D-Robotics

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RDK X3

V1.1.0

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D-ROBOTICS HOLDING LIMITED

D-Robotics

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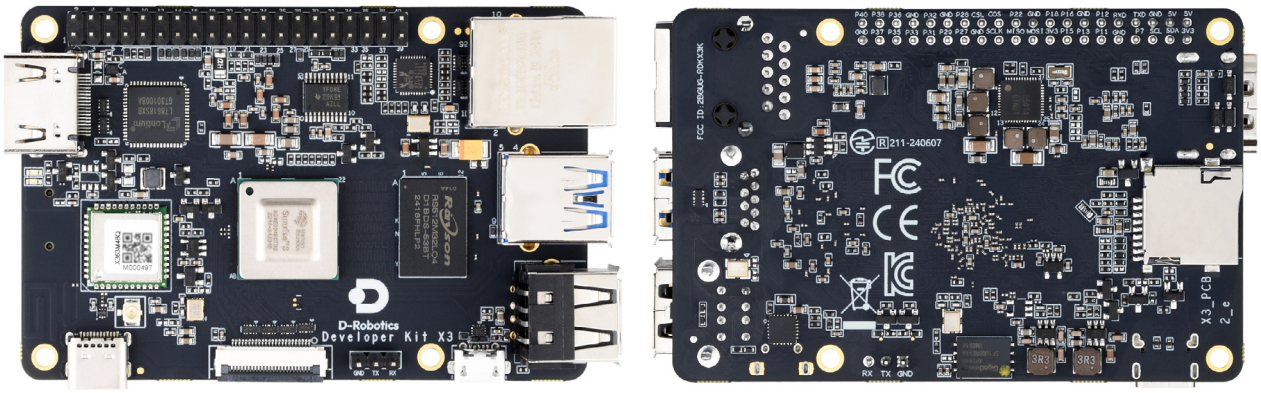


The D-Robotics RDK X3 is a next-generation high-performance intelligent platform specifically designed for AIoT and robotics applications. It features D-Robotics's self-developed Sunrise® 3 series chip, delivering up to 5 TOPS of edge AI computing power and a quad-core ARM Cortex®-A53 processor. Combining low power consumption with high efficiency, it enables developers to quickly build intelligent applications.

BRIEF

The RDK X3 offers the following core features:

- Quad-core ARM Cortex®-A53 processor
- Up to 5 TOPS of AI computing power
- Supports up to 4GB of memory
- Supports 4K@60fps video encoding and decoding

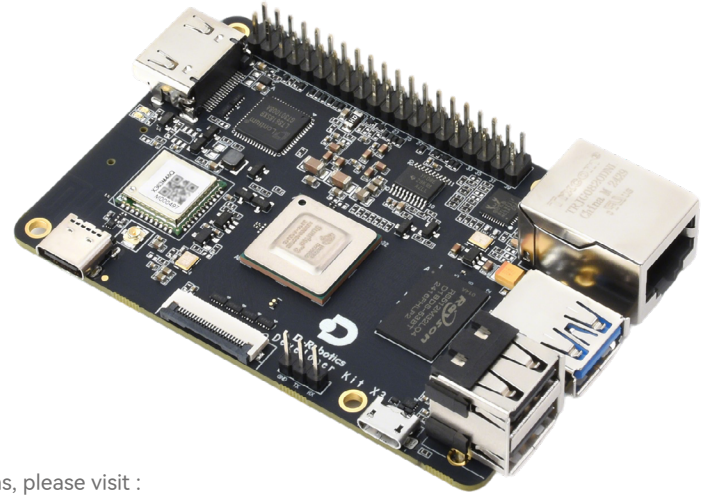
It comes equipped with a wide range of interfaces including HDMI, Gigabit Ethernet, USB 3.0, and MIPI CSI, catering to diverse application needs. Certain models are equipped with built-in dual-band (2.4GHz / 5.0GHz) Wi-Fi and Bluetooth 4.2 modules. Combined with an external antenna component, this ensures stable wireless connectivity, significantly reducing development and debugging costs for users and shortening time-to-market for products.

SPECIFICATIONS

Dimensions	85mm x 56mm x 20mm
CPU	Quad-core Arm® Cortex®-A53 64-bit @ 1.5GHz
BPU	Equivalent to 5 TOPS
Memory	2GB or 4GB LPDDR4
Storage	Options of NA, 16GB, 32GB, or 64GB
Peripheral Interfaces	Optional onboard 2.4GHz and 5GHz IEEE 802.11a/b/g/n/ac Wi-Fi, Bluetooth 4.2 module with external antenna support
	1 x Gigabit Ethernet PHY
	1 x USB 3.0 port
	32 × GPIOs: 3 × UART, 2 × SPI, 2 × I2S, 4 × I2C, PWM
	1 x Micro SD card slot
Imaging	1 × MIPI CSI interface
Display	1 × HDMI port, supports up to 1080p@60FPS
Multimedia	Supports H.265 codec, up to 4K@60FPS
	Supports MJPEG codec
Power Input	5V/3A DC
Operating Temperature	-20° C to 60° C
Lifecycle	Mass production maintained at least through 2030

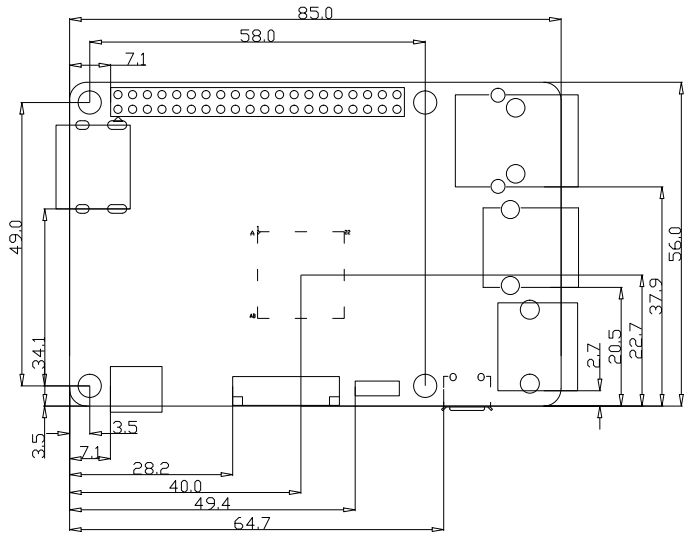
Specification & Model

Part Number	RAM Size
RDK X3 2G	2GB
RDK X5 4G	4GB



For detailed specifications, please visit :
https://developer.d-robotics.cc/en

Dimension



WARNINGS

- When using an external power supply with the RDK X3, ensure that the power source complies with local regulations and safety standards.
- This product should be used in a well-ventilated environment. If operating in an enclosed space, effective heat dissipation measures must be implemented.
- During use, the product should be placed on a stable, flat, and non-conductive surface.
- Damage caused by connecting incompatible devices is not covered under warranty.
- All peripherals used with this product (such as keyboards, monitors, and mice) must comply with the standards of the respective country and have the necessary certifications to ensure safety and performance compliance.
- All peripheral cables and connectors connected to this product must have good insulation to meet relevant safety requirements.

SAFETY INSTRUCTIONS

To Avoid Malfunction Or Damage:

- Do not use in humid environments, and avoid contact with water sources or placement on conductive surfaces.
- Keep away from heat sources; the RDK X3 is intended for use in normal room temperature environments..
- During assembly, avoid causing mechanical or electrical damage to the circuit board or connectors.
- Do not touch the circuit board or edge components while the device is powered on to prevent electrostatic discharge (ESD) damage.

https://developer.d-robotics.cc