

100029708 | reCamera 2002 HQ PoE 8GB - Your Shortest Pathway to Build a Market-ready AI Camera

SKU: 100029708

Product Overview

reCamera PoE is a fully open-source, modular AI camera that runs Linux on an embedded AI SoC with 1 TOPS @ INT8 computing power. It includes built-in YOLO models and Node-RED. The camera features a 1/2.9" CMOS sensor, replaceable M12 lenses (default 90° FOV), PoE connectivity, and GPIO for network readiness.

Features

Detail Capture: Paired with macro/short-focus lenses. Typical scenarios: microscopy, material crack detection.

Target Focusing: Paired with telephoto lenses, such as power tower inspection, bird's nest detection.

Global Monitoring: Paired with wide-angle/short-focus lenses, such as pedestrian/vehicle flow counting, warehouse goods recognition.

Object Classification

Objection Detection

Pose Detection

Instance Segmentation reCamera includes an Ultralytics commercial license, you can directly use the built-in YOLO models for commercial or personal projects.

Hardware: module board documentation is fully open, including 3D files, schematic, PCB files

AI Functions: inference pipeline, NPU runtime integration, YOLO11n models, and Node-RED AI nodes are fully open.

Applications: Node-RED flows, C++ SDK, RTSP examples, and Web UI resources are openly provided.

System: Buildroot, U-Boot, Linux Kernel, device trees, drivers, and system services are open-sourced.

Feature 8: Multiple Interfaces Supported reCamera outputs data through standard protocols such as RTSP, HTTP, WebSocket, and TCP/UDP to virtually any online platform or application. Also use MQTT to connect to other IOT devices.

Object Classification: Classify the entire image

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Product Image



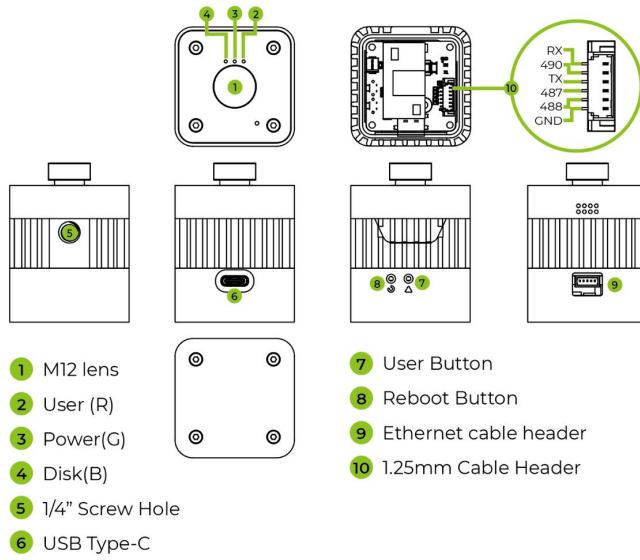
Product image

Specifications

reCamera 200x Series	reCamera 2002	reCamera 2002w	reCamera Gimbal	reCamera HQ PoE
Processor System	AI Performance	ni1TOPS@Int8		
SOC	SG2002			
CPU	C906@1GHz + C906@700MHz			
MCU	8051@8KB SRAM			
Memory	256MB			
Video Encode	5MP @ 30Fps			
Camera	Sensor	OV5647	GC2053	
Resolution	5M(25921944) Pixels	2MPixels		
Chip	1/4" CMOS Sensor	1/2.9" CMOS Sensor		
Pixel Size	1.4um	2.7um		
Output Format	RAW 10			
Maximum Frame Rate	full size: 15fps	full size: 30fps		
Aperture	F2.8			
Equivalent Focal Length	3.46mm	2.9mm		

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Field of View	65°	DFOV 93° HFOV 84° VFOV 54°		
Distortion	<1%			
Lens structure	5P			
Storage	eMMC	8GB/64GB		
Expansion	removable TF card (up to 2TB, not included)			
I/O	Ethernet	100Mbps	100Mbps with PoE	
Wireless	/	WIFI2.4G/5G BT4.2/5.0	WIFI2.4G/5G BT4.2/5.0	/
USB	USB Type-C(2.0)			
Button	1x Reset Button, 1x Boot Button			
Fill Light	0.3w White Light	/		
LED Indicator	1x Power indicator, 1x eMMC status indicator, 1x CPU status(User LED)			
I/O Port	/	3 I/O Ports 487,488,490		
Audio	Mic	On-board Mic		
Speaker	External Speaker			
Motor	/	MS3008/MS3506	/	
Dimension	40x40x36.5mm	68x112x71mm	40x40x45.8mm 40x40x53.1mm with lens	
Power	5V/1A USB Type C			
Operation Temperature	2050degC			
Operation Humidity	95%			

Hardware Overview



Hardware overview image