

GIGA

GIGA.SchDoc

DFSDM1

CAMERA

I2C4

DSI

GPIOs

PORTENTA

HDCConn_FEMALE.SchDoc

DSI

CAMERA

PDM

I2C0

GPIOs

I2C
PULLUPS

+3V3

R2

10k

R1

10k

SCL

SDA

PC6

PI0

PI1

PI2

PI3

PB12

GPIO0

GPIO1

GPIO2

GPIO3

PWM8

PWM0

PWM1

PWM2

nRED

R53

0

R52

0

nGREEN

nRED

nGREEN

nBLUE

MICROPHONE.SchDoc

PDM

CAMERA.SchDoc

CAMERA

I2C

RGB_LED.SchDoc

I2C

RED_CATHODE

GREEN_CATHODE

BLUE_CATHODE

ACCELEROMETER.SchDoc

I2C

DISPLAY.SchDoc

TOUCH_I2C

DSI

RESET

TE

TOUCH_INT

TOUCH_nRST

BACKLIGHT_SWIRE

MICROPHONE

CAMERA

RGB

ACCELEROMETER

DISPLAY

nBLUE is not connected to the GIGA which is able to drive the blue LED only if the I2C LED driver is mounted.

Fiducial_1
Fiducial mark 1mm

Fiducial_2
Fiducial mark 1mm

Fiducial_3
Fiducial mark 1mm

Fiducial_4
Fiducial mark 1mm

Fiducial_5
Fiducial mark 1mm

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Title: **TOP**ID: **ASX00039**

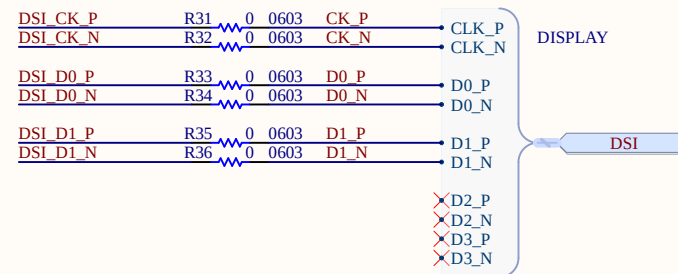
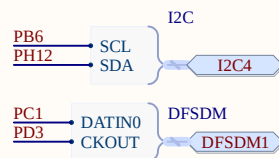
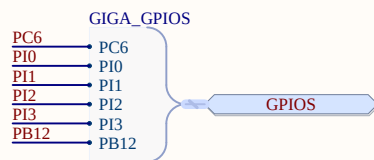
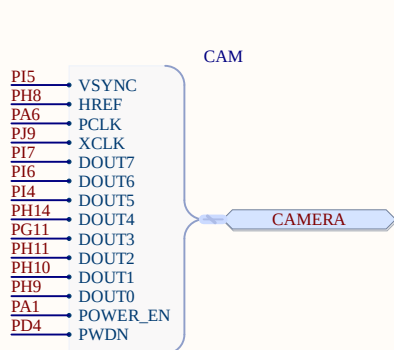
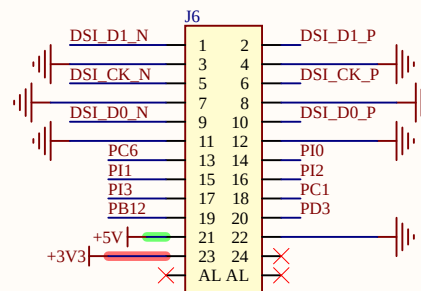
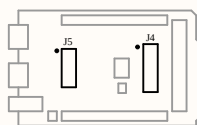
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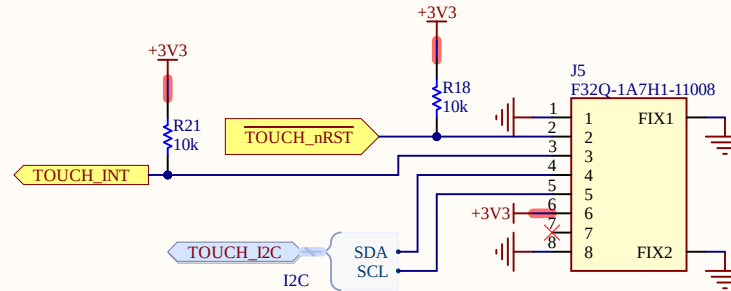
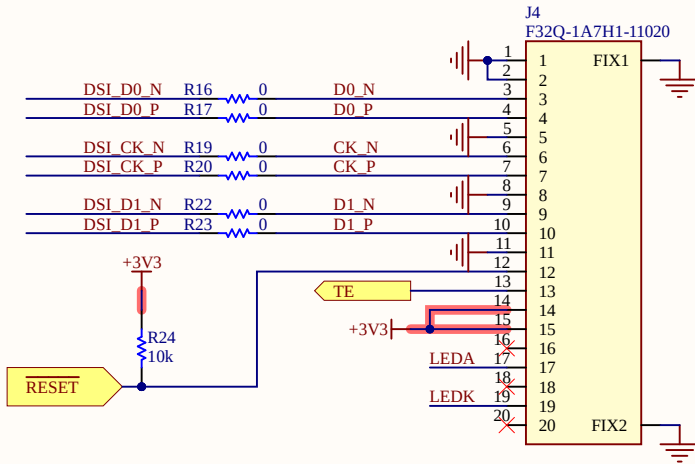
File: TOP.SchDoc

Revision: **V0.5**

Sheet 1 of 8

Author: **Silvio Navaretti**RevAuthor: **Silvio Navaretti**



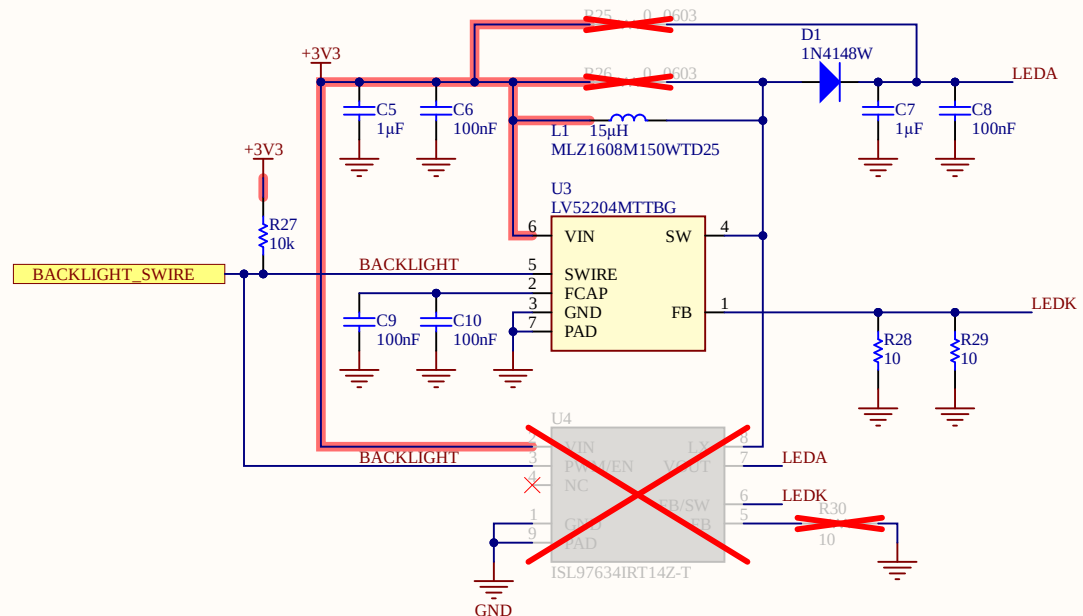
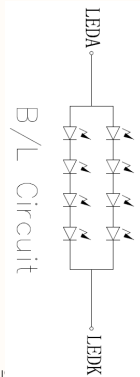
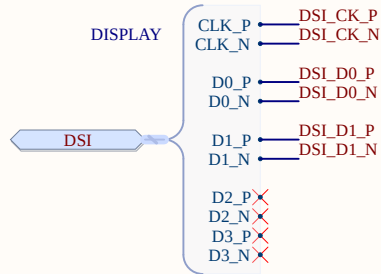


Pinout is inverted (pin 8 is pin 1, pin 7 is pin 2 etc) since the connector has been moved on the other side of the board with respect to the display.

NO.	SYMBOL	DISCRIPTION	I/O
1	GND	Ground	P
2	NC	OPEN.	--
3	VDD	Supply voltage (3.3V)	P
4	SCL	I2C clock input	I
5	SDA	I2C data input and output	I
6	INT	External interrupt to the host	I
7	RST	External Reset, Low is active	I
8	GND	Ground	P

Pinout is inverted (pin 20 is pin 1, pin 19 is pin 2 etc) since the connector has been moved on the other side of the board with respect to the display.

NO.	SYMBOL	DISCRIPTION	I/O
1	NC	-	-
2	LEDK	Cathode pin of backlight.	P
3	NC	-	-
4	LEDA	Anode pin of backlight.	P
5	NC	-	-
6	VCI	Supply voltage (3.3V).	P
7	IOVCC	Supply voltage for I/O system.	P
8	TE	Tearing effect output Leave the pin to open when not in use	O
9	RESET	The external reset input.	I
10	GND	Ground.	P
11	MIPI_D1P	MIPI DSI Differential Data pair.	I/O
12	MIPI_D1N	MIPI DSI Differential Data pair.	P
13	GND	Ground.	P
14	MIPI_CLP	MIPI DSI Differential Clock pair.	I
15	MIPI_CLN	MIPI DSI Differential Clock pair.	P
16	GND	Ground.	P
17	MIPI_D0P	MIPI DSI Differential Data pair.	I/O
18	MIPI_D0N	MIPI DSI Differential Data pair.	P
19	GND	Ground.	P
20	GND	Ground.	P



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Title: **DISPLAY**

ID: **ASX00039**

Date: 17/10/2024 Time: 13:08:33

File: DISPLAY.SchDoc

Revision: **V0.5**

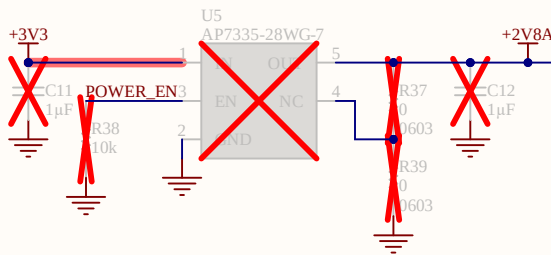
Sheet 4 of 8

Author: **Silvio Navaretti**

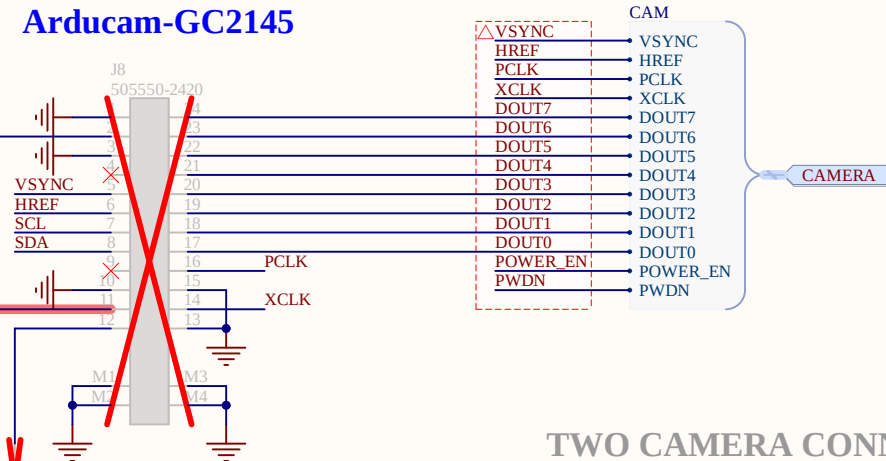
RevAuthor: **Silvio Navaretti**



CAMERA 2V8 LDO



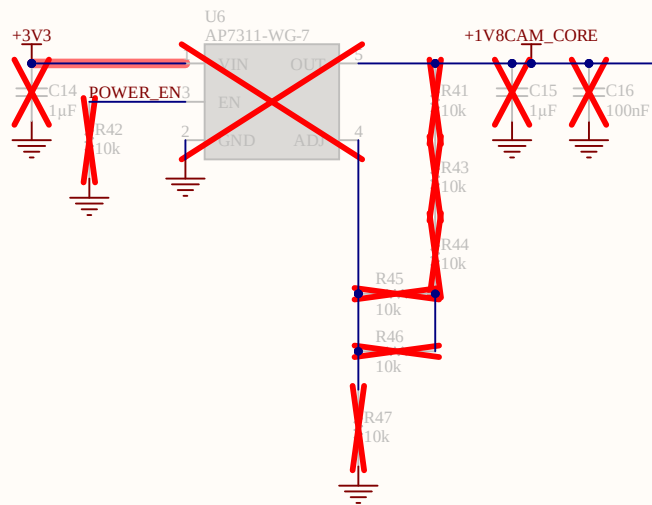
CAMERA Arducam-GC2145



Arducam-GC2145 camera module pinout

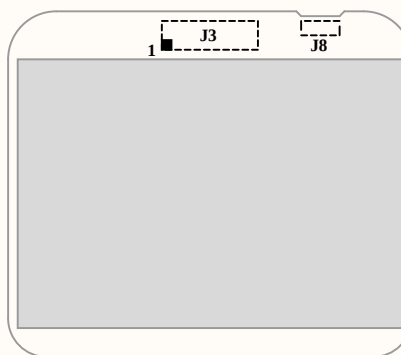
CONNECTOR	PIN	DESCRIPTION
	NO.	定义
	1	AGND
	2	AVDD2.8V
	3	GND
	4	NC
	5	FVLD
	6	LVLD
	7	SCL
	8	SDA
	9	NC
	10	DGND
	11	IOVDD1.8V
	12	DVDD1.8V
	13	DGND
	14	MCLK
	15	DGND
	16	PCLK
	17	D0
	18	D1
	19	D2
	20	D3
	21	D4
	22	D5
	23	D6
	24	D7

CAMERA 1V8 LDO



**TWO CAMERA CONNECTORS:
FLAT CABLE OR 2.54mm HEADER.
THEY CANNOT BE USED AT THE
SAME TIME**

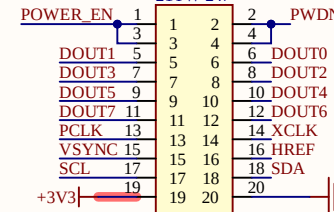
TOP VIEW
J3 is placed on TOP
It is accessible from BOTTOM bein pass through



CAMERA 2.54mm header

GIGA PINS
ON SILK

66
66
64
62
60
58
56
54
SCL1
3V3



GIGA PINS
ON SILK

67
67
65
63
61
59
57
55
SDA1
GND

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Title: **CAMERA**

ID: **ASX00039**

Revision: **V0.5**

Date: **17/10/2024**

Time: **13:08:35**

Sheet **5** of **8**

File: **CAMERA.SchDoc**

Author: **Silvio Navaretti**

RevAuthor: **Silvio Navaretti**



1

2

3

4

A

A

B

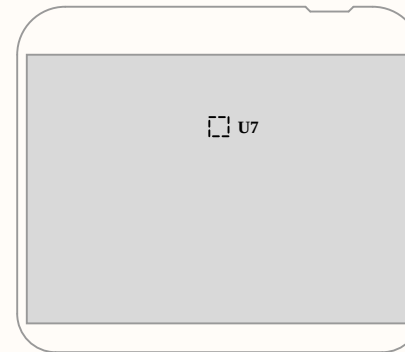
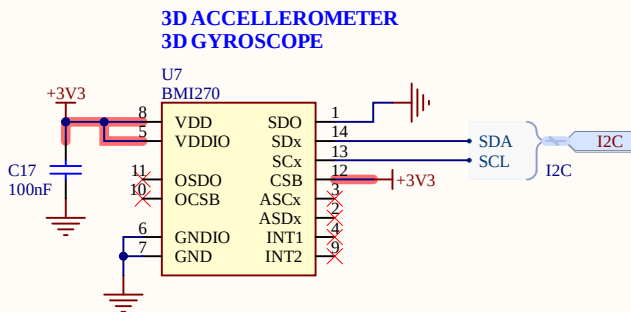
B

C

C

D

D



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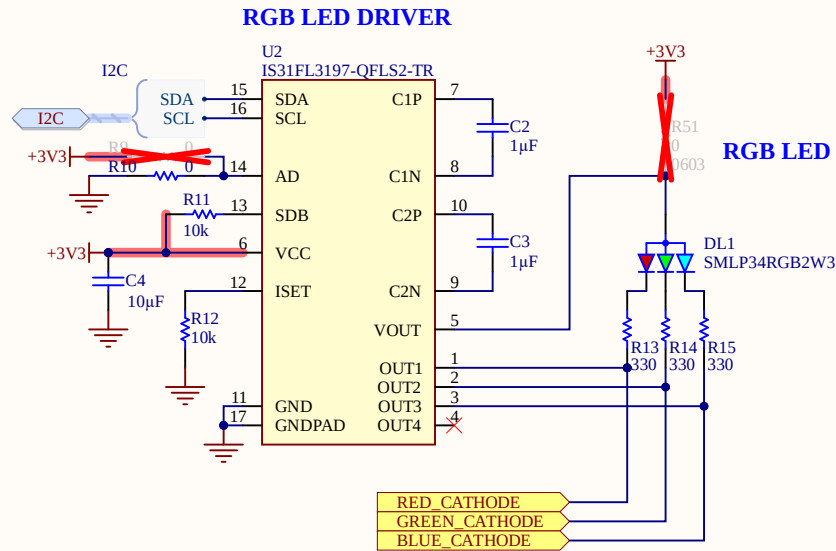
Title: ACCELEROMETER			
ID: ASX00039	Revision: V0.5		
Date: 17/10/2024 Time: 13:08:36	Sheet 6 of 8		
File: ACCELEROMETER.SchDoc	Author: Silvio Navaretti	RevAuthor: Silvio Navaretti	

1

2

3

4



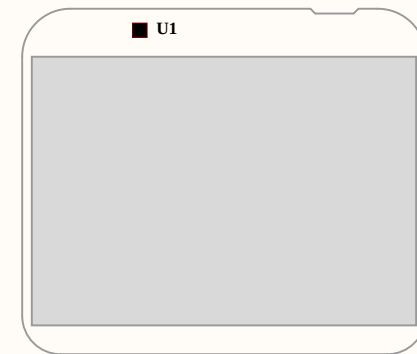
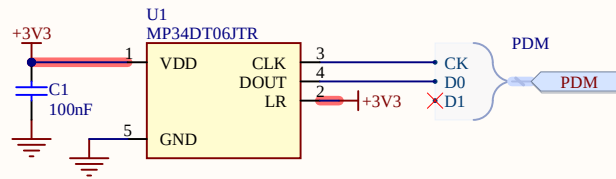
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Title: RGB		 	
ID: ASX00039	Version: V0.5		
Date: 17/10/2024	Time: 13:08:38	Sheet 7 of 8	RevAuthor: Silvio Navaretti
File: RGB_LED.SchDoc		Author: Silvio Navaretti	

MICROPHONE



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Title: MICROPHONE				
ID: ASX00039	Version: V0.5			
Date: 17/10/2024	Time: 13:08:39	Sheet 8 of 8		
File: MICROPHONE.SchDoc		Author: Silvio Navaretti	RevAuthor: Silvio Navaretti	