

# **Digital Microscope**

### MDC-3492 DUAL HDMI & USB MICROSCOPE DIGITAL CAMERA

- HDMI & USB Dual Image Output
- Uniqe Designed Manual Focusing Knob on Camera
- High Quality 3.5M CMOS Sensor
- C-Mount & Eyepiece Tube Connect All Kinds Microscopes
- Professional Analysis Software Support2 Split /4 Split Windows



	Hardware Configuration
Imaging Sensor	Aptina AR0330 CMOS Sensor
Scan Mode	Scan line by line
The maximum resolution	2304 x 1535(3,538,944 pixels)
Sensor Optical Format	1/3" (5.07mm(H) x 3.38mm(V), Diagonal 6.09mm)
Pixel Size	2.2μm x 2.2μm
Dynamic Range	69.5dB
ADC	12-bit, 8-Bit R.G.B to PC
SNR(Signal Noise Ratio)	39dB
Spectral Characteristics	380-650nm
Video Mode Resolution	1080P@30FPS, 720P@30FPS,WVGA@30FPS
Snapshot Mode Resolution	2304x1536, 2304x1296, 1920x1080, 1280x720, 800x480
Exposure Capability	Real-time auto, Single auto, Manual adjustment
White Balance	Real-time auto, Single auto, Manual adjustment
Capture Modes	Picture
Record Route	The local and TF card
Interface Parameter	
Camera Interface	C mount thread (1"x1/32) BFL: 11.6-36mm
Wired Picture Interface	HDMI Model: Mini HDMI
THIS I IOLATO III.GITAGO	USB Model: Micro USB
Charger Interface	Micro USB, DC5.0V 2A



Software Environment	
Operation System	Microsoft®Windows®XP/7/8/8.1/10(32&64 bit)
Computer Configuration	CPU: equal or more than the second generation Intel core 2.8GHz
	Memory: 2G or more
	USB port: USB2.0 high speed port or compatible port
	Displayer: Suggest 17 inches or larger

Operating Environment	
Operating Temperature	0°C~ 40°C
Storage Temperature	-20°C~ 60°C
Operating Humidity	30~60%RH
Storage Humidity	10~80%RH







### MDC-3492B DUAL HDMI & USB MICROSCOPE DIGITAL CAMERA

- HDMI & USB Dual Image Output
- Extra Hard Industrial Metal Housing
- 2.1M Super Wide Dynamic CMOS Sensor
- Standard C-Mount For Microscope Use
- Professional Analysis Software Included



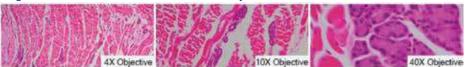
	MDC-3492B HDMI Camera Eyepiece
	Hardware Configuration
Imaging Sensor	SONY CMOS IMx291 super wide dynamic CMOS sensor
Expose Mode	Rolling Shutter
The Maximum Resolution	2.1M 1920 x 1080(2,073,600 Pixels)
Sensor Optical Format	1/2.8" (6.058mm(H) x 4.415mm(V))
Pixel Size	2.9µm x 2.9µm
Dynamic Range	128dB
ADC	12-bit, 8-Bit R.G.B to PC
SNR Max	30dB
Spectral Characteristics	380-650nm
Exposure Capability	Real-time auto, Single auto, Manual adjustment
White Balance	Real-time auto, Single auto, Manual adjust R G B separately
HDMI Output Resolution	1920x1080P60, 1920x 1080P50, 1920x 1080P30, 1920x 1080P25, 1920x 1080I60,
Record Format	Snapshot
Record Route	TF Card(Maximum support 128G, support hot plug )
	Interface Parameter
Camera Interface	C mount thread (1"x1/32)
Wired Picture Interface	HDMI TYPE C Mini HDMI
Charger Interface	Micro USB, DC5.0V (Maximum current 1A)
	Software Environment
Displayer	Recommend 16:9, at least 1080P HD displayer



Operating Environment	
Operating Temperature	0°C~ 40°C
Storage Temperature	-20°C~ 60°C
Operating Humidity	30~60%RH
Storage Humidity	10~80%RH

#### **APPLICATION AND CASE**

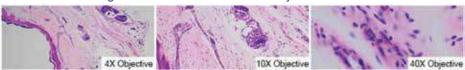
#### Dog taste buds sections under different objective

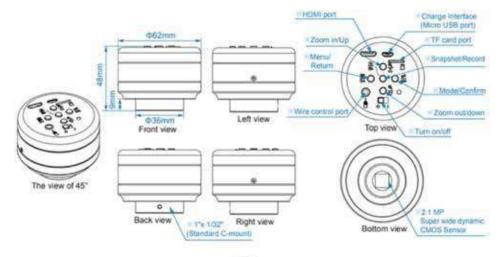


#### Butterfly wing slice under different objectives



#### Human skin sweat gland section under different objectives













### MDC-3494 MICROSCOPE CAMERA

- 5.0MP High Quality CMOS Sensor
- USB 2.0 Connection, Standard C-Mount
- 720HD Video Up To 30fps
- Capturing Software, Free Driver Included



	Hardware Configuration	
imaging sensor	Colorful	
scan patterns	Scan line by line	
The maximum resolution	2592 x 1944(5,038,848 pixels)	
Sensor Optical Format	1/2.5" (5.70mm(H) x 4.28mm(V), Diagonal 7.13mm)	
Pixel Size	2.2μm x 2.2μm	
Dynamic Range	70.1dB	
ADC	12-bit, 8-Bit R.G.B to PC	
SNR(Signal Noise Ratio)	38.1dB	
Spectral Characteristics	380-650nm	
Preview modes	10FPS@2592x1944,	
Binning Modes	1 x 1, 2 x 2	
Exposure Capability	3.9ms - 320ms, automatic and manual	
White Balance	automatic and manual	
Software Interface	DirectShow	
Capture modes	Picture	
	Software Environment	
Operation system	Microsoft® Windows® XP / 7 / 8 /8.1/10(32 & 64 bit)	
	CPU: equal or more than the second generation Intel core 2.8GHz	
0	memory:2G or more	
Computer Configuration	USB port:USB2.0 high speed port or compatible port	
	displayer:suggest 17 inches or larger	
Operating Environment		
operating temperature	0°C~ 40°C	
storage temperature	-20°C~ 60°C	
operating Humidity	30~80%RH	
Storage Humidity	10~60%RH	



### MDC-3495 DUAL WIFI & USB MICROSCOPE DIGITAL CAMERA

- 5.0MP High Sensitive CMOS Sensor
- WIFI Mode Connect Mobile Phone, Tablet, iPad, PC Freely
- USB 2.0 For Data High Speed Transfer
- C-Mount & Eyepiece Tube Connect All Kinds Microscopes
- Professional Analysis Software Support 2 Split/ 4 Split Windows.



	MDC-3495	MDC-3495M	MDC-3495-M05
Package size	Single weight :1.23kg, dimension: 30x 23x 11cm		
Connecting	C-Mount	C-Mount, Adapter Ring 1.0x/23.2mm Adapter Ring 30mm Adapter Ring 30.5mm	C-Mount, Adapter Ring 0.5x/23.2mm Adapter Ring 30mm Adapter Ring 30.5mm
Sensitive Chip	1/2.5" true color CMOS (	5.70mm(H) x 4.28mm(V), diag	onal7.13mm)
Scan Mode	Progressive		
Pixel Size	2.2µm x 2.2µm		
Resolution	Max: 2592 x 1944( 5,038,848 Mega Pixel)		
A/D switch	12-bit on chip,10-bit to pc		
Dynamic Range	70.1dB		
SN Ratio	38.1dB		
Working Modes	A.USB mode		
working wodes	B.WiFi mode		
Image format Frame rate	YUV output: 640x480@30fps,800x600@20fps,1280x960@10fps,1280x720@10fps,2592x1944 @5fps MJPG output: 640x480@40fps,800x600@40fps,1280x960@40fps,1280x720@40fps,2592x1944		
Exposure way	@15fps  3.9ms - 320ms,Wide range auto/manual exposure		
White Balance	Automatic White Balance/Automatic Exposure		
Focus mode	Manual fine adjust, big range auto-focus		
Snapshot control API	Native C/C++, C#, Direct Show, UVC		



Observe methods	Still picture and video in real time
Spectral region	380-650nm (with IR-cut Filter)
Wireless parameters	wireless protocol: IEEE 802.11b/g/n frequency range:2.40002.4835GHz transmit bandwidth :150Mbps
Power supply	Built-in lithium battery(4500 mAh); DC 5V USB power supply by PC; External DC 5V 1.5A adapter
OS requirement	Microsoft® Windows® XP / Vista / 7 / 8 (32 & 64 bit) MAC OS X (wireless working mode) IOS5/IOS6 (wireless working mode)
Hardware requirement	CPU: equivalent to Intel Core2 1.6GHz or higher Memory :2GB or higher USB port :USB2.0 High-speed port DVD-ROM(required when installing software)
Software Language	Chinese, English, Japanese, Swedish, Deutsch, accept OEM languages
Operating System	Microsoft Windows XP / Vista / 7 (32 & 64 bit) CPU: Equal to Intel Core2 2.8GHz or Higher Memory:2GB or More and CD-ROM
Operation Software	Windows: Micro Cam; Android & IOS: Ucam





### MDC-3497 DUAL WIFI & USB MICROSCOPE DIGITAL CAMERA

- 5.0MP High Sensitive CMOS Sensor
- WIFI Mode Connect Mobile Phone, Tablet, iPad, PC Freely
- USB 2.0 For Data High Speed Transfer
- Professional Analysis Software Support2 Split / 4 Split Windows
- Universal Adapter Rings Fits On All Kinds Of Eyepiece Dia.20-46mm



	MDC-3497	
	Hardware Configuration	
Scan Mode	Scan Line By Line	
Maximum Resolution	5.0M, 2592 x 1944 (5,038,848 Pixels)	
Sensor Optical Format	1/4"	
Pixel Size	1.4μm x 1.4μm	
Dynamic Range	68dB	
ADC	12-Bit, 8-Bit R.G.B to PC	
SNR	38.1dB	
Spectral	380-650nm	
Maximum	10FPS@2592x1944	
Transmission Frame	15FPS@1920x1080, 1600x1200, 1280x1024	
Rate (USB Mode)	30FPS@1280x960, 1280x720, 1024x768, 800x600, 640x480	
Maximum	10FPS@2592x1944	
Transmission Frame	15FPS@1920x1080, 1600x1200, 1280x1024	
Rate (WiFi Mode)	30FPS@1280x960, 1280x720, 1024x768, 800x600, 640x480	
Binning Modes	2 x 2	
Exposure Capability	3.9ms - 320ms, Automatic And Manual	
White Balance	Automatic And Manual	
Software Interface	DirectShow	



	Picture Resolution: 2592x1944, 1920x1080, 1600x1200,1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 640x480 Format: JPG,BMP,PNG,TIFF,PDF
Capture Modes	
· ·	Video
	Resolution:1920x1080, 1600x1200, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 640x480 Format:MJPG Format AVI File
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	Interface Parameters
Illumination Input Interface	USB (A FEMALE NUT), DC5.0V, Maximum 1.0A
Wired Picture / Charger Interface	Micro USB Interface USB2.0 DC5.0V 500mA (Wired Picture) USB 2.0 DC5.0V 2A (When Charging Power)
Display/ Special Illumination	Hot Shoe(No Electrical Connection)
Camera Interface	C Port, And It Can Customize Other Ports
	Wireless Parameter/Power Parameter
Standard	802.11b/g/n
Operating Frequency Range	2.400 ~ 2.4835GHz ( Subject To Local Regulations)
	802.11n 20MHz/40MHz
	802.11b/g
Available Channels	USA, Canada (FCC):11 Channels (2.412GHz~2.462GHz)
	Europe (CE): 13 Channels (2.412GHz~2.472GHz)
	Japan (TELEC): 14 Channels (2.412GHz~2.4835GHz)
	802.11n: up to 300Mbps 2T2R
Data Rate	802.11b: up to 11Mbps
	802.11g: up to 54Mbps
Transmission Power	11n HT40 MCS7: +16dBm +/-1.5dBm
	-61 dBm@10% PER at HT40 MCS7
Receiving Sensitivity	-68 dBm@10% PER at 54Mpbs
	-85 dBm@10% PER at 11Mpbs
	10@640x480
	8@800x600
Suggestion On Number Of	6@1024x768
Receiver On Different	5@1280x720
Resolution	5@1280x960
	4@1920x1080
	3@2592x1944
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH



	When There Has Not WiFi, LED Lamp Turn Of
The Wireless Work Instructions	When WiFi Is Opened But Do Not Connect, LED Is Always Lighting
	When WiFi Is Connected, LED Flashes At The Beginning And Stay Turn On Afterward
	When WiFi Is Connected, LED Flashes, About Once Per Second, The Greater The Amount Of Data The Faster It Flashes, And It Is About 10 Times Per Second
Build In Battery	3.7V, 5000mAh, 26650 Rechargeable Lithium Coin Cells
Continuous Working Period	About 8 Hours
Display/ Special Illumination	Hot Shoe(No Electrical Connection)
Charging Time	About 4 Hours
	Having Problems In Charging: Charge Lamp, Red Light Flashes Once Per 0.5 Second
	Low Battery: Charge Lamp, Green Light Breathes Once Per 1 Secon
Charge lamp, (Internal Battery)	Medium Battery: Charge Lamp, Green Light Breathes Once Per 2.5 Seconds
	High Battery: Charge Lamp, Green Light Breathes Once Per 4Seconds
	Fully Charged: Charge Lamp, There Will Be Always Green Light
	When Power Quantity More Than 20%: Power Lamp, There Will Be Always Green Light
Power Lamp, (Internal Battery)	When Power Quantity Lower Than 20%: Power Lamp, There Will Be Always Red Light
	When Power Quantity Lower Than 5%: Power Lamp, It Will Turn Off After Flashing 10 Seconds
Charge Cycle	500 Times @50% Power
	Wired: Direct-current 5V, Power By USB Cable
Power-up	Wireless: Internal Battery
	Charge Power: DC 5V 2A Power Plug
	Software Environment
	USB Work Mode
	Microsoft® Windows® XP/ 7 / 8 /8.1/10(32 & 64 bit)
Windows System	CPU: Equal Or More Than The Second Generation Intel Core 2.8GHz
Demand	Memory: 2G Or More
	DVD-ROM (Need It During Installing Software)
	WiFi Work Mode
	Microsoft® Windows® XP/ 7 / 8 /8.1/10(32 & 64 bit)
Windows System	CPU: Equal Or More Than The Second Generation Intel Core 2.8GHz
Demand	Memory: 2G Or More



iOS System Demand	iOS6.0 Or Higher	
Android System Demand	Android3.0 Or Higher	
	CPU: Dual-core 1.7GHz Or Higher	
	RAM Memory: 1G Or More	
	Storage ROM: Suggest 8G Or Larger	
Operating Environment		
Operating Temperature	0°C~ 40°C	
Storage Temperature	-20°C~ 60°C	









### MDC-3498 DUAL WIFI & USB MICROSCOPE DIGITAL CAMERA

- 5.0MP High Sensitive CMOS Sensor
- WIFI Mode Connect Mobile Phone, Tablet, iPad, PC Freely
- USB 2.0 For Data High Speed Transfer
- C-Mount & Eyepiece Tube Connect All Kinds Microscopes
- Professional Analysis Software Support2 Split / 4 Split Windows
- Extra Hard Industrial Metal Housing



Hardware Configuration		
Image Sensor	APTINA MT9P001 CMOS(colorful)	
Expose mode	Rolling shutter	
Maximum Resolution	2592 x 1944 (5,038,848 pixels)	
Sensor Optical Format	1/2.5" (5.70mm(H) x 4.28mm(V), Diagonal 7.13mm)	
Pixel Size	2.2µm x 2.2µm	
Dynamic Range	70.1dB	
ADC	12-bit, 8-Bit R.G.B to PC	
SNR (Signal Noise Ratio)	38.1dB	
Spectral Characteristics	380~650nm (during daytime mode)	
Binning Modes	1 x 1, 2 x 2	
Exposure Capability	Real-time auto, Single auto, Manual adjustment	
White Balance	Real-time auto, Single auto, Manual adjustment	
Software Interface	DirectShow	
Maximum Transmission	10FPS@2592x1944 15FPS@1920x1080,1600x1200 40FPS@1280x960,	
Frame Rate (USB mode)	1280x720, 1024x768, 800x600, 640x480	
Maximum Transmission	10FPS@2592x1944 15FPS@1920x1080,1600x1200 40FPS@1280x960,	
Frame Rate (WiFi mode)	1280x720, 1024x768, 800x600, 640x480	
Record format	Snapshot Picture Format: JPG,BMP,PNG,TIFF,PDF Resolution: 2592x1944, 1920x1080, 1600x1200, 1280x960, 1280x720, 1024x768, 800x600, 640x480 Record Video Format: MJPG format AVI file Resolution: 1920x1080, 1600x1200, 1280x960, 1280x720, 1024x768, 800x600, 640x480	



	Interface Parameters		
Wired picture	Micro USB interface; USB2.0 DC5.0V 500mA (wired picture)		
Wireless Parameter/Power			
Standard	802.11b/g/n		
Operating Frequency Range	2.400 ~ 2.4835GHz		
Available Channels	802.11n 20MHz/40MHz		
	802.11b/g		
	USA, Canada (FCC):11 Channels (2.412GHz~2.462GHz)		
	Europe (CE): 13 Channels (2.412GHz~2.472GHz)		
	Japan (TELEC): 14 Channels (2.412GHz~2.4835GHz)		
	802.11n: up to 150Mbps 1T1R		
Data Rate	802.11b: up to 11Mbps		
	802.11g: up to 54Mbps		
Transmission Power	11n HT40 MCS7: +16dBm +/-1.5dBm		
	-61 dBm@10% PER at HT40 MCS7		
Receiving Sensitivity	-68 dBm@10% PER at 54Mpbs		
	-85 dBm@10% PER at 11Mpbs		
	10@640x480		
	8@800x600		
Suggestion On Number Of	6@1024x768		
Receiver On Different	5@1280x720		
Resolution	5@1280x960		
	4@1920x1080		
	3@2592x1944		
The Wireless work instructions	When there has not WiFi, LED lamp turn off When WiFi is opened but do not connect, LED is always lighting When WiFi is connected, LED flashes at the beginning and stay turn on When WiFi is connected, LED flashes, about once per second, The		
Power-up	Wired: direct-current 5V, power by USB cable Wireless: DC 5V 2A power plug		
	Software Environment		
	USB Work Mode		
	Microsoft® Windows® XP/ 7 / 8 /8.1/10(32 & 64 bit)		
Windows System Demand	CPU: Equal Or More Than The Second Generation Intel Core 2.8GHz		
	Memory: 2G Or More		
	DVD-ROM (Need It During Installing Software)		



WiFi work mode		
Windows system demand	Microsoft® Windows® XP / 7 / 8 /8.1/10(32 & 64 bit)	
	CPU: equal or more than the second generation Intel core 2.8GHz	
	Memory: 2G or more	
	Internal wireless network card (support IEEE 802.11b/g/n)	
iOS System Demand	iOS8.0 or higher	
Android system demand	Android4.0 or higher	
	CPU: dual-core 1.7GHz or higher	
	RAM memory: 1G or more	
	Storage ROM: suggest 8G or larger	
Operating Environment		
Operating temperature	0°C~ 40°C	
Storage temperature	-20°C~ 60°C	
Operating Humidity	30~60%RH	
Storage Humidity	10~80%RH	



5.0M High sensitive CMOS Sensor





## MDC-3491 MICROSCOPE CAMERA

- High Resolution, 5.0Mega Pixels.
- USB 2.0 Connection.
- CCD Camera Theory.



MDC-3491 Microscope Camera  Hardware Configuration		
Scan Patterns	Scan Line By Line	
The Maximum Resolution	5.0M, 2592 x 1944(5,038,848 Pixels)	
Sensor Optical Format	1/2.5" (5.70mm(H) x 4.28mm(V), Diagona 7.13mm)	
Pixel Size	2.2µm x 2.2µm	
Dynamic Range	70.1dB	
	12-bit, 8-Bit R.G.B to PC	
<b>S</b> NR Max	38.1dB	
Spectral Characteristics	380-650nm	
	10FPS@2592x1944,	
Preview Modes	15FPS@1920x1080, 1600x1200	
	40FPS@1280x960, 1280x720, 1024x768, 800x600, 640x480	
Binning Modes	1 x 1, 2 x 2	
Exposure Capability	3.9ms - 320ms, Automatic And Manual	
White Balance	Automatic And Manual	
Software Interface	Direct Show	
Capture Modes	Photos And Videos (MJPG and AVI)	
	Software Environment	
Operation System	Microsoft®Windows®XP / 7 / 8 /8.1/10(32 & 64 bit)	
	CPU: Equal Or More Than The Second Generation Intel Core 2.8GHz	
Computer Configuration	Memory: 2G Or More	
, and comigation	USB Port: USB2.0 High Speed Port Or Compatible Port	
	Displayer: Suggest 17 Inches Or Larger	

### Regulatory compliances



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