

LPR Installation Reference Guide

1. Installation Angle

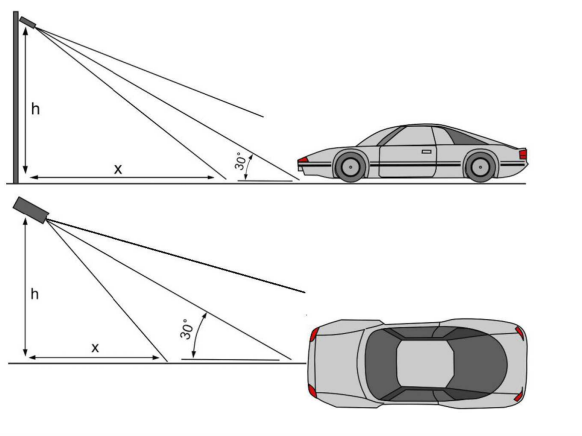
The ideal vertical image capture angle to the target license plate is 0 degrees, or straight horizontal.



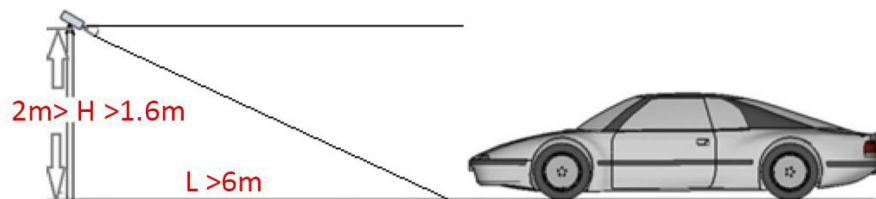
However, in reality vehicles/license plates have differences in heights and to avoid the headlight shooting directly to the camera at night time, it may be necessary to mount the camera higher, increasing the vertical image capture angle.

Recommendation:

- Vertical angle should not exceed 15 degrees.
- Horizontal angle should not exceed 15 degrees.



Note: for entrance surveillance, the camera height (H) should be around 1.6 meter to 2 meters.



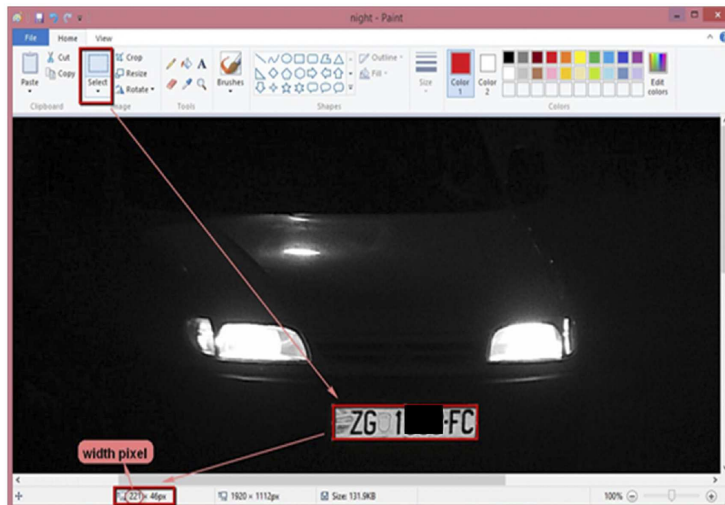
2. Pixel Requirement


Purpose:

The dimensions of the license plate vary according to different areas. To get a valid image of LPR camera, you need to measure the plate size and define the minimum valid pixels in the live view.

Steps:

- A. Capture a live view picture of passing vehicle.
- B. Measure the pixel of the license plate.
 - a. Open Paint.



- b. Click  and select the license plate. The height and width pixel of the frame displays in the lower left corner of the paint interface.

Notes:

- License plate itself must be clear in the video.
- The height of plate should be between 16 to 50 pixels, and for the better recognition result, the height of plate should be between 20 to 40 pixels.
- The width of plate should be between 100 to 200 pixels, and for the better recognition result, the width of plate should be between 100 to 180 pixels.

3. Configuration

- The camera needs to have SD card installed as picture storage.
- To reduce the effect of the headlights at night, the shutter speed should be no less than 1/500 s.
- To avoid overexposure of license plate, the recommended value of Gain settings should be 20.
- Turn off the WDR and BLC functions to keep all the captured image details.
- Keep the Digital Noise Reduction value between 10 and 20.

Login to the web GUI of camera, and go to configuration >> Road Traffic >> detection configuration. Move the left and right yellow lines on the image to set the license plate detection region. The green borders will change automatically after you click save button. Make sure both green borders are perpendicular to the direction of the car. The red arrow indicates the direction of the driving car.

Detection Configuration
Picture
Camera
Blacklist & Whitelist
Real-time LPR Result

Detection Type Vehicle Detection

Enable

Area Settings
Arming Schedule and Linkage Method

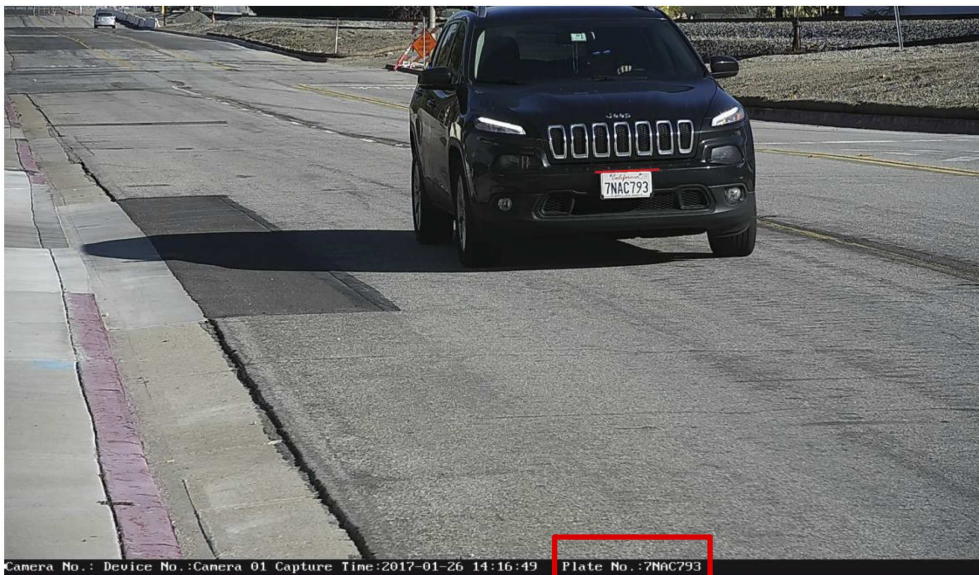
Total Number of Lanes 1

Plate Mode Large

Select Mode City Street

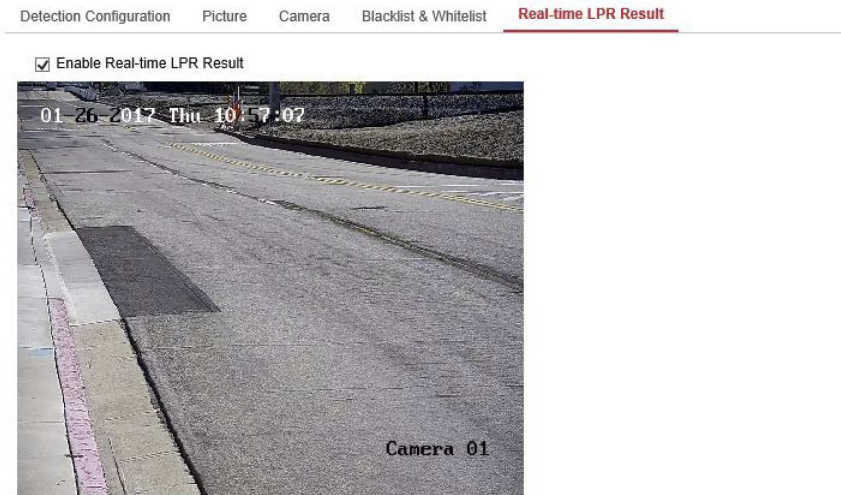
Save

The license plate captured in the image tilt angle must be within +/-5 degrees.



4. Results

A. In the real-time LPR Result tab, we can see the captured license plate in real time.



No.	Capture Time	Plate No.	Captured Picture	Lane No.	Direction	Matching Result
31	01-26-2017 10:50:39	7TES111		1	Forward	Other List
30	01-26-2017 10:49:30	4LVY457		1	Forward	Other List
29	01-26-2017 10:49:13	4UUF651		1	Forward	Other List
28	01-26-2017 10:46:14	5NDT254		1	Forward	Other List
27	01-26-2017 10:43:05	7AYG885		1	Forward	Other List

B. In the Picture, we can search and download all the captured pictures. Select File Type as **Vehicle Detection** and choose day and time.

Live View Playback **Picture** Configuration [admin](#) [Help](#) [Logout](#)

Download by File

Download Stop Downloading

Progress

Search Conditions		File List			
File Type	No.	File Name	Time	File Size	
Vehicle Detection	<input type="checkbox"/> 1	20170124094138_7RDX503	2017-01-24 09:41:38	0	
	<input type="checkbox"/> 2	20170124094353_55814N1	2017-01-24 09:43:53	0	
Plate No.	<input type="checkbox"/> 3	20170124094931_D60790	2017-01-24 09:49:31	0	
	<input type="checkbox"/> 4	20170124095457_7NWM756	2017-01-24 09:54:57	0	
Start Time	<input type="checkbox"/> 5	20170124095507_7NWM756	2017-01-24 09:55:07	0	
2017-01-23 00:00:00	<input type="checkbox"/> 6	20170124101306_4CWM636	2017-01-24 10:13:06	0	
End Time	<input type="checkbox"/> 7	20170124101418_84031M1	2017-01-24 10:14:18	0	
2017-01-27 23:59:59	<input type="checkbox"/> 8	20170124101424_7MWN108	2017-01-24 10:14:24	0	
<input type="button" value="Search"/>	<input type="checkbox"/> 9	20170124101753_7BMU603	2017-01-24 10:17:53	0	
<input type="button" value="Export"/>	<input type="checkbox"/> 10	20170124101851_5WVYN836	2017-01-24 10:18:51	0	
	<input type="checkbox"/> 11	20170124102312_7S8T014	2017-01-24 10:23:12	0	
	<input type="checkbox"/> 12	20170124102409_8ZWX920	2017-01-24 10:24:09	0	
	<input type="checkbox"/> 13	20170124102414_7VYXS88	2017-01-24 10:24:14	0	
	<input type="checkbox"/> 14	20170124102437_7R0U166	2017-01-24 10:24:37	0	
	<input type="checkbox"/> 15	20170124102919_79717A2	2017-01-24 10:29:19	0	
	<input type="checkbox"/> 16	20170124102931_7TLX577	2017-01-24 10:29:31	0	
	<input type="checkbox"/> 17	20170124103417_89319P1	2017-01-24 10:34:17	0	
	<input type="checkbox"/> 18	20170124103450_8LUG701	2017-01-24 10:34:50	0	
	<input type="checkbox"/> 19	20170124103743_8NDT254	2017-01-24 10:37:43	0	
	<input type="checkbox"/> 20	20170124103749_85603F1	2017-01-24 10:37:49	0	
	<input type="checkbox"/> 21	20170124104438_8YOF133	2017-01-24 10:44:38	0	
	<input type="checkbox"/> 22	20170124104449_8ZXC114	2017-01-24 10:44:49	0	
	<input type="checkbox"/> 23	20170124104506_25792M1	2017-01-24 10:45:06	0	
	<input type="checkbox"/> 24	20170124104640_8EUR543	2017-01-24 10:46:40	0	

Total 960 Items << 1/10 >>

The file is named by time_plate.jpg. Select files and click download. Make sure you are running as administrator for Internet Explorer so you can find the download pictures in your computer.