UNO Q

Product Details Page Content

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Short Description

Arduino UNO Q bridges high-performance computing with real-time control, supporting advanced applications such as object recognition, voice commands, motion detection, and more. **Get power and ease of use – all wrapped up into UNO.**

Overview

Arduino UNO Q's hybrid design makes it the perfect dual-brain platform for your next innovation. It combines a Linux® Debian-capable Qualcomm® Dragonwing™ QRB2210 microprocessor with a real-time STM32U585 microcontroller (MCU). It's Arduino, it's a computer, it's anything you want to build.

It's the go-to tool to prototype your next robotics or IoT project, thanks to:

- **All-in-one toolbox:** Arduino UNO Q combines the powerful Dragonwing™ QRB2210 microprocessor (MPU) with a real-time STM32U585 microcontroller (MCU) – no matter what you're building, it's your new go-to tool!
- **AI in a blink:** unlock AI-powered vision and sound solutions that react to their environment.
- **Arduino support and developer tools** including libraries, sketches, and projects developed for the UNO ecosystem by millions of users.
- **Compatible with the Arduino UNO ecosystem**: UNO Q works with a wide range of Arduino hardware, from classic UNO shields to new carriers, and includes a Qwiic connector for Modulino® nodes and third-party modules.
- **Streamlined software experience**: in addition to Arduino IDE and Arduino Cloud, you can jumpstart development with plenty of pre-built examples and AI models available through Arduino App Lab.
- **Seamless, unified development**: build classic Arduino Sketches, code in Python® thanks to the pre-installed Linux® Debian OS, or mix the two from a single interface – it's easy, with Arduino App Lab.

Powered by Qualcomm Dragonwing QRB2210

Your UNO Q is a compact, cost-effective platform with advanced features like machine vision – thanks to the integrated AI and GPU acceleration, quad-core 2.0 GHz CPU, Adreno GPU, 2x ISP, and support for camera, display, and audio provided by the Dragonwing QRB2210.

Advanced features

- **Microprocessor:** Qualcomm® Dragonwing™ QRB2210
- **Microcontroller:** Real-time, low-power STM32U585 MCU
- **RAM**: 2GB LPDDR4
- **Storage:** 16 GB eMMC built-in (no SD card required)
- **Connectivity:** Dual-band Wi-Fi® 5 (2.4/5 GHz), Bluetooth® 5.1
- **High-speed headers:** Power advanced peripherals – vision, audio, display
- **Classic UNO headers**: Mount shields to add capabilities
- **LED matrix:** 8 x 13 LED matrix for visual creation and feedback
- **USB-C connector:** Power delivery, video output, or connect keyboard, mouse, USB microphones or USB cameras via dongle
- **Qwiic connector:** Expand easily with Modulino® nodes – no soldering required

UNO Q empowers innovators to turn ideas into real-world solutions. Whether you're experimenting with IoT, learning robotics, or diving into AI, **your next idea starts with Q**.

What is Arduino App Lab?

Unified Dev Experience

App Lab is a brand-new integrated development environment that unifies the journey across Linux® and real-time OS.

Preloaded on the UNO Q, App Lab combines Arduino Sketches, Python® scripts, and containerized AI models into fully integrated applications all managed from a single interface.

Ready-to-use Apps and Bricks

Get started fast with Arduino Apps, self-contained examples with everything you need. Add plug-and-play features to your projects with pre-built Bricks to accelerate your ideas even more.

Pre-loaded AI Models

With pre-loaded AI models in Arduino App Lab, you can leverage the real-world data for a wide range of capabilities such as object/human detection, anomaly detection, image classification, sound recognition, and keyword spotting.

Find out more in our official documentation.

Need Help?

Check the Arduino Forum for questions about the Arduino Language or how to make your own Projects with Arduino. If you need any help with your product, please contact the official Arduino User Support through our Contact us page.

Warranty

You can find your product warranty information here.

Tech Spec

Microprocessor (MPU)	Qualcomm Dragonwing™ QRB2210: Quad-core Arm® Cortex®-A53 @ 2.0 GHz Adreno GPU 3D graphics accelerator 2x ISP (13 MP + 13 MP or 25 MP) @ 30 fps
Microcontroller (MCU)	STM32U585 Arm® Cortex®-M33 up to 160 MHz 2 MB flash memory 786 KB SRAM
RAM	2GB LPDDR4
Power Supply	From USB-C connector 5 VDC max at 3 A Input Voltage (VIN): 7-24 VDC
Storage	16GB eMMC
USB	1× USB-C port with host/device role switching, power role switch and video output
Connectivity	Wi-Fi® 5 2.4/5GHz with onboard antenna Bluetooth® 5.1 with onboard antenna
Interfaces	I2C/I3C SPI PWM CAN UART PSSI GPIO JTAG ADC
Video	Video output support via USB-C MIPI DSI pins on JMEDIA header

Extra	4× RGB user-controllable LEDs 8x13 Blue LED Matrix 1x QWIIC connector voltage 3V3, I2C 1x User push-button JCTL: MPU Remote Debug connector
Audio	Microphone IN / Headphone OUT / Line OUT on JMISC
Dimensions	68.85 mm x 53.34 mm (UNO form factor)
MPU Operating System	Linux Debian OS with upstream support
Real-time Operating System	Arduino Core on Zephyr OS
Containerization	Docker and Docker Compose support
Supported Operating Systems for Arduino App Lab	Windows: Windows 10 or later (64-bit) macOS: macOS 11 or later (64-bit) Linux: Ubuntu 22.04 or later, and Debian Trixie (64-bit)

Datasheet

docs.arduino.cc/resources/datasheets/ABX00162-datasheet.pdf (the link will be available on Oct 7th)