

RealScan-FC

All-in-one. Palmprint Live Scanner.

User Manual

REV02



Introduction

RealScan-FC is an all-in-one palmprint live scanner for capturing various types of fingerprints and palmprints, including slaps, flats, rolls, palms, and writer's palms. Featuring Xperix's cutting-edge optical & biometric technologies, it is capable of capturing the highest quality images regardless of the physical condition of hands. RealScan-FC supports user-friendly features like voice instruction, foot switches, and a mobile power supply. With the proven reliability of FBI certification, RealScan-FC is a perfect fit for criminal identification.

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Disclaimer

1. Restrictions of Use

This passport reader must be used only for legal and authorized purposes. We are not responsible for any illegal activities or unauthorized usage.

2. Accuracy of information

The content of this manual is accurate as of the date of writing. Although the passport reader is designed to read the provided information as accurately as possible, the accuracy of the information cannot be guaranteed due to data input errors, technical issues, or other external factors. We are not responsible for any damage or loss resulting from these inaccuracies. The information in this manual is subject to change without notice due to product improvements.

3. Technical Support

This product must be installed and maintained according to the technical support provided by the manufacturer. We are not responsible for any damage or loss resulting from unauthorized repairs, modifications, or alterations.

4. Interference and Malfunction

This device may generate, use, and radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. We are not responsible for any interference or malfunction occurring in specific environments.

5. Legal Compliance

This product is designed to comply with various international and domestic regulations. Users are responsible for complying with local laws and regulations, and we are not responsible for any issues arising from non-compliance with legal requirements.

6. Liability

We are not liable for any direct, indirect, incidental, special, or consequential damages arising from the use of this product. This includes, but is not limited to, loss of profits, loss of data, inability to use the product, or other economic losses.

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This manual provides reliable information, but we accept no liability for any loss caused by typographical errors. The information in this manual is subject to change without notice due to product improvements.

Safety Instructions

Please read the following instructions carefully before using this product. This information is crucial to ensure user safety and prevent damage to the user's property.



Failure to follow these instructions may result in serious injury or death.

Installation Instructions

Do not install the product in direct sunlight or in locations with high humidity or dust.

- This can cause fire or electric shock.

Install the product in a dry location.

- Moisture can cause product damage or electric shock.

Do not install the product near heat sources such as electric heaters.

- Overheating can cause fire or electric shock.

Install the product in a location free from electromagnetic interference.

- This can cause product damage or electric shock.

Install and repair the product through a qualified professional.

- Failure to do so may result in fire, electric shock, or injury.
- If the product is damaged due to unauthorized installation or disassembly by the user, repair costs will be charged.

Use only an AC/DC adapter that complies with LPS, or supply power through the USB-C port of a Listed PC or Laptop that complies with LPS.

- Using a non-compliant power source may cause product damage or electric shock.

Operation Instructions

Take care not to spill liquids such as water, beverages, or chemicals into the product.

- This can cause fire, electric shock, or product damage.



CAUTION

Non-compliance may cause minor injury or product damage.

Installation Instructions

Protect the power cord from damage by foot traffic or pinching.

- This can cause product damage or injury.

Keep the product away from strong magnetic objects such as magnets, TVs, monitors (especially CRT monitors), and speakers.

- This can cause product malfunction.

Operation Instructions

Do not drop the product or subject it to impact or collision during use.

- This can cause product malfunction.

Do not press the product's buttons with excessive force or use sharp tools.

- This can cause malfunction.

Safety Instructions for DC Power

Please read the following instructions carefully before using this product. This information is crucial to ensure user safety and prevent damage to the user's property.



WARNING Failure to follow these instructions may result in serious injury or death.

Operation Instructions

Use only the specified DC power adapter provided with the product.

- Use of a non-standard power source may result in product damage, fire, or electric shock.

Do not disassemble or modify the device or power adapter.

- This may cause fire, electric shock, or product malfunction due to damage to internal components.

If liquid enters the device, immediately disconnect the power and stop using it.

- This may cause fire, electric shock, or product damage.

If abnormal conditions occur (e.g., smoke, burning smell, overheating), immediately disconnect the power.

- Continued use may result in fire or electric shock.

Do not connect or disconnect the power cable with wet hands.

- This may cause electric shock.



CAUTION

Non-compliance may cause minor injury or product damage.

Operation Instructions

Ensure the power connector is properly and securely connected.

- Poor contact may result in degraded product performance.

Do not apply excessive force or pressure to the power cable.

- This may cause cable damage and lead to product malfunction or damage.

Do not use the device in high temperature, high humidity, or dusty environments.

- This may cause product damage or performance degradation.

Unstable power supply may cause malfunction.

- This may result in degraded performance or data errors.

Disconnect the power when the device is not used for a long period.

- This may help prevent product deterioration or power-related issues.

Revision History

Version	Change	Date
REV01	Initial creation of the User Guide	2025-10-24
REV02	Additional Safety Instructions for DC Power Specification Text Revision	2025-10-24

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System Requirements

Before installing the SDK, please ensure the following.

- A device with the following specifications:
 - OS: Windows 7/8/10/11 (x64, x86), Linux Ubuntu, Debian, Fedora, OpenSUSE, CentOS 32/64bit, Android 5.0 or higher
- This scanner must be used in an environment that supports USB 2.0 or higher to ensure stable data transmission. If a USB hub is used, it must provide sufficient power. In cases where the power supply is unstable or disconnected, please connect the scanner directly to a USB port on the main PC.

RealScan-FC Unpacking Procedure

Before unboxing the RealScan-FC, please check the list below.

- Remove the contents from the box and separate the components from the packaging material.
- Verify that all parts have been received. If any parts are missing, contact Xperix service.
- Check the product for damage. If the product is damaged, contact Xperix Service.

Heater Usage Notice

To minimize the appearance of halo artifacts caused by a cold sensor surface, it is recommended to turn on the heater at least one hour before use.

Ensure that the heater is supplied with stable power during this period.

Note: Insufficient heating or unstable power may result in visible halo effects in captured fingerprint images.

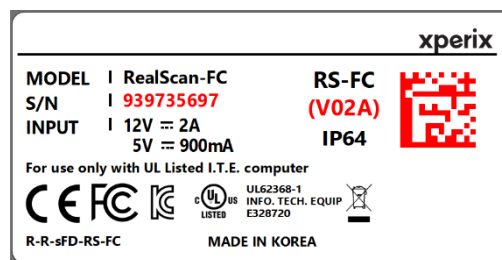
Components

To use the product at its best performance, please use only the USB cable and power adapter provided.

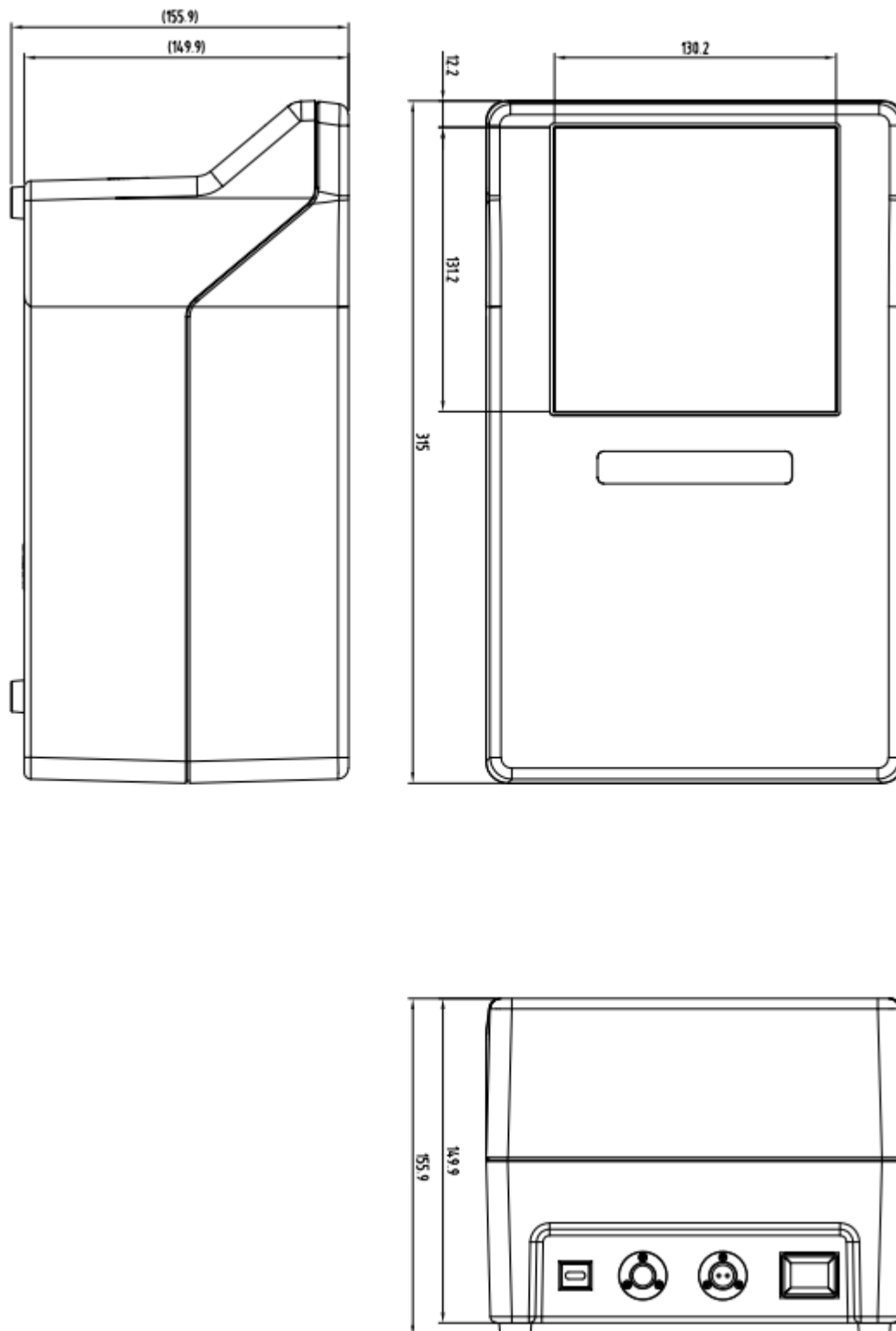
Using any cable or adapter may result in reduced performance or damage to the product. Failure to follow these precautions will void the warranty.

Item	Quantity	Image
RealScan-FC	1EA	
Power Code Cable & Adaptor	1EA	
USB C type Cable	1EA	
WIPER	1EA	

Product Labeling



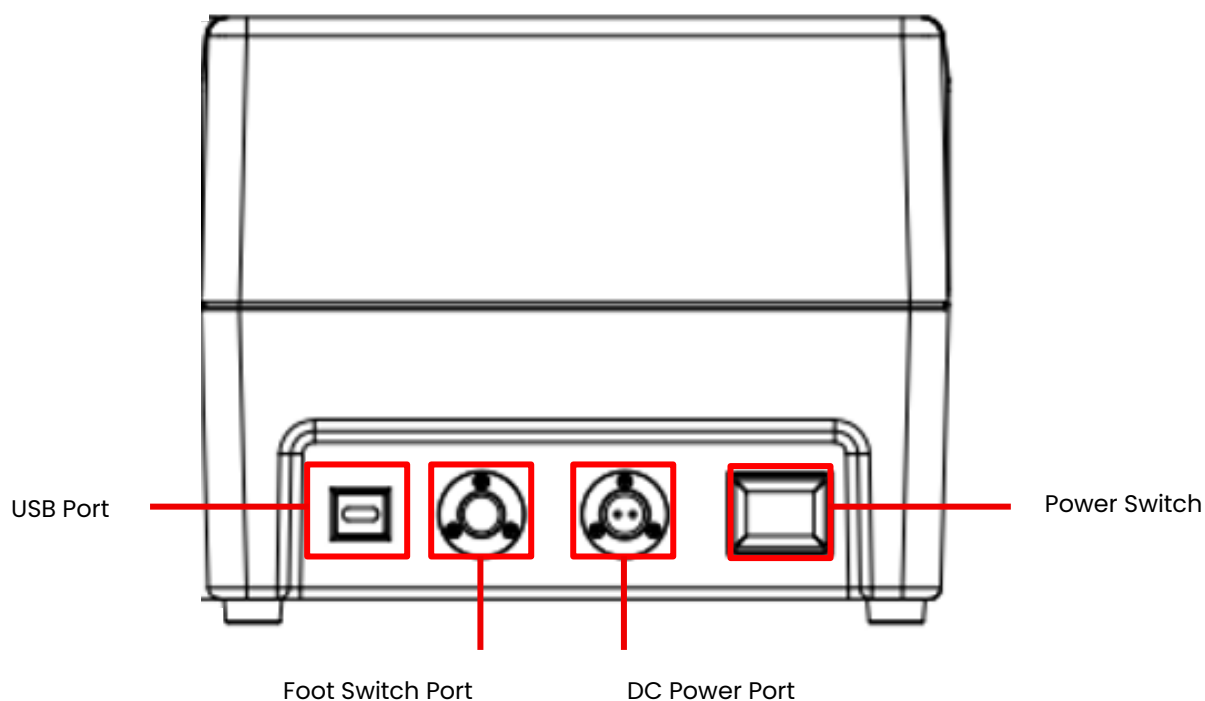
External View (Diagram)



External View



Name	Description
Scan Area	Used for placing fingers to capture fingerprint images.

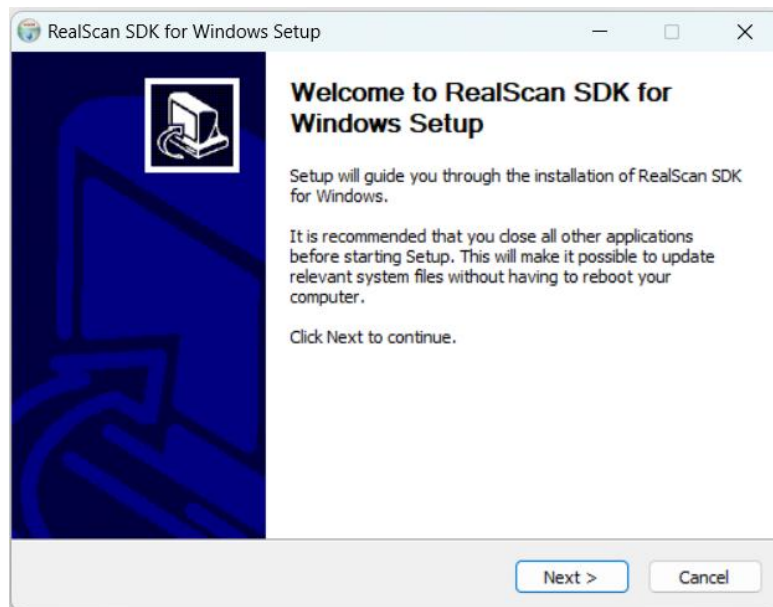


Name	Description
USB Port	Connects to a PC for data communication and device control.
Foot Switch Port	Allows a foot switch to be connected to control scanning operations by foot.
DC Power Port	Connects a power adapter to supply power to the device.
Power Switch	Turns the device power on or off.

SDK Installation Guide

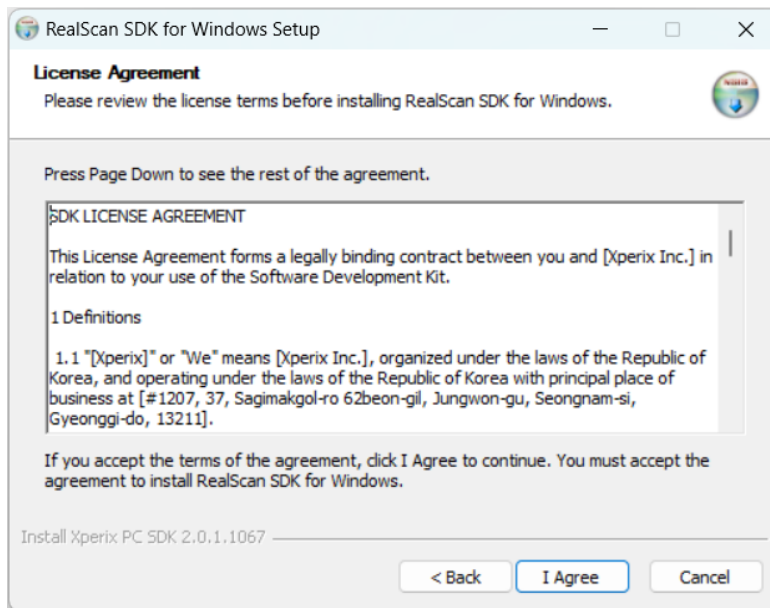
This page provides instructions for installing the SDK. Please follow the guide below to proceed with the installation.

1. Run the file RealScan SDK_for_Windows_Installer_v2.x.x.xxx.exe.
2. SDK Introduction Screen.



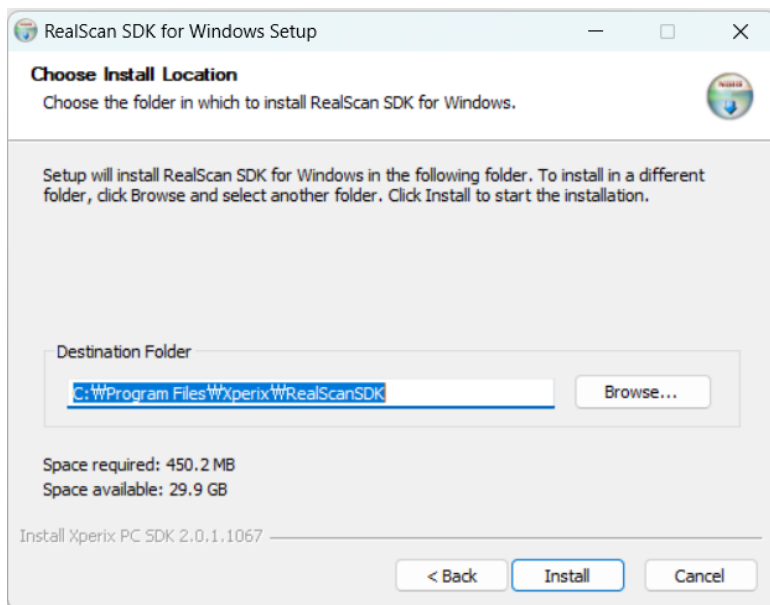
➔ Click the [Next] button.

3. License Agreement



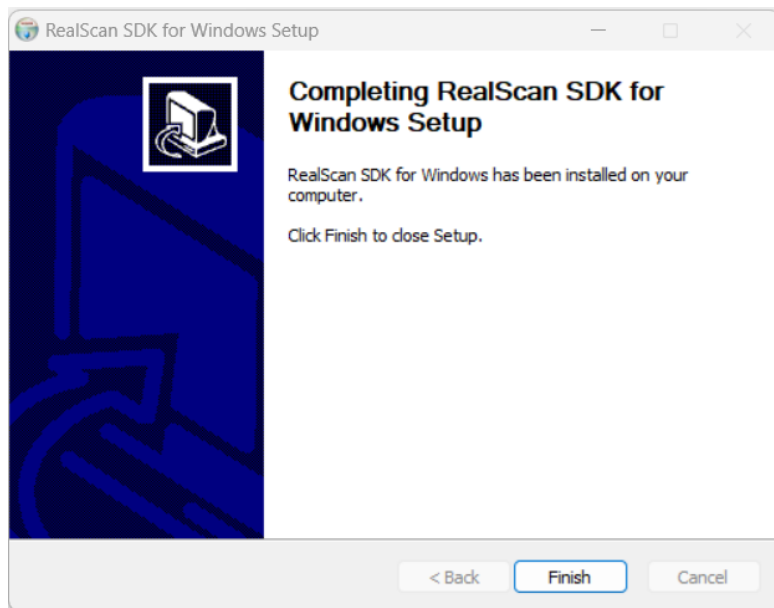
→ Click the [I Agree] button.

4. Choose Installation Location



→ Click the [Install] button.

5. Installation Successful



➔ Click the [Finish] button.

Device Driver Installation Guide

This page provides instructions for installing the device driver. Please follow the guide below to proceed with the installation.

Note:

If the driver is installed while the device is connected to the PC via USB cable, the installation may not complete successfully. Ensure that the USB cable is disconnected from the PC before proceeding with the driver installation.

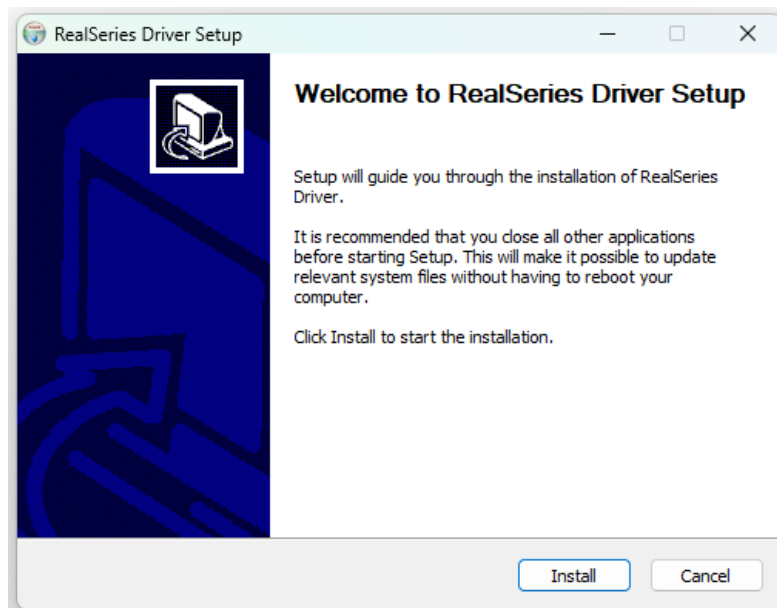
1. Navigate to the Driver folder located at `\Program Files\Xperix\RealScanSDK`.

Name	Date modified	Type	Size
Bin	2024-07-15 오전 10:10	File folder	
Document	2024-07-15 오전 10:10	File folder	
Driver	2024-07-15 오전 10:10	File folder	
Example	2024-07-15 오전 10:10	File folder	
Install	2024-07-15 오전 10:10	File folder	
Uninstall.exe	2024-07-15 오전 10:10	Application	56 KB

2. Run the file `RealSeries_Driver_v3.1.1.1.exe`.

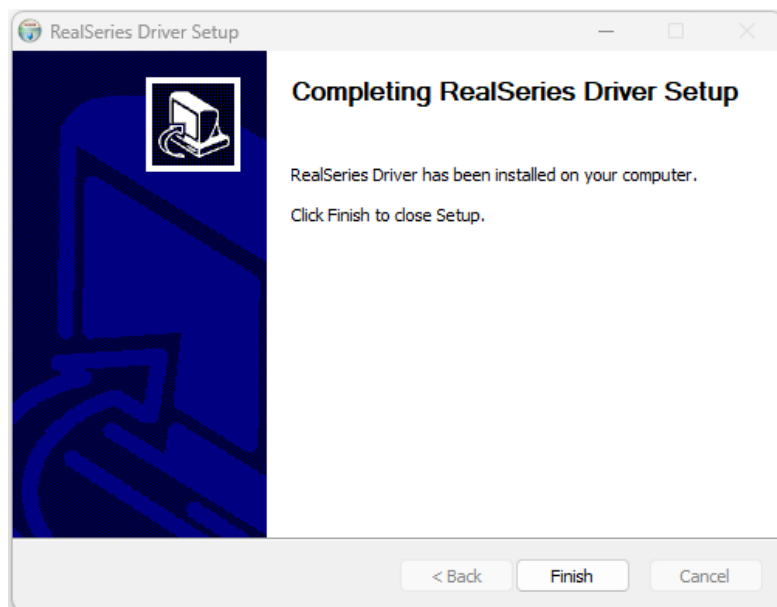
 RealScan_Driver(win7_only_S60).exe
 RealScan_Driver(win10_only_S60).exe
 RealSeries_Driver(win7).exe
 RealSeries_Driver(win10).exe
 RealSeries_Driver(win11).exe
 RealSeries_Driver_v3.1.1.1.exe

3. Driver Introduction Screen



→ Click the [Next] button.

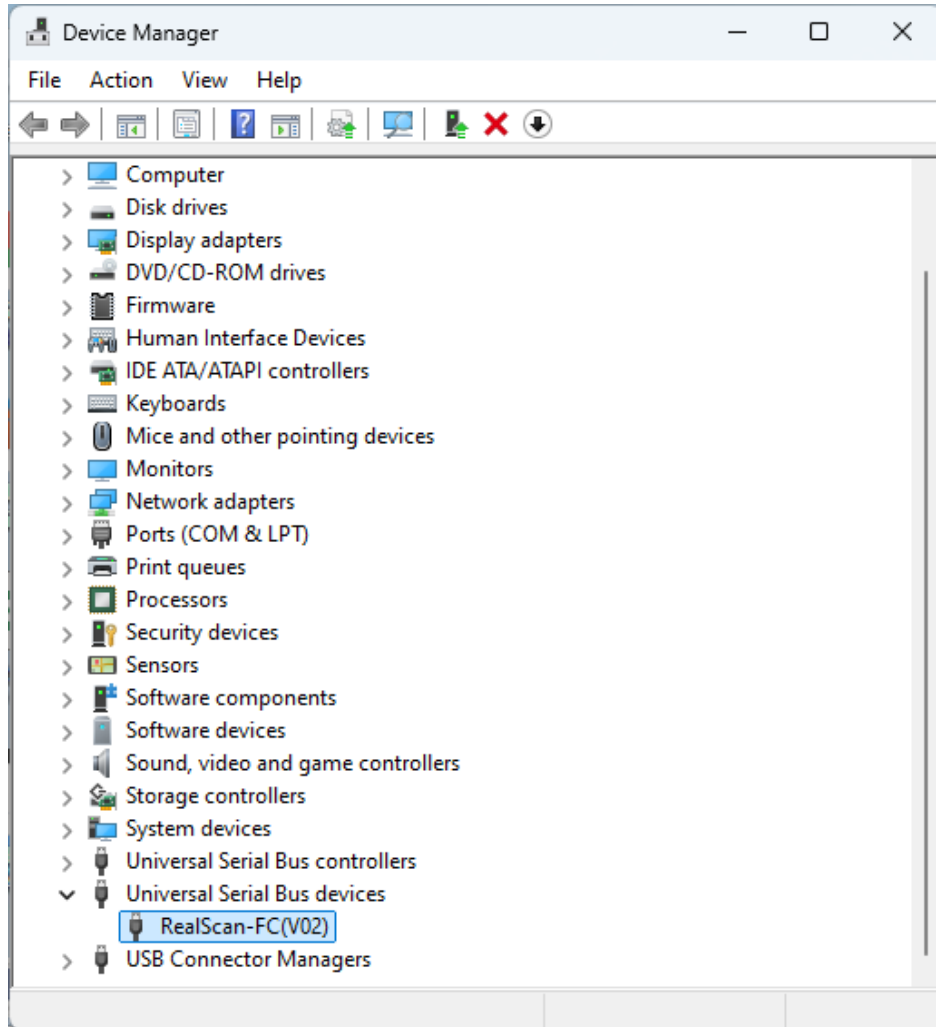
4. Installation Successful



→ Click the [Finish] button.

5. After installation, you need to check in Device Manager to see if the device driver is installed properly.

Press the Windows key + R to open the Run dialog, type devmgmt.msc, and click OK. If the device is installed correctly, it will appear under 'Universal Serial Bus devices as RealScan-FC.



Sample APP(Example) User Guide

This page provides instructions on how to use the Sample APP. Please follow the guide below to utilize the Sample APP.

1. Navigate to the BIN folder located at \Program Files\Xperix\RealScanSDK.

 Bin	2025-04-23 오전 8:39	File folder
 Document	2025-06-19 오후 12:41	File folder
 Driver	2025-06-19 오후 12:41	File folder
 Example	2025-04-23 오전 8:39	File folder
 Install	2025-04-23 오전 8:39	File folder
 Uninstall.exe	2025-06-19 오후 12:41	Application

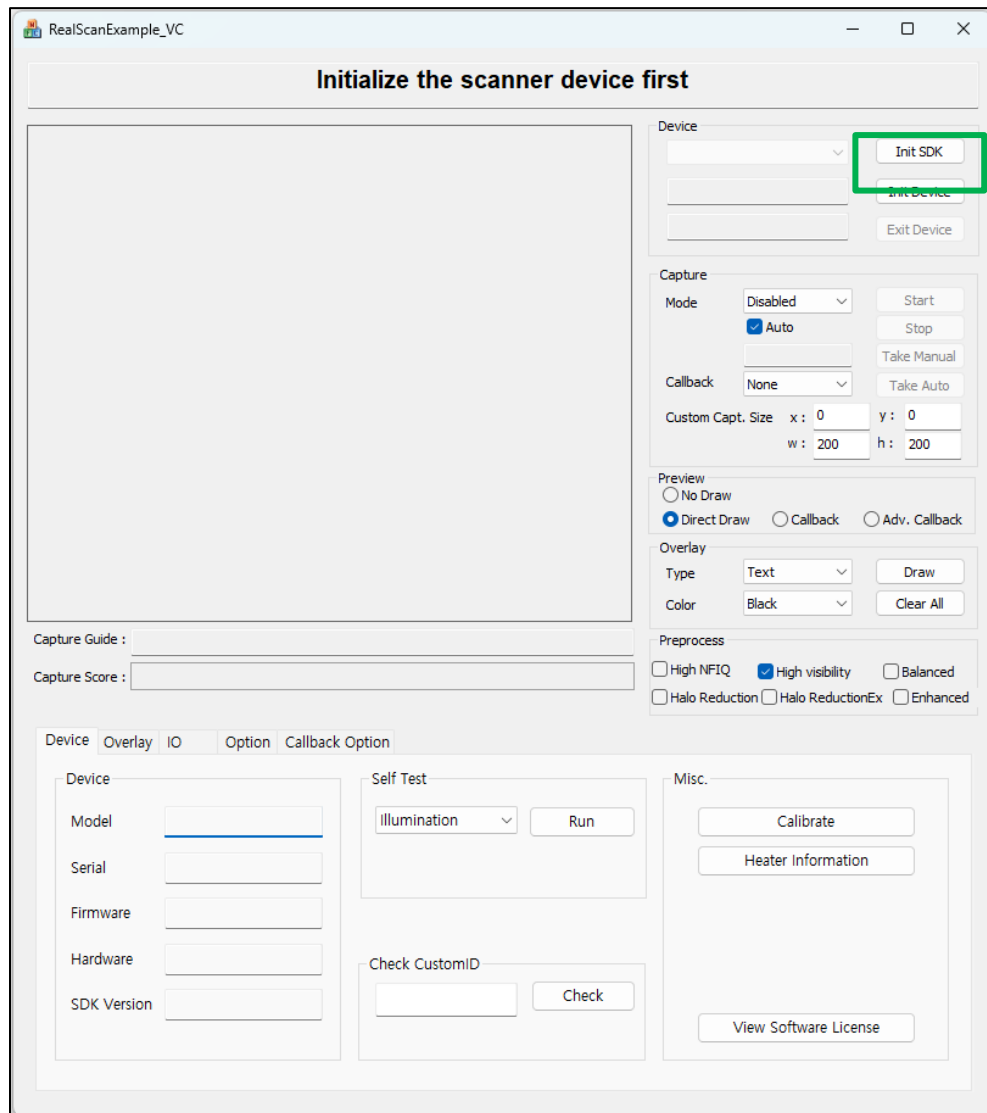
2. Move to the folder corresponding to your PC specifications.

 x64	2025-04-23 오전 8:39	File folder
 x86	2025-04-23 오전 8:39	File folder
 D.LC	2024-12-05 오전 10:47	LC File
 X DiagnosisTool.exe	2024-12-05 오전 10:47	Application

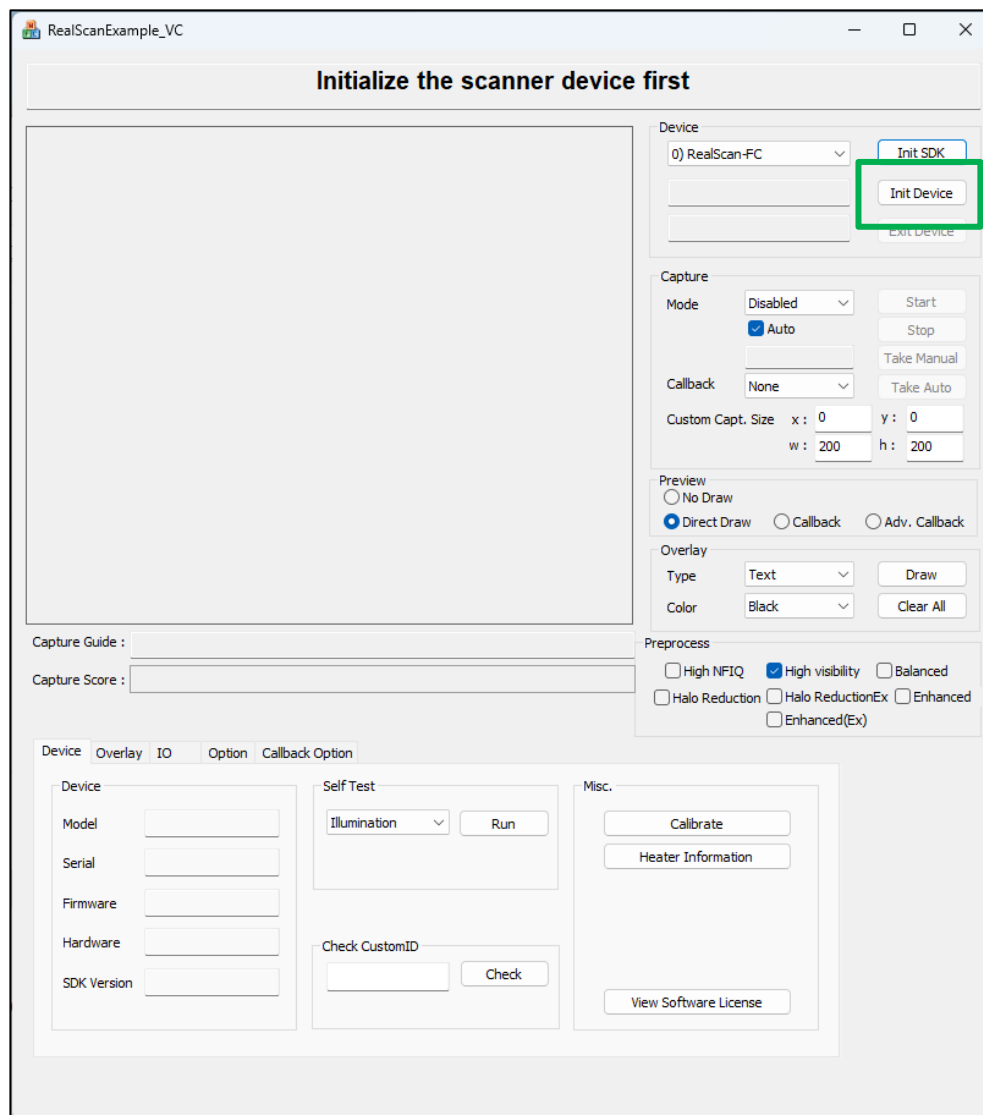
3. Run the program RealScanExample_VC.exe

이름	
 LICENSE.TXT	
 opencv_world341.dll	
 RealScanExample_CSharp.exe	
 RealScanExample_VBNet.exe	
 RealScanExample_VC.exe	
 RS_SDK.dll	
 RS_SDK.ini	
 tensorflowlite_c.dll	

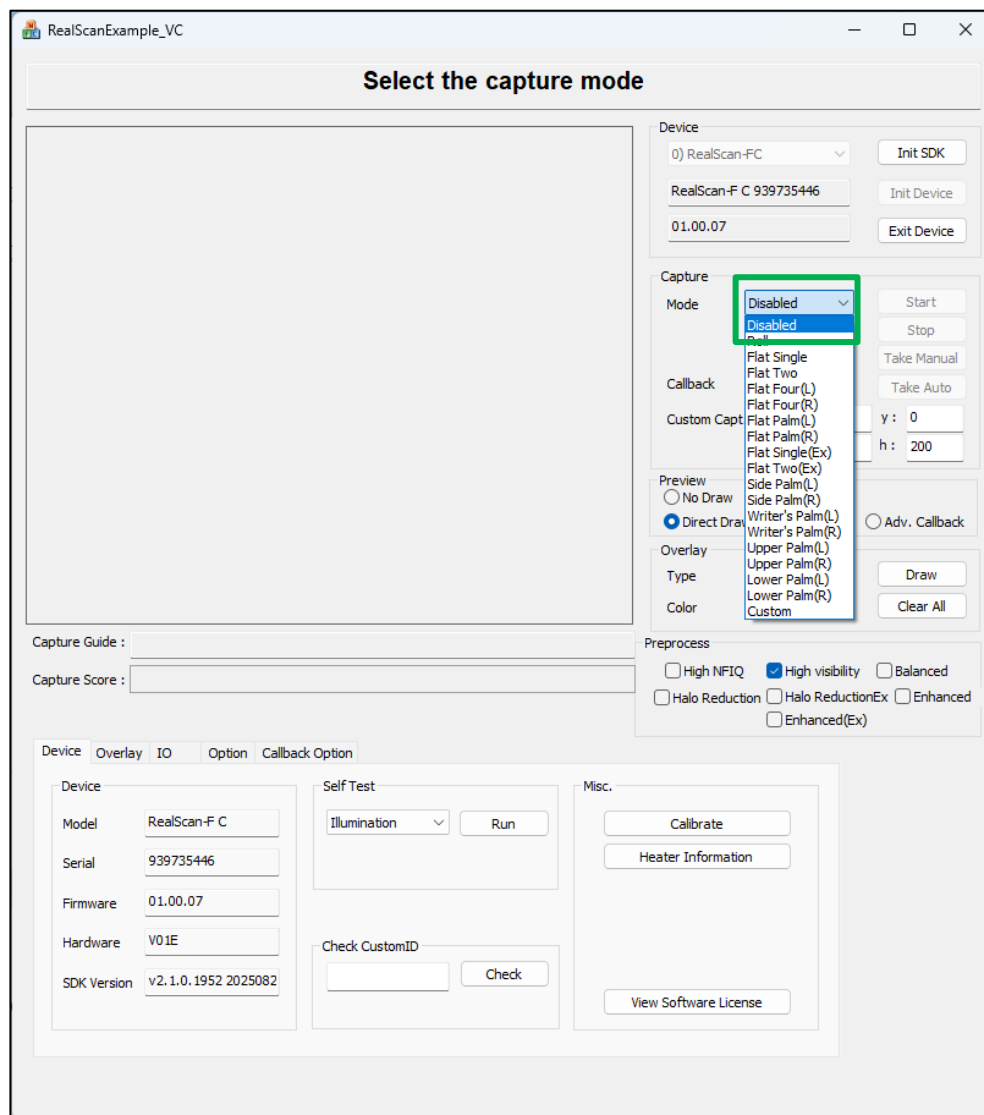
4. Click the Init SDK button



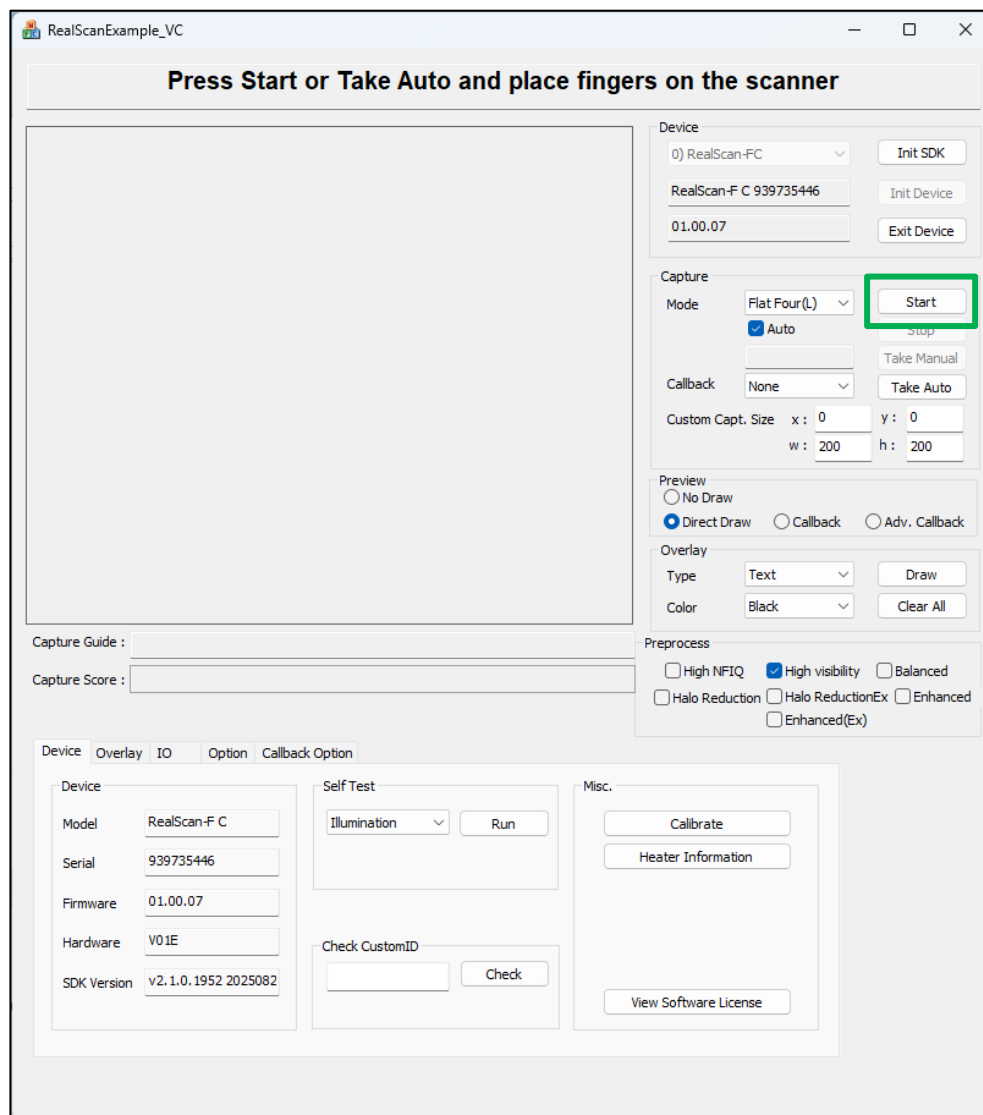
5. Click the Init Device button



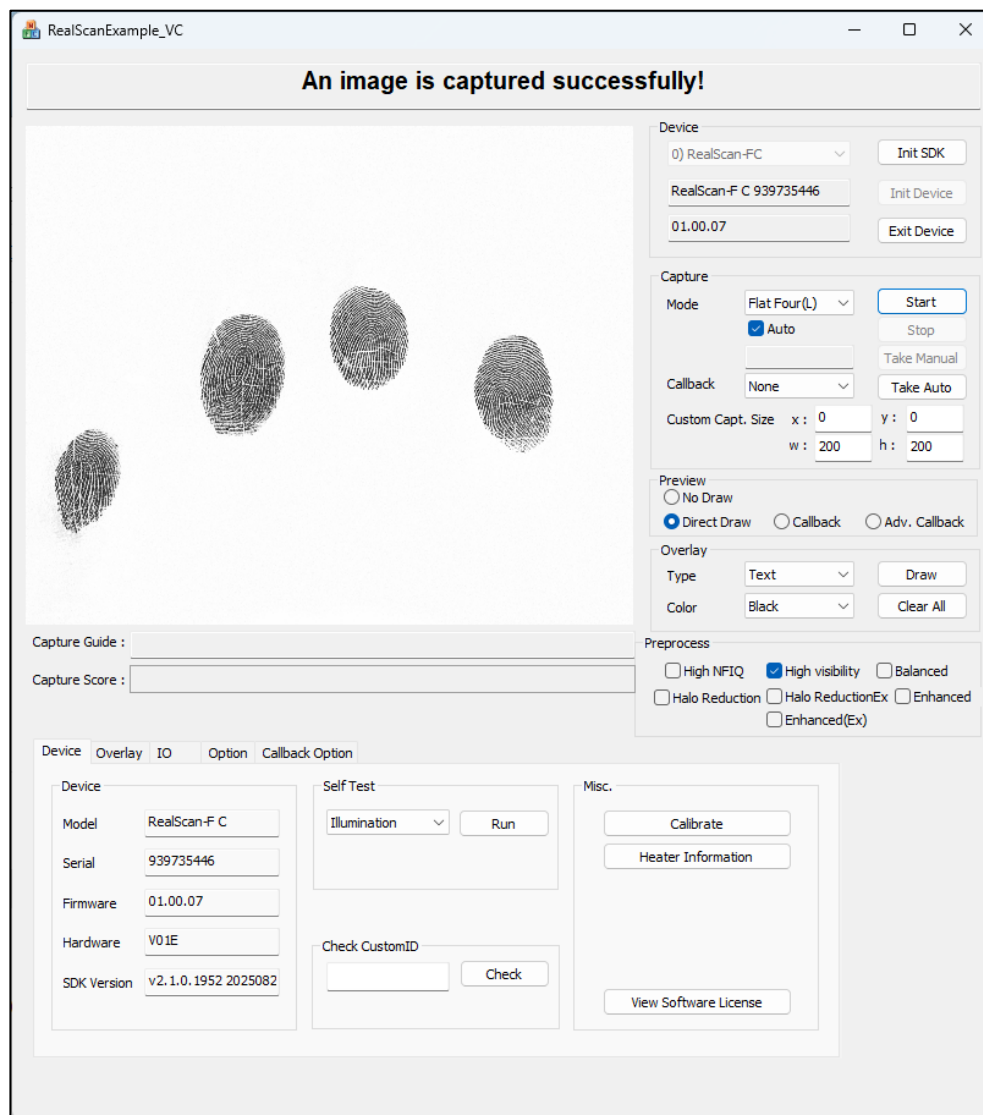
6. Configure the capture mode.



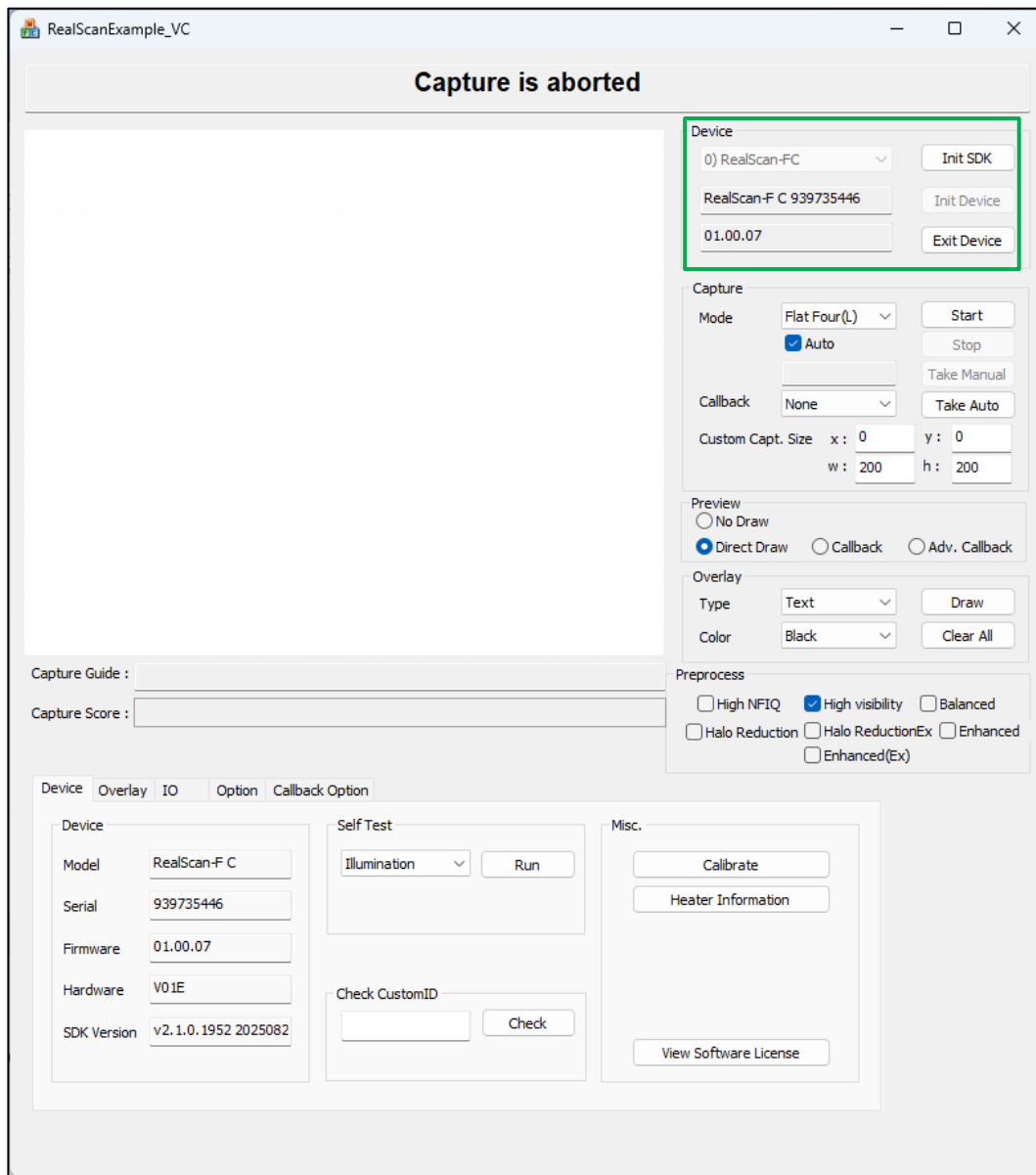
7. Click the Start button and place your finger on the scanner.



8. Once the finger is placed, the fingerprint will be captured successfully.

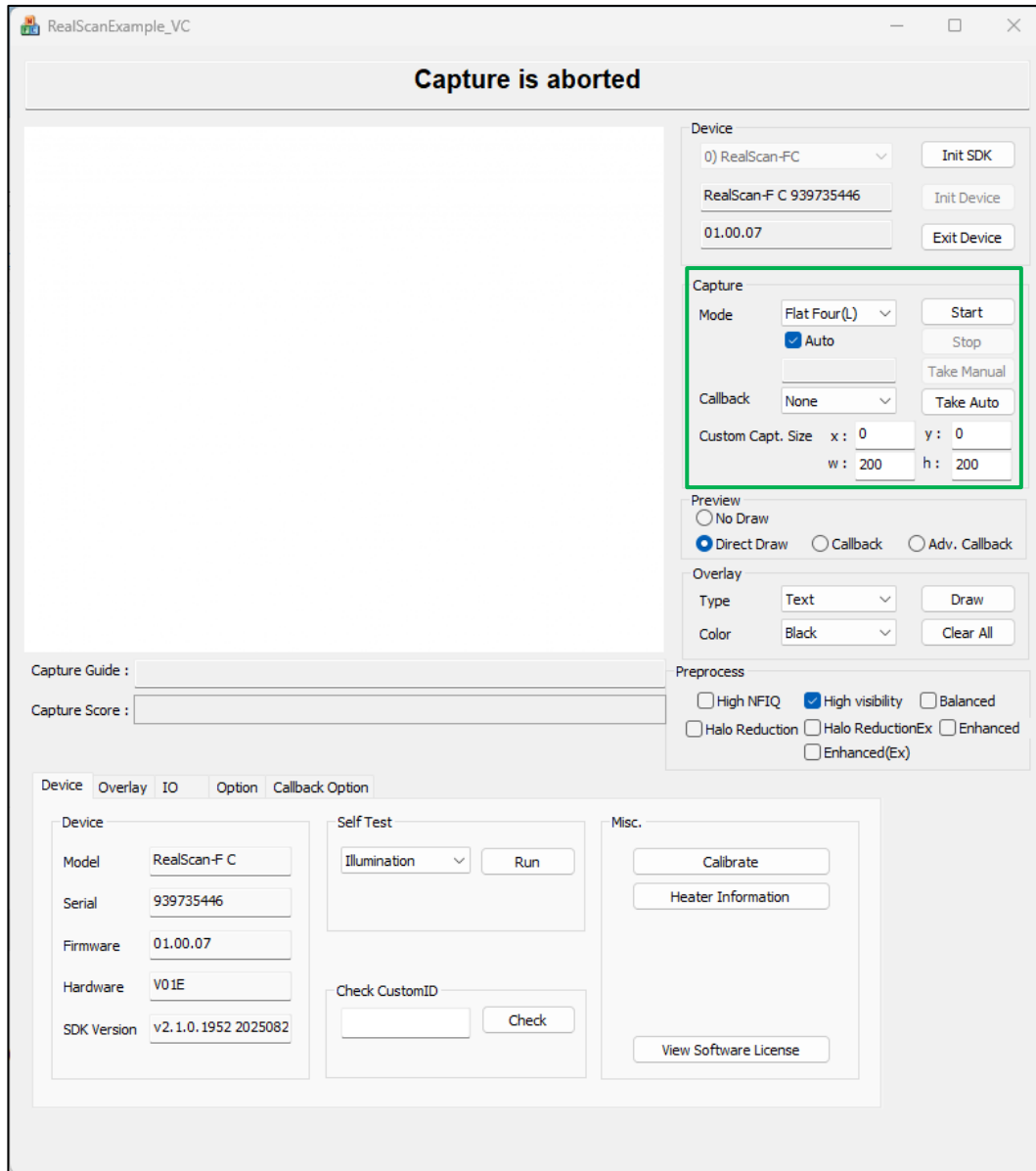


9. Review the components of the Sample Application.



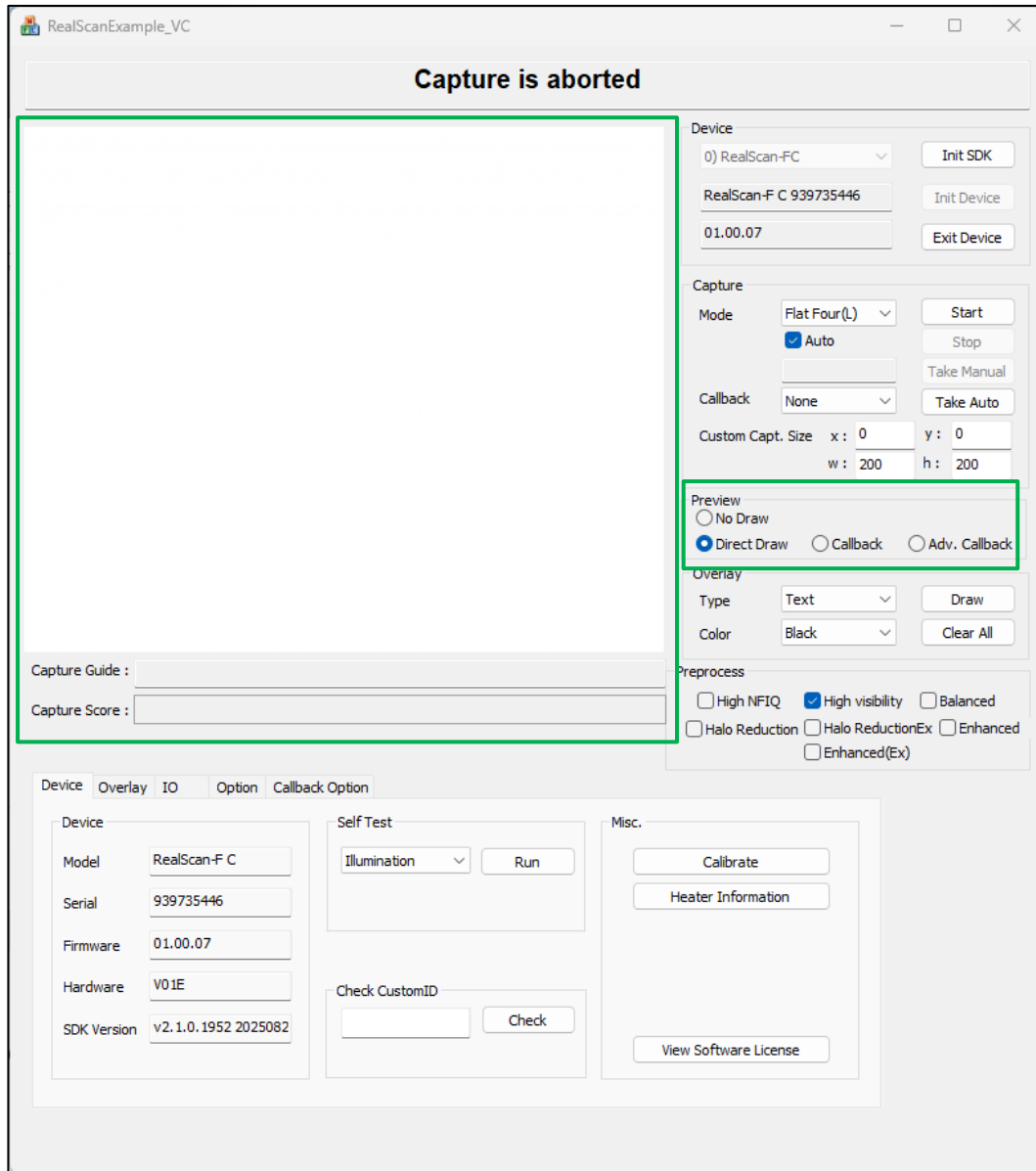
Device Connection Section

Item	Function
Init SDK	Initializes the SDK.
Init Device	Initializes the device and obtains the device handle.
Exit Device	Releases the device and associated resources.



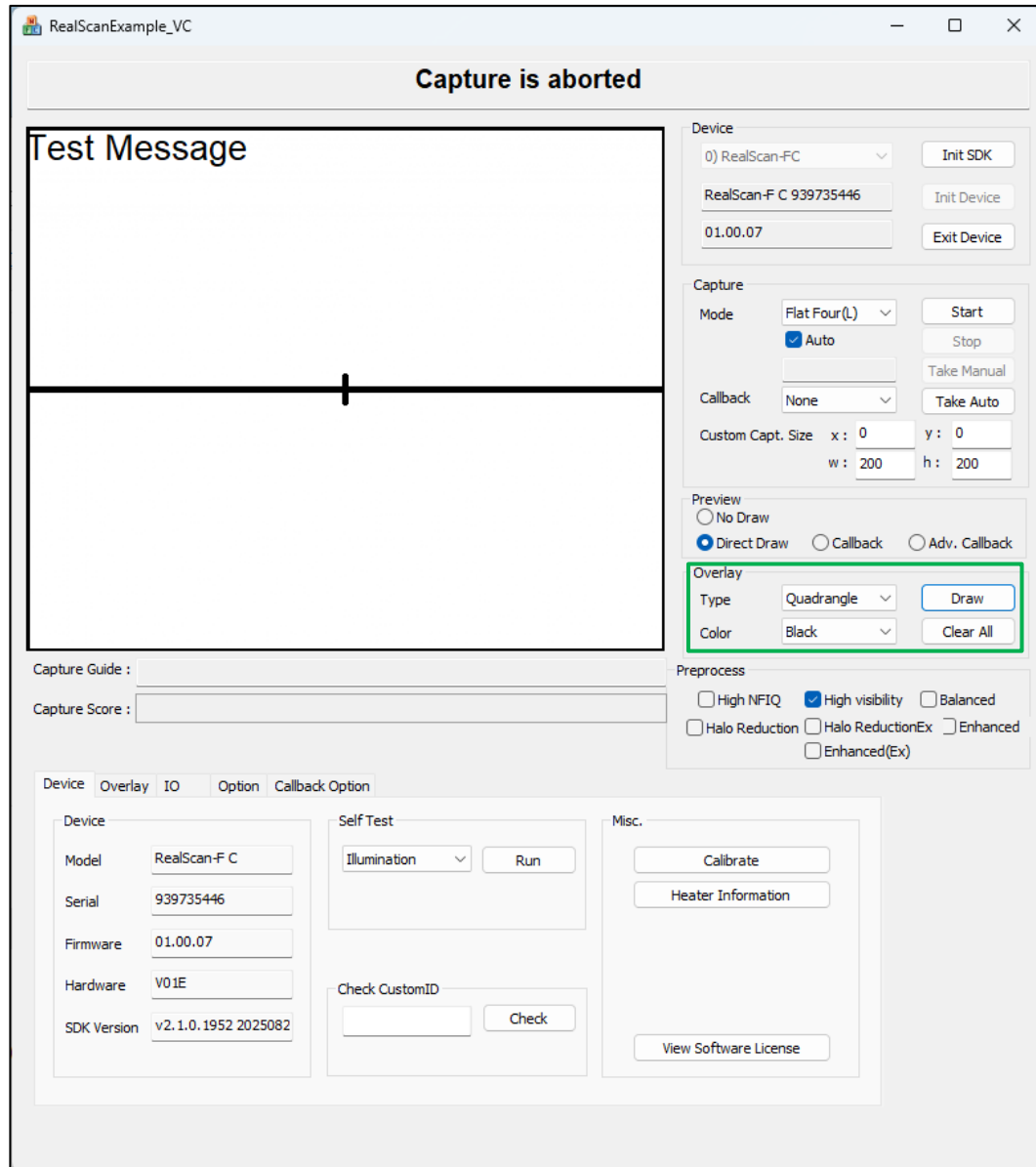
Capture Settings Section

Item	Function
Mode	Sets the capture mode.
Auto	Enables automatic capture using a callback function.
Start	Starts fingerprint scanning.
Stop	Stops fingerprint scanning.
Take Manual	Allows manual capture after disabling the Auto checkbox.
Take Auto	Automatically invokes the configured callback function.
Custom Capt. Size	Configures the capture coordinates and image size.



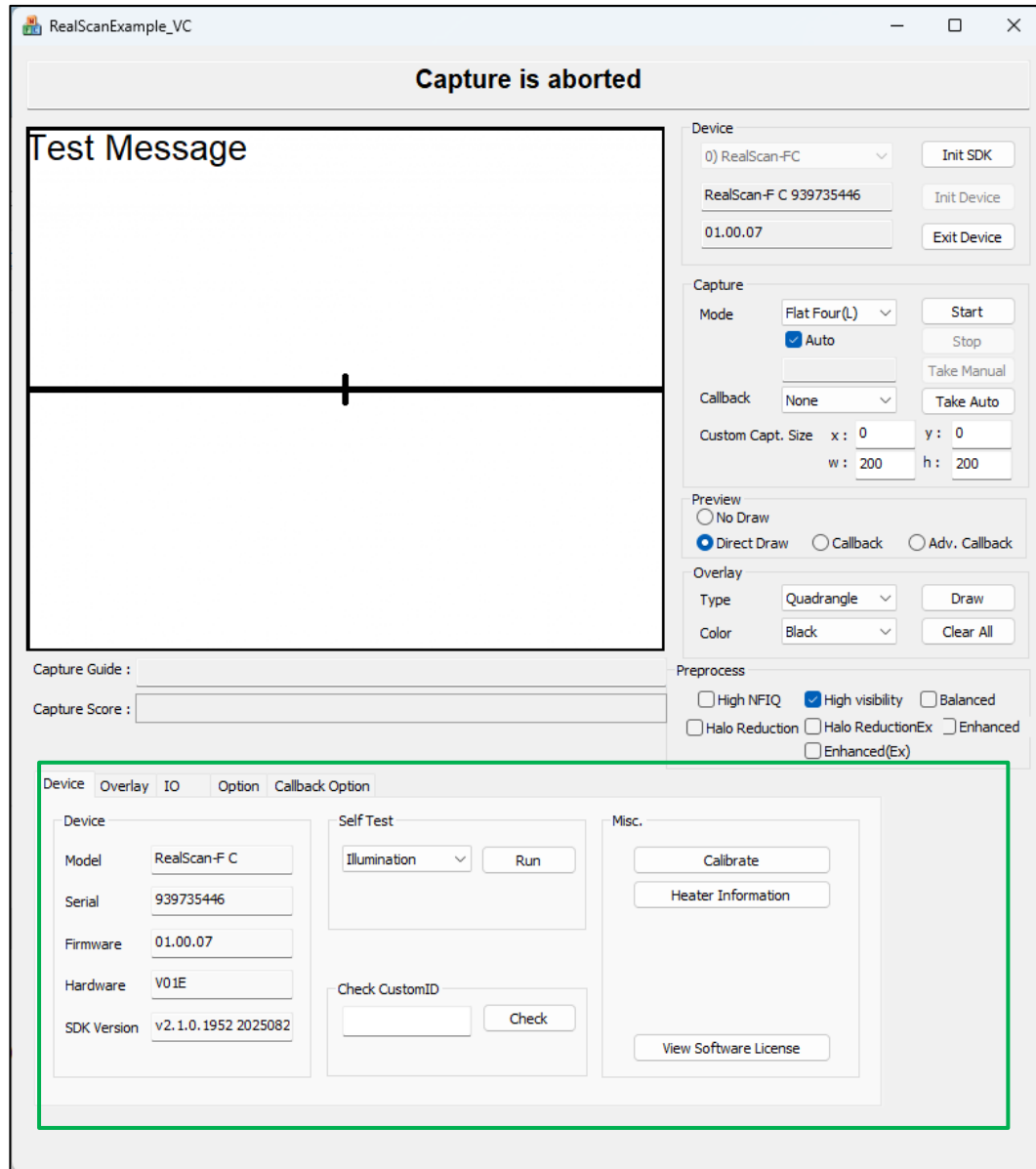
Preview Section

Item	Function
Preview	Displays the captured image in the preview area.
No Draw	Does not display the captured image in the preview area.
Direct Draw	Directly displays the captured image in the preview area.
Callback	The image received via callback is displayed in the preview area.
Adv Callback	Displays the guide image and score along with the captured image.



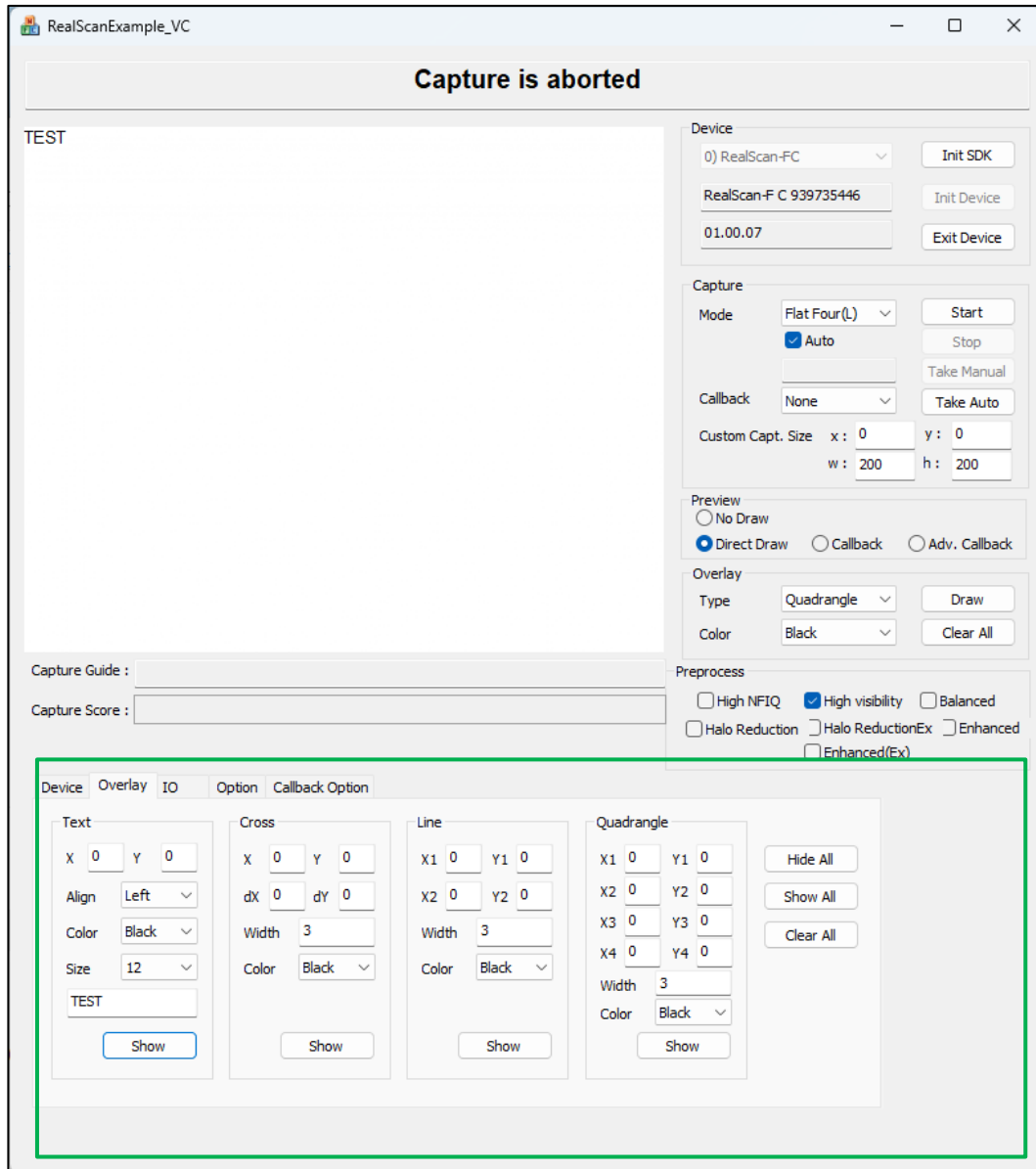
Overlay Section

Item	Function
Type	Sets the type of overlay to be displayed in the preview area.
Color	Sets the color of the selected overlay type in the preview area.
Draw	Displays the configured overlay type and color in the preview area.
Clear All	Removes all overlays displayed in the preview area.



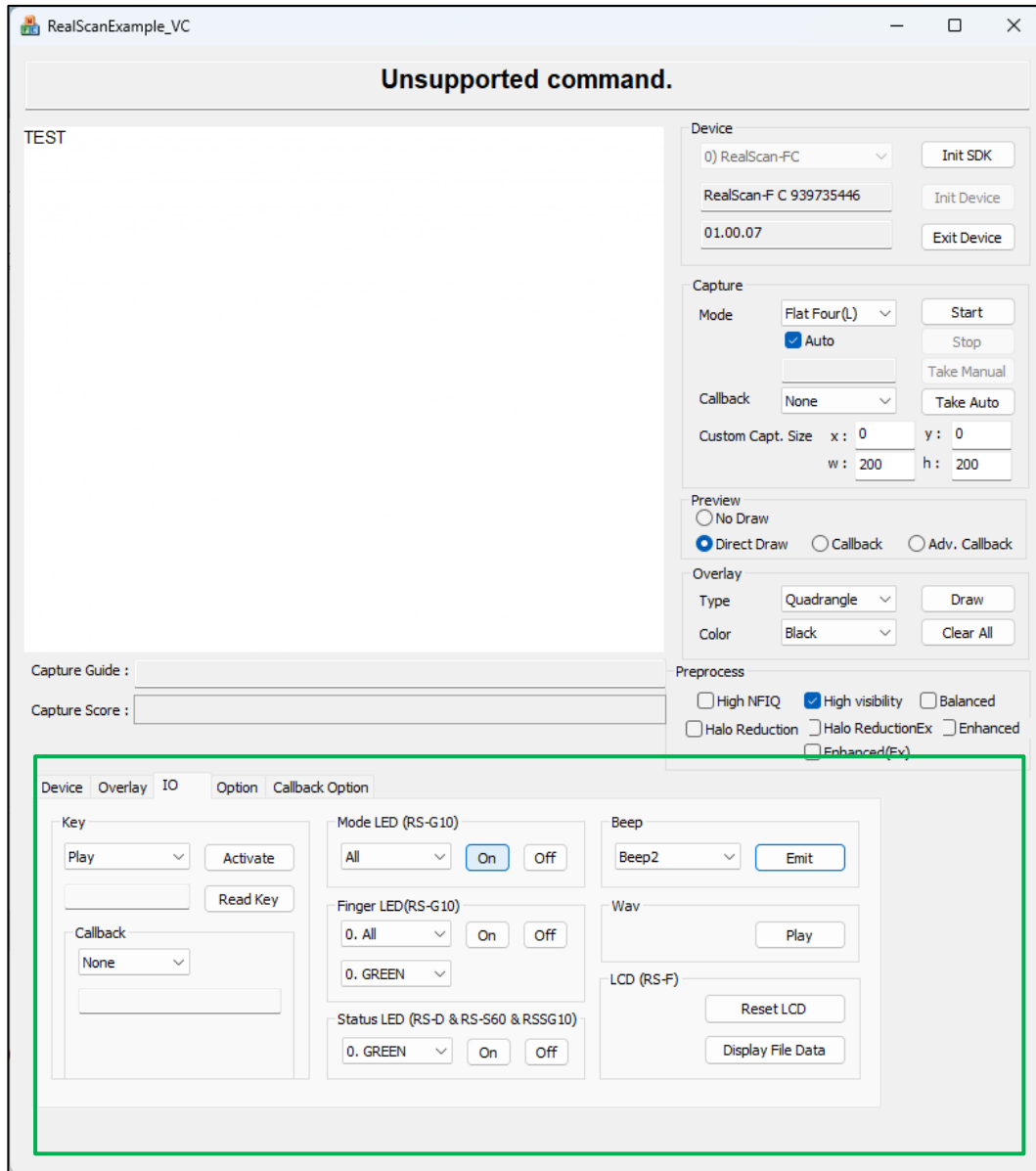
Device Section

Item	Function
Device	Displays device information.
Self-Test	Checks the device's illumination and contamination (dirty) status.
Check CustomID	Checks the custom ID of the device.
Calibrate	Checks for contamination on the surface of the scan area.
Heater Information	Heater information is available.
View Software License	Displays the software license.



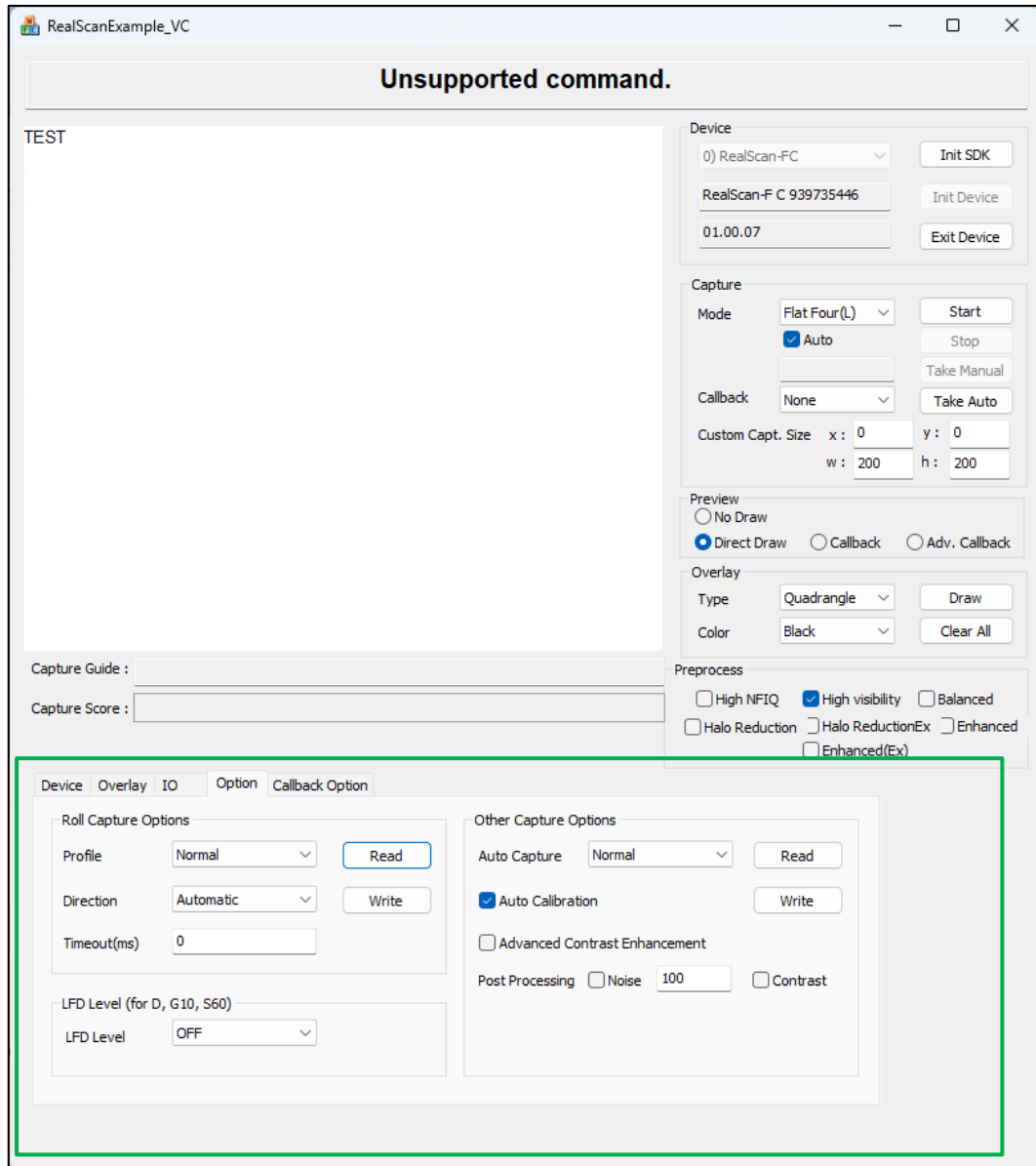
Overlay Section

Item	Function
Text	Displays text in the preview area.
Cross	Displays a cross marker in the preview area.
Line	Displays a line in the preview area.
Quadrangle	Displays a quadrangle in the preview area.
Hide All	Hides all overlays in the preview area.
Show All	Shows all overlays in the preview area.
Clear All	Resets all overlay settings.



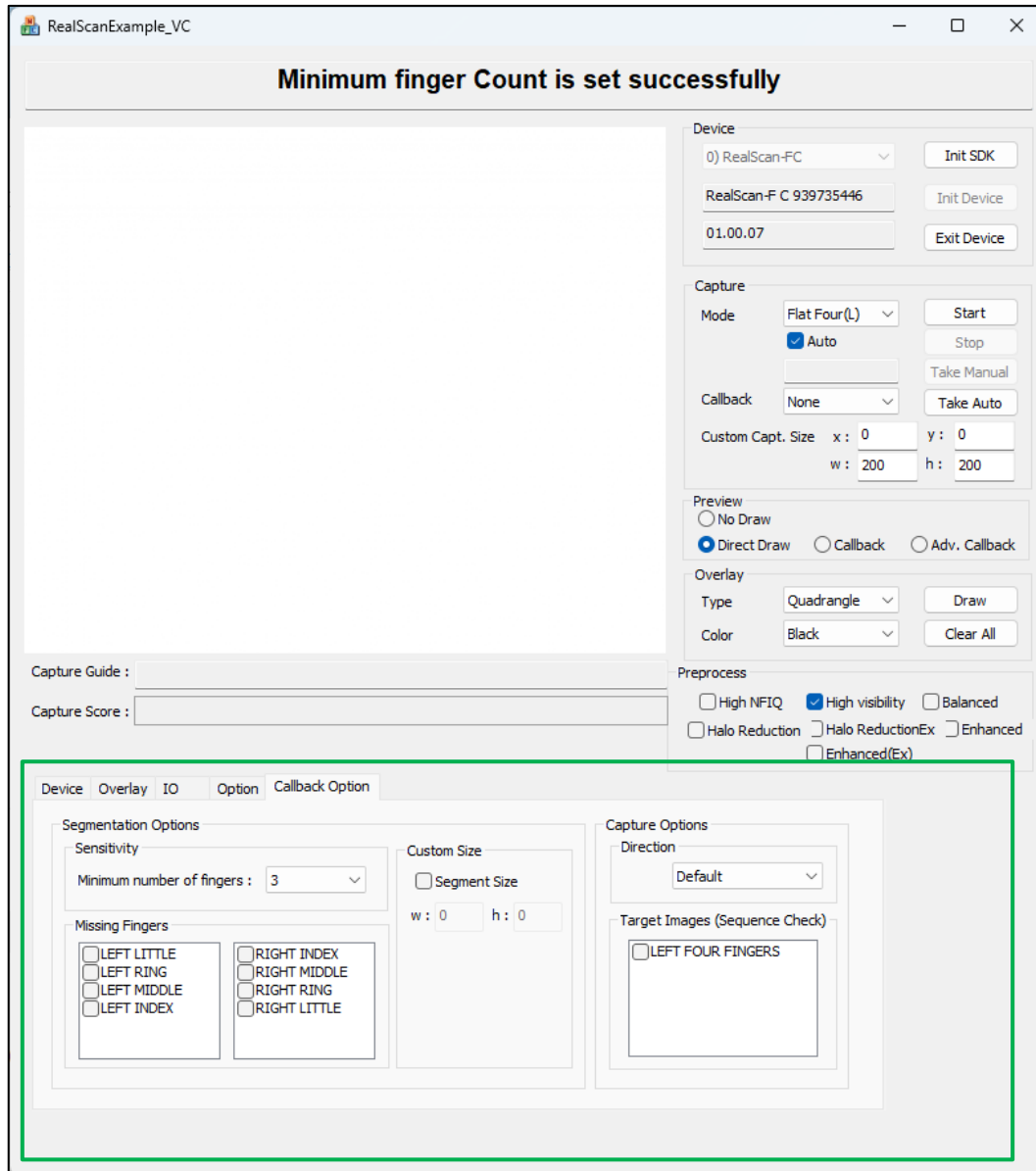
IO Section

Item	Function
Key	Not supported by RealScan-FC
Mode LED	Not supported by RealScan-FC
Finger LED	Not supported by RealScan-FC
Status LED	Not supported by RealScan-FC
Beep	Plays a beep sound.
Wav	Plays an audio file.
LCD	Not supported by RealScan-FC



Option Section

Item	Function
Roll Capture Options	Configures detailed options for roll capture.
LFD Level	Sets the LFD (Live Finger Detection) level.
Other Capture Options	Configures additional options related to fingerprint capture.



Callback Option Section

Item	Function
Segmentation Options	Sets the actual number of segmented fingers and related information.
Custom Size	Configures the image size for segmented output.
Capture Options	Sets the capture orientation.

Trouble Shooting Guide

This document provides instructions on how to handle errors that frequently occur while using the product.

If you need any further technical support, please visit, please visit <https://tech.xperix.com> to create a new ticket and share your inquiry.

If you would like to learn more about error handling methods, please visit <https://tech.xperix.com/en/support/solutions> and refer to the FAQ section.

Symptoms	Causes	Solutions
The device does not power on.	This may occur when the device is not properly connected.	Check the USB cable connection.
		Try connecting the device to a different USB port on the PC.
Dirty errors occur continuously.	Triggered when the surface of the scan area is contaminated.	Clean the surface of the scan area using a soft cloth.
The device powers on but does not scan.	This may occur when the device is not properly connected to the SDK.	Reinstall the device driver.

Specifications

Dimensions (WxLxH)	193 mm x 315 mm x 150 mm
Platen Size (WxL)	131.2 mm x 130.2 mm
Sensing Area (WxL)	127 mm x 127 mm
Weight	5,350g
Resolution (DPI)	500DPI
Capture Mode	Flat(Four/Two/Single) and Rolled(Single) fingers, Upper and Lower palms, Writer's palms
Image Size (WxL)	Palm print: 2500 x 2500 pixels Four finger Slap: 1600 x 1500 pixels Single flat / Roll: 800 x 750 pixels
Supported Image Formats	RAW, BMP, WSQ, JPEG2000, ISO19794-4
Surface Protection	Optic Glass (Scratch free)
Ingress Protection	IP64
User Feedback Elements	Speaker
Operating Temperature	0 °C ~ 55 °C (32 °F ~ 131 °F)
Operating Humidity	10% ~ 90%
Power Source USB Voltage Level	USB 3.2 Gen 1, USB-C / USB Host 5.0V ±10% / Adapter 12 VDC ±10%
FBI / Image Certifications	Identification Flats (Appendix F & Appendix P), Live- Scan(Tenprint) System (Appendix F), Live-Scan(Palm) System (Appendix P)
OS	Windows 7 or higher 32/64bit Linux Ubuntu, Debian, Fedora, OpenSUSE, CentOS 32/64bit Android 5.0 or higher
Certification	FBI, CE, FCC, KC, RoHS, WEEE, REACH, WHQL, UL

Regulatory Information

FCC Compliance Information

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Note: 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, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. 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 to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Ask an operator or a skilled technician for assistance.

Unauthorized modifications or changes not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC regulations.

European Union CE Mark and Compliance Declaration

This product is CE marked in accordance with the R&TTE Directive (1999/5/EC). Xperix Inc. declares that this product complies with the essential requirements and other relevant provisions of Directive 1999/5/EC.

This device is a Class 1 radio equipment under the European Radio and Telecommunications Terminal Equipment (R&TTE) Directive (1999/5/EC).



WEEE Mark and Compliance Information

This product must be disposed of and recycled in accordance with the WEEE Directive (2012/19/EU). Xperix Inc. declares that this product complies with the mandatory requirements of the WEEE Directive and other relevant regulations. Users must return this product to appropriate recycling facilities, separating it from general waste, in accordance with local and national regulations.





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