Tinyscope CAM
Microscopic Camera
User Manual

Hi , Read me
before you explore the
world with TinyScopeCAM

English

| Inventory

① TinyScope Microscopic Camera x1　② USB to Type-C adaptor x1
　　　　　　　　　　　　　　　　　　　　 USB/Type-C data cable x1

③ Biological slide x4　　　　　　　　④ Liquid sampler ×4

⑤ Dropper x2　　　　　　　　　　　⑥ User manual
　　　　　　　　　　　　　　　　　　（warranty card）x1

⑦ Cleaning cloth x1　　　　　　　　⑧ Storage bag x1

Note: The package and contents in the picture are only for reference.
It should be based on actual objects.

Product Specification

1. Plan apochromatic objective
2. Illumination module
3. Type-C data cable interface
4. Magnetic cover plate (bright field illumination side)
5. Magnetic cover plate (dark field illumination side)

Note: The two sides of the magnetic cover plate shown in the figure are for reference only, and the structural shape of the functional area is subject to the actual object.The bright and dark field illumination are on the same magnetic cover plate, and they are distinguished by the front side and the back side.
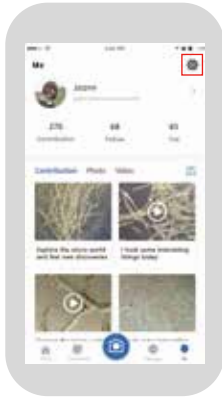
| User Tutorial (Observe Opaque Objective)

Connect TinyScope CAM to Android phone

01

  TINYSCOPE

GET IT ON
Google play   Download [TinyScope] APP.

02

Open [TinyScope]APP-
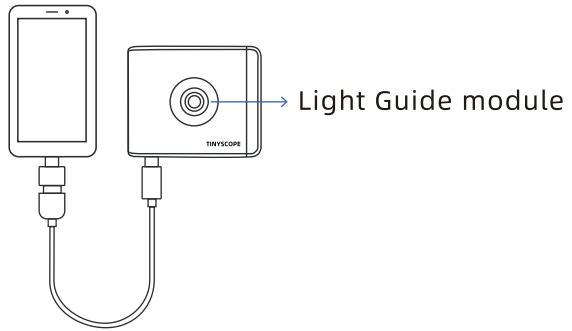click on [Me]-
Click on " ⚙ " icon.

03 Click on[OTG];then click on[OTG test] to determine whether your phone supports OTG function.

04 If your phone supports OTG function, please click on [OTG tutorial] again to match your mobile phone brand and follow the steps to turn on [OTG] function.

05

Light Guide module

Plug the adaptor into the USB port of the data cable
(then both ends of the data cable are Type-c ports).
Plug two ends of the data cable that has been connected
into the port of your smart phone and TinyScopeCAM
respectively. After successful connection, the light
guide area of this product will illuminate.

06

Your phone will pop up a window [Please
select an application for the USB device];
choose [TinyScope].

07

If your phone pops up a window asking
for your permission like [Allow "TinyScope"
to access the USB device or not?],please
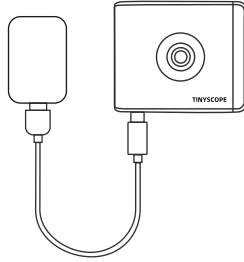choose [Yes].

08

After successful connection,the light guide
area will illuminate, and the mobile phone
screen will jump to the TinyScope APP interface.

09

Move TinyScope CAM's lens close to an opaque
planar object, and a clear image on your screen
indicates a successful connection.

Connect TinyScope CAM to iPhone

01

Connect TinyScope CAM with WIFI module.

02 Long press the button to open the WIFI image transmission module; then the indicator light is on,and wait for 3 to 5S.

03 Open the WIFI connection selection interface on your iPhone;
connect to the WIFI named [**ScopeCAM_XXX**];
and the initial password is **12345678**.

04 Open the TinyScope App on iPhone; select the interface for the microscope camera,and then the view of TinyScope CAM displays in real time.

05 On setting page of the microscope,you can select different resolution options.

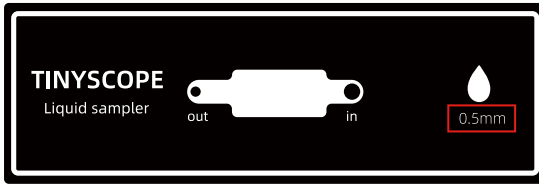# Connect TinyScope CAM to PC (Windows/Mac)

Windows :

01 Adjust the data cable to USB/Type-C
(The ends of the data cable should be USB and
Type-C port. If it have already connected with
the adaptor,please remove it).

02 Search [Camera] in Windows 10
(Enter Camera in the search bar at the bottom
of the desktop).

03 Click to open [Camera] application.

Mac:

01 Adjust the data cable to USB/Type-C
(The ends of the data cable should be USB and
Type-C port, so if you have connected with the
adaptor,please remove it) .

02 Connect TinyScope CAM and PC with the data cable.

03 Open [QuickTime Player]-Click on [File] in the
upper left corner
-Click on [New Movie Record].

04 Click on [🔴] button - click [Camera].

| Liquid Sampler

The number in the right side of the the liquid sampler indicates its groove depth,and the diameter of the object in samples should be below it.

E.g.choose 0.5mm sampler to observe aquatic organisms whose maximum diameter is 0.49mm

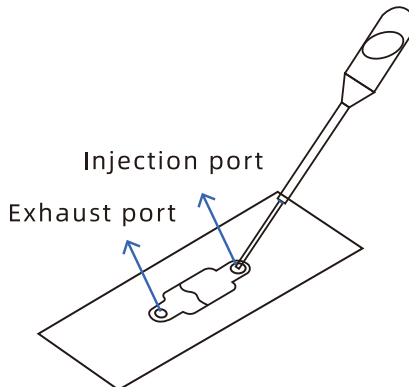## **Instructions**

01   Use a dropper to pick up the sample;

02   Firstly evaluate the size of the observed object in the sample and select a proper sampler;
(It is better that the maximum diameter of the object is close to the number marked in the sampler)

03

Injection port

Exhaust port

Slowly squeeze the liquid into the liquid sampler via injection port

7

04 Aim the front side of liquid sampler towards the lens for direct observation.

Caution:Because the microorganism and cells are small, you may need to adjust the position of the liquid sampler by move the liquid sampler for several times for observation.

| Observe Biological Slides/Liquid Sampler

The two opposite sides of magnetic cover plate are bright field side and dark field side, respectively.
Choose the dark field side-the black side when observing with a liquid sampler,while choose the bright field side-the white side when observing biological slides.

Bright Field
Illumination Module
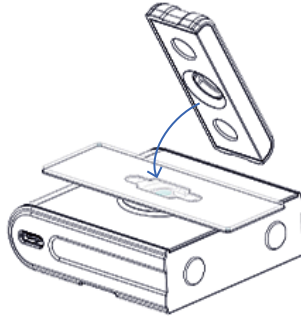
Dark Field
Illumination Module

Instructions

01 Take the magnetic cover plate off from the right side of TinyScopeCAM;

02 Place the slide/liquid sampler over the lens with the front side of towards the lens; (the front side: texts are readable from left to right)
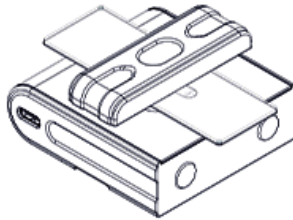
03 Adjust the position of the slide/liquid sampler so that the center transparent part is in the center of TinyScopeCAM lens

04

Select bright field side or dark field side, and aim the center concave part to TinyScopeCAM lens；

05

Cover the magnetic cover plate

Problems and Solutions

Blurred image displayed on your phone after successful connection

- Slightly move TinyScopeCAM up and down to adjust the distance between the lens and object;

- The lens is stained, please observe after wiping the lens according to the safety instructions in this manual.

The image is unclear when observing the slides/with liquid samplers in bright or dark field illumination.

- The front side is where texts are readable from left to right; please aim the front side and the sample area at the lens;

- The front side of the sampler is stained, please wipe and clean it before observation.

No window pop up after correct connection.

- Please restart your phone/PC and follow [How to use] Page to operate again;

- Close TinyScopeCAM APP and other similar USB camera application, and then plug TinyScopeCAM in again.

Blank screen after connection

- TinyScopeCAM is not properly connected to the phone, please reconnect the phone to TinyScopeCAM;

- For hareware problem,please contact the retail store.

Image lag

- TinyScopeCAM is overheat，Please pause and wait for the machine temperature to drop before using again;

- The selected resolution is relatively higher,and the frame rate isrelatively lower, it is recommended to select 1920 * 1080;

- Close other applications.

Multiple Working Modes

● Observe objects with rugged surface (insects, flowers, etc.). You can adjust the distance between the lens and the object by slightly moving the product towards or a way from the object.

● When observing soft or humid surface objects (such as skin, towels, ice cubes, etc.), you can add a clean cover slide (0.17mm thick) between the lens and the object to be observed, and the cover slide can be purchased by yourself. (Pay attention to the risk of glass breaking)

● Several ways to observe liquid

Use in dark field illumination mode to observe translucent liquid；
Use bright field illumination or direct observation when the object in the liquid is completely opaque.

● The camera software on PC only has the photographing function. If you need to use time-lapse photography on the PC, please download the camera software yourself.

Safety Instructions

● Do not disassemble or refit the product for any reason; otherwise the failure caused is not covered by the warranty, and you bear all these safety responsibilities.

● Please do not let the product directly contact with liquid, for neither the lens nor the body of TinyScopeCAM is waterproof.

● The device should be kept in the temperature neither too high (above 60°C) nor too low (below 0°C).

● Do not contact the lens and LED light guide area with hard and sharp objects to avoid damage.

● Do not look directly at the LED illumination module for a long time to avoid eye damage.

● This product contains small parts, so please do not swallow to avoid choking hazard.

● If the lens is dusty or oily, wipe the lens with a dry and clean lens cloth.

Product Parameters

Pixel	1300W
Optical Resolution	2μm
Focusing Range	0-0.25mm
Light Source	LED
Interface	USB2.0
Power supply	5V USB DC
Dimension	69.5mm x 56mm x 23mm

Material Safety Data Sheet

Parts Name	Toxic and harmful substances or elements					
	Pb	Hg	Cd	Cr (VI)	PBB	PBDEs
Lens Module	×	○	○	○	○	○
Plastic Parts	○	○	○	○	○	○
Metal Parts	○	○	○	○	○	○
Circuit Board ssembly	×	○	○	○	○	○
Wire	×	○	○	○	○	○
Flannel	○	○	○	○	○	○

○ indicates the content of this toxic and hazardous substance in all homogeneous materials of this part is under the limit requirement stipulated in the "Requirement Standard for Limits of Toxic and Hazardous Substances in Electronic Information Products" (SJ/t11363-2006).

×:Indicates that the content of the toxic and hazardous substance in at least one homogeneous material of the component exceeds the limit requirements specified in the Standard for Limit Requirements for Toxic and Harmful Substances in Information Products (SJ/T11363-2006).

Note: The reason why this product is marked with "×" is that there are no alternative technologies or components to choose from at this stage.

Warranty Card

Warranty policy :

Return within 7 days since you receive the product;exchange within 15 days;cover one year warranty.

Free service:

During the warranty period, if the fault is caused by the quality problem of the product itself, please contact the distributor with this warranty card and shopping certificate.

Free repair service is not covered if:

- No warranty card or purchase certificate

- Damage caused by self-disassembly

- Failure due to water ingress or falling, etc. or man-made mechanical damage

- Damage caused by non-designated power source or voltage

- Fault and damage caused by any force majeure

Warranty Card

Warranty（Archive Edition）

Product Model： _____   Purchase Date： _____

Buyer Name： _____   Phone Number： _____

Address： _____

_____

Tinysc⊙pe CAM