SOUNDCAM BIONIC M

Product data

Highlights

- Modular system
- Big array with 100 cm diameter
- Beamforming and Holography
- Quick toolless assembly
- Integrated battery
- Real-time results at 100 fps
- Input for Trigger and Tacho

Applications

- Automotive
- Machine acoustics
- Railway vehicles
- Building acoustics
- Sound insulation checking

SOUNDCAM BIONIC M

The Advanced Modular Sound Camera

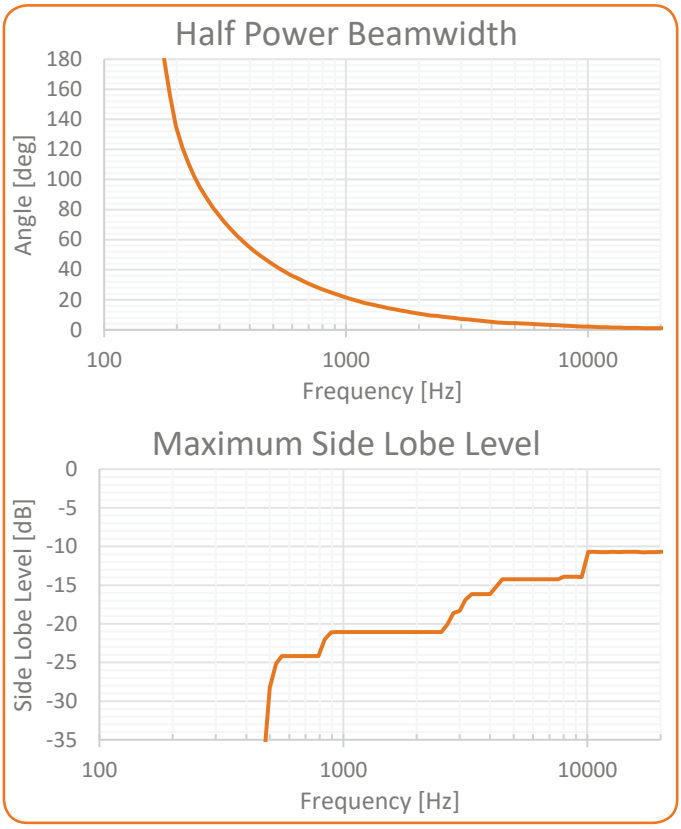
www.cae-systems.de

What is SoundCam?

SoundCam Bionic is a modular acoustic camera that images sound. The device locates sound sources in realtime and immediately displays the results on the screen. It is as easy to use as a smartphone.

The SoundCam Bionic M microphone array has a diameter of 100 cm and consists of 112 microphones. It is designed for use in the far field and can also be used in the near field from 40 Hz. The optimized microphone arrangement guarantees perfect results.
The seven detachable microphone arms are locked and held by magnets and guarantee a very fast setup and a small packing volume.

The carrying handle on the device and the integrated rechargeable battery make the SoundCam Bionic M suitable for mobile use.



Hardware

Physical Properties	Dimensions	100 x 100 x 15 cm (39 x 39 x 5.9 inch)
	Weight	3.8 kg (8.4 lb)
	Waterproof	IP20 or IP54
	Battery	Life ~ 3.5 h; fully charged in 1.5 h
	Tripod socket	1/4 inch
	Buttons	1 configurable + power on/off
	Operating temp	-20°C to 50°C (-4°F to 122°F)
	Charging temp	0°C to 45°C (32°F to 113°F)
	Storage temp	-30°C to 60°C (-22°F to 140°F)
Display	Size	7 inch / 15.5 x 8.6 cm
	Resolution	800 x 480 px
	Touch	10 finger capacitive touch
Embedded Controller	Processor	ARM A53 4x1.2 GHz with 1 GB RAM
	Internal storage	32 GB or 512 GB
	OS	Linux for ARM
Interfaces	USB	For data export
	Ethernet	LAN (for running software on laptop/PC)
	Audio	3.5 mm for headphones
	Input	Trigger, Tacho
Sensors	Microphones	112 digital MEMS
	Frequency range	Up to 24 kHz
	Beamforming	250 Hz to 24 kHz
	SONAH	40 Hz to 2 kHz
	Sample rate	48 kHz
	Sound pressure	Max. 120 dB
	Resolution	24 bit
Optical Camera	Resolution	320 x 240 (50 fps) or 640 x 480 (16 fps)
	Aperture angle	70° (FoV horizontal)
	Shutter	Global shutter
Power	Battery	Li-ion rechargeable battery (48 Wh)
	Input	19V with power adapter
	Management	Smart: work and charge simultaneously

Software features

OS	Linux (on SoundCam), Windows (for Laptop/PC)
HMI	Touchscreen, headphones, buttons
Protection	Password (unauthorized access protection)
Online Performance	Up to 100 acoustic fps, up to 50 optical fps
	Acoustic pictures, optical pictures, FFT and spectrogram
	Listen to local sound (broadband or frequency filtered)
	Place marker while measuring
	Buffer recording, trigger recording (SPL or frequency)
	Long term measurements (average and peak-hold)
	Time weighting: fast, slow, impulse
Offline Features	View acoustic results frame by frame
	Save and reload
	Replay in real-time or slow motion
	Listen to local sound
Export	Screenshots, video, sound
Intuitive Usability	Distance settings
	Frequency filters (narrow band, 1/3-octave and octave)
	Dynamic filter and low cut-off
	3 scaling modes: off, auto, smart (crest factor)

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