

UnoVersion 7

CAM1 Connector
Sch-QWA17_CAM0_1.SchDoc



USB
Sch-QWA17_USB Hub.SchDoc



LAN
Sch-QWA17_LAN.SchDoc



Image Sensor
Sch-QWA17_V7_ImageSensor.SchDoc



DIO
Sch-QWA17_DIO.SchDoc



USB Boot and Switch
Sch-QWA17_USB-SW-Boot.SchDoc



Power
Sch-QWA17_Power.SchDoc



GPIO
Sch-QWA17_GPIO.SchDoc



MCU
Sch-QWA17_MCU.SchDoc




RTC
Sch-QWA17_RTC.SchDoc



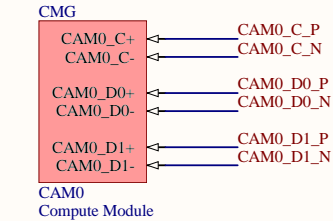
HDMI
Sch-QWA17_HDMI.SchDoc



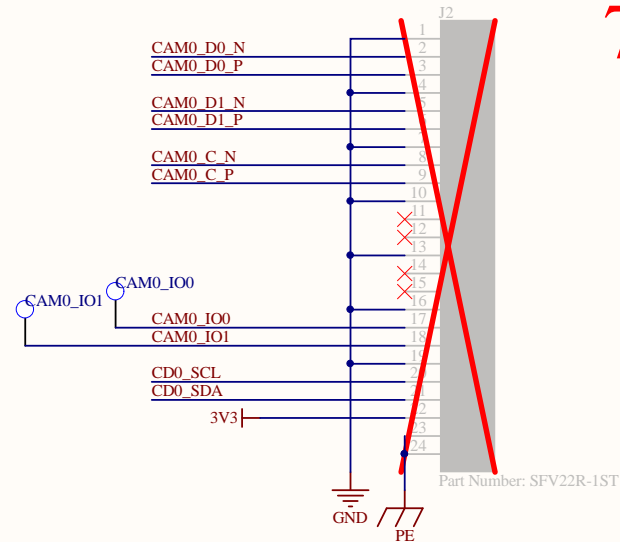
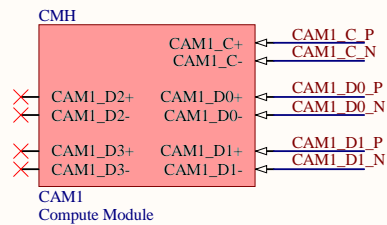
Title <i>QWA17-SmartCam -Top Level</i>			<i>Q-Wave Systems Co.,Ltd</i> 65/2 Moo 1 Beung Sriracha Chonburi Thailand	Q-WAVE SYSTEMS 
Size: A4	Number:1	Revision:7		
Date: 10/2/2019	Time: 2:17:56 PM	Sheet 1 of 12		
File: Top_Level_QWA17.SchDoc				

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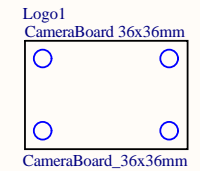
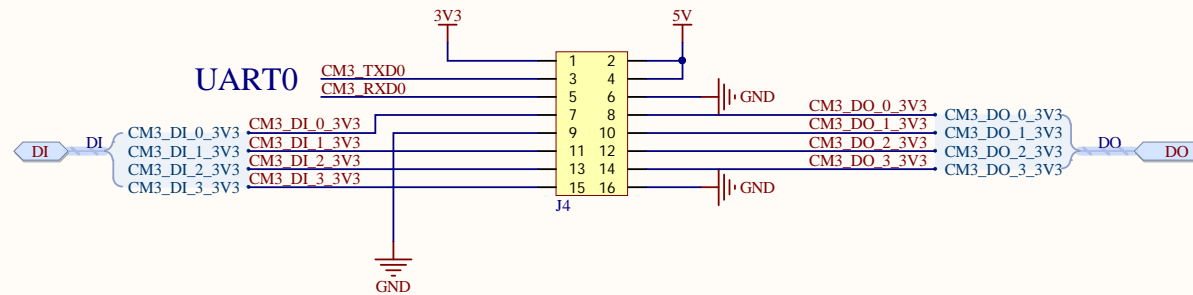
Main CPU - Camera1




CAM1 - 2 Lane CSI-2



GPIO Header for Uno Version



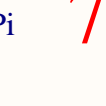
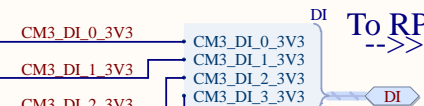
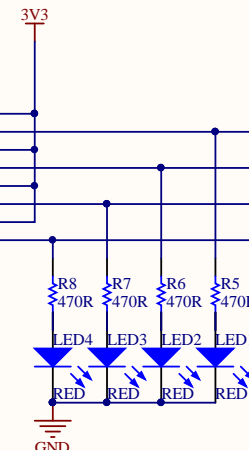
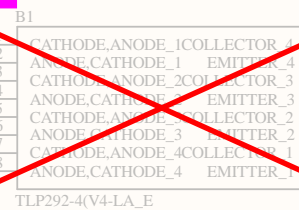
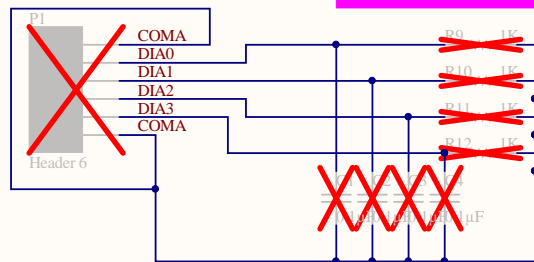
Title <i>QWA17-SmartCam Camera1+Uno GPIO</i>			Q-WAVE SYSTEMS  <i>Q-Wave Systems Co.,Ltd 65/2 Moo 1 Beung Sriracha Chonburi Thailand</i>
Size: A4	Number: 2	Revision: 7	
Date: 10/2/2019	Time: 2:17:56 PM	Sheet 2 of 12	
File: Sch-QWA17_CAM0_1.SchDoc			

Q-WAVE
SYSTEMS

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(Digital In 24V)

Spec IF Max +/-50mA, VF=1.4
Calc = IF = (24V-1.4)/1k = 20mA



Uno Version

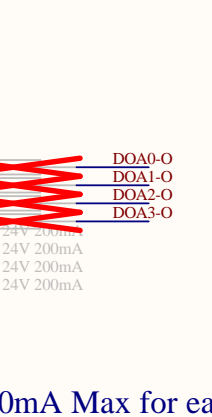
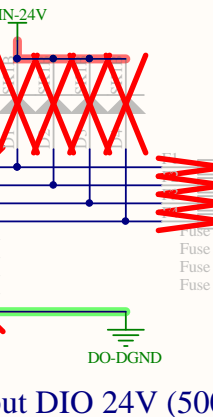
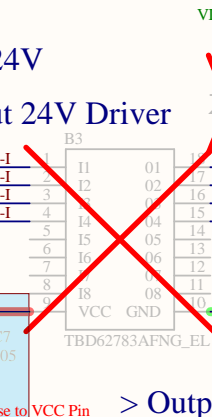
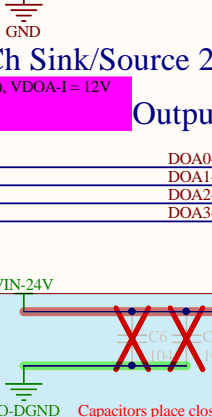
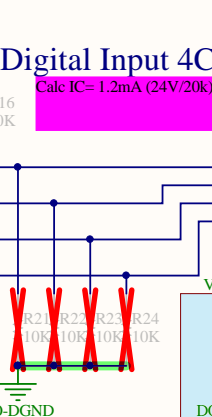
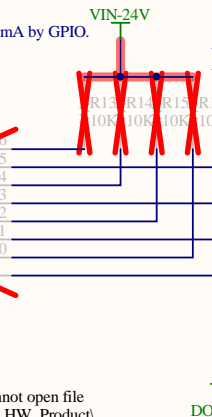
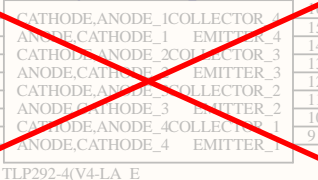
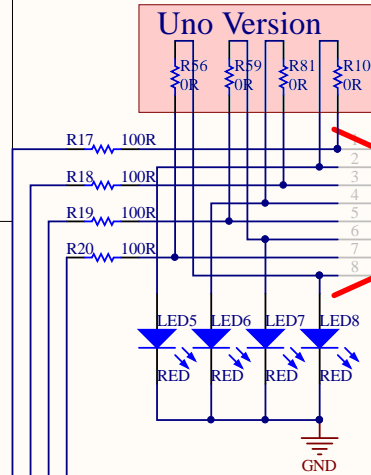
*CM_GPIO drive up to 18mA and sink up to 17mA by GPIO.
Calc = IF = (3.3V-1.4)/100R = 19mA

Digital Output 4Ch

Digital Input 4Ch Sink/Source 24V

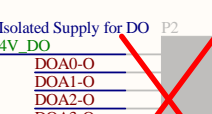
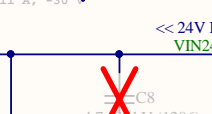
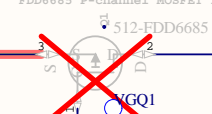
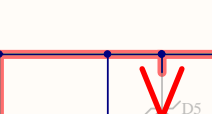
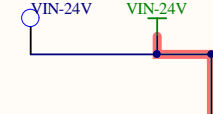
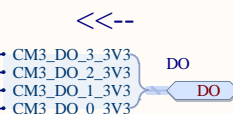
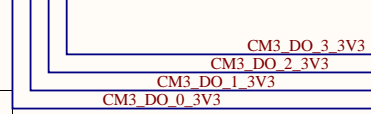
Calc IC = 1.2mA (24V/20k), VDOA-I = 12V

Output 24V Driver

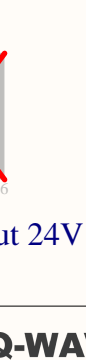
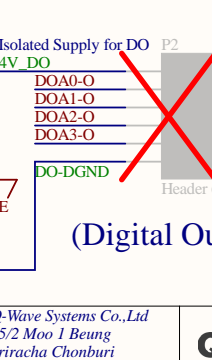
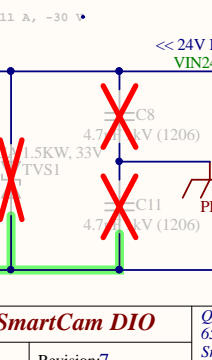
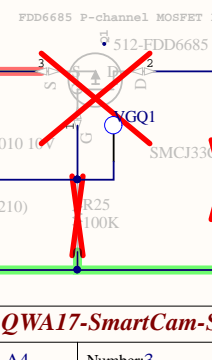
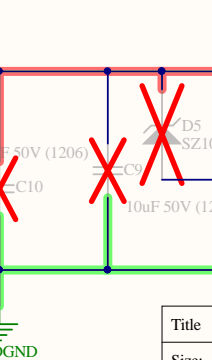
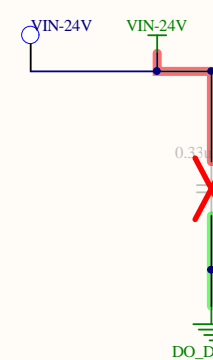


From RPi

Cannot open file
D:\HW_Product\
REF-DOC-DES
IGN\12.Photo
Coupler\001.png



> Output DIO 24V (500mA Max for each)



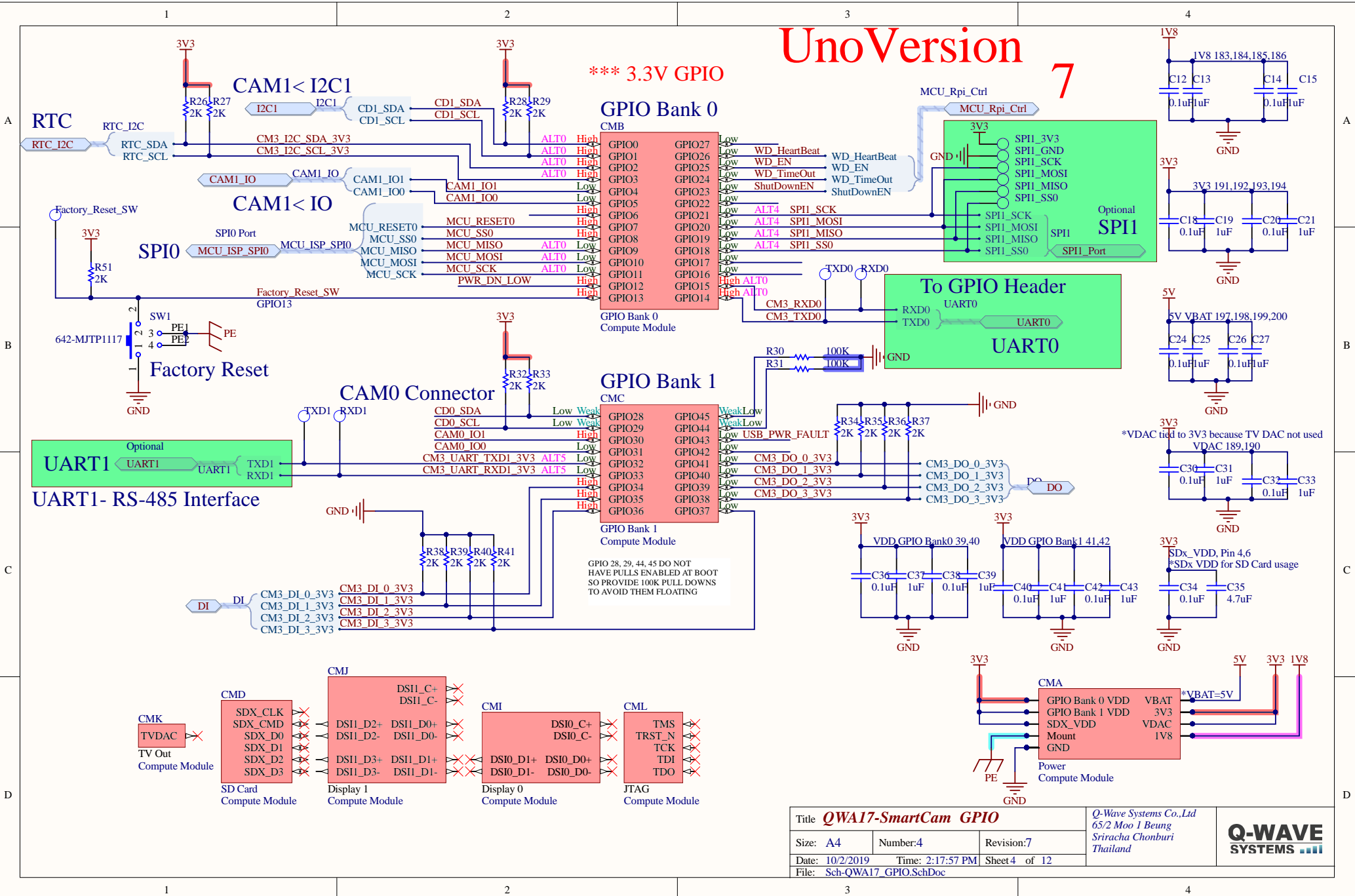
(Digital Out 24V)


Title QWA17-SmartCam-SmartCam DIO			Q-Wave Systems Co.,Ltd 65/2 Moo 1 Beung Sriracha Chonburi Thailand	
Size: A4	Number:3	Revision:7	Sheet 3 of 12	
Date: 10/2/2019	Time: 2:17:56 PM	File: Sch-QWA17_DIO.SchDoc		
			Q-WAVE SYSTEMS	

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7

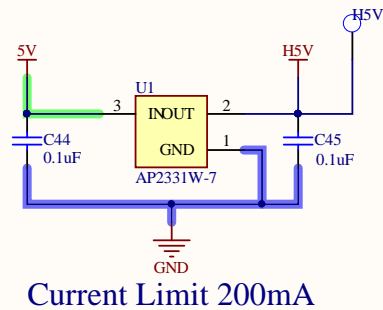
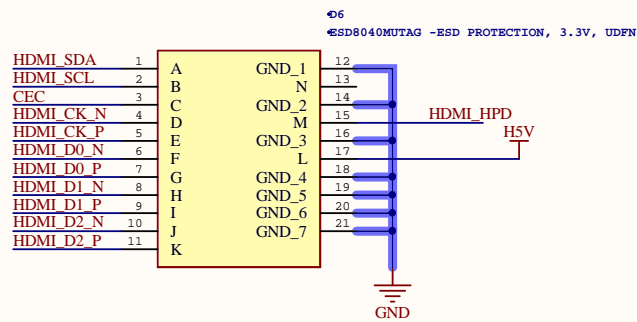
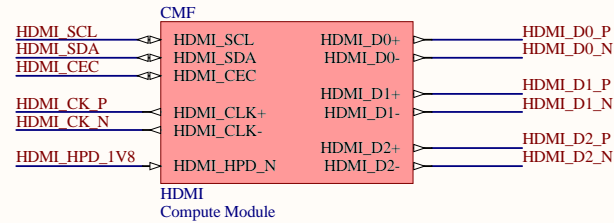
*** 3.3V GPIO



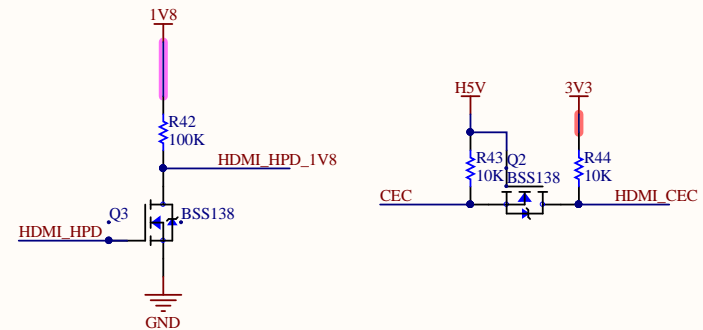
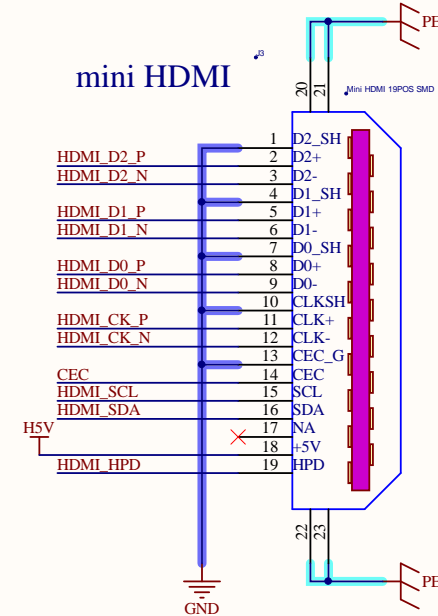
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Size: A4	Number:4	Revision:7		
Date: 10/2/2019	Time: 2:17:57 PM	Sheet 4 of 12		
File: Sch-QWA17_GPIO.SchDoc				

HDMI

HDMI

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7

mini HDMI

Title **QWA17-SmartCam HDMI**

Size: A4

Number: 5

Revision: 7

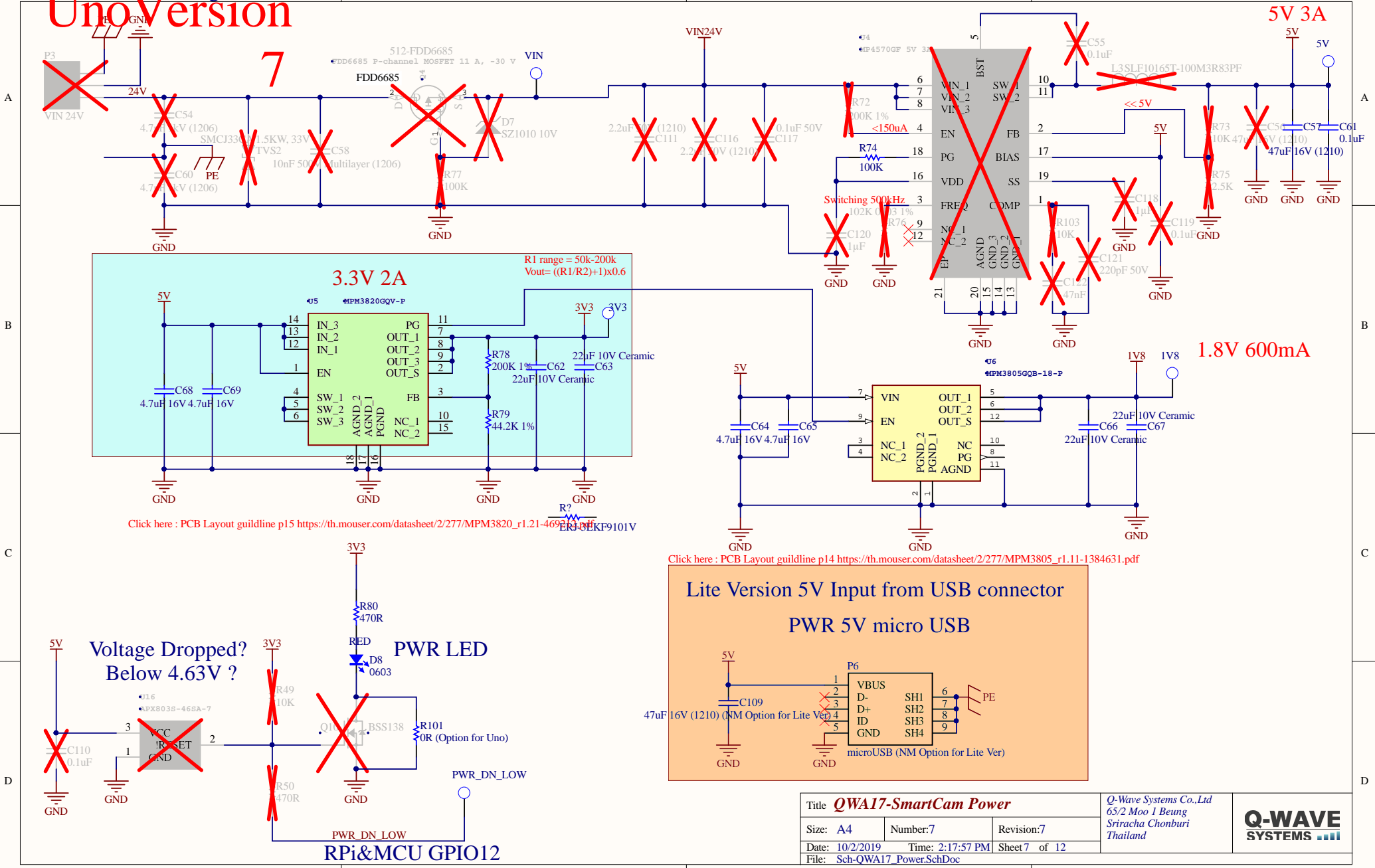
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File: Sch-QWA17_HDMI.SchDoc

Q-Wave Systems Co., Ltd
65/2 Moo 1 Beung
Sriracha Chonburi
Thailand**Q-WAVE**
SYSTEMS

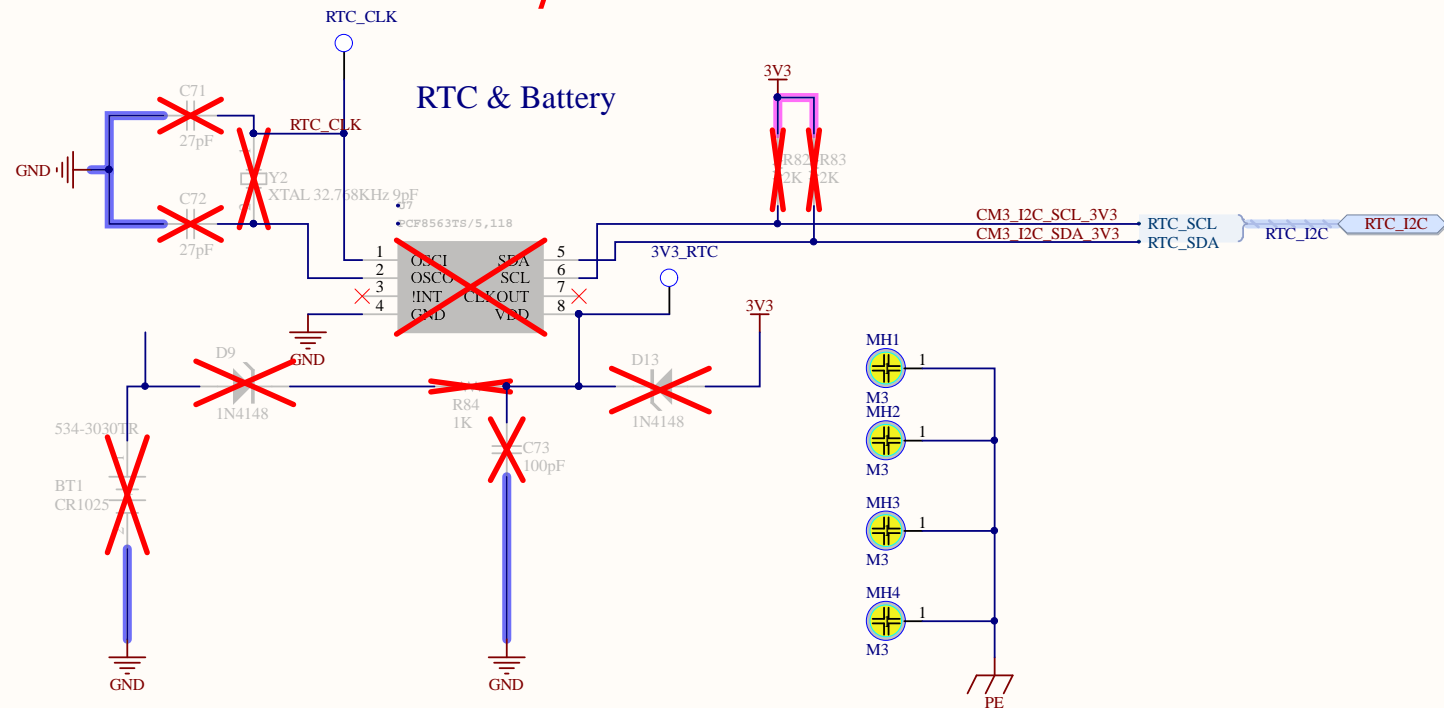
Main CPU - Power Design
Uno Version




Title <i>QWA17-SmartCam Power</i>			Q-Wave Systems Co.,Ltd 65/2 Moo 1 Beung Sriracha Chonburi Thailand	Q-WAVE SYSTEMS 
Size: A4	Number: 7	Revision: 7		
Date: 10/2/2019	Time: 2:17:57 PM	Sheet 7 of 12		
File: Sch-QWA17_Power.SchDoc				

Main CPU - RTC & Battery Design

UnoVersion 7



Title <i>QWA17-SmartCam RTC</i>			<i>Q-Wave Systems Co.,Ltd 65/2 Moo 1 Beung Sriracha Chonburi Thailand</i>	Q-WAVE SYSTEMS 
Size: A4	Number: 8	Revision: 7		
Date: 10/2/2019	Time: 2:17:57 PM	Sheet 8 of 12		
File: Sch-QWA17_RTC.SchDoc				

USB HUB Port

USB A Host 1

UnoVersion 7

USB Current 1.2A

USB Port LED (5V)

USB Power Control 2.1A

To RPi >


Lite Version connect 5V direct to PWR2

1.8V Bypass Cap

3.3V Bypass Cap

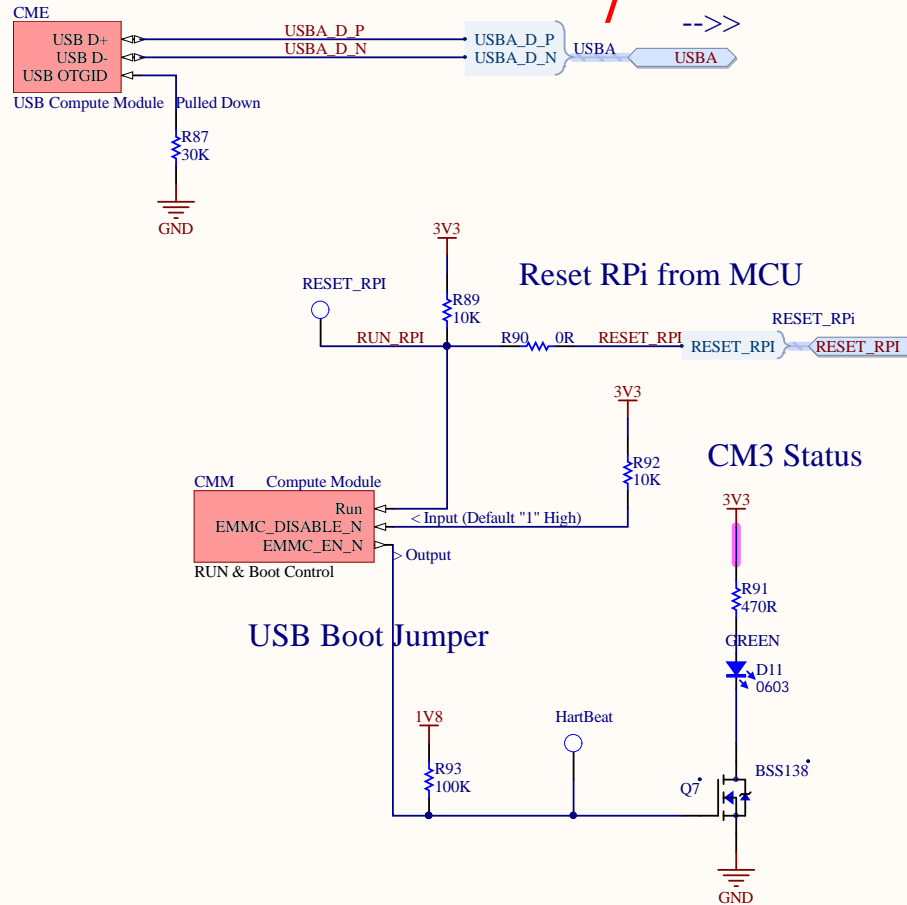
1.8V Bypass Cap


3.3V Bypass Cap

Title <i>QWA17-SmartCam USB Hub</i>			<i>Q-Wave Systems Co.,Ltd 65/2 Moo 1 Beung Sriracha Chonburi Thailand</i>	Q-WAVE SYSTEMS 
Size: A4	Number: 9	Revision: 7		
Date: 10/2/2019	Time: 2:17:57 PM	Sheet 9 of 12		
File: Sch-QWA17_USB Hub.SchDoc				

USB Switch(USB or eMMC Boot)

UnoVersion 7

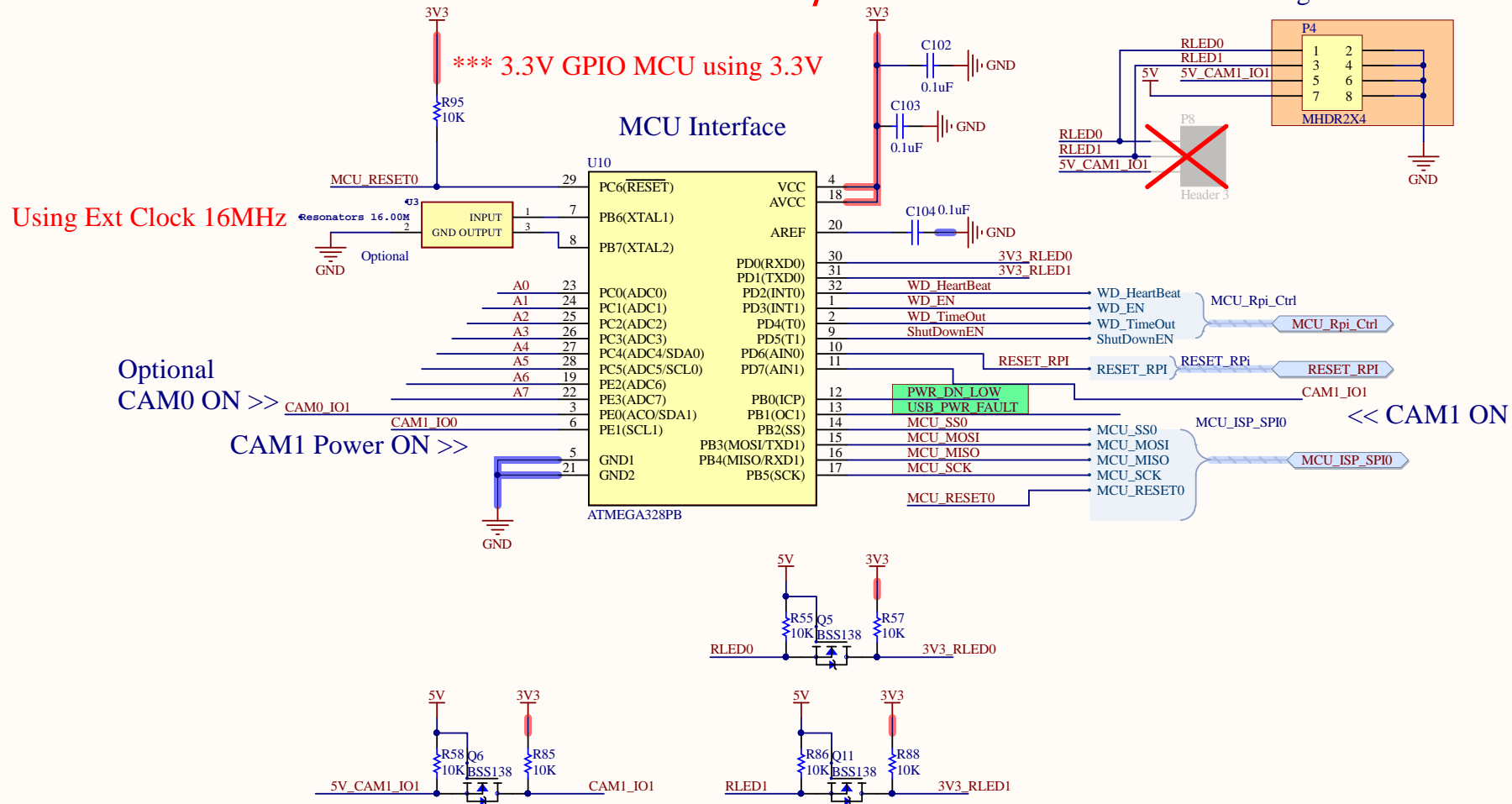



Title <i>QWA17-SmartCam USB Boot</i>			<i>Q-Wave Systems Co.,Ltd</i> 65/2 Moo 1 Beung Sriracha Chonburi Thailand	Q-WAVE SYSTEMS 
Size: A4	Number: 10	Revision: 7		
Date: 10/2/2019	Time: 2:17:57 PM	Sheet 10 of 12		
File: Sch-QWA17 USB-SW-Boot.SchDoc				

Q-Wave Systems Co.,Ltd
65/2 Moo 1 Beung
Sriracha Chonburi
Thailand

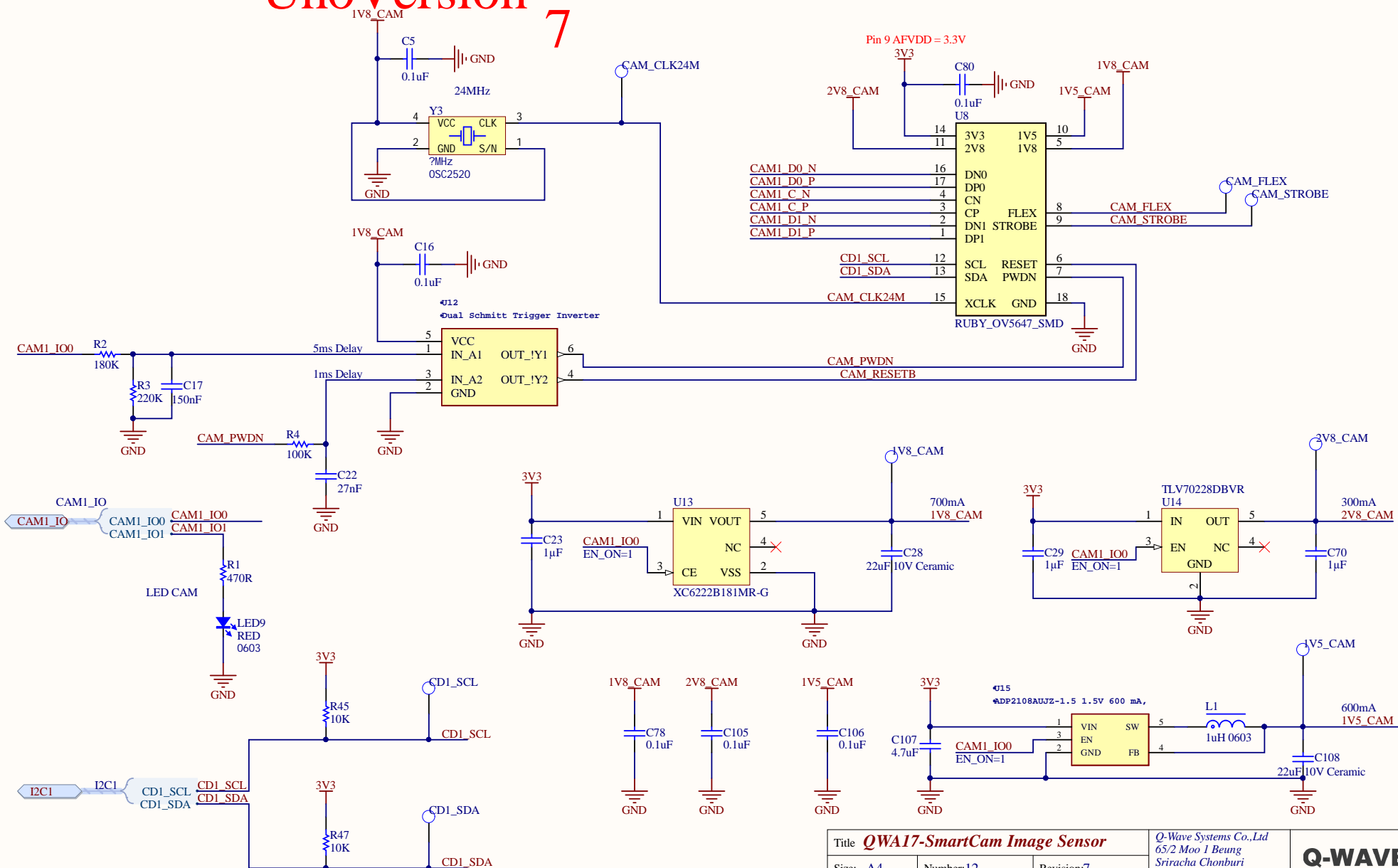
UnoVersion


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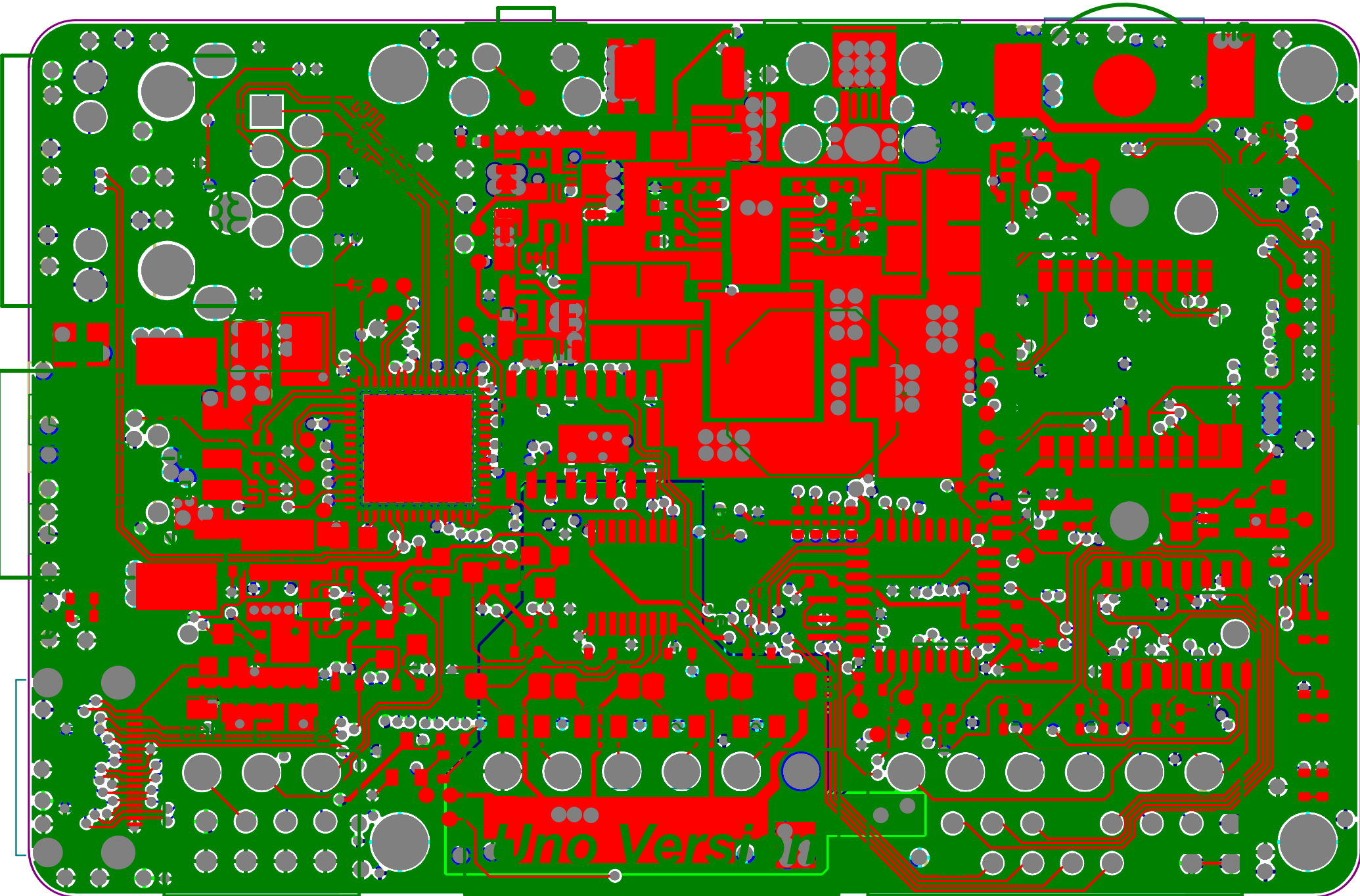


Title <i>QWA17-SmartCam MCU</i>			<i>Q-Wave Systems Co.,Ltd</i> 65/2 Moo 1 Beung Sriracha Chonburi Thailand	
Size: A4	Number: 11	Revision: 7		
Date: 10/2/2019	Time: 2:17:58 PM	Sheet 11 of 12		
File: Sch-QWA17 MCU.SchDoc				

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Title <i>QWA17-SmartCam Image Sensor</i>			Q-Wave Systems Co.,Ltd 65/2 Moo 1 Beung Sriracha Chonburi Thailand Q-WAVE SYSTEMS 
Size: A4	Number: 12	Revision: 7	
Date: 10/2/2019	Time: 2:17:58 PM	Sheet 12 of 12	
File: Sch-QWA17_V7_ImageSensor.SchDoc			



Uno Versi

EagleEye Smart Camera

CR102

3V

PMR

ACT

CAM

D1

1±

2±

3±

4±

D1

D0

QMA-17 1±

EagleEye

2±

3±

4±

D0



Smart Camera
Q-WAVE
SYSTEMS
Q-Wave Systems

Uno Version

CAM

L1

L0

VCC

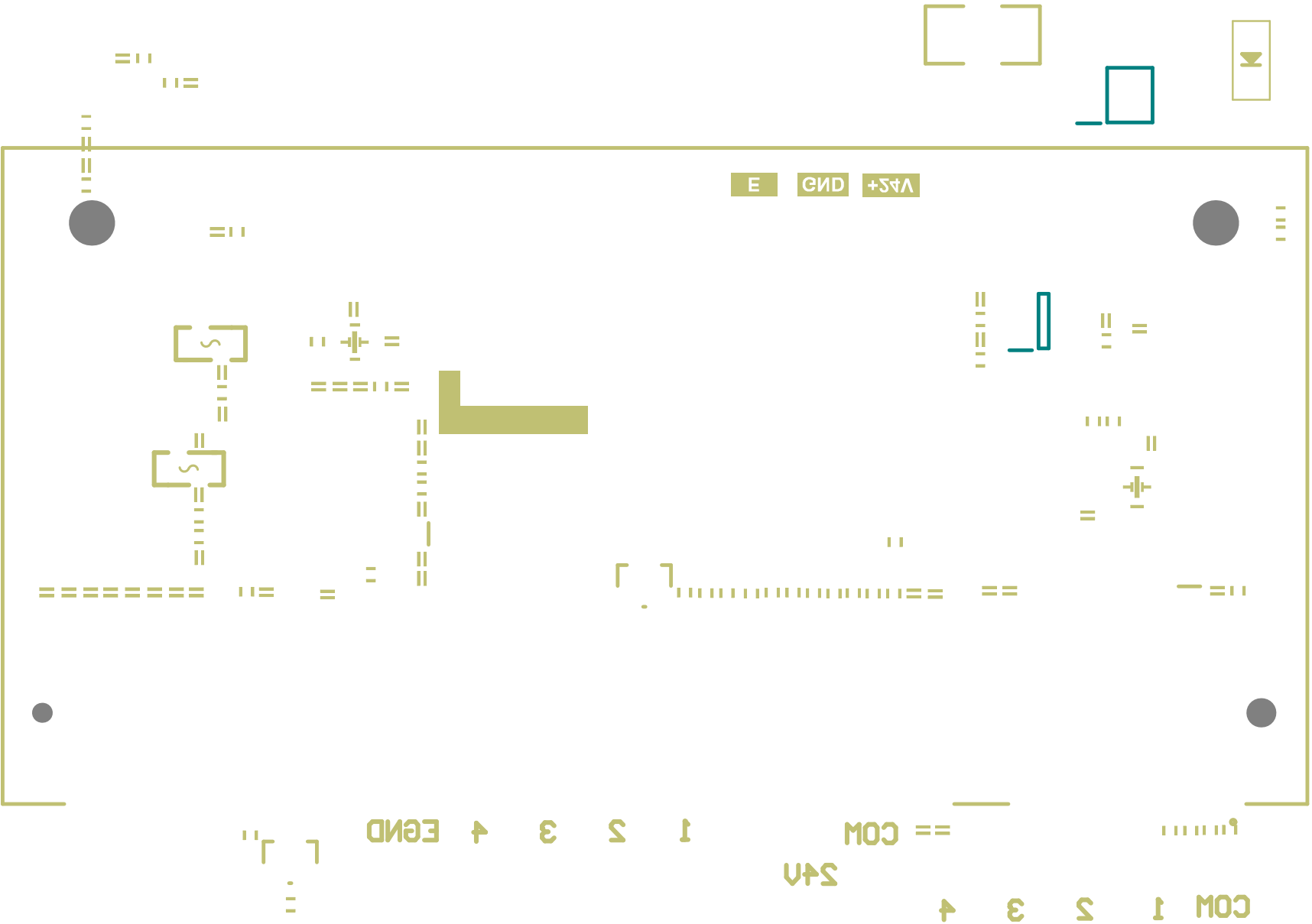
D-

D+

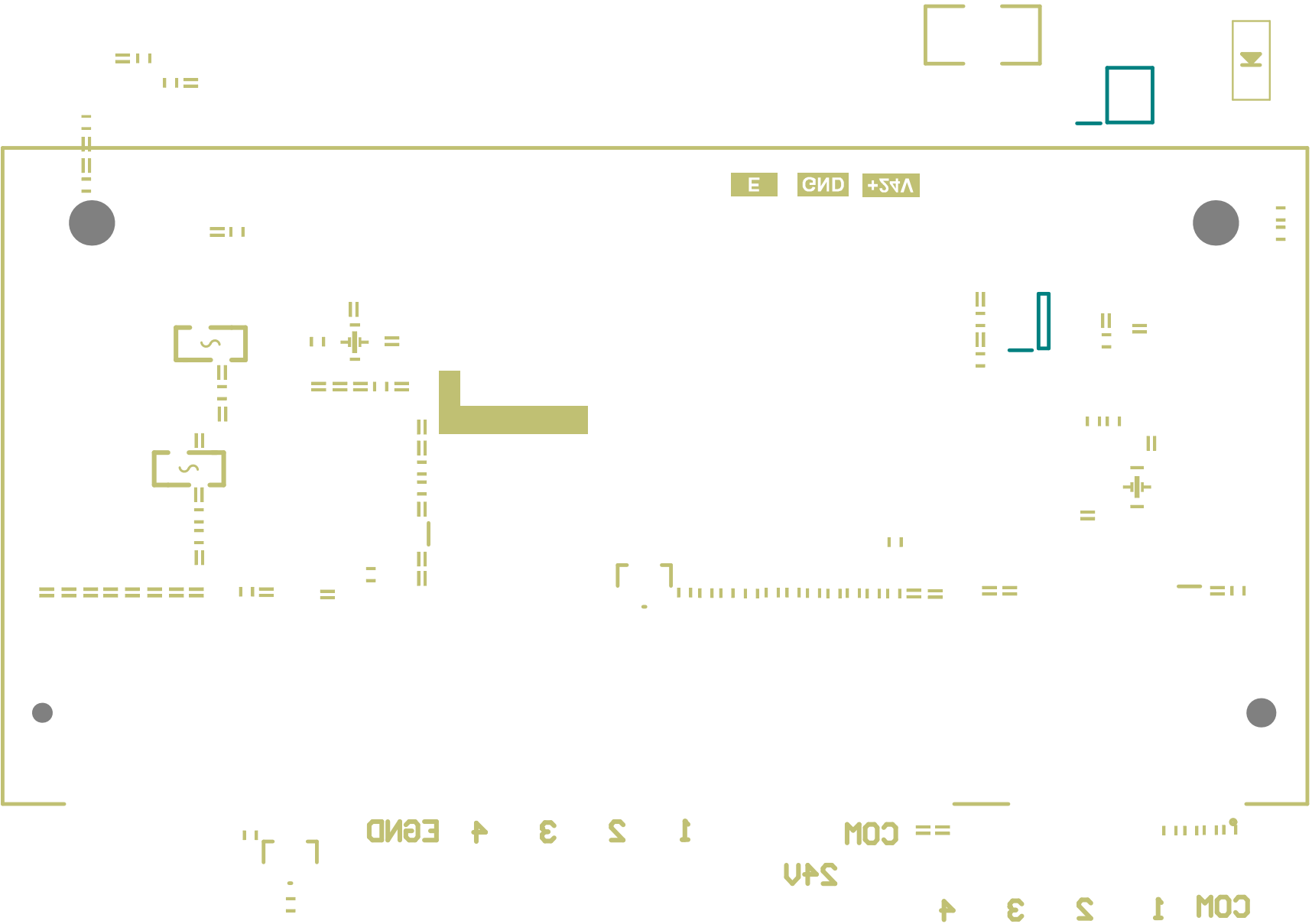
GND

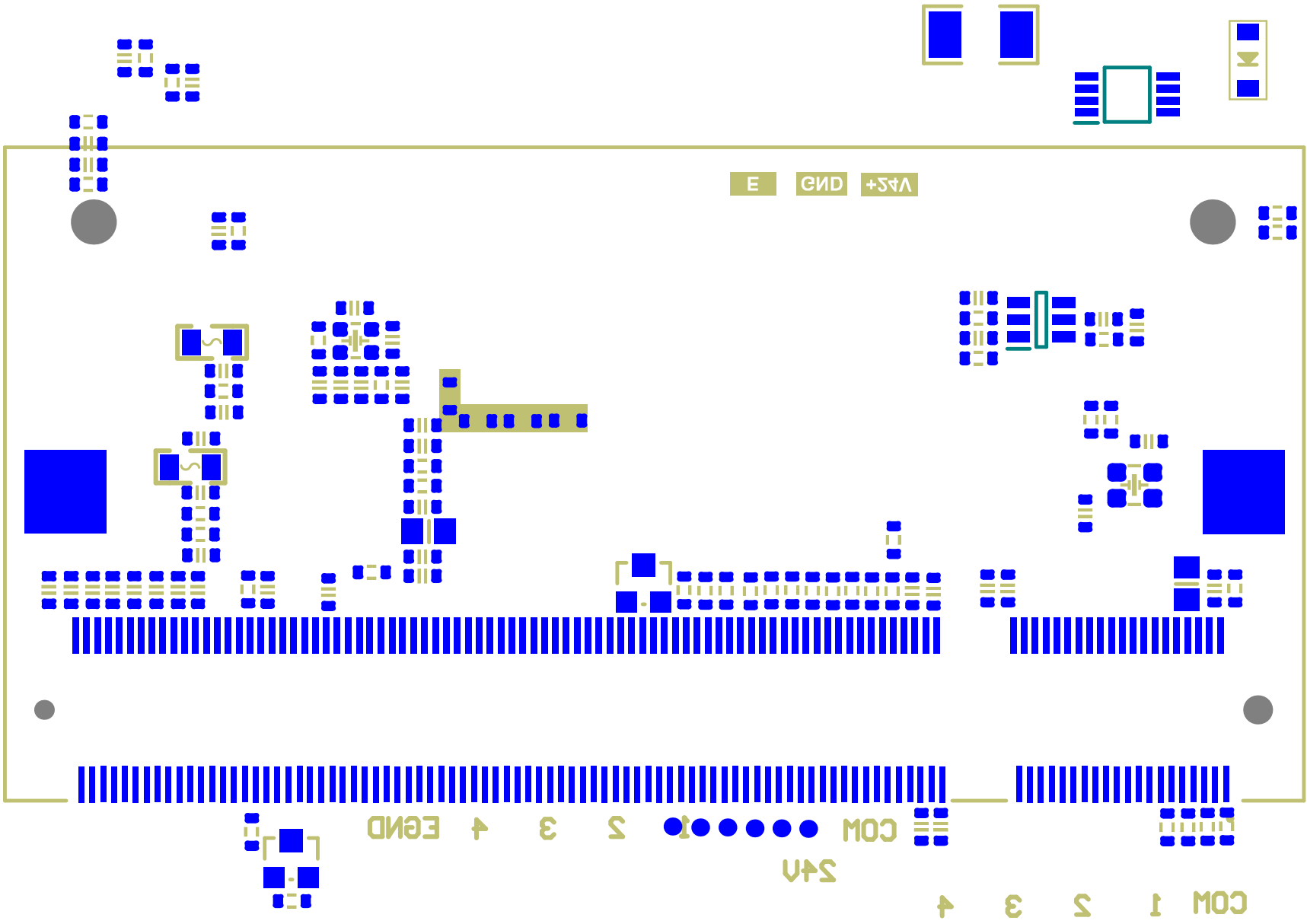
5V
1.2A











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