

Manual

ViewTer 500 UV/IR



Thank you for choosing the Microscope Anyty ViewTer 500 IR/UV!

This extremely compact digital microscope magnifies the subject up to 200 times! The microscope is very handy, stable and has the dimensions of a digital camera. ViewTer 500 is available with either UV LED or IR LED illumination.

You can use the ViewTer 500 microscope for a wide range of applications, such as:

- Industrial inspection
- Computer parts inspection
- Telecommunication module inspection
- Scientific teaching tool
- Medical analysis
- School research tool
- Insect section / examination
- Plant dissection / examination
- Skin analysis
- Textile inspection
- Inspection of collections / coins / jewellery
- Pressure testing

And much more ...

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1. Content

The product includes the parts listed below. Please check that the delivery is complete. A description of the parts (except the spacers) can be found on the following pages.



1	ViewTer 500 UV/IR	6	Mini-USB charging cable
2	Spacer	7	Shoulder laces
3	Lens cover	8	Measuring scale
4	Remote control	9	SD card
5	USB charging cable	10	Cleaning tissue

2. Description of the device parts



1 On/Off button	Switching the device on and off
2 Release button	Button for taking pictures/videos
3 Remote control connection	Connection for remote control
4 Tab holder	Tab for the carrying strap
5 Lens cover	Lens with lens cover
6 Charging display	Red light during charging
7 LED controller	Set the brightness of the LED
8 Mini-USB connection	For connecting to the PC
9 Charging port	Connection for charging the device



10 Display	Showing microscope picture and information
11 Magnification controller	Changing of magnification/focus
12 SD/SDHC slot	Slot for SD card
13 LED button	Changing LED mode
14 Menu button	Showing the setting
15 Mode button	Changing mode
16 Direction buttons	Navigating through the menu
17 Confirmation button	Confirming the selection
18 Digital zoom	Changing the digital zoom



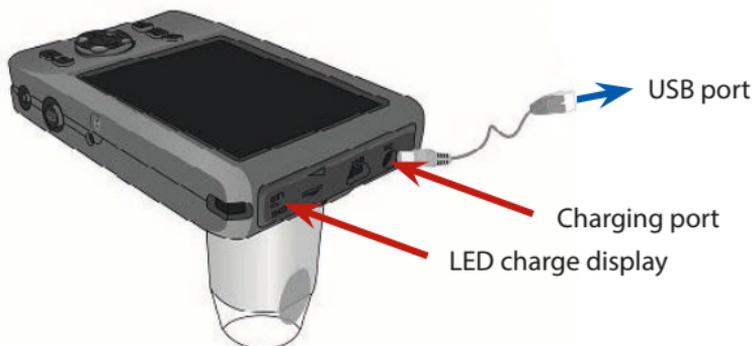
Remote control

Release

Changing mode

Switch on the LED

3. First use



3.1 Charging

Please charge the ViewTer microscope before using it for the first time. Use the attached USB charging cable. The charging lamp lights up red during charging. The charging time is about 4-5 hours. The charging light turns blue when charging is completed. Please charge the battery completely before using the device for the first time.

We recommend not to use the device while charging, otherwise the battery life time may be shortened.

3.2 Insert SD card

Pictures taken by the ViewTer are saved on the SD card. Please insert a SD card into the SD/SDCH card slot. The maximum usable size for the SD card is 32 GB. If you are using a MicroSD/SDCH card, make sure that the MicroSD/SDCH card is correctly placed in the adapter. If the card cannot be read correctly, remove the card from the device and reinsert it.

3.3 Attaching the lens cover and spacers

The apparatus includes two sets of lens covers and spacers:

For x60 + x200

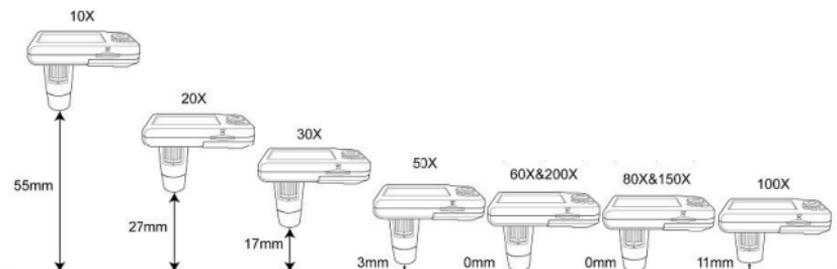
For x80 + x150

Change the covers and spacers to obtain the desired magnification. To remove the spacers, simply pull them off the lens.

3.4 Changing the magnification and focus

Turn the magnification controller to adjust the focus while shooting.

This picture shows the magnification and focus distances.



3.5 Connecting the remote control

Connect the remote control if you want to use the unit e.g. with a tripod.

Please connect the cable of the remote control to the corresponding connection on your ViewTer microscope.

4. Using the ViewTer

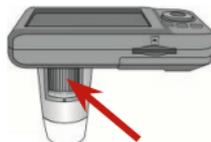
4.1 Switching on the device

Switch on the device. Press the on/off button for one second and the display will switch on. The device switches off in the same way.



4.2 Changing the magnification and the zoom

Bring the lens cover close to the object. The image of the object is shown on the screen. Use the magnification controller to adjust the magnification and the focus.



4.3 Digital zoom

You can also use the digital zoom to adjust the magnification. Press the +/- buttons next to the display to adjust the magnification of the digital zoom. The maximum zoom is x4. If you use the digital zoom, the image quality will deteriorate.

4.4 Adjusting the LED

Press the LED button to switch between the following LED modes: light off -> white LED -> UV LED/IR LED. To adjust the brightness, please use the LED controller on the side of the device.

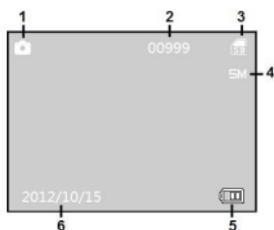
4.5 Display scale

Press the "OK" button for a few seconds during video mode to show the display scale. You can use the scale to adjust position and size. The scale is only showed on the display and is not saved in the data.

4.6 Recording a still image

Press the release button next to the power button and the display turns black. This is the sign that the ViewTer is recording.

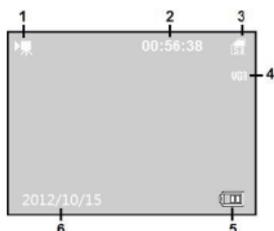
Display in still mode



- 1 Still mode
- 2 Free memory space
- 3 SD card
- 4 Media format
- 5 Battery display
- 6 Current date and time

4.7 Recording a video

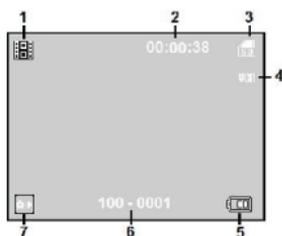
Press the mode button to switch to video mode. Press the release button to start recording. Press the button again to stop recording the video.



- 1 Video mode
- 2 Free memory space
- 3 SD card
- 4 Media format
- 5 Battery display
- 6 Current date and time

4.8 Preview of recorded data

Press the Mode button twice to switch to preview mode. To play videos, press the release button.



- 1 Preview mode
- 2 Only for videos: Length of the recording
- 3 SD card
- 4 Media format
- 5 Battery display
- 6 Preview data number
- 7 Only for videos: Press the release button to start the video.

5. Settings

This section explains the modes and settings. Press the menu button in each mode to open the settings menu and use the directional pad to navigate.

5.1 Still image mode settings



Settings in still image mode

To open the main settings go to point 5.4 (page 13)



Change colour

You can change the colour of the data to be saved.



Normal

Standard setting, all colours



Grey scale

Black/White



Changing the resolution

Choose between five different resolutions. Large resolutions produce high-resolution images, but the size of the saved files is also increased.



500M

Data is saved in 2060 x 1920 pixels



300M

Data is saved in 2048 x 1536 pixels



200M

Data is saved in 1600 x 1200 pixels



100M

Data is saved in 1280 x 960 pixels



VGA

Data is saved in 640 x 480 pixels



Image stabilisation system

Prevents blurring due to camera shake when taking pictures. If there is too much shaking, the system may not work properly.



On

Image stabilisation system is on



Off

Image stabilisation system is off

5.2 Video mode settings



Settings in video mode

WB White balance



Normal

Normal white balance



Outside (Sunny)

Setting for an environment where the light is strong



Outside (Cloudy)

Setting for an environment where the light is weak



Incandescent lamp

Setting for an environment in which an incandescent lamp is



Fluorescent lamp

Setting for an environment in which a fluorescent lamp is

MP Changing the resolution

Choose from two different resolutions. Large resolutions produce high-resolution videos, but the size of the saved files also becomes larger.



VGA

640 x 480 pixel



QVGA

320 x 240 pixel

5.3 Preview mode settings



Settings in preview mode



Rotate the image (only for images)

You can rotate the images during the preview.

90 Rotation of the image by 90° clockwise

180 Rotation of the image by 180° clockwise

270 Rotation of the image by 270° clockwise

Cancel Exit the setting



File protection

You can protect a file from being deleted by locking it.



Protect

Activating the protection



Unlock

Deactivating the protection

 Delete files

You can delete one or more files.

- | | | |
|---|-----------------|----------------------------------|
|  | Current picture | Delete the current picture/video |
|  | All | Delete all data on the SD card |
|  | Cancel | Exit the setting |

5.4 ViewTer main settings

 Settings for still image recording / system settings

 Exposure

Set the exposure between **+3 +2 +1 ±0 -1 -2 -3**

WB Setting the white balance

Setting the white balance for taking a still image

- | | | |
|---|-------------------|---|
|  | Normal | Normal white balance |
|  | Outside (Sunny) | Setting for an environment where the light is strong |
|  | Outside (Cloudy) | Setting for an environment where the light is weak |
|  | Incandescent lamp | Setting for an environment in which an incandescent lamp is |
|  | Fluorescent lamp | Setting for an environment in which a fluorescent lamp is |

 Sharpness

- | | | |
|---|--------|---|
|  | Normal | Normal setting |
|  | Sharp | Big change in the colour and brightness of the image. The image appears sharper. |
|  | Soft | Small change in the colour and brightness of the image. The image appears softer. |

 Quality of images to be saved

- | | | |
|---|----------------|-------------------------------|
|  | Extremely fine | The highest quality of image |
|  | Fine | Standard setting |
|  | Normal | The smallest size of the file |

CPU	Pentium III 1Ghz or higher
Optical drive	Necessary
Main memory	over 256 MB
Required memory space	over 1000 MB
Connection type	USB 1.1/2.0
Display size	15" (XGA) or more
Graphic	16 Bit colour or more
Rights	Administration rights (during installation)

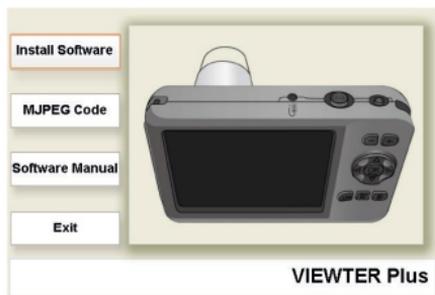
Recommended requirements

CPU	Pentium 4 1.6 Ghz or higher
Main memory	512 MB or more
Required memory space	10 GB or more
Display size	17" (SXGA) or more
Graphic card	16 Bit colour, Video memory 64 MB or more

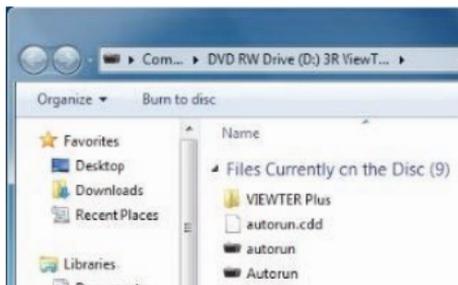
6.1 Installing the software

Antivirus software may interrupt the installation process. If this happens, please disable your computer's antivirus software until the installation is complete.

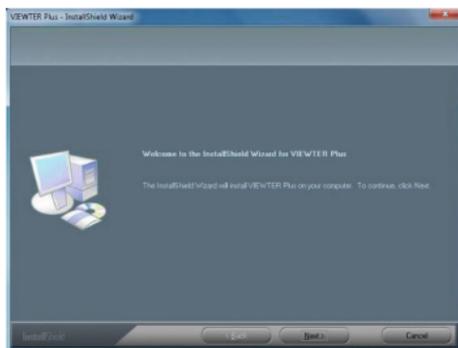
Press "Continue anyway" if UAC (User Account Control) is activated. The installation menu opens after you have inserted the installation CD into the CD-ROM drive. Then click "Install Software".



If the installation menu does not open automatically, open my "My Computer" -> "CD-ROM" and then click "autorun.exe".



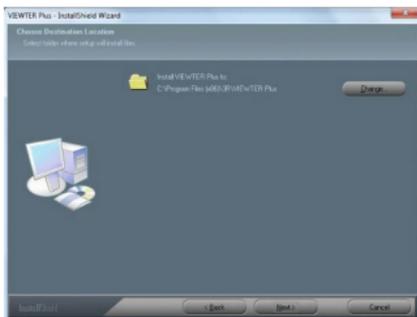
The installation programme will open now. Please click "Next".



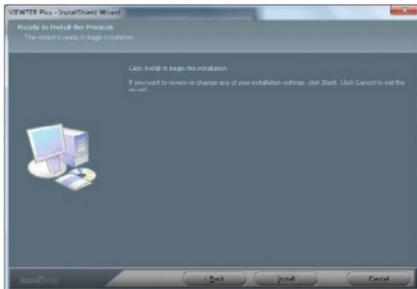
The End User Licence Agreement is displayed. Click "I accept" and then click "Next".



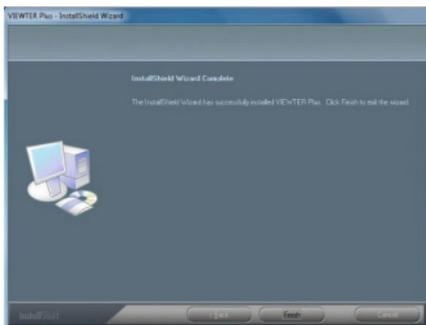
The screen where you can change the installation folder is shown. Click "Next".



Click "Install" to start the installation.



Click "Finish" to end the installation.



6.2 Transmitting / Deleting the recorded data

You can use ViewTer Plus to edit recorded data that has been transmitted to the computer. To do this, move the data to the desired folder.

Recording with ViewTer



Connect the enclosed mini-USB cable to your computer.



When the ViewTer is connected to the computer, "Card Reader Mode" is displayed on the screen. The unit is displayed as a "Removable Disk" on the computer.



Click on the following icons one by one to open the folder with the saved data. The recorded data are saved in the folder "100DSCIM".



The icon of "Removable Disk" may look different depending on the type of computer. If you are using your own SD card and the folder name has been changed, the folder name may have a different name.

Now open the image folder in ViewTer Plus. Follow the steps below:



Or:

8/7/Vista C: Users > (User name) > Documents

XP C: Documents and Settings > (User name) > My Documents

Move the recorded data from "100DSCIM" to the images folder.



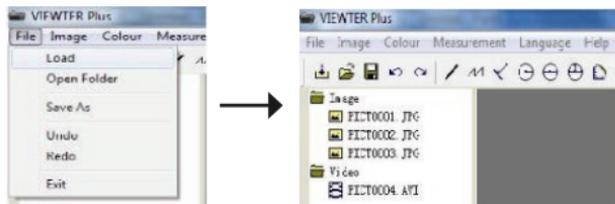
6.3 Using ViewTer Plus

Now you can use the software. Open "ViewTer Plus".



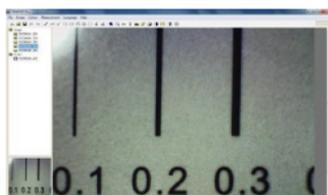
File summary

Click on "Open" in the "File" tab of the menu bar. The files are now displayed on the left side of the window.



File

The saved data is shown after you have opened the folder with a double click. If you want to enlarge or reduce them, use "Zoom In" or "Zoom Out" in the "Image" tab in the menu bar.

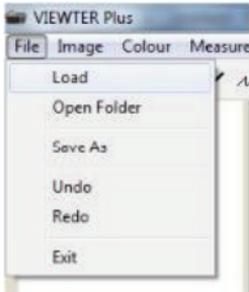


A control bar is showed for the video mode.



Editing

ViewTer Plus allows you to edit the currently displayed image. You can save the edited data by clicking on "Save as" in the "File" tab.



Menu bar, tab "Image"

Under the "Image" tab, you can edit the currently selected image.



Flip the current image horizontally

Flip the current image vertically

Rotate the image 90° clockwise

Rotate the image 90° counterclockwise

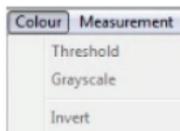
Intensifies the sharpness

Reduce the sharpness

Activate the image embossing

Menu bar, tab "Colour"

Under the tab "Colour" the colour of an image can be changed.



Change the colour of the image to monochrome

Activate the grayscale

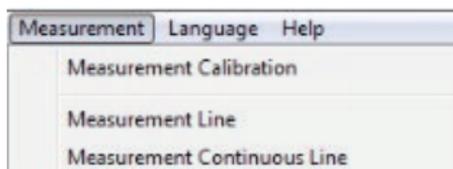
Invert the colours of the image

Measuring functions

You can use ViewTer Plus to insert measurements into the taken images. Each measurement function can be found in the "Measurement" tab in the menu bar.

Measurement	Language	Help
Measurement: Calibration		Standard dimensions are set
Measurement: Line		Measures the distance between two points
Measurement: Continuous Line		Measures the length of a continuous line
Measurement: Dot-Line		Measures the length of a dotted line
Measurement: Radius Circle		Measures the length of a radius
Measurement: Diameter Circle		Measures the length of a diameter
Measurement: Three-Point Circle		Measures a circle through three points
Measurement: Arc		Measures the size of an arc
Measurement: Polygon		Measures the size of a triangle
Measurement: Three points Angle		Measures an angle with 3 points
Measurement: Four Points Angle		Measures an angle with 4 points
Setting		Change the font of the text etc.
Clear Calibration data		Deleting the calibration data

Using the measurement functions (e.g. length of a line).
Select "Measurement Line" in the "Measurement" tab.



Next, click on two points that you want to measure. As an example, click on the lower part and the upper part of the "L" to measure the height.



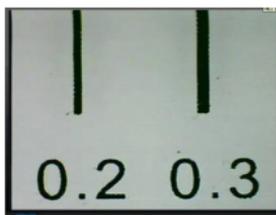
Some measurements require three clicks.

Click anywhere in the image and the measurement data become visible.

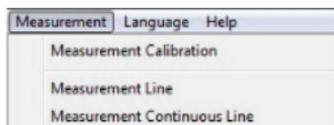


Calibration function

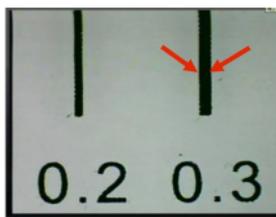
Use "Calibration" to calculate more precise data. To do this, take a still image of the measuring scale included in the delivery.



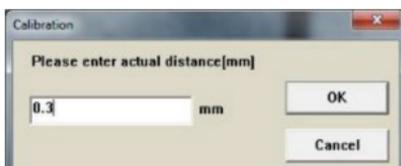
Select "Measurement Calibration" in the "Measurement" tab.



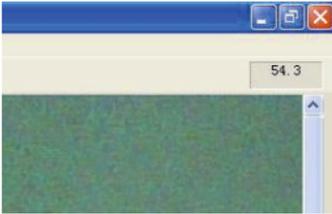
Please click on two lines of the scale where the size is known.



Enter the correct size in the new window and click "OK".

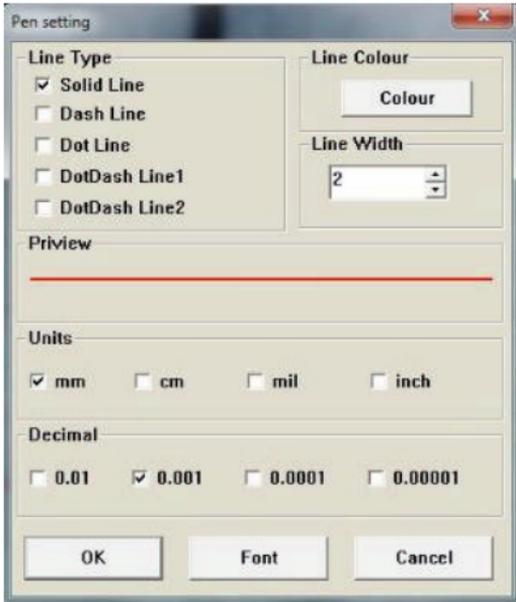


The values are displayed on the left side of "Magnification". From now on, measurements will be made based on these values.



Line settings

Select "Settings" in the "Measurement" tab to open the window shown below. In this window you can set the font, font colour and the line colour.



7. Advices and FAQ

Reference:

- Pictures and screenshots in this manual

The images and screenshots in this manual were taken in the process of developing the product.

- Trademark

The product name in this manual is a registered trademark.

Troubleshooting:

- I cannot turn the ViewTer on or off

Look on page 7 (charging) and follow the steps. Also check if the charging light is on. Please turn the LED controller and check if the LED light is on. Also press the menu button and check if the menu screen will be displayed. If the screen freezes during the starting process, please press the release button and the "-" button at the same time to reset the ViewTer.

- No graphic. The focus could not be adjusted.

Turn the controller and test if the displayed image changes. The focus of the ViewTer is a monofocal point. Please refer to the image on page 8 to change the distance between the ViewTer and the object.

- SD card is not read/data cannot be saved.

Is the SD card inserted correctly? Please check if the SD card has been inserted correctly and if the adapter for micro SD cards is working properly. Format the SD card with your computer or any other device except the ViewTer before inserting the card into the unit.

8. Specifications

Image sensor	1/3 Inch 5 Million Pixel CMOS Sensor
Focus distance	0~60 mm (with lens covers)
Magnification	x10~200
Digital zoom	Maximum x4
Still image format	JPEG
Still image resolution	2560x1920/2048x1536/1600x1200/1280x960/ 640x480
Video format	AVI
Video resolution	640x480/320x240
Light source	ViewTer500UV: White LEDx4 / UV LEDx4 ViewTer500IR: White LEDx4 / UV LEDx4
LED	ViewTer500UV: wavelength 395 nm; frequency 0.59, 10-14 Hz ViewTer500IR: wavelength 850 nm; frequency 3.53, 10-14 Hz
ISO sensitivity	100/200/400
Monitor	3.5" LCD monitor, resolution 320x240 px
Saving the data	SD/SDHC Card, maximum 32 GB
Battery	Battery rechargeable (1800 mAh internal LI-ON battery)
Charging time	Around 5 hours
Duration of use	Maximum 4 hours
Possible charging cycles	Around 500
PC Connection	USB1.1/2.0
Operating temperature	-10° - 40° C
Air humidity	less than 85%
Weight	About 170 g (without SD card)
Dimensions	About 117mm x 75 mm x 67 mm

9. Safety advices

Please read the following instructions carefully before use to avoid danger.



Warning
Disregarding the following instructions can lead to serious injuries!

-  DO NOT store or use the product in direct sunlight or under high temperatures. Doing so would cause the battery to expand or explode.
-  DO NOT look directly into the LED light source.
-  DO NOT use the product with wet hands or in humid conditions. This could result in an electric shock.
-  DO NOT disassemble or modify the product. This could result in electric shock or fire hazard.
-  DO NOT use organic solvent, alcohol or thinner for cleaning.
-  DO NOT use additional units as a power supply. There is a risk of fire or electric shock.
-  DO NOT insert fingers into the lens part. Do not point a light source directly into the lens. This could damage the lens.

Rechargeable batteries are installed. Please note this for proper disposal.

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