Arduino Nano R4

Sales Brief

CONFIDENTIAL INFORMATION

Nano R4

Release: June 19th 2025

Building upon the familiar RA4M1 microcontroller found in the UNO R4 family, this board offers a miniature form factor for streamlined development and production. This seamless transition from prototyping to real-world applications is made possible by leveraging the same powerful core.

Value Proposition | Short Version (MVP)

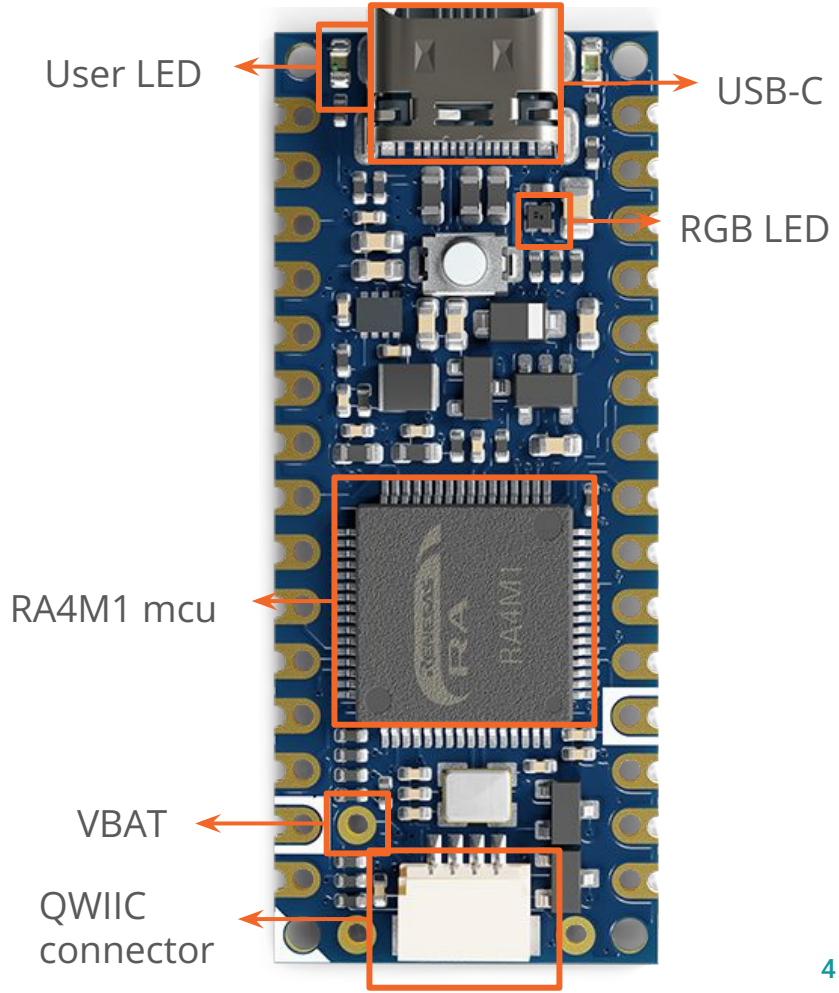
Why should customers buy this product?
The Nano R4 is the ideal choice for developers seeking to seamlessly transition from prototyping to production. Building upon the success of the UNO R4 Minima, it leverages the same powerful microcontroller in a compact Nano form factor.

Key Benefits:

- **Effortless Transition:** Move seamlessly from prototyping to production with the familiar RA4M1 microcontroller present already in the UNO R4 family.
- **Compact Design:** Ideal for space-constrained applications with the Nano family's small footprint.
- **Enhanced Flexibility:** Castellated pins and single-sided components facilitate the creation of custom hardware solutions.
- **Enhanced Connectivity:** Features an on-board QWIIC connector for easy integration with a wide range of sensors and peripherals.

Tech specs

Foot print	Nano form factor
Microcontroller	R7FA4M1AB3CFM
Memory	256 kB Flash, 32 kB RAM
Pinout	Compatible with other Nano board accessories
	CAN, DAC and OpAmp, VBAT
Connectors	USB-C
	QWIIC
Extra	RGB Led
Operating Voltage	5V
Voltage range	6-21V
UART	1
SPI	1
I2C	2 (5V and 3.3V (QWIIC))
Pinout	14 digital, 8 analog, 6 PWM



User personas

Makers interested in prototyping should be driven to the UNO R4 Minima given it more accessible headers and on board SWD connector for debugging.

Persona 1: The Embedded Systems Engineer

Demographics: Age 30-55, experienced engineer with a background in embedded systems
Goals: Develop reliable and efficient embedded systems, reduce time-to-market, optimize performance
Needs: Powerful microcontroller with advanced features, cost-effectiveness, flexible hardware design, robust software tools and support
Pain Points: Steep learning curve for new microcontroller architectures, complex design processes, limited customization options

Persona 2: The Product Designer

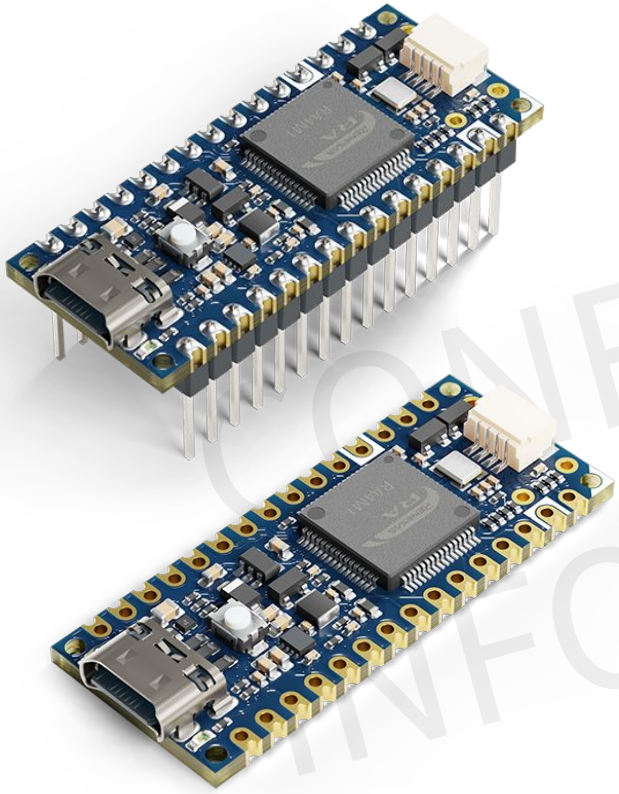
Demographics: Age 25-40, industrial or product designer with a focus on IoT and smart devices
Goals: Create innovative and visually appealing products, integrate microcontroller functionality into designs, ensure reliable and secure operation
Needs: Compact and customizable hardware, easy-to-use development tools, strong community support for design inspiration and troubleshooting
Pain Points: Limited design flexibility with off-the-shelf boards, complex hardware integration, challenges in meeting regulatory requirements

Value Proposition Breakdown Version

Customer need / Value proposition	Target	Values	Use Cases
Certification requirements	Product Designer	Certification documentation compliance	Streamline production with readily available certification documentation for Europe (CE), USA (FCC), UKCA (UK), RCM (Australia), plus RoHS, WEE, and REACH compliance.
Use the same firmware in prototyping and production	Embedded Systems Engineer	Portability and library support	Easily transition from prototyping with UNO R4 Minima to production with Nano R4, leveraging the same firmware and libraries while accessing advanced features like CAN, OpAmp, and DAC.
Easily embed it in a custom hardware	Product Designer	Compact form factor	Ideal for embedded systems with its small footprint (4.3x1.7 cm), single-sided components, and castellated pins for easy integration into custom hardware designs.
Stand form factor among different options	Embedded Systems Engineer, Product Designer	Same form factor among the different options of the Nano family	Easily adapt existing custom hardware designs for other Nano boards thanks to the consistent pinout.

Nano R4

Features And Benefits



Arduino Nano R4

– Space-Saving Design
At just 4.3x1.7 cm, the Nano form factor is ideal for integrating into compact and space-constrained applications.

– Effortless Expansion
Quickly expand your project's capabilities by easily connecting a wide range of sensors and actuators using the on-board QWIIC connector. An extra I2C port at 5V on pins A4 and A5 offers further connectivity options.

– Production-Ready
Designed for seamless integration into your products, this board features castellated pins and single-sided components for easy assembly and customization.

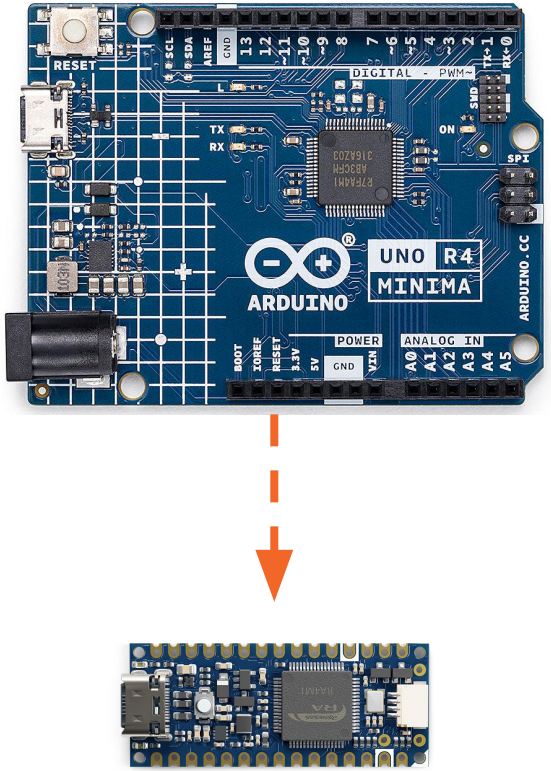
– Programmable RGB LED
Customize the on-board RGB LED to indicate different operating states, making debugging and system monitoring more intuitive.

Nano R4

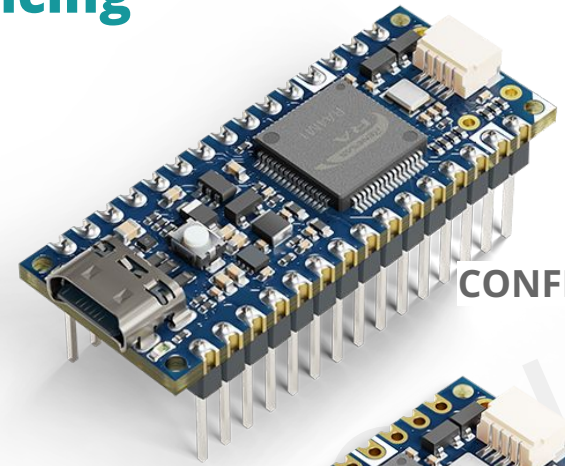
Pricing And Positioning

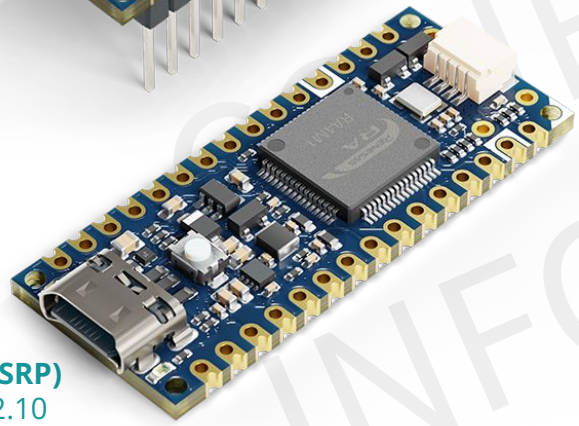
Positioning

Experience the benefits of a System-on-Module with the Nano R4.
It offers a streamlined path to production for projects developed with the UNO R4 family.



Pricing





Price (MSRP)
€11 / $12.10

Name: Arduino Nano R4 / Arduino Nano R4 with headers

SKU: ABX00142 / ABX00143

MSRP (before VAT):
ABX000142 €11 / $12.10
ABX000143 €12.09 / $13.30

Availability: June 19th 2025

Cross Sell: Bundle with the Arduino Nano Screw Terminal Adapter (ASX00037), Arduino Nano Motor Carrier (ABX00041), Nano connector carrier (ASX00061)

That’s a wrap
Thank you!