

MCC-S40MD

4K boom-arm mountable video camera



Overview

Capture 4K resolution video images in the Operating Room

Capturing high-resolution video from surgical procedures is an increasing requirement in today's medical environments - from student teaching and academic research to maintaining accurate records for legal and compliance purposes.

Designed for use in Operating Rooms*, the MCC-S40MD is a 4K video camera that's designed for mounting on a ceiling or floor-standing boom arm. The camera can also be commanded via a suitable remote controller.

Exceptional 4K image quality is assured by the large-format Exmor R® CMOS image sensor that captures far more light than smaller sensors in conventional cameras, assuring high levels of detail and very low image noise. It's equipped with the large aperture image-stabilised lens that's capable of zooming in with high magnification for a detailed close-up view of intricate surgical procedures.

The camera can output 4K video via HDMI and HD video via 3G-SDI at the same time - ideal for simultaneous connection to a 4K monitor and medical video recorder in the Operating Room.

The camera's cylindrical all-in-one design is ideal for integration in the modern Operating Room, with convenient cable routing and a smooth wipe-clean housing that resists sterilisation chemicals.

* Please note that this product does not conform to the definition of a medical device.

Features

Crisply-detailed, low noise 4K images

The large, high resolution 1.0-inch Exmor R[®] CMOS Sensor captures finely-detailed 4K video images, with four times the resolution of Full HD. 3D noise reduction minimises random image noise.

High quality zoom lens

The large-aperture 4K-quality lens is optimised for precision surgical imaging applications. 20x lossless zoom (12x optical and 1.67x Clear Image zoom) combines for powerful close-ups of small surgical details. Its aspheric lens can suppress image distortion and/or colour shift.

Clearer, vibration-free images

Active image stabilisation (optical/electronic hybrid) corrects for the effects of mechanical vibration on a boom mounting arm, ensuring clear, stable images even at high zoom settings.

Simultaneous HDMI and 3G-SDI output

The MCC-S40MD can simultaneously output 4K video via HDMI, and Full HD video via 3G-SDI. This allows convenient connection to a 4K monitor, while simultaneously recording video via SDI to a Full HD recorder.

ND Filter and Auto Exposure Modes

The camera's built-in Neutral Density (ND) filter and range of Auto Exposure modes make the MCC-S40MD ideal for capturing high-

quality video footage under a high-brightness shadowless lamp in the Operating Room.

IR Cut Filter

The integrated IR (InfraRed) Cut Filter can be locked off to allow IR shooting.

Optimised design for boom mounting

The camera's sleek, cylindrical all-in-one design is optimised for boom mounting in surgical environments. Cables are accessed via a flush rear cover: connectors are grouped around the central axis, allowing the camera to be rotated freely for convenient installation. The casing features no exposed screws, minimising the risk of loose parts falling during surgery.

Wipe-clean design for improved OR hygiene

The camera's smooth cylindrical exterior casing is easy to wipe clean and resists sterilisation chemicals.

Remote control

The camera can be controlled remotely via VISCA protocols (RS-232C) from a PC and/or dedicated OR controller.

Specifications

Camera Head	
Image Device	1 type "Exmor R" CMOS image sensor, single chip type
Effective Pixels	3840 (H) x 2160 (V)
Sensitivity	F6.2 (Y) (Typical)
Picture S/N	61 dB (Y) (Typical)

Horizontal Resolution	1800 TV lines
Gain	0 to 39 dB
Shutter Speed	1/6 to 1/10000

Lens

Zoom Ratio	20x (12x ; Optical Zoom,1.67x ; Digital Zoom)
Focal Length	f = 9.3 mm to 111.6 mm
F-number	F2.8 to F4.5 mm
ND Filter	Integrated (In and Out) ND level: 0, 1/4, 1/16, 1/64
IR Cut Filter	Integrated (In and Out, Removable)
Image Stabilization	Optical and Electrical (Hybrid)
Minimum Object Distance	80 mm (w) to 1000 mm (t)

Connectors

Output Connectors	HDMI 1.4b (TypeA) (x1) (4K, HD, SD) 3G-SDI (x1) (SMPTE 292/424 Compatible)
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Input/Output Connectors	RS-232C (x1) (D-sub 9-pin) HR10G-7R-4P (73) (x1)
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General

Power Requirements	DC 9 to 24 V
Input Current	1 A (9 V) to 0.4 A (24V)
Operating Temperature	0°C to 40°C 32°F to 104°F
Operating Humidity	20% to 80% (without condensation)
Operating Pressure	700 hPa to 1060 hPa
Storage and Transport Temperature	-20°C to +60°C -4°F to +140°F
Storage and Transport Humidity	20% to 90% (without condensation)
Storage and transport pressure	700 hPa to 1060 hPa
Mass (Camera Head)	approx. 1.2 kg 2 lb 10 oz

Dimensions (Camera Head) (WHD, excluding longest protrusions)	approx. 90 x 93 x 269 mm approx. 3 5/8 x 3 3/4 x 10 5/8 in.
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Supplied Items	Fall Prevention Wire (1) Wire Fixing Screw M4 x8 (1) Before Using This Unit (1) Instructions for Use in CD-ROM (x1) Warranty Card (x1)
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