

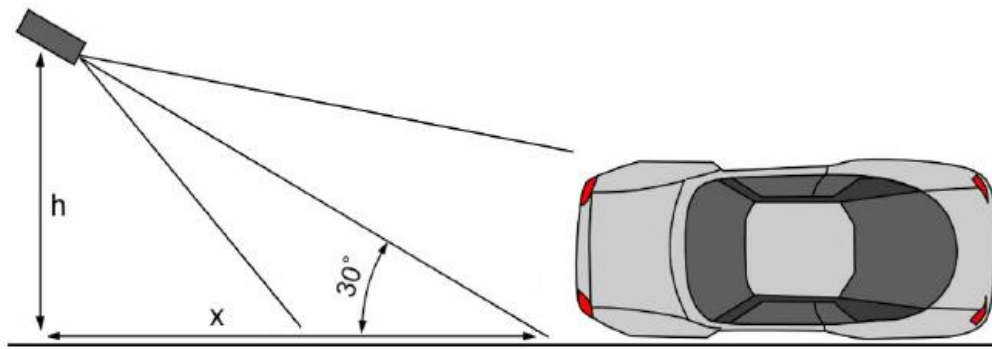
ANPR Camera Installation Limitation

Range

Model: ITC237-PU1A(PW1A), ITC237-PU1B(PW1B), ITC215-PW4I-(IR)LZF27135

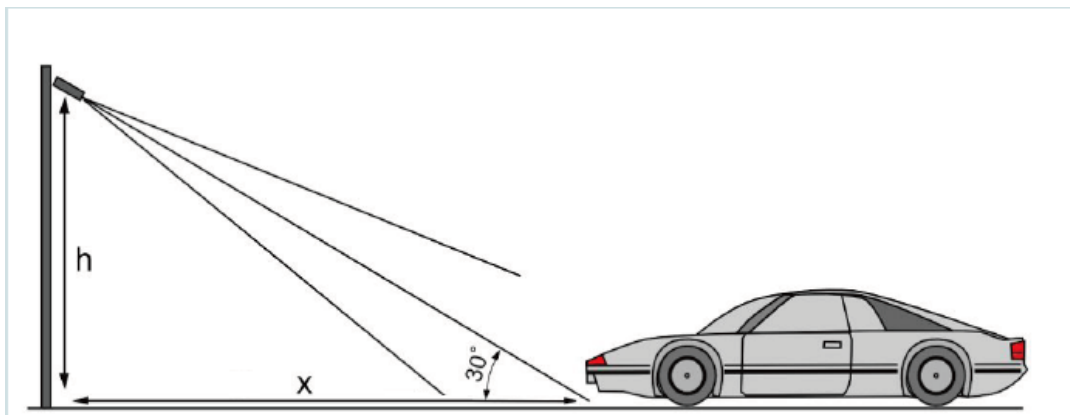
1. Installation limitation

1.1 Horizontal Direction



The angle between camera lens and the farther lane border shall be smaller than 30° . The camera is at a distance of h meters away from the further side of lane, and snapshot distance is x meters, $x \geq 1.7h$.

1.2 Vertical Direction



No matter front-installation or side-installation, the angle between camera lens and the ground shall be smaller than 30° .

Camera installation height is h , snapshot distance is x , $x \geq 1.7h$.

1.3 Plate Angle of Inclination



Make sure plate inclination angle is always smaller than 5°.

1.4 Plate Pixel





Make sure the pixel size of the plate at the snapshot position is within certain range below:

Region	Type	Size (pixel)
Europe, UK, Turkey, Israel	Single-row plate	Width of Plate: 130~180
	Double-row plate	Width of plate: 70~100
CIS region, Armenia, Serbia	Single-row plate	Width of Plate: 150~180
	Double-row plate	Width of Plate: 100~130
Australia & New Zealand, North America	All	Height of character: 20~50
Other regions not list		Width of Plate: 100~180

You may observe the pixel size in Paint tool.

2. Installation Scene

Recommended plan:

Installation Method	Camera Height	Snapshot Distance x	Lane Width	Vehicle Speed*	Model
Front-Installation	6m	25m	3.5m~7m	≤60kmh	ITC237-PU1B
Side-Installation	1.2m	4-6m	3.5m	≤40kmh	ITC237-PW1B, ITC215-PW4I
	2m	7m±2m	3.5m	≤40kmh	ITC237-PU1B
	3m	12m±2m	3.5m~7m	≤60kmh	ITC237-PU1B
	4m	16m±2m	3.5m~7m	≤60kmh	ITC237-PU1B
	5m	16m±2m	3.5m~7m	≤60kmh	ITC237-PU1B

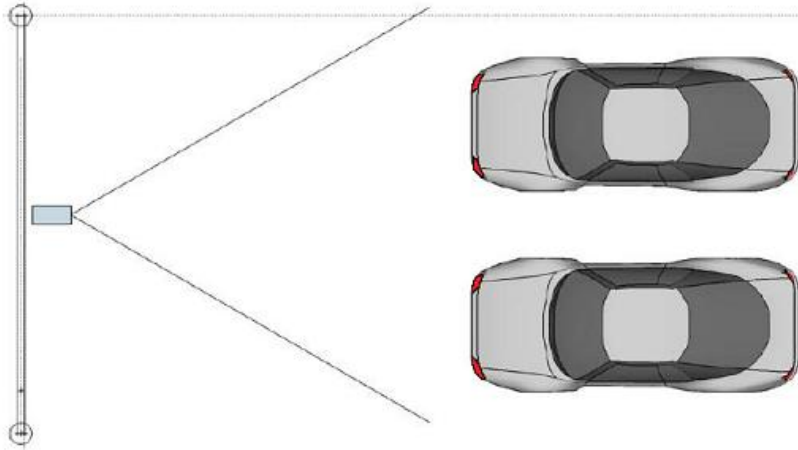
*For all the regions, except Australia & New Zealand and North America.

*For Australia, New Zealand and North America, the vehicle speed is up to 20kmh.

If there are other scenes, please refer to chapter 1.

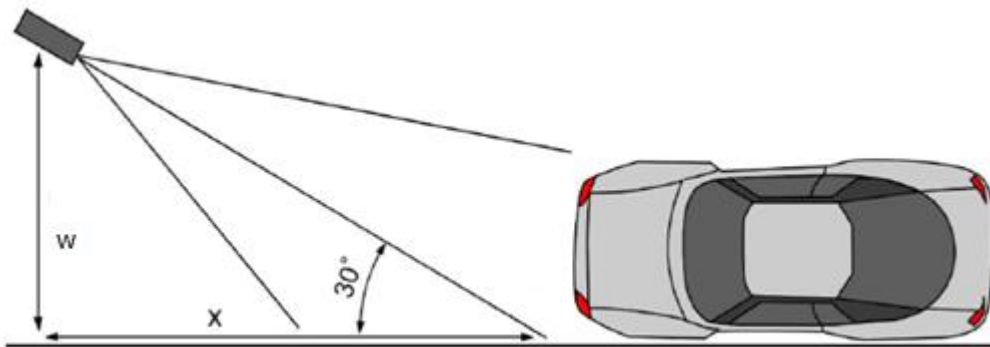
For the snapshot distance, make sure the vehicle has complete turn and can move straight with distance x .

2.1 Front-Installation



During front-installation, a camera can monitor *1* lane, only ITC237-PU1B can monitor *2* lanes when the installation height is over *3* meters. When a camera is installed at center of a lane, it monitors this lane only. When a camera is installed at border between *2* lanes, it monitors these *2* lanes at the same time.

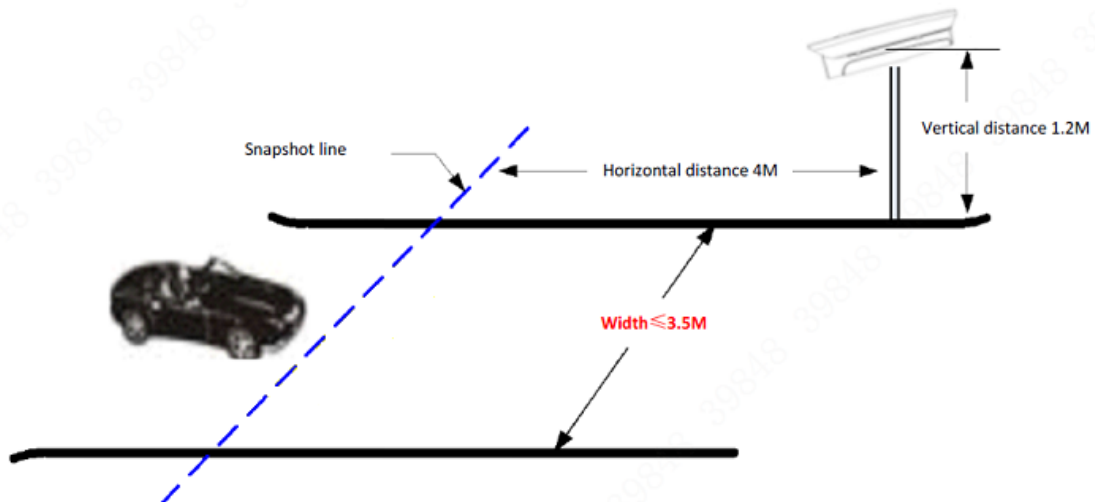
2.2 Side-Installation



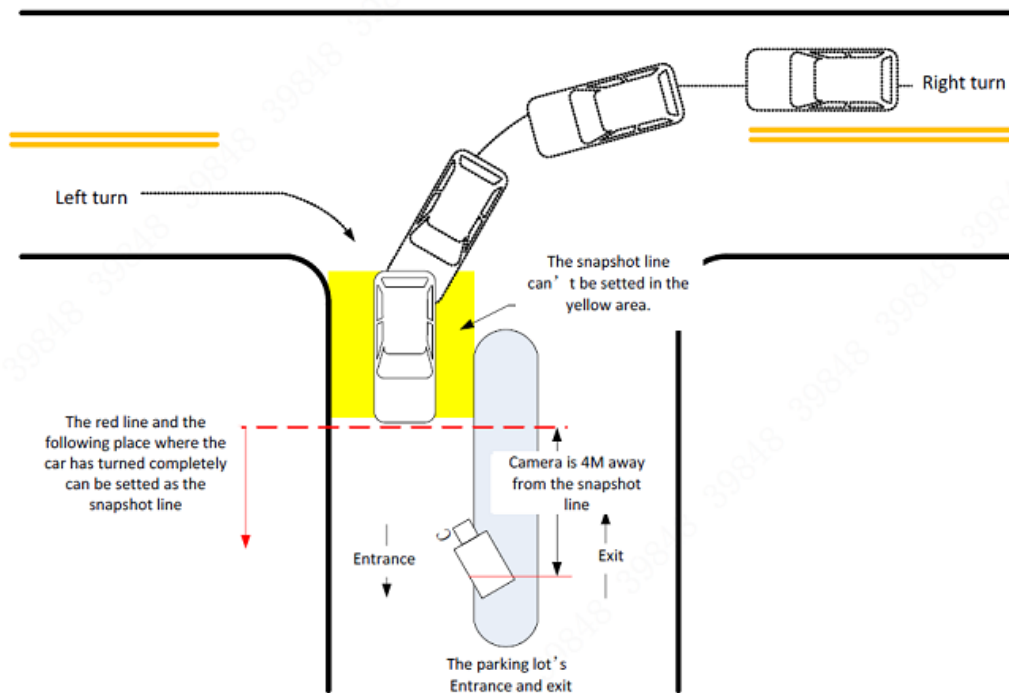
At side-installation, a camera can monitor *1* lane, only ITC237-PU1B can monitor *2* lanes when the installation height over *3* meters, The angle between camera lens and the farther lane border shall be smaller than 30° .

The camera is at a distance of w meters away from the further side of lane, and snapshot distance is x meters, $x \geq 1.7w$.

2.2.1 Installation Limitation for Vehicle Entrance Scene






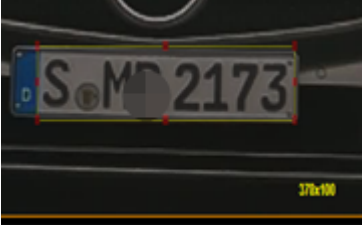
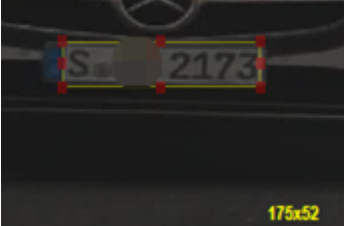







Camera installation height is 1.2m, lane width is smaller than 3.5m (If the lane is too wide, you can place isolation pile to guide vehicle flows), the horizontal distance from camera to snapshot position is 4m.



During snapshot, make sure the vehicle has complete turn and being moving straight.

3. Checklist

This chapter is to help you solve the issues when you are unable to get the correct results.

	Bad Example	Good Example	Y/N	Tips:
Definition				Adjusting focal length or shutter speed
Plate Pixel	 67x31  370x100	 175x52		Adjust focal length or shorten the distance between camera and vehicle
Overexposure				Adjust shutter speed and IR light brightness.
Angle	 			Adjust angle refer to chapter 1
Insufficient light				Adjust the shutter speed or provide some extra light

