

**Legend:**

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

**MAXIMUM** Total output current sourced or sunk by sum of all I/Os and control pins is 140 mA

**MAXIMUM** Output current sourced or sunk by any I/O and control pin is 20 mA

CIP0/COPI have previously been referred to as MISO/MOSI

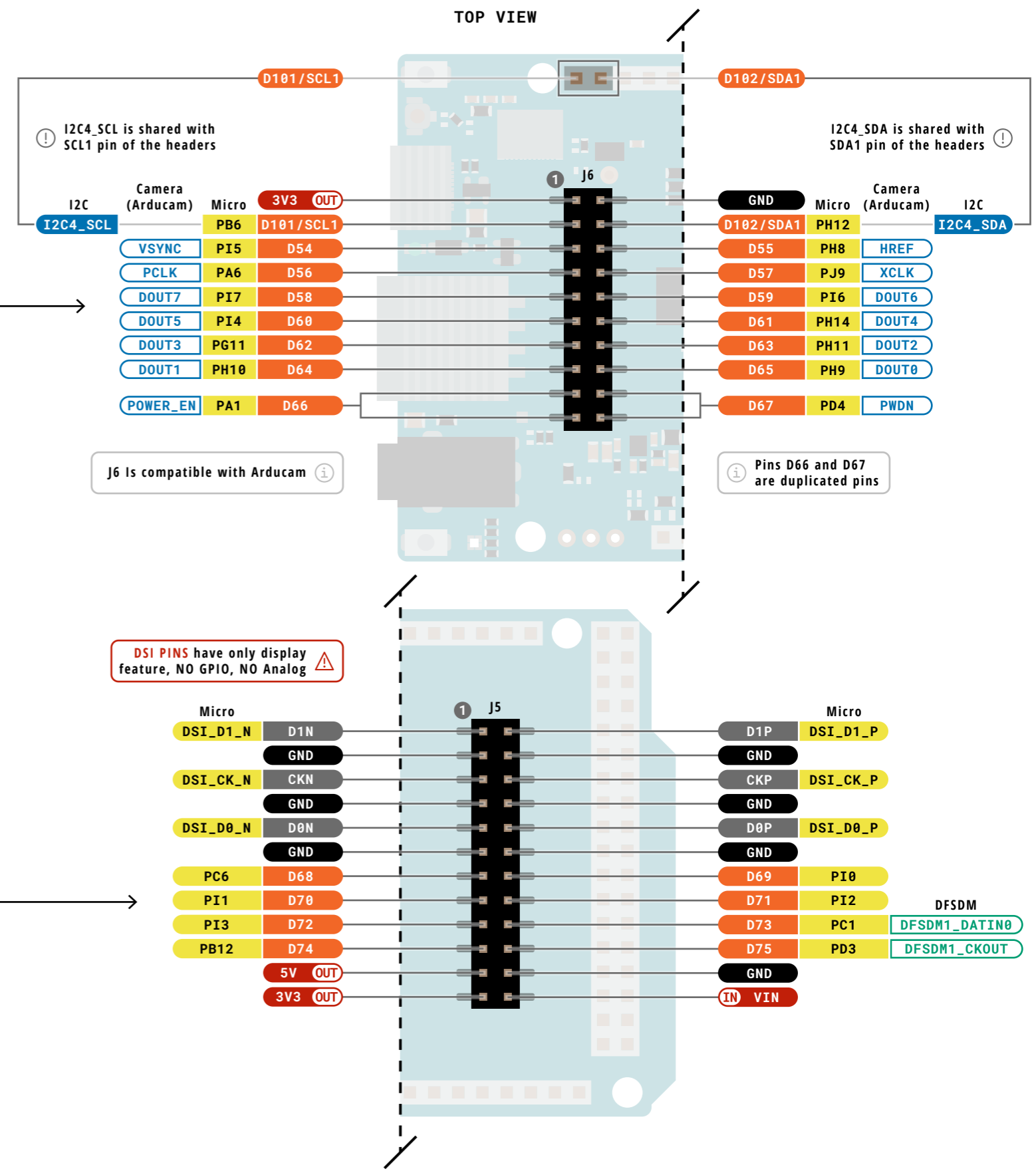
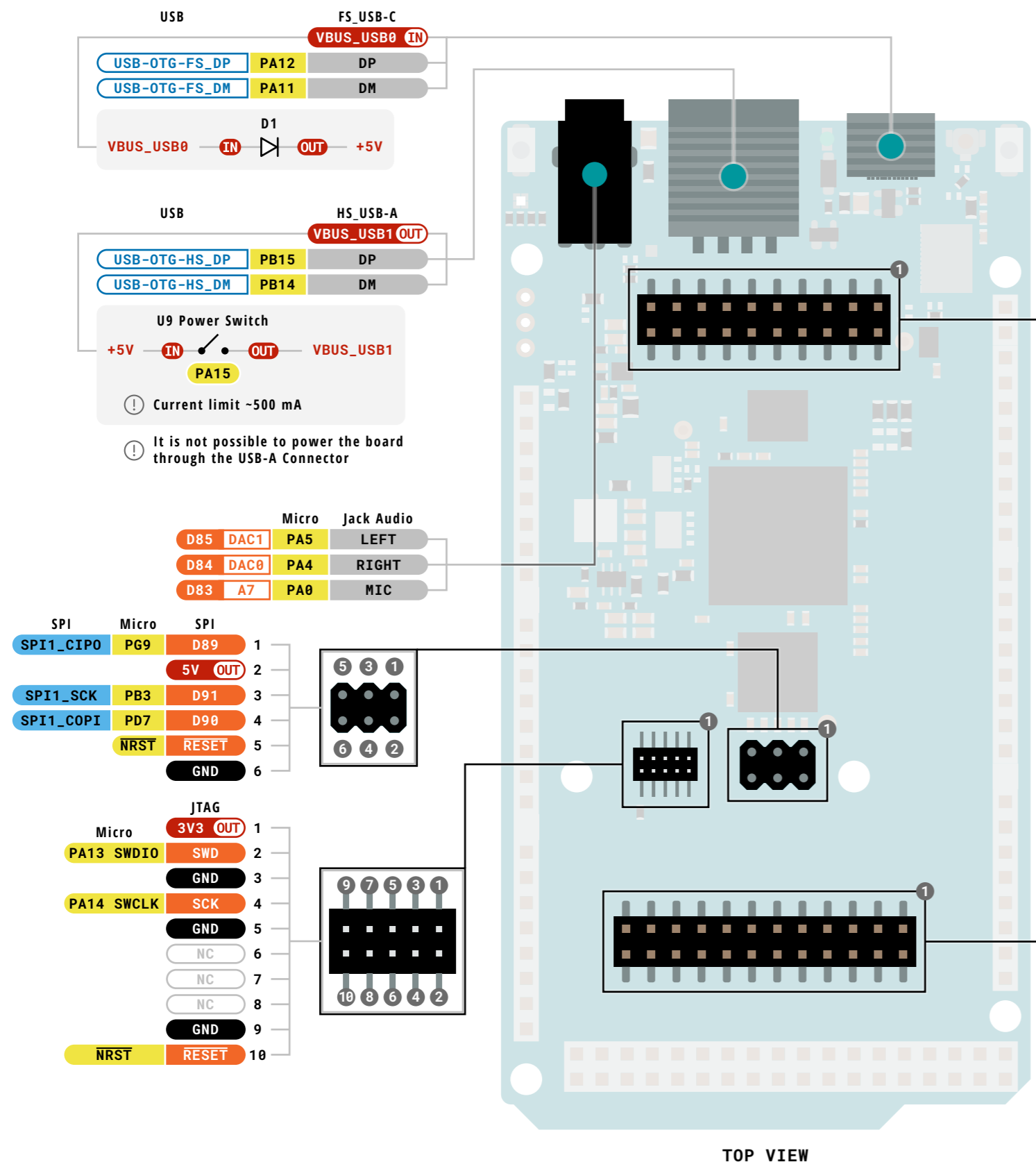
**GIGA R1 WIFI BOARD**

**ARDUINO**

SKU code: ABX00063  
Full Pinout - Page 1 of 9  
Last update: 12 Jul, 2023

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**Legend:**

<span style="color:red">■</span> Power	<span style="border:1px solid red; padding:0 2px;">IN</span> Power Input	<span style="background-color:orange; border:1px solid orange; padding:0 2px;"> </span> GPIO Digital External	<span style="background-color:blue; border:1px solid blue; padding:0 2px;"> </span> I2C	<span style="border:1px solid blue; border-radius:50%; padding:0 2px;">D</span> Default	<span style="background-color:gray; border:1px solid gray; padding:0 2px;"> </span> LED
<span style="background-color:black; border:1px solid black; padding:0 2px;"> </span> Ground	<span style="border:1px solid red; padding:0 2px;">OUT</span> Power Output	<span style="background-color:yellow; border:1px solid yellow; padding:0 2px;"> </span> Analog External	<span style="background-color:lightblue; border:1px solid lightblue; padding:0 2px;"> </span> SPI	<span style="border:1px solid lightblue; border-radius:50%; padding:0 2px;">D</span> Default	<span style="background-color:lightgray; border:1px solid lightgray; padding:0 2px;"> </span> RGB LED
		<span style="background-color:yellow; border:1px solid yellow; padding:0 2px;"> </span> Main Part	<span style="background-color:purple; border:1px solid purple; padding:0 2px;"> </span> UART/USART	<span style="border:1px solid purple; border-radius:50%; padding:0 2px;">D</span> Default	<span style="border:1px solid gray; padding:0 2px;"> </span> Other
		<span style="background-color:orange; border:1px solid orange; padding:0 2px;"> </span> Secondary Part	<span style="border:1px solid blue; padding:0 2px;"> </span> Other SERIAL Communication	<span style="border:1px solid green; border-radius:50%; padding:0 2px;">D</span> Default	
		<span style="background-color:lightgray; border:1px solid lightgray; padding:0 2px;"> </span> Internal Component	<span style="background-color:green; border:1px solid green; padding:0 2px;"> </span> Analog		
		<span style="background-color:darkgray; border:1px solid darkgray; padding:0 2px;"> </span> Other Pins (Reset, System Control, Debugging)	<span style="border:1px solid green; padding:0 2px;"> </span> PWM/Timer		

**⚠️ MAXIMUM** Total output current sourced or sunk by sum of all I/Os and control pins is 140 mA

**⚠️ MAXIMUM** Output current sourced or sunk by any I/O and control pin is 20 mA

**i** CIP0/COPI have previously been referred to as MISO/MOSI

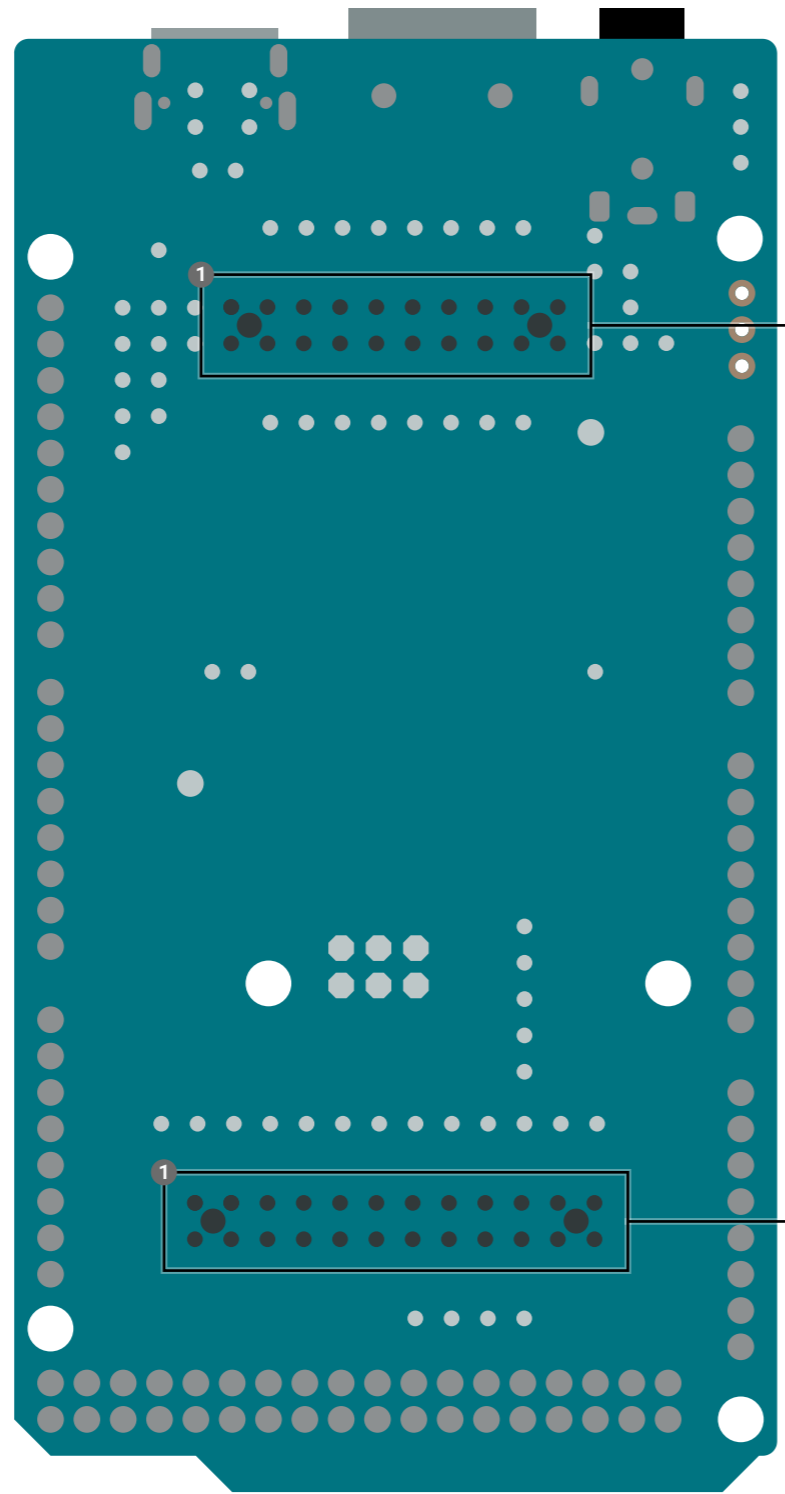
**ARDUINO GIGA R1 WIFI BOARD**

SKU code: ABX00063  
Full Pinout - Page 2 of 9  
Last update: 12 Jul, 2023

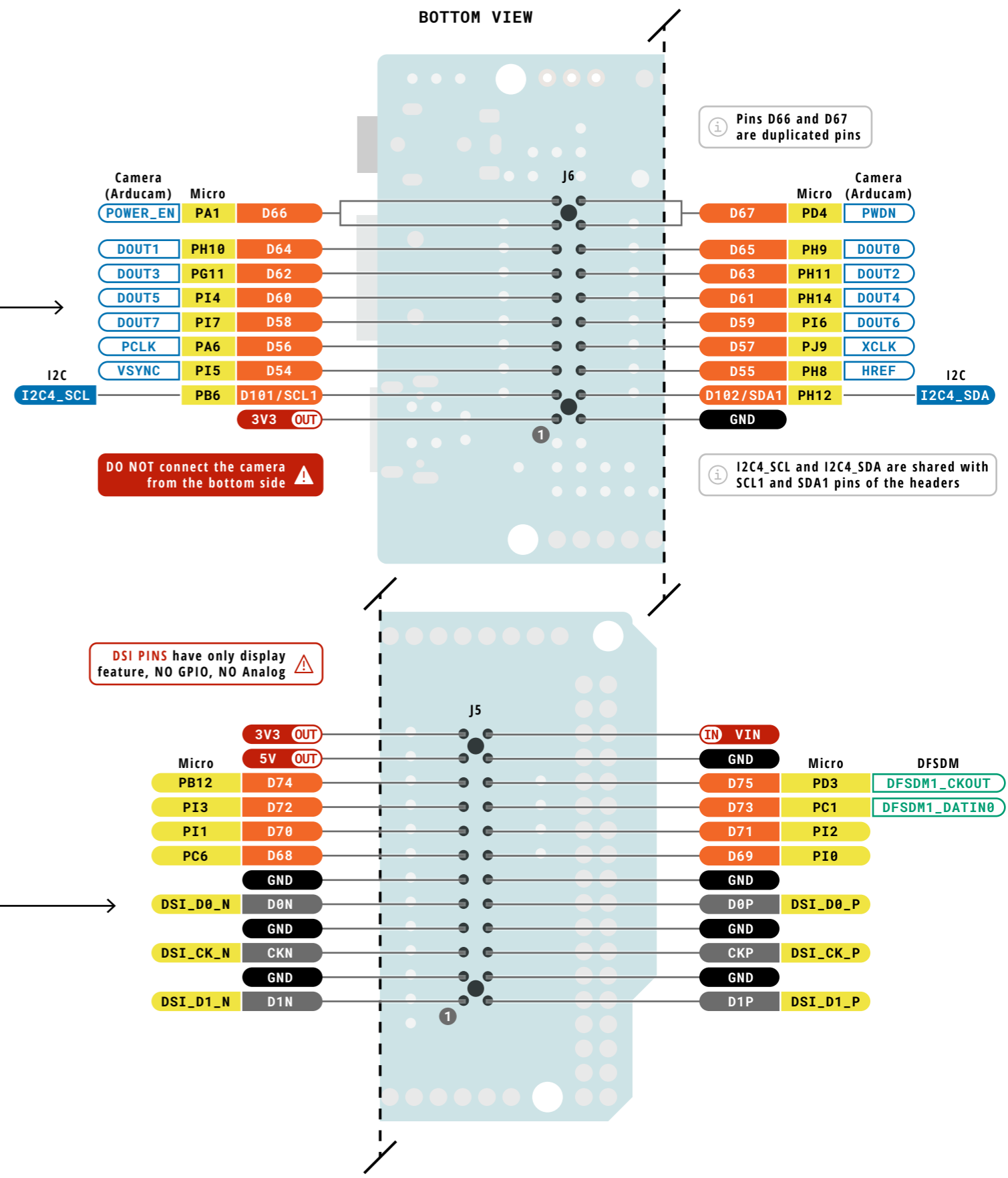
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Connectors J5 and J6 are pass through pins and can be connected also on the other side of the board, from the bottom



BOTTOM VIEW



Legend:

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

**MAXIMUM** Total output current sourced or sunk by sum of all I/Os and control pins is 140 mA

**MAXIMUM** Output current sourced or sunk by any I/O and control pin is 20 mA

**i** CIP0/COPI have previously been referred to as MISO/MOSI

**ARDUINO**

SKU code: ABX00063  
Full Pinout - Page 3 of 9  
Last update: 12 Jul, 2023

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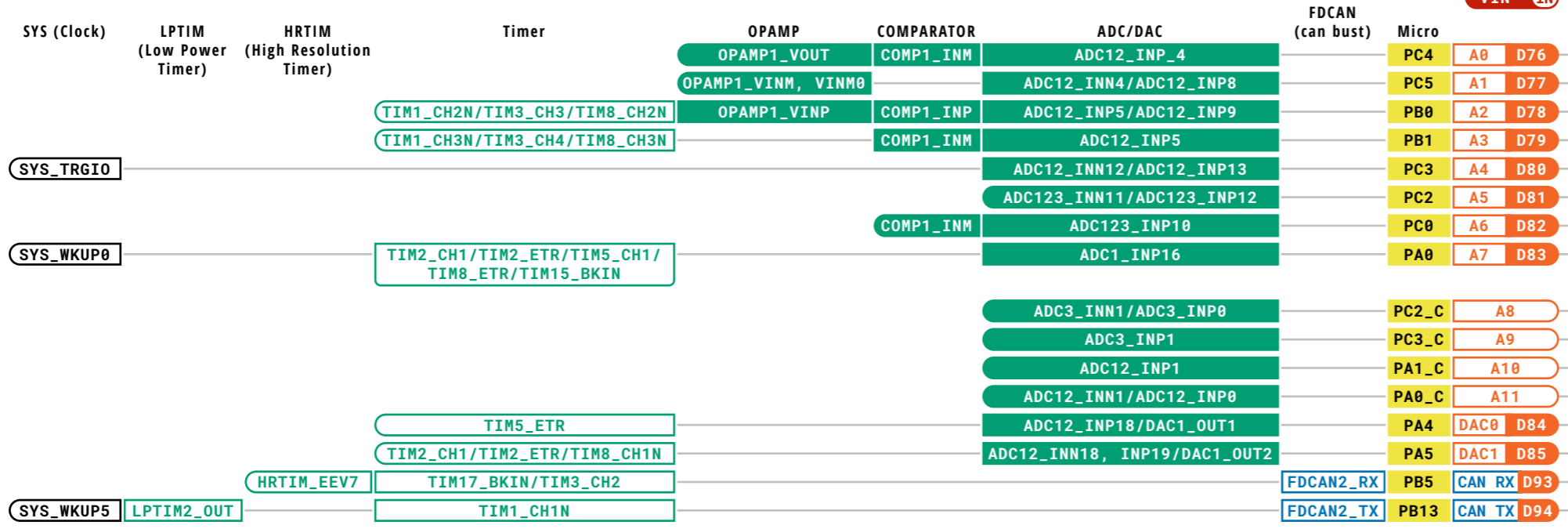
WARNING!

## Advanced Section

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

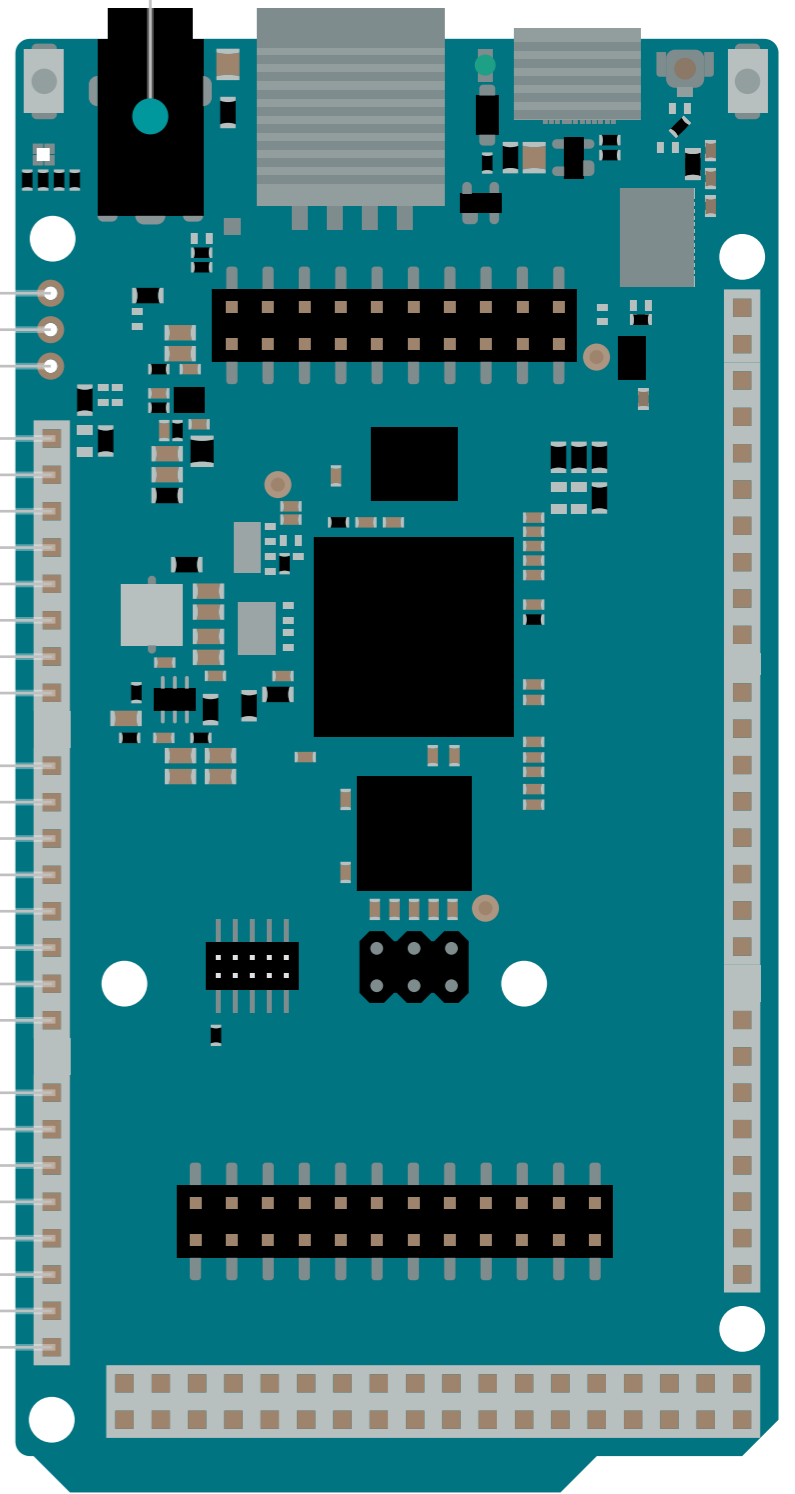


ADC/DAC		Micro	Jack Audio
ADC12_INN18/ADC12_INP19 /DAC1_OUT2	D85 DAC1	PA5	LEFT
ADC12_INP18/DAC1_OUT1	D84 DAC0	PA4	RIGHT
ADC1_INP16	D83 A7	PA0	MIC



VRTC pin can be connected to a coin cell that can keep turned on the H7 RTC Timer  
 VRTC pin CANNOT power the board

- OFF
- GND
- VRTC IN
- NC
- IOREF
- RESET
- 3V3 OUT
- 5V OUT
- GND
- GND
- VIN IN



TOP VIEW

Legend:

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

**⚠️ MAXIMUM** Total output current sourced or sunk by sum of all I/Os and control pins is 140 mA

**⚠️ MAXIMUM** Output current sourced or sunk by any I/O and control pin is 20 mA

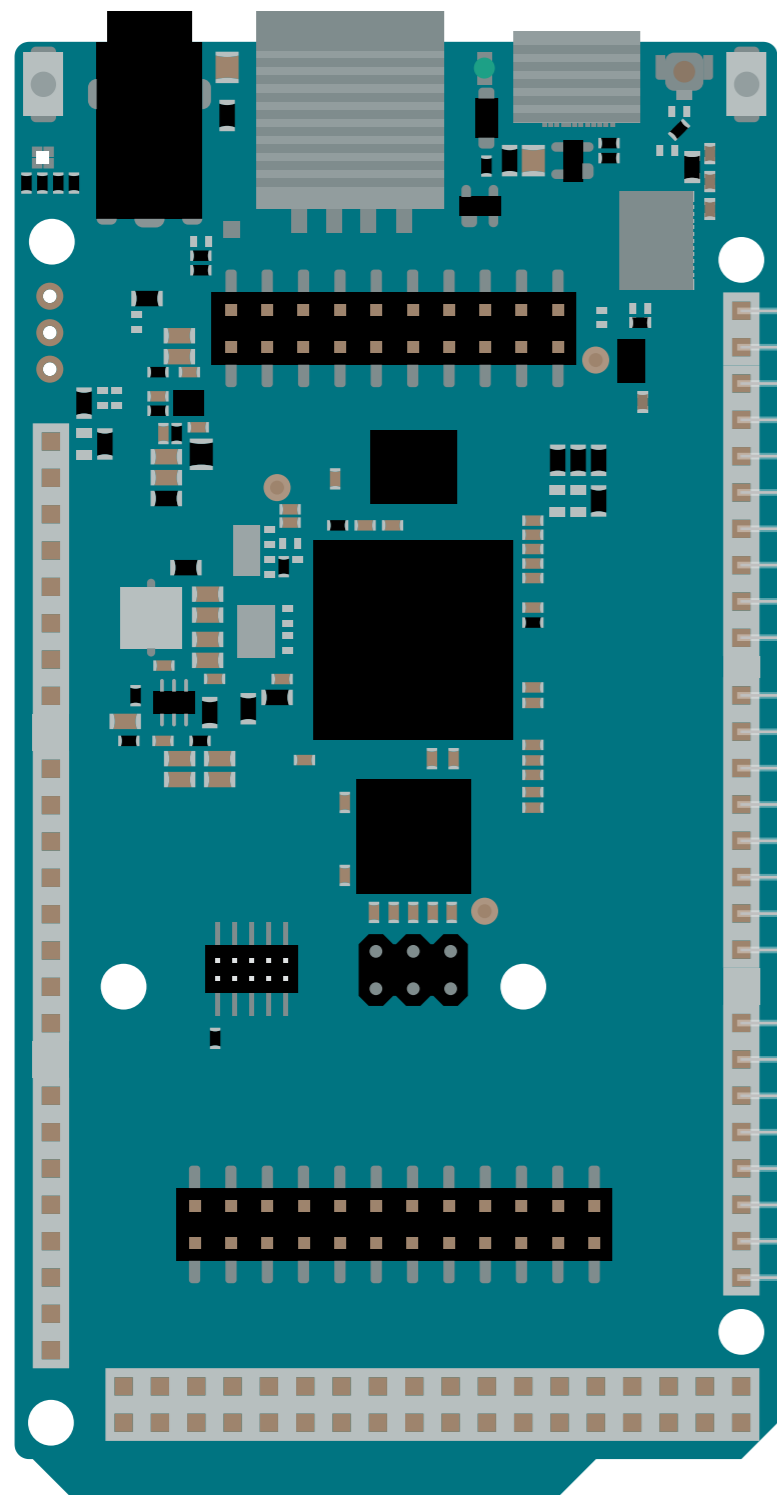
**i** CIP0/COPI have previously been referred to as MISO/MOSI



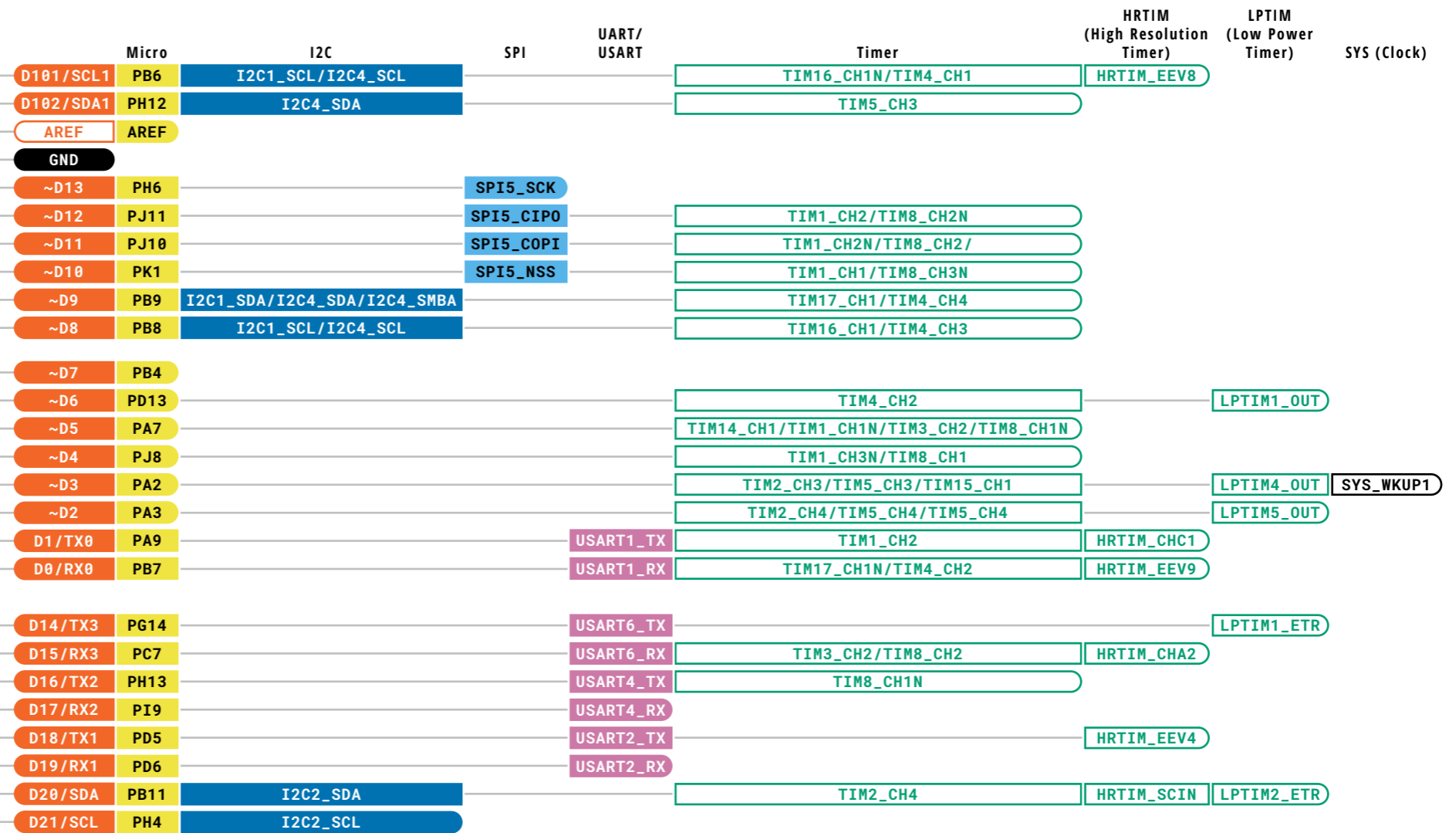
SKU code: ABX00063  
 Full Pinout - Page 5 of 9  
 Last update: 12 Jul, 2023

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TOP VIEW



Legend:

- Power
- Ground

- Power Input
- Power Output

- GPIO Digital External
- Analog External
- Main Part
- Secondary Part
- Internal Component
- Other Pins (Reset, System Control, Debugging)

- I2C
- SPI
- UART/USART
- Other SERIAL Communication
- Analog
- PWM/Timer
- Default
- Default
- Default
- Default

- LED
- RGB LED
- Other

- MAXIMUM** Total output current sourced or sunk by sum of all I/Os and control pins is 140 mA
- MAXIMUM** Output current sourced or sunk by any I/O and control pin is 20 mA
- CIP0/COPI have previously been referred to as MISO/MOSI

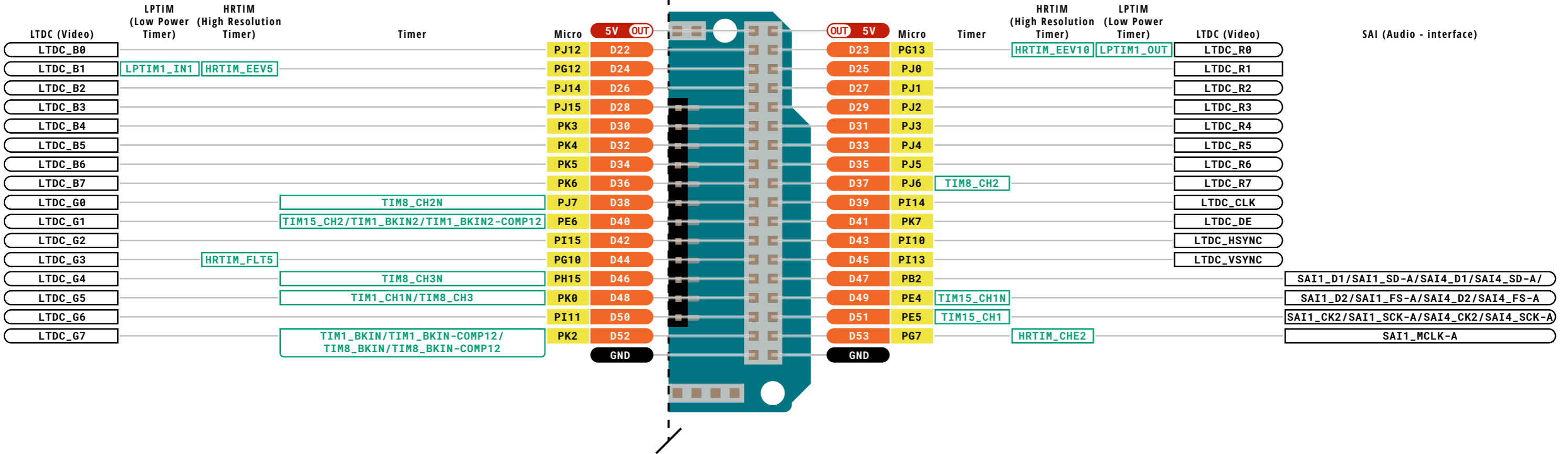


SKU code: ABX00063  
Full Pinout - Page 6 of 9  
Last update: 12 Jul, 2023

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Configured to be used with LTDC Display at 24bit



**Legend:**

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

- ⚠ **MAXIMUM** Total output current sourced or sunk by sum of all I/Os and control pins is 140 mA
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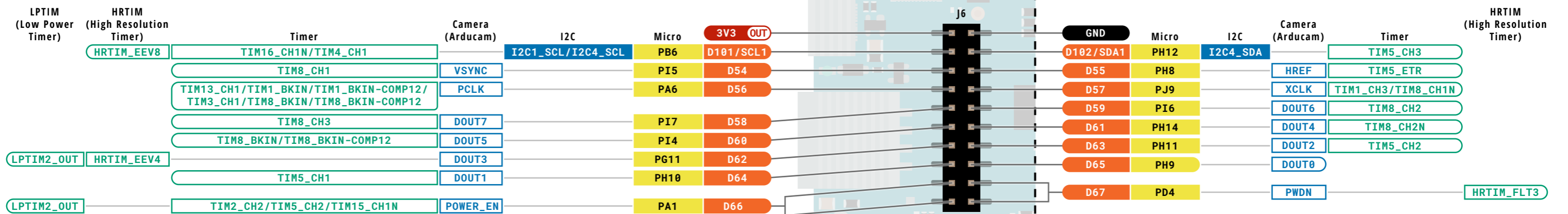


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Full Pinout - Page 7 of 9  
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TOP VIEW

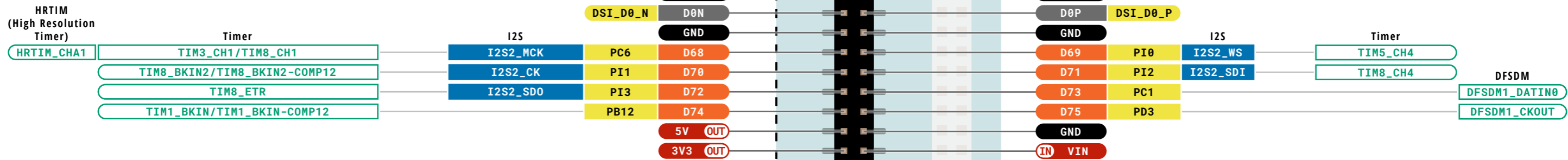


I2C4\_SCL and I2C4\_SDA are shared with SCL1 and SDA1 pins of the headers

J6 is compatible with Arducam

Pins D66 and D67 are duplicated pins

DSI PINS have only display feature, NO GPIO, NO Analog



Legend:

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

**⚠ MAXIMUM** Total output current sourced or sunk by sum of all I/Os and control pins is 140 mA

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**ARDUINO**

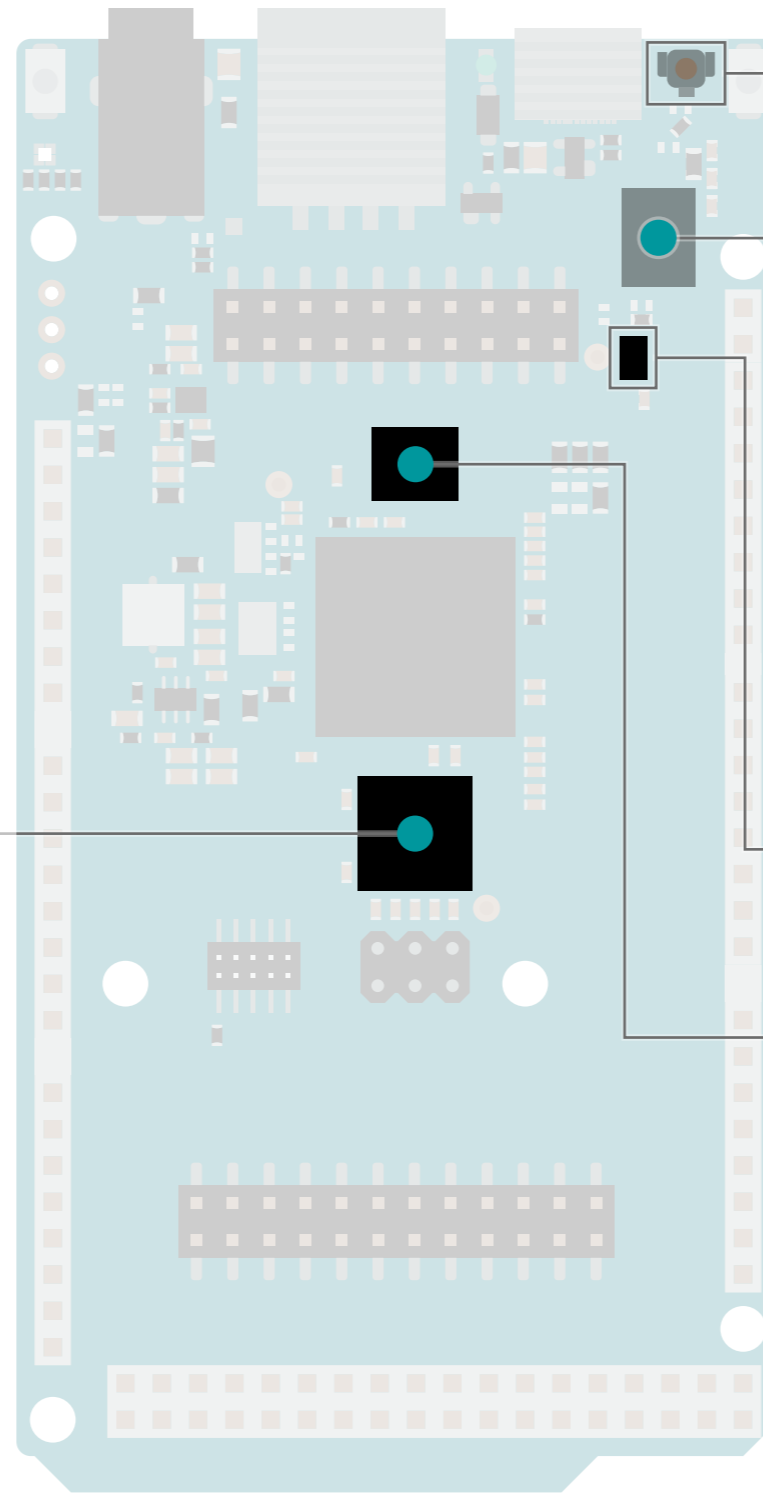
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Full Pinout - Page 8 of 9  
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FMC (Flexible Memory Controller)	Micro	SDRAM
FMC_A0	PF0	FMC_A0
FMC_A1	PF1	FMC_A1
FMC_A2	PF2	FMC_A2
FMC_A3	PF3	FMC_A3
FMC_A4	PF4	FMC_A4
FMC_A5	PF5	FMC_A5
FMC_A6	PF12	FMC_A6
FMC_A7	PF13	FMC_A7
FMC_A8	PF14	FMC_A8
FMC_A9	PF15	FMC_A9
FMC_A10	PG0	FMC_A10
FMC_A11	PG1	FMC_A11
FMC_A12	PG2	FMC_A12
FMC_BA0	PG4	FMC_BA0
FMC_BA1	PG5	FMC_BA1
FMC_SDCLK	PG8	FMC_SDCLK
	PH2	FMC_SDCKE0
FMC_SDNWE	PH5	FMC_SDNWE
FMC_SDNCAS	PG15	FMC_SDNCAS
FMC_SDNRAS	PF11	FMC_SDNRAS
FMC_SDNCS	PH3	FMC_SDNCS
FMC_DQMH	PE1	FMC_DQMH
FMC_DQML	PE0	FMC_DQML
FMC_D15	PD10	FMC_DQ15
FMC_D14	PD9	FMC_DQ14
	PD8	FMC_DQ13
FMC_D12	PE15	FMC_DQ12
FMC_D11	PE14	FMC_DQ11
FMC_D10	PE13	FMC_DQ10
FMC_D9	PE12	FMC_DQ9
FMC_D8	PE11	FMC_DQ8
FMC_D7	PE10	FMC_DQ7
FMC_D6	PE9	FMC_DQ6
	PE8	FMC_DQ5
	PE7	FMC_DQ4
FMC_D3	PD0	FMC_DQ3
FMC_D2	PD1	FMC_DQ2
FMC_D1	PD15	FMC_DQ1
FMC_D0	PD14	FMC_DQ0



U.FL-R-SMT-1	LBEE5KL1DX	Micro	UART	SDMMC (SPI)
	RX	PF7	UART7_TX	
	TX	PA8	UART7_RX	
	RTS	PF9	UART7_CTS	
	CTS	PF8	UART7_RTS	
	D0	PC8		SDMMC1_D0
	D1	PC9		SDMMC1_D1
	D2	PC10		SDMMC1_D2
	D3	PC11		SDMMC1_D3
	CLK	PC12		SDMMC1_CLK
	CMD	PD2		SDMMC1_CMD
	WL_WAKE_H	PI8		
	WL_ON	PB10		
	BT_WAKE_D	PH7		
	BT_WAKE_H	PG3		
	BT_ON	PA10		
	LPO_IN			
	ANT			

CRYPTO	Micro	I2C
SDA	PH12	I2C4_SDA
SCL	PB6	I2C4_SCL

FLASH	Micro	Quad-SPI
SI/I00	PD11	QUADSPI_BK1_I00
SO/I01	PD12	QUADSPI_BK1_I02
WP/I02	PE2	QUADSPI_BK2_I01
HOLD/I03	PF6	QUADSPI_BK1_I03
CS	PG6	QUADSPI_BK1_NCS
SCK	PF10	QUADSPI_CLK

**Legend:**

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

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Full Pinout - Page 9 of 9  
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