

AMP Series MIPI Cameras



Product Introduction

The "AMP" series MIPI camera modules are high-performance embedded modules developed for consumer-grade smart devices, featuring easy integration and high-quality imaging. The on-board ISP chip performs real-time image processing including exposure, white balance, noise reduction and HDR synthesis. Multiple field-of-view and resolution options are available to flexibly meet application requirements for navigation-obstacle avoidance, environment perception and wide-angle monitoring. Compact design balances protection, heat dissipation and simple mounting — a dependable vision choice for consumer smart devices.

Product Advantages



Large-aperture

Adopting a large aperture lens design, the light intake is significantly increased. Coupled with a high-sensitivity CMOS sensor, clear and bright images can still be captured in low light environments, meeting the demanding visual requirements of night surveillance, low light scenes, and more.



Built-in ISP

Integrated high-performance ISP chip, supporting real-time image processing such as automatic exposure, white balance, noise reduction, etc., can output high-quality images without additional computing power, reducing the burden on the main control and improving the overall efficiency and stability of the system.



High-dynamic

The built-in ISP supports HDR synthesis algorithm, which effectively suppresses overexposure and missing dark areas under complex lighting conditions such as backlighting and strong light through multi frame exposure fusion technology, preserves details, and presents a layered and realistic image.



High compatibility

Supporting standardized MIPI interfaces, it can quickly adapt to mainstream control platforms and operating systems, providing a variety of field of view and resolution specifications to choose from, simplifying the development process, and helping products quickly land and iterate.

Ecological Suite Support

Espressif ESP32-P4

- Low-power AIoT Multimedia MCU

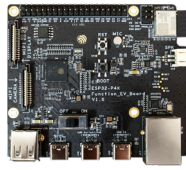
Chip: Dual core RISC-V400MHz

Computing: Built-in NNA neural accelerator

Interface: MIPI-CS1/USB 2.0

Encoding: H.264 hardware encoding

Use-cases: Smart access control, IoT cameras, lightweight vision endpoints



Rockchip RK 3588-NanoPC-T6

- High-Performance Edge-Computing Platform

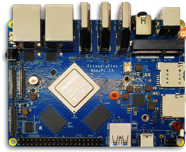
Chip: Octa-core A76+A55 big.LITTLE

Computing: 6 TOPS NPU

Interface: Multi-channel MIPI-CS1

Codec: 8K video encode/decode

Use-cases: Multi-channel vision, industrial inspection, multi-camera stitching



D-Robotics RDK X5

- AI Development Platform for Robots

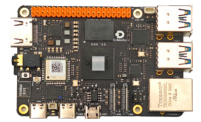
Chip: Horizon Sunrise 5

Computing: 10 TOPS BPU

Interface: Dual MIPI-CS1

Ecology: TogetheROS.Bot/ROS2

Use-cases: Robot depth perception, navigation & obstacle avoidance, 3D vision



Raspberry Pi5

- General-Purpose Open-Source Dev Platform

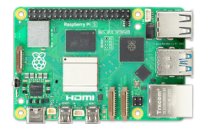
Chip: Quad-core Cortex-A76

Computing: No dedicated NPU

Interface: Dual MIPI-CS1

Ecosystem: Extensive community resources

Use-cases: Algorithm prototyping, education, pre-research



Product Parameters



Product Code: AMP121-C **Resolution:** 1280 (H) x 960 (V)

HFOV: 129.6° / 195° **EFL:** 0.95mm/1.75mm

Frame Rate: 30 FPS **F-NO:** 1.6/2.0

Dynamic Range: 120dB **Optical Size:** 1/3.75 inch

Pixel Size: 3.0um **Shutter Mode:** Rolling Shutter



Product Code: AMP360-C **Resolution:** 1920 (H) x 1536 (V)

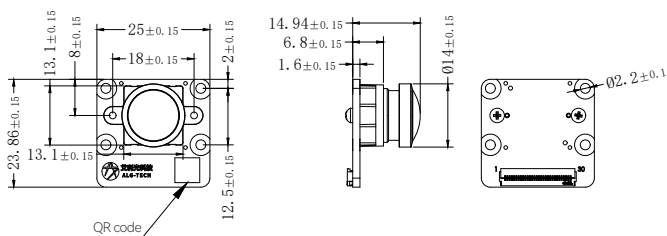
HFOV: 106° / 204° **EFL:** 1.42mm/3.13mm

Frame Rate: 30 FPS **F-NO:** 1.4/1.64

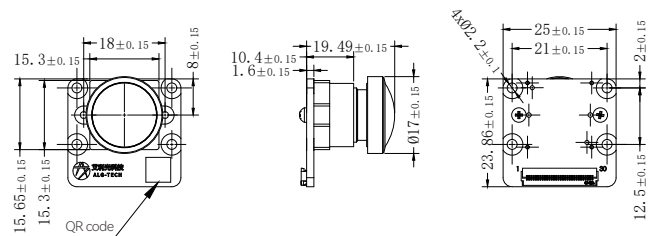
Dynamic Range: 120dB **Optical Size:** 1/2.44 inch CMOS

Pixel Size: 3.0um **Shutter Mode:** Rolling Shutter

Structural Dimensions



Using AMP1120-C121-T8A-Z00-MMPCas an example.



Using AMP1120-C360-T8A-Z00-MMPCas an example.

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