

# Vividia® Ablescope® Digital Articulating Inspection Camera Borescopes

## User Manual

### Models:

- VA-400 USB Digital Rigid Articulating Borescope
- VA-800 USB Digital Flexible Articulating Borescope
- VA-920 USB Digital Semi-Rigid Short Articulating Borescope
- VA-980 USB Digital Semi-Rigid Long Articulating Borescope
- VA-9150 USB Digital Semi-Rigid Super Long Articulating Borescope
- UV-400 USB Digital Rigid UV/White Articulating Borescope
- VA-680 USB 2MP HD Semi-Rigid Articulating Borescope

### Optional Accessories:

- VA-B2 Vividia® Wi-Fi Box for iPhone iPad and Android
- VA-T7 Vividia® Android Tablet
- VA-T8 Vividia® Windows Rugged Tablet
- VA-C1 Vividia® Rubber Sleeve Changing Tube Tool
- VA-R5 Vividia® Protective Rubber Sleeve 5pcs



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## Message from Vividia Technologies and Ablescope:

Dear Customer, thank you for your business. You can find product details, software, APPs, user's guides, how-to videos and more related information on our website, [www.vividia-tech.com](http://www.vividia-tech.com), and our YouTube channel. Please read this user guide carefully before you use Vividia Ablescope Inspection Camera Borescopes Videoscopes Endoscopes. We highly recommend you watch our short how-to videos on **YouTube** before you use these carefully crafted borescopes. You can call us to get technical support. We also offer custom design and manufacturing for borescopes. Please contact us if you have special needs or unique requirements for inspection cameras.

\*Some details of products may be changed slightly without notice.



## 1. Vividia™ Ablescope® Models: Comparison Table

There are total 6 models for Vividia Ablescope USB digital articulating borescope inspection cameras. We can also make custom borescopes based on our technologies. If you need different length, different focus range or different tube/cable materials.

<b>Models</b>	<b>Cable Cam</b>	<b>Moldable</b>	<b>Tube Length</b>	<b>Resolution (CMOS)</b>	<b>Probe Diameter</b>	<b># of LED lights</b>
<b>VA-400</b>	Rigid Stainless	No	40 cm	640 x 480	8.5 mm	6
<b>VA-800</b>	Flexible	No	80 cm	640 x 480	8.5 mm	6
<b>VA-920</b>	Semi-Rigid	Yes	35 cm	640 x 480	8.5 mm	6
<b>VA-980</b>	Semi-Rigid	Yes	80 cm	640 x 480	8.5 mm	6
<b>VA-9150</b>	Semi-Rigid	Yes	150 cm	640 x 480	8.5 mm	6
<b>UV-400</b>	Rigid	No	40 cm	640 x 480	12 mm	UV/white
<b>VA-680 HD</b>	Semi-Rigid	Yes	80 cm	1920 x 1080	8.5 mm	6

## 2. Optional Accessories:

- a) **Wi-Fi Box (model: VA-B2 AirBox):** With VA-B2 wifi AirBox, one can connect Vividia Ablescope borescopes to iPhones, iPads, Android phones and tablets wirelessly through WiFi connection. The free APP “AirBox” is provided to preview and take pictures and videos. “AirBox” app can be downloaded from app store and play store.
- b) **Android Tablet (Model: VA-T7):** Vividia VA-T7 Android Tablet can connect to Vividia Ablescope borescopes and other USB digital microscopes through OTG cable (included in a package). APPs are available for free download online or Google “Play Store”.
- c) **Windows Tablet (Model: VA-T8):** Vividia VA-T8 Windows Tablet is a Windows 10 tablet. It can be connected to Vividia borescopes or microscopes through OTG cable. Vividia VA-T8 tablet is water-proof, rugged heavy-duty industrial tablet.
- d) **Protective Rubber Sleeve Changing Tool (Model: VA-C1):** This tube tool is very useful if you need to change the worn or dirty protective sleeve for protecting the articulating assembly. Watch our how-to videos on YouTube “Vividia ablescope”.

## 3. Package Contents:

Borescope; OTG cable; Protective rubber sleeve changing tube; 5 pcs silicone rubber sleeves; user manual; Aluminum or hard plastic case or cardboard box.

#### 4. Introduction of Vividia® Ablescope® Digital Articulating Borescopes

**Vividia® Ablescope®** USB Digital Articulating Borescope Inspection Camera Videoscopes are designed for visual inspection jobs where the area to be inspected is inaccessible by other means. The borescope uses a miniature video camera at the end of long tube. The end of the probe camera has bright white LED lights which makes it possible to get a very clear view, take good quality photos or capture videos deep within equipment, engines, cylinders or other dark inside spaces.

There are many applications for Vividia® Ablescope borescope inspection cameras. Here are some of them:

- Aviation airplane engine maintenance/inspection
- Gas cylinder/tank inspection
- Tube and pipe inspection
- Air conditioner and vacuum systems inspection
- Safer and locker inspection
- Instrument, mechanical and equipment repairs
- Automotive, boat, truck, motorcycle engine inspection
- Music instrument inspection and repair, like violin, cello, piano, horn etc.
- Electronics and electric equipment inspection and repairs

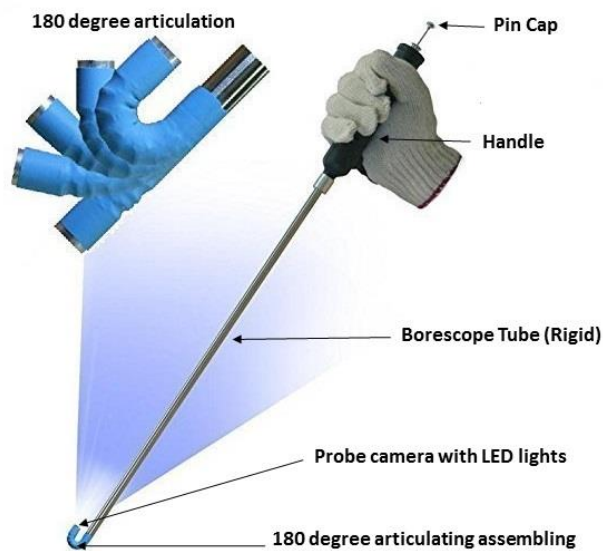
##### 4.1 Specifications\*

- |                                   |  |
|-----------------------------------|--|
| 1. Sensor:                        | high-quality CMOS sensor                     |
| 2. Resolution:                    | 640X480 (1920 x 1080 for <b>VA-680 HD</b> )  |
| 3. Interface:                     | USB2.0.                                      |
| 4. Frame rate:                    | 30 frames/sec (CIF and VGA).                 |
| 5. Focal distance:                | 40mm - 400mm                                 |
| 6. Optical lens view angle:       | 60°  |
| 7. Photo format:                  | JPG  |
| 8. Video format:                  | AVI  |
| 9. High brightness LED:           | 6 pcs, white color (UV-400: white/UV lights) |
| 10. Brightness at 20cm distance:  | ~ 200 lumens, adjustable                     |
| 11. Diameter of insertion:        | 8.5mm max.                                   |
| 12. Length of tube:               | from 350mm to 1500mm depending on models     |
| 13 Articulation bendable angle:   | one way 0° to 180° adjustable                |
| 14. Angle locker:                 | can be locked/unlocked at any angle          |
| 15. Articulation bendable radius: | 30mm   |
| 16. Water Proof:                  | IP65   |

- 16. Working temperature: 0° to 60°
- 17. Storage temperature: 0° to 60°
- 18. Works with systems: Windows XP, 7, 8, 10 and MAC, plug & play, Android; (iOS like iPad/iPhone with VA-B2 WiFi Box)
- 19. Connecting to Android: Yes, through OTG cable or VA-B2 WiFi Airbox
- 20. Connecting to iPad/iPhone: Yes, through WiFi Airbox

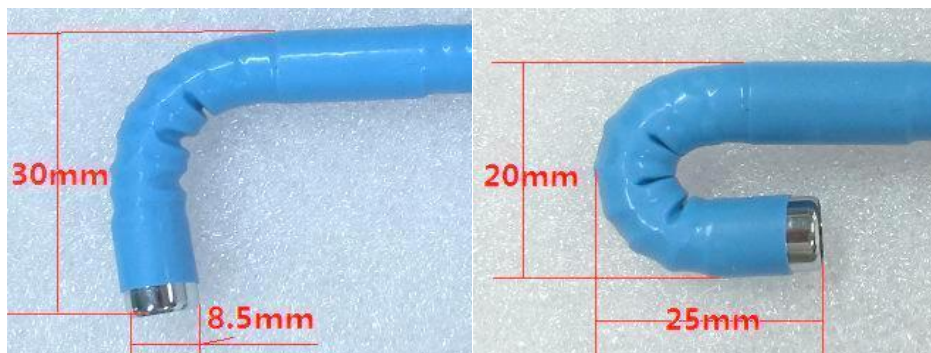
#### 4.2 Structure of Vividia Ablescope Articulating Borescopes

The structure is illustrated with Model VA-400 Rigid. The other models have the similar structure, the differences are the cables (flexible or semi-rigid) and their length.



#### 4.3 Features of Vividia Ablescope Digital Articulating Borescopes

1. Articulation bendable angle: 0° to 180° adjustable continuously
2. Very easy operation by one hand hold and just pushing down the release button by bending the thumb to adjust the articulation angle
3. The articulation angle can be locked/unlocked at any degree by open/close the locker



4. Very small bending radius



5. High brightness LED illumination
6. Long depth of field from 40mm to 4000mm
7. Work with: Windows XP, 7, 8, 10 and MAC, plug & play
8. Connect to Android devices through OTG cable
9. With Wi-Fi box (model: VA-B2), one can connect the borescopes to iPhone, iPad, Android devices.

#### 4.4 Bendable Articulation Operations

Watch our how-to videos on YouTube by searching "Vividia Ablescope"

1. How to bend the articulation see right photo: The release button and the locker are worked together. Just push down the release button by the thumb to bend the articulation to a proper angle from 0° to the 180° back and forth.
2. How to lock the articulation angle, (**Note:** we have improved borescope design and removed locking functions to avoid unnecessary damages).
3. Portrait of the image: The direction of the USB cable indicates the portrait position of the image
4. At the end of the borescope there are 6 high light white LED around the lens to provide illumination. To adjust the light user can turn the wheel on the dimmer on USB cable. The LED lights will be hot after a while. Please do not touch the camera end by fingers.






#### 4.5 Take pictures, videos and control the LED lights brightness






After connecting a Vividia Ablescope Borescope to a PC or suitable Android or Windows tablet, you can pre-view videos and do inspection. The brightness of 6 LED lights is controlled by turning the LED wheel dimmer on the control unit installed on USB cable. One can take pictures either by using software/APP or by pressing the snap button on the control unit. One needs to use software or APP to record videos.



#### 4.6 Replacing worn protective rubber sleeve with the tube changing tool

The worn or dirty protective rubber sleeve for the articulating assembling could be replaced easily with the metal tube changing tool. You can watch our video on YouTube by search "Vividia Ablescope Sleeve" . Here is how-to step-by-step:

STEPS	PHOTOS	DESCRIPTION
1		Remove the worn or dirty protective rubber sleeve from borescope
2		Take out one new rubber sleeve and get the changing tool ready
3		Insert a new rubber sleeve onto the small end of the tube changing tool

4		Roll up the rubber sleeve on the tube
5		Roll the rubber sleeve to the larger end of the tool
6		Place the larger end of the tube onto the end of Vividia Ablescope camera probe
7		Roll the rubber sleeve to the upside of the articulating assembly and take away the changing tool
8		Roll the rubber sleeve over the articulation assembly and pass to the other side of the articulating assembly

#### 4.7 Software download, Installation, and Use

Vividia™ Ablescope® USB Articulating Borescopes can be used on Windows, Mac, Linux computers, also can be used on Android devices through OTG connection.

##### 4.7.1 For Windows (XP/Vista/7/8/10) Users:

Visit our web pages, [www.vividia-tech.com](http://www.vividia-tech.com); and/or [www.oasisscientific.com](http://www.oasisscientific.com) to download the software and menu: Many other USB camera software can be used.

App software for PC: **Vividia Ablescope** (with measurement), **Digital viewer**

Menu: Quick use guide of ehe1.exe or oasis.exe

Menu: User Guide Vividia™ Ablescope® Articulating Borescope



Note: Vividia Ablescope Borescopes are UVC cameras and can be used by many other software of UVC digital cameras

#### 4.7.2 For Mac Users:

You can use **Photo Booth** or other Mac USB webcam software, such as “**digital viewer**” for Mac, “**miXscope**” (free to try). Find more information from our website [www.vividia-tech.com](http://www.vividia-tech.com) and [www.oasisscientific.com](http://www.oasisscientific.com) to download related software.



#### 4.7.3 APPs for Android devices connected with OTG cable:

Download and install **OTG View**, **CameraFi**, or **UsbWebCamera**, or **MScopes for USB Camera / Webcam** from Google Play Store or [www.pureapk.com](http://www.pureapk.com).

Note: Some new models of Android phones need **MScopes app**.

Menu: Connecting to Android Devices through OTG Cable



#### 4.7.4 For iPad, iPhone and Android phones and tablets users through WiFi AirBox (Sold separately, B2 AirBox WiFi Converter)

Download and install “**AirBox -Vividia Ablescope**” from Apple’s APP Store. For Android devices, download the same APP from Google Play Store or our website [www.vividia-tech.com](http://www.vividia-tech.com) and [www.oasisscientific.com](http://www.oasisscientific.com).

#### Quick Guide of software ehe1.exe and oasis.exe:

##### For Windows users:

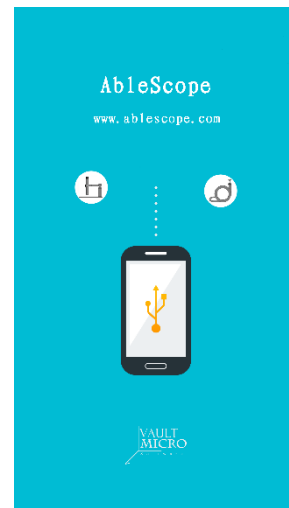
- 1, Plug in the borescope into the USB port
- 2, Download the software ehe1.exe from our web page: [www.vividia-tech.com](http://www.vividia-tech.com) or [www.oasisscientific.com](http://www.oasisscientific.com).
- 3, Double click on the icon of ehe1.exe to open the image windows  
If the image came from your built-in camera, please click on the devices in the navigation bar and then click on the USB camera to change image to the borescope
- 4, Quick use of the function keys:

KEY	FUNCTION
SPACE BAR	IMAGE FREEZE
RETURN	SNAP
↑ & ↓	ZOOM IN / OUT
F5	DELAY 10 SECONDS SNAP

##### For Mac users:

Users may use the **Photo Booth** to observe the image.

If the image came from your built-in camera, please click on the cameras in the navigation bar and then click on the USB camera to change image to the borescope. One can also download "Digital Viewer" from our websites.



### Connect Android devices through OTG cable:

Please visit our website: [www.vividia-tech.com](http://www.vividia-tech.com) and [www.oasissscientific.com](http://www.oasissscientific.com).

To download below APP and user guide:

- 1, App: OTG View, ablescope.apk; Camerafi, MScopes
- 2, Menu: Menu: Connecting to Android



Using an OTG cable provided to connect on Android devices and follow the instruction from the screen. **Note:** Not all Android devices can work with our products. And we can't guarantee the performance too. AbleScope.apk is mainly developed for the Android devices that carrying Qualcomm chips as the CPU in the smart phones and tablets.

### Connect iPad iPhone through WiFi AirBox:

**Vividia Ablescope VA-B2 AirBox WiFi Converter** for iPads and iPhones is designed for customers who want to use our Vividia™ Ablescope® articulating borescopes (Models: VA-400, UV-400, VA-800, VA-920, VA-980 and VA-9150) and microscopes (Model: V1-PS, V2, and V2-S) with their iPhone and or iPad. It works with UVC (USB Video Camera) that has MJPEG format output. **VA-B2 AirBox** convert the USB camera signals into a WiFi hot point, and iPad, iPhone or Android devices with WiFi functions can connect to and one can use our free APPs (AirBox -Vividia Ablescope) to see preview live images, take pictures and record videos.



The Apps for **Vividia™ VA-B2 WiFi AirBox**: First download our APP and install on your devices:

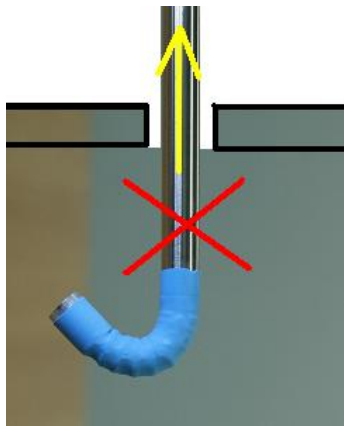
Devices	App Name	Download Address
Android	<a href="#">AirBox.apk</a>	Google Play Store
iPhone, iPad	<a href="#">AirBox - Vividia AbleScope</a>	Apple App Store

Menu: User Guide for Vivida Ablescope VA-B2 WiFi Airbox

#### 4.8 Very Important Notice

Warning: Please do not bend the camera tip by force.

When a user finishes inspection and take the bended borescope out from a small opening, user needs to make sure the articulation part is at the straight position. DO NOT take the scope out by force and it would damage the articulation assembly. Product quality warranty will not cover the damages caused by misuse, abuse and impropriate use. You can watch the application video on YouTube, search "Vividia Ablescope" .



#### 4.9 General Notes & Safety Precaution

1. The borescope should be used under 60°C (140°F). High temperature can

- increase video noise, even damage the camera sensors and electronics.
2. Do not immerse the cable camera in oils, water, gasoline or other fluids.
  3. Pull out the borescope slowly and carefully, remember to unlock the cable camera first. Brunt force can break the bending camera.
  4. Clean the lens with clean soft fabric and/or Q-tips with alcohol. Dirty lens glass can greatly affect image quality.
  5. Caution: Never use force to bend the articulating camera. Unlock the articulating camera by pressing the locking wheel and turn clockwise.
  6. Use high quality OTG cable and USB extension cable when needed. And make sure the connection is tight and secure. This will affect the image quality.
  7. A phone/tablet case could affect OTG cable connection in some cases. Please remove the case if needed.
  8. Do not disassemble the borescope, especially the camera, articulation assembly and handle.
  9. Avoid moisty environment, temperature shock and extreme temperatures. Dry surroundings help the life of the products.
  10. Avoid dropping, violent vibrations, strong collision or distortion.
  11. Keep the device away from chemicals, explosive substances, and fire hazards.

## 5. Troubleshooting & FAQ

### **Question 1: "The borescope is stuck; I cannot bend the camera. What should I do?"**

Answer: Please do not use force to bend or articulate the camera. You simply need to unlocking the camera probe by pressing down the locking wheel under the shutter release cable pin can. Watch our YouTube videos on this by search "Vividia Ablescope" on YouTube website.

### **Question 2: "What software should I use with Windows system (Windows 7/8/10 etc.)?"**

Answer: For Windows system, we have free software "ehe1.exe" or "oasis.exe" . You can download the software from our website, [www.vividia-tech.com](http://www.vividia-tech.com). You can also use other free USB webcam software, like "Digital Viewer" , "Smart Camera" etc. You can find more information from [www.oasisscientific.com/downloads](http://www.oasisscientific.com/downloads).

### **Question 3: "Can I use Vividia Ablescope borescopes in water, oil or gasoline?"**

Answer: No. The Vividia Ablescope borescopes are not designed to be immersed in water, oil, gasoline or other liquids or mixtures of fluids. The camera could be damaged.

### **Question 4: "Can I use Vividia Ablescope Borescopes for high temperature applications?"**

Answer: The working temperature of Vividia Ablescope borescopes is from 0°C to 60°C. Please do not use the borescope to hot engines or other high temperature environments. The high temperature can increase video noise, and damage the camera sensor and electronics.

**Question 5: “Is my Android phone or tablet compatible with Vividia Ablescope borescopes through OTG cable connection?”**

Answer: Not all Android phones and tablets can be used with Vividia Ablescope borescopes with OTG cable connection. You can find a list of compatible and non-compatible devices on our website [www.vividia-tech.com](http://www.vividia-tech.com). (We cannot guarantee the Android devices will work with our borescopes since they are many models, and each model can have internal changes very quickly by manufacturers. We found that many cheap small tablets do not work with USB borescopes due to lacking of OTG video function). We can guarantee that the Phone and Tablets (**Model VA-T6** and **VA-T8**) we supply will work with Vividia Ablescope borescopes. With WiFi box (Model: **VA-B2**), you can connect Vividia Ablescope borescopes to more smart phones and tablets, including both Android and iOS (iPhones, iPads) systems.

**Question 6: “Can I use Vividia Ablescope borescopes with my iPhone and iPad?”**

Answer: No and yes. One cannot directly connect Vividia Ablescope Inspection Cameras to an iPhone or iPad through a cable. But with our WiFi box (Model: **VA-B2 AirBox**), you can link Vividia Ablescope borescopes to iOS devices, like iPhones and iPad. You need to download free APP “AirBox” from Apple’ s app store. Visit our website [www.vividia-tech](http://www.vividia-tech) to find out details. One potential issue with WiFi connection is that the video data transfer rate is limited depending on the wireless environments, which may cause slow video refresh rate.

**Question 7: “Can I zoom in on my subject?”**

Answer: Depending on the software or APPs you use, you can digitally zoom in. There is no optical zoom for Vividia Ablescope borescopes. Usually when you move borescope close to an abject, you will see larger and clearer image in certain focus range.

**Question 8: “How do I clean my scope?”**

Answer: Use clean and soft fabric with alcohol or lens cleaning fluid. The protective rubber sleeve can be changed if it is dirty or broken.

**Question 9: “Does this work on Amazon Kindle Fire or other types of non-Android tablets?”**

Answer: Vividia Ablescope borescopes do not work on Amazon Kindle Fire. Borescopes work on Windows tablets. Please visit our website, [www.vividia-tech.com](http://www.vividia-tech.com), for more information.

## **6. Warranty**

There is limited product quality warranty of one year since the purchase date from the manufacturer. Product accessories and spare parts are not in warranty.

## **7. About Vividia Tech and Ablescope**

Vividia Technologies and Ablescope are dedicated to developing and marketing innovative, affordable products to meet the needs of our customers.

### **Vividia Technologies**

info@vividia-tech.com

[www.vividia-tech.com](http://www.vividia-tech.com)

Greenville, SC

USA

## **8. Distributor Information:**

Distributor Name:

Distributor Contact information:

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