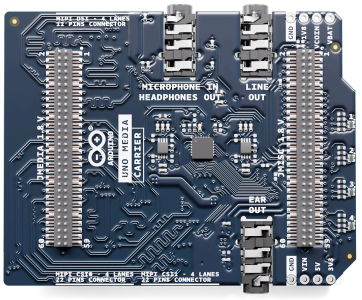
User Manual
SKU: ASX00083



Description

The Arduino UNO Media Carrier extends the multimedia capabilities of compatible host boards (UNO Q, VENTUNO Q), enabling advanced vision, display, and audio applications with plug-and-play simplicity. Designed for easy integration, it connects via the JMEDIA and JMISC high-speed connectors, both of which feature passthrough designs to keep all pins available for additional modules or carriers in your setup.

Equipped with two MIPI CSI connectors for IMX219 cameras (e.g. Raspberry Pi Camera Module 2), the carrier opens the door to dual-camera computer vision projects, from stereo depth mapping to multi-angle image capture. A MIPI DSI interface provides compatibility with standard 22-pin 4 lanes MIPI DSI displays (e.g. Waveshare), making it easy to add rich, interactive visual output to your projects without additional adapters. For audio, the carrier includes three dedicated 3.5 mm jacks: one combined microphone input and headphone output for flexible audio capture and monitoring, one line out for connecting to amplifiers or powered speakers, and one ear out enabling Class-AB differential earpiece output.

Together, these interfaces enable a complete edge multimedia hub, ideal for AI-powered kiosks, object tracking, interactive installations, and more.

Target Areas

Makers and advanced hobbyists, educational institutions and training centers, prototyping teams and startups

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1 Application Examples

The UNO Media Carrier expands the multimedia capabilities of compatible host boards (UNO Q, VENTUNO Q), enabling dual-camera computer vision, interactive displays, and multi-channel audio applications. With plug-and-play compatibility for Raspberry Pi cameras and Waveshare displays, the carrier simplifies hardware integration for a wide range of multimedia projects.

- **Computer Vision and AI:** Stereo depth mapping for robotics, dual-camera object tracking for automated inspection systems, and gesture recognition interfaces using synchronized camera inputs.
- **Interactive Displays and Kiosks:** AI-powered smart kiosks with touchscreen displays, interactive museum exhibits with real-time visual feedback, and digital signage with camera-based audience analytics.
- **Education and Research:** Computer vision lab projects for teaching image processing and machine learning, real-time video analysis experiments, and multimedia IoT course demonstrations with integrated audio-visual feedback.
- **Prototyping and Development:** Rapid proof-of-concept development for smart retail solutions, early-stage testing of telepresence systems with integrated audio and video, and hardware validation for multimedia edge devices.
- **Audio-Visual Applications:** Voice-controlled interactive systems with headphone feedback, multimedia recording stations with line-level audio output, and hands-free communication devices using microphone input and earphone output.

CONTENTS

2 Features

2.1 General Specifications Overview

2.1.1 Connectivity & Media

| Camera Connectors | - 2× MIPI-CSI 22-pin 4 lanes camera connectors

- Raspberry Pi camera compatible | | Display Connector | - 1× MIPI-DSI 22-pin 4 lanes display connector

- Waveshare display compatible | | Audio Connectors | - 1× MIC-IN / Headphones Out 3.5 mm jack

- 1× Line Out 3.5 mm jack

- 1× Earphones Out 3.5 mm jack |

> **Hardware Support:** The UNO Media Carrier officially supports cameras based on the IMX219 sensor and the Waveshare 8-DSI-TOUCH-A display (https://www.waveshare.com/wiki/8-DSI-TOUCH-A) initially. Additional camera and display modules may be supported in future software updates.

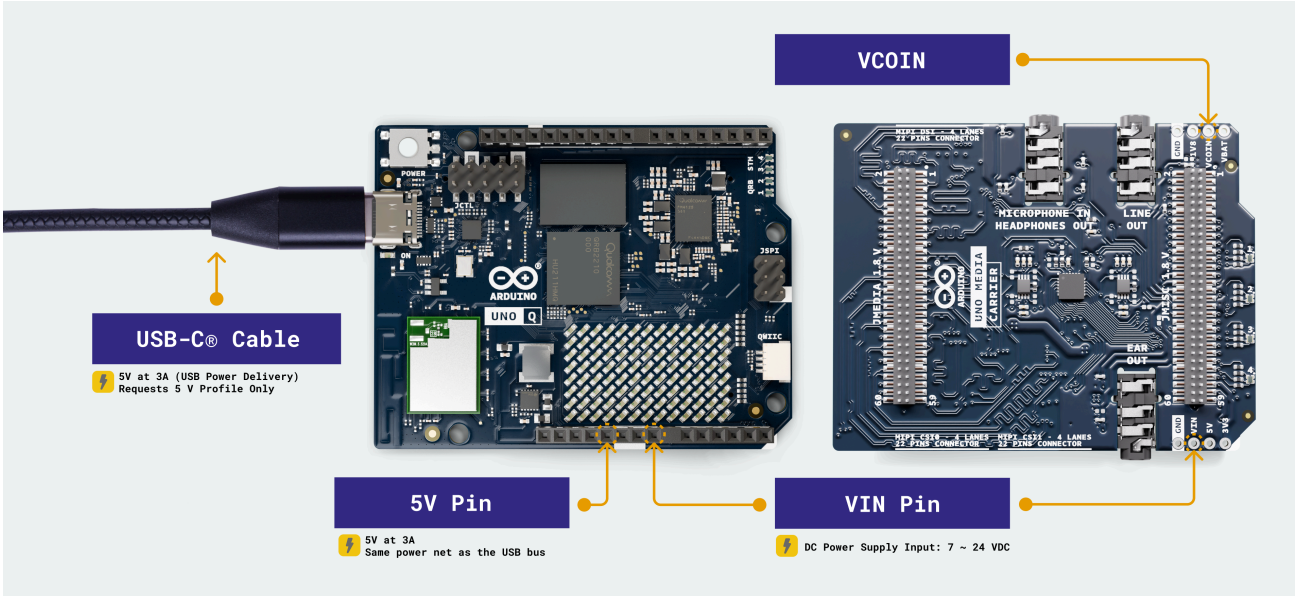
2.1.2 Board Interface & Expansion

Component	Details
Host Board Connection	- JMEDIA high-speed connector - JMISC high-speed connector - Passthrough design maintains pin availability
Available Interfaces	- I2C - MIPI-CSI - MIPI-DSI - PSSI - GPIO - Audio endpoints (HP OUT, LINE OUT, MIC IN, EAR OUT)

3 Ratings

3.1 Power Rails

Source	Voltage	Notes
Host board (via JMEDIA/JMISC)	-	Power source from host board
VIN (DC IN)	7-24 V DC	DC power input for high-power configurations
VCOIN	3.0 V DC	Coin cell input for host board RTC (max 3.6 V)

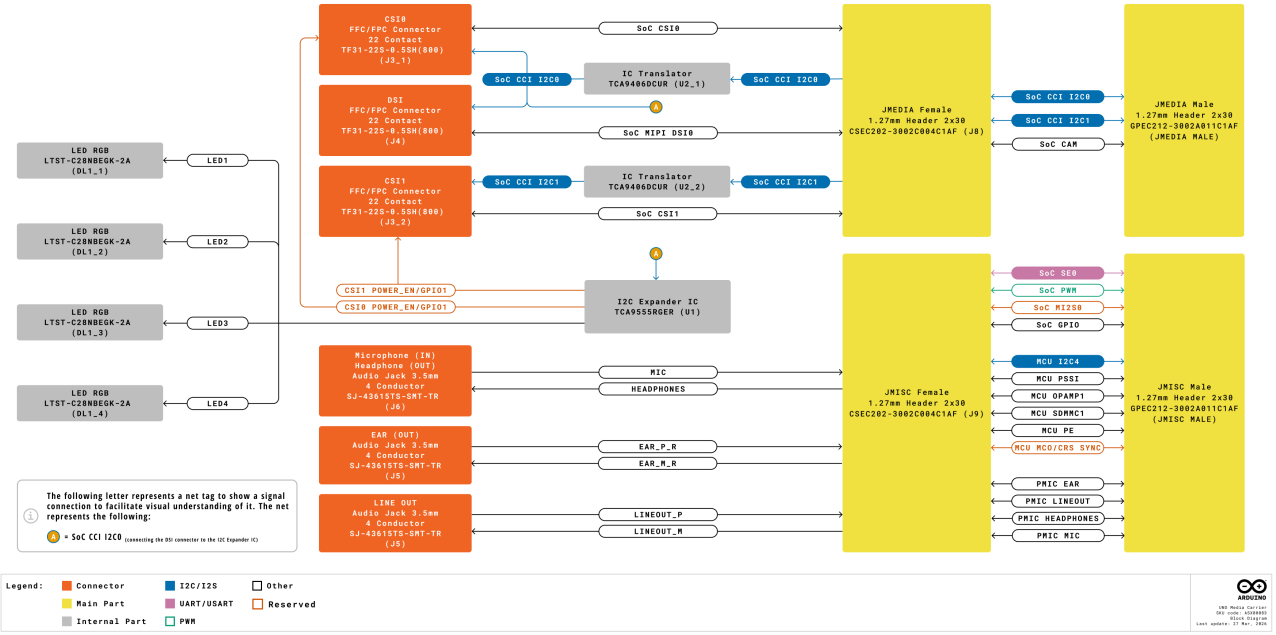


3.2 Recommended Operating Conditions

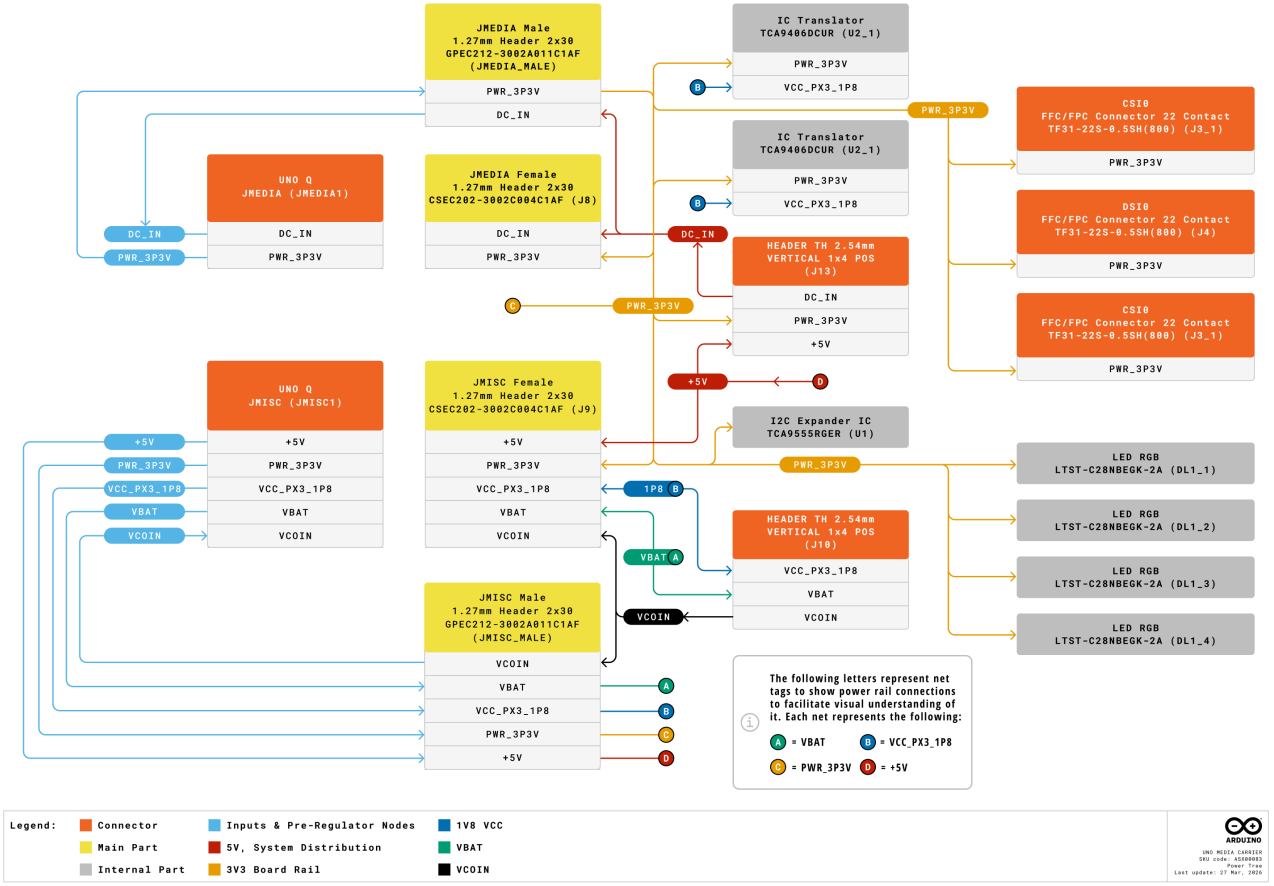
Parameter	Minimum	Typical	Maximum	Unit
Operating temperature	-10 (14)	-	60 (140)	°C (°F)

4 Functional Overview

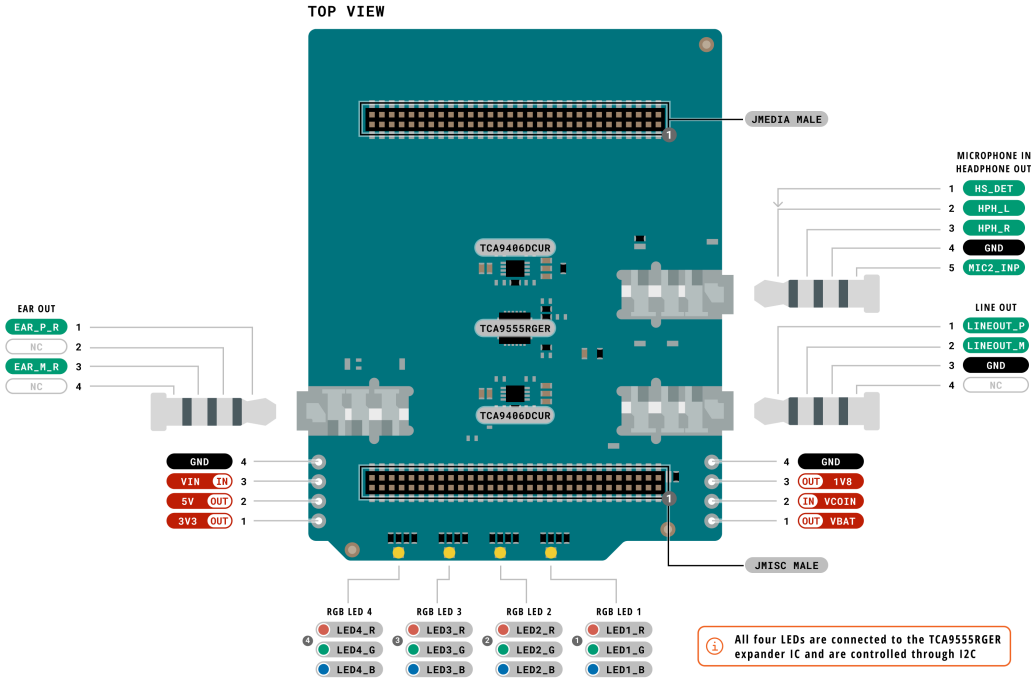
4.1 Block Diagram



4.2 Power Tree



4.3 Pinout



Legend:	Digital	I2C	Other SERIAL
Power	Analog	SPI	Analog
Ground	Main Part	UART/USART	Internal Part

ARDUINO

UNO MEDIA CARRIER
SKU code: ASX00083
Pinout
Last update: 06 Feb, 2026

4.4 Camera Interfaces

The UNO Media Carrier provides two MIPI-CSI 22-pin 4 lanes camera connectors, compatible with IMX219 cameras (e.g. Raspberry Pi Camera Module 2). These allow dual-camera computer vision applications such as stereo vision, depth mapping, or multi-angle capture.

Connector	Type	Pin Count	Lanes
CSI0	MIPI-CSI	22	4
CSI1	MIPI-CSI	22	4

Camera Support: The UNO Media Carrier officially supports cameras based on the IMX219 sensor initially. Additional camera modules may be supported in future software updates.

4.5 Display Interface

The UNO Media Carrier includes one MIPI-DSI 22-pin 4 lanes display connector, compatible with Waveshare MIPI-DSI displays for visual output in interactive applications.

Connector	Type	Pin Count	Lanes
DSI0	MIPI-DSI	22	4

Display Support: The UNO Media Carrier officially supports the Waveshare 8-DSI-TOUCH-A portrait touchscreen LCD display initially (https://www.waveshare.com/wiki/8-DSI-TOUCH-A). Additional display modules may be supported in future software updates.

4.6 Audio Interfaces

The carrier provides three 3.5 mm audio jacks for flexible audio input and output.

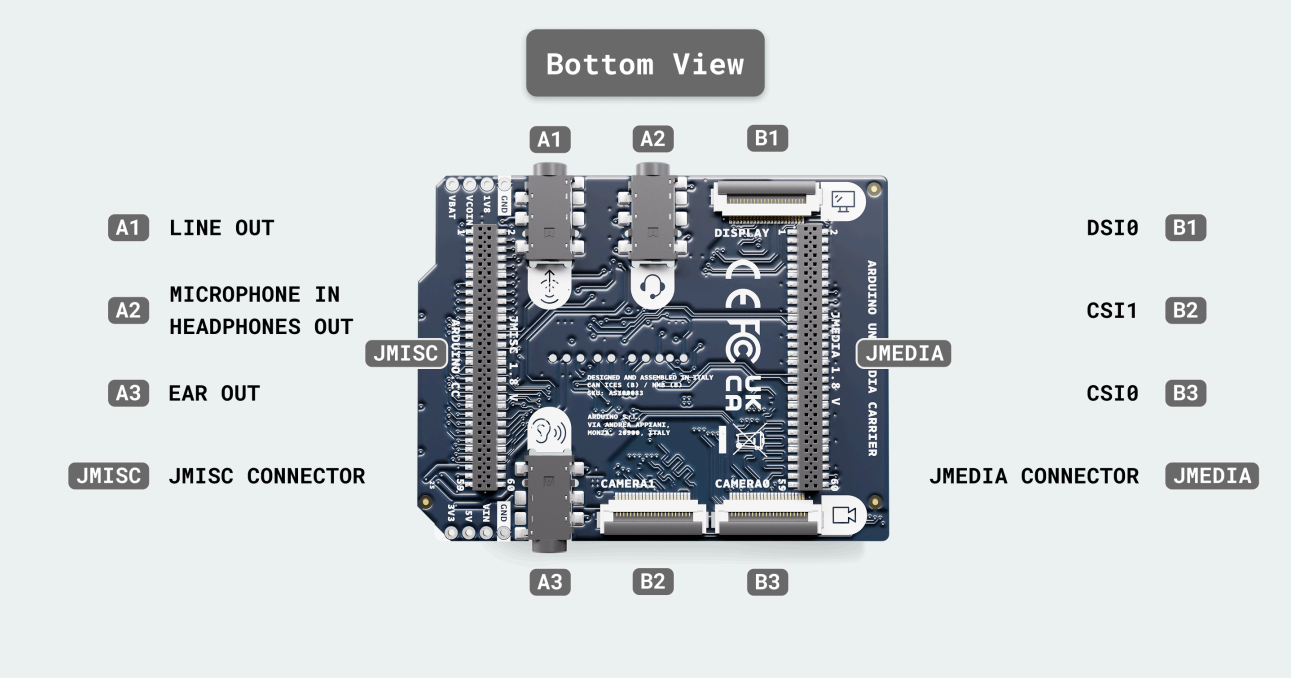
Jack	Type	Function
MIC-IN / Headphones Out	3.5 mm jack	Combined microphone input and headphone output
Line Out	3.5 mm jack	Line-level audio output
Earphones Out	3.5 mm jack	Earphone output

4.7 Additional Interfaces

Through the JMEDIA and JMISC connectors, the UNO Media Carrier also provides access to:

- **I²C:** For camera control and other peripheral communication
- **PSSI:** Parallel camera interface available through JMISC
- **GPIO:** General-purpose I/O pins available through JMISC

5 Peripherals



UNO Media Carrier Peripherals

- **LINE OUT (A1):** 3.5 mm audio jack for audio output. Signals routed through JMISC analog audio endpoints (`LINEOUT_P`, `LINEOUT_M`).
- **MICROPHONE IN / HEADPHONES OUT (A2):** 3.5 mm jack supporting microphone input and headphone output. Microphone signals (`MIC2_INP`, `MIC2_INN`, `MIC2_BIAS`) and headphone signals (`HPH_L`, `HPH_R`, `HPH_REF`, `HS_DET`) routed through JMISC.
- **EAR OUT (A3):** 3.5 mm audio jack for Class-AB differential earpiece output. Signals routed through JMISC analog audio endpoints (`EAR_P_R`, `EAR_M_R`).
- **DSI0 (B1):** 22-pin 4 lanes MIPI-DSI display connector compatible with Waveshare MIPI-DSI displays. Operates at 1.8 V logic level, routed from JMEDIA connector.
- **CSI1 (B2):** 22-pin 4 lanes MIPI-CSI camera connector compatible with IMX219 cameras (e.g. Raspberry Pi Camera Module 2). Operates at 1.8 V logic level, routed from JMEDIA connector. Camera 1 interface.
- **CSI0 (B3):** 22-pin 4 lanes MIPI-CSI camera connector compatible with IMX219 cameras. Operates at 1.8 V logic level, routed from JMEDIA connector. Camera 0 interface.
- **JMEDIA CONNECTOR (JMEDIA):** Female 60-pin high-speed connector interfacing with the host board's JMEDIA header. Routes MIPI-CSI camera signals (`CSI0`, `CSI1`), MIPI-DSI display signals (DSI0), Camera Control Interface I^2C (`CCI_I2C0`, `CCI_I2C1`), camera master clocks (CAM_MCLK0, CAM_MCLK1), and power rails. Signals operate at 1.8 V logic level. Passthrough design maintains pin availability for stacking.
- **JMISC CONNECTOR (JMISC):** Female 60-pin mixed-voltage connector interfacing with the host board's JMISC header. Routes SoC GPIO (1.8 V), MCU GPIO and peripherals (3.3 V), analog audio signals, debug or trace interfaces, and power rails (`+3V3`, `+5V_USB`, `+1V8`, `VBAT`, `VCOIN`). Passthrough design maintains pin availability for stacking.

MIPI-CSI and MIPI-DSI signals operate in the 1.8 V DC domain. Camera Control Interface (CCI) I^2C buses provide camera configuration and control. Audio signals are analog and referenced to ground. Level translation is required when interfacing 1.8 V DC SoC signals with 3.3 V DC or 5 V DC devices.

> Do not use the Camera Control Interface I^2C lines (CCI_I2C0, CCI_I2C1) or audio interface signals (MI2S0) as general-purpose I/O. These signals are interface-dedicated, operate at 1.8 V DC, and are reserved for their specific functions.

5.1 Power Distribution Header (J13)

Pin	Designation	Direction	Voltage	Notes
1	+5V	OUT	+5V	5V power output
2	DC_IN	IN	7-24V	DC input from user
3	PWR_3P3V	OUT	+3.3V	3.3V main logic power
4	GND	-	0V	Ground

This header provides access to the main power rails for external use or testing. It is connected to JMEDIA power distribution and includes test points TP21 (`DC_IN`) and TP22 (`PWR_3P3V`) for voltage monitoring.

5.2 Low Voltage Power Header (J10)

Pin	Designation	Direction	Voltage	Notes
1	VCC_PX3_1P8	OUT	+1.8V	1.8V I2C translation rail
2	VCOIN	IN	3.0V	Coin cell backup (max 3.6V)
3	VBAT	OUT	Variable	Battery voltage from host board buck
4	GND	-	0V	Ground

This header provides access to low voltage and backup power rails connected to JMISC power distribution. Test point TP20 (`VCC_PX3_1P8`) is available for the 1.8 V rail. The VCOIN input (pin 59) has a maximum voltage limit of 3.6 V DC and accepts power from an external CR2032 coin cell battery for host board RTC backup. The VBAT output (pin 60) provides battery voltage from the host board's buck converter.

5.3 JMISC Expansion Header (Male)

This header mirrors the JMISC Female connector and exposes power rails, SoC GPIO, MCU GPIO, debug, trace, and analog, audio signals for expansion. All SoC GPIO lines operate at a 1.8 V DC logic level, while MCU pins use a 3.3 V DC logic level. The header supports configurable Serial Engine 0 (SPI/UART/I^2C), PWM outputs, digital microphone (DMIC), and multi-channel I^2S audio interfaces.

5.3.1 Power Rails

Pin	Designation	Direction	Voltage	Notes
53	+3V3	OUT	+3.3V	3.3V power output
54	+5V_USB	OUT	+5V	5V USB power output
55	+3V3	OUT	+3.3V	3.3V power output
56	+5V_USB	OUT	+5V	5V USB power output
57	+1V8	IN	+1.8V	1.8V rail input
59	VCOIN	IN	3.0V	Coin cell backup
60	VBAT	OUT	Variable	Battery voltage from host board buck
26,27,	GND	-	0V	Ground (multiple pins)
35,44,				
58				

5.3.2 SoC GPIO (1.8 V Logic Level - MPU Domain)

Pin	Designation	Function	Notes
37	SOC_GPIO_0_SE0	SE0: MISO/CTS/SDA	Serial Engine 0, configurable
39	SOC_GPIO_1_SE0	SE0: MOSI/RFR/SCL	Serial Engine 0, configurable
41	SOC_GPIO_2_SE0	SE0: SCLK/TX	Serial Engine 0, configurable
43	SOC_GPIO_3_SE0	SE0: CS_N_0/RX	Serial Engine 0, configurable
45	SOC_GPIO_86_SE0	SE0: CS_N_2	Serial Engine 0, chip select
47	SOC_GPIO_82_SE0	SE0: CS_N_1/PWM[6]	Serial Engine 0, CS or PWM
49	SOC_GPIO_18	PWM[0]	PWM output 0
51	SOC_GPIO_28	PWM[1]	PWM output 1
46	SOC_GPIO_98	DMIC1_CLK/MI2S0_CLK	Digital mic 1 clock / Audio clock
48	SOC_GPIO_99	DMIC1_DATA/MI2S0_WS	Digital mic 1 data / Audio WS
50	SOC_GPIO_100	DMIC2_CLK/MI2S0_D0	Digital mic 2 clock / Audio data 0
52	SOC_GPIO_101	DMIC2_DATA/MI2S0_D1	Digital mic 2 data / Audio data 1

Note: SoC GPIO lines operate at 1.8 V DC and require proper level translation when interfacing with 3.3 V DC or 5 V DC devices.

5.3.3 MCU GPIO (MCU Domain)

Pin	Designation	MCU Pin	Function	Notes
1	MCU_PSSI_D0	PC6	PSSI Data 0	Parallel camera interface
3	MCU_PSSI_D1	PC7	PSSI Data 1	Parallel camera interface
5	MCU_PSSI_D2	PC8	PSSI Data 2	Parallel camera interface
7	MCU_PSSI_D3	PC9	PSSI Data 3	Parallel camera interface
9	MCU_PSSI_D4	PE4	PSSI Data 4	Parallel camera interface
11	MCU_PSSI_D5	PI4	PSSI Data 5	Parallel camera interface
13	MCU_PSSI_D6	PI6	PSSI Data 6	Parallel camera interface
15	MCU_PSSI_D7	PI7	PSSI Data 7	Parallel camera interface
17	MCU_PSSI_PDCK	PD9	PSSI Pixel Clock	Parallel camera clock
19	MCU_PSSI_RDY	PI5	PSSI Ready	Parallel camera ready
21	MCU_PSSI_DE	PD8	PSSI Data Enable	Parallel camera DE
2	MCU_SDMMC1_CMD	PD2	SDMMC1 Command	SD/MMC interface
16	MCU_I2C4_SCL	PF14	I2C4 Clock	I2C bus 4
18	MCU_I2C4_SDA	PF15	I2C4 Data	I2C bus 4
12	MCU_PE7	PE7	GPIO	General purpose I/O
14	MCU_PE8	PE8	GPIO	General purpose I/O
23	MCU_MCO	PA8	MCU Clock Out	Master clock output
25	MCU_CRS_SYNC	PA10	Clock Recovery Sync	USB clock recovery

5.3.4 MCU Debug & Trace

Pin	Designation	MCU Pin	Function	Notes
4	MCU_TRACE_CLK	PE2	Trace Clock	Debug trace clock
6	MCU_TRACE_D0	PE3	Trace Data 0	Debug trace data
8	MCU_TRACE_D2	PE5	Trace Data 2	Debug trace data
10	MCU_TRACE_D3	PE6	Trace Data 3	Debug trace data

5.3.5 Analog/Audio Signals

Pin	Designation	Function	Notes
20	MCU_OPAMP1_VOUT	PA3	OpAmp 1 output
22	MCU_OPAMP1_VINP	PA0	OpAmp 1 positive input
24	MCU_OPAMP1_VINM	PA1	OpAmp 1 negative input
28	EAR_P_R	-	Earpiece speaker positive
30	EAR_M_R	-	Earpiece speaker negative
32	LINEOUT_P	-	Line out positive
34	LINEOUT_M	-	Line out negative
36	HPH_L	-	Headphone left channel
38	HPH_R	-	Headphone right channel
40	HPH_REF	-	Headphone reference
42	HS_DET	-	Headset detect
29	MIC2_INP	-	Microphone 2 positive input
31	MIC2_INN	-	Microphone 2 negative input
33	MIC2_BIAS	-	Microphone 2 bias voltage

5.4 JMEDIA Header (Male)

This header mirrors the JMEDIA Female connector and exposes camera and display signals, including MIPI CSI/DSI differential pairs and Camera Control Interface I^2C buses. The I^2C, CSI, and DSI signals are routed from JMEDIA Male connector. All signals operate at a 1.8 V DC logic level and require proper level translation for 3.3 V DC or 5 V DC interfacing.

5.4.1 SoC Camera/Display Signals (MPU Domain)

Pin	Designation	Function	Notes
varies	SOC_CCI_I2C0_SCL	I2C0 Clock	Camera Control Interface I2C
varies	SOC_CCI_I2C0_SDA	I2C0 Data	Camera Control Interface I2C
varies	SOC_CCI_I2C1_SCL	I2C1 Clock	Camera Control Interface I2C
varies	SOC_CCI_I2C1_SDA	I2C1 Data	Camera Control Interface I2C
varies	SOC_GPIO_20	CAM_MCLK0	Camera 0 master clock
varies	SOC_GPIO_21	CAM_MCLK1	Camera 1 master clock
varies	SOC_GPIO_29	-	General purpose I/O
varies	SOC_GPIO_30	-	General purpose I/O

> All SoC signals operate at 1.8 V DC and must not be connected directly to 3.3 V DC or 5 V DC devices without proper level translation.

> Camera GPIO signals (`SOC_GPIO_20`, `SOC_GPIO_21`, `SOC_GPIO_29`, `SOC_GPIO_30`) are not accessible through female headers. They are only available through the flat camera connectors and I/O expander

> circuits.

5.4.2 MIPI CSI/DSI Differential Pairs

Signal Group	Lanes	Function	Notes
SOC_CSI0	4-lane	CSI0 MIPI Camera	Camera 0 differential pairs
SOC_CSI1	4-lane	CSI1 MIPI Camera	Camera 1 differential pairs
SOC_MIPI_DSI0	4-lane	DSI0 MIPI Display	Display differential pairs

5.5 Additional Interfaces

Through the JMEDIA and JMISC connectors, the board provides access to:

- **I²C:** Camera Control Interface I²C (`CCI_I2C0/I2C1`, 1.8 V DC) via JMEDIA and MCU `I2C4` (3.3 V DC) via JMISC for peripheral communication
- **PSSI:** 8-bit parallel camera interface with pixel clock, data enable, and ready signals via JMISC
- **GPIO:** SoC GPIO (1.8 V DC) and MCU GPIO (3.3 V DC) pins available via JMISC for general-purpose I/O

5.6 Logic Level Compatibility

The board uses three logic domains: MPU signals (SoC) operate at 1.8 V DC, MCU signals run at 3.3 V DC, and analog audio/microphone signals are referenced to ground. Level translation is mandatory when connecting 3.3 V DC or 5 V DC devices to 1.8 V DC SoC GPIO pins to prevent damage to the host board processor.

5.7 Audio Interface Signals

GPIO pins 98-101 support dual-mode operation for audio applications. They work as digital microphone interface (`DMIC1_CLK`, `DMIC1_DATA`, `DMIC2_CLK`, `DMIC2_DATA`) or as multi-channel I2S audio (`MI2S0_CLK`, `MI2S0_WS`, `MI2S0_DATA0`, `MI2S0_DATA1`). These pins are dedicated to the interface only for audio/DMIC functionality and cannot be used as regular general-purpose GPIOs.

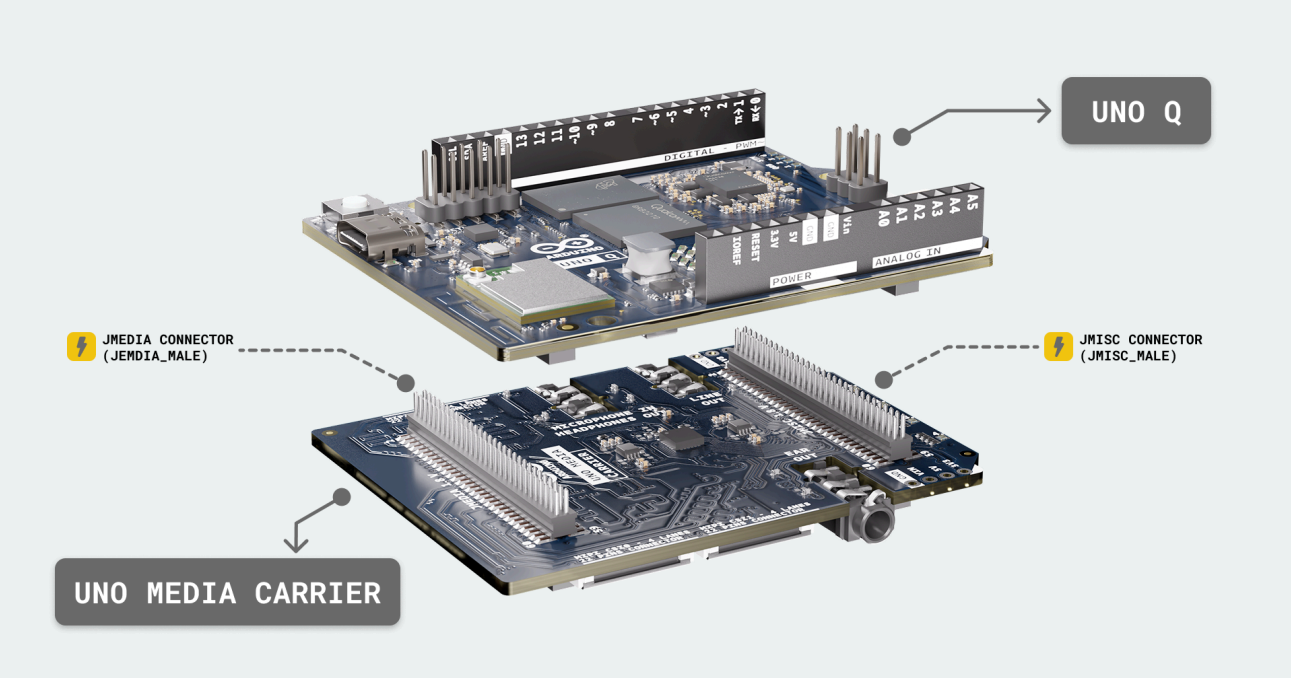
5.8 Power Output Capability

The combined maximum current for the +3V3 and +5V_USB rails depends on the host board's specifications. Refer to your host board's datasheet for maximum current limits (UNO Q, VENTUNO Q). The VCC_PX3_1P8 rail provides low current, suitable only for I^2C-level translation circuits and should not be used for applications requiring high current or external device power supply.

6 Device Operation

6.1 Getting Started

The UNO Media Carrier connects directly to the host board through the JMEDIA and JMISC high-speed connectors. Install the carrier by aligning the connectors and pressing firmly until fully seated. The passthrough design ensures all signals remain accessible for future expansion.



1. Power off the host board before installing the UNO Media Carrier.
2. Align the JMEDIA and JMISC connectors on the UNO Media Carrier with the corresponding female connectors on the host board.
3. Press the carrier firmly onto the host board until both connectors are fully seated.
4. Connect cameras to the CSI0 and CSI1 connectors as needed.
5. Connect a display to the DSI0 connector if required.
6. Connect audio peripherals to the 3.5 mm jacks as needed.
7. Power on the host board. Both UNO Q and VENTUNO Q support 7-24 V DC via VIN input. UNO Q can alternatively be powered via 5 V DC / 3 A USB-C.

> **Note:** Make sure the host board is powered off before installing or removing the UNO Media Carrier to prevent damage to the connectors or components.

6.2 Power Considerations

The UNO Media Carrier is powered mainly through the JMEDIA and JMISC connectors from the host board. An optional 7-24 V DC VIN input (J13) is available for additional power when using power-hungry peripherals such as multiple cameras or high-power displays.

> **Power Budget:** Ensure the host board's power supply can handle the combined current draw of the carrier board and all connected peripherals. Use the VIN input (7-24 V DC) if additional power is required.

6.3 Getting Started - Arduino App Lab

Arduino App Lab [1] is a unified editor that builds and runs projects on both the board's processors. A project is an **App** that can include:

- A Python® program that runs on the Linux system (Qualcomm Dragonwing™ QRB2210)
- An Arduino sketch that runs on the microcontroller (MCU) (STM32U585)
- Optional **Brick** (pre-packaged services such as AI models, web servers, or API clients) that are deployed alongside the App (runs on the Linux system as well).

Apps use **Bridge** to exchange data between the Linux side and the microcontroller.

Arduino App Lab can be installed on your PC or executed directly on compatible host boards (UNO Q, VENTUNO Q) in Single-Board Computer mode. When using UNO Q, the 4GB LPDDR4X variant is recommended to provide sufficient memory for stable operation and resource-intensive applications. To use the board:

- Launch a ready-to-use example in Arduino App Lab, customize it to your needs, or build a new application from scratch using the integrated editor.
- Press the **Run** button in Arduino App Lab [1].
- The editor builds the Linux component, flashes the MCU sketch, deploys any selected Brick, and starts everything on the board.
- Logs for both sides are available in the editor, and you can iterate without leaving Arduino App Lab.

For first time setting up:

1. Install Arduino App Lab [1], launch it, and connect the host board (UNO Q, VENTUNO Q). Use a **USB-C data** cable for PC-hosted mode, or simply power the board for SBC mode.
2. The board will automatically check for updates. If there are any updates available, you will be prompted to install them. Once the update is finished, the Arduino App Lab[1] will need to be restarted.
3. During the first setup, you will be asked to provide a name and password for the device. You will also be asked to provide Wi-Fi® credentials for your local network.
4. To test the board, navigate to an example App in the **"Examples"** section of the Arduino App Lab[1], and click on the "Run" button in the top right corner. You can also create a new App in the **"Apps"** section.
5. The status of the App can be monitored in the console tab of the App.

> **Note:** In **PC-hosted** mode, a *USB data* connection is required for first-time setup. Afterwards, you can use the **Network** target over LAN (SSH). In **Single-Board Computer (SBC)** mode, no USB data link is needed for setup, just power the board and use the **Network** target once it joins your network. For peripherals in SBC mode (keyboard, mouse, USB camera, microphone), use a USB-C dongle with external power delivery capabilities. When DisplayPort Alt-Mode is active, USB data transfer speeds are reduced.

Use a 5 V DC / 3 A USB-C source and cable, or power from the 5 V or VIN pins as specified in the input power section (USB-C is 5 V DC only / VIN is 7-24 V DC).

> First boot typically takes 20 to 30 seconds while Linux starts. Wait for the boot LED sequence or the LED-matrix animation to finish before interacting with the board.

6.4 Bricks

Bricks are modular building blocks in Arduino App Lab that let you extend your application without writing all of the underlying infrastructure. Each Brick encapsulates ready-made functionality, such as sensor integration, AI models, databases, or user interfaces, that you can drop into a project. Typical Bricks provide:

- An AI model (e.g., object classification or keyword spotting)
- A web UI or REST API service
- An integration to an external data source

Bricks are deployed alongside the App and managed by the Linux side. The typical workflow is:

1. Create an **App** in Arduino App Lab.
2. Select any **Brick** the App should use.
3. Add your Python® code (Linux) and/or your Arduino sketch (MCU).
4. The Brick needs to be imported into your `main.py` file, and initialized following the Brick's API.
5. Press **Run** to deploy the Linux application, flash the MCU, and launch your App together with its Bricks.
6. The **Bridge** tool handles data exchange between Linux and MCU.

> While an App is bound and running, USB interfaces may be occupied by the system. Use Arduino App Lab [1] to deploy and monitor. To use external CLI tools over USB, stop the App or disconnect the board.

6.5 Camera Setup

The UNO Media Carrier supports MIPI-CSI cameras connected via the 22-pin MIPI-CSI connectors. Cameras are controlled through the host board's Linux system using V4L2 drivers.

1. Lift the locking tab on the CSI connector (`CSI0` or `CSI1`).
2. Insert the camera ribbon cable with contacts facing down.
3. Press the locking tab down to secure the cable.
4. Power on the system and verify camera detection using `v4l2-ctl --list-devices`.

6.6 Display Setup

The UNO Media Carrier supports MIPI-DSI displays connected via the 22-pin MIPI-DSI connector. Displays are driven through the host board's MIPI-DSI interface.

1. Lift the locking tab on the DSI connector.
2. Insert the display ribbon cable with contacts facing down.
3. Press the locking tab down to secure the cable.
4. Power on the system and configure display settings in the Linux environment.

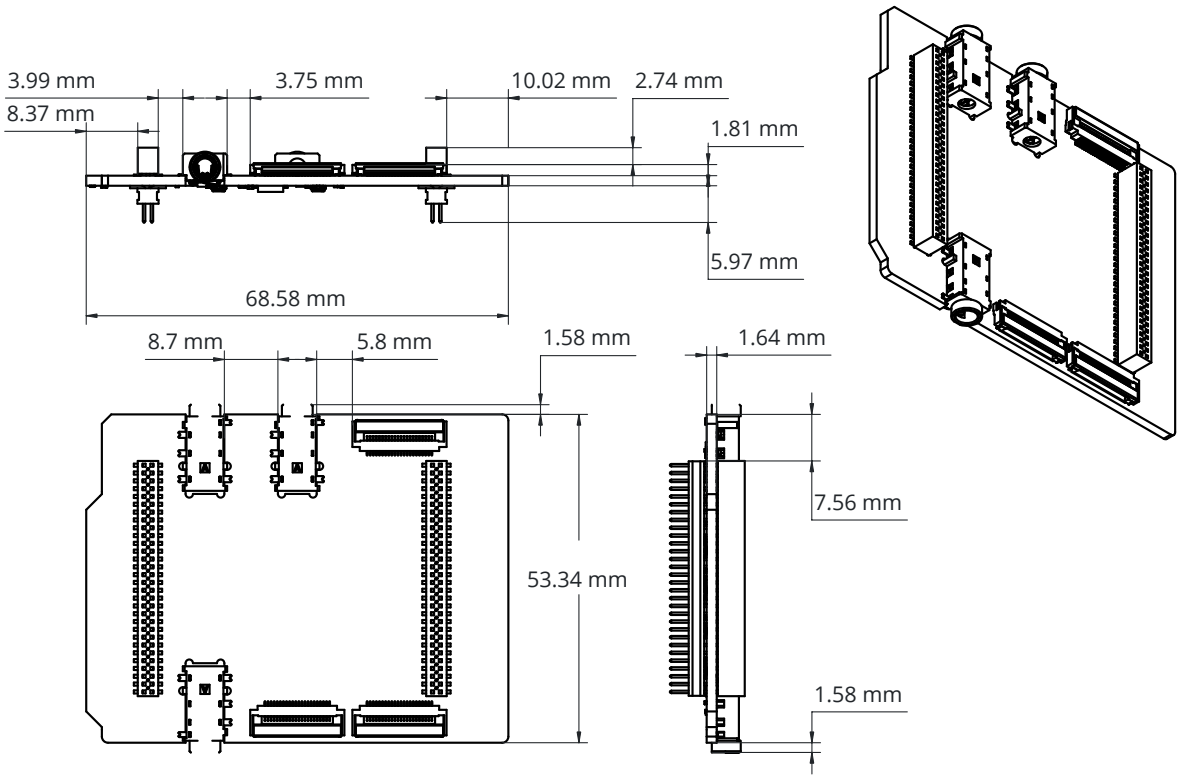
6.7 Audio Setup

The UNO Media Carrier provides three 3.5 mm audio jacks for flexible audio input and output. Audio signals are routed through the JMISC connector to the host board's audio codec.

- **MIC-IN / Headphones Out:** Combined jack for microphone input and headphone output. Use a four-pole TRRS connector for simultaneous input and output.
- **Line Out:** Stereo line-level output for connection to external amplifiers or powered speakers.
- **Earphones Out:** Direct earphone output for mono or stereo playback.

7 Mechanical Information

The board dimension measures 68.58 mm × 53.34 mm. The outline and hole pattern are shown below and are compatible with the UNO form factor. The board is designed to stack directly onto the host board through the JMEDIA and JMISC connectors.



Certifications

8 Declaration of Conformity CE DoC (EU)

English: We declare under our sole responsibility that the products above are in conformity with the essential requirements of the following EU Directives and therefore qualify for free movement within markets comprising the European Union (EU) and European Economic Area (EEA).

French : Nous déclarons sous notre seule responsabilité que les produits indiqués ci-dessus sont conformes aux exigences essentielles des directives de l'Union européenne mentionnées ci-après, et qu'ils remplissent à ce titre les conditions permettant la libre circulation sur les marchés de l'Union européenne (UE) et de l'Espace économique européen (EEE).

9 Declaration of Conformity to EU RoHS & REACH 191 11/26/2018

Arduino boards are in compliance with Directive 2011/65/EU of the European Parliament and Directive 2015/863/EU of the Council of 4 June 2015 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Substance	Maximum Limit (ppm)
Lead (Pb)	1000
Cadmium (Cd)	100
Mercury (Hg)	1000
Hexavalent Chromium (Cr6+)	1000
Poly Brominated Biphenyls (PBB)	1000
Poly Brominated Diphenyl ethers (PBDE)	1000
Bis(2-Ethylhexyl) phthalate (DEHP)	1000
Benzyl butyl phthalate (BBP)	1000
Dibutyl phthalate (DBP)	1000
Diisobutyl phthalate (DIBP)	1000

Exemptions: No exemptions are claimed.

Arduino boards are fully compliant with the related requirements of European Union Regulation (EC) 1907 /2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). We declare none of the SVHCs (https://echa.europa.eu/web/guest/candidate-list-table), the Candidate List of Substances of Very High Concern for authorization currently released by ECHA, is present in all products (and also package) in quantities totaling in a concentration equal or above 0.1%. To the best of our knowledge, we also declare that our products do not contain any of the substances listed on the "Authorization List" (Annex XIV of the REACH regulations) and Substances of Very High Concern (SVHC) in any significant amounts as specified by the Annex XVII of Candidate list published by ECHA (European Chemical Agency) 1907 /2006/EC.

10 Conflict Minerals Declaration

As a global supplier of electronic and electrical components, Arduino is aware of our obligations with regards to laws and regulations regarding Conflict Minerals, specifically the Dodd-Frank Wall Street Reform and Consumer Protection Act, Section 1502. Arduino does not directly source or process conflict minerals such as Tin, Tantalum, Tungsten, or Gold. Conflict minerals are contained in our products in the form of solder, or as a component in metal alloys. As part of our reasonable due diligence Arduino has contacted component suppliers within our supply chain to verify their continued compliance with the regulations. Based on the information received thus far we declare that our products contain Conflict Minerals sourced from conflict-free areas.

11 FCC Caution

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference

(2) this device must accept any interference received, including interference that may cause undesired operation.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment.
3. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator & your body.

English:

User manuals for licence-exempt radio apparatus shall contain the following or equivalent notice in a conspicuous location in the user manual or alternatively on the device or both. This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

French:

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l' appareil nedoit pas produire de brouillage

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC SAR Warning:

English This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

French: Lors de l' installation et de l' exploitation de ce dispositif, la distance entre le radiateur et le corps est d 'au moins 20 cm.

Company Information

Company name	**Arduino S.r.l.**
Address	Via Andrea Appiani 25, 20900 Monza (Italy)

Reference Documentation

No.	Reference	Link
1	Arduino App Lab	https://www.arduino.cc/en/software
2	Arduino UNO Q Documentation	https://docs.arduino.cc/hardware/uno-q/
3	Arduino UNO Media Carrier Documentation	https://docs.arduino.cc/hardware/uno-media-carrier/
4	Project Hub	https://projecthub.arduino.cc/
5	Library Reference	https://docs.arduino.cc/libraries/
6	Arduino Store	https://store.arduino.cc/

Document Revision History

Date	Revision	Changes
27/03/2026	1	Initial release