The Evolution4K™ *Recorder*

4K UHD Medical Video Recorder Solution

The Med X Change, Inc. Evolution4K offers the latest in 4K UHD video recording in a compact device all while delivering brilliant 4K UHD video quality designed for both Apple and Windows editing. There are two available variations; the first with HDMI 2.0 50/60Hz input and HDMI 2.0 50/60Hz output (for 4K medical camera pass-through). The second variation has 4K quad SDI input and 4K quad SDI output, supporting both 4K Square Division and Two Sample Interleave (2SI). Both variations also accept 1080p HD resolution if a 4K medical camera is not connected.

As an embedded Linux device, the Evolution4K allows the users to enter patient data, capture 4K UHD video and 4K still images, playback 4K video, auto print to medical grade printers and record to dual USB 3.0 external hard drives or flash drives. The device is compliant to medical foot pedals (RS-232), 4K surgical microscope and 4K endoscope cameras (2x 3.5mm triggers), encrypts all ePHI data at rest and in transit and can store cases on a large internal hard-drive.

The device can be controlled via an integrated 5" capacitive multi-touch screen that uses swipe and pinch and zoom gestures similar to the latest mobile devices.

MEDICAL CERTIFICATIONS
IEC 60601-1:2012 (Ed 3.1)
IEC 60601-1-2:2014 (Ed 4.0)
No. U8 18 05 74193 030

4K UHD & HD VIDEO/STILL IMAGE RECORDING

- Two Models: **HDMI 2.0** *(1, EVO4K100)* or **3G-SDI** *(4, EVO4K200)*
- 4K UHD 60Hz input: **HDMI 2.0** *(1)* or **3G-SDI** *(4)*
- 4K UHD 60Hz output: **HDMI 2.0** *(1)* or **3G-SDI** *(4)*
- 4096x2160p or 3840x2160p 50/60Hz
- 4K UHD recorded/captured files: H.264, .mp4, JPEG, PNG

INTEGRATED 12.7CM TOUCH LCD SCREEN

- Control entire software from integrated touch screen
- Multi-touch/swipe interface
- Duplicate the internal 12.7cm touch screen to any HID touch monitor via VGA

PATIENT DATA ENTRY/WORKFLOW

- Enter patient data, filter patients and start cases
- Sort by fields *(Name, Case date, Patient ID)*
- Append to completed cases

ONE TOUCH RECORDING

- Record 4K UHD Video and capture still images simultaneously with integrated 12.7cm touch screen, endoscopy camera head buttons, microscope triggers, foot pedal, etc.
- Record to internal hard drive and 2 USB 3.0 locations simultaneously

DICOM INTEGRATION

- Automatic DICOM c-store *(PACS storage)* & c-find *(MWL)*

LIVE VIDEO STREAMING OVER IP

Live stream camera video over IP via RTSP protocol

PRINTING/PLAYBACK/COPY/REVIEW

- Review completed cases
- Playback video/stills and copy to external USB/Network
- Auto print to Sony UP-DR80MD medical grade printer

STORAGE, SETTINGS, OTHER

- 1TB Internal storage *(Approx. 20 Hours 4K UHD video)*
- Networking, media and printing settings
- Simple USB software updates
- Embedded Linux OS

EXTERNAL TOUCH MONITOR SUPPORT

- Multiple HID Touch Screens are supported via USB
- Duplicate the internal 12.7cm Touch Screens to a external Touch monitor via the Secondary Display Ports *(DP, HDMI or VGA)*
- Two of the 3 ports can be used at simultaneously for multiple external displays.
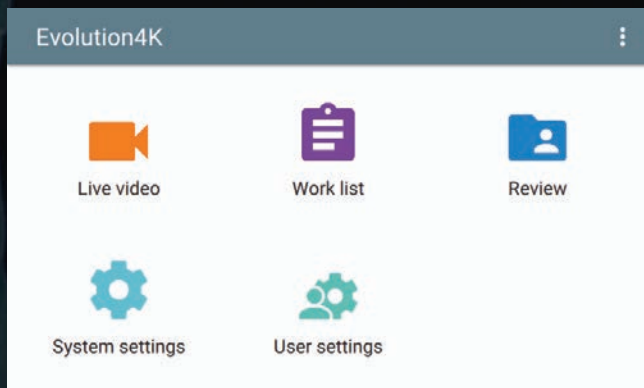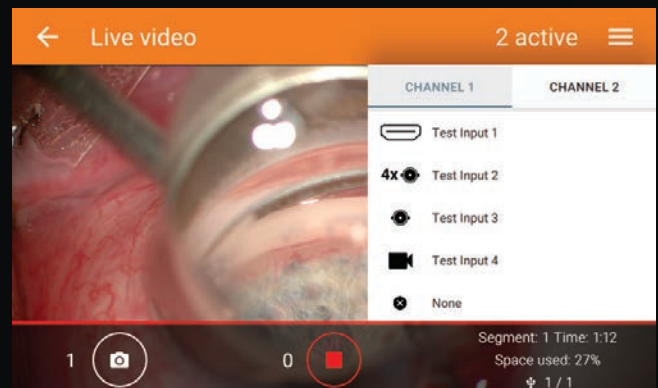
LIVE VIDEO   **WORK LIST**   **REVIEW**   **SYSTEM SETTINGS**   **USER SETTINGS**

Home

Live video tab

TYPICAL SUPPORTED CAMERA/VIDEO RESOLUTIONS

- 4K & 4K UHD: 4096x2160p & 3840x2160p
- HD: 1080p, 1080i, 720p
- 4K & 4K UHD Hz: 60, 59.94, 50
- 1080p Hz: 60, 59.94, 50
- 1080i Hz: 60, 59.94, 50
- 720p Hz: 60, 59.94, 50
- 3D HD Side by Side: 1080p, 1080i, 720p
- 3D HD Top/Bottom: 1080p, 720p

STILL IMAGE CAPTURE

- 4K: 4096 pixels *(H)* x 2160 pixels *(V)* = 9MP
- UHD: 3840 pixels *(H)* x 2160 pixels *(V)* = 8MP
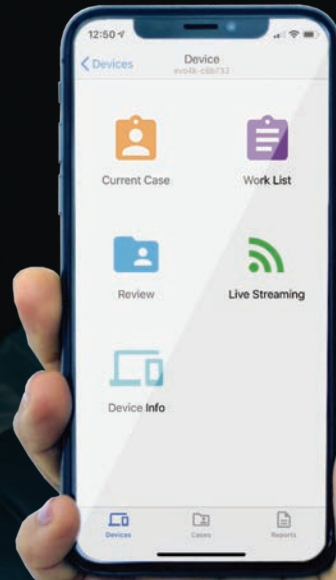- HD: 1920 pixels *(H)* x 1080 pixels *(V)* = 2MP

3D HD RECORDING

- Accepts and records 3D HD via HDMI input at Side by Side or Top/Bottom formatting *

  * The video coming in via HDMI must already be multiplexed to 3D formatting via a 3D Multiplexer device.
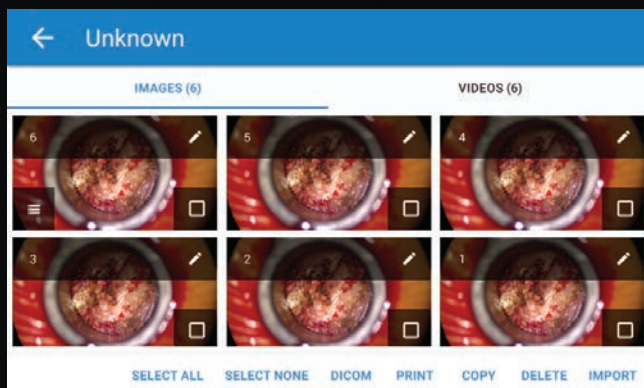
CYBER SECURITY COMPLIANCE

- Audit logging/controls
- Individual user accounts
- Admin role
- User account management
- ePHI is encrypted at rest and in transit using AES-256
- Session timeout
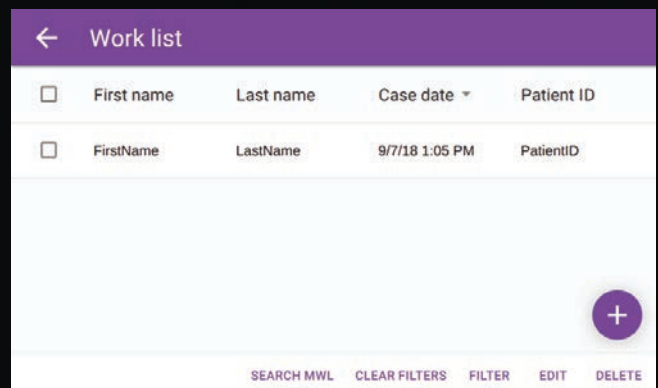- HIPAA Compliance encryption, auditing, logs, user/admin roles
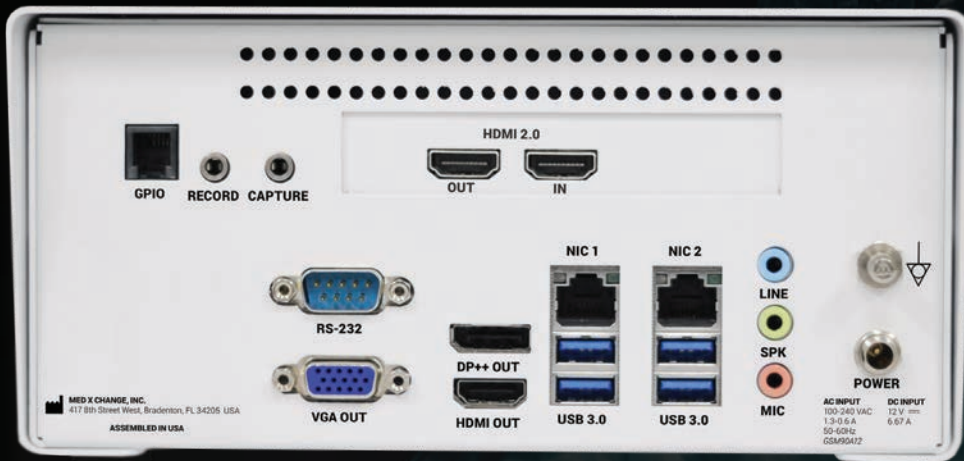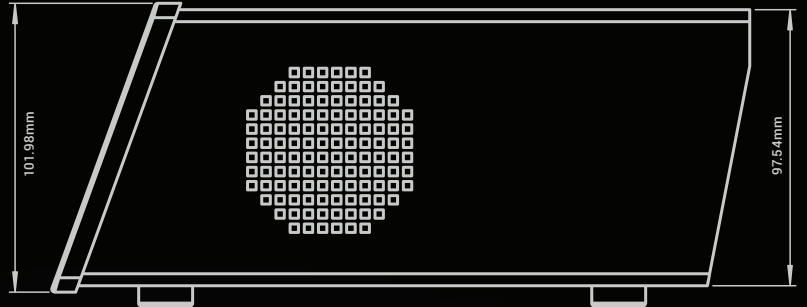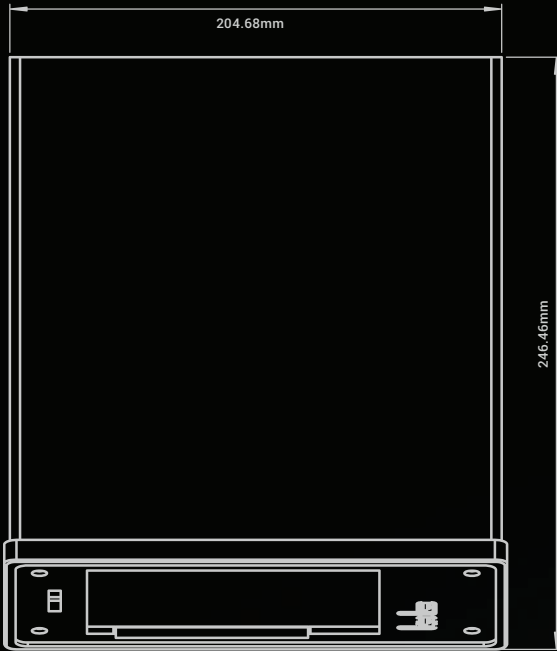
MEDXSTREAM PLUS iOS APP

- Wirelessly control some recorder functions
- Encrypted WiFi connection
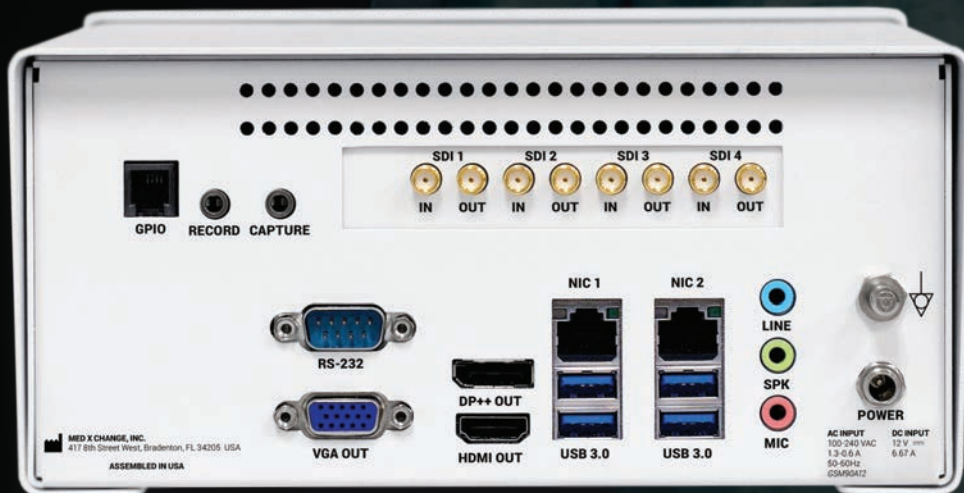- Wireless/wired *(lightning cable)* transmission of still images/videos

Review tab

Work list tab

204.68mm

246.46mm

101.98mm

97.54mm

HDMI 2.0

OUT   IN

GPIO   RECORD   CAPTURE

RS-232

VGA OUT

DP++ OUT

HDMI OUT

NIC 1   NIC 2

USB 3.0   USB 3.0

LINE

SPK

MIC

POWER

MED X CHANGE, INC.
417 8th Street West, Bradenton, FL 34205 USA

ASSEMBLED IN USA

AC INPUT
100-240 VAC
1.3-0.6 A
50-60Hz
GSM90A12

DC INPUT
12 V
6.67 A

EVO4K100 (1 - HDMI 2.0)

ACCESSORY PACK CONTENTS

- 1 - User Manual download card
- 1 - 6' Medical grade power cable
- 1 - Wired keyboard
- 1 - AC/DC Medical grade power supply
- 1 - 6' HDMI cable *(EVO4K100 only)*
- 4 - 6' 3G-SDI cables *(EVO4K200 only)*
- 2 - 3.5mm Stereo cables

GPIO   RECORD   CAPTURE

SDI 1   SDI 2   SDI 3   SDI 4
IN OUT IN OUT IN OUT IN OUT

RS-232

VGA OUT

DP++ OUT

HDMI OUT

NIC 1   NIC 2

USB 3.0   USB 3.0

LINE

SPK

MIC

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ASSEMBLED IN USA

AC INPUT
100-240 VAC
1.3-0.6 A
50-60Hz
GSM90A12

DC INPUT
12 V
6.67 A

EVO4K200 (4 - 3G-SDI)

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ISO 13485 Certified

U5020-05, 4.0