Arduino® UNO Q Product Summary

Bridge High-Performance Computing with Real-Time Control

Whether you need a powerful microprocessor, precise microcontroller control, or both — UNO Q delivers it all in one board, making it the perfect platform for your next innovation.

Built in the iconic UNO form factor, Arduino UNO Q combines a **Linux Debian-capable MPU** and a **real-time MCU** into one powerful, dual-brain platform. This hybrid design unlocks powerful applications — from AI and computer vision to IoT, robotics, and industrial automation — all on a single board.

Compatible with **Arduino App Lab — a completely new, all-in-one development environment** that empowers you to build innovative applications across microcontrollers, embedded Linux, and edge AI. It's designed with **ready-to-use examples**, expandable functionality via modular Bricks, and effortless deployment with built-in orchestration — bringing your ideas to life faster than ever.

Key Features

– Hybrid Intelligence
Combine the power of Linux and real-time MCU control in a single board — perfect for smart, responsive, and edge-aware applications.

– Streamlined Platform App Lab
With Arduino App Lab, you get an intuitive environment to create projects. It empowers you to seamlessly combine Arduino sketches, Python scripts, and containerized AI models into fully integrated applications.

– Simplified Development Experience
App Lab provides prebuilt examples, custom app creation using intuitive building blocks called Bricks, to scalable deployment with transparent orchestration of software and containers.

– Ready for AI and Vision at the Edge
Unlock the full potential of on-device intelligence with built-in support for computer vision, sound recognition, and real-time automation. UNO Q provides the performance and tools to bring AI-powered ideas to life right at the edge.

– Familiar Form, Unmatched Power
UNO Q keeps the iconic UNO footprint, featuring integrated Wi-Fi®, Bluetooth®, Qwiic expansion, and an 8x13 LED matrix, fully compatible with existing shields and accessories, while packing in modern features like Linux processing, AI support, and high-speed I/O.

– Two Setups, One Experience
UNO Q adapts to your workflow: use it as a single board computer by connecting a monitor, keyboard, and mouse, or connect it to a host PC running App Lab for programming it with a familiar development setup.

Application Areas

Smart Consumer Devices
Build intelligent products that react to the world around them, from facial recognition doorbells to voice-activated displays and AR-driven experiences.

Robotics Develop autonomous robots, gesture-controlled companions, or vision-guided arms leveraging dual cameras, onboard processing, and real-time motor control.

Home & Building Automation
Create smarter environments with devices that sense, respond, and adapt, lights that follow motion, systems that adjust with voice commands, and controls that personalize comfort and efficiency.

Education & STEM
Inspire students with a platform that blends embedded programming, AI, and Linux development. UNO Q makes advanced topics approachable.

Edge AI Prototyping
Build intelligent devices that run vision, audio, and anomaly detection models locally, no external processors needed.

Hardware Technical Specifications

Foot print	Arduino® UNO form factor	
CPU	• Qualcomm QRB2210 • Quad-core Arm® Cortex®-A53 @ 2.0 GHz • GPU 3D graphics accelerator	
Microcontroller	STM32U585 • Arm® Cortex®-M33 up to 160 MHz • 2 MB flash memory • 786 KB SRAM	
Memory	**RAM**	2GB PDDR4,
	Storage	16GB eMMC
Connectivity	**Wi-Fi®**	2.4/5GHz with onboard antenna
	Bluetooth	BLE® 5 with onboard antenna
USB-C®	1× USB-C port with host/device role switching, power role switch, and video output	
Camera	USB® camera support	
	2x MIPI CSI pins	
Video	Video output support via USB-C®	
	MIPI DSI pins	
Audio	Microphone IN / Headphone OUT / Line OUT / Ear OUT	
Other Interfaces	I2C/I3C	PSSI
	SPI	GPIO
	PWM	JTAG
	CAN	ADC
	UART	
Power Supply	**USB-C®**	5 VDC max at 3 A
	Input Voltage (VIN)	5 VDC
Dimensions	**Width**	53.34mm
	Length	68.85mm
Extra	4× RGB user-controllable LEDs	

	8x13 Blue LED Matrix
	1x QWIIC connector voltage 3V3, I2C
	1x User push-button
	MPU Remote Debug connector

Software Technical Specifications

MPU Operating System	Linux Debian OS with Upstream Support
Real-time Operating System	Zephyr OS
Containerization	Docker and Docker Compose support