CIPO/COPI have previously been referred to as MISO/MOSI.

- **MAXIMUM Total output current sourced or sunked by sum of all I/Os and control pins is 140 mA.**
- **MAXIMUM Output current sourced or sunked by any I/O and control pin is 20 mA.**

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

The diagram shows the pinout for a device with various connections and components, including USB, Micro, SPI, DSI, I2C, GPIO, Power, and others. It highlights the compatibility with Arducam for Camera and mentions that Pins D06 and D07 are duplicated pins.
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**MAXIMUM**
- Total output current sourced or sunked by sum of all I/Os and control pins is 140 mA.
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**Legend:**
- Power
- Power Input
- 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
- Default
- LED
- RGB LED
- Other

**NOTICE:**
- Pins D66 and D67 are duplicated pins.
- DSI PINS have only display feature, NO GPIO, NO Analog.
- DO NOT connect the camera from the bottom side.
- Connectors J5 and J6 are pass through pins and can be connected also on the other side of the board, from the bottom.
- DSI_D1_N and DSI_D1_P are shared with SCL1 and SDA1 pins of the headers.

**IQUEM:**
- Total output current sourced or sunked by sum of all I/Os and control pins is 140 mA.
- Output current sourced or sunked by any I/O and control pin is 20 mA.
WARNING!

Advanced Section

The following information is for advanced use only and may not be officially supported by Arduino software.
CIPO/COPI have previously been referred to as MISO/MOSI

**MAXIMUM**

- Total output current sourced or sunked by sum of all I/Os and control pins is 140 mA
- Output current sourced or sunked by any I/O and control pin is 20 mA

**Legend:**
- Power
- Power Input
- 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
- Other

**Definitions:**
- **GPIO Digital External:** General Purpose Input/Output pins that can be configured for digital input and output.
- **Analog External:** Analog pins for input/output of analog signals (voltage levels, current, etc.).
- **Main Part:** Central processing unit (CPU) and related components like memory.
- **Secondary Part:** Peripherals like displays, sensors, and I/O adapters.
- **Internal Component:** Internal components like memory controllers, buses, and buses.
- **Other Pins:** Pins used for miscellaneous purposes or not specifically categorized.

**Others:**
- **Digital I/O:** Used for digital input/output without the need for analog interfacing.
- **Analog I/O:** Used for interfacing with analog signals.
- **Comparator:** A circuit that determines whether one voltage level is higher than another.
- **Timer:** A hardware circuit that counts events, often used for timing purposes.
- **ADC/DAC:** Analog-to-Digital Converter/Digital-to-Analog Converter, used for converting between analog and digital signals.
- **Micro:** Microcontroller unit, responsible for executing instructions to control the device.
- **SPI:** Serial Peripheral Interface, a fast serial interface for exchanging data between multiple devices.
- **UART/USART:** Universal Asynchronous Receiver/Transmitter, used for serial communication.
- **PWM/Timer:** Pulse Width Modulation/Timer, used for generating periodic signals with variable pulse widths.

**Notes:**
- **MAXIMUM:** Indicates the maximum allowable value for a parameter.
- **GPIO Digital External:** Can be configured for various functions depending on the application.
- **Analog External:** Used for interfacing with analog signals, such as sensors or microphones.
- **Main Part:** Essential components like the CPU and memory are located here.
- **Secondary Part:** Includes peripherals and expansion interfaces.
- **Internal Component:** Core components like the memory controller and busses.
- **Other Pins:** Miscellaneous pins that may be used for various purposes.

**CPI0/COPI:** These pins were previously referred to as MISO/MOSI.
CIPO/COPI have previously been referred to as MISO/MOSI.

- **MAXIMUM** Total output current sourced or sunked by sum of all I/Os and control pins is 140 mA.
- **MAXIMUM** Output current sourced or sunked by any I/O and control pin is 20 mA.

**Legend:**
- **Power**
- **Power Input**
- **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
- LED
- RGB LED
- Other

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

**Recent Updates:**
- Last update: 12 Jul, 2023
- SKU code: ABX00063
- Full Pinout - Page 6 of 9
CIPO/COPI have previously been referred to as MISO/MOSI.

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

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

---

**Legend:**
- **Power**
- **GPIO Digital External**
- **Analog External**
- **Main Part**
- **Secondary Part**
- **Internal Component**
- **Other Pins (Reset, System Control, Debugging)**
- **I2C**
- **Default**
- **LED**
- **RGB LED**
- **Other**
- **SPI**
- **Default**
- **UART/USART**
- **Default**
- **Other SERIAL Communication**
- **Analog**
- **Default**
- **PWM/Timer**
- **Micro**
- **2V3 GND**
- **VSSNC**
- **VCC**
- **3V3**
- **5V**
- **Vin**
- **GND**
- **Power Input**
- **Power Output**
- **Ground**

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

**J6 is compatible with Arducam**

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**I2C4_SCL and I2C4_SDA are shared with SCL1 and SDA1 pins of the headers**

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**J6 pins D66 and D67 are duplicated pins**

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**NOTE:**
- Components with **HRTIM** (High Resolution Timer) are associated with **HRTIM**.
- Components with **LPTIM** (Low Power Timer) are associated with **LPTIM**.
- Components with **I2C** are associated with **I2C**.
- Components with **GPIO** are associated with **GPIO**.
- Components with **SPI** are associated with **SPI**.
- Components with **UART/USART** are associated with **UART/USART**.
- Components with **Other SERIAL Communication** are associated with **Other SERIAL Communication**.
- Components with **Analog** are associated with **Analog**.
- Components with **PWM/Timer** are associated with **PWM/Timer**.
- Components with **Micro** are associated with **Micro**.

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**Arducam Camera:**
- J6 is compatible with Arducam.
- J6 pins D66 and D67 are duplicated pins.
- Pins D66 and D67 are compatible with Arducam.

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**SKU code: ABX0063**
**Full Pinout - Page 8 of 9**
**Last update: 12 Jul, 2023**

**GICA R1 WIFI BOARD**

**CC BY SA**
Legend:

- **Power**
- **Power Input**
- **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**
- **LED**
- **RGB LED**
- **Other**

**CIPO/COPI** have previously been referred to as **MISO/MOSI**

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

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

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