

Vzense UpgradeTool User Guide



Windows

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Vzense

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1 Overview

Welcome to the Vzense UpgradeTool User Guide. UpgradeTool is a graphical Windows-based tool developed for Vzense TOF Cameras such as the DCAM710, DCAM305,DCAM800LITEUSB,DCAM800LITE,DCAM550P, DCAM550U(herein referred to as a *camera module*). This document describes how to upgrade the firmware of the camera module.

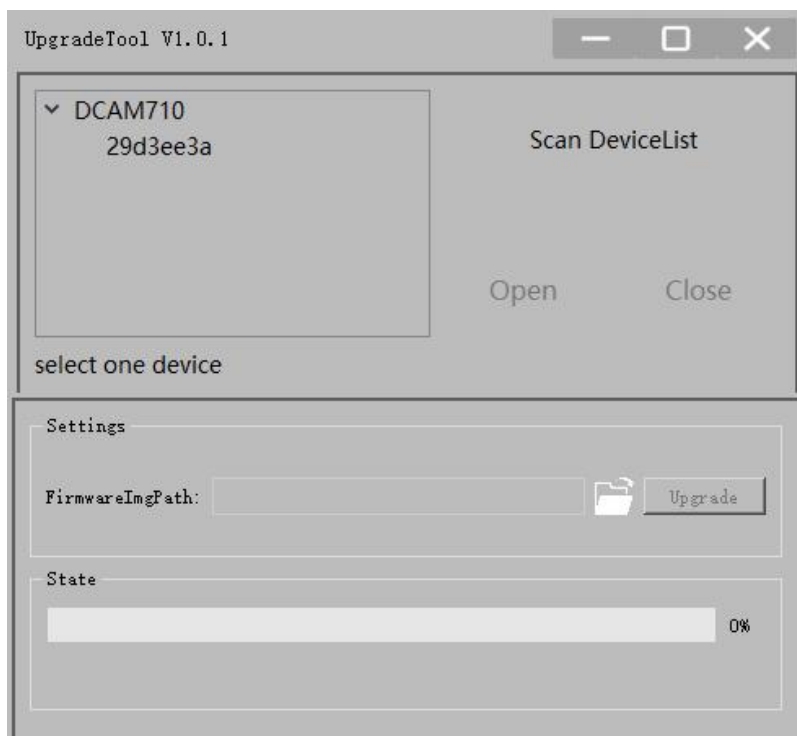
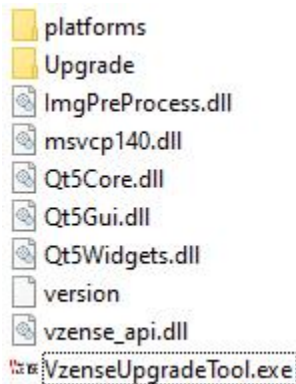


Figure 1 - VzenseUpgradeTool.

2 Package Structure

The UpgradeTool package for Windows contains the following notable directories and files:



Upgrade: Driver that can be used to upgrade the camera module. Run the “**DriverInstall.exe**” firstly, which in the “**Upgrade\DriverAssitant_v4.5**”.



3 Requirements

UpgradeTool has the following requirements:

Supported Operating Systems: Windows 7 32/64 bit, Windows 10 32/64 bit

RAM: A minimum of 4GB

4 Setting up the Development Environment

4.1 Hardware Installation

Connect the camera module to a PC using a USB cable or a Network cable as shown in [Figure 2](#):

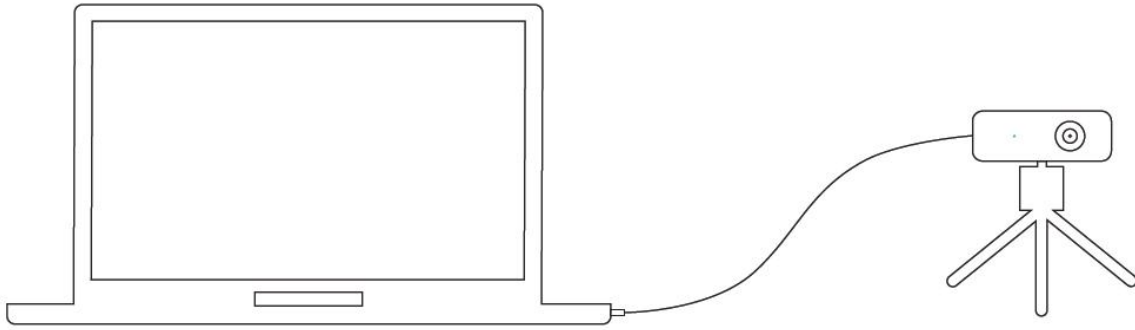


Figure 2 - Hardware installation.

4.1.1 USB

Connect the camera module to PC USB interface through USB cable.

In Windows, when the camera module is successfully connected, it will pop up the notice of the device driver installation. After the driver is auto-installed successfully, it will display the **Vzense TOF Camera** device in Windows Device Manager.

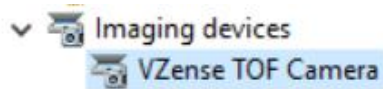


Figure 3 Vzense TOF Camera

4.1.2 Network

Network cable connection can be divided into fixed address direct connection and DHCP connection.

1. Fixed address

The fixed address connection can be directly connected to the camera and the computer, or it can be configured to be used in the switch of the same network segment.

Direct connection: one end is connected to the camera, and the other end is connected to the network cable interface of the PC host. The default IP of the camera is 192.168.1.101. On the PC side, set the subnet mask of "local connection" to 255.255.255.0, and the IP address to the same network segment (such as 192.168.1.100).

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address: 192 . 168 . 1 . 100

Subnet mask: 255 . 255 . 255 . 0

Default gateway: . . .

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses

Preferred DNS server: . . .

Alternate DNS server: . . .

☐ Validate settings upon exit

Advanced...

OK Cancel

Figure 3.1 Direct connection

2. DHCP

For the DHCP connection mode, the camera needs to be connected to the router with DHCP enabled, and the PC in the same LAN is used for connection. It is recommended to set the "local connection" of the PC to obtain the IP address automatically.

General Alternate Configuration

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☒ Obtain an IP address automatically

☐ Use the following IP address:

IP address:

Subnet mask:

Default gateway:

☒ Obtain DNS server address automatically

☐ Use the following DNS server addresses

Preferred DNS server:

Alternate DNS server:

☐ Validate settings upon exit

Advanced...

OK Cancel

Figure 3.2 DHCP

Note:

1. The network card, router and switch used at the PC end shall meet the requirements of Gigabit Ethernet.
2. When you first run the SDK, set permissions for the SDK to pass through the system firewall.

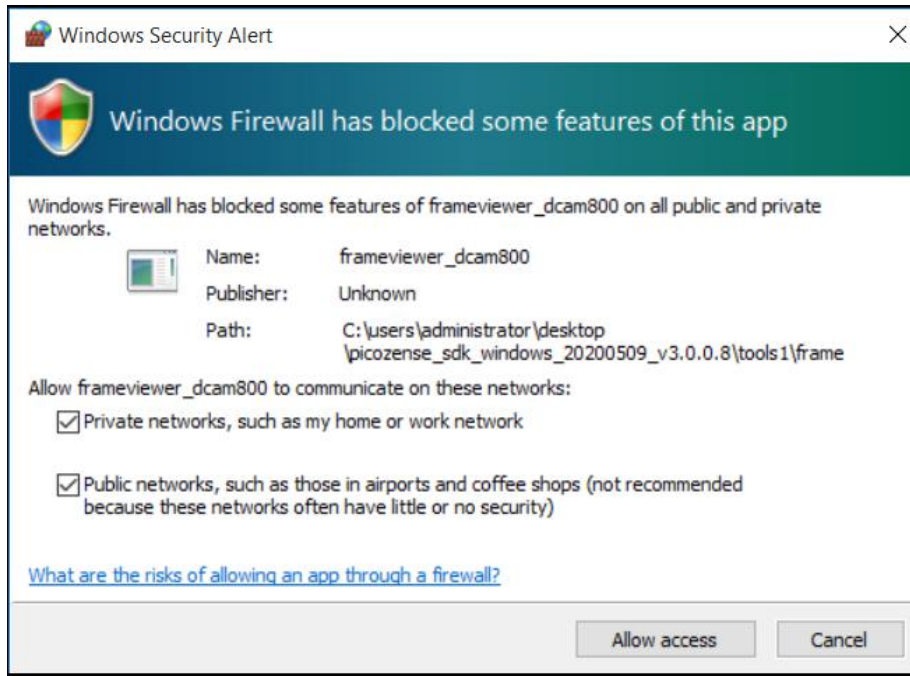


Figure 3.3 firewall setting

4.1.3 Running Single Camera Mode

Single camera mode allows you to upgrade the firmware. Follow the steps below to use *single camera mode*:

1. Set up the camera module as described above in Section 4.1.
2. Wait for the front of the camera to light up.
3. Navigate to the root of the package and run **VzenseUpgradeTool .exe**.
4. DoubleClick the Camera Mode in the devicelist or Click the Camera Mode first, then click **Start** to begin stream capture as shown in Figure 4

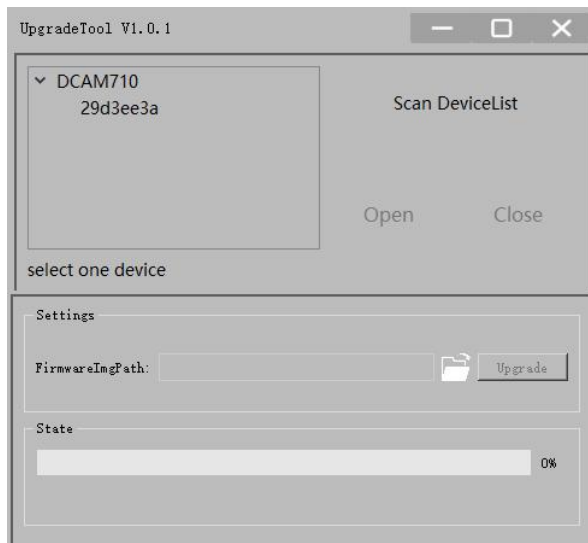


Figure 4

5 UpgradeTool Settings and Functionality

The following subsections describe the settings and functionality of UpgradeTool.

5.1 DeviceList

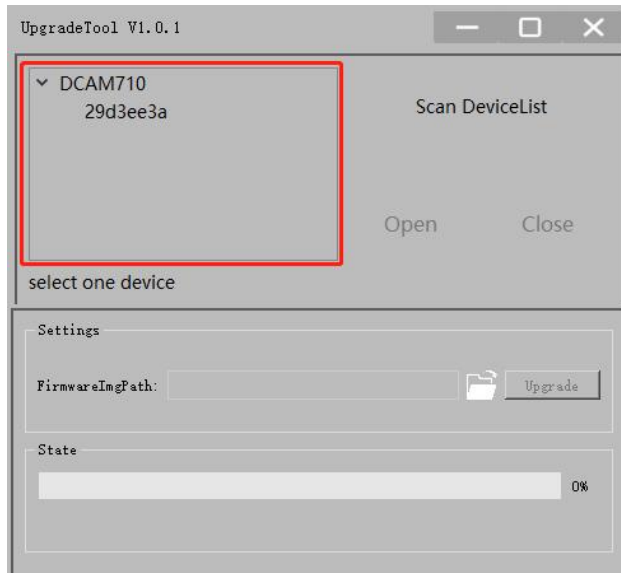
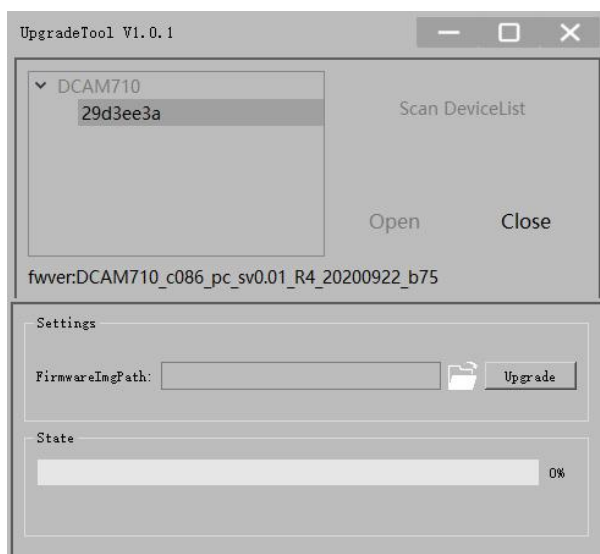


Figure 5 - DeviceList .

DeviceList shows one or more of the available devices. If connect the camera module to a PC using a USB cable, the text of the selected item is a field in the “Device instance path” which is one property of the “Vzense TOF Camera” as shown in Figure 3. If connect the camera module to a PC using a Network cable, the text of the selected item is the module sn. Follow the steps to use the *DeviceList* :

1. DoubleClick the Camera Mode in the devicelis or Click the Camera Mode first, then click “**Start**” to begin stream capture.
2. Click “**Stop**” to stop steam capture and clear the devicelist.
3. Click “**Scan DeviceList**” to get the devicelist, then repeat the step 1 to operate another Camera Mode.



5.2 Settings

Settings select the firmware file that match with the DCAM type. Then, Click “**Upgrade**” to upgrade the fireware for the camera mode.

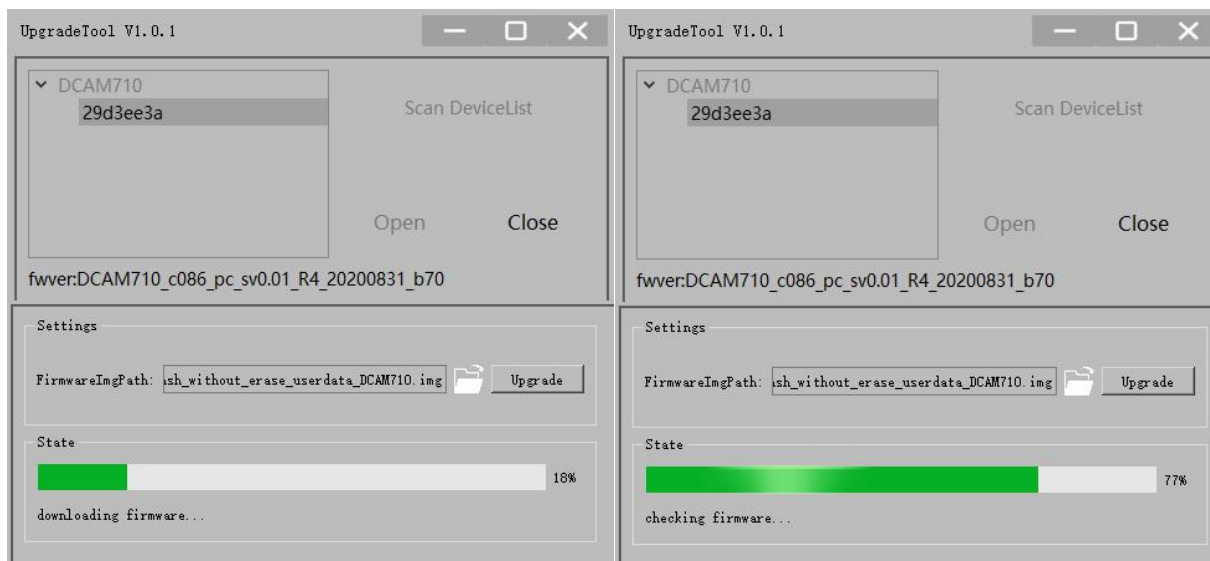


Figure 6 - Image View.

6 Firmware Download

Download the Firmware for “<https://gitee.com/Vzense/DeviceFirmware-List>” or “<https://github.com/Vzense/DeviceFirmware-List>”

The screenshot displays two views of the Vzense/DeviceFirmware-List repository. The top view is from Gitee, showing a list of folders and files with their commit messages. The bottom view is from GitHub, showing the same list with commit dates.

| File/Folder | Commit Message | Commit Date |
|-------------|--|--------------|
| DCAM10 | add DCAM800 device firmware; add DCAM10 device firmware | May 26, 2020 |
| DCAM305 | add DCAM305 device firmware | May 26, 2020 |
| DCAM500 | add new version of DCAM500 20200916 --add json config file | Sep 16, 2020 |
| DCAM510 | add DCAM510 device firmware; update README.md | May 26, 2020 |
| DCAM710 | add new version of DCAM710 20201010_b76 version | Oct 28, 2020 |
| DCAM800 | add DCAM800 device firmware; add DCAM10 device firmware | May 26, 2020 |
| DCAM800Lite | add new version of DCAM800Lite 20200918 version | Sep 25, 2020 |
| README.md | add first version of DCAM500 and DCAM800Lite device firmware | Aug 27, 2020 |

For more information, please check the file “**DCAM...**” that you pull.

7 FAQ

Q1: About “The Other Instance is Running!”

A1: “The Other Instance is Running!” represents that the existing UpgradeTool program is running. You can restart the UpgradeTool after closing the program. If this prompt still appears after closing, check the background process to close VzenseUpgradeTool.exe directly.

Q2: Do We need to install a driver to drive the camera?

A2: Vzense DCAM710 cameras support standard USB communication protocols and do not require specific drivers to be installed before use.

Q3: Driver Install.exe cannot install the driver properly.

A3: Try to run DriverInstall.exe with administrator privileges.