

# [Beta Test] License Plate Search Quick Test Guide

v7.14.5.0

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# Outline

1. Introduction
2. Preliminary Spec
3. System Structure
4. Environment Requirement
5. Quick Test Setup
6. Troubleshooting

# Introduction

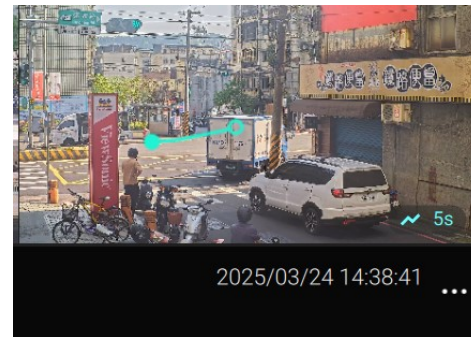
VIVOTEK release the **Beta-test VCA package** for the license plate search function as a new vehicle attribute for “Deep Search” as an add-on VEHICLE info for forensic search purpose.

## **Beta-test Purpose**

- Field test for general LPR engine
- Regional LPR hit rate & accuracy improvement.

## **Limitation:**

- Country with “**Alphanumeric**” license plate only.
  - North AM, AU, NZ, Mexico, EU, APAC,...



# Limitation:

- Only detect “**Alphanumeric**” license plates
  - General License Plate Detection Model, Not built for specific country.
  - Pilot Test Sites:
    - APAC: Taiwan
    - USA: California, Hawaii
    - Europe: UK
  - Euro alphabet are **not** support (Ex: Ü)
- Night Mode Performance will be very limited.
  - If the vehicle shape is hard to recognized at night mode, VCA might not capture the vehicle at 1<sup>st</sup> place. The complementary method by motion detection is limited to low-traffic scene like mid-night entrance.



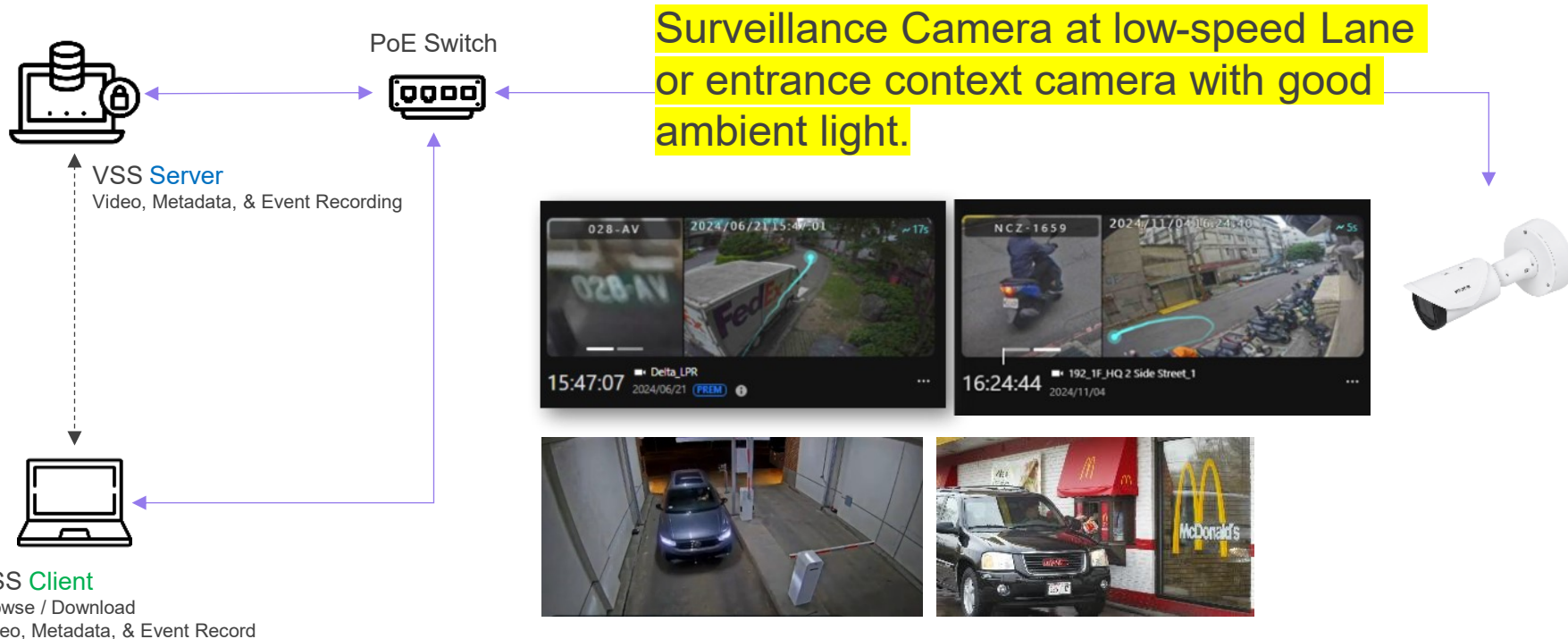
# Preliminary Spec

Test Scene: Day Mode Only.



Vehicle Detection Condition		
Minimum Size of Vehicle	5 MP	Min. size: length 56 pix Recommend: 76 pixels ( ~ 3% of Width)
	8 MP (4K)	Min. size: width 83 pix Recommend: 114 pixels ( ~ 3% of Width)
License Plate Search Condition		
Minimum Size of Vehicle	5 MP	<b>Min. License Plate Height: 25 pix ( ~ 1.3% of Width)</b>
	8 MP (4K)	<b>Min. License Plate Height: 25 pix ( ~ 1% of Width)</b>
Speed	$\leq 30 \text{ km / h (18.6 mph)}$	

# Test System Structure





# Camera Models for License Plate Search Beta-test

## Platform 1

- **[Recommended]** IB9387-EHTV-V3 / IB9391-EHTV-V2
- FD9387-EHTV-V3 / FD9391-EHTV-V2
- CC9391-HV / CC9381-HV-V2 / CC9390-HV / CC9380-HV-V2

[<Download the sample VCA package for “Platform 1”>](#)

## Platform 2

- IB9389-EHV-V3 / IB9389-EHTV-V3 / IB9399-EHV / IB9399-EHTV
- FD9389-EHV-V3 / FD9389-EHTV-V3 / FD9399-EHV / FD9399-EHTV

[<Download the sample VCA package for “Platform 2”>](#)

# Environment Requirement

## Backend

### VSS Server v1.4 Version

- OS: Windows 11, 10 (64-bit)
- CPU: 8th Generation Intel® Core™ i3 Processors desktop version (i3-8100) or above\*
- RAM: 8 GB or above

### VSS Client v1.4 Version

- OS: Windows 11, 10 (64-bit) / macOS 13, 14
- CPU: 8th Generation Intel® Core™ i7 Processors desktop version (i7-8700) or above
- RAM: 8 GB or above
- Supported Browsers:
  - Google Chrome 128.0.6613.114 or later
  - Microsoft Edge 128.0.2739.54 or later

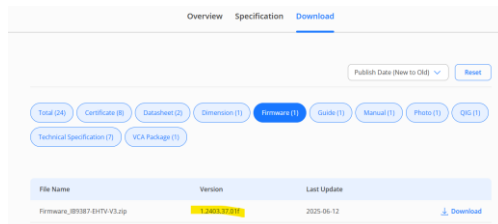
## Camera

### Minimum Requirement for Camera Firmware

**FW 2403 version :v1.2403.XX.XXX or later**

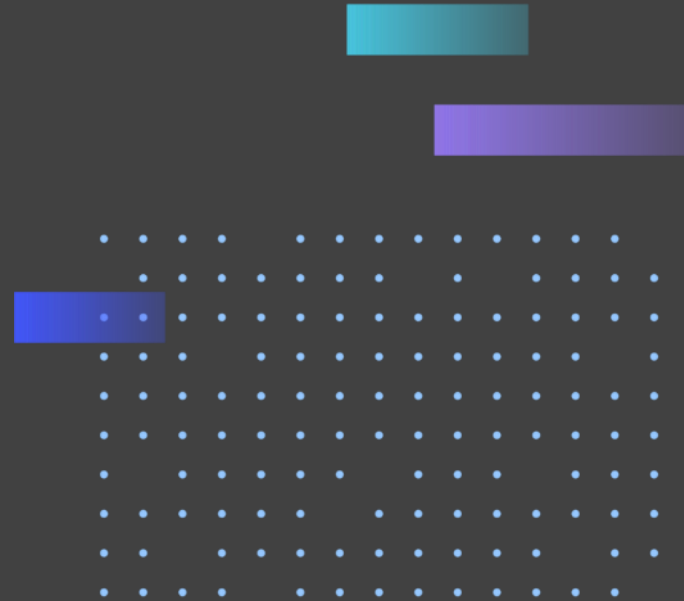
Please upgrade the camera with latest firmware on VIVOTEK product page.

- [IB9387-EHTV-V3](#) / [IB9391-EHTV-V2](#)
- [FD9387-EHTV-V3](#) / [FD9391-EHTV-V2](#)
- [IB9389-EHV-V3](#) / [IB9389-EHTV-V3](#) / [IB9399-EHV](#) / [IB9399-EHTV](#)
- [CC9391-HV](#) / [CC9381-HV-V2](#) / [CC9390-HV](#) / [CC9380-HV-V2](#)



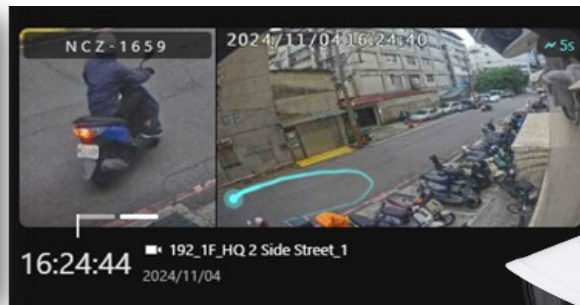
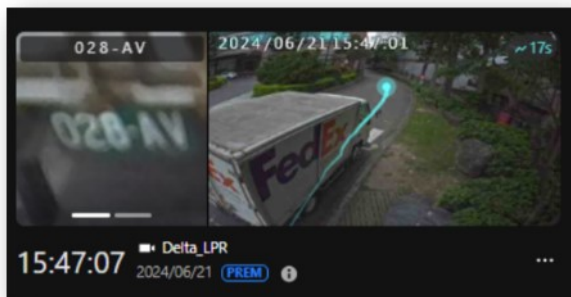


# Quick Test Setup



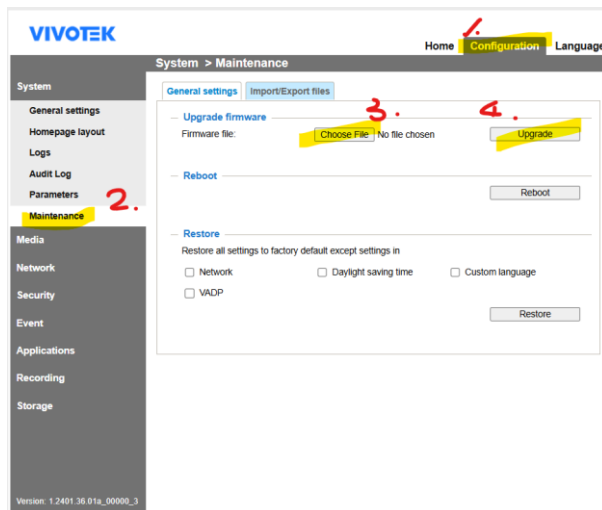
# 1. Choose the test site

Surveillance Camera at low-speed Lane or entrance context  
camera with good ambient light condition.

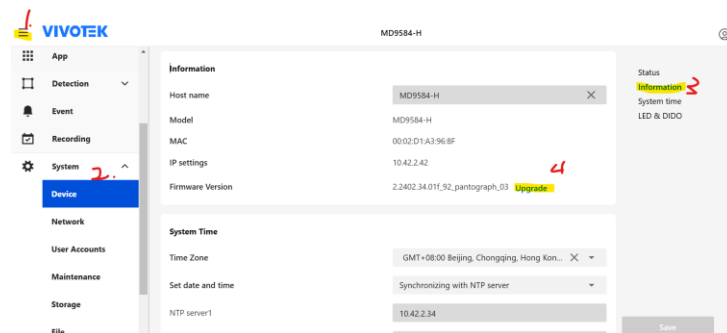


## 2. Upgrade Camera Firmware

Old UI (FW before 1.2401.XX.XXX)



New UI (FW after 1.2403.XX.XXX)



### 3. Check Version after upgrade

Check FW Version: **1.2403.XX.XXX or later**

The screenshot shows the VIVOTEK web interface for device IB9387-EHTV-V3. The left sidebar contains the following menu items: Event, Recording, System (highlighted), Device, Network, User Accounts, Maintenance, Storage, File, Logs & Parameter, and Theme. The main content area is titled 'Information' and displays the following details:

Field	Value
Host name	IB9387-EHTV-V3
Model	IB9387-EHTV-V3
MAC	00:02:D1:82:78:44
IP settings	192.168.21.117
Firmware Version	1.2403.17.01d_vca_09 <a href="#">Upgrade</a>

Below the 'Information' section is the 'System Time' section, which includes:

- Time Zone: GMT+08:00 Beijing, Chongqing, Hong Kong, Ku
- Set date and time: Synchronizing with NTP server
- NTP server1: 10.135.5.108
- NTP server2: time3.rockwell.com

On the right side of the 'Information' section, there is a 'Status' box with the following information:

- Information
- System time
- LED & DIDO

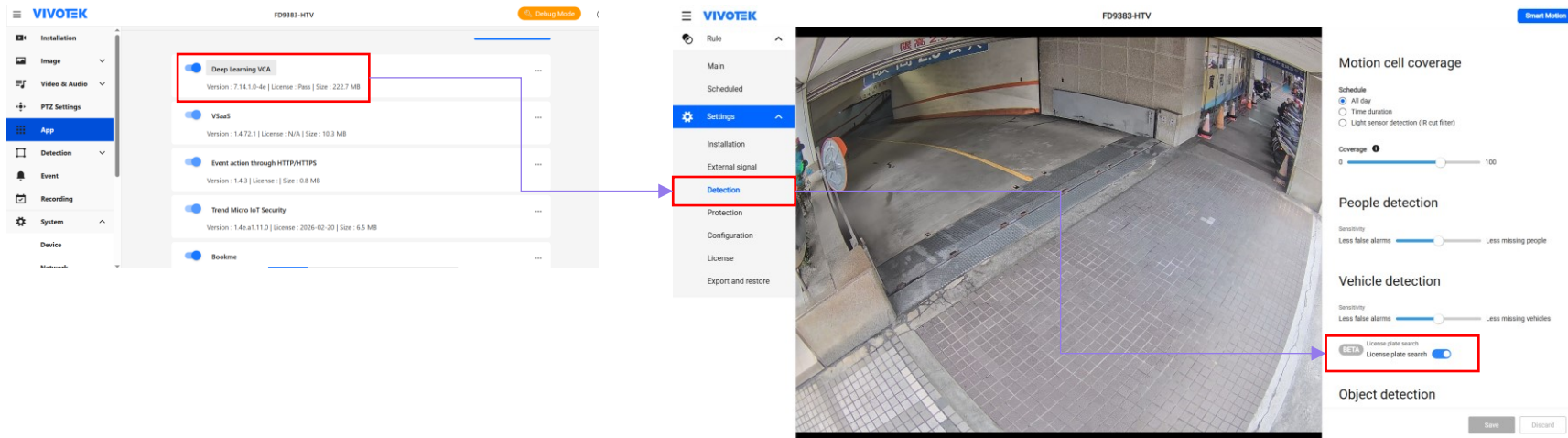
Check VCA Version: **7.14.5.0**

The screenshot shows the VIVOTEK web interface for device FD9383-HTV. The left sidebar contains the following menu items: Installation, Image, Video & Audio, PTZ Settings, App (highlighted), and Detection. The main content area is titled 'App' and displays the following information:

Application	Version	License	Pass	Size
Deep Learning VCA	7.14.5.0	Pass		232.1 MB
Event action through HTTP/HTTPS	1.4.3	License		0.8 MB

There is an 'Upload' button in the top right corner of the 'App' section.

## 4. Turn On the “License Plate Search” function



**BETA** License plate search  
License plate search ☒

# Check the time zone setting

Please check you time zone setting is correct.

**VIVOTEK** FD9383-HTV Debug Mode

**Device**

**Storage**  
1.92 GB  
Used: 0.40 GB

**Information**

Host name	FD9383-HTV
Model	FD9383-HTV
MAC	00:02:D1:86:34:9F
IP settings	192.168.21.118
Firmware Version	1.2403.43.01d <a href="#">Upgrade</a>

**System Time**

**Time Zone** GMT+08:00 Beijing, Chongqing, Hong Kong, Ku

**Set date and time** Synchronizing with NTP server

**NTP server1** pool.ntp.org

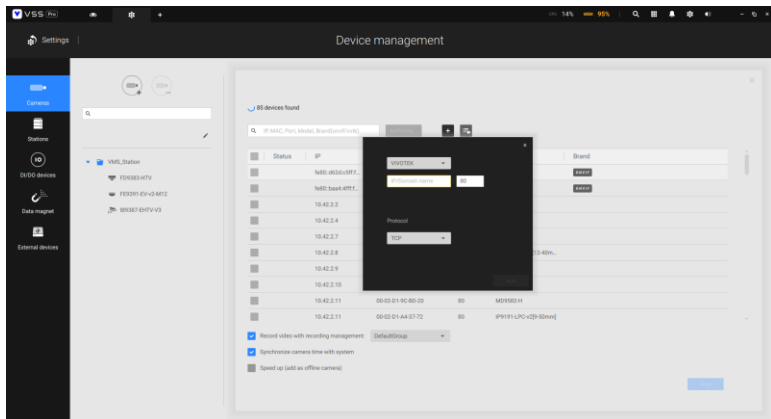
**NTP server2** time2.google.com

**NTP server3** time3.google.com

**Save**

**Status**  
Information  
System time  
LED

## 5. Add the camera into the VSS v1.4

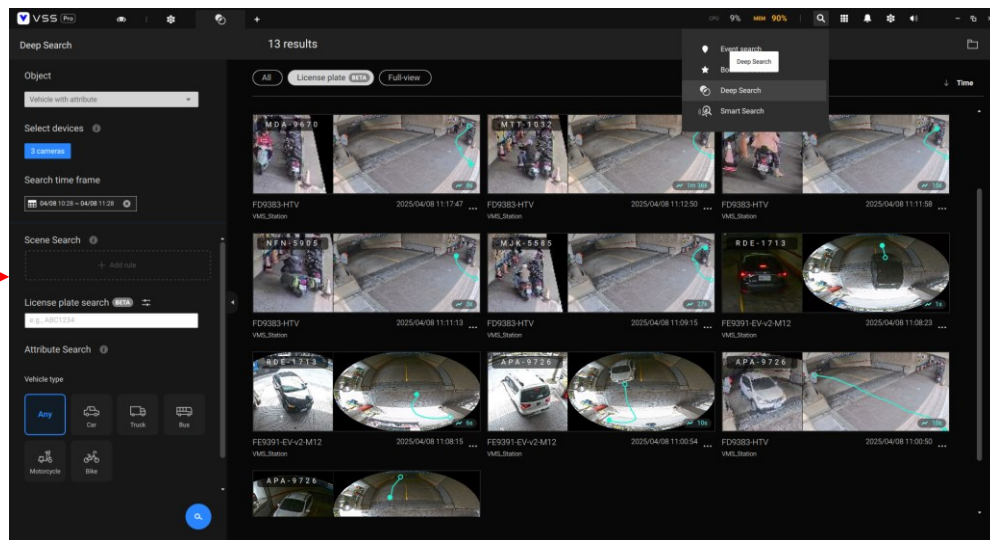


**Note:**

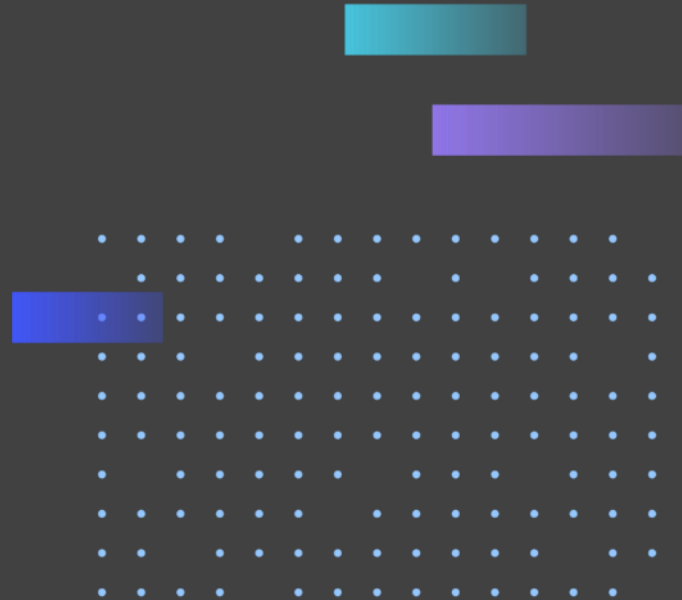
**Why should we wait for 5 mins before display the result on VSS ?**

VSS will query the object DB from device regularly. So, the object info update will not be real-time on VSS.

**Wait for 5 mins**, then Deep Search “Vehicle with attribute”



# Troubleshooting





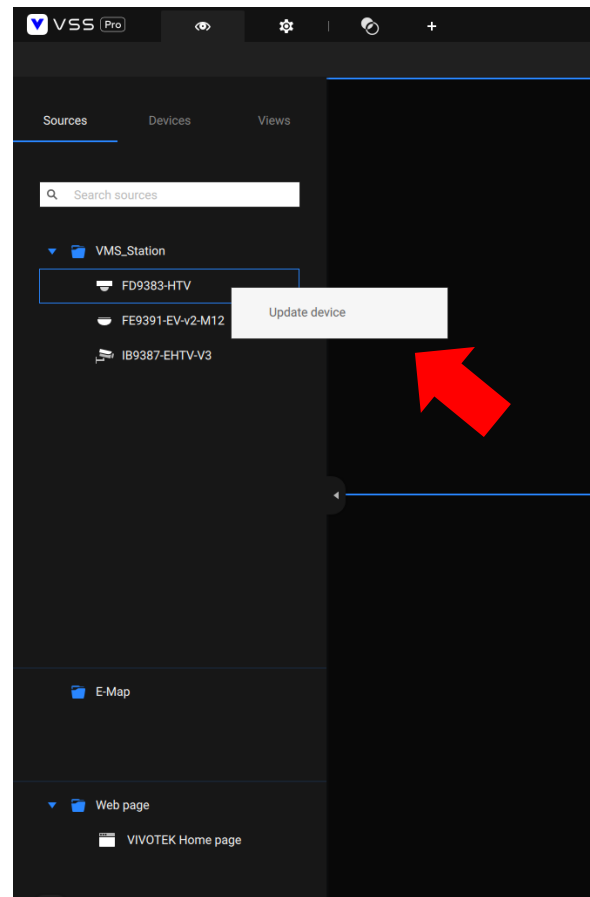
# Trouble Shooting

**Q: Can not get vehicle with license plate info on VSS Deep Search.**

**A:**

1. Check the camera FW & VCA version.
2. Check the “license plate search” beta function are enabled.
3. “Update the device” in VSS
  1. VSS live page – Source
  2. Right click on the camera.
  3. Click the “Update device”
4. Make sure low-speed vehicle passing or stop in front of the camera.  
Wait for 5 mins, Deep-search “Vehicle with attribute” again.

**Contact:** [vca.support@vivotek.com](mailto:vca.support@vivotek.com)



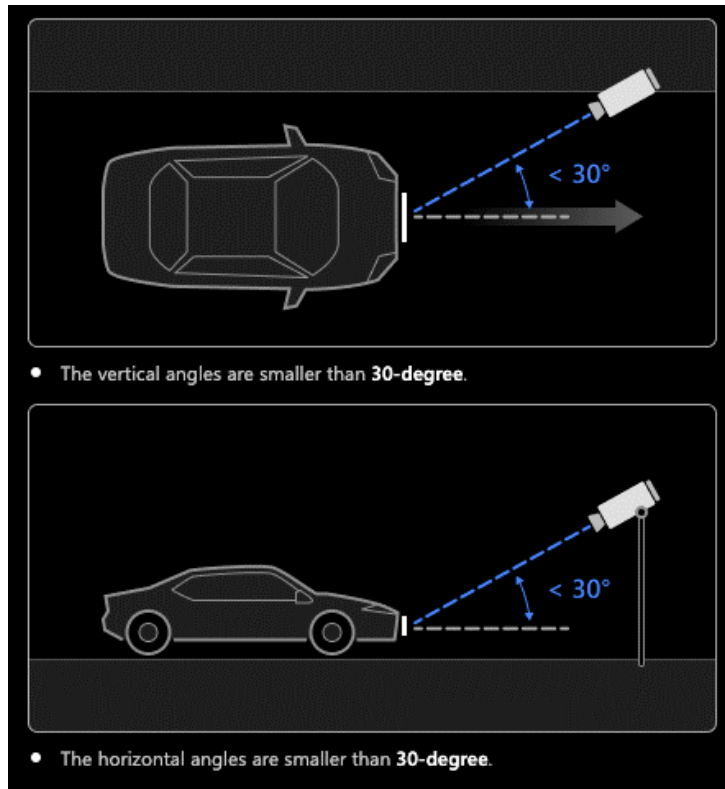
# Best Camera Setting for License Plate Capture

# Best Camera Setting for License Plate Capture

VIOVTEK License plate search is a add-on feature for forensic search.

If user need to apply it on high capture and accuracy rate application like vehicle IN/OUT record. We recommend following setting.

- Facing Angle  $< 30^\circ$
- Good Illumination Condition
- Low Vehicle Speed (  $< 30$  km/h)



# Thank You for Your Attention.

