Spectral
DEVICES INC.

Product Sheet
Multispectral Cinematography Camera

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Background Information

Trademarks

Spectral Devices Inc., MSMC-2-3

Sales and Support

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1. Description

Introducing the MSMC-2-3, a cutting-edge and award-winning multispectral cinematography camera that seamlessly integrates three high-performance cameras within a single compact housing. Each camera includes a motorized lens and captures the scene through a set of beam splitters, eliminating perspective errors and enabling accurate image overlay between cameras.

The MSMC-2-3 achieves synchronized image acquisition with programmable frame rates, guaranteeing temporal synchronization of images from all three cameras. Customize shutter speed and ISO through the user-friendly software, accommodating variations in spectral sensitivity between cameras.

Internally, the MSMC-2-3 utilizes a double optical breadboard design ensuring stability and robust operation. The housing is constructed from anodized aluminum and carbon fiber panels combining durability with weight reduction. Resistant to dust and water splashes, the system is designed for reliable performance in diverse environments.

Our comprehensive addon package includes all necessary supporting hardware for image and video recording and monitoring. Plus, enjoy the convenience of a standard waterproof travel case for secure transportation (included).

2. Specifications

Cameras	Three monochrome cameras, or two monochrome cameras and one-color camera.
Resolution and frame rate	HD (60 FPS) and 4K (30 FPS) Other resolutions available upon request
Lens	Motorized iris, motorized focus, adjustable through control panel or software (USB3)
Spectral Filters	Customized upon order. Available types include bandpass, long pass, short pass, multi-pass and notch within the range of 350 nm to 1000 nm. 1 filter slot per camera. Each filter is mounted within a holder and can be field swapped by the user with simple tools.
Camera Triggering	Hardware synchronization of all cameras is built-in. Users can start/stop acquisition and recording using a control pad (USB3) or monitor (SDI).
Network	USB3 model includes Wifi and Ethernet
Software	USB3 model includes built-in multi-camera acquisition software. User can monitor cameras using a single HDMI monitor. SDI model includes one or more external recording monitor(s) capable of (multichannel) 4K recording and viewing.
External construction	6061 aluminum, stainless-steel hardware, and carbon fiber
Surface finish	Black anodization, carbon fiber and laser etching
Power Requirement	9-36V DC AC adaptor provided
Dimensions	Camera: 360 mm x 222 mm x 320 mm (H x W x D) Control Pad: 143 mm x 143 mm x 26 mm (H x W x D)
Weight	Camera: < 10 kg Control pad: < 1 kg

3. Photos

Front With Cover

Front with Cover Removed
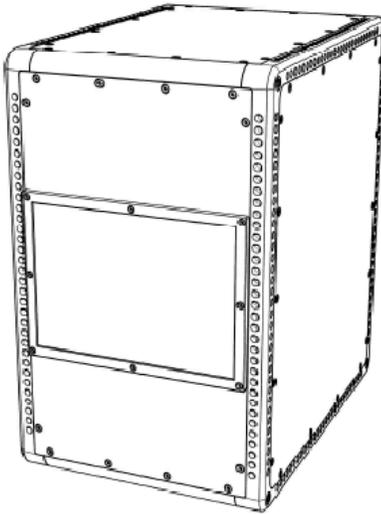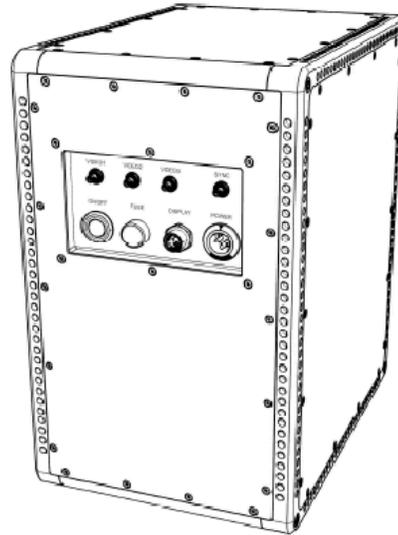

Back Electronics Panel

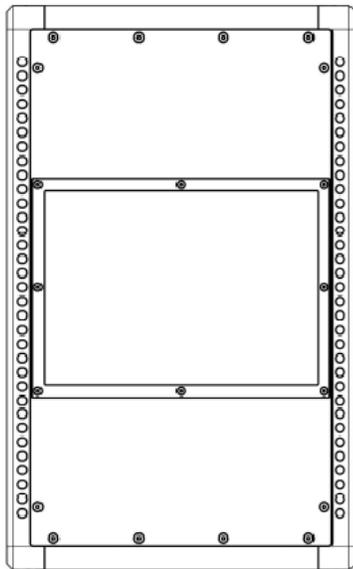

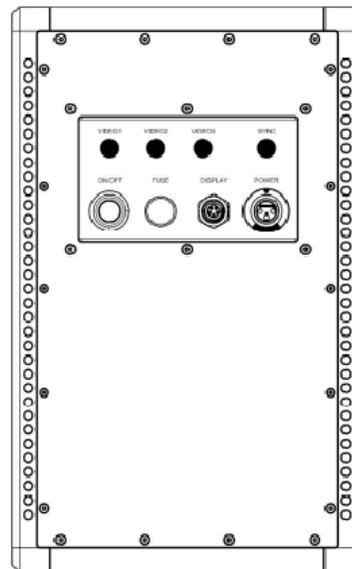Touch Control Pad

Equipment Case

4. Drawing

FRONT

BACK

FRONT VIEW

BACK VIEW

5. Example Images

Below is a collection of false color images of the Amazon rainforest captured with the MSMC-2-3 using narrow band filters in the blue, red edge and NIR bands. Images were captured at 4K resolution and 30 FPS. The images were provided as courtesy by Richard Mosse from his work entitled 'Broken Spectre'. The project received the Grand Prize for Innovative Collaboration as part of the European Union's S+T+ARTS Prize and Ars Electronica Festival in 2023.

More information can be found at the following websites:
https://www.richardmosse.com/
https://starts-prize.aec.at/en/broken-spectre/