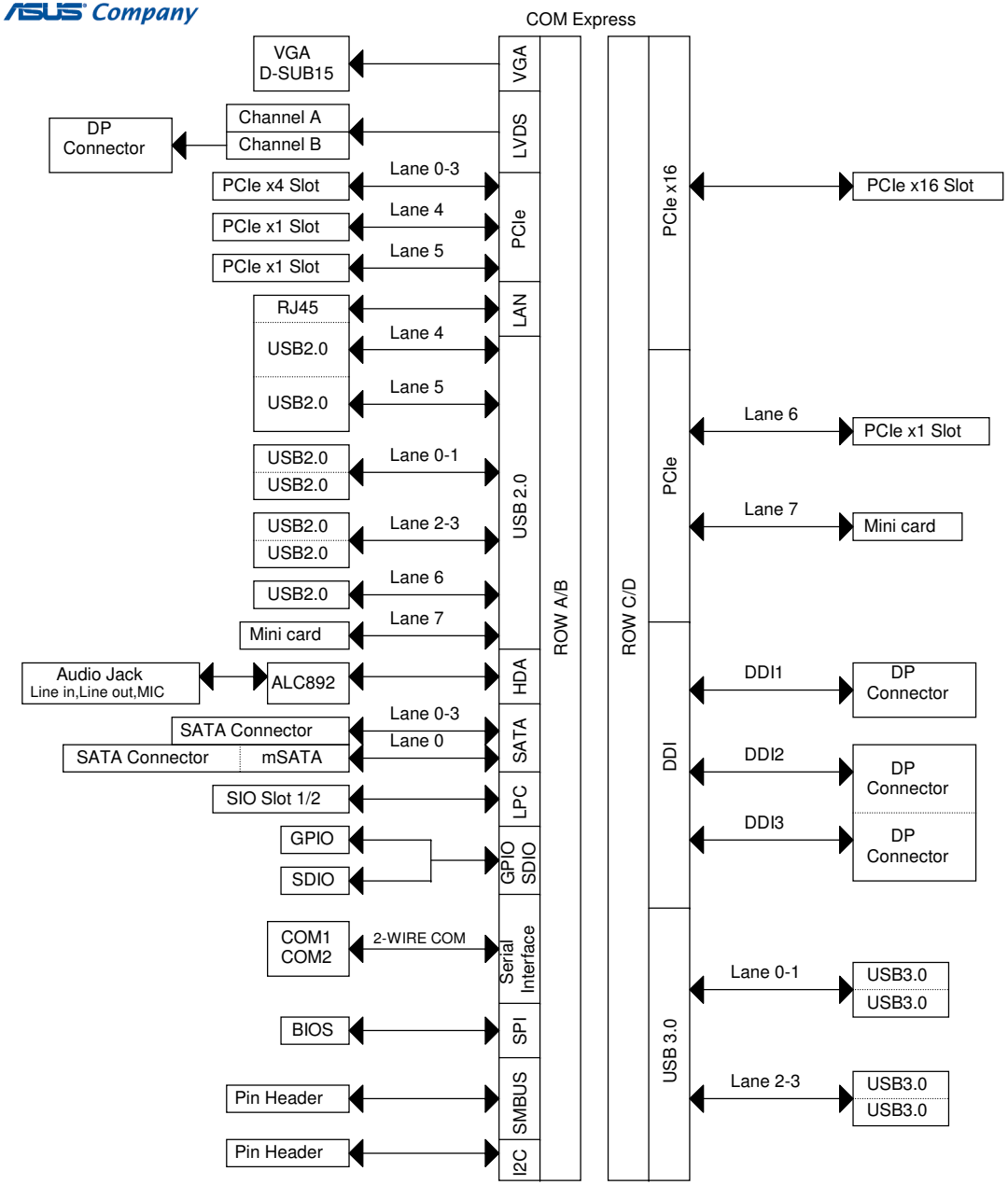
ECB-920A Rev.A1.0_0_0
COM Express (COM.0 Rev 2.1) Type 6/1/10 Carrier Board



AAEON Technology INC.

Title: Cover Sheet		
Size: B	Document Number: ECB-920A	Rev: A1.0_0_0
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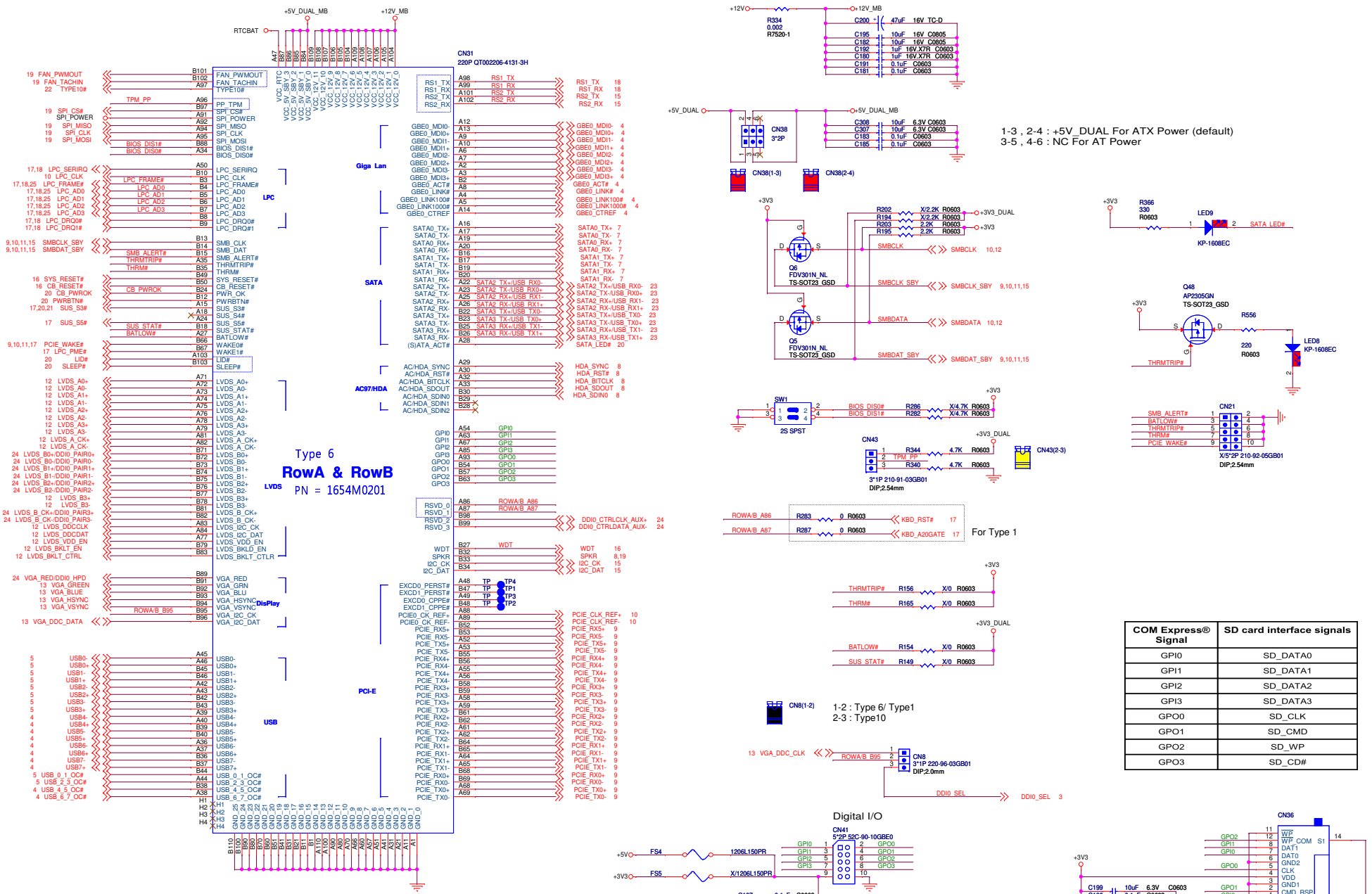

COM Express® Signal	SD card interface signals
GPI0	SD_DATA0
GPI1	SD_DATA1
GPI2	SD_DATA2
GPI3	SD_DATA3
GPO0	SD_CLK
GPO1	SD_CMD
GPO2	SD_WP
GPO3	SD_CD#

Power Rail	Module Pin Current Capability (Amps)	Nominal Input (Volts)	Input Range (Volts)	Derated Input (Volts)	Max Input Ripple (mV)	Max Module Input Power (w. derated input) (Watts)	Assumed Conversion Efficiency	Max Load Power (Watts)
VCC_12V	12	12	11.4 - 12.6	11.4	+/- 100	137	85%	116
VCC_5V_SBY	2	5	4.75 - 5.25	4.75	+/- 50	9		
VCC_RTC	0.5	3	2.0 - 3.3		+/- 20			

<Variant Name>

AAEON Technology INC.

Title: Row A/B

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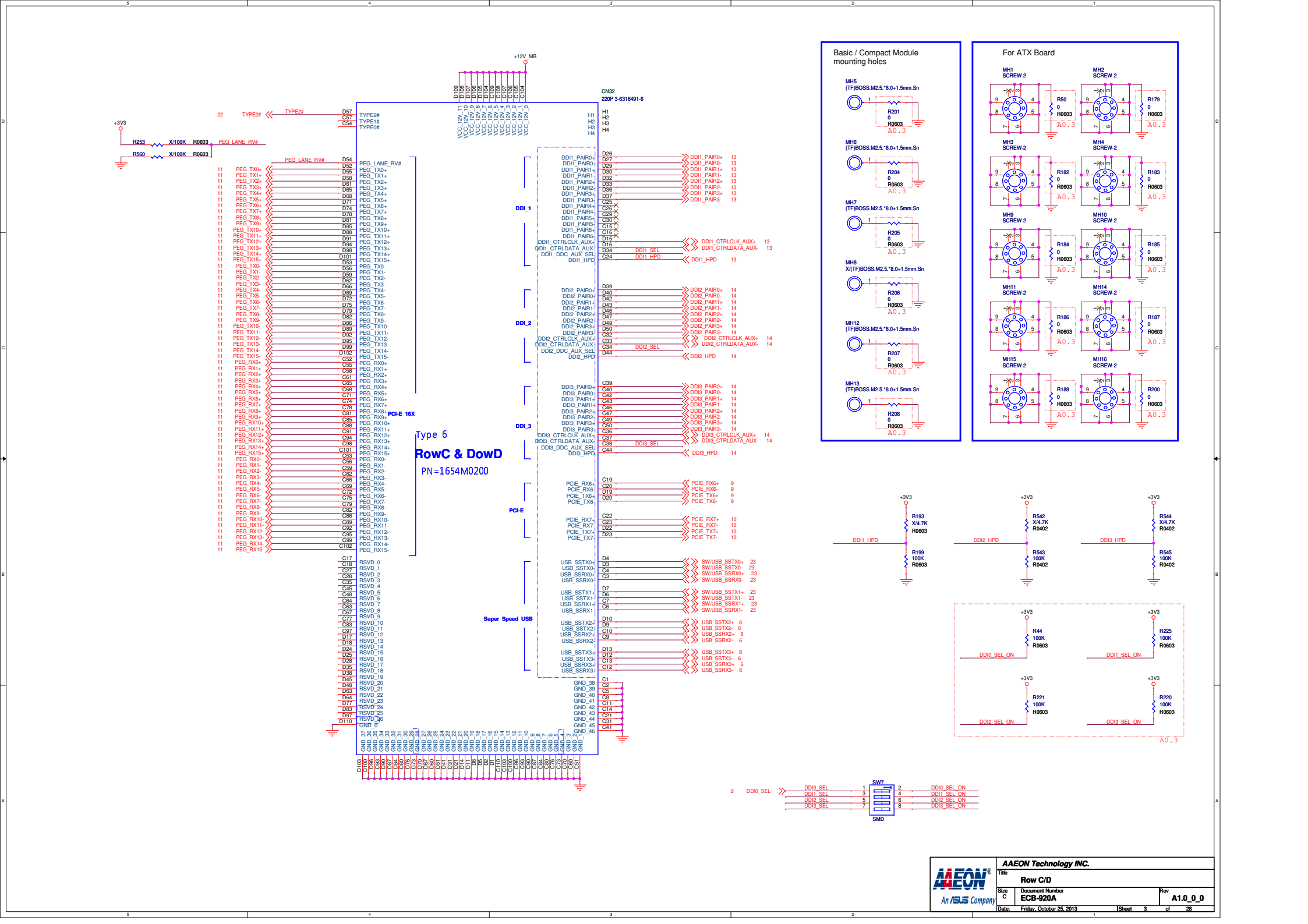
+12V_MB
CN32
220P 3-6318491-6
Type 6
RowC & DowD
PN=1654M0200
PCI-E 16X
DDI_1
DDI_2
DDI_3
PCI-E
Super Speed USB
Basic / Compact Module mounting holes
For ATX Board
MH1 SCREW-2
MH2 SCREW-2
MH3 SCREW-2
MH4 SCREW-2
MH5 (TF)BOSS.M2.5.*8.0+1.5mm.Sn
MH6 (TF)BOSS.M2.5.*8.0+1.5mm.Sn
MH7 (TF)BOSS.M2.5.*8.0+1.5mm.Sn
MH8 X/(TF)BOSS.M2.5.*8.0+1.5mm.Sn
MH9 SCREW-2
MH10 SCREW-2
MH11 SCREW-2
MH12 (TF)BOSS.M2.5.*8.0+1.5mm.Sn
MH13 (TF)BOSS.M2.5.*8.0+1.5mm.Sn
MH14 SCREW-2
MH15 SCREW-2
MH16 SCREW-2
SW7
SMD
AAEON Technology INC.
Row C/D
ECB-920A
A1.0_0_0
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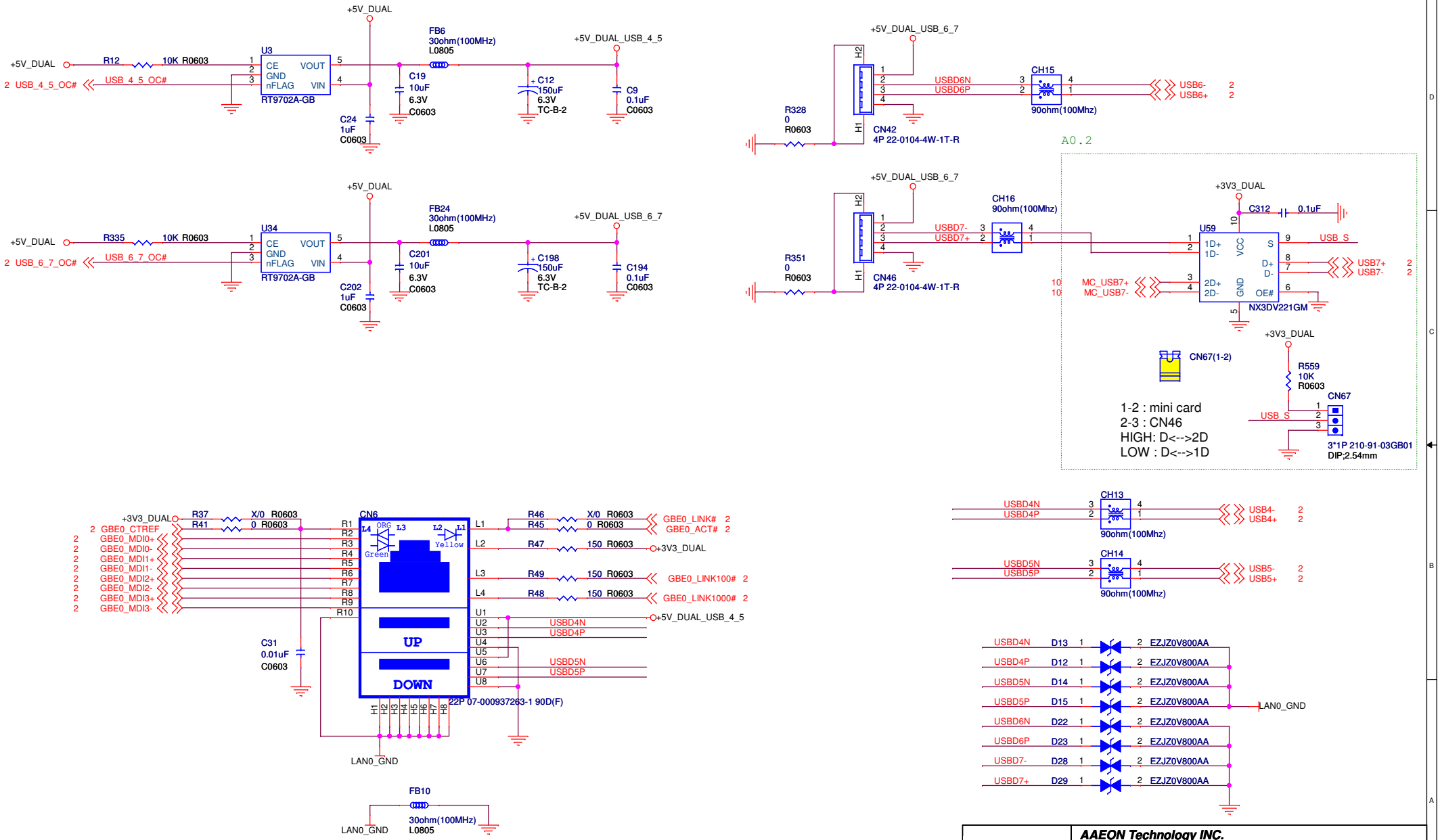
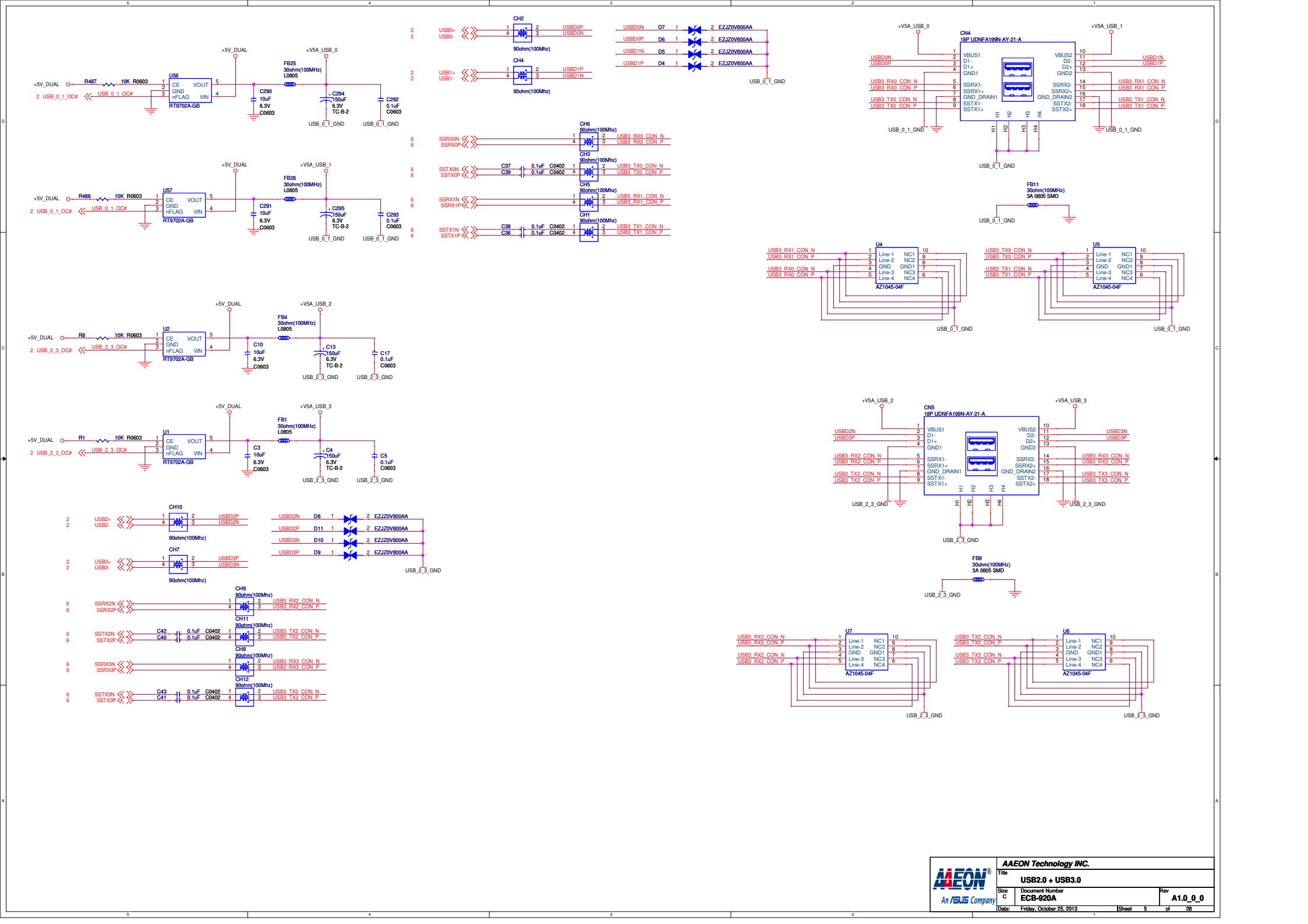
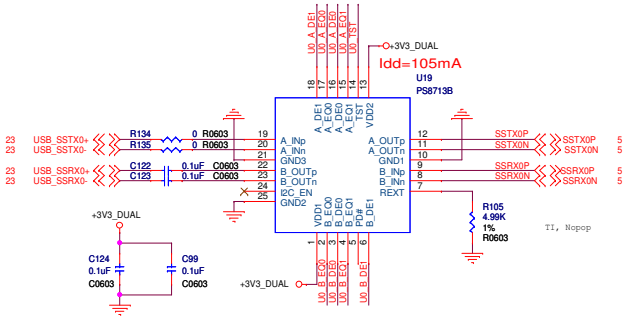
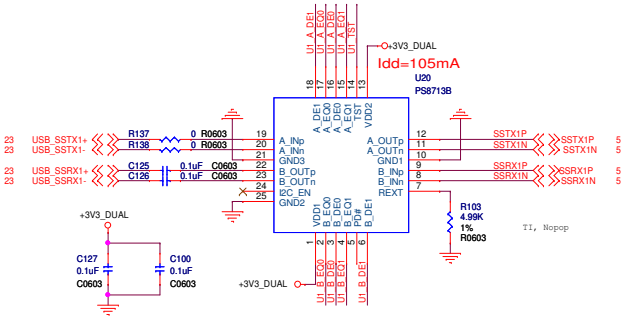


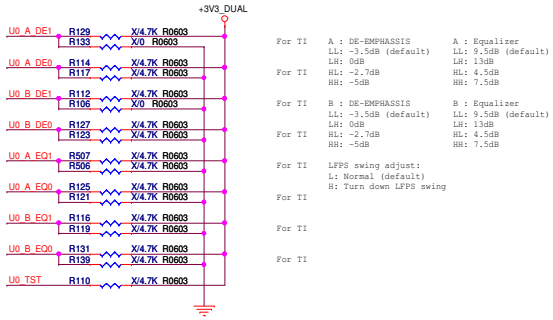
AAEON Technology INC.			
Title	LAN-RJ45 + USB2.0		
Size B	Document Number ECB-920A		Rev A1.0_0_0
Date: Friday, October 25, 2013	Sheet 4 of 28		

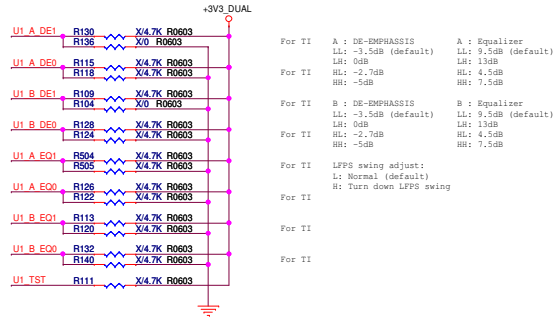


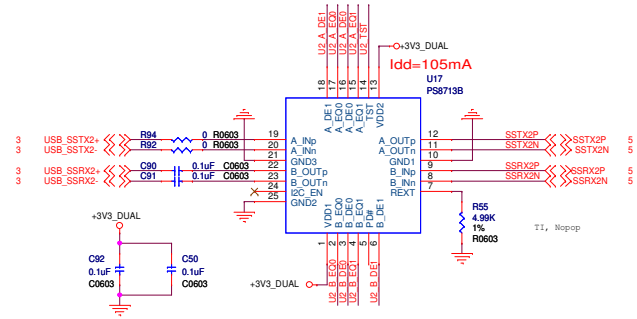
AAEON Technology INC.		
Title: USB2.0 + USB3.0		
Size: C	Document Number: ECB-920A	Rev: A1.0_0_0
Date: Friday, October 25, 2013	Sheet 5 of 28	

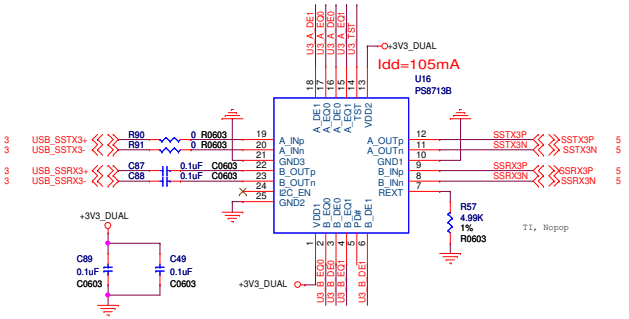


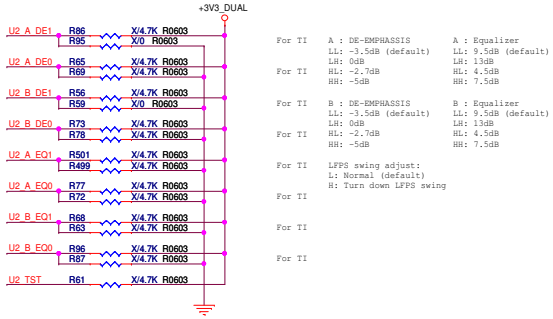


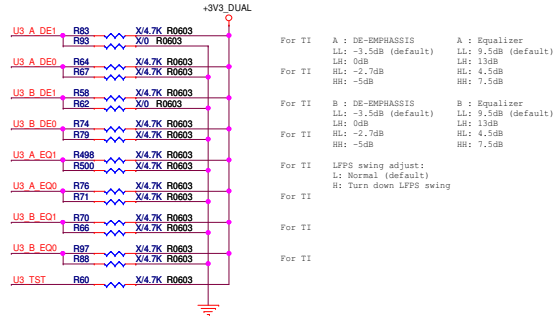












AAEON Technology INC.

Title: USB3.0 Redriver

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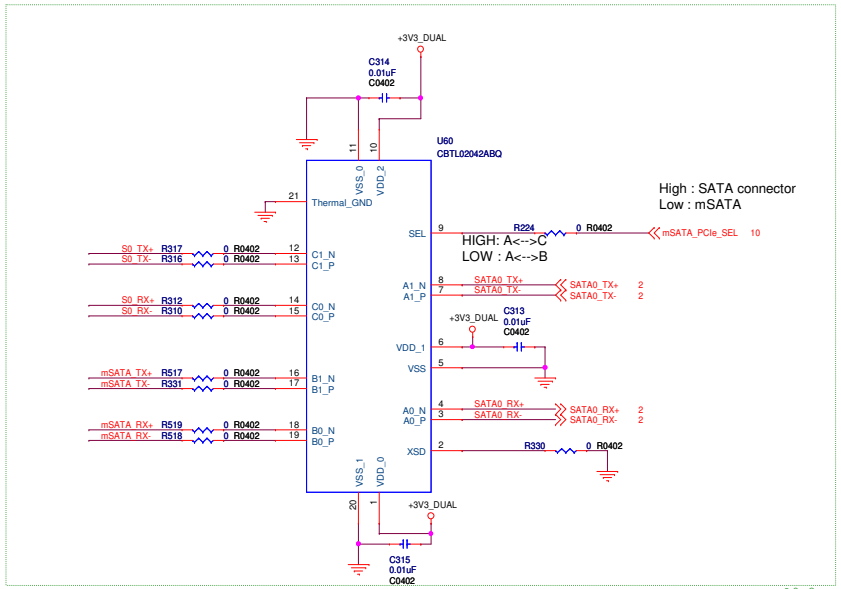
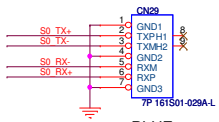
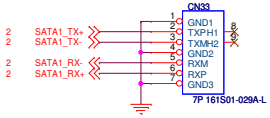


A0.2

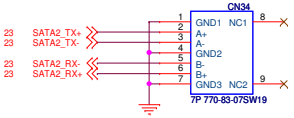
BLUE



BLUE



White



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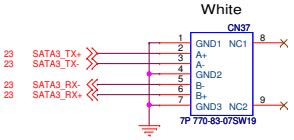
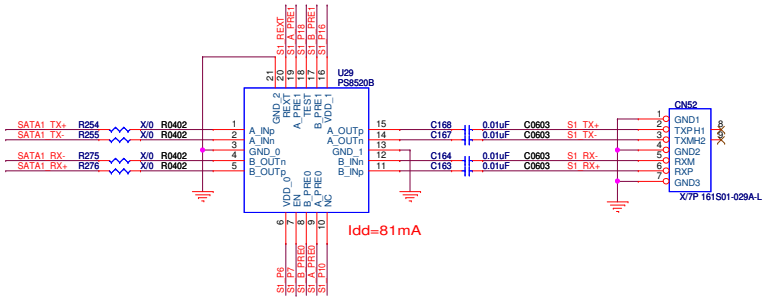
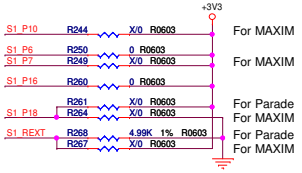
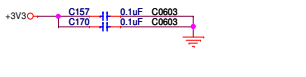
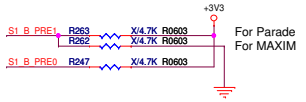




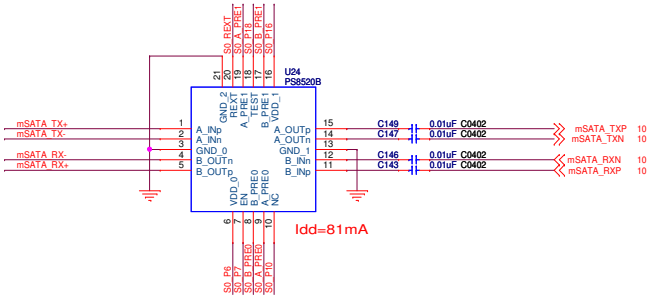


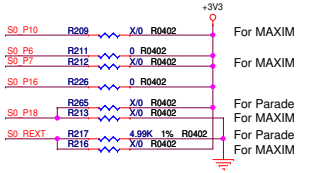


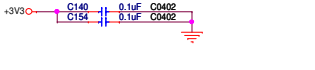
Pre-emphasis For CH A (A_PRE1, 0)
00: 0dB, no pre-emphasis
01: 1.5dB pre-emphasis
10: 2.5dB pre-emphasis
11: 3.5dB pre-emphasis



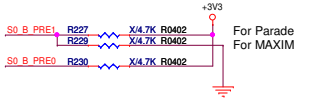
Pre-emphasis For CH B (B_PRE1, 0)
00: 0dB, no pre-emphasis
01: 1.5dB pre-emphasis
10: 2.5dB pre-emphasis
11: 3.5dB pre-emphasis







Pre-emphasis For CH A (A_PRE1, 0)
00: 0dB, no pre-emphasis
01: 1.5dB pre-emphasis
10: 2.5dB pre-emphasis
11: 3.5dB pre-emphasis



Pre-emphasis For CH B (B_PRE1, 0)
00: 0dB, no pre-emphasis
01: 1.5dB pre-emphasis
10: 2.5dB pre-emphasis
11: 3.5dB pre-emphasis

AAEON Technology INC.		
Title: SATA		
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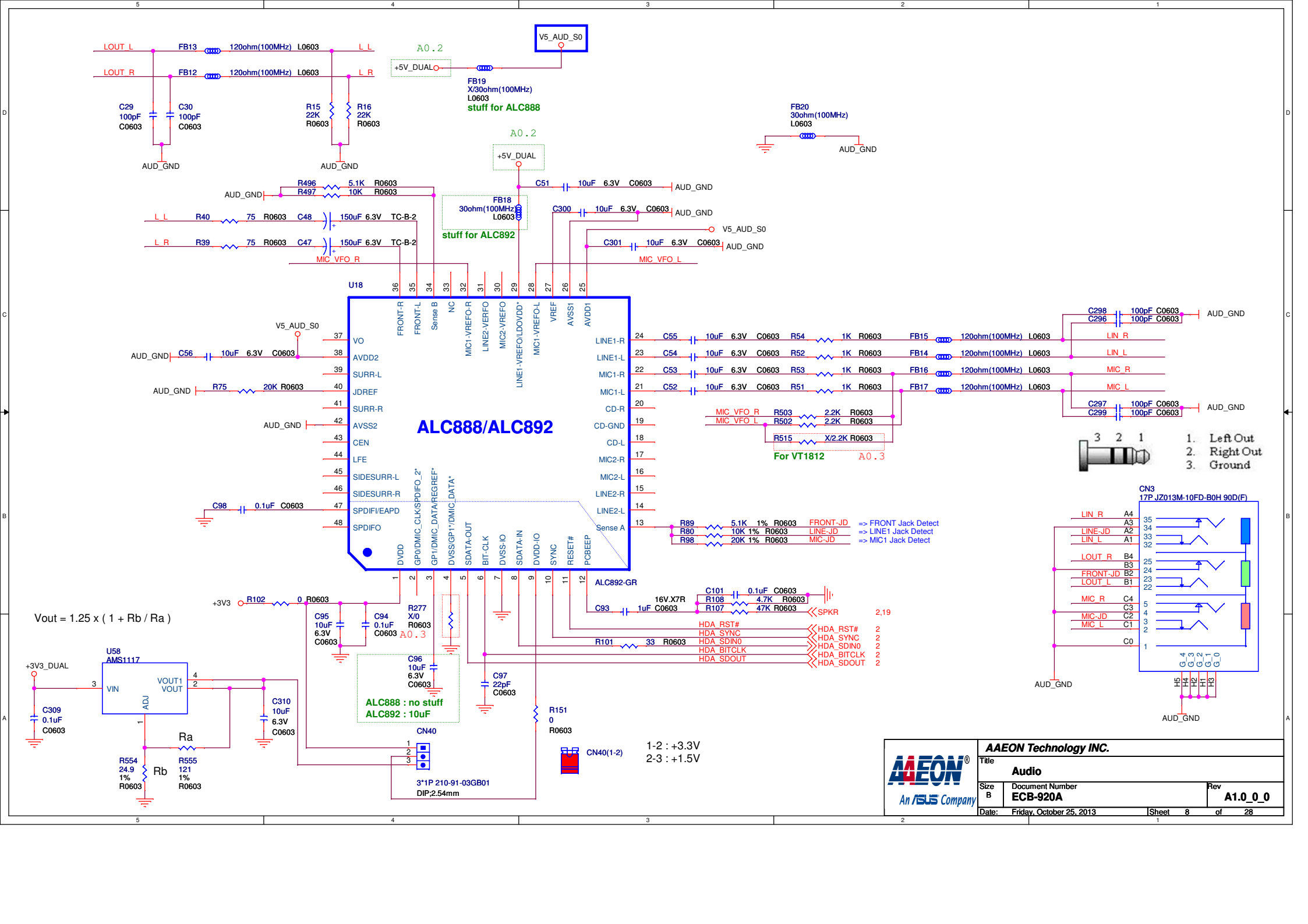
ALC888/ALC892
U18
ALC892-GR
U58
AMS1117
CN3
17P JZ013M-10FD-B0H 90D(F)
CN40
3*1P 210-91-03GB01
DIP;2.54mm
Vout = 1.25 x (1 + Rb / Ra)
ALC888 : no stuff
ALC892 : 10uF
stuff for ALC888
stuff for ALC892
For VT1812
1-2 : +3.3V
2-3 : +1.5V
1. Left Out
2. Right Out
3. Ground
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An ASUS Company
Title
Audio
Size
B
Document Number
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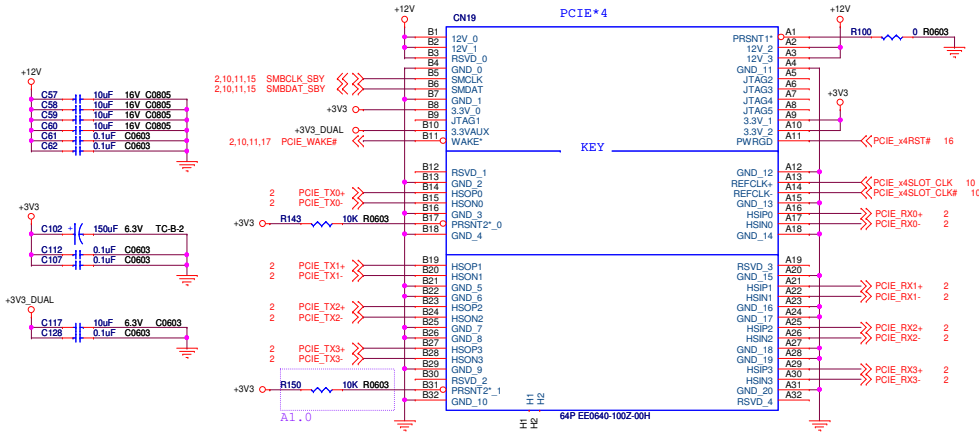

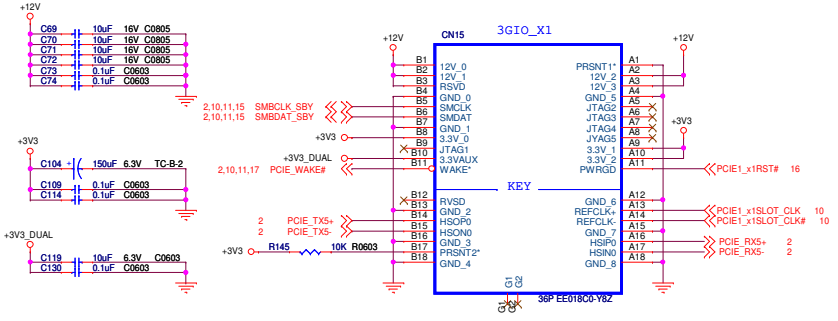

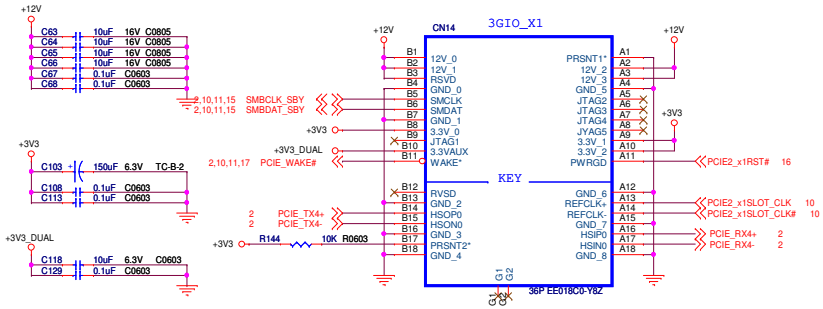

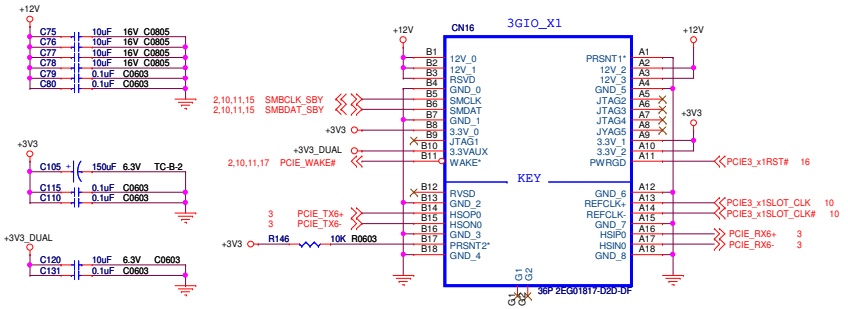

	X1		x4/x8	x16	
Standard height	10 W[1] (max)	25 W[1] (max)	25 W (max)	25 W[2] (max)	75 W[2, 4] (max)
Low profile card[3]	10 W (max)		25 W (max)	25 W (max)	

Power Rail	10 W Slot	25 W Slot	75 W Slot
+3.3V			
Voltage tolerance	± 9% (max)	± 9% (max)	± 9% (max)
Supply Current	3.0 A (max)	3.0 A (max)	3.0 A (max)
Capacitive Load	1000 µF (max)	1000 µF (max)	1000 µF (max)
+12V			
Voltage tolerance	± 8%	± 8%	± 8%
Supply Current	0.5 A	2.1 A (max)	5.5 A (max)
Capacitive Load	300 µF (max)	1000 µF (max)	2000 µF (max)
+3.3Vaux			
Voltage tolerance	± 9% (max)	± 9% (max)	± 9% (max)
Supply Current			
Wakeup Enabled	375 mA (max)	375 mA (max)	375 mA (max)
Non-wakeup Enabled	20 mA (max)	20 mA (max)	20 mA (max)
Capacitive Load	150 µF (max)	150 µF (max)	150 µF (max)

AAEON Technology INC.

Title: PCIe x4 / x1 Slots

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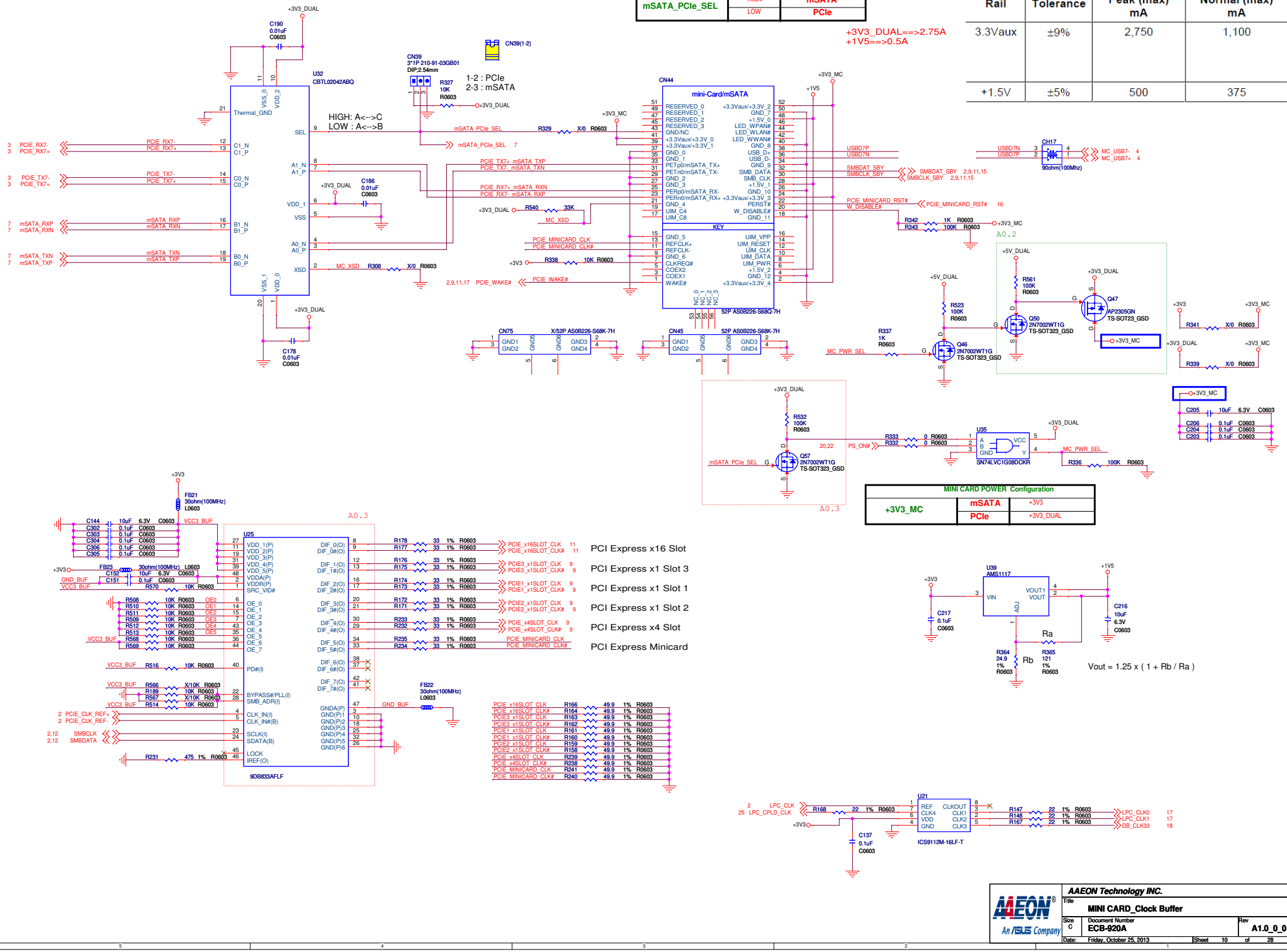
MINI CARD Configuration		
mSATA_PCIe_SEL	HIGN	mSATA
	LOW	PCIe

+3V3_DUAL==>2.75A
+1V5==>0.5A

Power Rail	Voltage Tolerance	D0-D2, $D3_{hot}$ Power	
		Peak (max) mA	Normal (max) mA
3.3Vaux	±9%	2,750	1,100
+1.5V	±5%	500	375



MINI CARD POWER Configuration		
+3V3_MC	mSATA	+3V3
	PCIe	+3V3_DUAL

Vout = 1.25 x (1 + Rb / Ra)

AAEON Technology INC.	
Title	MINI CARD_Clock Buffer
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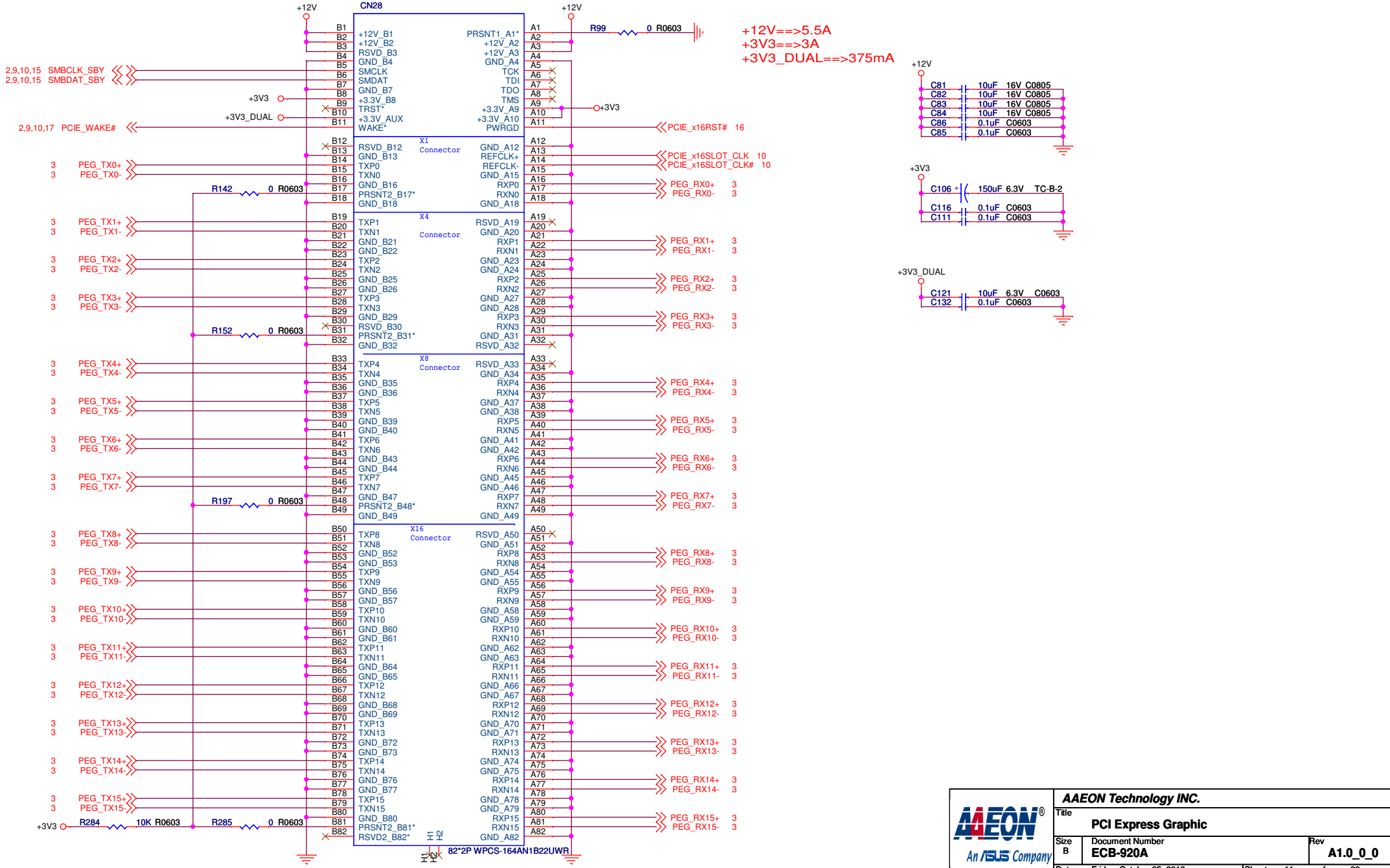

AAEON Technology INC.			
Title: PCI Express Graphic			
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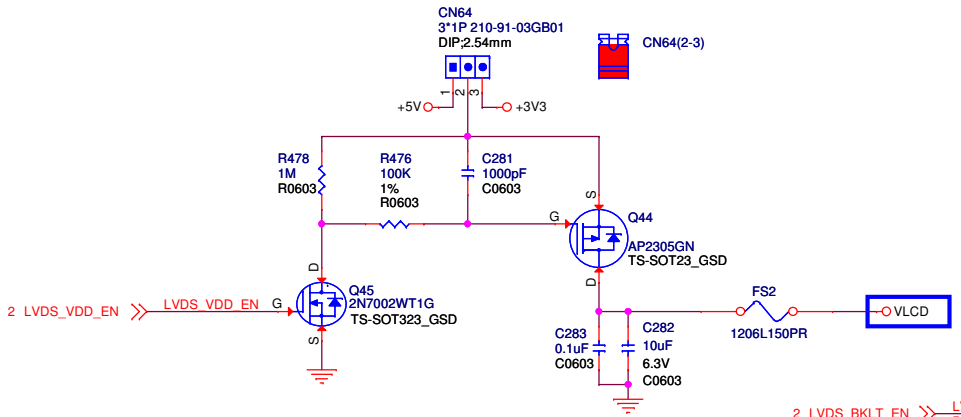
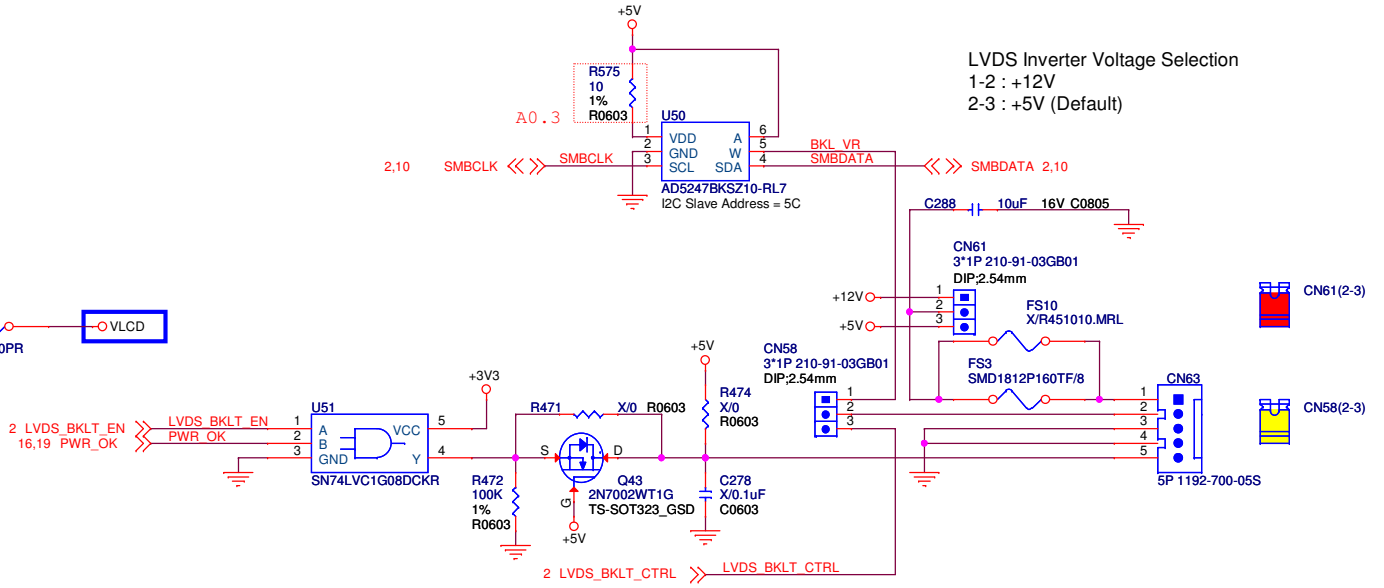
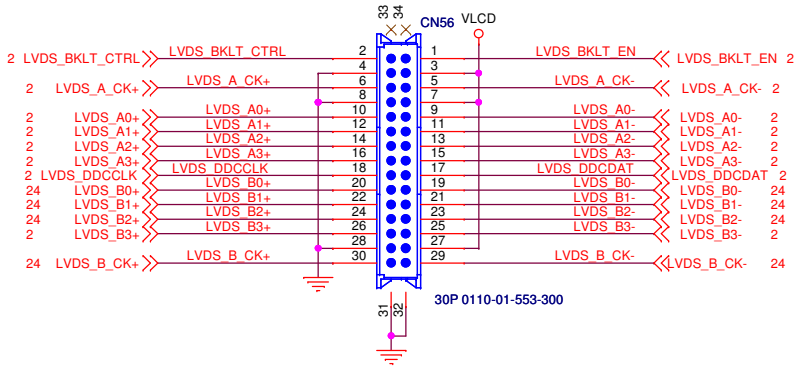
LVDS Operating Voltage Selection
1-2 : +5V
2-3 : +3.3V (Default)



LVDS Inverter Voltage Selection
1-2 : +12V
2-3 : +5V (Default)





AAEON Technology INC.			
Title: LVDS			
Size: B	Document Number: ECB-920A		Rev: A1.0_0_0
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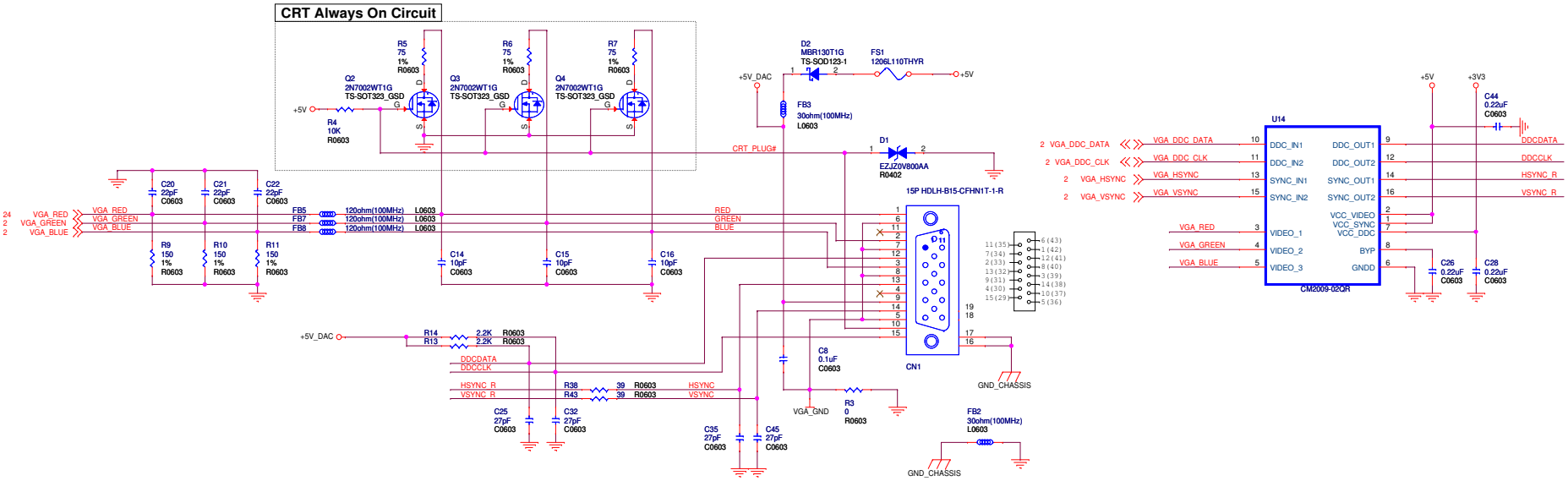

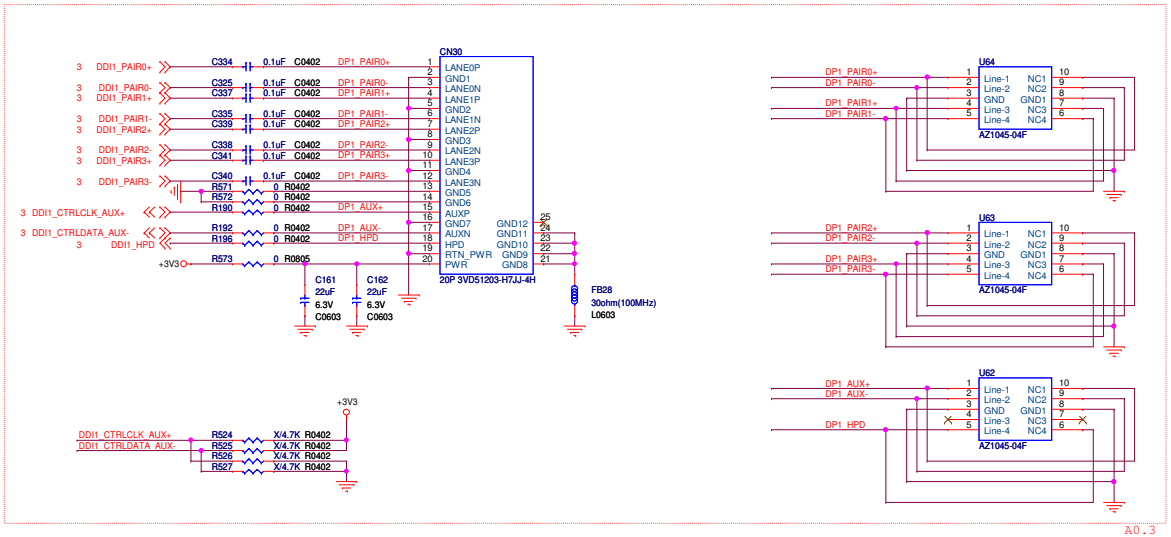

AAEON Technology INC.			
Title: VGA + DDI1			
Size: C	Document Number: ECB-920A	Rev: A1.0_0_0	
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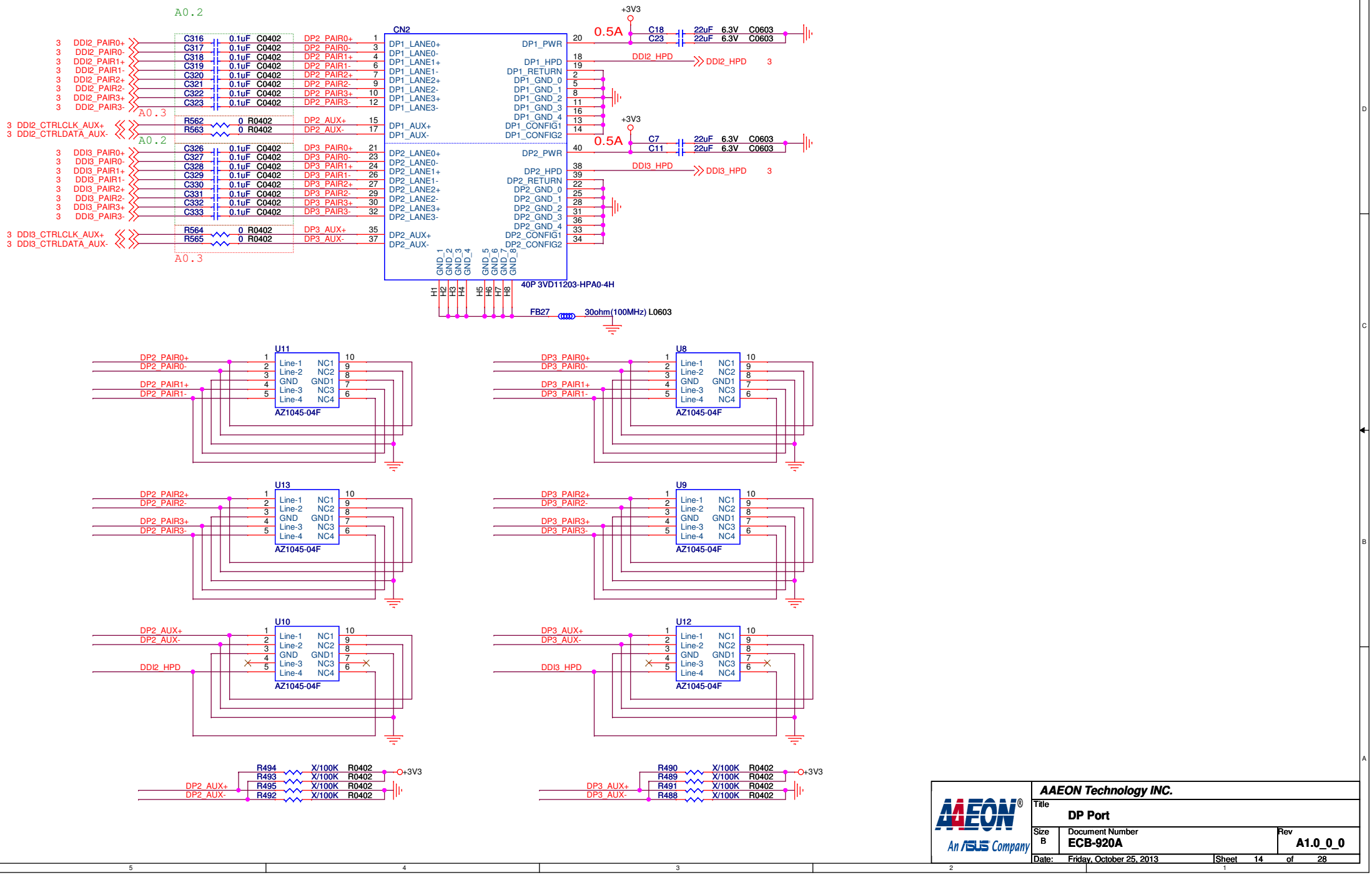

AAEON Technology INC.		
Title	DP Port	
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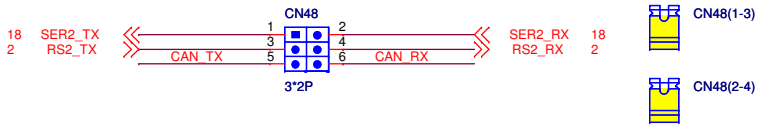
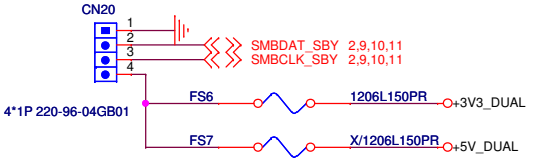
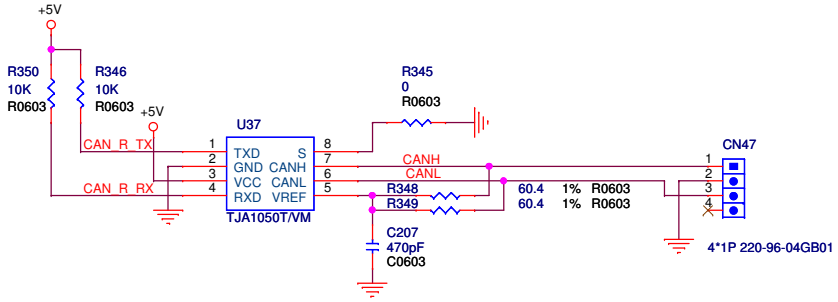
1-3 , 2-4 : Serial port (default)
3-5 , 4-6 : CAN BUS

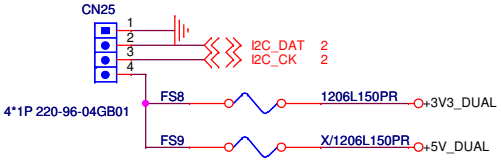


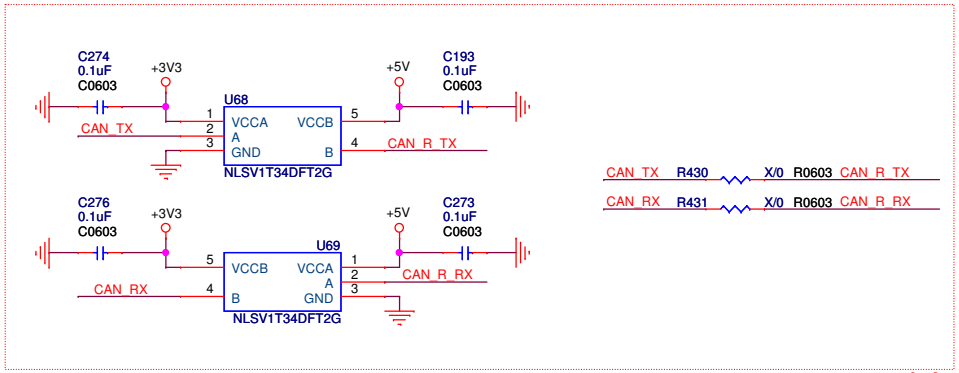
CN48(1-3)

CN48(2-4)









A0.3

AAEON Technology INC.		
Title: CANBUS / SMBUS / I2C		
Size: B	Document Number: ECB-920A	Rev: A1.0_0_0
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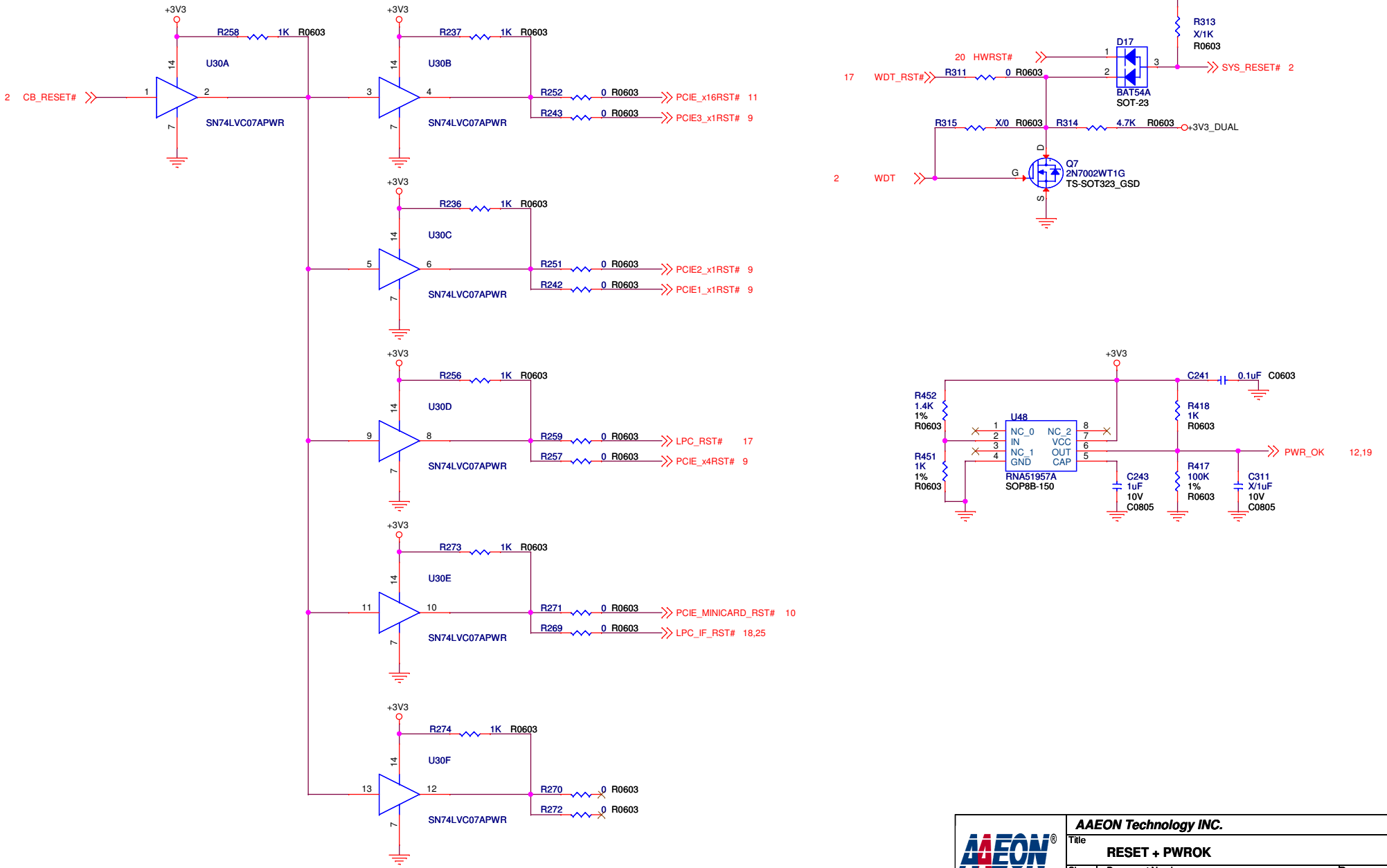

AAEON Technology INC.

Title	RESET + PWROK	
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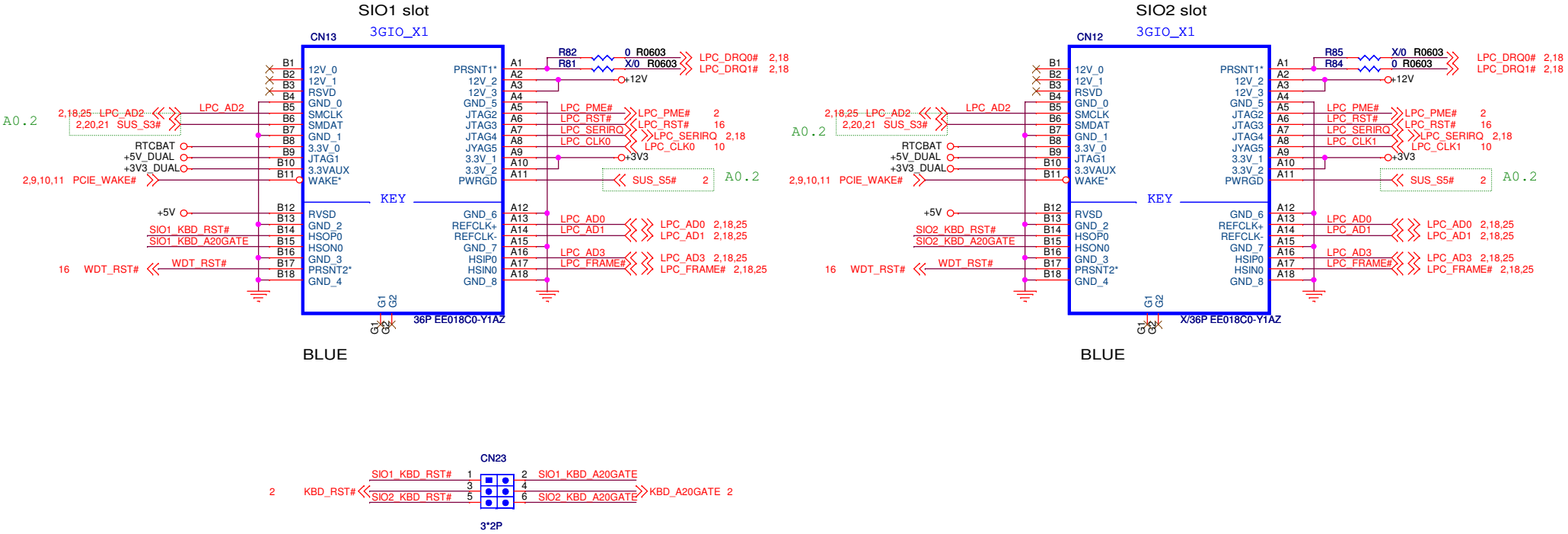
Date: Friday, October 25, 2013	Sheet 16 of 28	



1-3 , 2-4 : Keyboard controller from SIO1 (default)
3-5 , 4-6 : Keyboard controller from SIO2

AAEON Technology INC.			
Title: SIO Card SLOT			
Size: B	Document Number: ECB-920A		Rev: A1.0_0_0
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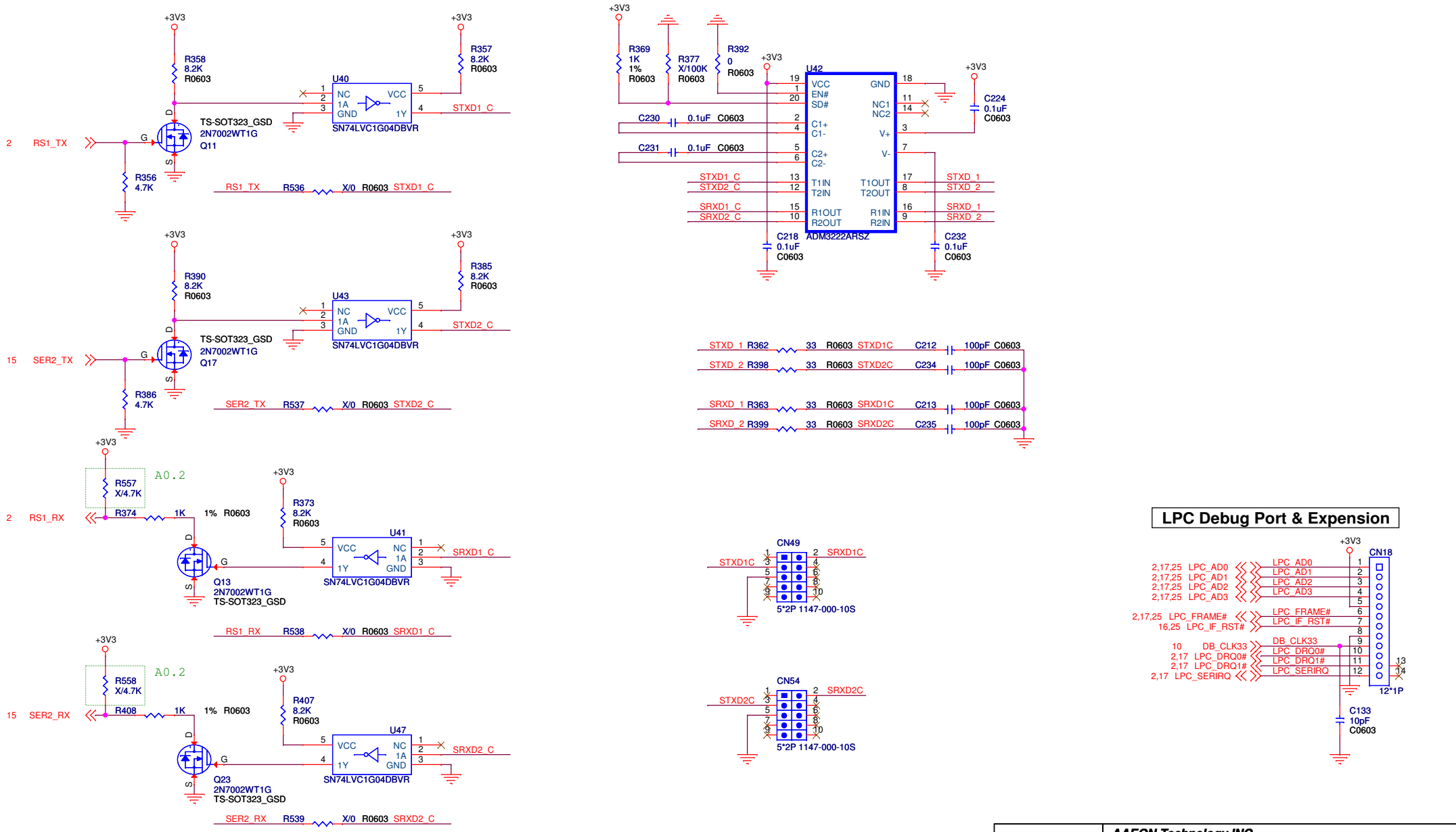

AAEON Technology INC.			
Title: Serial port + LPC			
Size: B	Document Number: ECB-920A		Rev: A1.0_0_0
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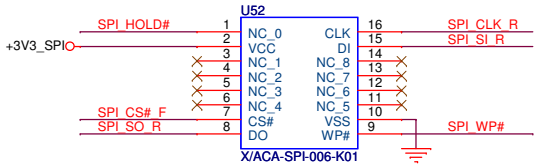
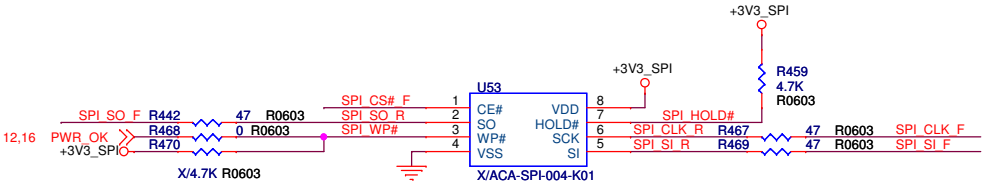
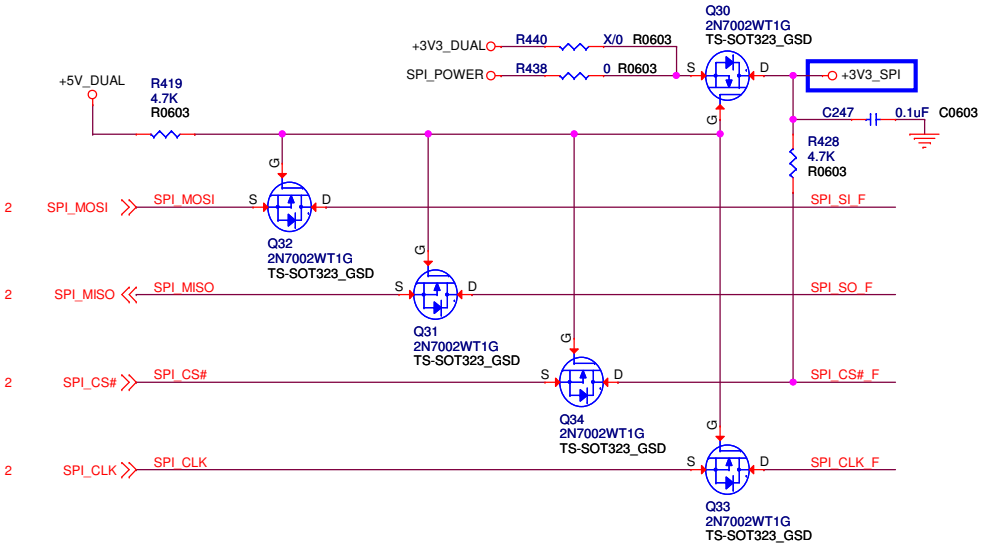
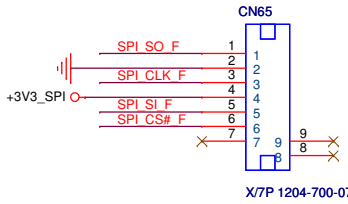
SPI

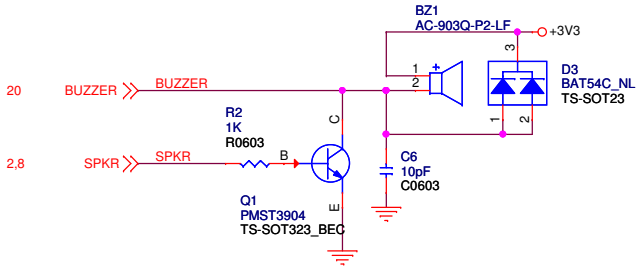




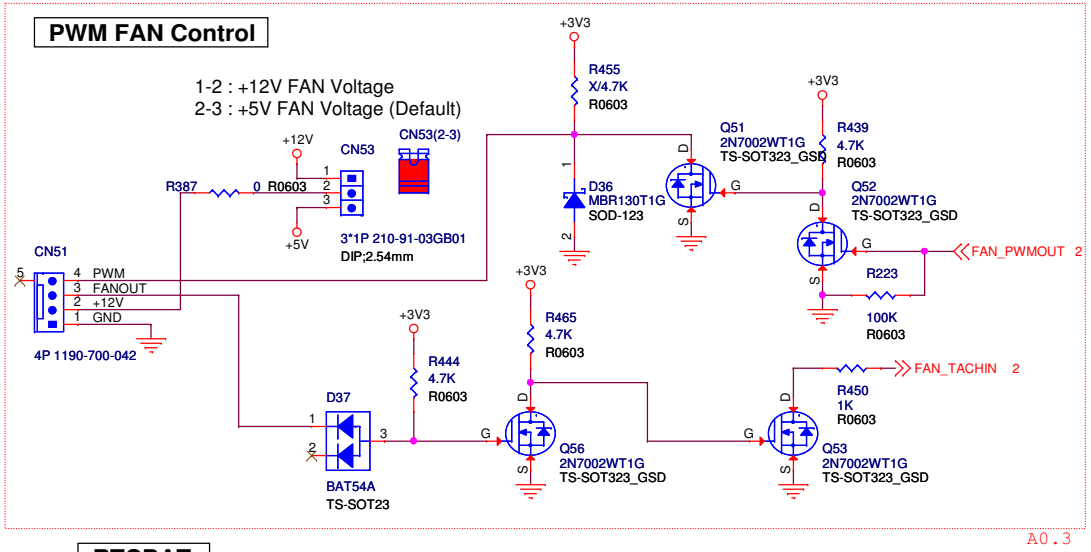




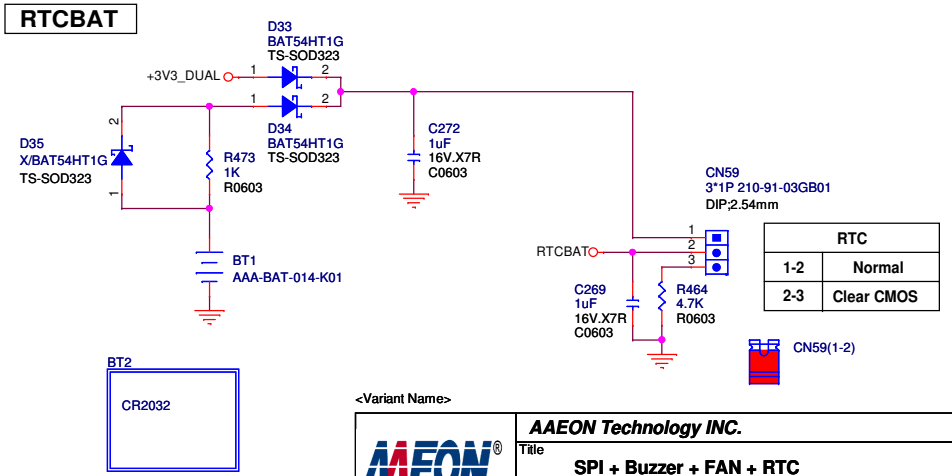
Buzzer



PWM FAN Control



RTCBAT



<Variant Name>

AAEON Technology INC.

Title	SPI + Buzzer + FAN + RTC	
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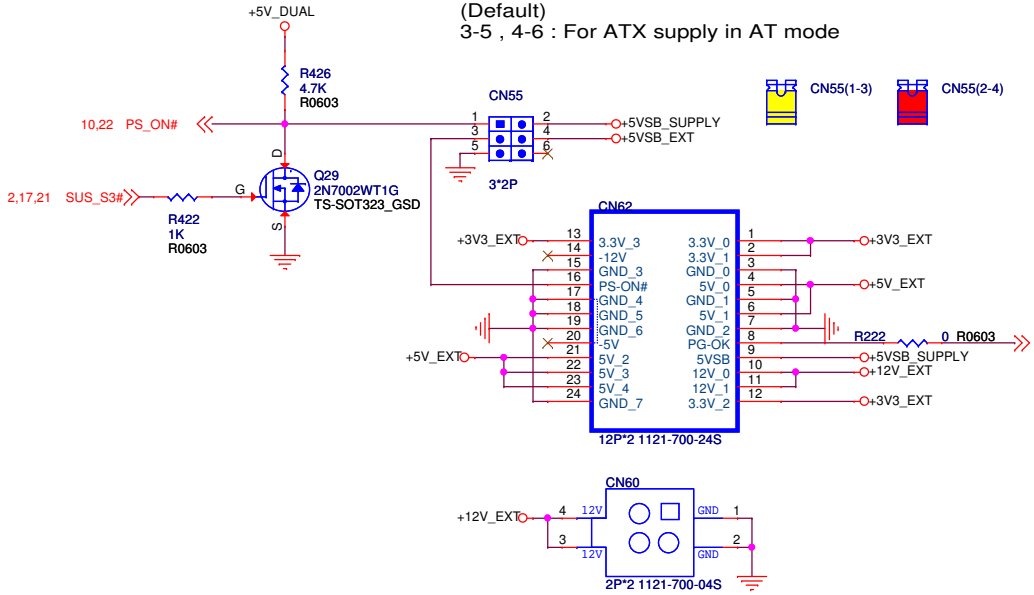
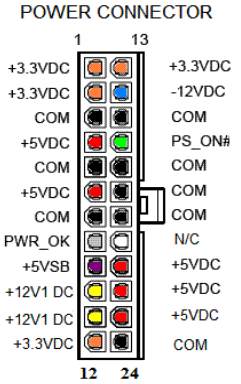
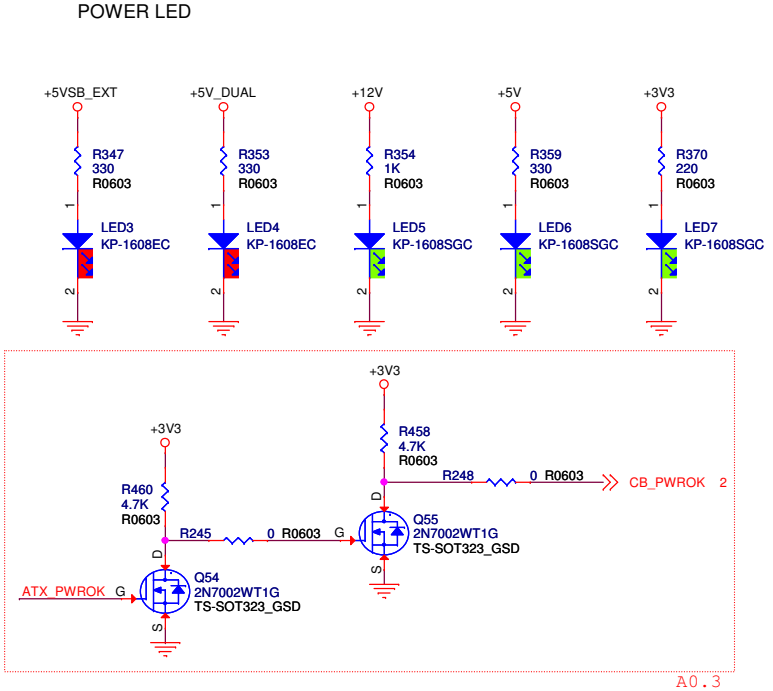
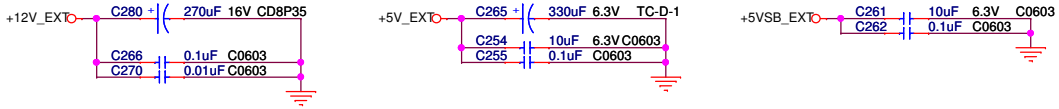
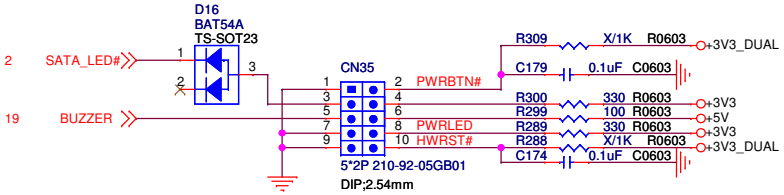
1-3 , 2-4 : For ATX supply controlled (Default)
3-5 , 4-6 : For ATX supply in AT mode

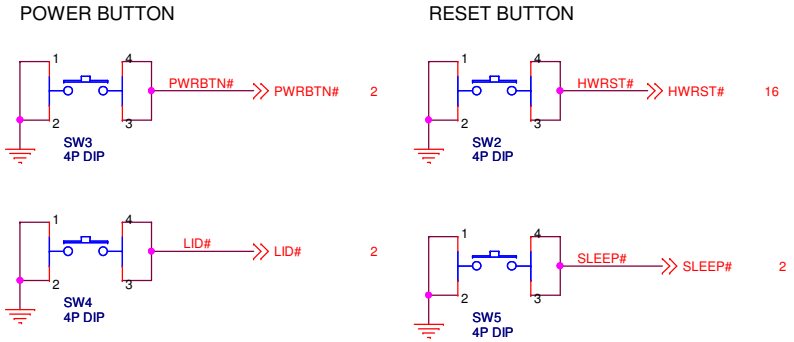












AAEON Technology INC.			
Title: ATX Power + Front Panel			
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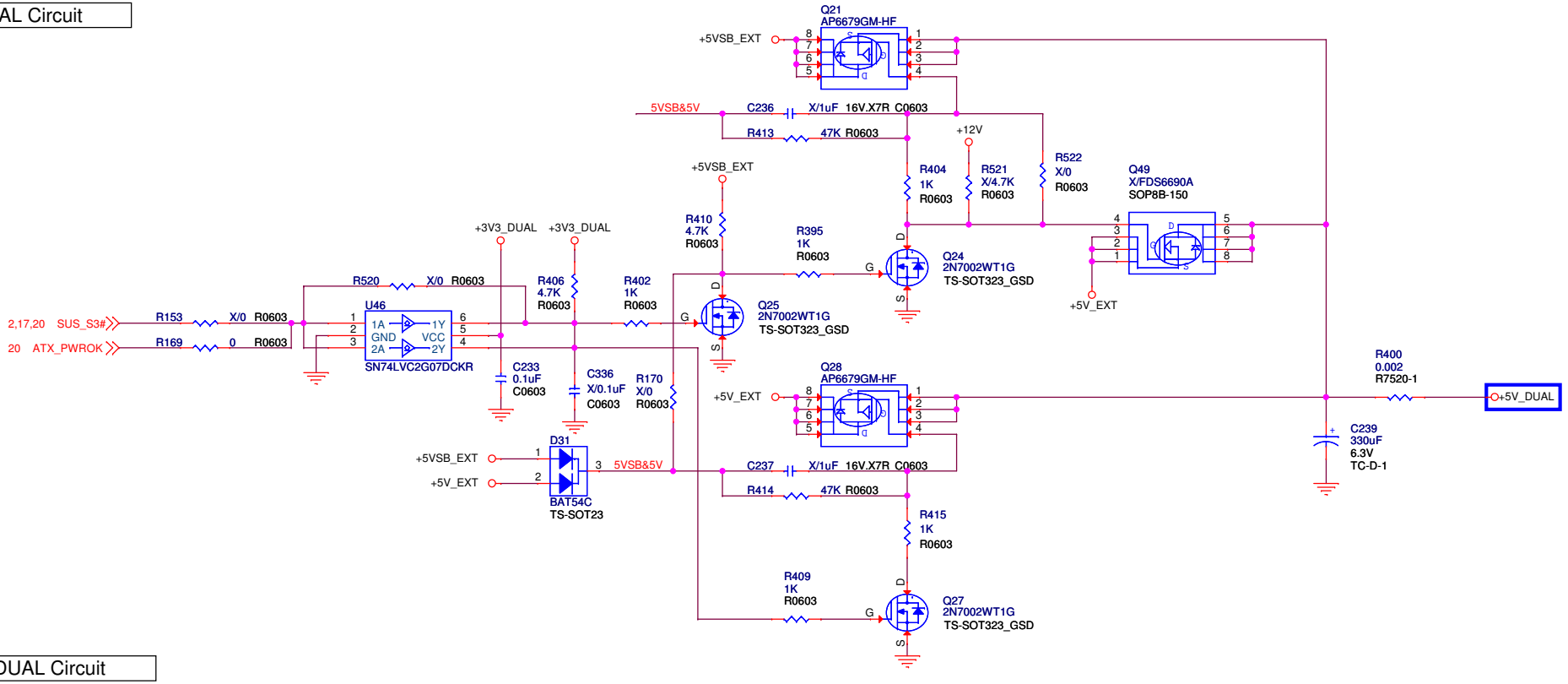
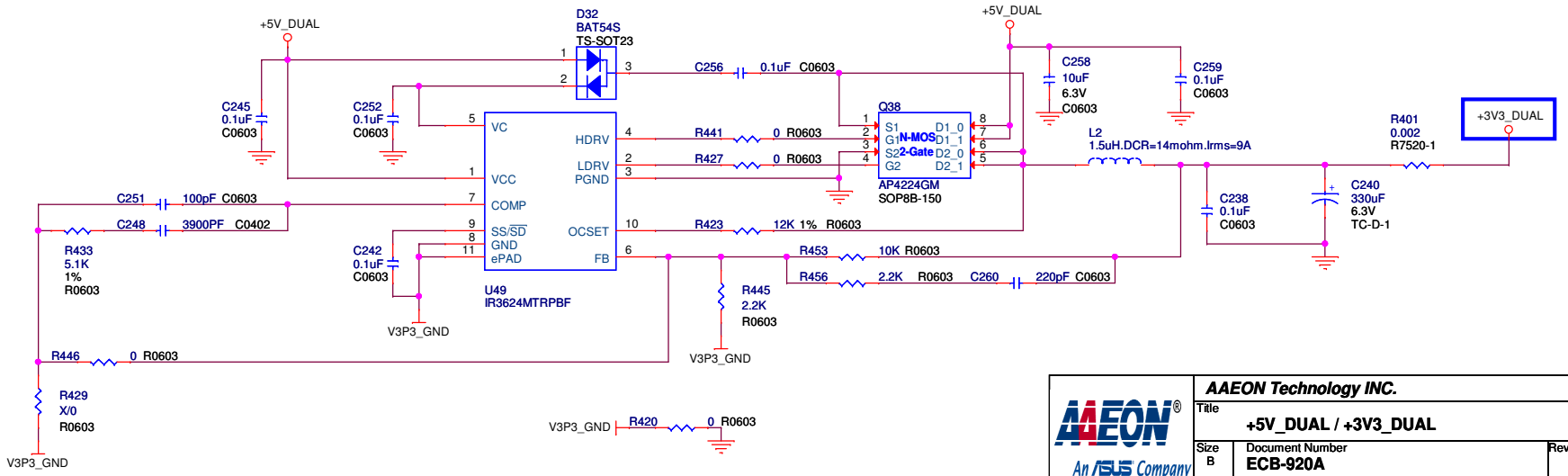
+5V_DUAL Circuit



+3V3_DUAL Circuit



AAEON Technology INC.		
Title: +5V_DUAL / +3V3_DUAL		
Size: B	Document Number: ECB-920A	Rev: A1.0_0_0
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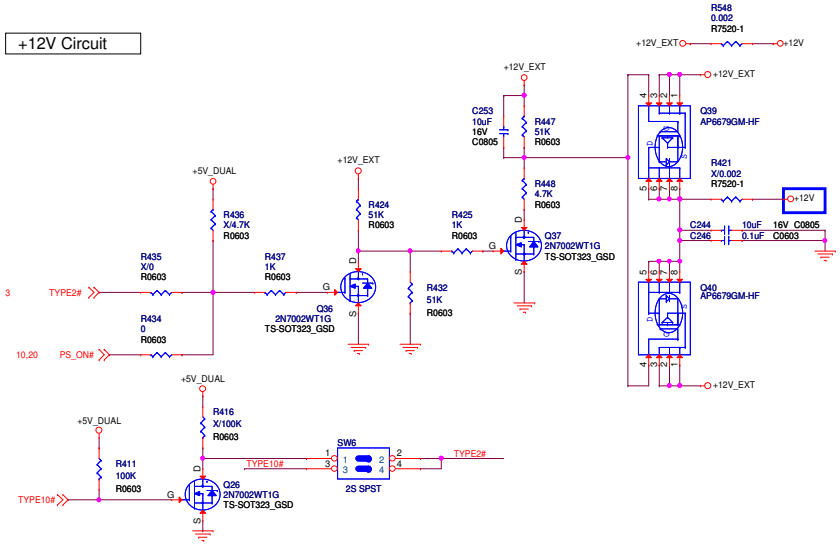
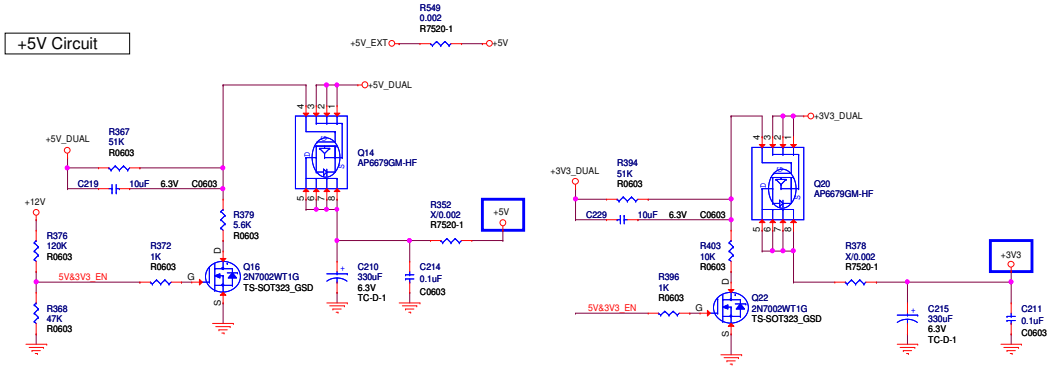
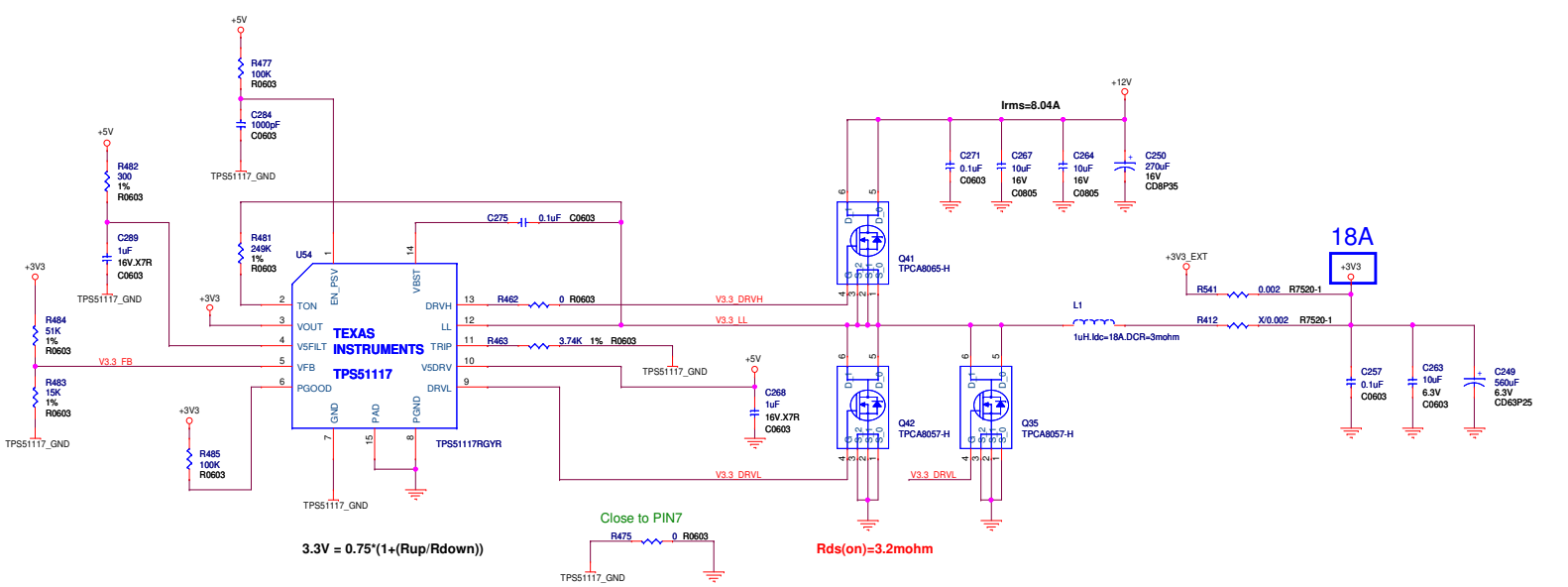
+12V Circuit

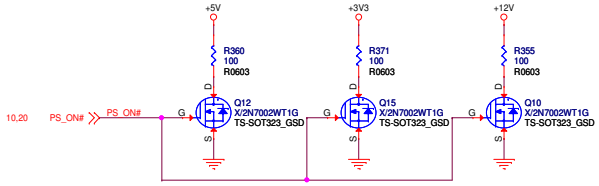


+5V Circuit



+3V3 Circuit





AAEON Technology INC.			
Title: +12V / +5V / +3V3			
Size: C	Document Number: ECB-920A		Rev: A1.0_0_0
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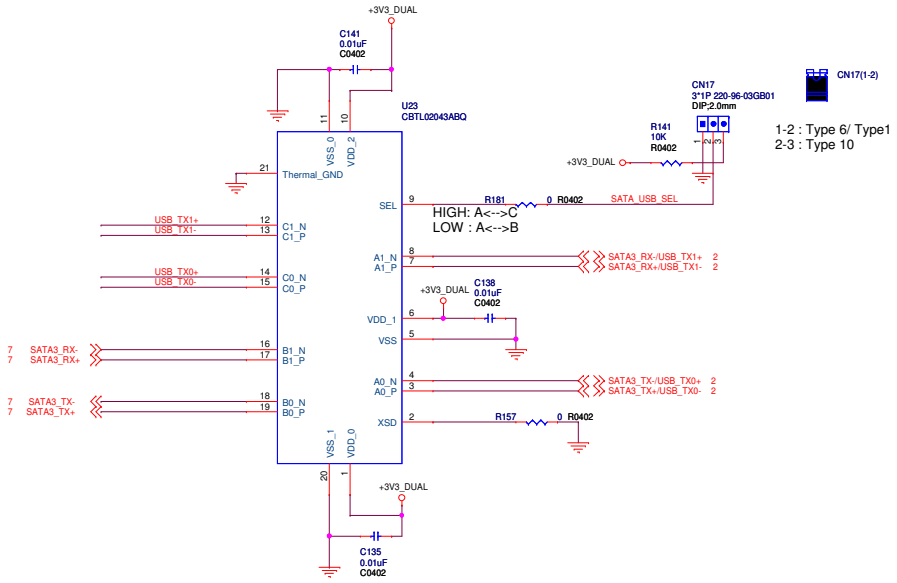

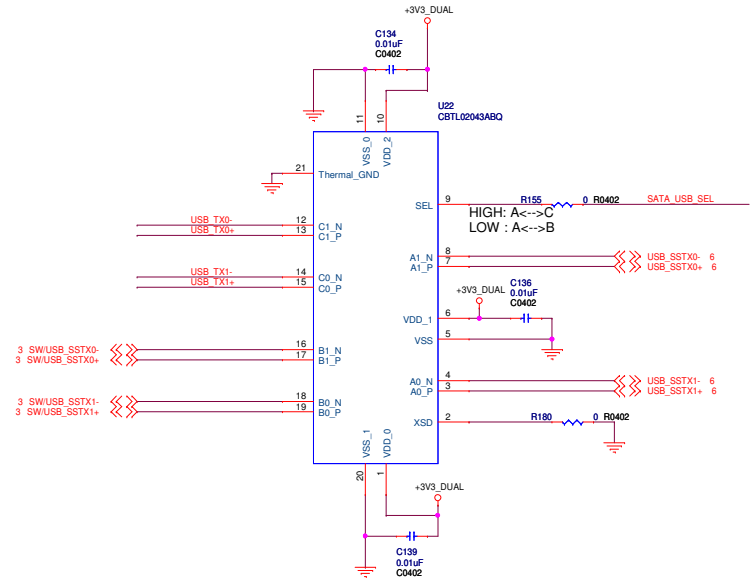

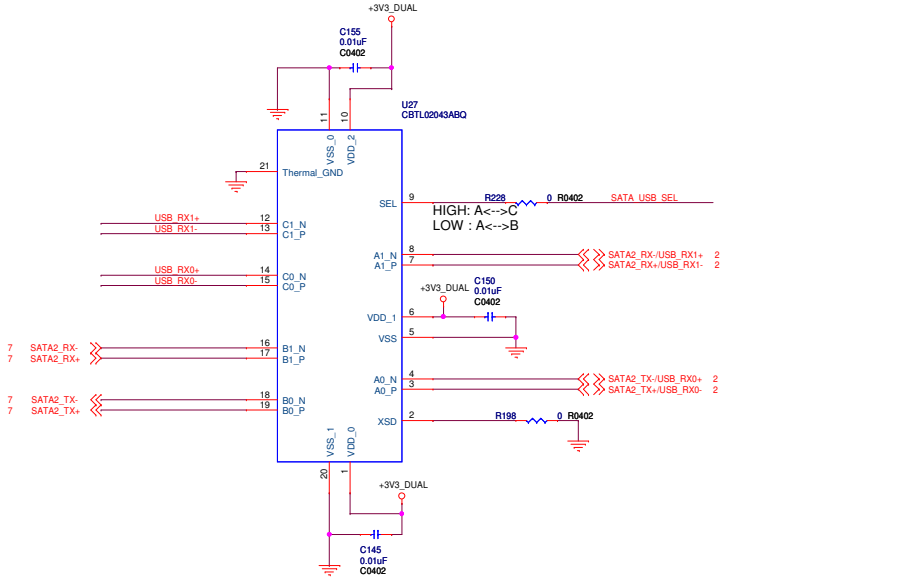

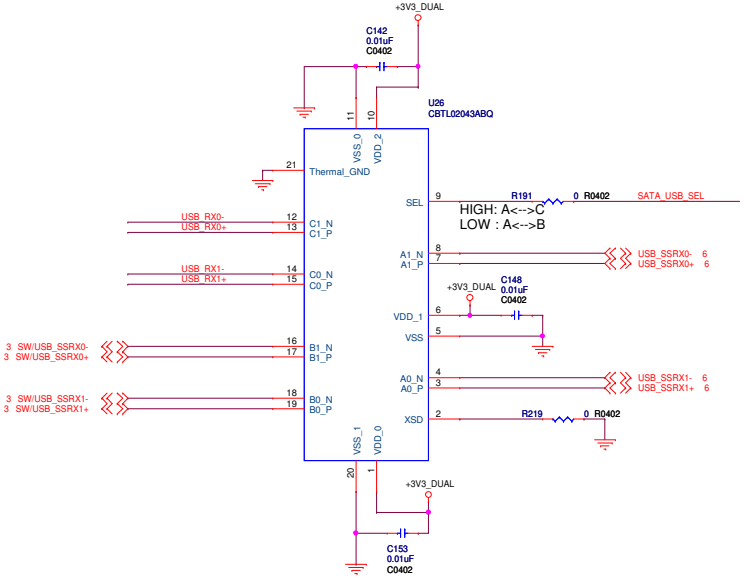

AAEON Technology INC.

Title	SATA/USB Switch	
Size: C	Document Number: ECB-920A	Rev: A1.0_0_0
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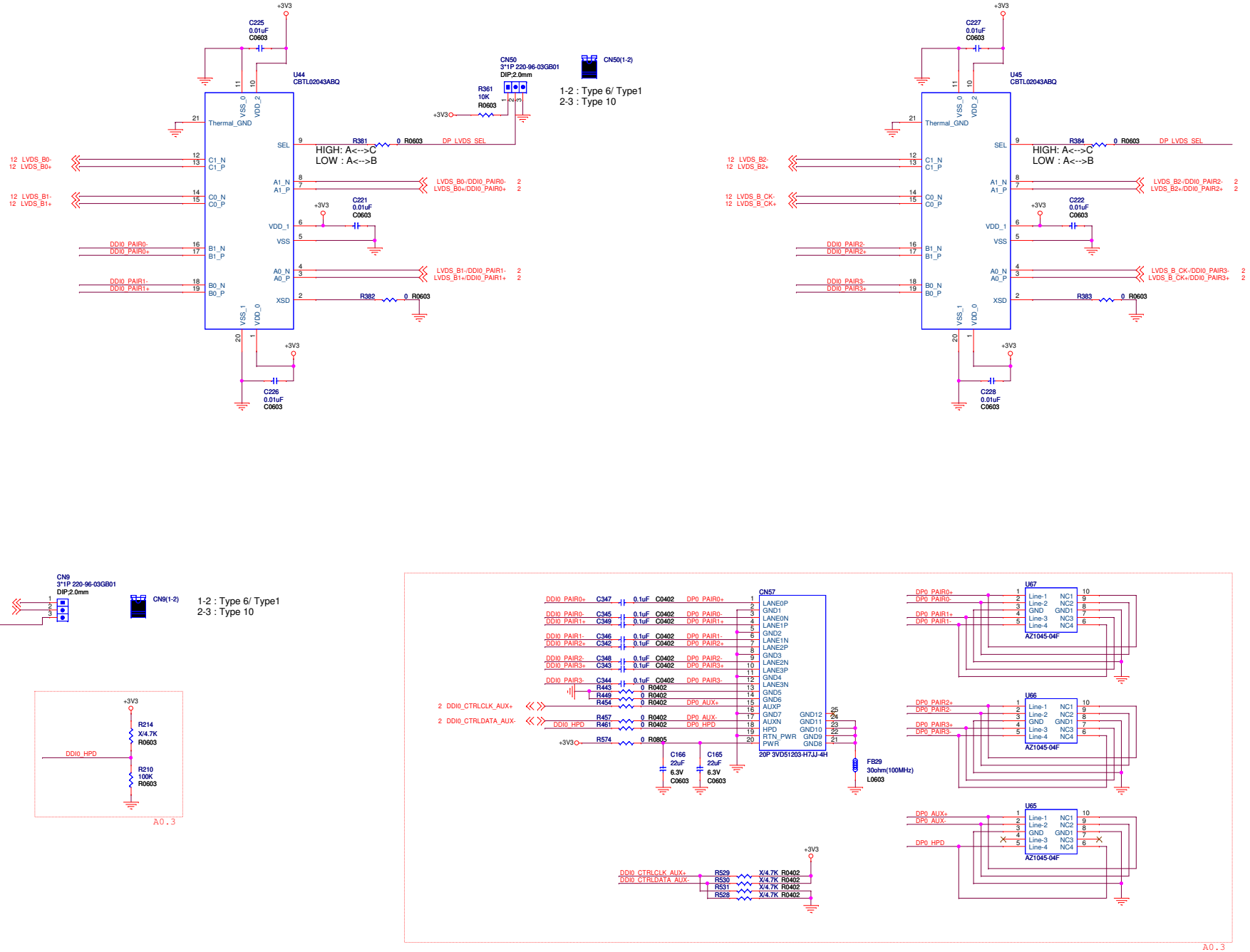

AAEON Technology INC.			
Title: DDI0/LVDS/CRT Switch			
Size: C	Document Number: ECB-920A	Rev: A1.0_0_0	
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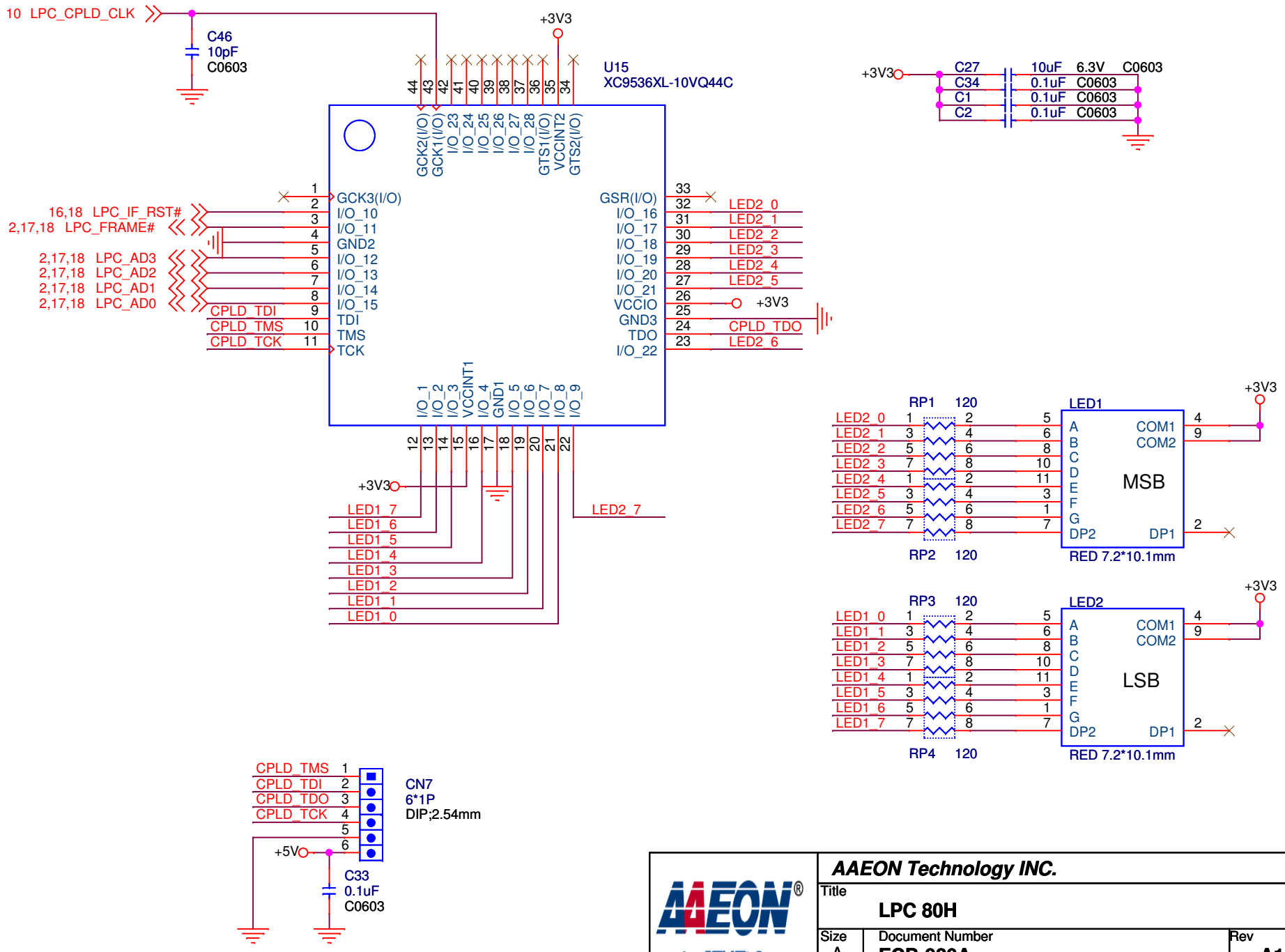

AAEON Technology INC.		
Title: LPC 80H		
Size: A	Document Number: ECB-920A	Rev: A1.0_0_0
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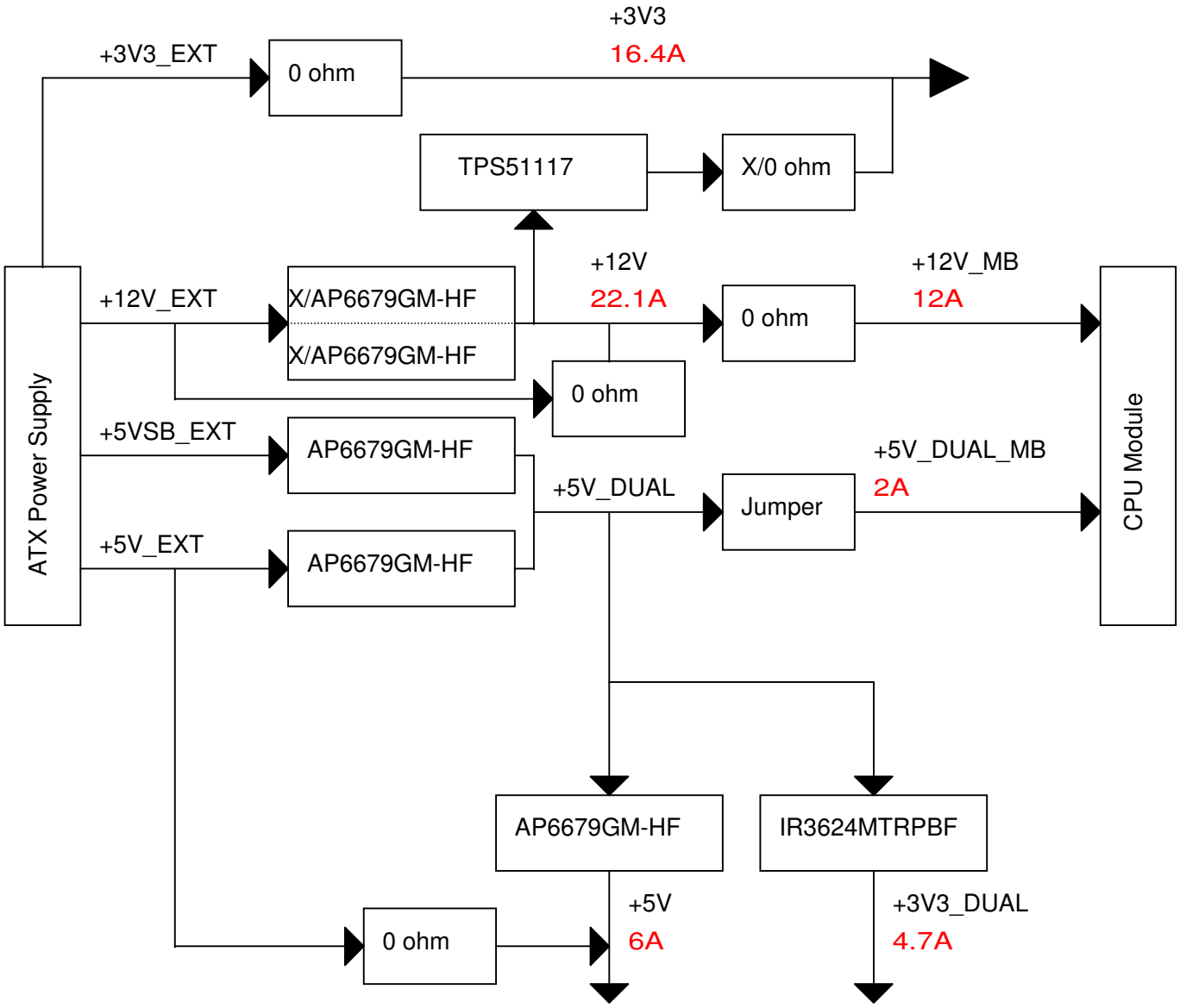

AAEON Technology INC.			
Title: Power Block			
Size: A	Document Number: ECB-920A		Rev: A1.0_0_0
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Change History

Item	Date	Revision	Description	Page	Design By	Approve By
1	2012/12/03	A0.1	First Release.	1 ~ 28	Ronald Lin	Richard Wu
2	2013/03/25	A0.2	1.Add U59,C312,R559,CN67 for USB 2.0 Switch.	4	Ronald Lin	Richard Wu
			1.Add U60,C314,C313,C315,R317,R316,R312,R310,R517,R331,R519,R518,R224,R223,R330,CN22 for SATA Switch.	7		
			1.Codec Power change from +5V to +5V_DUAL.	8		
			1.Add Q50,R561. 2.Change Q47 to AP2305GN.	10		
			1.Change DP Port AC CAP from 0 ohm to 0.1uF.	14		
			1.Change SIO Slot pin define and add SUS_S3#,SUS_S5 signal.	17		
			1.ADD R557,R558.	18		
3	2013/07/23	A0.3	1.Chang U25 from ICS9DB108BFLF to 9DB833AFLF. 2.Add Q57,R532.	10	Ronald Lin	Richard Wu
			1.Remove C324,C325,C334,C335. 2.Add R562,R563,R564,R565.	14		
			1.Change R44,R220,R221,R225 from 1K to 100K. 2.Add R50,R179,R182,R183,R184,R185,R186,R187,R188,R200,R201,R204,R205,R206,R207,R208	3		
			1.Add Q54,Q55,R460,R245,R458,R248.	20		
			1.Reserve R277,R515.	8		
			1.Change DDI1 connector to DP connector.	13		
			1.Add U68,U69,C193,C273,C274,C276,R430,R431.	15		
			1.Change DDI0 connector to DP connector. 2.Add R210.	24		
			1.Modify smart FAN circuit.	19		
			1.Add R575.	12		
3	2013/10/25	A1.0	1.Change R150 connect to B31 of CN19.	9	Ronald Lin	Richard Wu

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Title: Revision History

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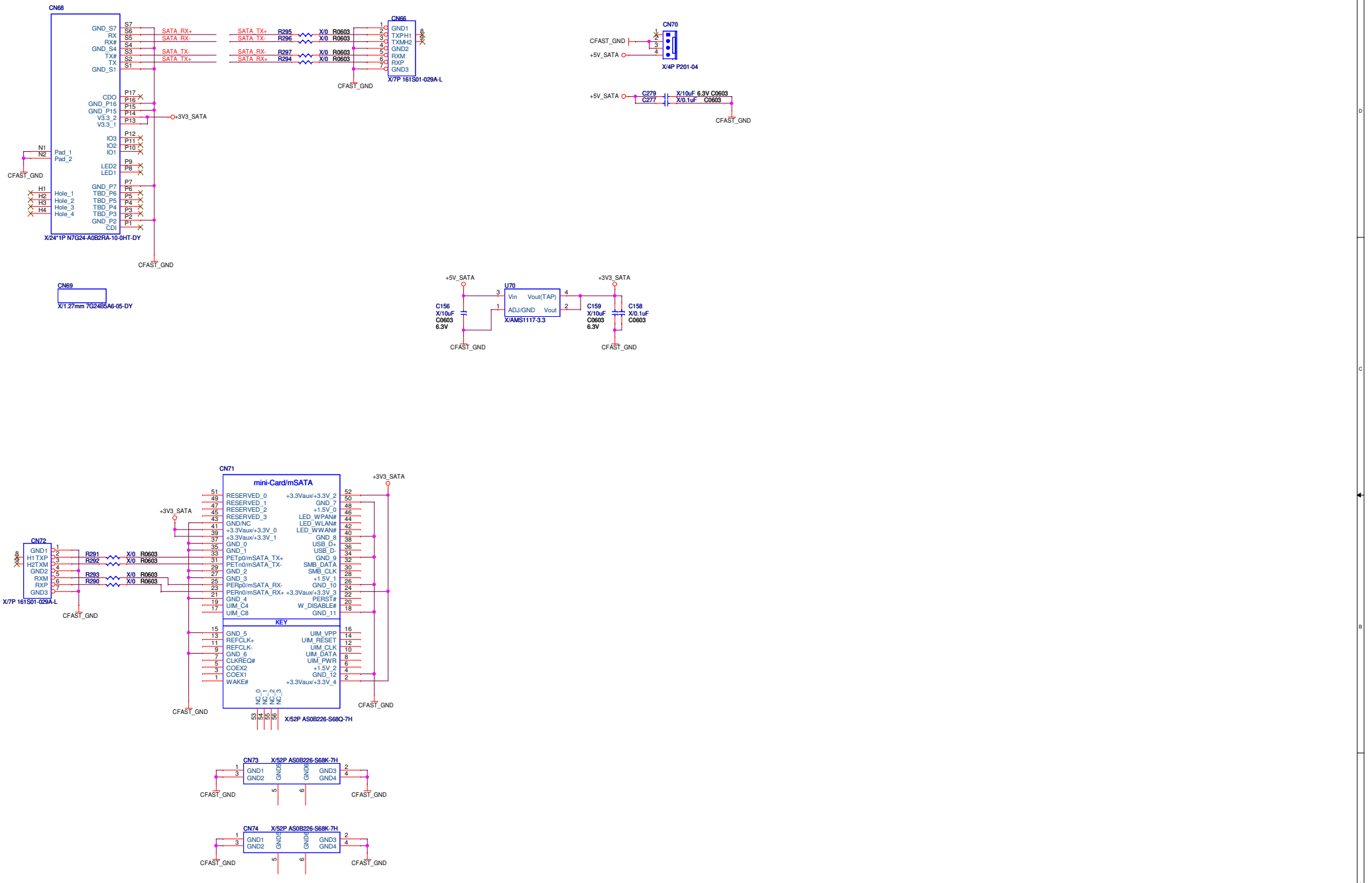

AAEON Technology INC.			
Title: Revision History			
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