



HM11x

SURGICAL HEADMOUNT WIRELESS CAMERA AND LIGHT

The HM11x is a head-mounted wireless camera and light designed for visualization of the procedure within the Operating Room and record it or share inside the OR.

Combining cutting-edge wireless technology with high-definition imaging, the HM11x provides surgeons with flexibility in the Operating Room and offers surgeon's point-of-view visibility up to four monitors or recorders. It delivers zero-latency 4K wireless video.

The headlight offers adjustable brightness, a lightweight ergonomic design, and seamless integration with existing surgical systems. This robust, one-of-a-kind system enhances both comfort and workflow. With wireless connectivity, the HM11x improves mobility, reduces setup time, and minimizes the risk of tripping hazards, ultimately ensuring a safer and more efficient surgical environment. Its versatile design makes it ideal for various procedures, from general surgery to specialized disciplines.

Part Number: MDWL1_HM11x

HM11 TRANSMITTER

VIDEO AND CAMERA

Image Sensor	Sony IMX 678, CMOS Active
Pixel Size	8.86 mm (1/1.8)
Video Format	3840 x 2160 (4Kp30)
HDR	Digital overlap HDR, Clear HDR
Fixed focus	30-70cm
White Balance	Auto
Lens	12 (default) or 16 mm

LAMP

Light	Powerful LED light - Maximum of 100K Lux at 40cm working distance
Beam Size	12cm at 40cm working distance
Color Temperature	5700K

PHYSICAL ATTRIBUTE

Dimensions (Transmitter)	4" x 6.4" [96mm x 162mm]
Weight (Transmitter)	437g (including battery)
Weight (Headband)	320g (including camera and lamp)
Mountability	On a belt

TRANSMITTER'S INTERFACES

Intensity Control Knob	Off, On, 1-100K LUX
HDMI In	HDMI 1.4 Type A (from camera)
Power Out	12VDC to the lamp
Pairing Button	Pairing with Receiver
USB	FW Update via USB-C
BLE and NFC	Control and configuration
LED indication	Video, Network



WIRELESS VIDEO NETWORK

Wireless Video Band	DFS Frequencies: 5.250 ~ 5.350 GHz and 5.470 ~ 5.725 GHz Non-DFS Frequencies: 5.150 ~ 5.250 GHz and 5.725 ~ 5.850 GHz UNII5 frequencies: 5.925 GHz to 6.425 GHz Note: Frequencies are dependent on regional approvals
Encryption	AES-256, RSA-1024 key exchange
Bandwidth	40MHz
Modulation	OFDM
RF Power	15dBm EIRP
Antennas	2x Internal 0dBi antennas
Range	Up to 100 ft (30m)
Multicast	Transmitter can stream simultaneously to up to 4 receivers
Noise Rejection	Can coexist with WiFi and other devices working on the 5GHz band. Up to 6 sets at the same location

BLUETOOTH AND NFC

BT band	2402 - 2480MHz
Bandwidth	1MHz
BT RF Power	7dBm EIRP
NFC	13.56MHz
NFC Antenna Inductance	2.1uH

POWER

Power Input	12VDC from battery (RRC-2054)
Power Consumption	16W at maximum light intensity
Operating Duration	Up to 3 hours of continuous use at maximum light intensity
Operating Temperature	0-40°C (32-104°F), Relative humidity range: 25-75%

CERTIFICATION AND APPROVALS

RF Compliance	FCC, EU, ISCED, KC, MIC
General	SO 13485:2016 MDR 2017/745 Class I FDA Manufacturer Registration 3014730563 FDA Listing Class I, 510K exempt. CFR 21 Parts 801, 807, 820, 880 UK MDR 2002
Medical Electrical Equipment	IEC 60601-1:2005 + A1:2012 + A2:2020, EN 60601-1:2006 + A1:2013 + A2:2021, ANSI/AAMI ES60601-1:2005+ A1:2012 + A2:2021, CAN/ CSA-C22.2 No. 60601-1:14 + A2:2022
IEC 60601-1- 6:2010+A2:2021, EN 60601-1:2010 + A1:2015 + A2:2021	IEC 60601-1:2005 + A1:2012 + A2:2020, EN 60601-1:2006 + A1:2013 + A2:2021, ANSI/AAMI ES60601-1:2005+ A1:2012 + A2:2021, CAN/CSA-C22.2 No. 60601-1:14 + A2:2022 IEC 60601-1-6:2010+A2:2021, EN 60601-1:2010 + A1:2015 + A2:2021 IEC 60601-1-2:2014 + A1:2020, EN 60601-1-2:2015 + A1(21) Edition 4.1, CISPR 11:2015 + A1(16) + A2(19) group 1 class B limits
Materials	Regulation (EC) No 1907/2006, Directive 2011/65/EU & 2015/863/EU
Radio	FCC CFR 47 Part 15, Radio FCC CFR 47 Part 2 RE-Directive 2014/53/EU: EN 301 893 V2.1.1, EN 300 328 V2.2.2, EN 50665:2018 Electromagnetic Compatibility - EN 301 489-1 V2.2.3, EN 301 489-17 V3.2.4, Class B

WHAT IN THE BOX?

Headband with wireless camera and lamp
Transmitter
2 x battery
Battery charger
Belt
2 x screw driver
Suitcase