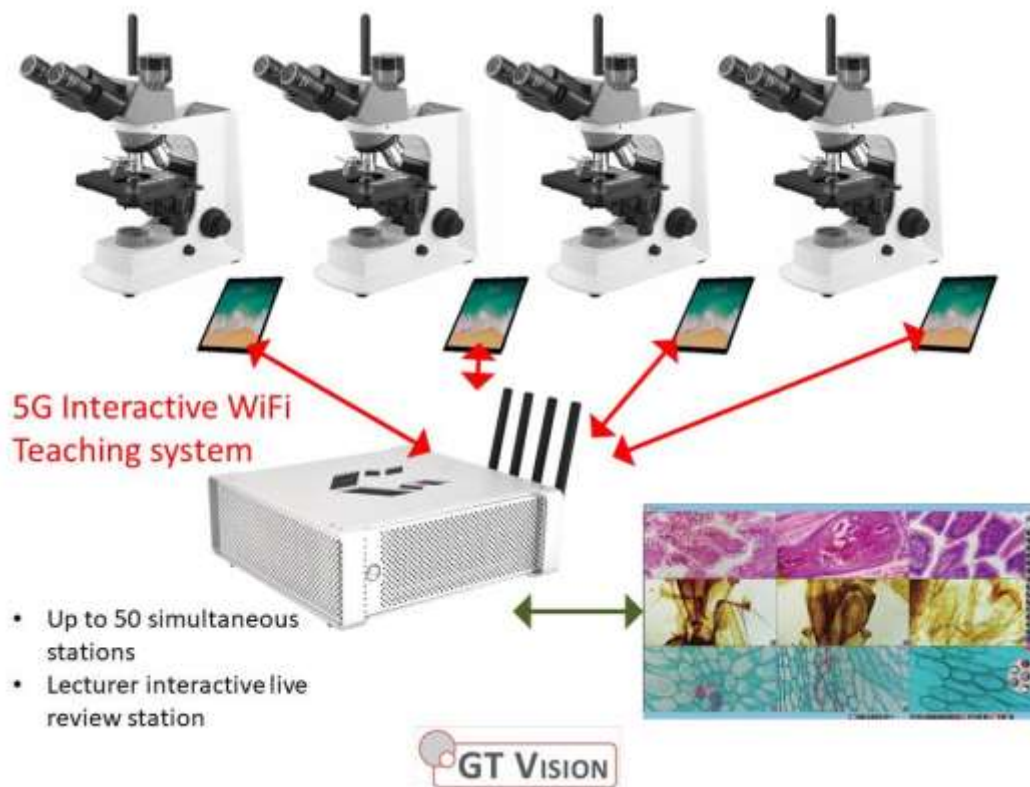


# 5G Interactive Microscopy WIRELESS Teaching System

Product ID: 1010M



GT Vision's 5G Interactive Microscopy Teaching System can be instantly installed into any classroom requiring no cabling. It is easily scalable, modern and packed with unique and powerful features. It is professionally supported by GT Vision, the largest specialist microscopy imaging company in Europe.

Each microscope is fitted with a high quality WiFi Microscopy camera, the live image is viewed using a fully featured Student Viewing APP on any mobile device.

The Lecturer has their own 'Teacher APP' and can see the live images from up to 35 student cameras on a large display. The lecturer can take control of the student's APP controlling various permissions and interacting with their images.

The heart of the system is a unique Vi-Matrix unit which is a powerful WiFi, networking amplifying and repeater station controlled by the APP which provides a guaranteed smooth, uninterrupted flow of a large number of live images and interactive tools.

This unique system is an economic, yet more powerful and interactive, modern alternative to other systems costing 10X more.

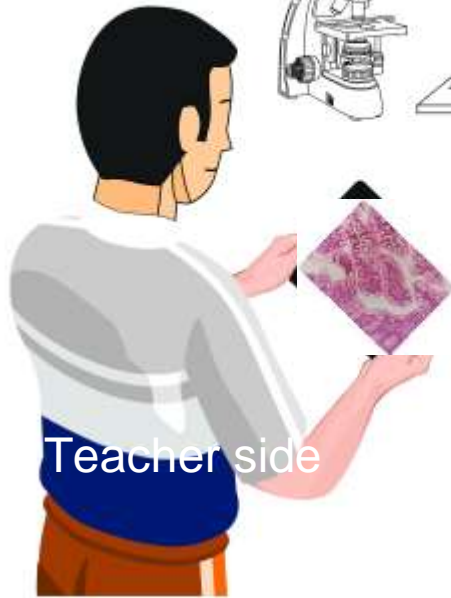
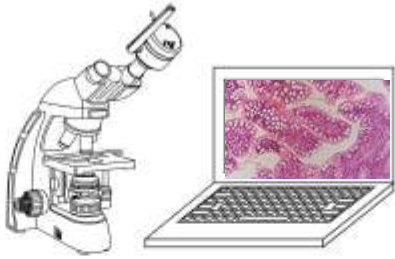


by GT Vision Ltd  
[www.gtvision.co.uk](http://www.gtvision.co.uk)

# Application

GT Vision's 5G Interactive Microscopy Teaching System can be instantly installed into any classroom requiring no cabling.

Interactive software for the instructor



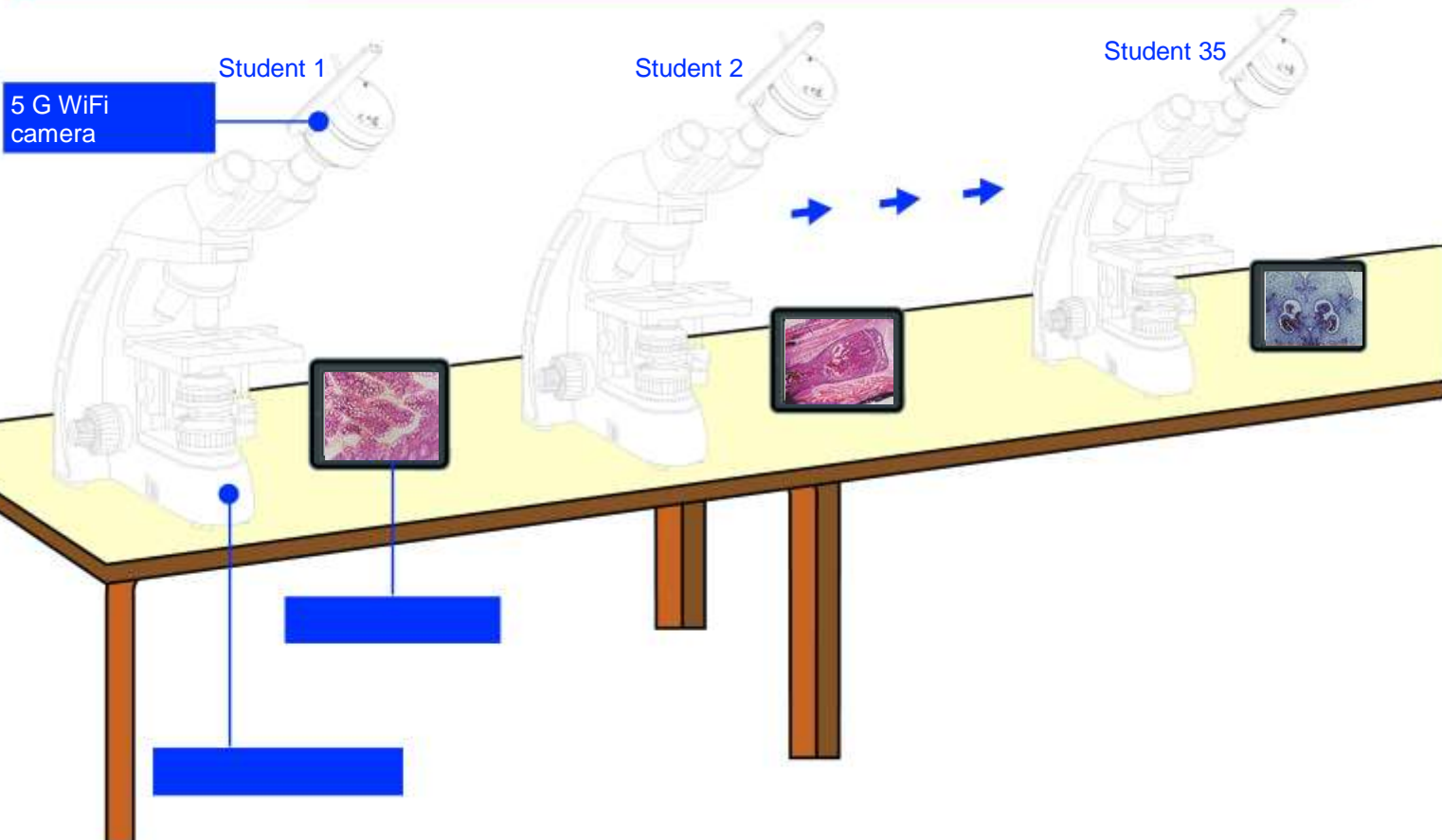
ViMatrix VM3500

1000M

1000M Network cable

## Student side

35 students microscope live images are sent to the teacher's large screen/PC wirelessly via 5G WiFi technology.



## Our products and support

A.5G WiFi Cameras - resolutions: 2.0 / 5.0 / 8.0 / 12.0



B. Matched WiFi ViMatrix VM3500

Through wireless transmission technology, a wireless ViMatrix can be connected to a teacher and 35 student microscopes simultaneously with perfect WiFi referencing, all images will display smoothly and reliably. The teacher has a large screen / windows system and the students use their tablet to see their WiFi camera via the Internet without switching WIFI SSID, this save lots of precious class time. Extremely easy to use and setup.



C. Professional Interactive education software for teacher



WiFi SYSTEM

D. Multi-functional and easy to operated APP for student  
Compatible with Android and iOS system

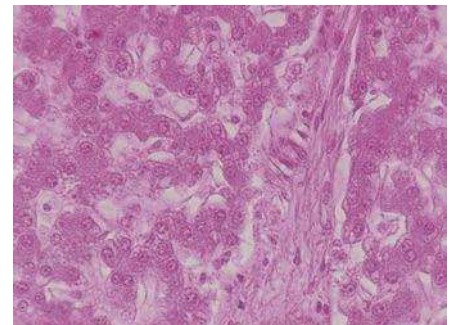
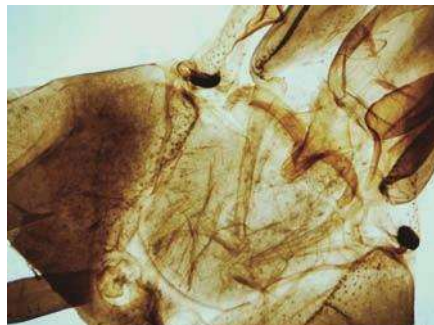


## What are the advantages of this system?

**In the microscopy class, up to 35 students can see & record live images on their tablets/ iPads /mobile phones from their own microscopes, this greatly reduces the investment needed for student computers.**

This system greatly enhances the students' interest in microscopy, with the instant sharing of their specimen images to the class and to teachers or classmates improving the efficiency and enjoyment of learning.

After class, students can use the tablet/cell phone to review specimen pictures /videos that they have observed.



**Key features of the easy to use and comprehensive APP for the student:**

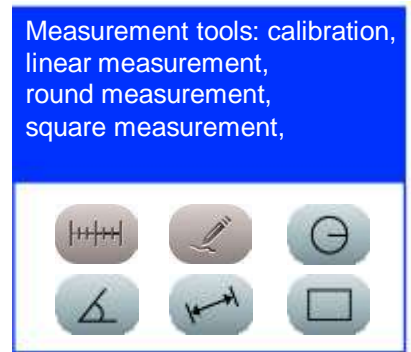
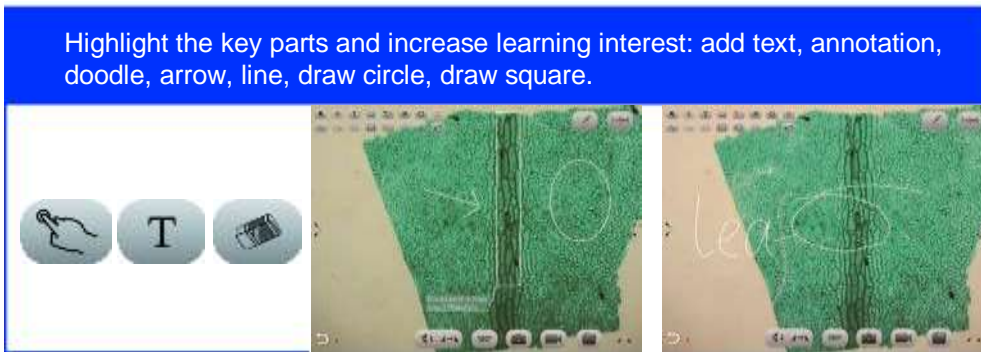
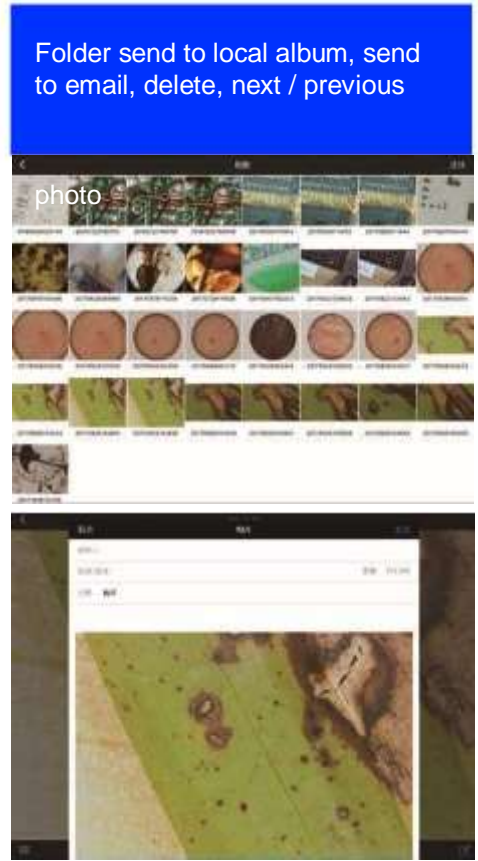
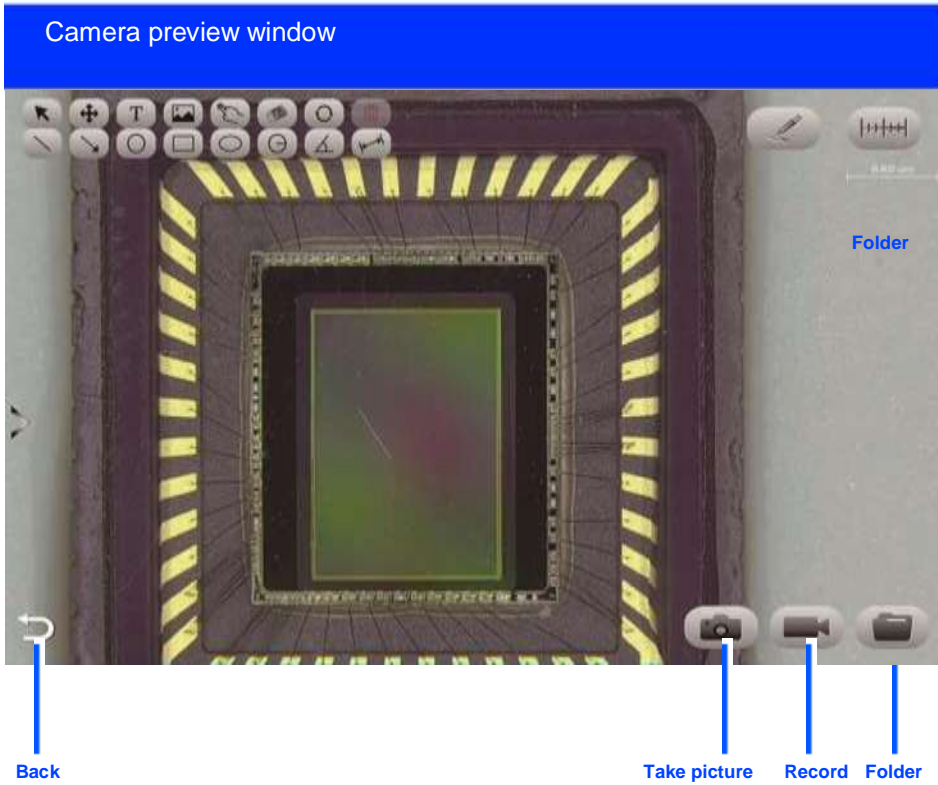
- Photo, video, folder management, parameters (brightness, white balance, etc.) adjustment
- Annotations, measurements, lines, arrows, add picture
- 



Share to social network with a single button



Navigation: Camera preview,



**B. Comprehensive assistance to teachers in microscopy interactive teaching, improves teaching efficiency and quality.**

The wireless network the teacher's large screen synchronises access to up to 35 student microscopes, they can see if the students have found the observation target and if they have understood properly. It displays 1/2/4/6/9 /25 student images simultaneously, teachers can show the typical specimens or compare the same/similar specimens in front of the class, measurement and annotation tools allow real-time evaluation of students' classroom learning effectiveness. The teaching process can also be recorded as a teaching model for teachers' training or the last saved

image/video can be used by the next teacher.

**Key features of interactive software for teacher**

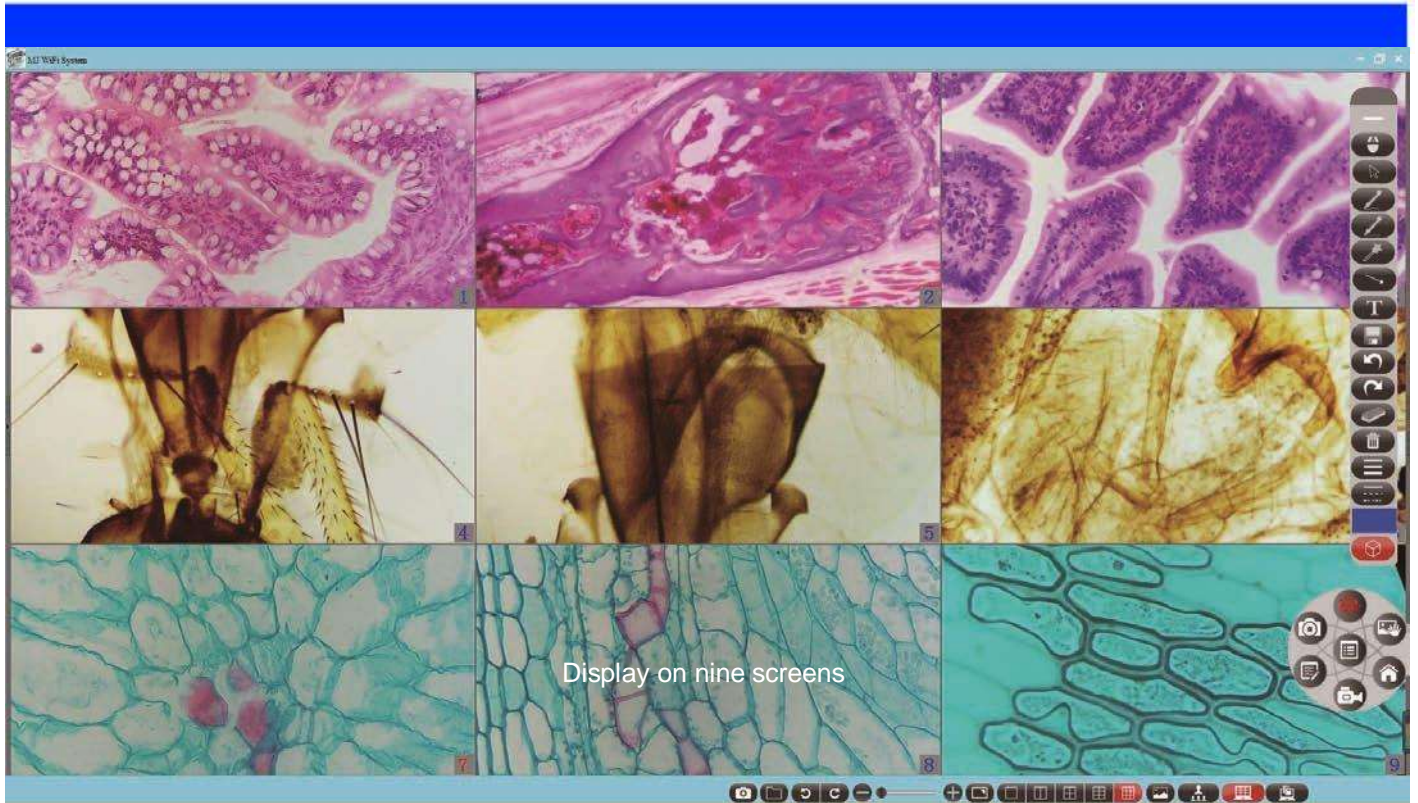
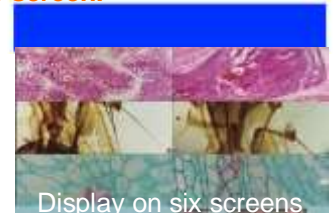
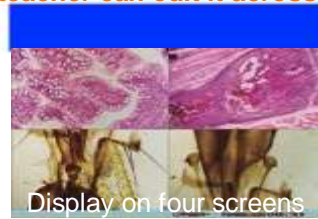
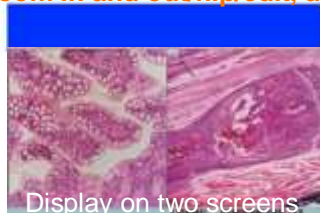
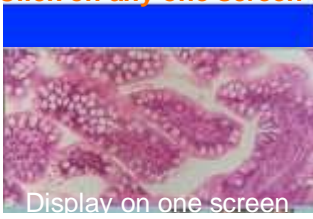
The function icons are easy to access and identify and can be moved onto the screen, so that the teacher can pick the menu in different locations of the software while walking in the

classroom.



Navigation panel

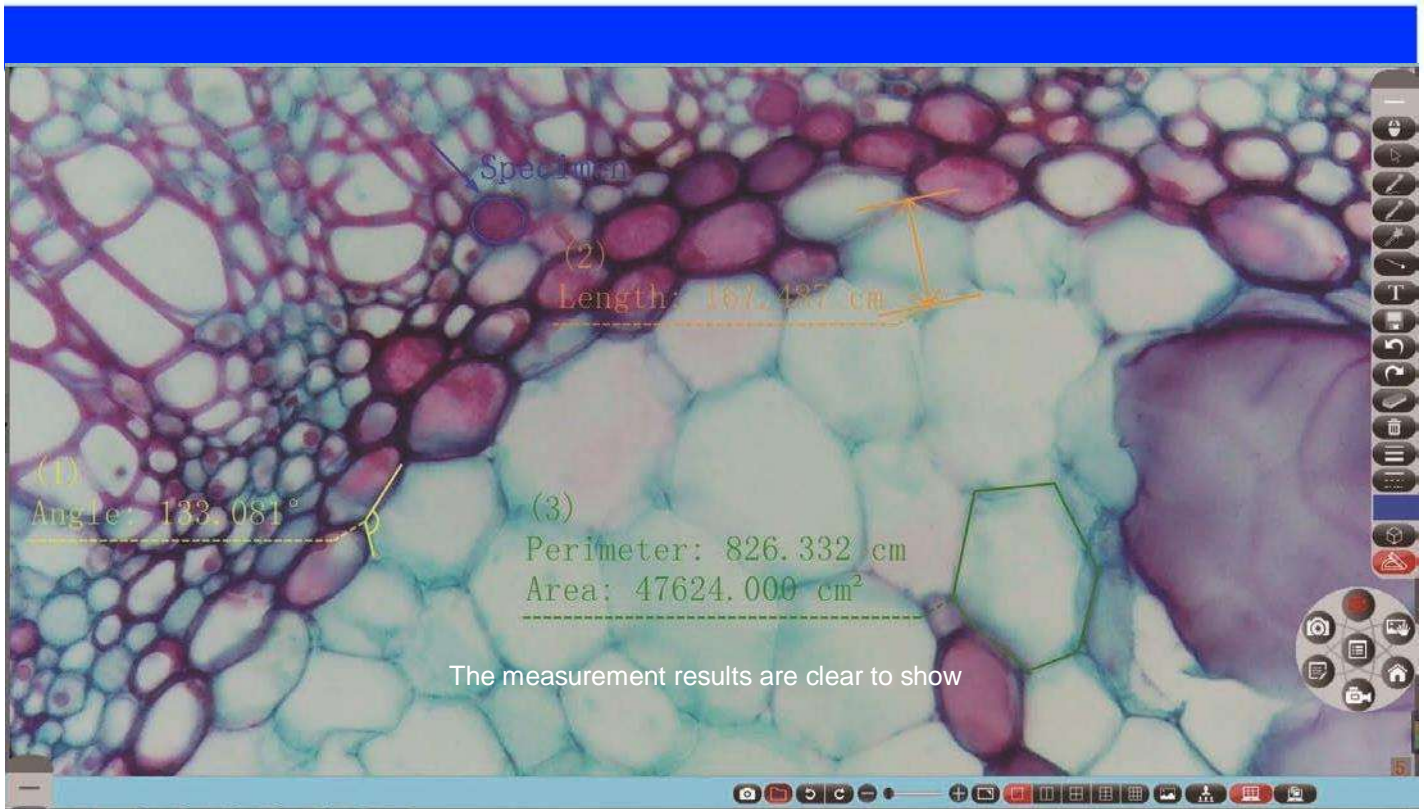
Click on any one screen to zoom in and out/flip/edit, and teacher can edit it across the screen.



### Rich measurement tools for all applications

Calibration, linear measurement, parallel line measurement, irregular shape measurement, polygon measurement, arc measurement, measurement, circular measurement, concentric circle measurement, angle measurement





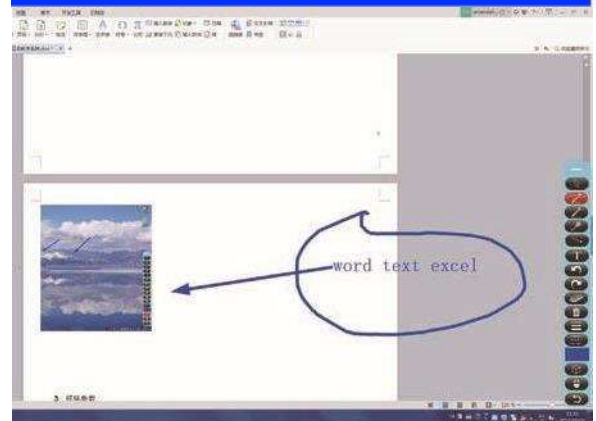
**Powerful educational editing tools**

Show/hide left toolbar, drag, select, copy, cut, paste, open folder, delete, convert to PDF, print

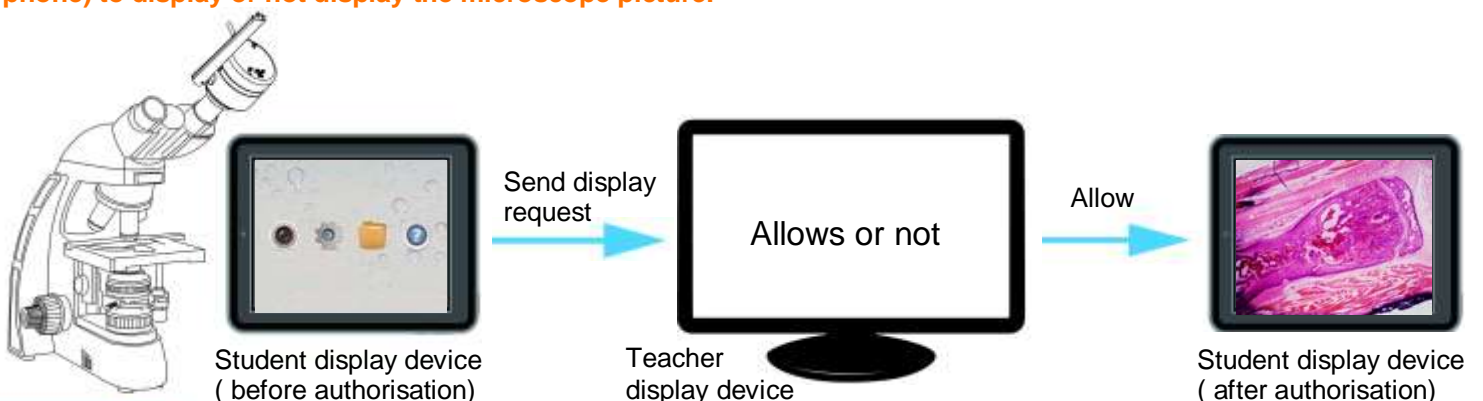
Record inside and outside of the

Show/hide right toolbar, mouse right through, object choice, the pen tool, line tool, highlighter, arrows, add text, undo and redo, eraser, line width, linear, colors, graphics.

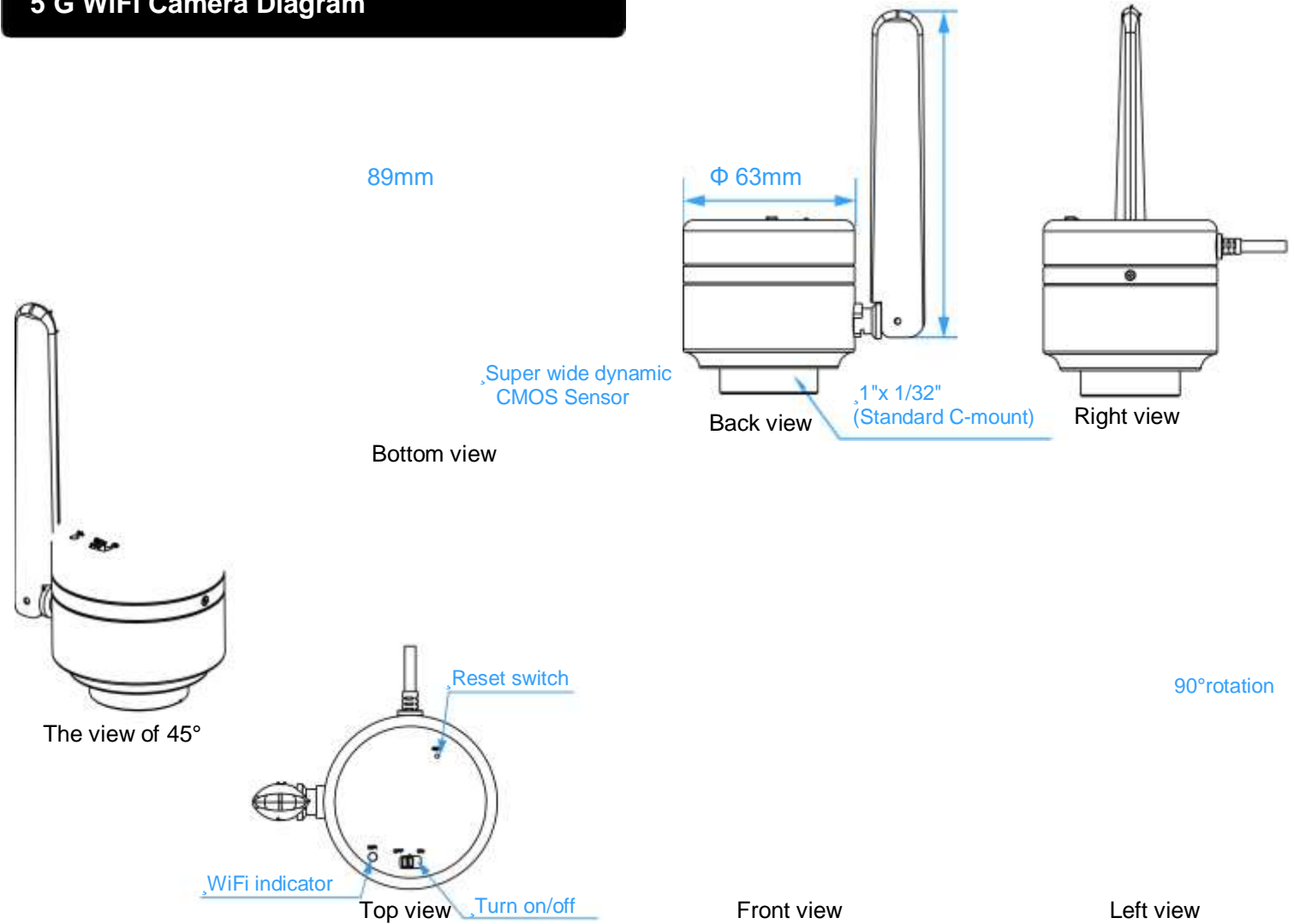
Mouse arrow tool: teacher can utilise edit tools of the software independently on the computer desktop or an opened WORD/EXCEL without closing the software, which can keep the software recording uninterrupted.



**Mobile display device management function: the teacher can control the student's mobile device (tablet or cell phone) to display or not display the microscope picture.**



# 5 G WiFi Camera Diagram



## Specifications

Hardware	2.0 MP	5.0 MP	8.0 MP	12.0
Image Sensor	SONY IMX291 CMOS Sensor	SONY IMX178 COMS	SONY IMX274 COMS	SONY IMX226 COMS
Expose mode	Rolling shutter	Rolling shutter	Rolling shutter	Rolling
Maximum Resolution	1920 x 1080 (2,073,600 pixels)	2592 x 1944 (5,038,848	3840 x 2160 (8,294,400	4000x 3000 (12,000,000
Sensor Optical	1/2.8"	1/1.8"	1/2.5"	pixels)
Format	2.9µm x 2.9µm	2.4µm x	1.62µm x	1/1.7"
Pixel Size	128dB	80dB	80dB	1.85µm x 1.85µm
Dynamic Range	30dB	≥50dB	≥50dB	80dB
SNRmax	380-650nm			
Spectral	Real-time auto, Single auto, Manual adjustment			
Charactristics	Real-time auto, Single auto, Manual adjust R G B			
Exposure Capability	Snapshot Picture Format JPG  Resolution 1920x1080  Record Video Format MOV Resolution 1920X1080P60 1920X1080P30, 1280x720P120	Snapshot Picture Format JPG  Resolution 2592x1944  Record Video Format MOV Resolution 2592X1944@30FPS, 2560X1920@30FPS, 2048x1536@30FPS	Snapshot Picture Format JPG  Resolution 3840x2160  Record Video Format MOV Resolution 3840X2160@30FPS, 2560x1920@30FPS	Snapshot Picture Format JPG  Resolution 3840x2160  Record Video Format MOV Resolution 4000X3000@15FPS, 4096X2160@25FPS, 3840x2160@30FPS



## Wireless Parameter/Power Parameter

Standard	IEEE 802.11n/ac
Operating Frequency	2412---2484MHz & 5180---5825MHz
Data Transmission	IEEE 802.11n : MCS0--MCS7 @ HT20 /2.4GHz band IEEE 802.11n : MCS0--MCS9 @ HT40 /5GHz band IEEE 802.11ac : MCS0--MCS9 @ VHT80/5GHz band HT20 MCS7 : -71dBm@10% PER(MCS7) /2.4GHz band VHT80 MCS9 :-60dBm@10% PER(MCS9) /5GHz band HT40 MCS7 :-70dBm@10% PER(MCS7) /2.4GHz band
Receiving	IEEE 802.11ac: 13±1.5dBm@HT80 MCS9 /5GHz band IEEE 802.11n: 16±1.5dBm @HT20/40 MCS0 /5GHz band IEEE 802.11n: 16±1.5dBm @HT20/40 MCS7 /2.4GHz band
The Wireless work	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 afterward When WiFi is connected LED flashes about once per second The greater the
Power-up	Wireless: DC 5V 2A charger
Software Environment (Please confirm mobile display device( tablet and cell phone) must support protocol IEEE 802.11n/ac,	Microsoft®Windows®XP / 7 / 8 /8.1/10(32 & 64 bit) CPU: Dual-core 3.0 GHz or more CPU Memory: 4G or more At least 10 GB available hard disk space Wireless network card(support IEEE
Windows system demand	
iOS System Demand	iPhone X/ 8/ 8 Plus/7/ 7 Plus/6s/6s Plus/ 6/6 Plus iPad Pro (12.9-inch 2nd generation)/ 12.9-inch 1st generation / 10.5-inch / 9.7-inch
Android system demand	Android4.0 or higher CPU: dual-core 1.7GHz or higher Storage ROM suggest 8G or larger
Operating Environment	0C~ 40C
Operating temperature	-20C~ 60C
Storage temperature	30~60%RH
Operating Humidity	10~80%RH