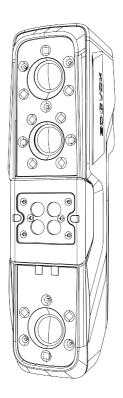
JDCVOK

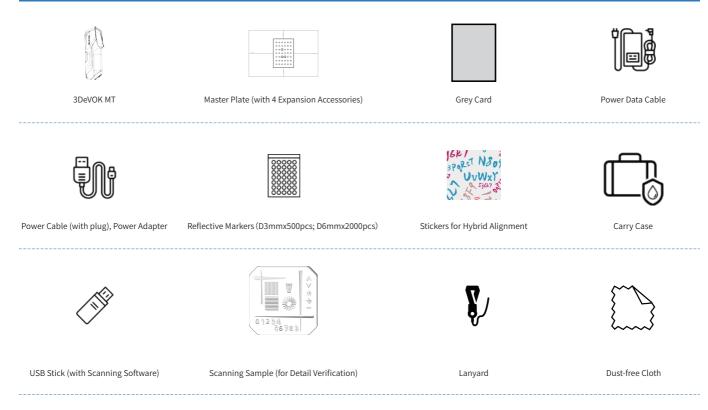
3DeVOK MT

Handheld Color 3D Scanner



Quick Guide V1.0

1. Product List



2. Technical Parameter

Light Sources	34 Blue Laser Lines	22 Infrared Laser Lines (invisible)	Infrared Vcsel Structured Light (invisible)				
Class of Lasers	Class II (Eye-safe)	Class I (Eye-safe)					
Scan Mode	Crossed Blue Lasers (Supports markerless scanning)	Crossed Infrared Lasers (Supports markerless and invisilbe-light scanning)	Infrared Linear-array Structured Light (Speckle) (Supports markless, invisible-light, fine scanning, and rapid scanning at ultra-long- distance range and ultra-large FOV)				
Basic Accuracy*	Up to 0.04 mm (Marker Alignment)						
Volumetric Accuracy*	Up to 0.04 mm + 0.06 mm/m (Marker Alignment)						
Point Distance	0.05 - 5 mm (0.1-5 mm recommended)	0.1 - 5 mm	Speckle Scan: 0.2-5 mm, Fine Scan: 0.1-5 mm				
Alignment Mode	Hybrid Alignment (Marker&Texture&Feature), Marker Alignment, Texture Feature Alignment and Geometric Feature Alignment						
Ability to Capture Texture	Yes						
Scanning Distance	150 - 1000 mm	150 - 1500 mm					
Field of View	140 mm $ imes$ 140 mm - 490 mm $ imes$ 490 mm	$50~\text{mm} \times 75~\text{mm}$ - 1100mm \times 1000mm					
Scanning Frame	Up to 70 FPS (Marker Alignment) Up to 30 FPS (Hybrid Alignment)	Up to 30 FPS					
Output Formats	*.obj, *.stl, *ply, *.asc, *.mk2, *.txt, *.epj, *.apj, *.spj, *.map, *sk						

The Ability for 3D Printing	Supports .stl, .obj and other formats
Working Temperature Range	0 - 40°C
Working Humidity Range	10% - 90% RH (Non-condensing)
Interface	USB 3.0
Scanner Dimensions & Weight	Dimensions: 215 mm \times 73 mm \times 53 mm; Weight: 620 g
Power Source	DC:12 V, 5.0 A

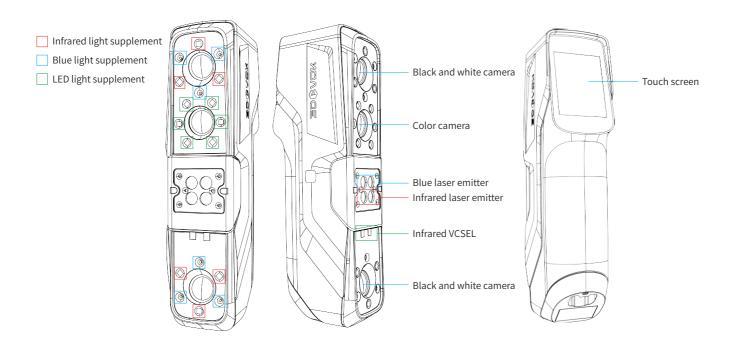
*: Laboratory theoretical accuracy test results are subject to uncertainty errors. The actual value may be affected by external factors (e.g., temperature, humidity, the scanned object, scanning techniques, etc.).

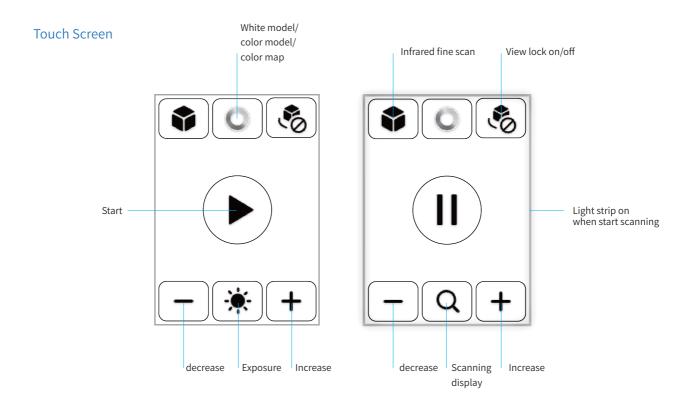
3. Recommended Configuration of PC



OS: Win10/Win11, 64-bit; CPU: i7-13650HX and above; RAM: 32GB and above Graphic Card: NVIDIA discrete graphics card, NVIDIA RTX3060 and above Graphics Memory: 6GB and above

4. Device Introduction



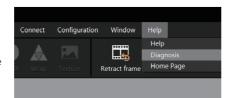


5. Software Installation and Activation

1.Insert the USB drive provided in the case to PC, find the 3DeVOK Studio Installer and install. Future updates to the installation can be obtained from the official website: www.3devok.com.

2.Import the activation file before first scan, and make sure the PC is properly connected to the internet during activation. Click Help - Diagnosis, and click in the License session. Wait for the activation update.

Note: The initial activation time will be related to the warranty period. For details, please refer to the device purchase contract.

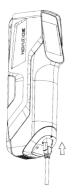




3.After the authorization update, the device is in normal operation.

6. Device Connection

1. Connect one end of the USB cable to USB 3.0 port (the blue port) of PC (if it is a desktop, it should be plugged into the USB 3.0 port at the back of the chassis), then connect the other end to the bottom of the device (in the direction of the arrow), and tighten the screw.

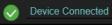


2. Connect the power cable and the power adapter to the power source, and connect the round plug at the end of the power adapter to the round connector of the USB cable (as shown in the figure below).

3. The connection of device, data cable, power adapter, power cable, and PC is shown at the diagram below.



4. After connection, open the 3DeVOK Studio software. When successfully connected to PC.



appear at the bottom left of the screen, the device is

7. First Scan

1. Open the 3DeVOK Studio software, and it will first prompt for the import of a new configuration file. Click the "Yes" button, the software will automatically import the configuration file and restart for the update. After the restart, the new configuration file will be applied to the device. Note: If the connection fails, please try unplugging and re-plugging the device, or use a different USB 3.0 port.



2. After the update, the device is successfully connected, and the software interface is displayed as shown in the figure below. The scanning mode can be selected at the left sidebar (left white box), with the scanning process (upper white box) displayed at the top (Calibration-Scan-Finish-Wrap-Texture). On the right is the distance indicator bar (right white box), where the green dot represents the scanning distance. During scanning, ensure that the green dot stays in the optimal position on the distance bar.



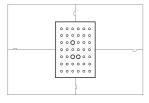
Note: The actual user interface may differ slightly from what is shown in this guide. Please refer to the version of the software in the USB stick.

Device Calibration

1. Take out the Expansion accessories from the case, assemble it, and place it around the master plate, as shown in the figure below.

2. Clicl	Calibration	for device calibration,
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and follow the steps (shown in the figure below).



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Laser Plane Calibration

After standard calibration, if there is deficiency of laser lines or excessive noise data during scanning, the laser plane calibration of the device needs to be performed. The steps are as follows: 1. Prepare four sheets of A4-size white paper, place them in 2×2 pattern, and lay them flat side by side on the table as the laser plane. 2. Click the "Laser Plane Calibration" button on the left, and follow the on-screen instructions to finish the laser plane calibration.



White Balance Calibration

When higher color accuracy is required for the texture, white balance calibration can be performed. The steps are as follows:

1. Take out the gray card from the case and place it face up on a light-colored background surface.

2. Click the "Calibrate White Balance" button on the left, and follow the on-screen instructions to complete the calibration.

Note: When is it necessary to calibrate the white balance?

1. When the scanning environment changes between two scans (e.g., the first scan was outdoors, and the second scan is indoors).

2. When color distortion is observed during scanning or the scanned colors differ significantly from the real object.

3. When the surrounding ambient light is complex (e.g., there is red light, green light, etc.).



Scan

1. Select the scanning mode, then click



to start, or click the \triangleright button on the center of the screen to begin scanning. Keep the device at the optimal

scanning distance and scan the object at different angles until the object's color map turns green.

Mode Guide:

Structured light Scan: Suitable for human body scanning, as well as fast scanning of medium-to-large objects.

Laser Scan:

Hybrid alignment: Suitable for objects with continuous and non-repetitive geometric or texture features, such as sculptures and artistic ornaments with complex surfaces

Marker: Suitable for industrial parts and industrial design products (regular shapes, large curves), especially for black or reflective objects





to process and generate the optimized point cloud data.

3. After removing the excess 3D point cloud data, click to process mesh data. After meshing, click





to export the model in formats such as

STL or OBJ. If the data is in color, export it in OBJ format (including MTL and PNG files).

For more tutorials on 3DeVOK products and software updates, please visit the official website: https://www.3devok.com/



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