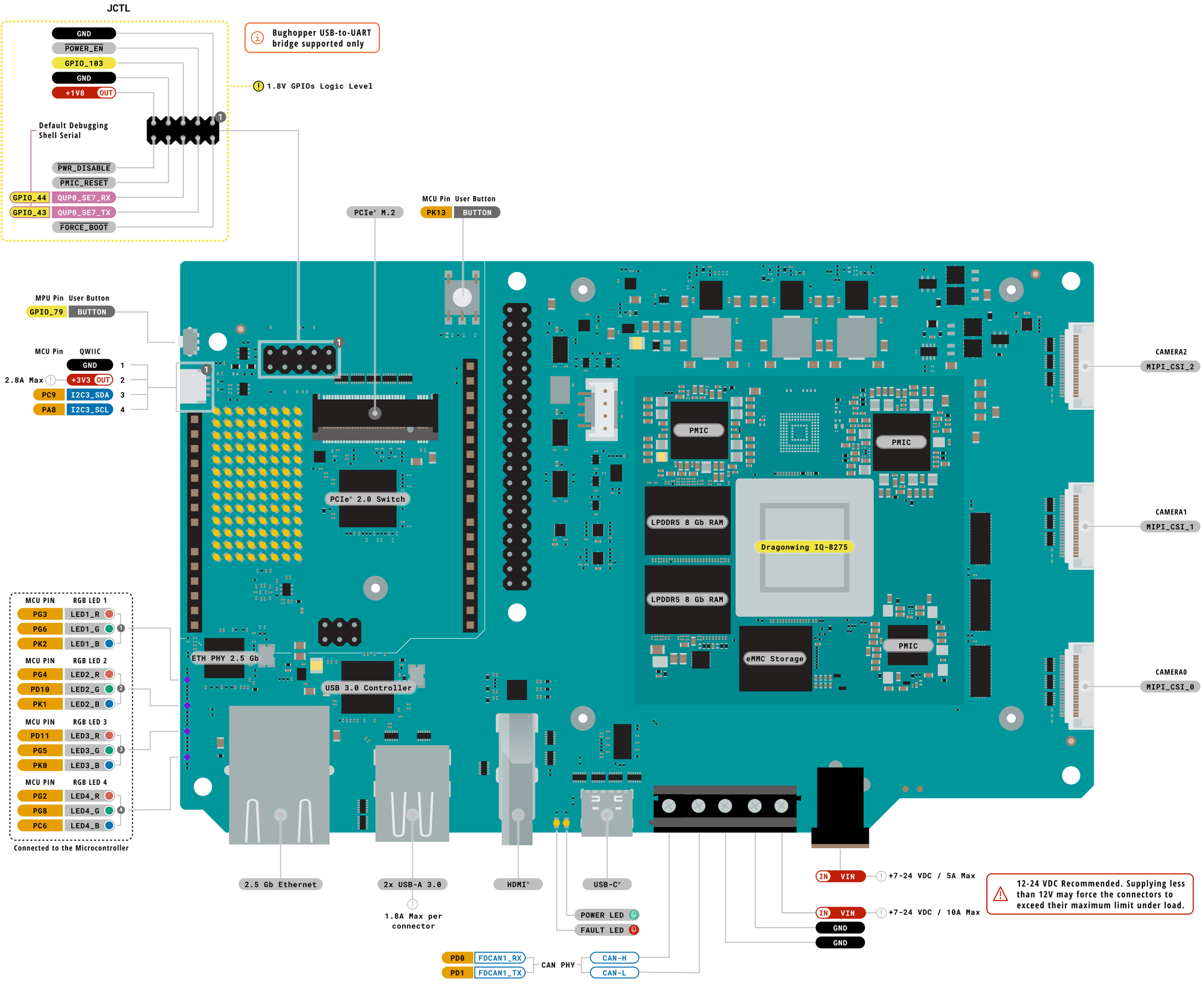

Legend:

- Power
- Ground
- IN Power Input
- OUT Power Output
- GPIO Digital External
- Analog External
- Main Part
- Secondary Part
- Internal Component
- Other Pins (Reset, System Control, Debugging)
- I2C — D Default
- SPI — D Default
- UART/USART — D Default
- Other SERIAL
- Analog — D Default
- PWM/Timer
- LED
- RGB LED

WARNING JCTL GPIO pins are 1.8V logic only

WARNING UART bridge used on JCTL must be open-drain to avoid back-powering

+3V3 output pin on the Qwiic connector is protected by a power switch limited to 2.8 Amps

ARDUINO VENTUNO Q

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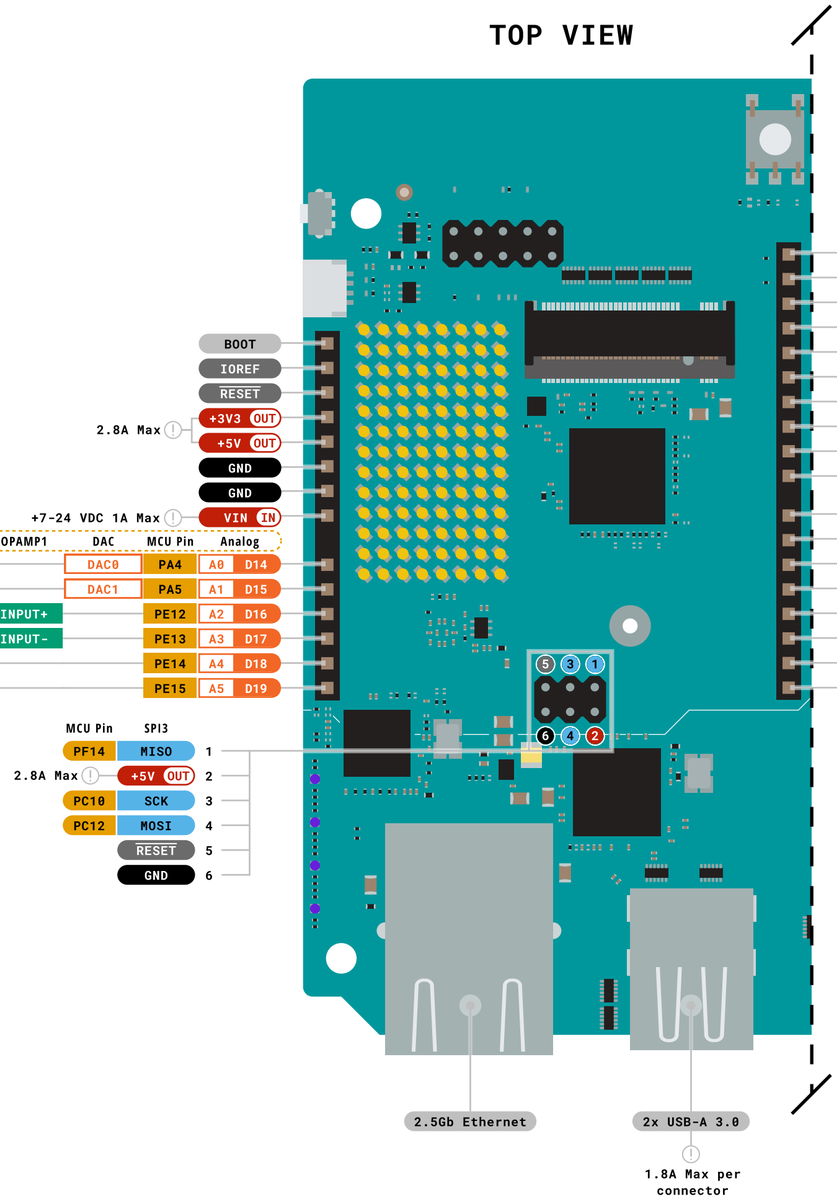
WARNING!

Advanced Section

The following information is for advanced use only and may not be officially supported by Arduino software

TOP VIEW

TOP VIEW



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- Analog — D Default
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- RGB LED

WARNING A0 and A1 are not 5V tolerant

VIN pin on JANALOG is protected by a 1.1 Amps PTC

+3V3 and +5V output pins on JANALOG and JSPI are protected by power switches limited to 2.8 Amps

JANALOG pins A4 and A5 do not have a STM32H5F5 I2C connected to them

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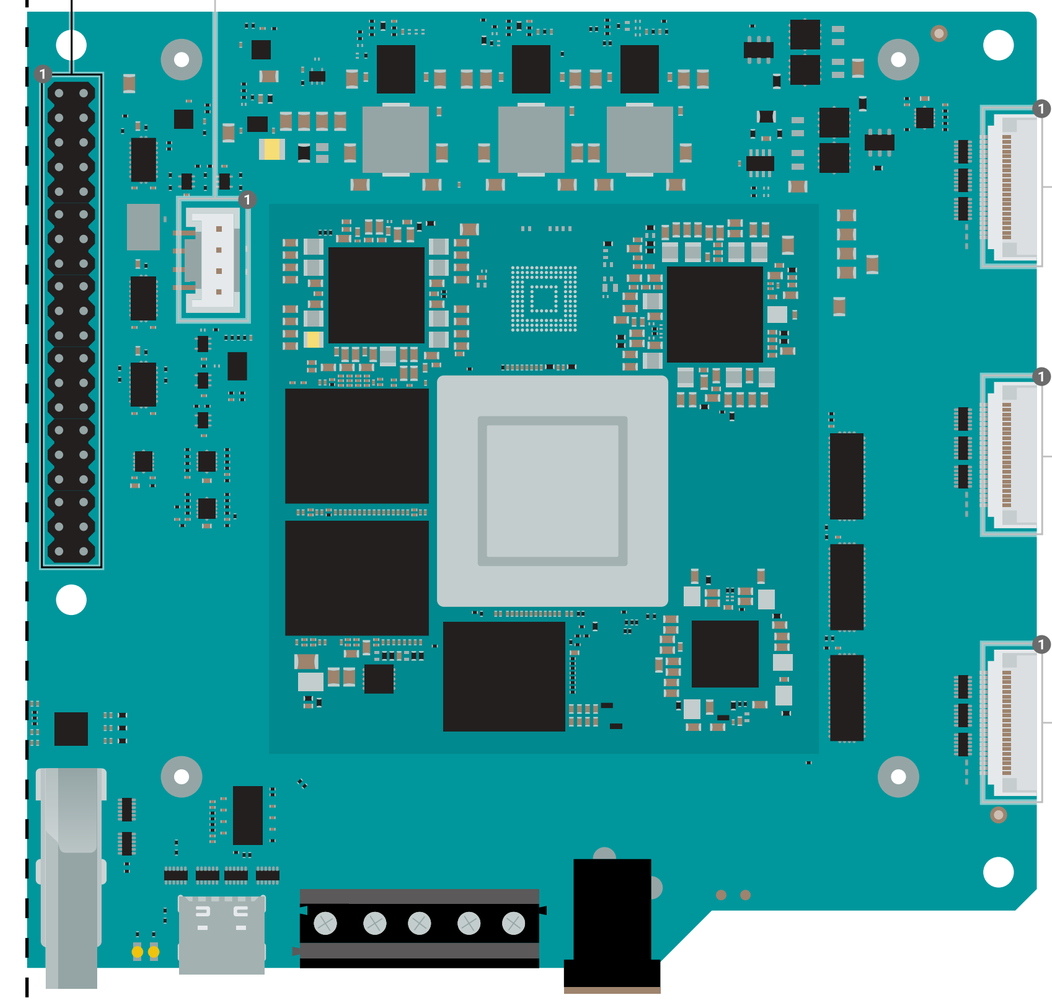
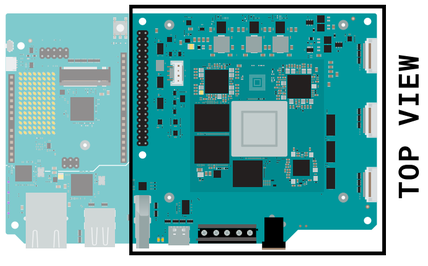
	+3V3 OUT	1	2	OUT +5V	
SE0_SDA	GPIO_17	3	4	OUT +5V	
SE0_SCL	GPIO_18	5	6	GND	
	GPIO_83	7	8	GPIO_86	SE2_TX
	GND	9	10	GPIO_87	SE2_RX
SE2_RFR	GPIO_85	11	12	GPIO_116	I2S1_SCK
	GPIO_109	13	14	GND	
	GPIO_90	15	16	GPIO_105	
	+3V3 OUT	17	18	GPIO_106	
SE3_MOSI	GPIO_26	19	20	GND	
SE3_MISO	GPIO_25	21	22	GPIO_107	
SE3_SCK	GPIO_27	23	24	GPIO_28	SE3_CS
	GND	25	26	GPIO_88	
SE1_SDA	GPIO_19	27	28	GPIO_20	SE1_SCL
	GPIO_89	29	30	GND	
	GPIO_80	31	32	GPIO_77	
	GPIO_81	33	34	GND	
I2S1_WS	GPIO_117	35	36	GPIO_84	SE2_CTS
	GPIO_108	37	38	GPIO_118	I2S1_DATA0
	GND	39	40	GPIO_119	I2S1_DATA1

+3V3 and +5V power rails are limited to 2.8 Amps

FAN	MCU Pin
1 +5V OUT	
2 TACH	PA7
3 PWM	PG15
4 GND	

TOP VIEW





TOP VIEW

CAMERA2	
1	GND
2	CSI2_C0_LN0_M
3	CSI2_B0_LN0_P
4	GND
5	CSI2_B1_LN1_M
6	CSI2_A1_LN1_P
7	GND
8	CSI2_A0_CLK_M
9	CSI2_NC_CLK_P
10	GND
11	CSI2_A2_LN2_M
12	CSI2_C1_LN2_P
13	GND
14	CSI2_C2_LN3_M
15	CSI2_B2_LN3_P
16	GND
17	GPIO_82
18	NC
19	GND
20	CCI_I2C4_SCL1
21	CCI_I2C4_SDA1
22 OUT	+3V3

CAMERA1	
1	GND
2	CSI1_C0_LN0_M
3	CSI1_B0_LN0_P
4	GND
5	CSI1_B1_LN1_M
6	CSI1_A1_LN1_P
7	GND
8	CSI1_A0_CLK_M
9	CSI1_NC_CLK_P
10	GND
11	CSI1_A2_LN2_M
12	CSI1_C1_LN2_P
13	GND
14	CSI1_C2_LN3_M
15	CSI1_B2_LN3_P
16	GND
17	GPIO_75
18	NC
19	GND
20	CCI_I2C2_SCL1
21	CCI_I2C2_SDA1
22 OUT	+3V3

CAMERA0	
1	GND
2	CSI0_C0_LN0_M
3	CSI0_B0_LN0_P
4	GND
5	CSI0_B1_LN1_M
6	CSI0_A1_LN1_P
7	GND
8	CSI0_A0_CLK_M
9	CSI0_NC_CLK_P
10	GND
11	CSI0_A2_LN2_M
12	CSI0_C1_LN2_P
13	GND
14	CSI0_C2_LN3_M
15	CSI0_B2_LN3_P
16	GND
17	GPIO_64
18	NC
19	GND
20	CCI_I2C0_SCL1
21	CCI_I2C0_SDA1
22 OUT	+3V3

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JHAT power rails are protected by power switches limited to 2.8 Amps

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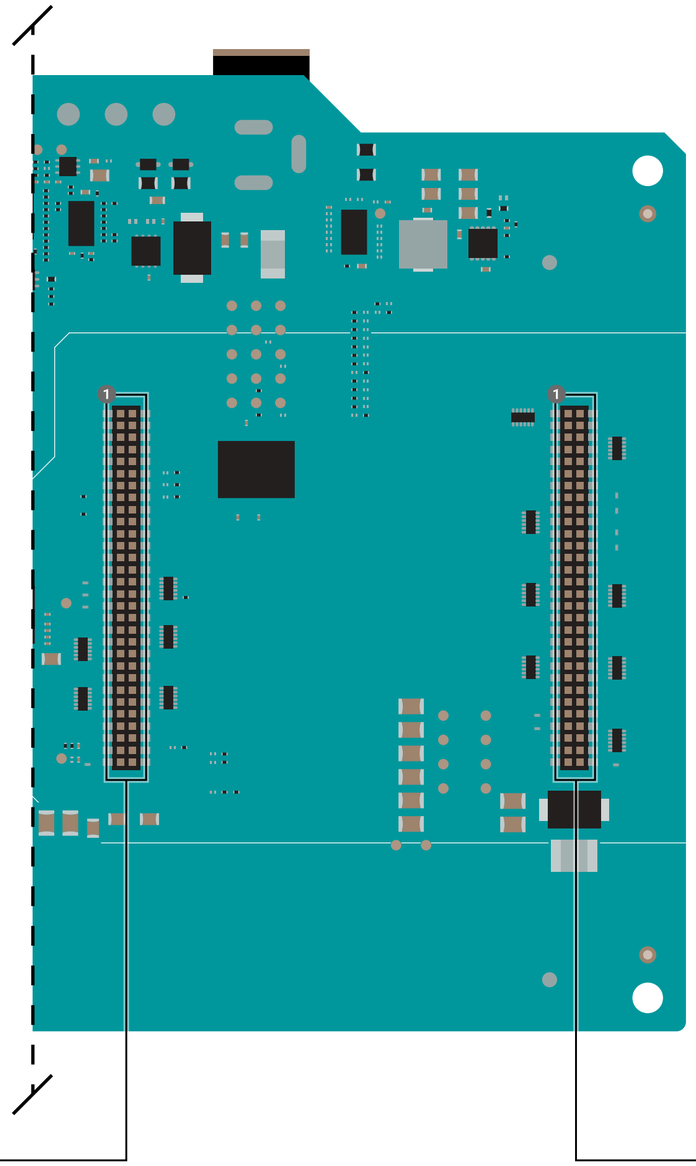
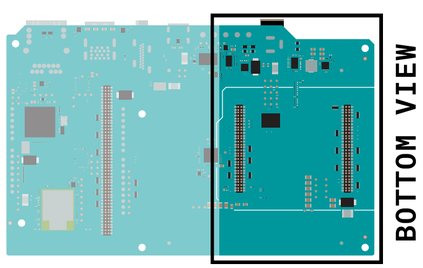
JMISC

PA9	MCU_PSSI_D0	1	2	MCU_TRACE_CLK	PE2		
PC7	MCU_PSSI_D1	3	4	MCU_TRACE_D0	PE3		
PC8	MCU_PSSI_D2	5	6	MCU_TRACE_D1	PE4		
PE1	MCU_PSSI_D3	7	8	MCU_TRACE_D2	PE5		
PC11	MCU_PSSI_D4	9	10	MCU_TRACE_D3	PE6		
PD3	MCU_PSSI_D5	11	12	MCU_USART2_RX	PE7		
PF4	MCU_PSSI_D6	13	14	MCU_USART2_TX	PE8		
PI7	MCU_PSSI_D7	15	16	MCU_I2C2_SCL	PF1		
PA6	MCU_PSSI_PDCK	17	18	MCU_I2C2_SDA	PF0		
PI5	MCU_PSSI_RDY	19	20	MCU_GPIO_PA0	PA0		
PH8	MCU_PSSI_DE	21	22	MCU_GPIO_PA1	PA1		
PA11	MCU_UART4_RX	23	24	MCU_GPIO_PA2	PA2		
PA12	MCU_UART4_TX	25	26	GND			
	GND	27	28	EAR_P			
	MIC_IN+	29	30	EAR_M			
	MIC_IN-	31	32	LINEOUT_P			
	MIC_BIAS	33	34	LINEOUT_M			
	GND	35	36	HPH_L			
MISO	SOC_GPIO_10_SE0	37	38	HPH_R			
MOSI	SOC_GPIO_11_SE0	39	40	HPH_REF			
SCK	SOC_GPIO_12_SE0	41	42	HS_DET			
CS0	SOC_GPIO_13_SE0	43	44	GND			
CS2	SOC_GPIO_15_SE0	45	46	SOC_GPIO_120	I2S2_SCK		
CS1	SOC_GPIO_14_SE0	47	48	SOC_GPIO_121	I2S2_WS		
	SOC_GPIO_73	49	50	SOC_GPIO_122	I2S2_DATA0		
	SOC_GPIO_74	51	52	SOC_GPIO_123	I2S2_DATA1		
	+3V3 OUT	53	54	OUT +5V USB			
	+3V3 OUT	55	56	OUT +5V USB			
	+1V8 OUT	57	58	GND			
MCU_VBAT	SOC_VCOIN IN	59	60	NC			



JMEDIA

GND	1	2	GND		
MIPI_DSI0_CLK_M	3	4	MIPI_DSI0_L1_P		
MIPI_DSI0_CLK_P	5	6	MIPI_DSI0_L1_M		
GND	7	8	GND		
MIPI_DSI0_L2_M	9	10	MIPI_DSI0_L0_P		
MIPI_DSI0_L2_P	11	12	MIPI_DSI0_L0_M		
GND	13	14	GND		
MIPI_DSI0_L3_M	15	16	SOC_CAM_MCLK0	GPIO_67	
MIPI_DSI0_L3_P	17	18	SOC_CAM_MCLK1	GPIO_68	
GND	19	20	GND		
CSI0_C0_LN0_M	21	22	CCI_I2C2_SDA1	GPIO_59	
CSI0_B0_LN0_P	23	24	CCI_I2C2_SCL1	GPIO_60	
GND	25	26	GND		
CSI0_B1_LN1_M	27	28	CSI1_B2_LN3_P		
CSI0_A1_LN1_P	29	30	CSI1_C2_LN3_M		
GND	31	32	GND		
CSI0_A0_CLK_M	33	34	CSI1_C1_LN2_P		
CSI0_NC_CLK_P	35	36	CSI1_A2_LN2_M		
GND	37	38	GND		
CSI0_A2_LN2_M	39	40	CSI1_NC_CLK_P		
CSI0_C1_LN2_P	41	42	CSI1_A0_CLK_M		
GND	43	44	GND		
CSI0_C2_LN3_M	45	46	CSI1_A1_LN1_P		
CSI0_B2_LN3_P	47	48	CSI1_B1_LN1_M		
GND	49	50	GND		
GPIO_58	CCI_I2C0_SCL1	51	52	CSI1_B0_LN0_P	
GPIO_57	CCI_I2C0_SDA1	53	54	CSI1_C0_LN0_M	
GND	55	56	GND		
1.5A Max !	VIN IN	57	58	OUT +3V3	
	VIN IN	59	60	OUT +3V3	



BOTTOM VIEW

Legend:

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- SPI — D Default
- UART/USART — D Default
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- RGB LED

WARNING Except for VIN, the power rails on JMEDIA and JMISC are unprotected and have no current limiting

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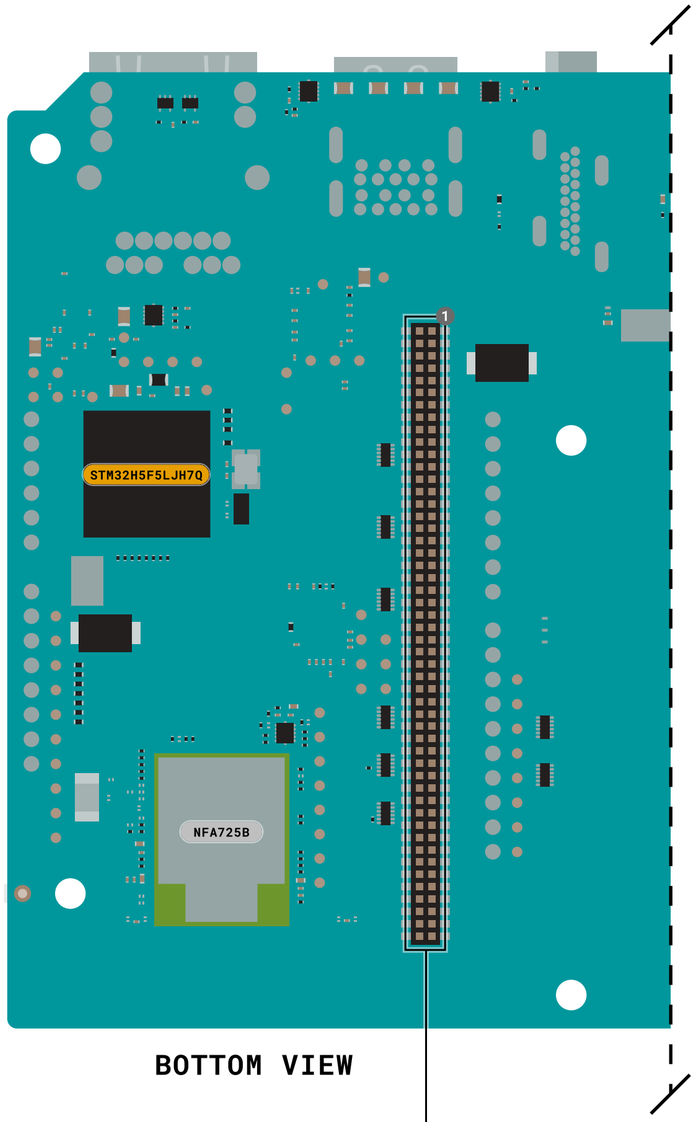
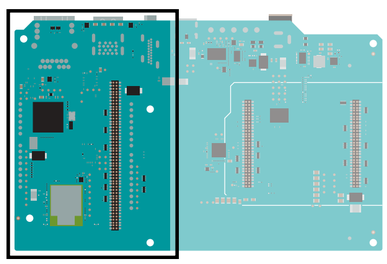


BOTTOM VIEW



BOTTOM VIEW

JOMEGA

	GND	2	1	IN	VIN	
	GND	4	3	IN	VIN	
	GND	6	5	IN	VIN	
	GND	8	7	IN	VIN	
	GND	10	9	IN	VIN	
	GND	12	11	IN	VIN	
	GND	14	13	IN	VIN	
	GND	16	15		GND	
	USB1_SS_TX_P	18	17		GND	
	USB1_SS_TX_N	20	19		GND	
	GND	22	21		GND	
	USB1_HS_D_P	24	23		GND	
	USB1_HS_D_N	26	25		GND	
	GND	28	27		GND	
	USB1_SS_RX_P	30	29		GND	
	USB1_SS_RX_N	32	31		GND	
	GND	34	33		GND	
	USB2_SS_TX_P	36	35		GND	
	USB2_SS_TX_N	38	37		GND	
	GND	40	39		MCU_GPIO_PC0	
	USB2_HS_D_P	42	41		MCU_GPIO_PC1	
	USB2_HS_D_N	44	43		MCU_GPIO_PC2	
	GND	46	45		MCU_GPIO_PC3	
	USB2_SS_RX_P	48	47		MCU_GPIO_PD12	
	USB2_SS_RX_N	50	49		MCU_GPIO_PD13	
	GND	52	51		MCU_GPIO_PD14	
	USB1_PWRON	54	53		MCU_GPIO_PD15	
	USB1_OVERCUR	56	55		MCU_GPIO_PI2	
	USB2_PWRON	58	57		MIC2_IN+	
	USB2_OVERCUR	60	59		MIC2_IN-	
GPIO_39	MISO	62	61		MIC2_BIAS	
GPIO_40	MOSI	64	63		JTAG_TMS	
GPIO_37	SCK	66	65		JTAG_TDO	
GPIO_38	CS	68	67		JTAG_TDI	
	PM_PS_HOLD	70	69		JTAG_TCK	
GPIO_52	FORCE_USB_BOOT	72	71		JTAG_SRST	
	POWER_EN	74	73		JTAG_TRST	
GPIO_79	USER_BUTTON	76	75		GND	
	PMIC_RESET	78	77	OUT	+1V8_SPX3	
	RTSS_RESET	80	79	OUT	+1V8	
	RTSS_PS_HOLD	82	81	OUT	+1V8	
	GND	84	83		QUP0_SE7_TX	GPIO_71
PD5	FDCAN1_TX	86	85		QUP0_SE7_RX	GPIO_72
PI9	FDCAN1_RX	88	87		PWR_DISABLE	
	GND	90	89		FORCE_BOOT	
PA10	FDCAN2_TX	92	91	OUT	+3V3	
PD9	FDCAN2_RX	94	93	OUT	+3V3	
	GND	96	95	OUT	+3V3	
PF6	FDCAN3_TX	98	97	OUT	+5V	
PF7	FDCAN3_RX	100	99	OUT	+5V	

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WARNING Power rails on JOMEGA are unprotected and have no current limiting

+1V8 marked pins are the recommended for powering peripherals. Avoid +1V8_SPX3

ARDUINO VENTUNO Q

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