

## IPHLPR2-83M-W LPR IP Security Camera User Manual

### 1. Installation Angle

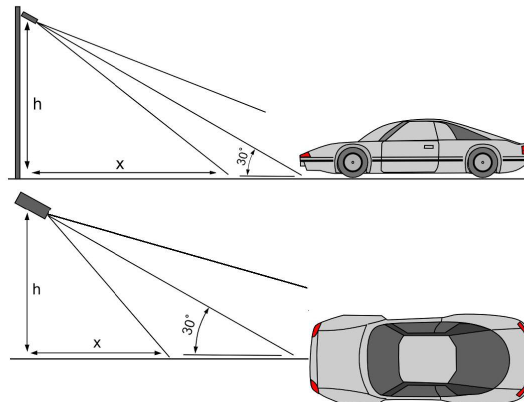
The ideal vertical image capture angle to the target license plate is 0 degrees, or straight horizontal.



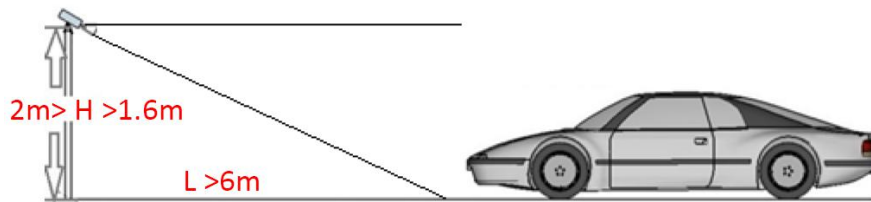
However, in reality vehicles/license plates have differences in heights and to avoid the headlight shooting directly to the camera at night time, it may be necessary to mount the camera higher, increasing the vertical image capture angle.

#### ***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.



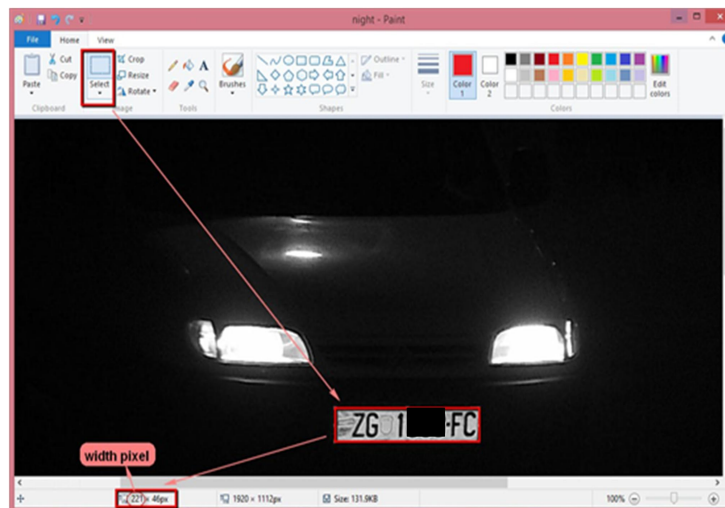
## 2. Pixel Requirement


### *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.

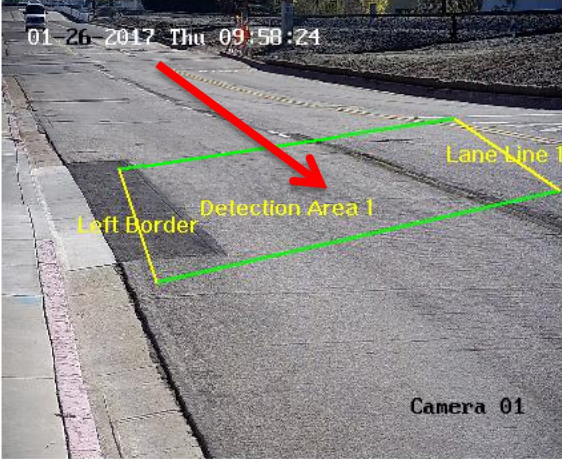
Login to the web GUI of camera, and go to configuration >> Road Traffic >> detection configuration. Move the left and right yellow lines on the image to set the license plate detection region. The green borders will change automatically after you click save button. Make sure both green borders are perpendicular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



01-26-2017 Thu 09:58:24

Lane Line 1

Left Border


Detection Area 1

Camera 01

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  $\pm 5$  degrees.




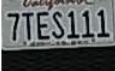




## 4. Results

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

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

☒ Enable Real-time LPR Result



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			
	No.	File Name	Time	File Size
File Type 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_D6D790	2017-01-24 09:49:31	0
Start Time 2017-01-23 00:00:00	<input type="checkbox"/> 4	20170124095457_7NWM756	2017-01-24 09:54:57	0
	<input type="checkbox"/> 5	20170124095507_7NWM756	2017-01-24 09:55:07	0
End Time 2017-01-27 23:59:59	<input type="checkbox"/> 6	20170124101306_4CWM636	2017-01-24 10:13:06	0
	<input type="checkbox"/> 7	20170124101410_64031M1	2017-01-24 10:14:18	0
	<input type="checkbox"/> 8	20170124101424_7MWN108	2017-01-24 10:14:24	0
<div>Search</div>	<input type="checkbox"/> 9	20170124101753_7BMU603	2017-01-24 10:17:53	0
	<input type="checkbox"/> 10	20170124101851_5WYN836	2017-01-24 10:18:51	0
<div>Export</div>	<input type="checkbox"/> 11	20170124102312_7S8T014	2017-01-24 10:23:12	0
	<input type="checkbox"/> 12	20170124102409_6ZWX020	2017-01-24 10:24:09	0
	<input type="checkbox"/> 13	20170124102414_7VYK588	2017-01-24 10:24:14	0
	<input type="checkbox"/> 14	20170124102437_7RIU166	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_6LUG701	2017-01-24 10:34:50	0
	<input type="checkbox"/> 19	20170124103743_5NDT254	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_6YOF133	2017-01-24 10:44:38	0
	<input type="checkbox"/> 22	20170124104449_6ZKC114	2017-01-24 10:44:49	0
	<input type="checkbox"/> 23	20170124104506_25792M1	2017-01-24 10:45:06	0
	<input type="checkbox"/> 24	20170124104840_5EUR543	2017-01-24 10:48:40	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.