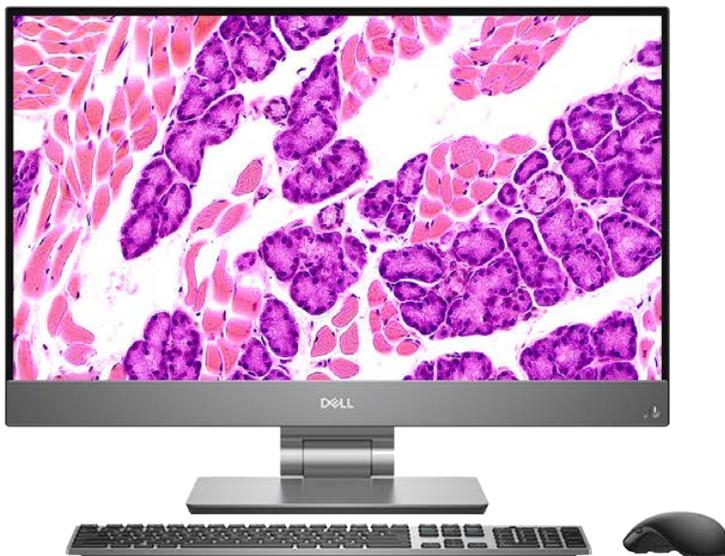


MEIJI TECHNO AMERICA MICRO WIFI EDU (5G) CLASSROOM INTERACTIVE EDUCATIONAL CAMERA SYSTEM

Install in minutes / Multiple operation systems supported / Free of tedious infrastructure
Support rapid digitization of pure optical microscope classrooms



This interactive system rolls optical microscope, microscopy camera, Micro Wifi Edu (5G) ViMatrix, and various smart imaging devices into one with a variety of functions such as lecture, monitor camera images, monitor students' mobile devices, demonstration, annotation and comparison to fully realizes cross-platform microscopy education. It is not only conducive to teachers' efficient teaching and quick mastery of students' dynamic learning, but also allows students to save images, videos, annotations and so on to the smart devices, so as to facilitate student immediate submission of study reports with names, captured images, and notes to consolidate study achievement. Thanks to this system, teachers and students can have a great deal of benefit from microscope classes.

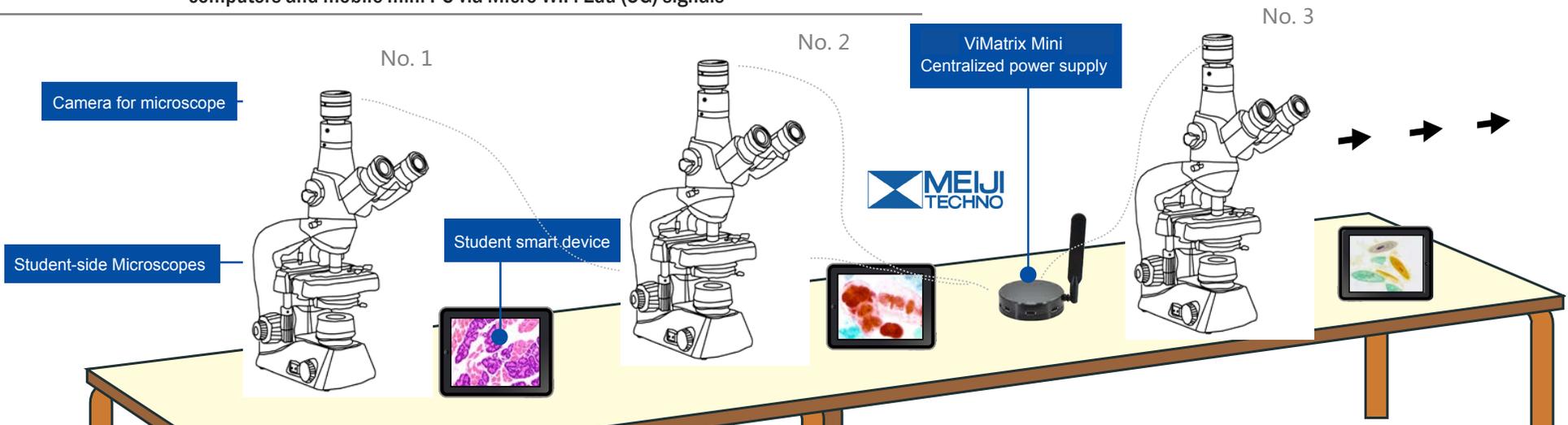
System layout

The teacher's main control end



Student-side

Real-time images under microscope are transmitted wirelessly to teacher-side computers and mobile mini PC via Micro WiFi Edu (5G) signals



System Composition

Optical microscope



Optional 0.5x or 1x adapter



Microscope Cameras



Camera for student Camera for teacher

Teacher side master control ViMatrix



Student side Vimatrix Mini



Teacher computer



Software: Micro WiFi EDU

When used on a PC, you need to install the interactive software Micro WiFi EDU which included in this System.

Micro WiFi Edu supported tablet and smartphone (please bring yours or purchase with distributors)



APP: Micro WiFi EDU

Or scan provided QR code to download APP Micro WiFi EDU

Projection

The teacher side computer can use the projector for large-screen display, but also can use the lecturing mode of this system, real-time stream such as microscopic images, computer documents to the smart devices of students, so as to obtain high-quality teaching effect.

Audio System

Teachers and students can do one-to-one voice communication; to ensure audio quality, a dedicated high-quality microphone for teachers is provided by designated agents; students can use their own headphones.

Classroom requirements

Student desks requirements: please provide enough physical space to the student microscope and Vimatrix Mini, 3 student microscope cameras share one ViMatrix Mini. It is recommended that three student cameras have a physical distance of less than 2 meters. Two mains outlets should be available (rated output voltage is AC 100-240V).

Camera for microscope

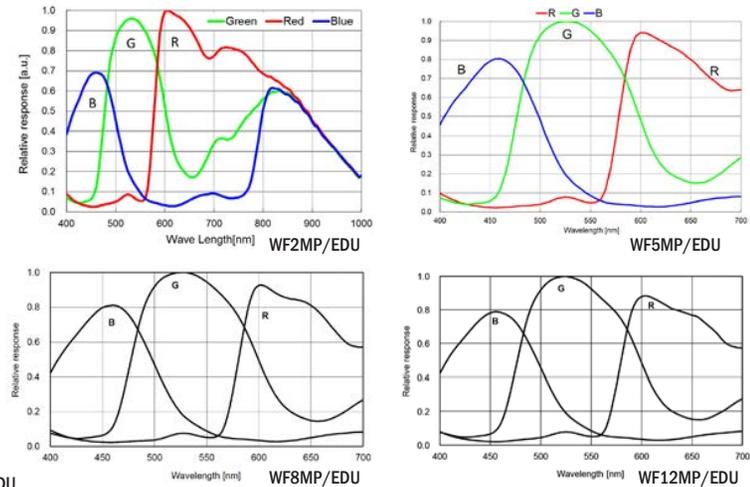


Plug and play, powered by the ViMatrix Mini, safe and reliable. Do not change the mechanical structure of the microscope, do not destroy the original optical system of the microscope. Static and dynamic pixel are real synchronized, no pixel interpolation.

The camera only has a power button to prevent students from misoperation. Independent camera designed makes it easy to quickly upgrade a higher resolution camera in the future. When the camera needs to be repaired or replaced, it can be instantly unscrewed without waiting for the after-sales personnel to be present.

- ✓ 2.0MP
WF2MP/EDU
- ✓ 5.0MP
WF5MP/EDU
- ✓ 8.0MP
WF8MP/EDU
- ✓ 12.0MP
WF12MP/EDU

- ✓ Higher sensitivity
- ✓ Larger dynamic range
- ✓ True color reproduction



The teacher's main control Micro WiFi Edu ViMatrix

The unique ViMatrix controls all cameras, and the teacher-side PC has all administrator rights of the system.

 9 strong signal antennas, can cover the diameter of up to 50 meters of spherical environment, to meet the requirements of teaching activities.

 Ultra-strong core to ensure stable real-time image and data transmission.

 Provides 1 WAN port to connect with teacher's PC and 4 LAN ports to support Internet connection.

 Multi-terminal data synchronization and transmission, the maximum transmission rate can reach 2600Mbps @ 5G Hz.



Student side Micro WiFi Edu ViMatrix Mini

 One high gain single frequency external antenna.

 Friendly-designed three 5V 2A USB charging interface, available for students to charge their smart devices in the classroom.

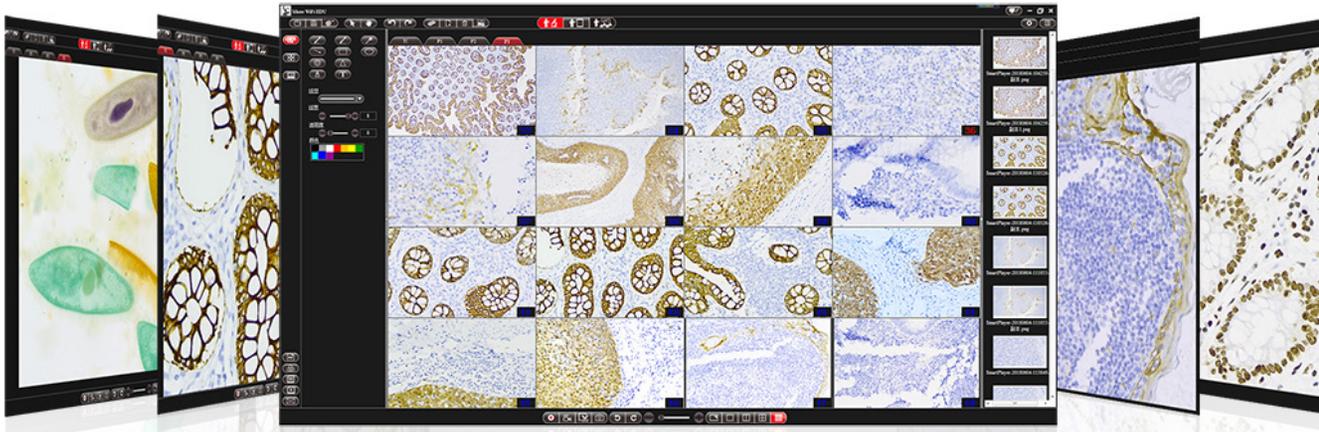
 Three power ports for microscope camera .

 Three cameras share one ViMatrix Mini.



Teacher-side Interactive software Micro WiFi Edu

Six main interactive teaching methods allows arbitrary composition of use



- User-friendly interface with icons, easy to identify and quickly use.
- Each function has been designed to be very accessible and helpful to education and research.
- Unique black background, eliminate miscellaneous light interference, improve microscope image recognition.

Scope of applications:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Education teaching | <input checked="" type="checkbox"/> Cell Lab | <input checked="" type="checkbox"/> Pathological Studies |
| <input checked="" type="checkbox"/> Blood Science | <input checked="" type="checkbox"/> Parasite Science | <input checked="" type="checkbox"/> Microbiology |
| <input checked="" type="checkbox"/> Material analysis | <input checked="" type="checkbox"/> Environmental studies | <input checked="" type="checkbox"/> Food/Beverage Control |
| <input checked="" type="checkbox"/> General cytology such as agriculture, forestry, livestock | | |

Lecturing mode



The teacher PC screen or the selected student smart device screen is streamed to all student smart devices synchronously.



Lecture materials such as PPT/ WORD/ EXCEL are displayed on the smart device of students in real time to enrich the teaching content.



The operation process of the teacher PC or the selected student smart device is displayed to all student smart devices synchronously.

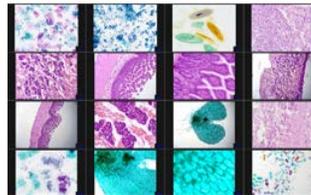
Demonstrate student works

Live-demo the selected camera video to the entire student smart devices.



Monitor live-image under microscope camera

Teachers can easily capture all camera live-image, confirming that all cameras are connected successfully.



Annotate student works

Annotate and edit selected images and documents, and send the operation process to all student smart devices in real time.

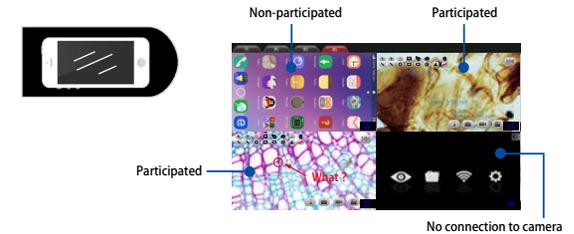


Annotation tools:



Monitor smart devices screen

Real-time monitoring of all student smart devices screen to ensure that all students participate in learning. The students' annotations, measurements, and other operations in the APP are displayed on teacher's PC. The progress of the study can be checked at any time. The teacher can show the selected student smart devices screen to all students.



Multi-screen comparison teaching

- Static picture comparison
- Dynamic Video comparison
- Static vs. dynamic mixing comparison
- Support for cross-window annotating
- Support teacher-to-peer comparison with selected students

Teacher interactive software Micro WiFi Edu Interactive shortcuts

Multi-page camera monitoring window, capturing the teacher-side image and all student-side real-time image simultaneously.

Take picture, record, screen-capture, screen-record for single or multiple student-side images.

Smart settings for camera : restore all camera default parameters;
Restore all camera default names;
Disable parameters adjustment on all smart devices.
Modify the camera name; restore the current camera default name.

The teacher receives students' voice and answers one-on-one questions.

Delete all documents with one click and reset the system with one click (convenient for next class teachers and students).

Student smart device APP Micro WiFi Edu



Scan supplied "student seat QR code" to access micro image directly.

Take photos / videos and record important content in real time.

Annotate, measure, doodle, add pictures, improve learning efficiency.

Tool bar



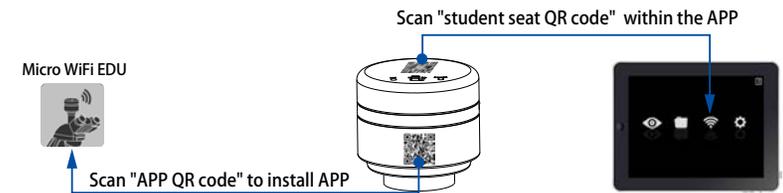
Smart devices black and white list management: delete all white list and blacklist; allow Smart devices authorization message popup; The smart device is authorized to join into the system in order. Check all authorized smart devices list.

23 measurement tools to meet basic teaching requirements.



Teacher-side mobile Mini PC (optional)

The mobile Mini PC has the same control and functions as the teacher-side PC, enabling easy mobile teaching in the classroom.



The student smart devices and the teacher-side PC can send each other voice realizes individual counseling.

Generates learning / research reports within student APP easily and can sent to teacher's email immediately.

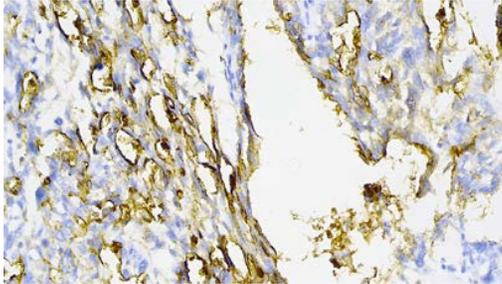
Annotation tools



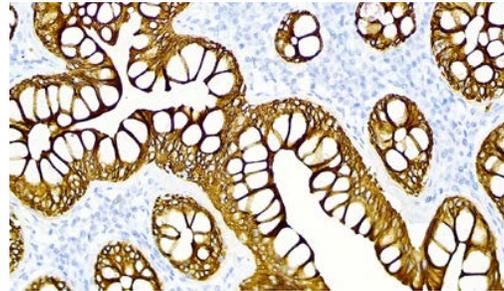
System Image samples

Taken by Camera WF8MP/EDU

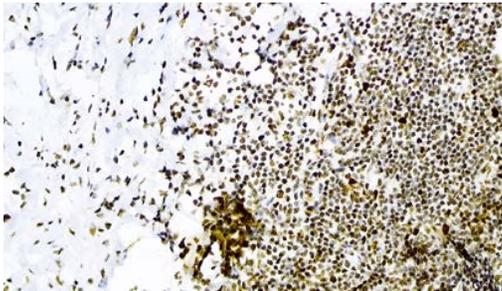
HE slices



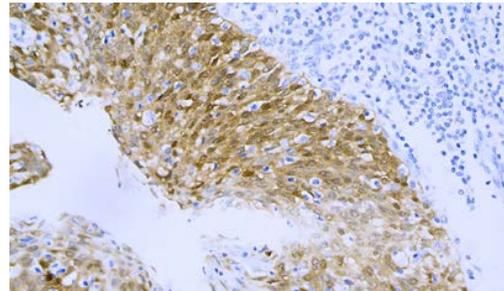
Ovarian cancer membranes 40X



Colon pulp 40X

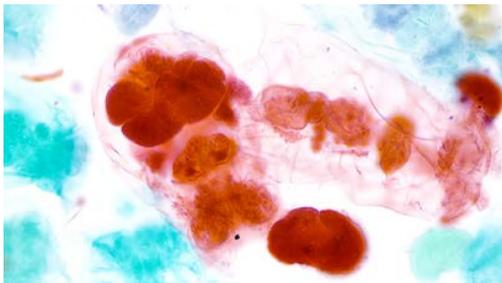


Appendix nucleus 40X



Cervical cancer nuclear slurry 40X

Insect slices

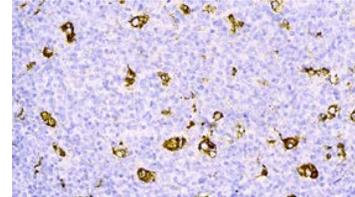


Wheel-worm 40X

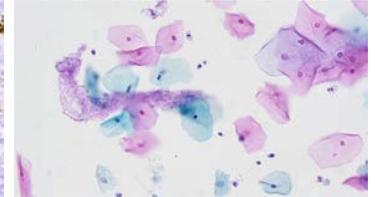


Paramecium stons 40X

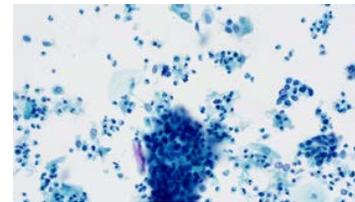
Pathological slices



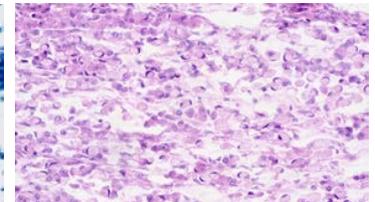
40X



40X

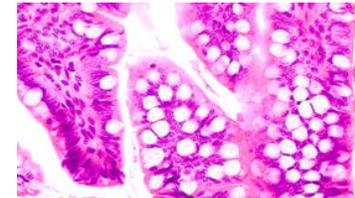


40X

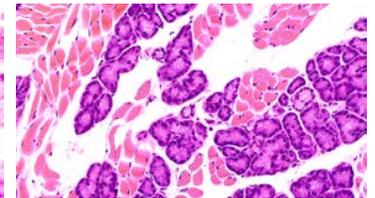


40X

Animals slices

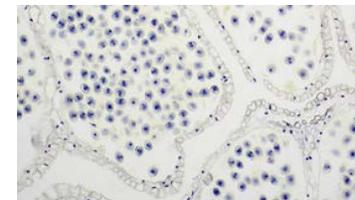


Canine ileum 40X

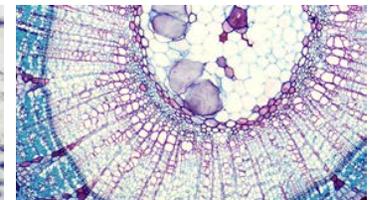


Dog taste buds 40X

Plant slices



Pine young male cone longitudinal 10X



Lime tree stem cross 10X

Technical specifications

| Camera Models | WF2MP/EDU | WF5MP/EDU | WF8MP/EDU | WF12MP/EDU |
|------------------------|--|--|---|--|
| Resolution | 2.0MP | 5.0MP | 8.0MP | 12.0 MP |
| Image sensor | SONY IMX291 CMOS | SONY IMX178 COMS | SONY IMX274 COMS | SONY IMX226 COMS |
| Exposure mode | Rolling exposure | Rolling exposure | Rolling exposure | Rolling exposure |
| Max resolution | 1920 x 1080 | 2592 x 1944 | 3840 x 2160 | 4000 x 3000 |
| Sensor size | 1/2.8" | 1/1.8" | 1/2.5" | 1/1.7" |
| Pixel size | 2.9 μm x 2.9 μm | 2.4 μm x 2.4 μm | 1.62 μm x 1.62 μm | 1.85 μm x 1.85 μm |
| Dynaminc range | 128dB | >80dB | >80dB | >80dB |
| Signal-to-noise ration | 30dB | >50dB | >50dB | >50dB |
| Spectral response | 380nm-650nm | 380nm-650nm | 380nm-650nm | 380nm-650nm |
| Exposure capability | Real-time automatic, single-time automatic, manual adjustment | | | |
| White balance | Real-time automatic, single-time automatic, manual RGB separately adjusted | | | |
| Record format | Photo Picture format: JPG Resolution: 1920 x 1080 Video Video format: MOV Resolution: 1920 x 1080@30fps, 1920 x 1080@60fps, 1280 x 720@30fps, 1280 x 720@60fps | Photo Picture format: JPG Resolution: 2592 x 1944 Video Video format: MOV Resolution: 2592 x 1944@30fps, 2560 x 1920@30fps, 2048 x 1536@30fps, 1920 x 1080@30fps | Photo Picture format: JPG Resolution: 3840 x 2160 Video Video format: MOV Resolution: 3840 x 2160@25fps, 2592 x 1944@25fps, 2048 x 1536@25fps, | Photo Picture format: JPG Resolution: 4000 x 3000 Video Video format: MOV Resolution: 4000 x 1080@15fps, 4096 x 2160@25fps, 3840 x 2160@25fps, 2592 x 1944@25fps |

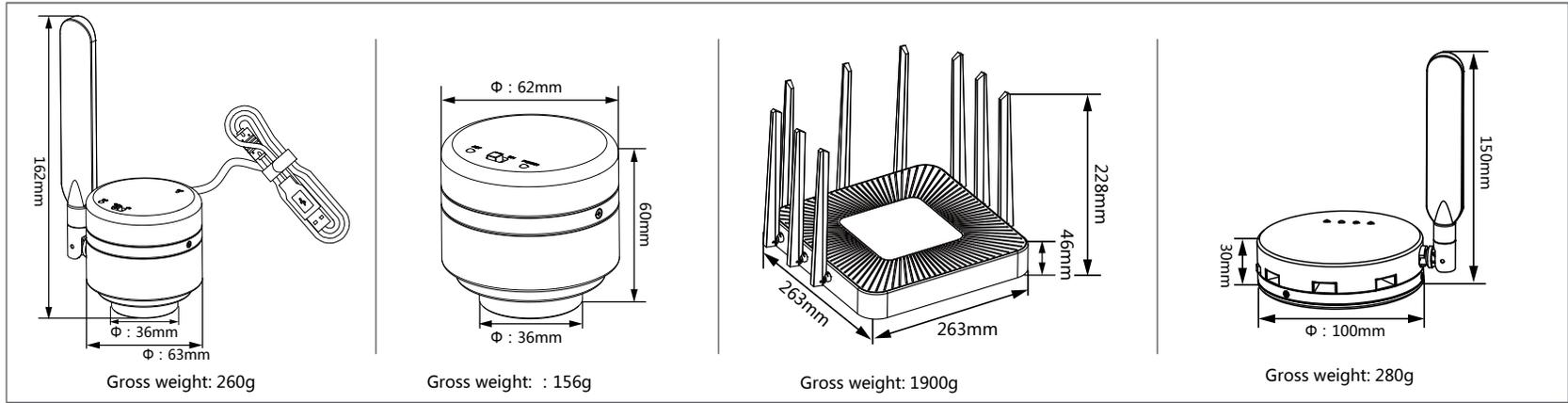
| Teacher-side Micro WiFi Edu (5G) Vimatrix Model | |
|---|--|
| Interface | 4 x 10/100/1000BASE-T Ethernet RJ45 Interface 1 x 10/100/1000BASE-T Ethernet RJ45 Interface |
| Button | Power on/Off |
| Lights | Power Light, Status light |
| Antenna | 9 high-gain single band antennas |
| External power supply | AC100~240V/1.5A (Max) |
| Wireless parameters | |
| Protocol supported | IEEE 802.11ac |
| Frequency | 5.180-5.825GHz |
| Signal rate | 2600Mbps |
| Transport security | WPA/WPA2, WPA-PSK/WPA-PSK2 |
| WAN type | Dynamic IP |
| Protocol | Supports IPV4 and IPV6 |

| Student-side Micro WiFi Edu (5G) Vimatrix Mini Model | |
|--|---|
| Interface | 3 x 10/100BASE -T Ethernet RJ45 Interface |
| Button | Power On/Off |
| Lights | Power Light, Status Light |
| Antenna | 1 high-gain single-band antennas |
| External power supply | DC12V 5A |
| Wireless parameters | |
| Protocol supported | IEEE 802.11ac |
| Frequency | 5.180-5.825GHz |
| Signal rate | 450Mbps |
| Transport security | WPA/WPA2, WPA-PSK/WPA-PSK2 |
| Protocol | Supports IPV4 and IPV6 |

| Software operating requirements | |
|---------------------------------|--|
| PC | Microsoft® Windows® 7 / 8 /8.1/10(32 & 64 bit) |
| | CPU: Intel i5 Quad-core 3.0GHz or better |
| | Memory: 8G or above |
| | At least 10GB of available hard disk space Wireless network card(IEEE 802.11ac supported) |
| iOS | iPhone X/ 8/ 8 Plus/7/ 7 Plus/6s/6s Plus/ 6/6 Plus iPad Pro 12.9 inches 2nd Generation/12.9 inches 1st Generation/10.5 inches 9.7 inches iPad Air 2/ iPad mini 4 iOS11.0 and later system |
| | Android |
| Android | Android 5.0 and later system |
| | CPU: Dual core 1.7GHz and later |
| | Memory RAM:2G or more Storage ROM: 8G or more recommended |

*Please confirm smart devices hardware must support Micro Wifi Edu (5G) protocol, otherwise it will not acquire image under microscope camera properly.

Dimensions



FC Verification No.: GZEM1801000017ITV

Verification No.: CSRT180084
Verification No.: CSTT180018

CE Verification No.: GZEM1801000016ITV

