



D-Robotics

RDK Stereo Camera Module



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D-ROBOTICS HOLDING LIMITED

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BRIEF

The RDK Stereo Camera is a stereo depth camera module custom-designed for the RDK X5 platform. It integrates two 2-megapixel color image sensors and delivers synchronized video output via dual 22-pin MIPI CSI interfaces. The module supports hardware-level stereo synchronization and offers ultra-wide field of view (up to 178° diagonal), making it ideal for robotic vision, obstacle avoidance, and 3D mapping applications. With the provided BPU-accelerated stereo depth algorithm, the system enables efficient edge-side inference, significantly reducing CPU load and enhancing overall system performance.

SPECIFICATIONS

Image Sensor	SmartSens SC230AI, 1/2.8" CMOS, Rolling Shutter
Resolution	2 Megapixels (1920 × 1080)
Lens Structure	2G + 4P + 1IR
Focal Length	2.28mm ±5%
Aperture	F2.2 ±5%
Field of View (FOV)	178° diagonal / 150° horizontal / 80° vertical
Distortion	< -30%
Chief Ray Angle (CRA)	13°
Interface	Dual 22-pin MIPI CSI
Communication Protocol	I ² C
Memory	Onboard EEPROM
Synchronization	Supports hardware-level stereo sync



<https://developer.d-robotics.cc>