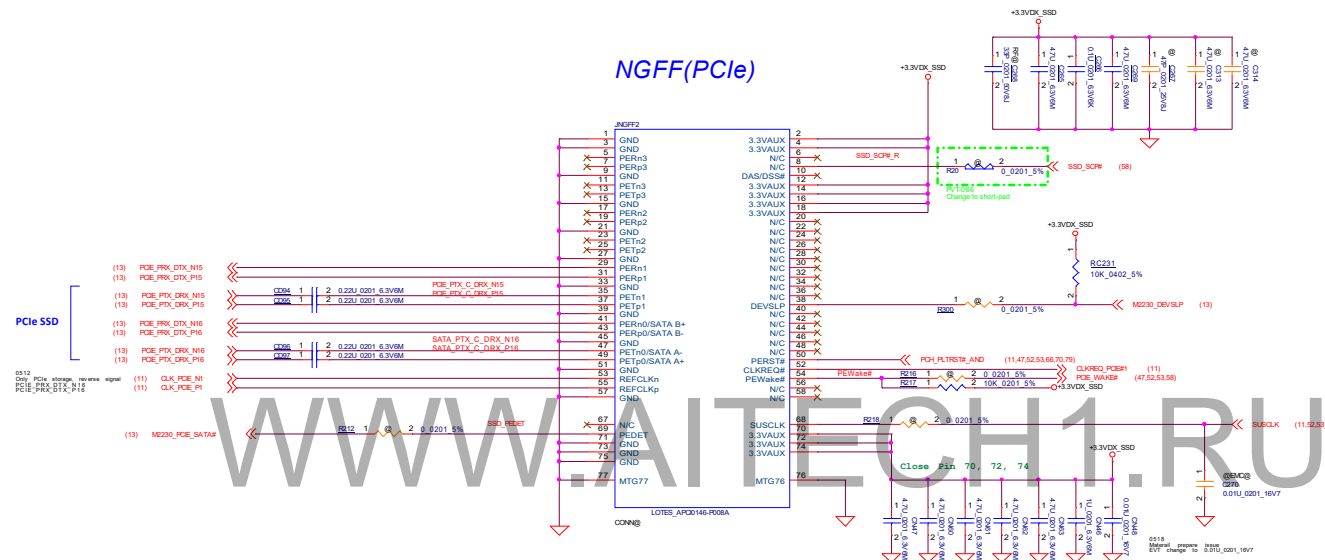
Security Classification		Compal Secret Data		Compal Electronics, Inc. P066 - TPM/Gyro/Accel/E-Compass	
Issued Date	2019/05/08	Deciphered Date	2019/05/08	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D MANAGEMENT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NOR BE SHARED WITH THE RESEARCHER IF CONTAINING ANY INFORMATION BY OR DELOVED BY THIS PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
					L44661P1
				Date:	10/24/2019
				Sheet	66 of 100

WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P067 - Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Monday, January 28, 2019	Sheet 67 of 100

SSD PCIe

M.2 2230 Key-M



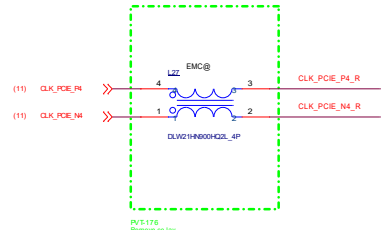
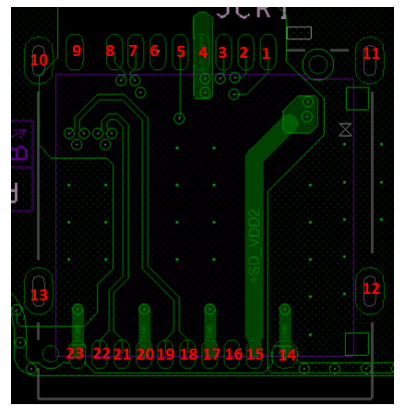
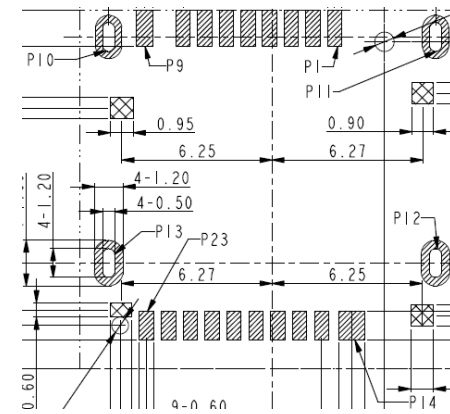
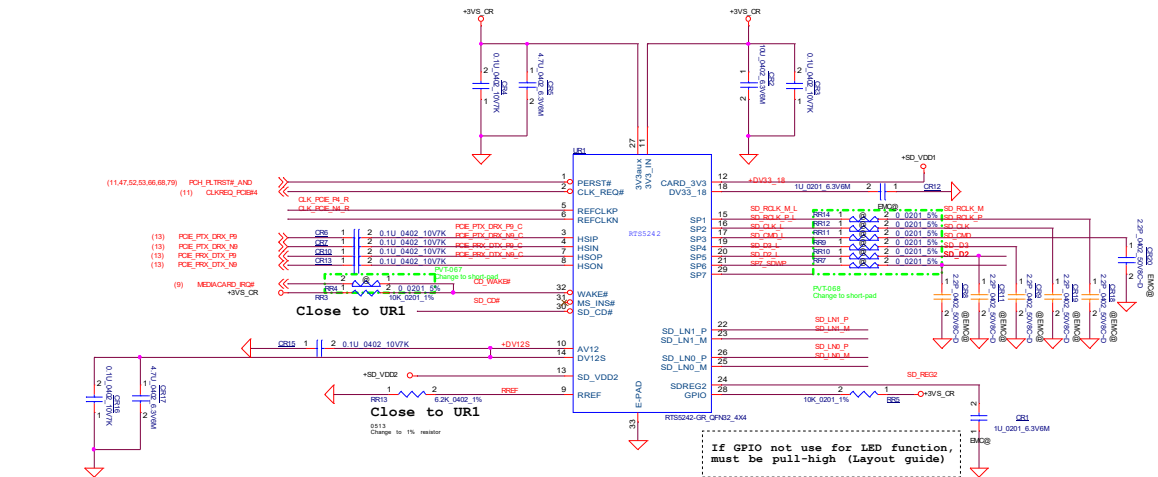
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2019/05/08	Deciphered Date	2019/05/08	Title	P068 - M.2 SSD PCIE
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE CUSTOMER OR THE CUSTOMER'S EMPLOYEES WITHOUT THE WRITTEN CONSENT OF COMPAL ELECTRONICS, INC. NEITHER THE SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				Date	Wednesday, February 27, 2019
				Sheet	08 of 100

WWW.AITECH1.RU

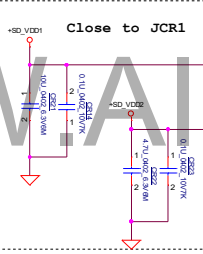
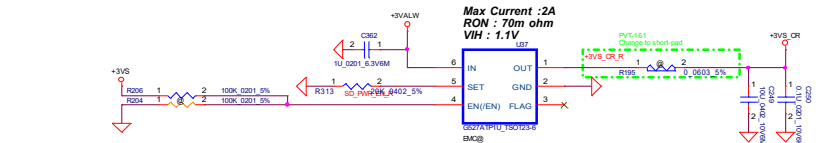
Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P069 - Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Monday, January 28, 2019	Sheet 69 of 100

Card Reader

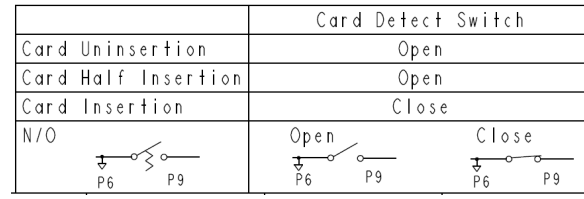
- 1)Placing the RTS5242 chip and flash card socket locate to suit trace routing for SI / EMI / ESD.
- 2)Keep bulk and de-coupling capacitors as close as possible to the RTS5242 chip and flash card socket.
 - Bulk capacitor for Card 3V3 place closed to flash card socket.
 - Bulk capacitor for 3V3 IN / 3V3aux / DV12S place closed to RTS5242 chip.
- 3)Keep damping resistor (ex. for SD CLK / MS CLK) as close as possible to the RTS5242 chip.
- 4)Keep these capacitors for SD card / MS card signals as close as possible to flash card socket.



+3VS_CR



Opening/Close of Switch



Pin No.	Pin Assignment
P1	MICRO SD DAT2
P2	MICRO SD CD/DAT3
P3	MICRO SD CMD
P4	MICRO SD VDD1
P5	MICRO SD CLK
P6	MICRO SD VSS
P7	MICRO SD DAT0/RCLK+
P8	MICRO SD DAT1/RCLK-
P9	MICRO SD CD
P10	GND
P11	GND
P12	GND
P13	GND
P14	GND
P15	MICRO SD VDD2
P16	MICRO SD SWIO
P17	MICRO SD VSS
P18	MICRO SD DO+
P19	MICRO SD DO-
P20	MICRO SD VSS
P21	MICRO SD D1-
P22	MICRO SD D1+
P23	MICRO SD VSS

TaiSol Electronics Co., Ltd.

Part Name: MICRO SD4.0 FOR S/D PUSH TOP MOUNT TYPE

Part No.: 158-1090902601

Tol.: ±0.1mm

Material: SEE NOTES

Finish: SEE NOTES

THE 3RD PROJECTION

Model: DWFC-T0.50

Approved: JACKY

Checked: SUNNY

Drawn: NICK

Date: 2018.06.20

Rev: 01

Sheet: 2/2

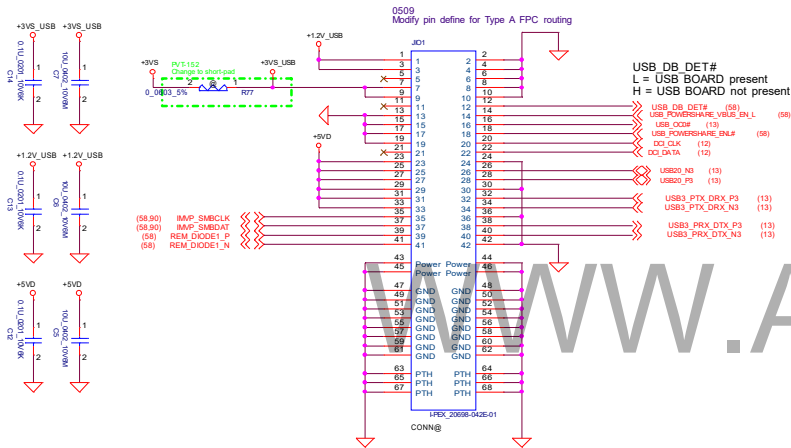
WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.		
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P071 - Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Monday, January 28, 2019	Sheet 71 of 100

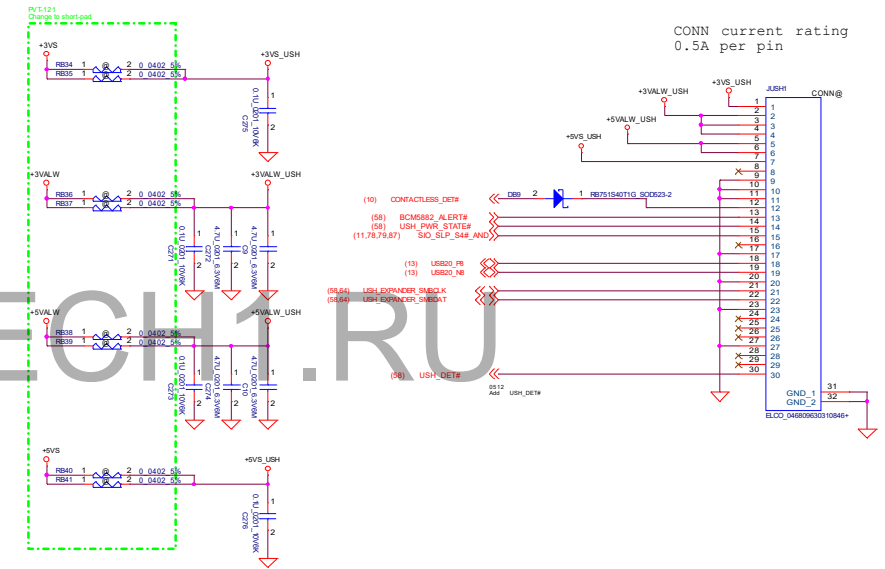
WWW.AITECH1.RU

Security Classification		Compal Secret Data		Compal Electronics, Inc.			
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title			
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				P072 - Reserve			
				Size	Document Number	Rev 0.4	
				LA-G661P			
Date:	Monday, January 28, 2019		Sheet	72	of 100		

USB Board CONN



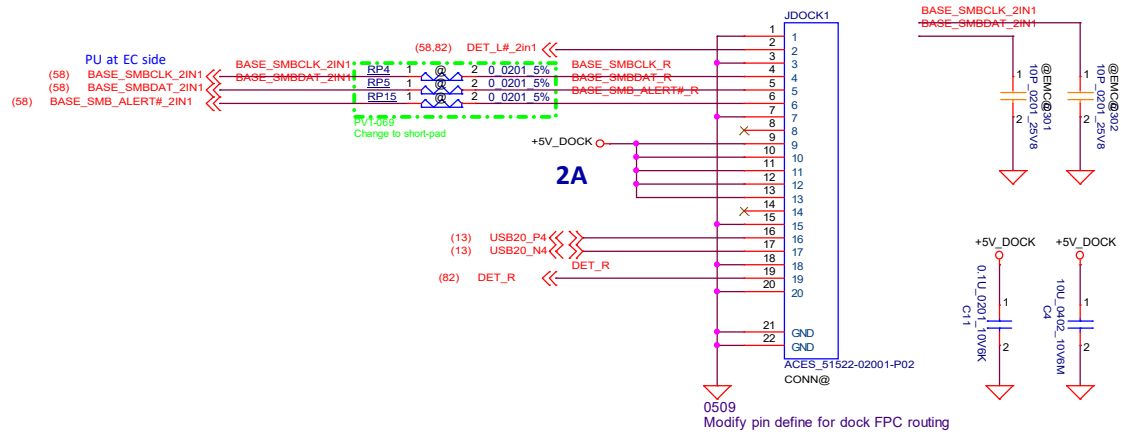
USH CONN.



DELL CONFIDENTIAL/PROPRIETARY

Security Classification		Compal Secret Data		Title	
20190508		Deciphered Date		20190508	
Issued Date		Deciphered Date		20190508	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THE SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		Size		Document Number	
				LA-G661P	
Date:		Thursday, January 31, 2019		Sheet 73 of 100	

Docking CONN



WWW.AITECH1.RU

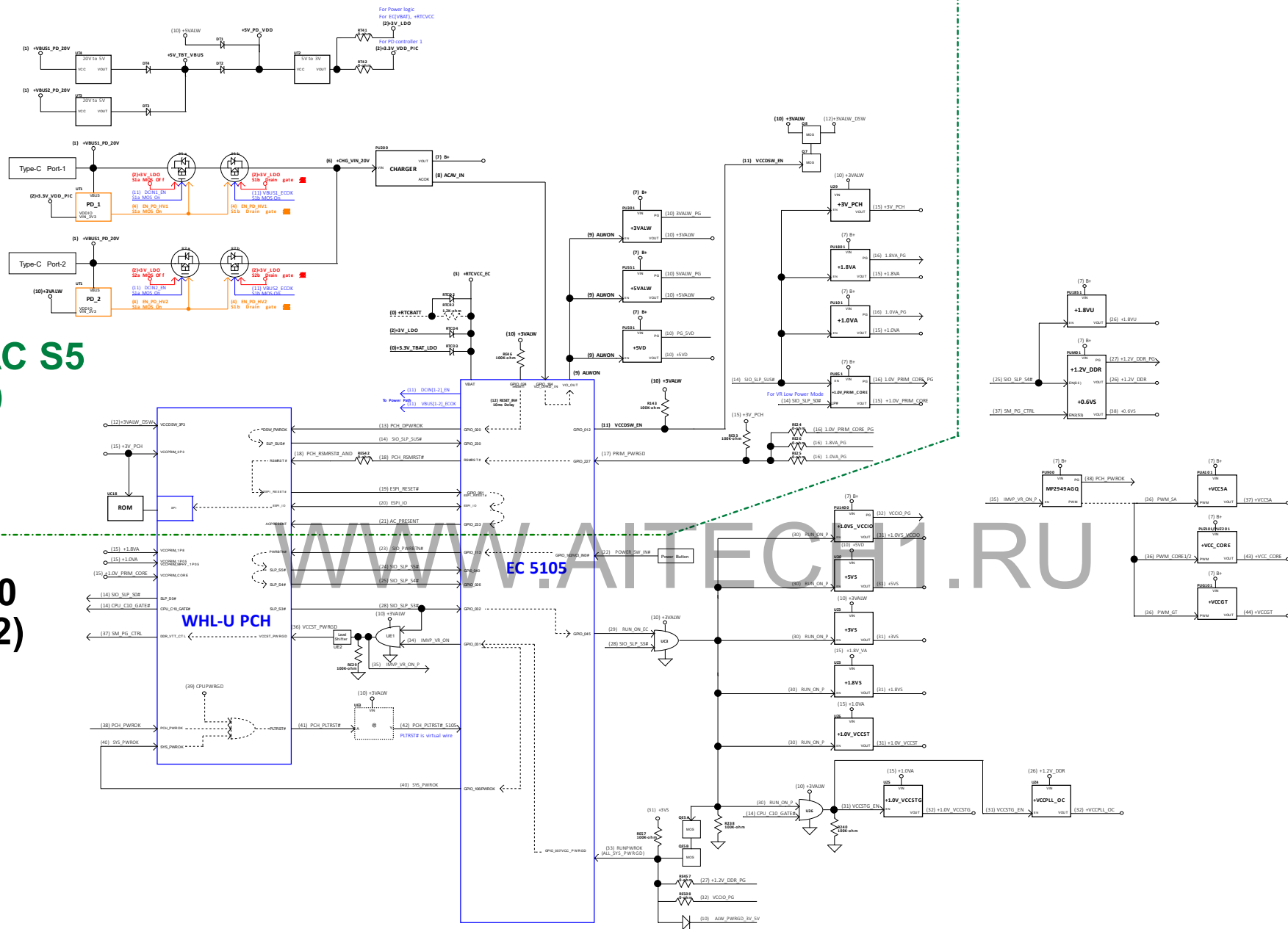
DELL CONFIDENTIAL/PROPRIETARY

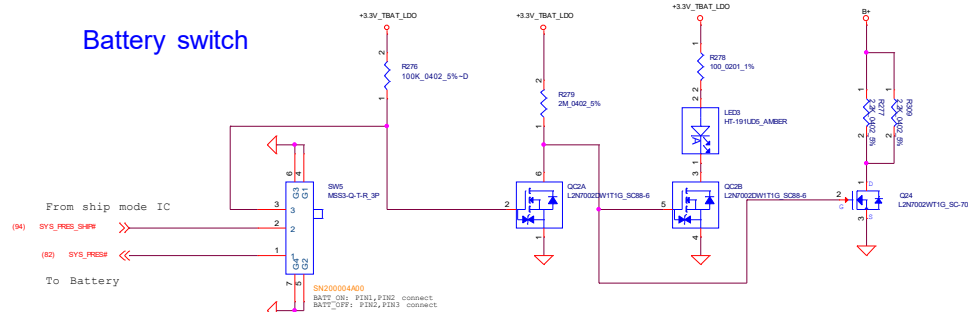
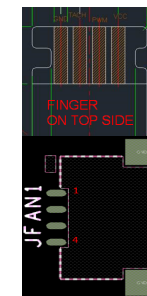
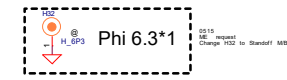
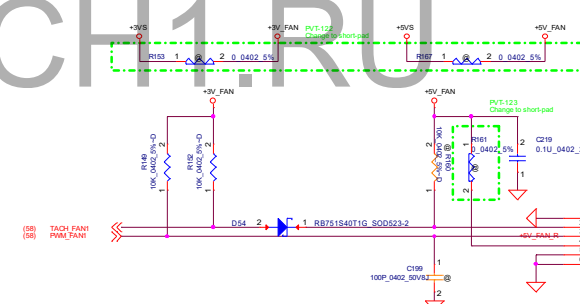
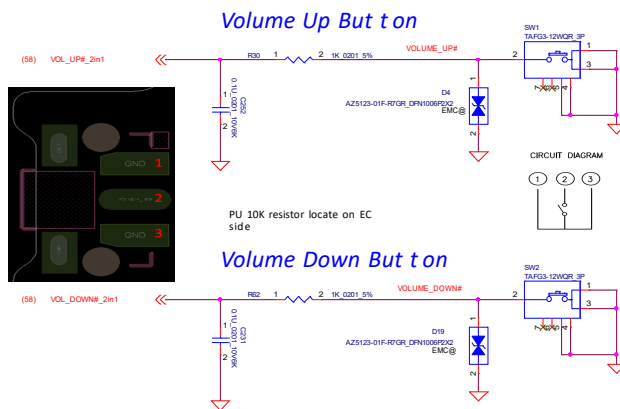
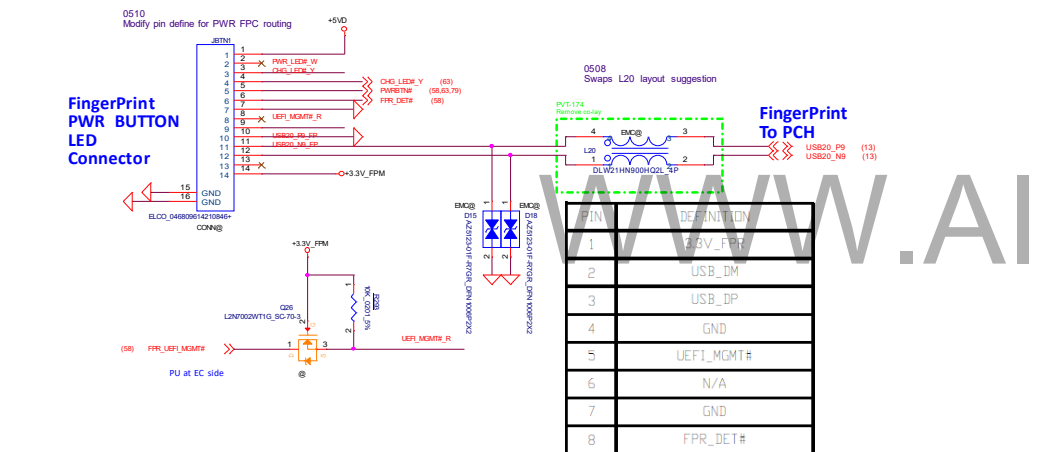
Compal Electronics, Inc.

Security Classification		Compal Secret Data		Title	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	P074 - Dock I/O	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number
				LA-G661P	
				Date:	Monday, January 28, 2019
				Sheet	74 of 100
				Rev	0.4

G3 to AC S5
(0)~(21)

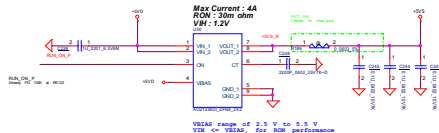
S5 to S0
(22)~(42)



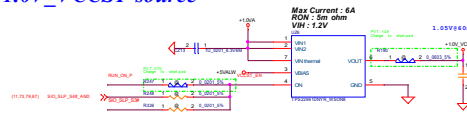


Security Classification		Compal Secret Data		Compal Electronics, Inc. P077 - PWRBTN / SCREW / FAN	
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT (CDD) AS AN INSTRUMENT OF WORK OR INFORMATION. IT IS THE PROPERTY OF COMPAL ELECTRONICS, INC. AND WILL BE USED OR DISCLOSED BY THIS PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Docment Number	Re
				Date	
				L-C661P Issued: 07/10/2019	Sheet 77 of 100

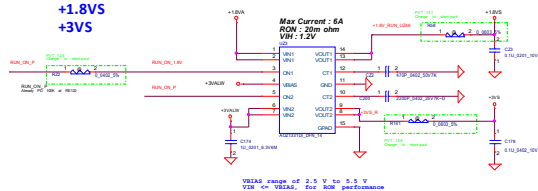
+5VS



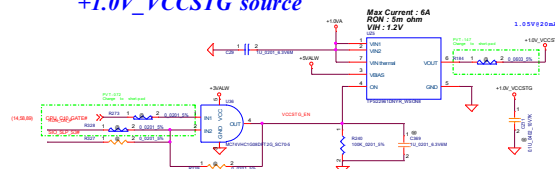
+1.0V_VCCST source



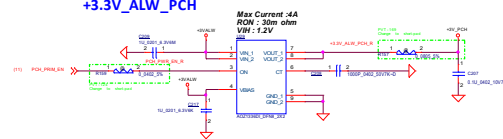
+1.8VS
+3VS



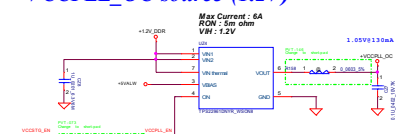
+1.0V_VCCSTG source



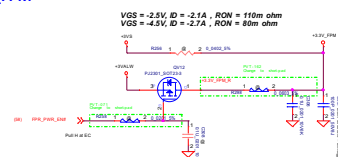
DSx
+3.3V_ALW_PCH



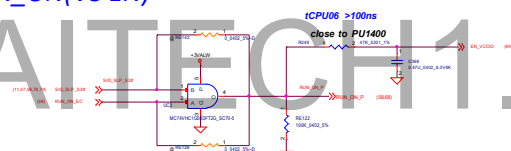
+VCCPLL_OC source (1.2V)



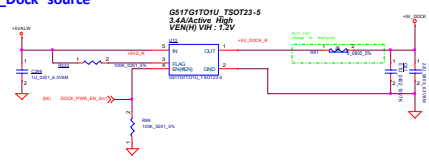
+3.3V_FPM



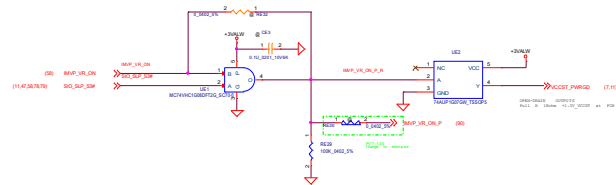
RUN_ON(VS EN)



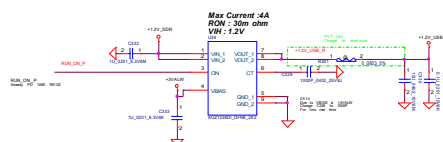
+5V_Dock source



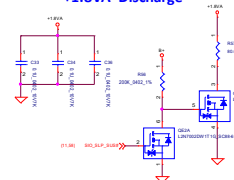
IMVP_VR_ON&VCCST_PWRGD



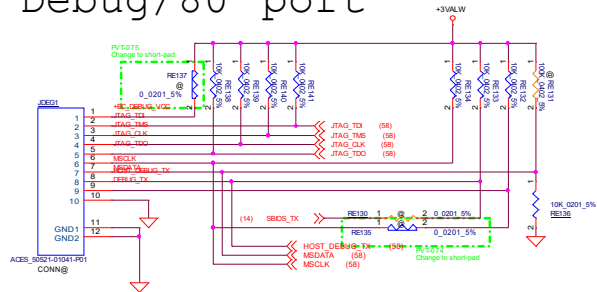
(+1.2V_USB) For Type A redriver



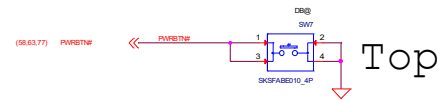
+1.8VA Discharge



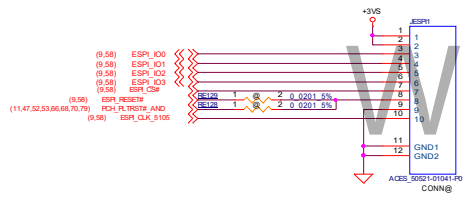
EC UART Debug/80 port



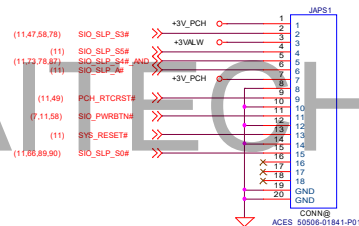
Test Power Button



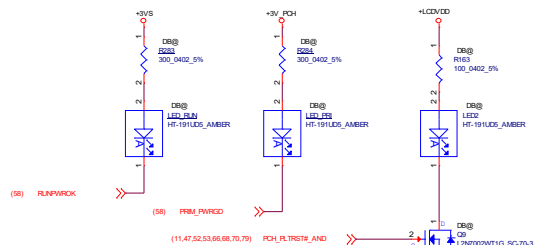
ESPI BIOS debug



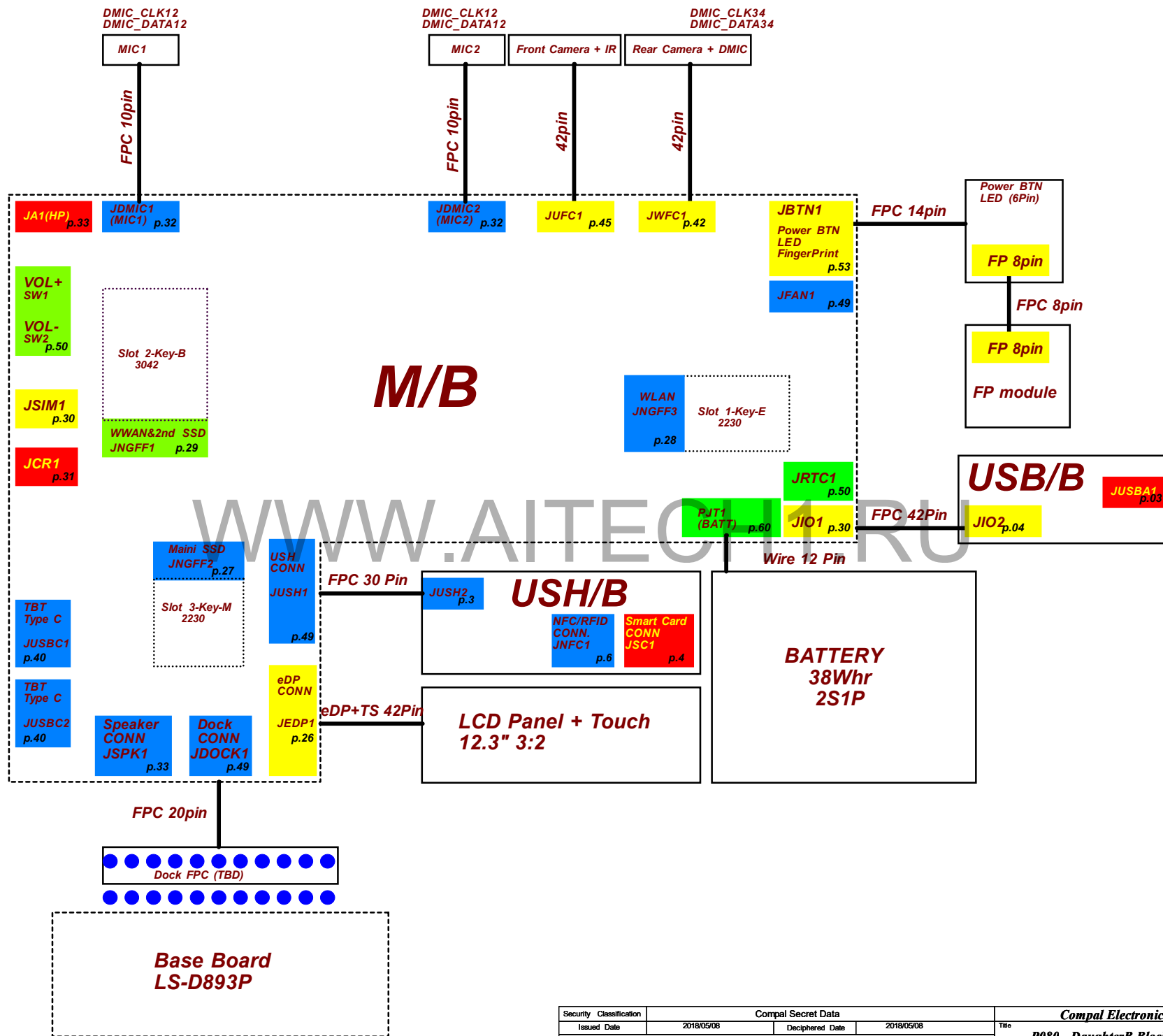
APS CONN



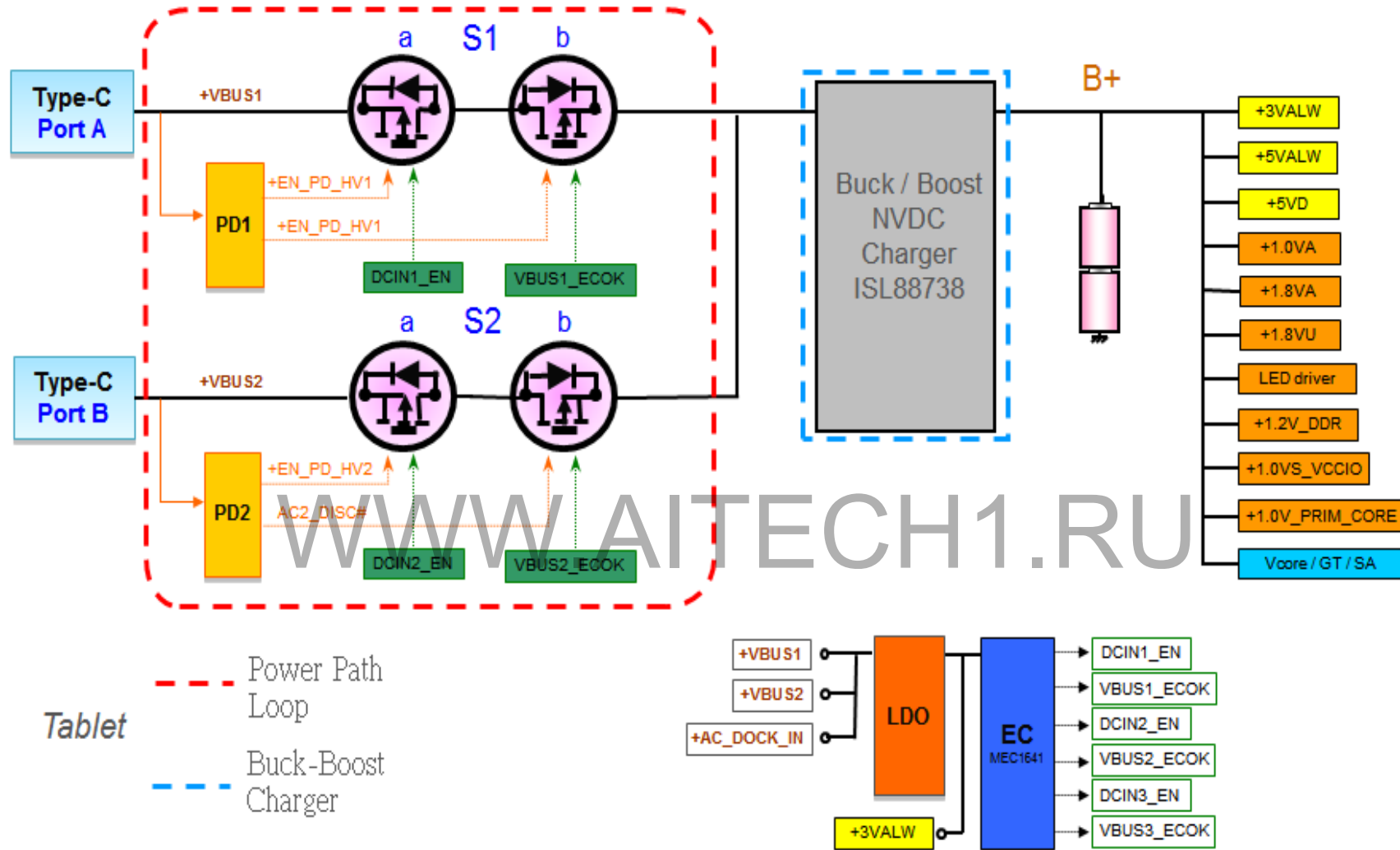
DEBUG LED



- New Tooling in DVT
- New applying
- Leverage others project
- Leverage PBC MLK

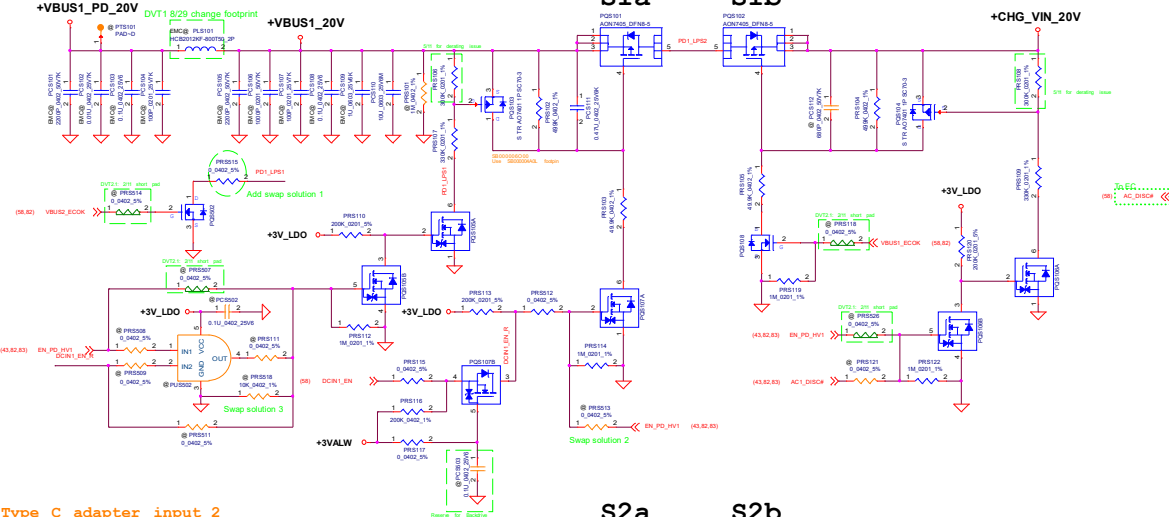


Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2018/05/08	Deciphered Date	2018/05/08	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
					LA-G661P	0.4
				Date:	Monday, January 28, 2019	Sheet 80 of 100

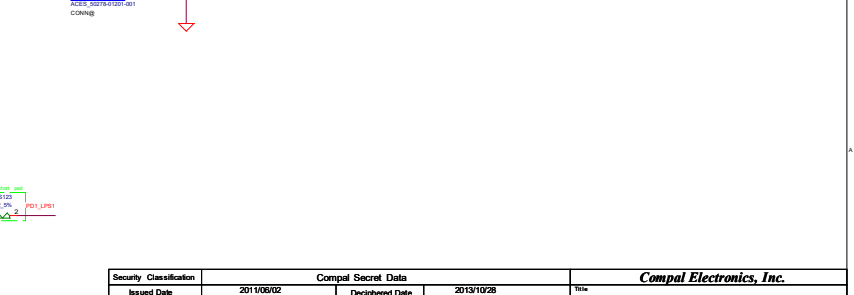
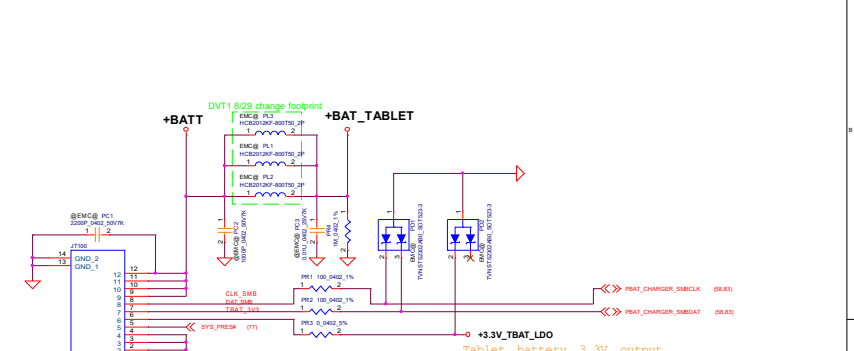
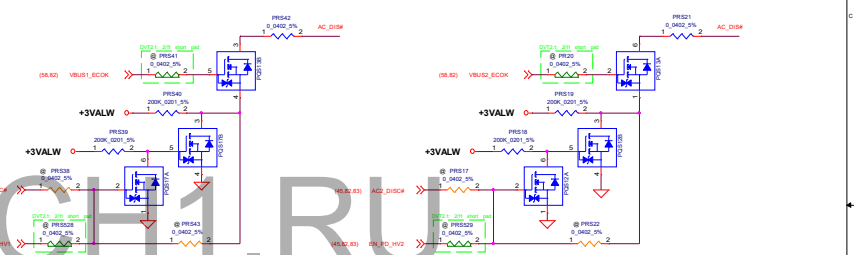
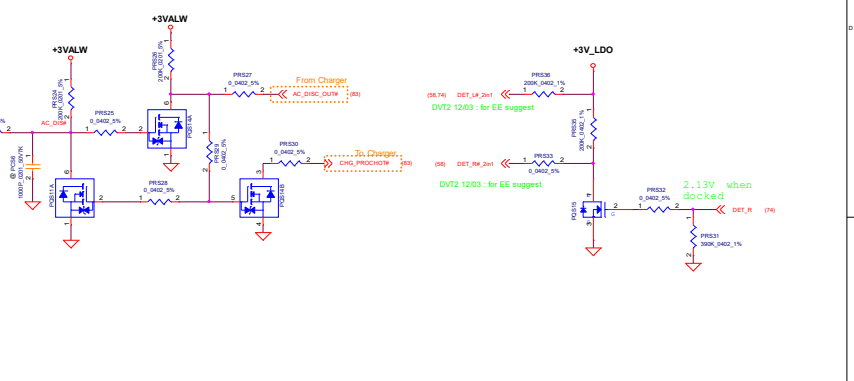
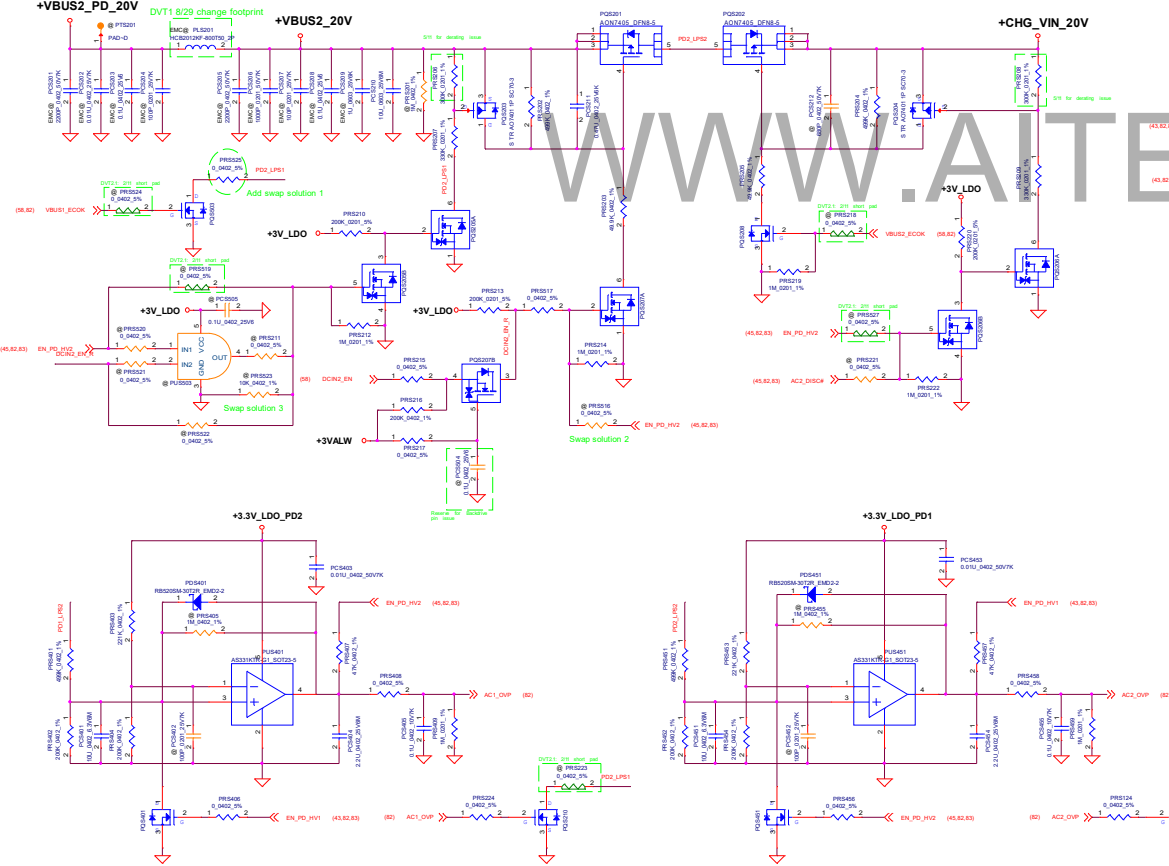


Function feild:
Rest of support elements (37.1), EMC Part(47.1)

Type C adapter input_1

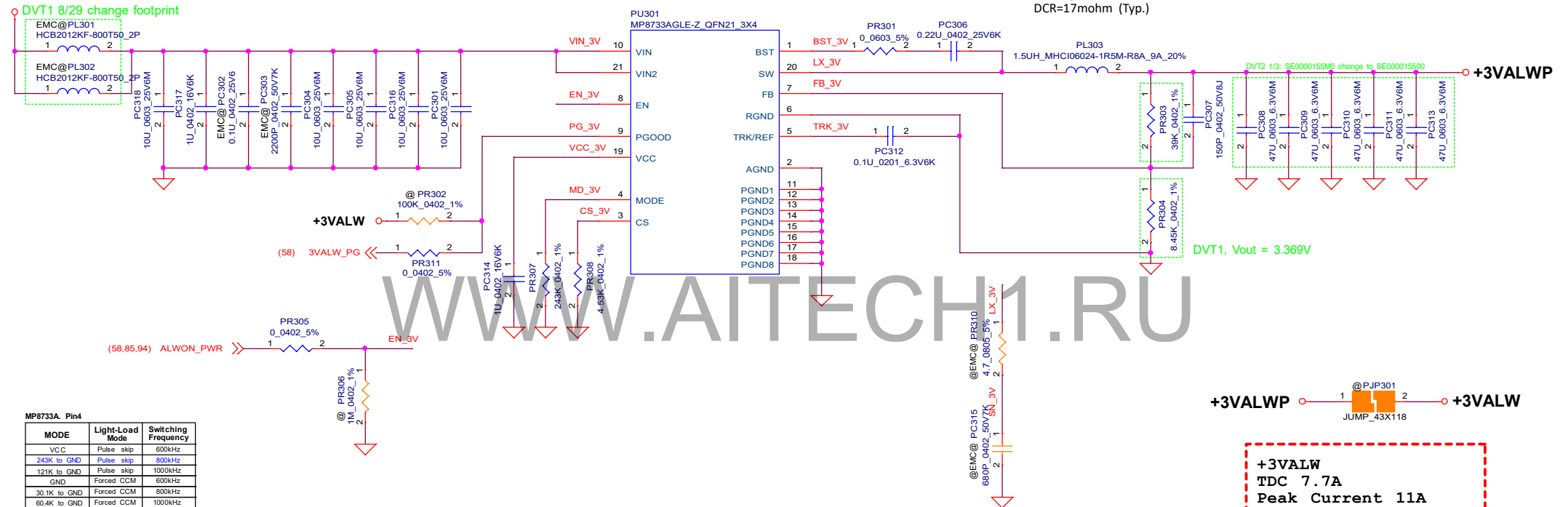


Type C adapter input_2



+3VALW controller(35.1), Support component(35.2)

B+



MP8733A Pin4

MODE	Light-Load Mode	Switching Frequency
VCC	Pulse-skip	600kHz
243K to GND	Pulse-skip	800kHz
121K to GND	Pulse-skip	1000kHz
GND	Forced CCM	600kHz
30.1K to GND	Forced CCM	800kHz
60.4K to GND	Forced CCM	1000kHz

MP8733A Pin7

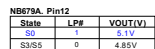
VFB = 0.6V
Vout = 0.6V*(1+R1/R2)
Vout = 0.6V*(1+39K/8.45K)
Vout = 3.369V

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/17	Deciphered Date	2014/12/05	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PWR +3VALW(MP8733A)	
Size		Document Number		Rev	
LA-G661P				1.0	
Date:		Friday, February 15, 2019		Sheet 84 of 100	

DVT1 8/29 change footprint

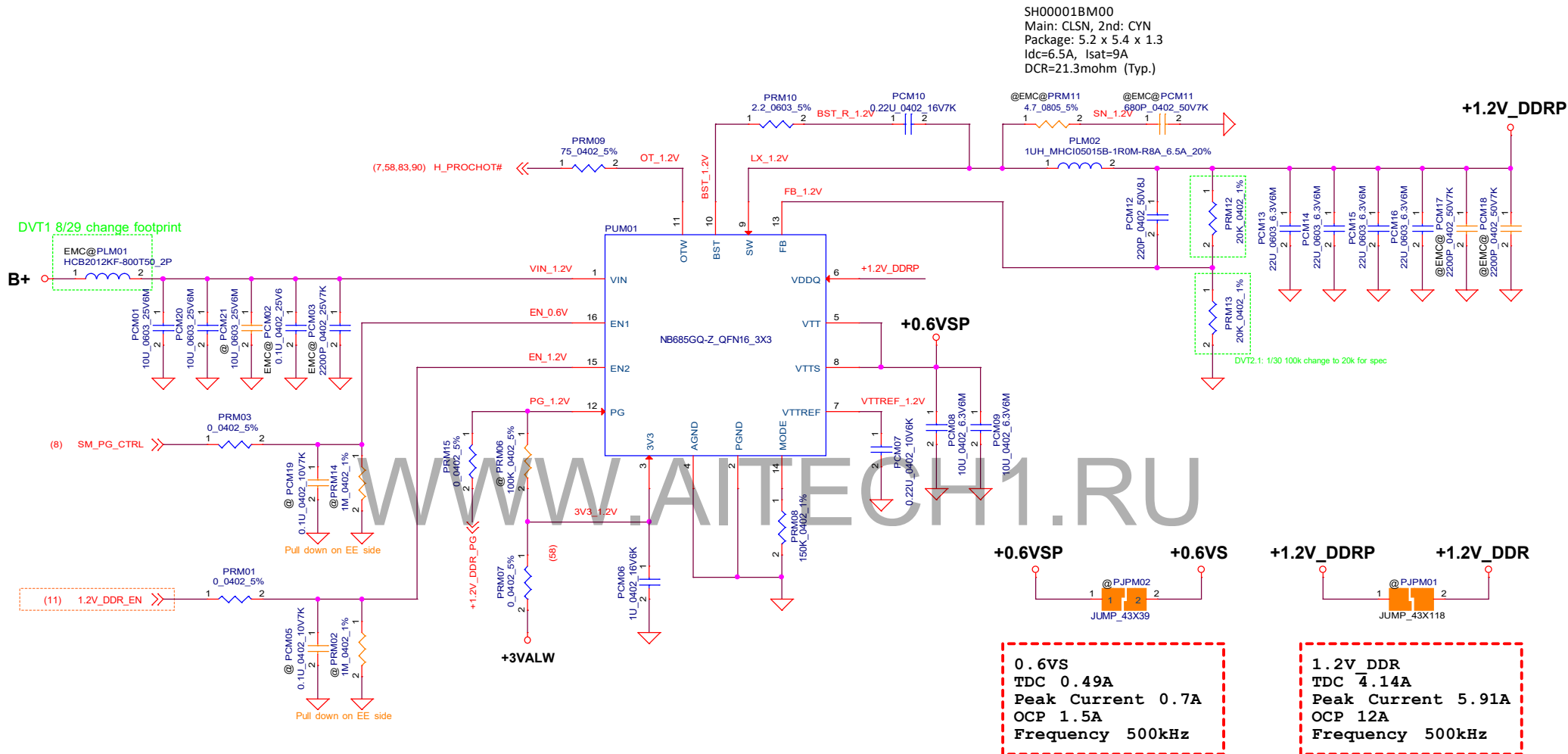


Main: ML, 2nd: CLSN
Package: 5.7 x 5.4 x 1.8
Idc=6.2A, Isat=8.4A
DCR=29mohm (Typ.)



Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2011/06/02	Deciphered Date	2013/10/28	Title	PWR +5V(ALW(NB679A)/+5VD(NB502)	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION CONTAINED MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev.
					LA-G661P	1
Date:				Friday, February 15, 2019	Sheet	85 of 100

+1.2V_DDR controller(35.3), Support component(35.4)



NB685_Pin15/16

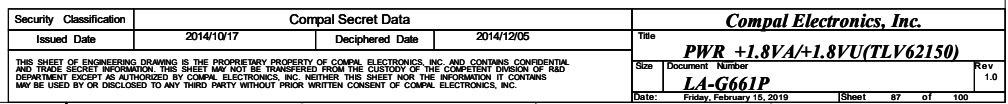
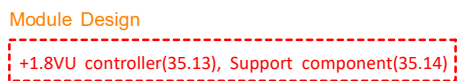
State	EN1	EN2	VDDQ	VTTREF	VTT
S0	H	H	ON	ON	ON
S3	L	H	ON	ON	OFF(High-Z)
S4/S5	L	L	OFF	OFF	OFF
Others	H	L	OFF	OFF	OFF

NB685_Pin14

State	USM	Fs	Resistor to GND
M1	N	700k	0
M2	Y	700k	100k
M3	N	500k	150k
M4	Y	500k	>200k

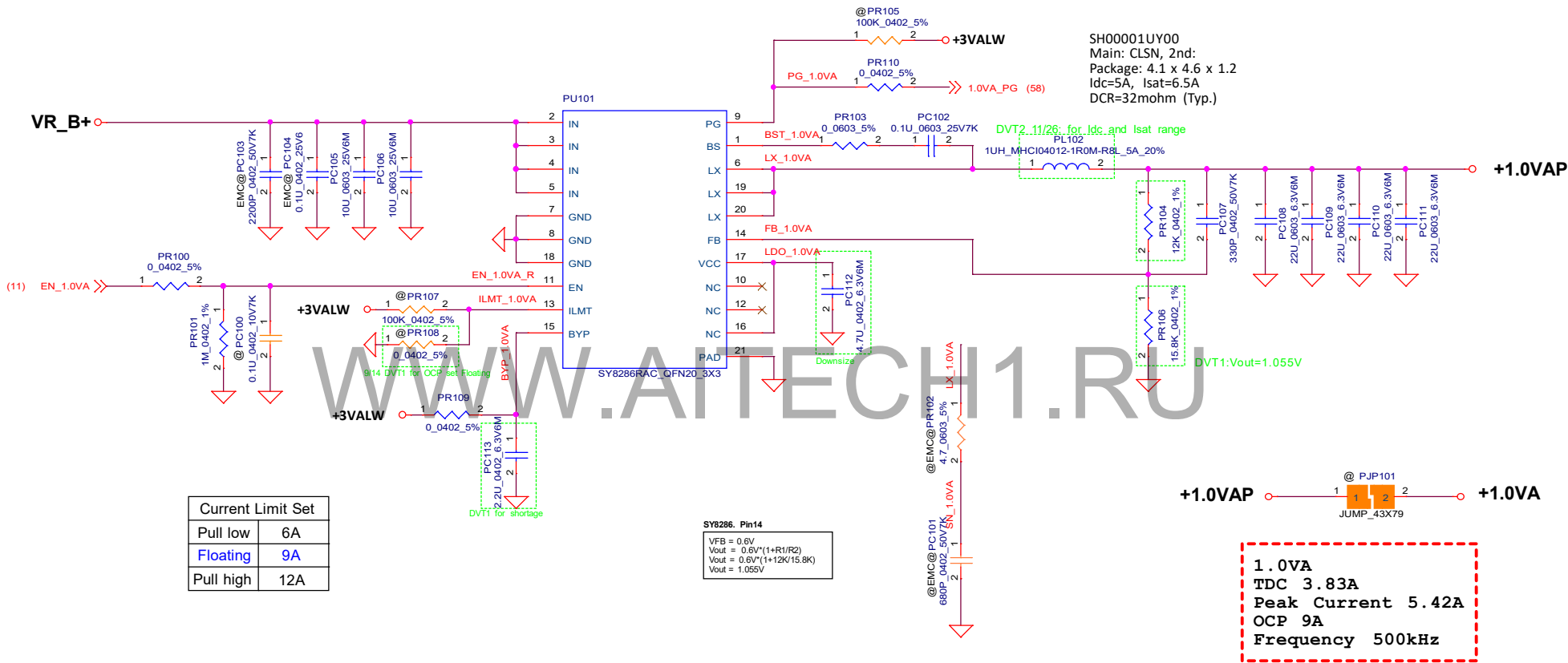
Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2013/04/10	Deciphered Date	2014/05/01	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PWR +1.2V_DDR/+0.6V(NB685)	
				Size	Document Number
				Date:	Friday, February 15, 2019
				Sheet	86 of 100
				Rev	1.0

+1.8VS controller(35.13), Support component(35.14)



Module Design

+1.0VA controller(35.5), Support component(35.6)



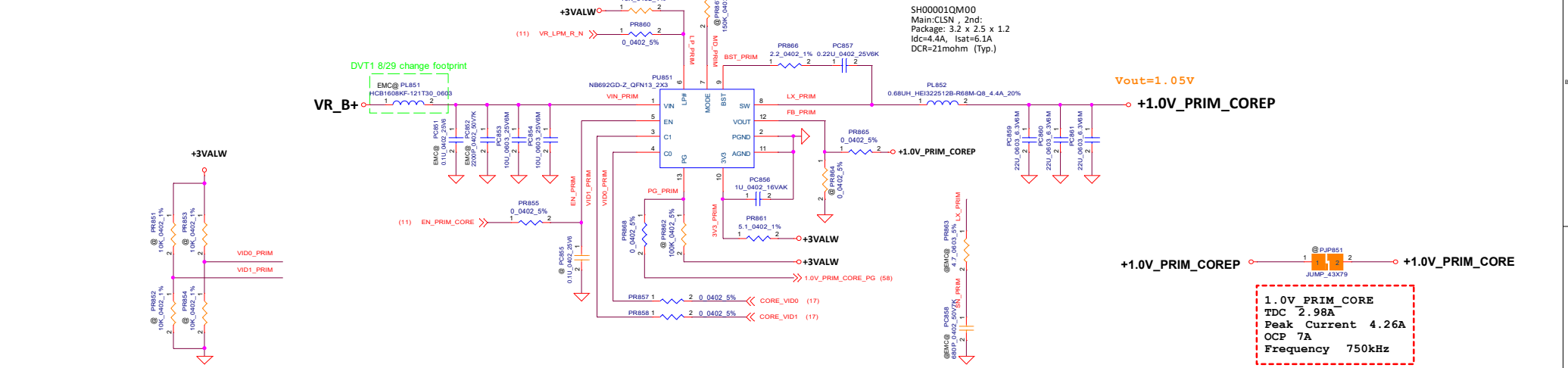
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2014/10/17	Deciphered Date	2014/12/05	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PWR +1.0VA(SY8286RAC)	
Size	Document	Number		Rev	1.0
LA-G661P				Date: Friday, February 15, 2019	
				Sheet	88 of 100

[illegible]

MODE	VR Rail	Resistor to GND
M1	VCCIO	0
M2	PRIMCORE	Floor or > 230K
M3	EDRAM/V 1.0A/EOPIO	100K
M4	Others	150K

VCCIO	LP#	C1	C0	VOUT(V)
	0	X	X	0
	1	0	0	0.85
	1	0	1	0.875
	1	1	0	0.95
	1	1	1	0.975

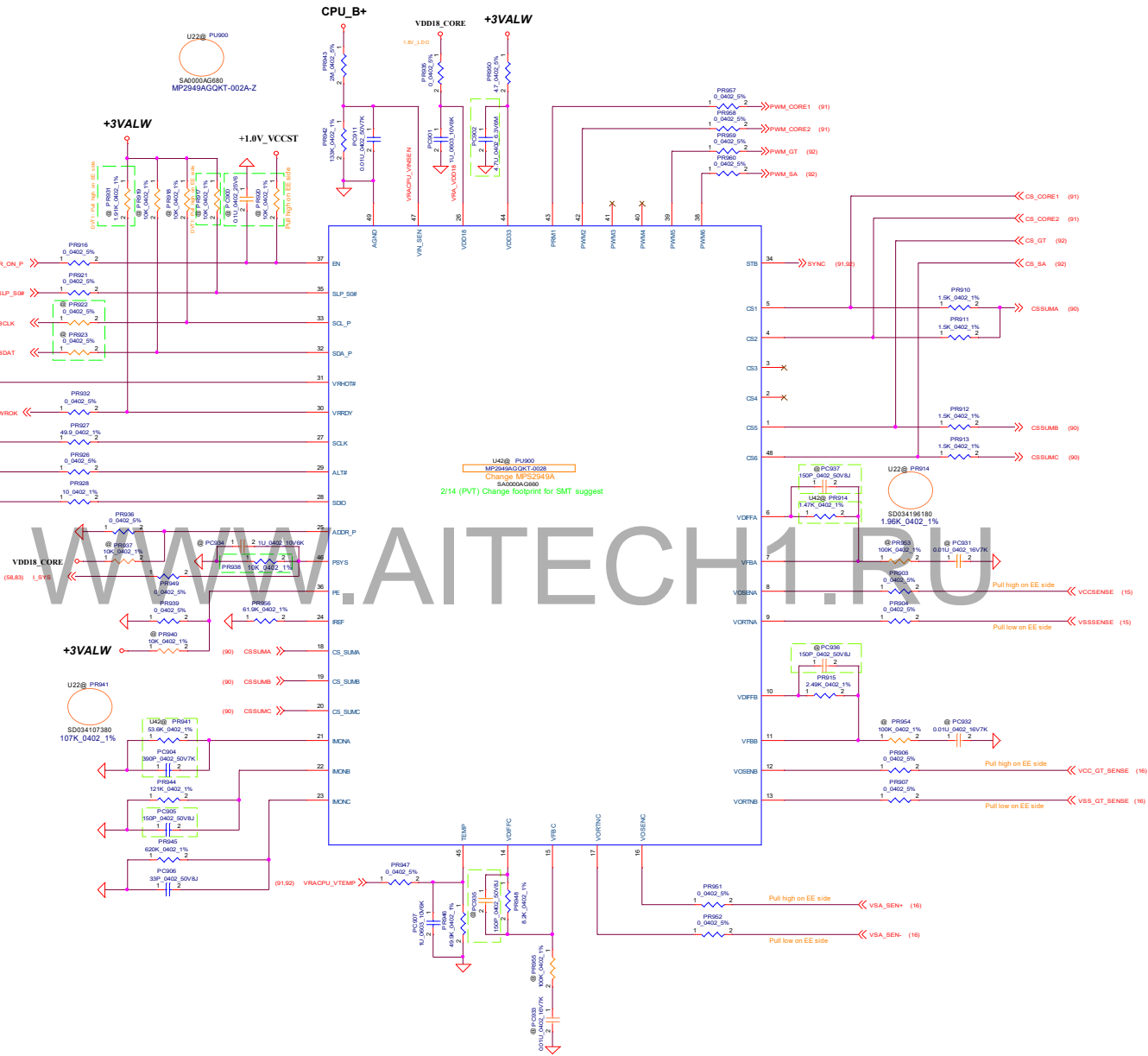
WWW.AITECH1.RU



MODE	VR Rail	Resistor to GND
M1	VCCIO	0
M2	PRIMCORE	Floor or > 230K
M3	EDRAM/V1.0A/EOPIO	100K
M4	Others	150K

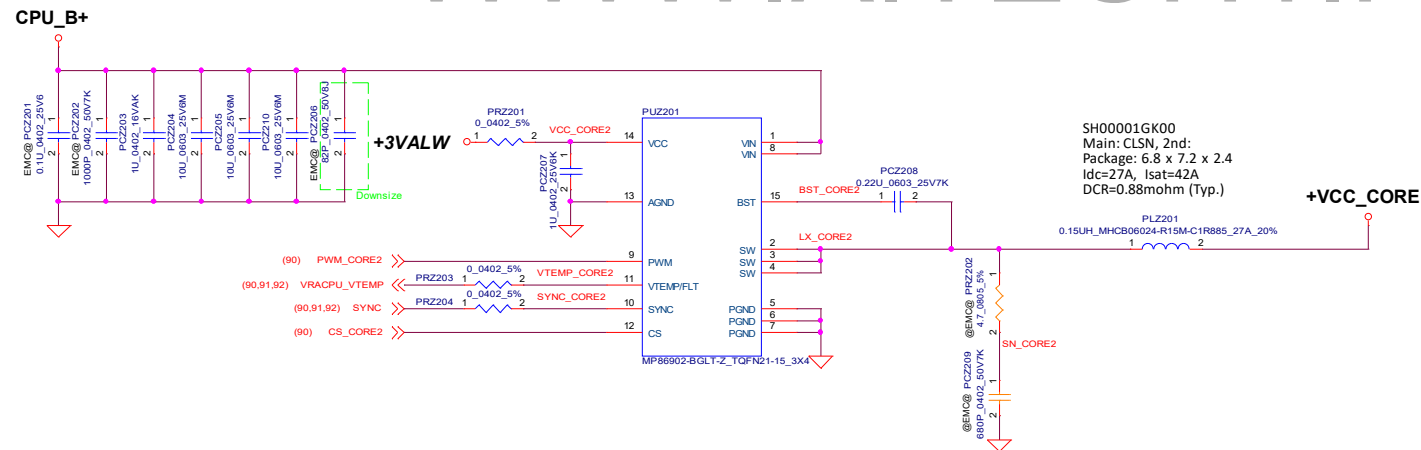
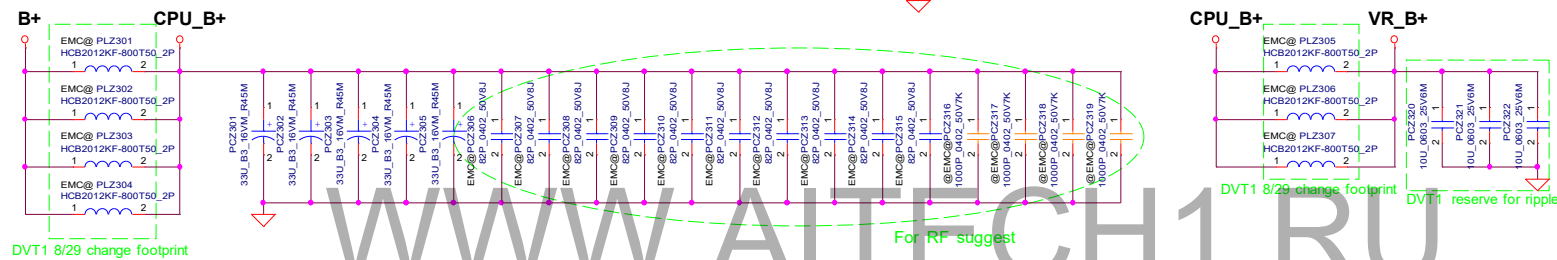
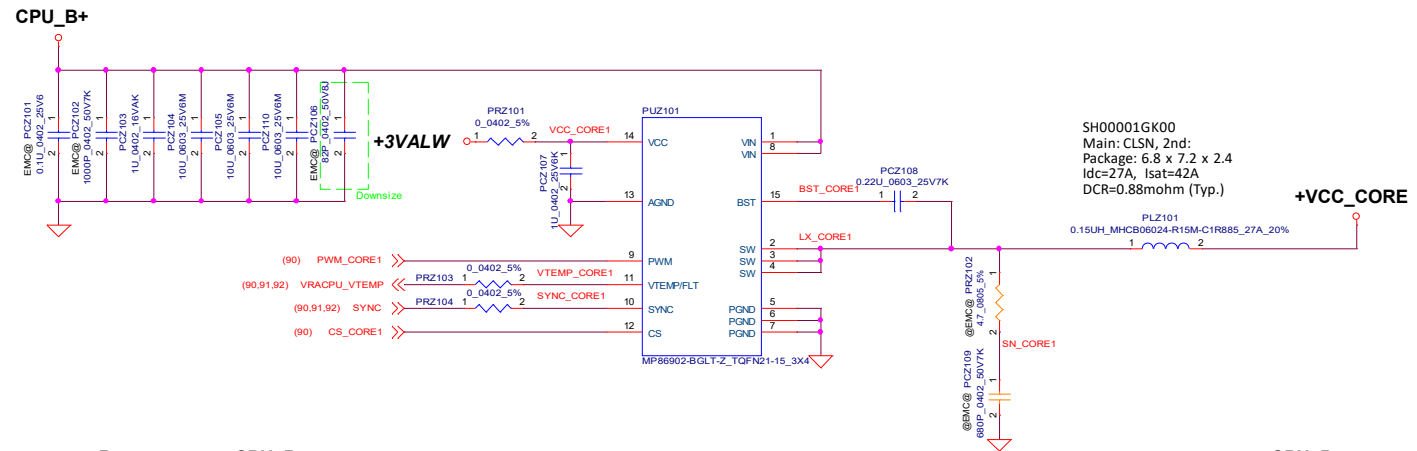
	LP#	C1	C0	VOUT(V)
VCCPRIM _CORE	0	X	X	0.75
	1	0	0	0.9
	1	0	1	0.95
	1	1	0	1.0
	1	1	1	1.05

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2014/10/17	Deciphered Date	2014/12/05	Title	PWR_VCCIO/PRIM(NB692*2)	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
				LA-G661P		1.0
Date:				Friday, February 15, 2019	Sheet	89 of 100



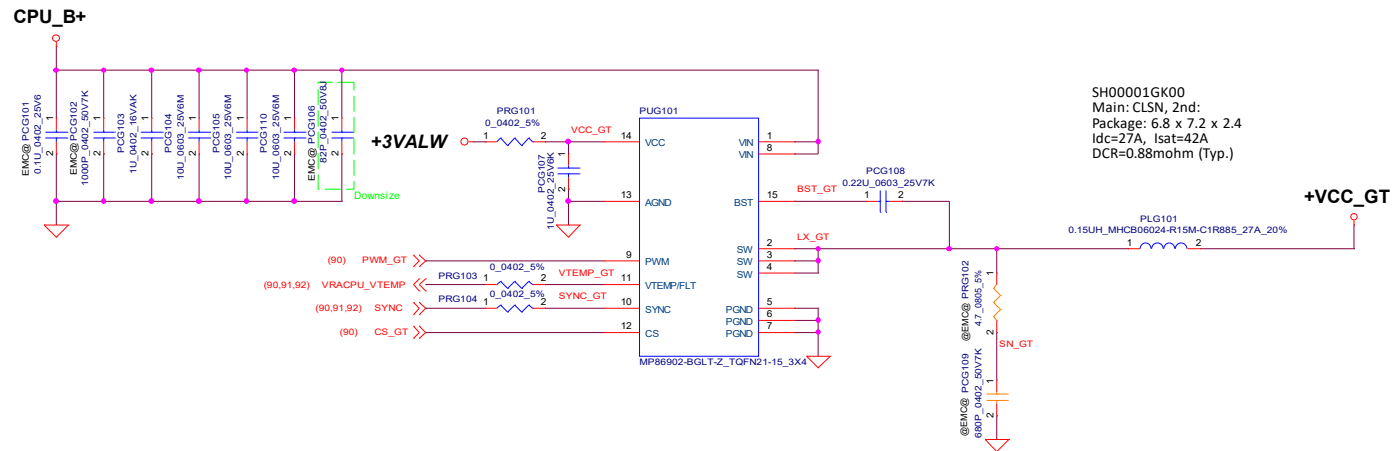
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

VCC_CORE Dr. MOS (36.2), Support component(36.3)

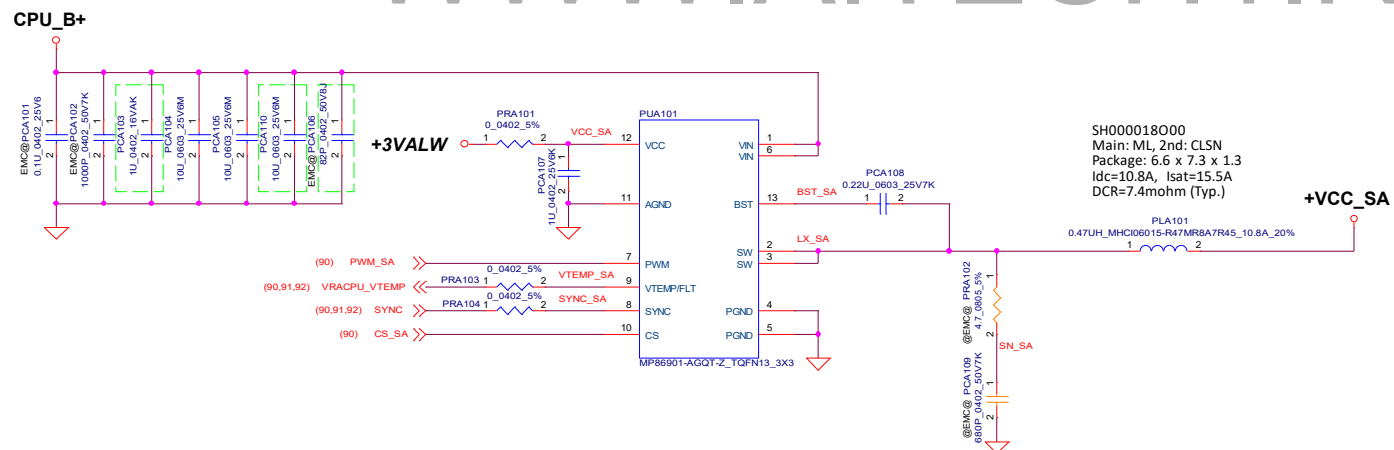


Security Classification		Compal Secret Data			Compal Electronics, Inc.				
Issued Date		2011/06/02		Deciphered Date		2013/10/28		Title	
								PWR +VCORE	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.									
Size		Document Number						Revisions	
		LA-G661P							
Date:		Friday, February 15, 2019		Sheet		91		of 100	

VCC_GT/SA Dr. MOS (36.2), Support component(36.3)



WWW.AITECH1.RU



Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2011/06/02	Deciphered Date	2013/10/28	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Document Number	Rev
					LA-G661P	1.0
Date: Friday, February 15, 2019				Sheet	92	of 100

VCC_CORE output cap(36.4), VCC_GT output cap(36.5), VCC_SA output cap(36.6)

+VCC_CORE

+VCC_CORE

Cap	SIZE	POP	NC
330uF	B2	3	1
47uF	0603	9	15
22uF	0603	9	0
10uF	0402	4	0
1uF	0201	54	0

+VCC_GT

+VCC_GT

Cap	SIZE	POP	NC
330uF	B2	2	1
47uF	0603	8	17
22uF	0603	7	0
10uF	0402	10	0
1uF	0201	14	0

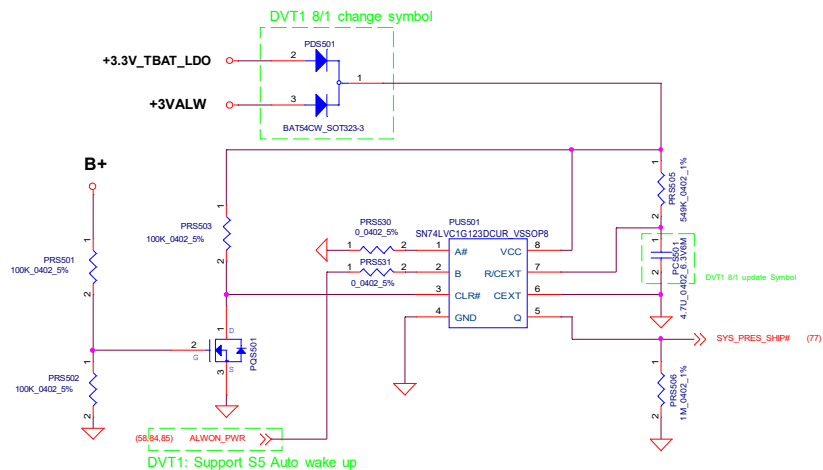
+VCC_SA

+VCC_SA

Cap	SIZE	POP	NC
330uF	B2	0	1
47uF	0603	4	0
22uF	0603	3	2
1uF	0201	7	0

WWW.AITECH1.RU

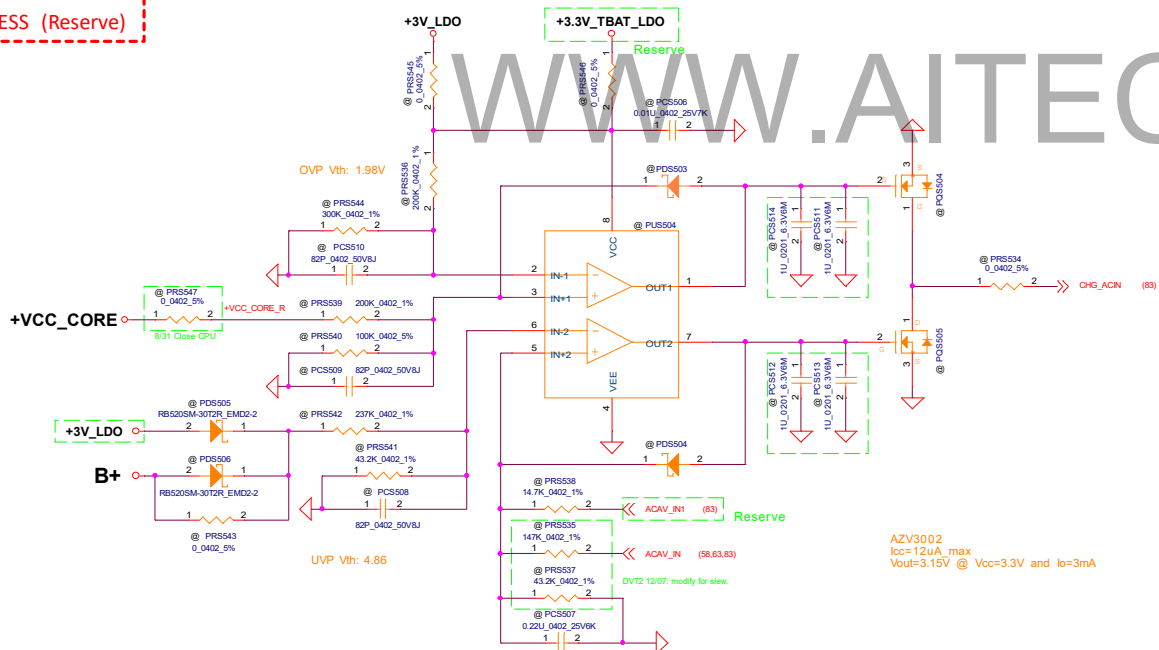
Storage mode wake up circuit



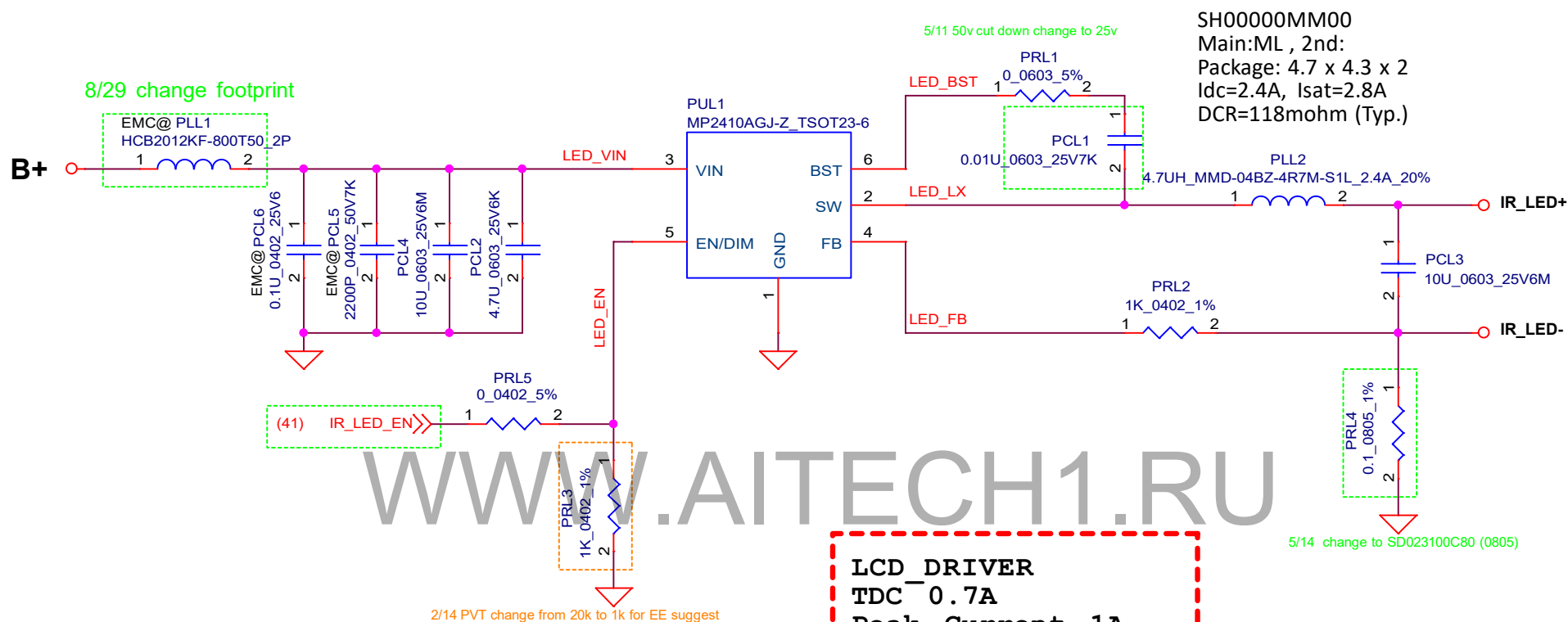
FUNCTION TABLE

INPUTS			OUTPUTS Q
CLR	A	B	
L	X	X	L
X	H	X	L ⁽¹⁾
X	X	L	L ⁽¹⁾
H	L	↑	
H	↓	H	
↑	L	H	

SMOKELESS (Reserve)



LED driver controller(42.1), Support component(42.2)



LCD_DRIVER
TDC 0.7A
Peak Current 1A
OCP 3.6A
Frequency 1MHz

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2011/06/02	Deciphered Date	2013/10/28	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PWR-LED DRIVER(MP2410A)	
				Size	Document Number
				LA-G661P	
				Date:	Friday, February 15, 2019
				Sheet	95 of 100
				Rev	1.0

WWW.AITECH1.RU

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2011/06/02	Deciphered Date	2013/10/28	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PWR-Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Friday, February 15, 2019	Sheet 96 of 100

WWW.AITECH1.RU

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2011/06/02	Deciphered Date	2013/10/28	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PWR-Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Friday, February 15, 2019	Sheet 97 of 100

WWW.AITECH1.RU

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2011/06/02	Deciphered Date	2013/10/28	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PWR-Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Friday, February 15, 2019	Sheet 98 of 100

WWW.AITECH1.RU

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2011/06/02	Deciphered Date	2013/10/28	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PWR-Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Friday, February 15, 2019	Sheet 99 of 100

WWW.AITECH1.RU

Security Classification	Compal Secret Data			Compal Electronics, Inc.		
Issued Date	2011/06/02	Deciphered Date	2013/10/28	Title		
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PWR-Reserve		
				Size	Document Number	Rev
				LA-G661P		
				Date:	Friday, February 15, 2019	Sheet 100 of 100