EC2RDX5K1A | 10 TOPS Edge AI Vision and Robotics Kit

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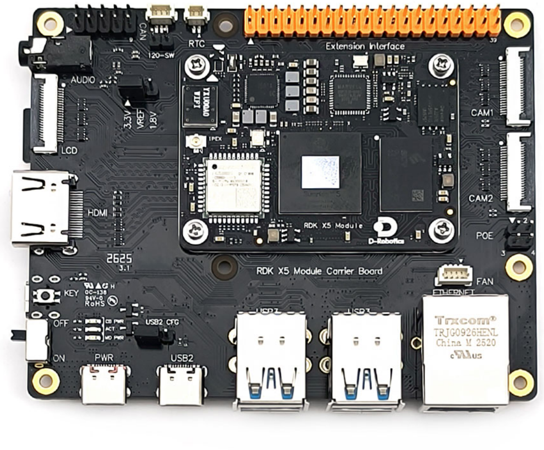


Overview

Power your next-generation AI and robotics projects with this all-in-one 10 TOPS Edge AI development kit, powered by the cutting-edge Sunrise 5 Intelligent Computing Architecture. The core SoM module delivers exceptional AI processing performance, capable of running Transformers for language models, RWKV sequence processing, 3D Occupancy Networks for spatial awareness, and Stereo Perception for depth sensing and binocular vision.

The kit's carrier board provides abundant interfaces—USB 3.0, HDMI, Ethernet, MIPI CSI, MIPI DSI, and a 40-pin connector—making it easy to connect cameras, sensors, displays, actuators, and other peripherals. Ideal for smart robots, intelligent vision systems, AI-powered drones, industrial automation, and advanced AIoT applications. it offers the flexibility, performance, and ease of use needed to accelerate development and bring AI applications to life.

Technical Overview

RDK-X5 SoM Module

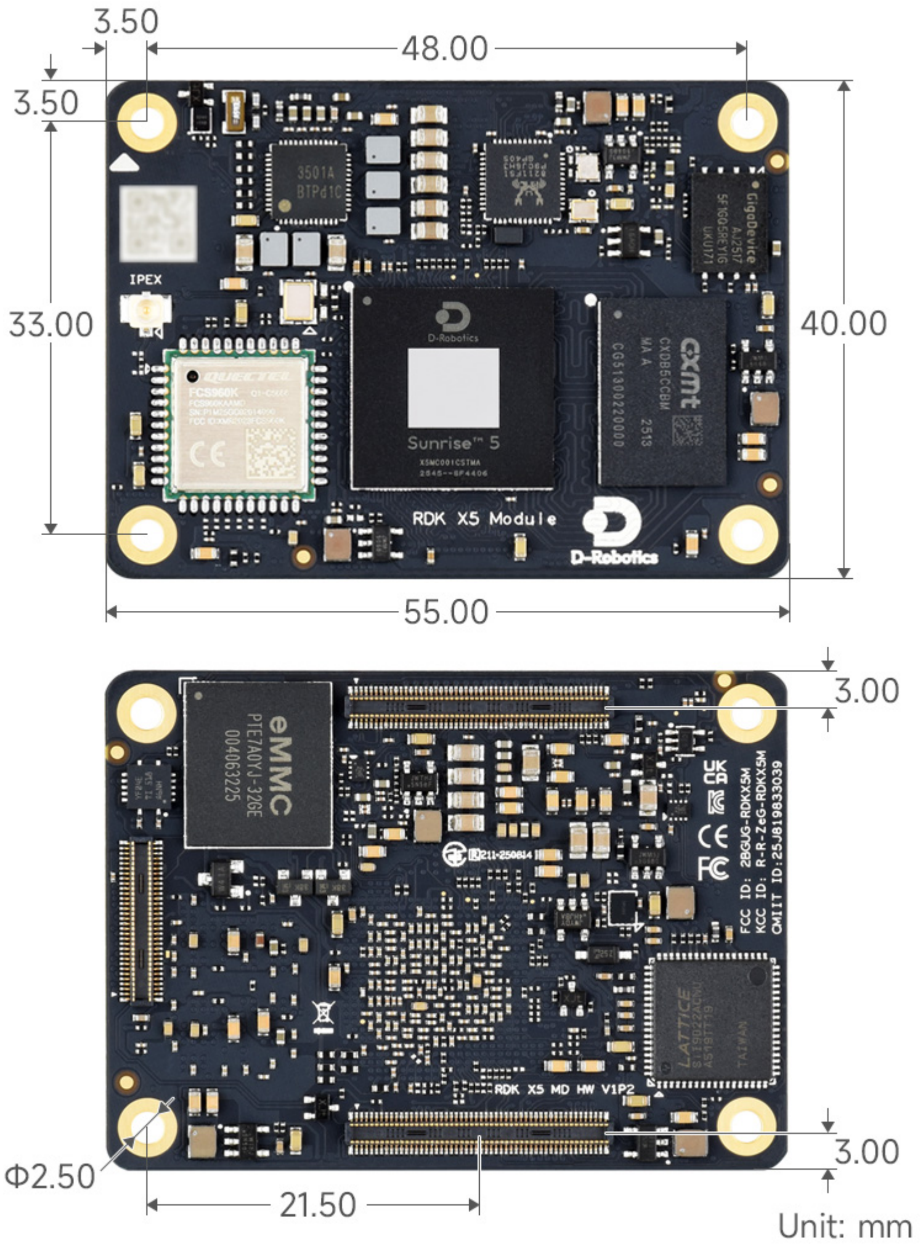
- 8-core ARM® Cortex®-A55 processor, 32 GFLOPS GPU performance
- 10 TOPS BPU computing power
- Supports 4K@60 H.264/H.265/M-JPEG video encoding and decoding
- ISP: 4K@60FPS, supports HDR/3DNR/WDR/PDAF
- Optional onboard RAM capacities: 2GB, 4GB, 8GB
- Optional onboard eMMC capacities: 0GB, 16GB, 32GB, 64GB
- Operating System: Ubuntu 22.04, Compatible with ROS 2

Carrier Board

- 2 × 4lane MIPI CSI interfaces
- 1 × HDMI interface (Up to 1080P@60FPS)
- 1 × 4lane MIPI DSI interface, compliant with MIPI V1.2 protocol
- 1 x 3.5mm headphone jack audio input/output
- 1 × Gigabit Ethernet PHY, supporting Network Time Protocol (NTP) and IEEE 1588
- 4 x USB 3.0 HOST interfaces（TYPE A)/ 1 x USB 2.0 Device interface（TYPE C)
- 1 x CAN FD
- 28 GPIOs (Reusable support 5 x UART, 8 x PWM, 3 x I2C, 2 x SPI, 1 x I2S)
- Optional dual-band 2.4/5 GHz wireless module supporting Wi-Fi 6 and Bluetooth 5.4

Dimensions

RDK-X5 SoM Module



Dimensions

Carrier Board