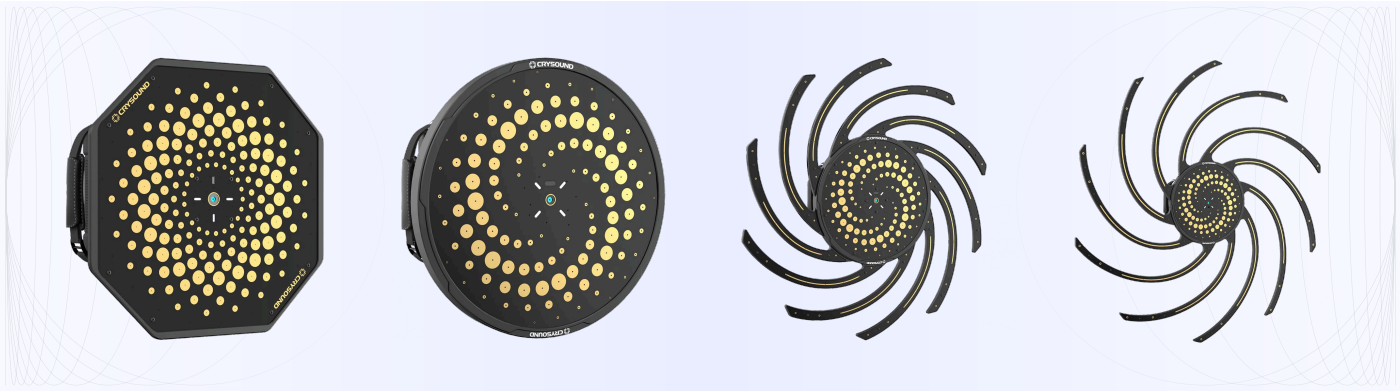

CRY8500 Series SonoCam Pi Acoustic Camera

Introduction

The CRY8500 Series SonoCam Pi is a hand-held acoustic camera array development kit designed to support for quick and accurate sound imaging application.

With up to 208 MEMS microphones, the microphone array of the SonoCam Pi features a modular design, allowing for plug-and-play replacement. It currently offers four array options: a 30cm 128-channel microphone array, a 30cm 208-channel microphone array, a 70cm 208-channel microphone array, and a 110cm 208-channel microphone array. Customers can flexibly select the most suitable array based on their specific measurement objects. The development kit is capable of both near-field and far-field measurements in a single system. This high-performance, lightweight and portable development kit redefines mobility and precision in acoustic diagnostics, making it the ideal tool for acoustic testing and analysis.

Applications

- Acoustics laboratory research and testing
- Optimize sound quality in automotive, HVAC, and consumer electronics
- Localize noise sources in turbines and assess rotor acoustics
- Visualize acoustic weak spots and radiating components
- Detect leaks, mechanical faults, and airborne noise

Highlights

- **Customizable and Replaceable Mic Array**

  Supports up to 208 digital MEMS microphones and array sizes up to 110 cm with arm extensions.

- **Optional Beamforming or Holography**

  Beamforming frequency range: 200 Hz – 20 kHz
  Holography frequency range: 20 Hz – 20 kHz

- **Open API for Real-time Waveform Output**

  SonoCam Pi provides an API for real-time 208-channel waveform and video output. Users can develop their own algorithms and applications with the hardware.

- **Class 1 Frequency Response**

  SonoCam Pi is designed and calculated as sound level meter performance, meeting the Class 1 frequency response requirements.

- **Up to 8 Hours of Operation**

  A single rechargeable Li-ion battery provides up to 4 hours of continuous operation. SonoCam Pi comes standard with 2 batteries, offering a total runtime of up to 8 hours.

- **Drone Detection and Tracking up to 500 Meters**

  The SonoCam Pi is capable of detecting and tracking drones at a range of 500 meters with a 30 cm 208-channel microphone array.

Technical Specifications

Acoustic Parameters

Mic Array	128, up to 208 channels
Beamforming Frequency	200 - 20k Hz (110cm array)
NAH Frequency	20 - 20k Hz (110cm array)
SPL	28 - 132 dB
Dynamic Range	Up to 40 dB
Distance	0.01 - 500 m

Camera

FOV	94° (H) × 76 ° (V)
Focal Length	2.3 mm
Resolution	13M pixels
Digital Zoom	1× - 6×
LED Light	4 × LED

Display

Resolution	1920 × 1200
Size	8 inches
Screen	Capacitive touchscreen
Brightness	600 nits, supports auto adjustment

Storage

Storage Capacity	64G (internal), 64G (external microSD card)
Storage Format	.jpg (picture), .mp4 (video), .wav (audio), .cdat (data)
Video Length	Maximum 5 minutes
Data Export	USB-C, Wi-Fi, microSD card

Analog Inputs

Channels	4 channels analog inputs
Frequency	20 - 100k Hz
Power Supply	IEPE, phantom power supply

Basic Parameters

Array Size	30 cm, 70 cm and 110 cm
Weight	2.9 kg (30 cm), up to 3.8 kg (110 cm)
Wi-Fi	802.11a/b/g/n/ac
Bluetooth	BT 5.2
Operating Temperature	-20 - +50 ℃
Storage Temperature	-20 - +70 ℃
Operating Humidity	10 - 80 % non-condensing

Software

Features	Beamforming and NAH. Sound pressure distribution and transfer paths visualization. Real time time-domain waveform, spectrogram and FFT Spectrum. Recording measurement by photos and videos. Same measurement accuracy as a sound level meter. Matlab API for real-time 208 channels waveform and video output.

Hardware Ports

USB-C 1	USB3.0 for charging, HDMI and data export
USB-C 2	USB2.0 for USB sensor
3.5 mm Audio Jack	Headphone output
MicroSD Card Slot	External storage

Language

Language	English, Chinese