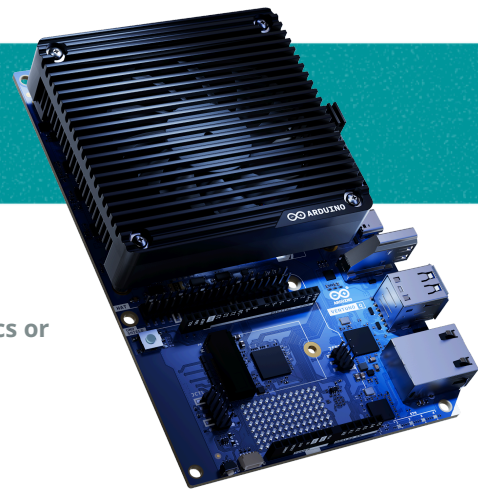




Arduino® VENTUNO™ Q

Optimized for LLMs & agentic AI,
go from idea to a running robotics or
physical-AI project, faster.

Where AI Takes Action.

Build Faster

Powered by Qualcomm
Dragonwing™ IQ8 Series
processor



40 TOPS NPU
Hexagon NPU



**Octa-core
Qualcomm® Kryo™**
CPU



**Qualcomm®
Adreno™**
623 GPU + Spectra ISP



STM32H5
Real-time MCU



16 GB LPDDR5
+ 64 GB eMMC



**Expandable M.2
NVMe**
Gen 4 port

Why developers love it



Run a local LLM in minutes

NPU-optimized models —bring up a
private LLM or VLM agent on day one.



Dual-brain, dual-OS

Ubuntu and Debian Linux for AI &
compute, STM32H5 for real-time control
— one board that perceives and acts, no
jitter.



Compatible With ROS 2

ROS 2 on Linux — bring Nav2, SLAM and
your own nodes, with NPU-accelerated
perception. No glue code, no custom
stack.



Open Platform, Build with Agent

Arduino® App Lab, VS Code or pick up
your Python editor — and build your app
with AI agents like Claude Code.



Connect anything

HDMI, 3x CAN bus, 3x MIPI cameras,
USB-C/USB-A, GPIO & PWM, Ethernet —
plus UNO Shield, Carrier and Raspberry Pi
HAT support.



Ships to production

Ship the same Arduino app on
Dragonwing IQ8 System-on-Module — one
silicon, prototype to volume.

AI models — ready to run on device



LLMs/VLMs

Stand up an optimized model like Qwen
3, Gemma 4. Or bring custom weights
from Hugging Face.



Audio Intelligence

Ready-to-run Whisper ASR,
speech-to-text and keyword spotting.
Train custom acoustics using Edge
Impulse.



Computer Vision

NPU-accelerated YOLO X. Zero-code
Bricks for object tracking. Multi-camera
processing at the edge.

Use cases — from prototype to production

Advanced Robotics

AMRs, sweepers & robot arms — ROS 2 navigation with NPU perception and
real-time motor control.

Physical & Agentic AI

Machines that perceive, decide & act — on-device VLMs and AI agents, fully
offline.

Industrial Automation

AI inspection, quality lines & predictive maintenance — multi-camera YOLOX
at the edge.

Fleet Mgmt & Multi-Camera

Driver monitoring, pedestrian detection & traffic nodes — 3x MIPI cameras,
video stays local.

AI Learning & Research Kit

One lab-proof board to teach robotics & AI, Linux, and Electronics.

HMI & Control

Voice, gesture and touchless panels with on-device AI and jitter free real
time controls.

MSRP \$299 · SKU ABX00181 · docs.arduino.cc

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