

# WF-20

## Instruction Manual



### Contents

● FCC Statement .....	2
● IC Statement .....	3
● Introduction .....	4
● System Requirement .....	4
● Package Contents .....	4
● Overview and Function .....	5
● Getting Started .....	6
● DinoConnect APP Overview .....	9
● Battery Information .....	13
● Specifications .....	14

## **DECLARATION OF CONFORMITY WITH FCC RULES FOR ELECTROMAGNETIC COMPATIBILITY**

We, AnMo Electronics Corporation, of 5F-1, No. 76, Sec. 2, Tung-Da Rd., Hsinchu 300, Taiwan, declare under our sole responsibility the product,

### **WF-20**

to which this declaration relates, complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## **FCC Radiation Exposure Statement**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance.

## **Federal Communication Commission Notice**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## **FCC Caution:**

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

## IC statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

## IC Radiation Exposure Statement

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance **20cm** between the radiator & your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de **20cm** de distance entre la source de rayonnement et votre corps.

## IC Caution:

The transmitter module may not be co-located with any other transmitter or antenna.

Le module émetteur peut ne pas être coïmplanté avec un autre émetteur ou antenne.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

Pour les produits disponibles aux États-Unis/Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

# Introduction

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The WF-20 is a Wi-Fi streamer, as well as a wireless router, to use combinedly with Dino-Lite Edge AF series for viewing and sharing observation without wire. With high quality image transmission and long battery life, the WF-20 is well suited for field applications.

## System Requirement

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**Mobile device or computer with operating system:**

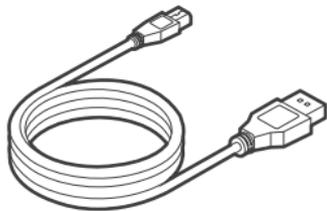
- iOS 10.X or later
- Android 6.0 or later
- Windows XP (SP3)/Vista/7/8/10

**Compatible Dino-Lite Digital microscope:**

- Dino-Lite Edge AF series

## Package Contents

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Mini USB charging cable

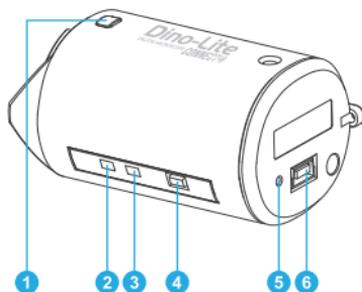


Rubber lid



Dino-Lite WF-20  
Wi-Fi streamer

# Overview and Function



- 1 Interface release button
- 2 Wi-Fi signal LED indicator
- 3 Battery LED indicator
- 4 On / Off power button
- 5 Reset pinhole button
- 6 Mini USB port (for charging purpose)

## Button usage and description:

Buttons	Description
On / Off power button	Press and hold for 1.5 seconds to turn on/off
Reset pinhole button	Press and hold the pinhole button for 3 seconds to restore factory settings

## LED status and description:

Indicator	Status
Green LED (Wi-Fi signal)	 Blinking Data transferring
Red LED (battery level)	 3 flashes per cycle Battery remains >70%
	 2 flashes per cycle Battery remains <70%
	 1 flash per cycle Battery remains <40%
	 Solid Battery full charged
	 Blinking repetitively Battery under charging

# Getting Started

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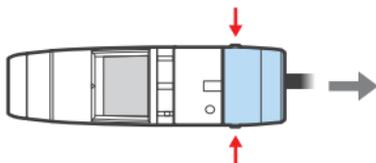
## Charging the Battery

Charge the WF-20 by connecting to a computer or a USB charger using the Mini USB charging cable.

## Assembling the Device

The WF-20 needs to be used with Dino-Lite AF series. The assemble procedure is as described below.

1. Pressing the two interface release buttons at the same time to remove the USB interface adapter cap.



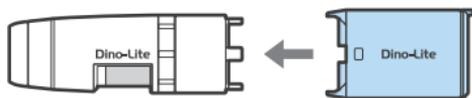
### Notice:

Do not bend the join part anytime especially when releasing the USB adapter cap or WF-20. Doing so may cause damage on the devices.

2. Remove the rubber lid from the WF-20. Suggest to cover the rubber lid onto the USB adapter cap for preventing dust build-up inside.



3. Attach the WF-20 onto AF series with the Dino-Lite logos facing the same side.



## Downloading the APP or software

### iOS/Android

Download and install DinoConnect from the Apple© App Store© or Google Play™.

### Windows

Install DinoCapture 2.0 version 1.5.30 or above via CD. The latest version of DinoCapture can also be downloaded from <https://www.dino-lite.com/download01.php>.

## Powering on

Press the power button for 1.5 seconds to power on. The startup process may take about half minute until the Dino-Lite's LED lit up.

### To power off

Press the power button again for 1.5 seconds.

## Setting the Network

### iOS/Android

1. Go to settings of your iOS/Android device.
2. Turn on Wi-Fi.
3. Select WF-20's SSID (default: "Dino-Lite WF-20"), and input password (default: "12345678").
4. Launch DinoConnect for using Dino-Lite.
5. (Optional) When multiple WF-20 are using nearby, be advised to change WF-20's SSID and password in DinoConnect settings for distinguishing purpose.



## Windows PC/laptop

1. Turn on Wi-Fi of your computer, and select the Network by clicking  or  icon in the notification area.
2. Select WF-20's SSID (default: "Dino-Lite WF-20"), and click the **Connect** button.
3. Enter the security key (default: "12345678"), and click **Next** to connect.
4. Launch DinoCapture 2.0 for using Dino-Lite.

## Joining Wireless Network

You may further setup the WF-20 as a router to build connection between your mobile and a wireless network.

1. Open DinoConnect settings .
2. Tap "Choose a network".
3. Choose a network, then enter password.

Now your device is able to connect with the chosen network via the WF-20. The device will remember the last connected wireless network.

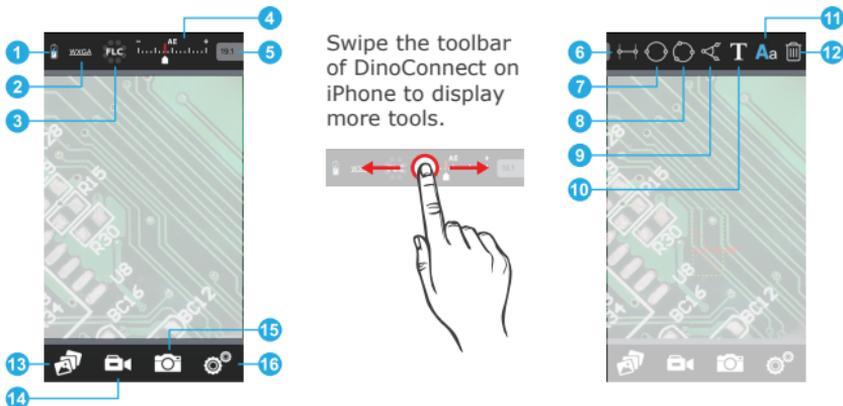


### Note:

The WF-20 can be possibly connected up to 10 mobile devices at the same time, but it is recommended to keep less than 5 connections for retaining image fluency.

# DinoConnect APP Overview

## DinoConnect on iOS



No.	Function	Description
1	Battery indicator	Battery level of the WF-20.
2	Resolution setting *	To choose resolutions.
3	LED switch *	To control Dino-Lite's LED lighting.
4	Exposure control *	To adjust exposure.
5	Magnification display box	To input magnification. (Doesn't required with AMR models.)
6	Line measurement	To measure linear distance between two endpoints.
7	Diameter circle	To measure the circumference, area, and radius of a circle that passes two endpoints of the diameter.
8	Three points circle	To measure the circumference, area, and radius of a circle that passes three endpoints.
9	Three points angle	To measure the angle between three endpoints.
10	Text	To write texts on the image.

11	Text color/size	To change text color and size.
12	Trash bin	To delete measurement and text on the image.
13	Gallery	To view captured images or recorded videos of Dino-Lite.
14	Record button	To start or stop video capture.
15	Shutter button	To capture an image.
16	Settings *	To change settings of connections, MicroTouch, etc.

**Note\*:**

Only the first connected PC/mobile device has the exclusive control on WF-20.

### How to do measurement on iOS

1. Focus the target, then input the current magnification. (AMR models will display magnification automatically)
2. Tap a measurement function on the toolbar.
3. Tap a desired position for the rough placement of an endpoint.
4. Slide to move the endpoint for fine adjustment.
5. Repeat steps 3 and 4 to place other endpoints required by the measurement.
6. Tap an area to display the measurement results.
7. To delete a measurement, tap it and tap the trash bin.

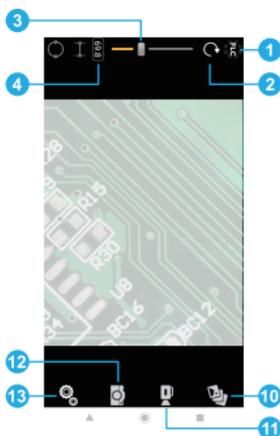
### How to move the measurement and measurement results

- To move the measurement and measurement results, tap on the measurement, then drag to reposition.

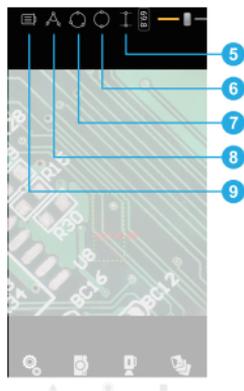
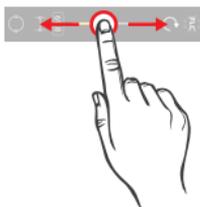
### How to create, move and edit text

- To create a text box, select the text function, then tap an area of the image.
- To move text, tap on the text, then drag the text box to reposition.
- To edit text, tap on the text, tap the text color/size function, select size/color.

## DinoConnect on Android



Swipe the toolbar of DinoConnect on Android smartphone to display more tools.



No.	Function	Description
1	LED switch *	To control Dino-Lite's LED light.
2	Refresh button	To refresh preview image.
3	Exposure control *	To adjust the exposure.
4	Magnification display box	To input magnification. (Doesn't required with AMR models.)
5	Line measurement	To measure linear distance between two endpoints.
6	Diameter circle	To measure the circumference, area, and radius of a circle that passes two endpoints of the diameter.
7	Three points circle	To measure the circumference, area, and radius of a circle that passes three endpoints.
8	Three points angle	To measure the angle between three endpoints.
9	Trash bin	To delete measurement and text on the image.
10	Gallery	To view captured images or recorded videos of Dino-Lite.

11	Record button	To start or stop video recording.
12	Shutter button	To capture an image.
13	Settings *	To change settings of resolution, connections, MicroTouch, etc.

**Note\*:**

Only the first connected PC/mobile device has the exclusive control on WF-20.

### How to do measurement on Android

1. Focus the target, then input the current magnification. (AMR models will display magnification automatically)
2. Tap a measurement function on the toolbar.
3. Tap a desired position for the rough placement of an endpoint.
4. Slide to move the endpoint for fine adjustment.
5. Repeat steps 3 and 4 to define other endpoints required by the measurement.
6. Tap on an area to display the measurement results.

### How to delete all measurements

1. Tap on the trash bin function. This function only appears when at least one measurement has been performed.
2. Tap anywhere on the image.
3. A window will pop out asking if you want to delete all measurements, tap "Yes".

## Battery Information

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The built-in battery of WF-20 has a limited lifespan and may eventually need to be serviced. Do not repair or replace the built-in battery of WF-20. Please contact your local dealer and they will help to send back to the manufacturer for replacing the battery, which is not covered under warranty.

The WF-20 was designed to have more than 2.5 hours battery life, but may vary with different Dino-Lite model and the way of using. Charging the WF-20 may take 3-4 hours by a USB charger or a power bank. The WF-20 can still be used while charging, but be noted that extra heat will be generated and may affect circuit performance under poor ventilation.

The battery of WF-20 retains average 80% of its original capacity after 500 charge cycles. The following tips may help to prolong battery lifespan:

- Avoid draining the battery all the way to 0%.
- Prevent exposing or charging the WF-20 at temperature above 30°C (86°F).
- Charge the WF-20 to 50% for long-term storage.
- Store the WF-20 at 15~25°C (59~77°F).

For extending battery life, you may consider to reduce Dino-Lite's LED brightness in APP or software.

## Specifications

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Product name	WF-20
Support protocol	Wi-Fi IEEE802.11b / g / n
Antenna	2.4GHz Wi-Fi FPCB antenna
Frequency	2.412GHz~2.485GHz
SSID (default)	Dino-Lite WF-20
Battery	1600mAh
Power consumption	2.5W
Battery continuous operation time	2.5 hours (tested by using with AF4915)
Operation temperature	10~45°C (50~113°F)
Dimensions	58mm x 36.5mm x 32mm
Weight	approx. 57g (with battery)