Vzense ConfigTool User Guide

Windows

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Vzense

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1 Overview

Welcome to the Vzense ConfigTool User Guide. ConfigTool is a graphical Windows-based tool developed for Vzense TOF Cameras such as the DCAM710, DCAM305,DCAM800LITEUSB,DCAM800LITE,DCAM550P,

DCAM550U,CSI100(herein referred to as a *camera module*). This document describes how to modify the config of the camera module.

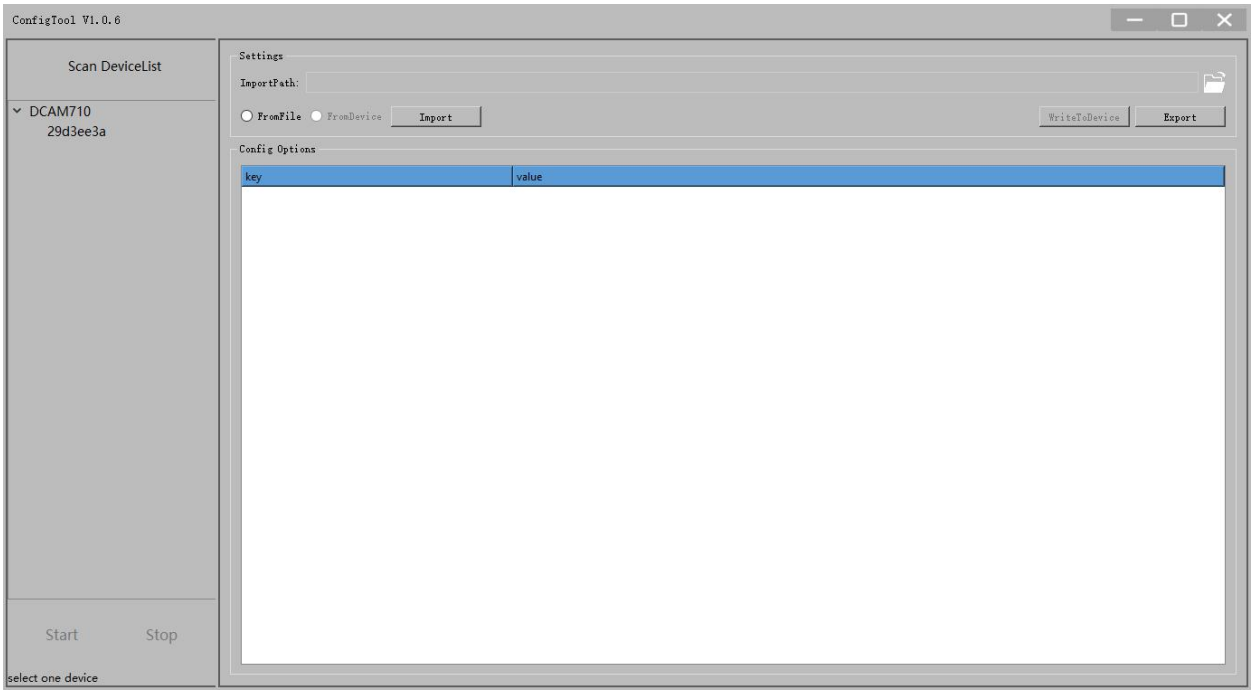
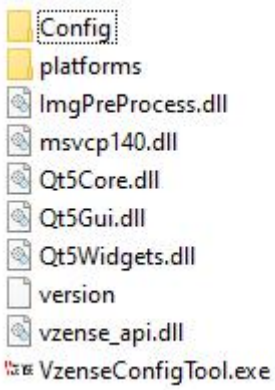


Figure 1 - VzenseConfigTool.

2 Package Structure

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



3 Requirements

ConfigTool 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:

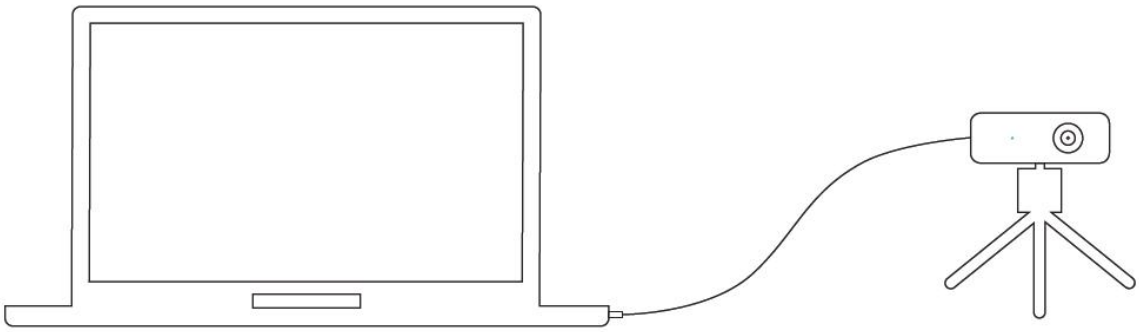


Figure 2 - Hardware installation.

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 Manger.

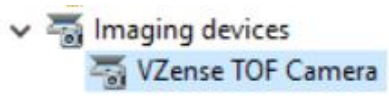


Figure 3 Vzense TOF Camera

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).

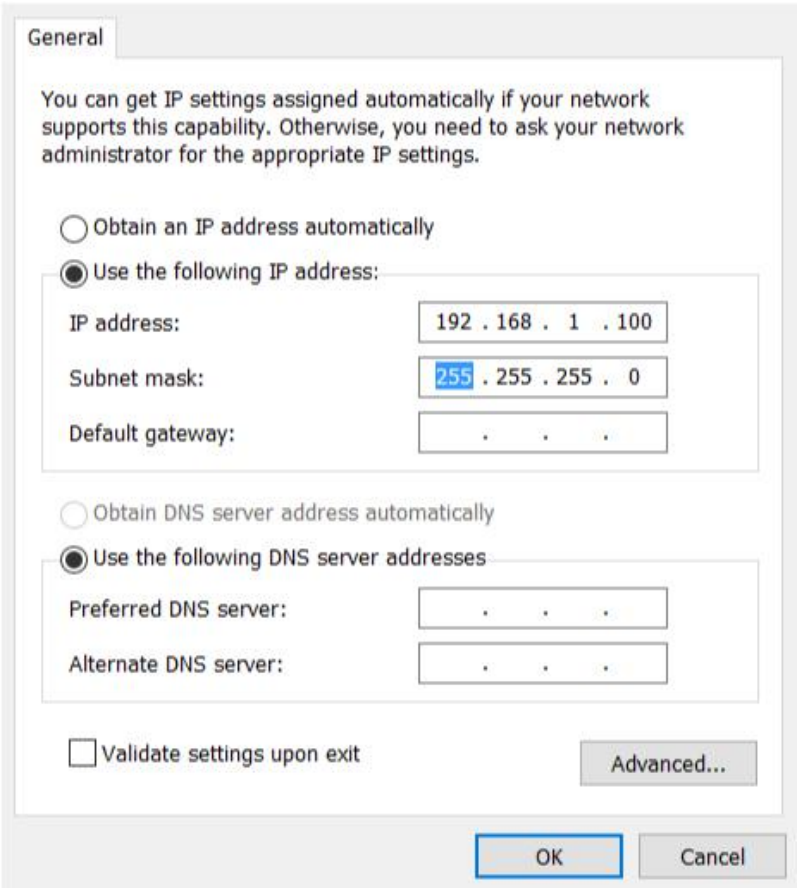


Figure 3.1 Direct connection

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.

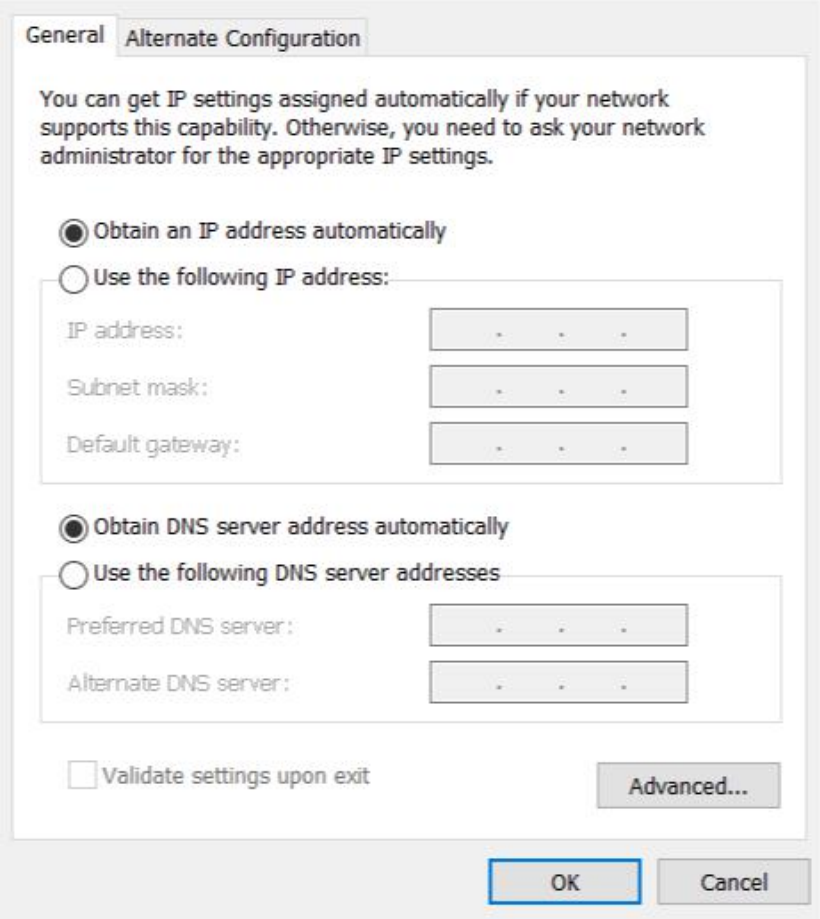


Figure 3.2 DHCP

Note:

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

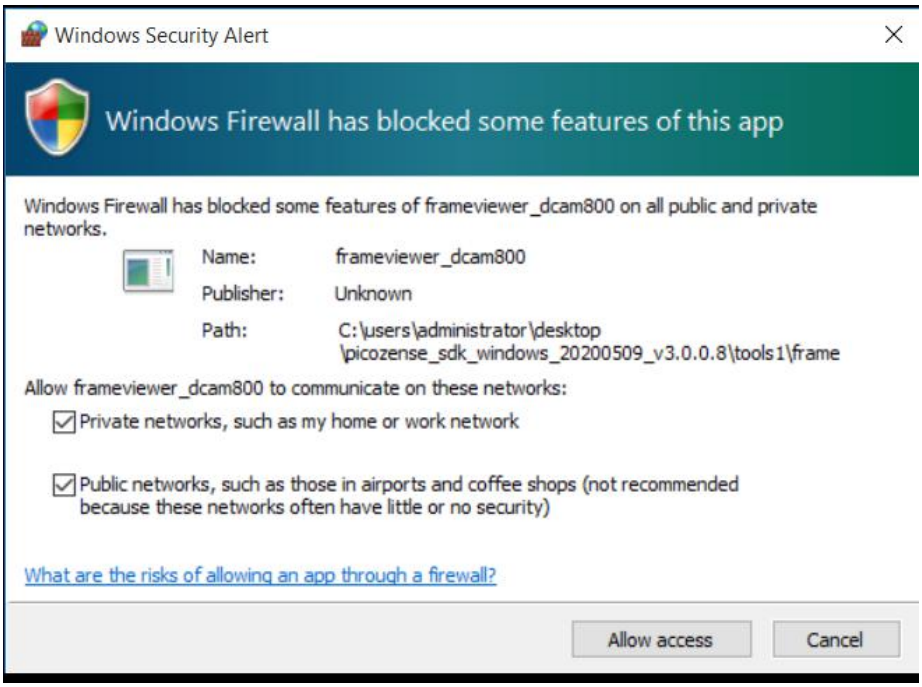


Figure 3.3 firewall setting

4.1.3 Running Single Camera Mode

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 **VzenseConfigTool .exe**.
4. DoubleClick the Camera Mode in the devicelist or Click the Camera Mode first, then click **Start**

5 ConfigTool Settings and Functionality

The following subsections describe the settings and functionality of ConfigTool.

5.1 DeviceList

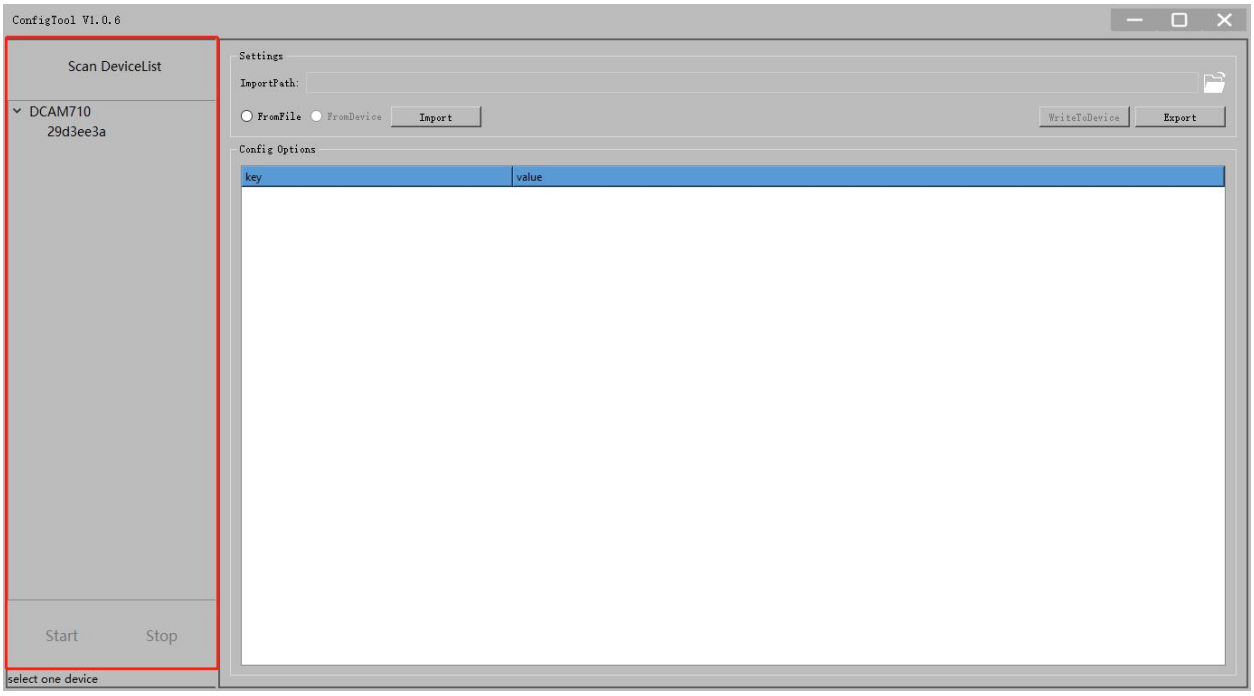
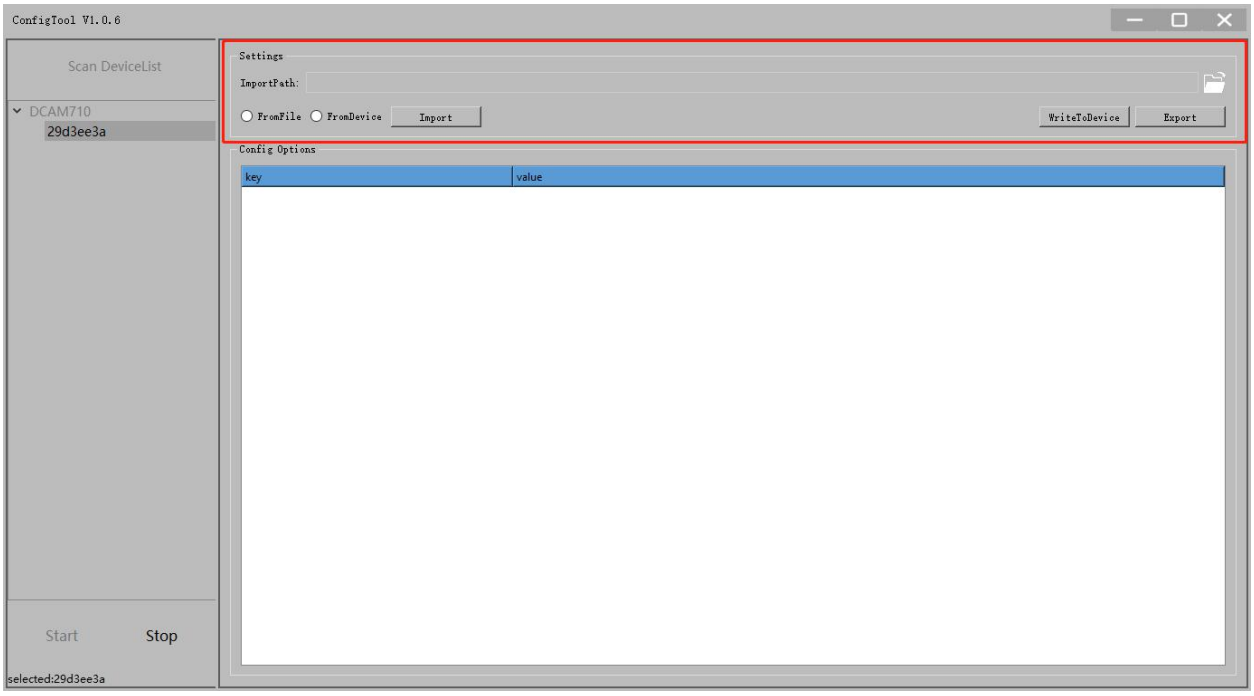


Figure 5 - DeviceList .

*DeviceList s*hows 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* :

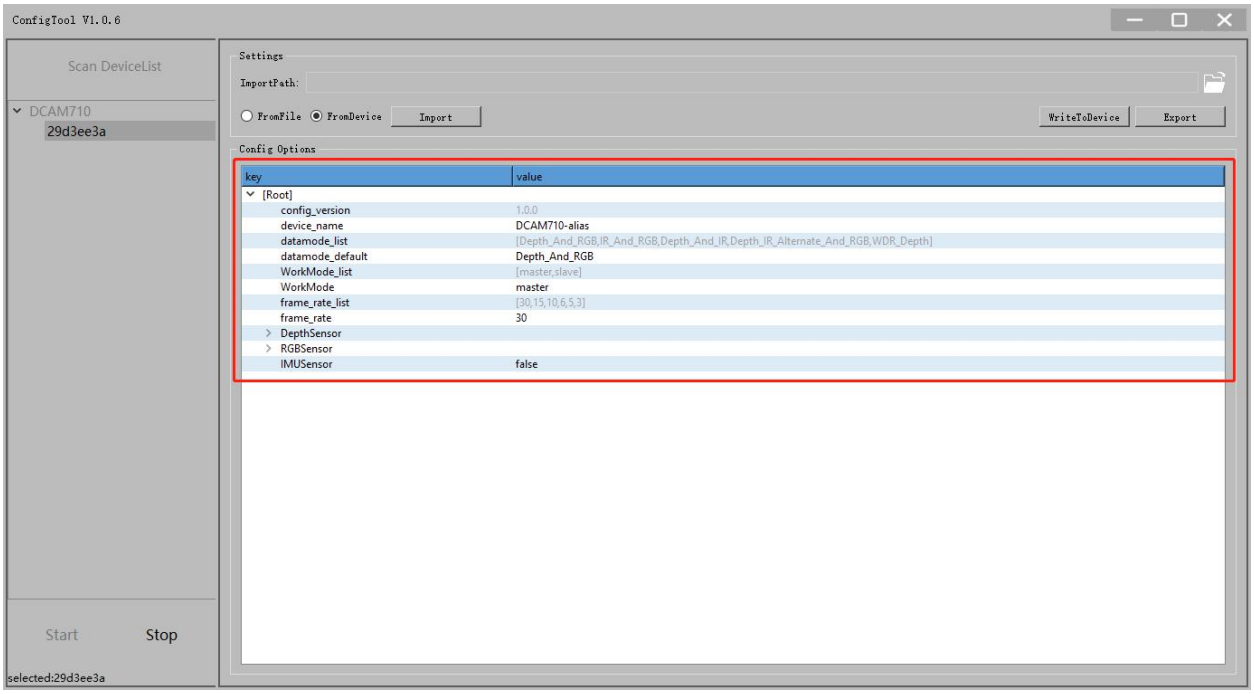
1. DoubleClick the Camera Mode in the devicelis or Click the Camera Mode first, then click “**Start”** to begin stream capture.
2. Click “**Stop**” to stop steam capture and clear the devicelist.
3. Click “**Scan DeviceList**” to get the devicelist,then repeat the step 1 to operate another Camera Mode.

5.2 Settings



1. If chose “**FromFile**”,then selcet a local config.json file that match with the camera mode, click “**Import**” to import configs. And if chose “**FromDevice**”, then click “**Import**” to import configs.
2. Modify the item in “**Config Options**”.
3. “**WriteToDevice**” or ”**Export**” to the local file.

5.3 Configs



5.3.1 All Configs

item	value	detail
config_version	x.x.x	
device_name	*	
datamode_list	{Depth, IR, Depth_And_IR, Depth_And_RGB, IR_And_RGB, Depth_IR_Alternate_And_RGB, WDR_Depth}	
datamode_default	one item in the datamode_list	
WorkMode_list	{ master, slave }	
WorkMode	one item in the WorkMode_list	
frame_rate_list	{30, 15, 10, 6, 5, 3}	
frame_rate_range	[1, 30]	
frame_rate	one item in the frame_rate_list or one item of frame_rate_range	
isUSBEnable	true/false	
isSocketEnable	true/false	
DepthSensor	See:5.2.2 DepthSensor Configs	
RGBSensor	See:5.2.2 RGBSensor Configs	
IMUSensor	See:5.2.2 IMUSensor Configs	

5.3.2 DepthSensor Configs

item		value	detail
enabled		true/false	
dsp_enable		true/false	
random_pattern		true/false	reserve
depth_range_list		{ 0, 1, 2, 3, 4, 5, 6, 7, 8 }	
BG_threshold_range		[0, 100]	
gmm_gain_range		[0, 4095]	
pulse_count_range		[0, 600]	
Regular_config	depth_range	One item in depth_range_list	
	BG_threshold	One item in BG_threshold_range	
	gmm_gain	One item in gmm_gain_range	
	pulse_count	One item in pulse_count_range	
WDR_config	WDR_Number_Range	[2, 3]	depth_range count list
	WDR_Number	One item in WDR_Number_Range	2 or 3

	WDR_frame_No.0	The same with Regular_config	
	WDR_frame_No.1	The same with Regular_config	
	WDR_frame_No.2	The same with Regular_config	If the WDR_Number is2，this item is invalid

5.3.3 RGBSensor Configs

item	value	detail
enabled	true/false	
resolution_list	{1920_1080, 1280_720, 640_480, 640_360}	
resolution_default	One item in resolution_list	

6 FAQ

Q1: About “The Other Instance is Running!”

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