TruVision S Series ANPR Camera Installation Guide

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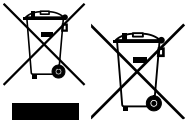
Certification



Contact information EMEA: https://firesecurityproducts.com

Australian/New Zealand: https://firesecurityproducts.com.au/

Product documentation Please consult the following web links to retrieve the electronic version of the product documentation. The manuals are available in several languages.

English

Français

Italiano

Deutsch

Polski

Español

Nederlands

Português

Suomi

Content

Introduction

Product overview

This is the installation guide for S Series ANPR camera models:

TVLP-S01-0401-BUL-G	TruVision ANPR camera, 4MP, 2.8 to 12 mm, 50 m IR, Wiegand, IP67, IK10, POE+ (802.3-at) / 12VDC
TVLP-S01-0402-BUL-G	TruVision ANPR camera, 4MP, 8 to 32 mm, 100 m IR, Wiegand, IP67, IK10, POE+ (802.3-at) / 12VDC

Contact information and manuals / /firmware

For contact information and to download the latest manuals, tools, and firmware, go to the web site of your region:

EMEA:	https://firesecurityproducts.com Manuals are available in several languages.
Australian/ New Zealand:	https://firesecurityproducts.com.au/

Installation

This section provides information on how to install the cameras.

Installation environment

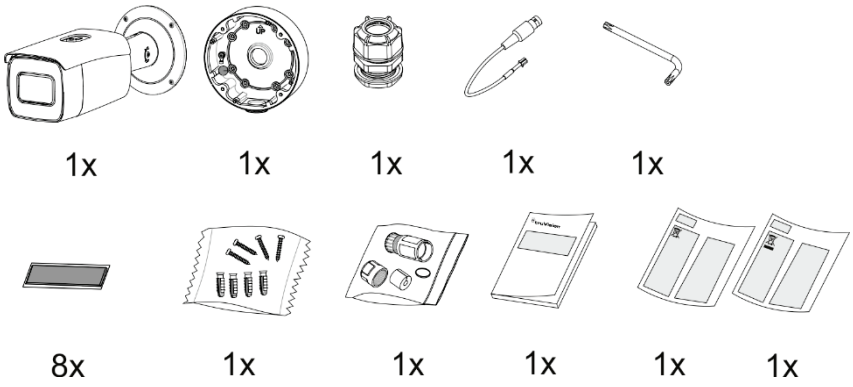
When installing your product, consider these factors:

- **Electrical**: Install electrical wiring carefully. It should be done by qualified service personnel. Always use a proper PoE switch or a 12 VDC UL listed Class 2 or CE certified power supply to power the camera. Do not overload the power cord or adapter.
- **Ventilation**: Ensure that the location planned for the installation of the camera is well ventilated.
- **Temperature:** Do not operate the camera beyond the specified temperature, humidity, or power source ratings. The operating temperature of the camera is between -30 to +60°C (-22 to 140°F). Humidity is below 90%.
- **Moisture:** Do not expose the camera to rain or moisture or try to operate it in wet areas. Turn the power off immediately if the camera is wet and ask a qualified service person for servicing. Moisture can damage the camera and create the danger of electric shock.
- **Servicing**: Do not attempt to service this camera yourself. Any attempt to dismantle or remove the covers from this product will invalidate the warranty and may also result in serious injury. Refer all servicing to qualified service personnel.

- **Cleaning**: Do not touch the sensor modules with fingers. If cleaning is necessary, use a clean cloth with some ethanol and wipe the camera gently. If the camera will not be used for an extended period, put on the lens cap to protect the sensors from dirt.

Package contents

Check the package and contents for visible damage. If any components are damaged or missing, do not attempt to use the unit; contact the supplier immediately. If the unit is returned, it must be shipped back in its original packaging.

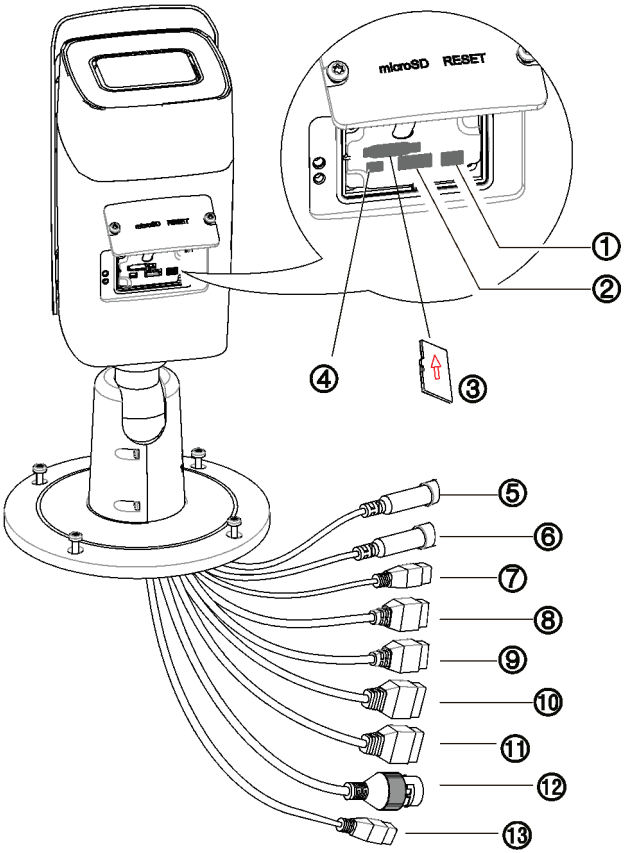


CAUTION: Use direct plug-in UL listed power supplies marked Class 2/CE certified or LPS (limited power source) of the required output rating as listed on the unit.

CAUTION: Risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Camera description

Figure 1: S Series ANPR camera



1. BNC port
2. Serial port for debugging
3. SD card
4. Reset button
5. Audio In
6. Audio Out
7. RS-485 port
8. Power input (12 VDC)
9. 12 VDC output
10. Alarm 1 In/Out
11. Alarm 2 In/Out
12. Ethernet RJ45 PoE port
13. Wiegand output

Setting up the camera

Note: If the light source where the camera is installed experiences rapid, wide variations in lighting, the camera may not operate as intended.

To quickly put the camera into operation:

1. Prepare the mounting surface.
2 Mount the camera on the mounting surface using the appropriate fasteners. See “Mounting the camera” on page 8.
3. Set up the camera’s network and streaming parameters so that the camera can be controlled over the network. For further information, please refer to the “TruVision S Series ANPR Camera Configuration Manual”.
4. Program the camera as appropriate for its location. For further information, please refer to the “TruVision S Series ANPR Camera Configuration Manual”.

IR illumination

The camera’s built-in IR illuminators provides high-quality video in low-light environments, even when there is no other illumination available.

You can configure the IR illuminators using a web browser or a client software, such as TruVision Navigator. If the function is enabled, the IR light is On when the camera enters night (black and white) mode. If disabled, the IR light is always Off.

The visible IR range may vary due to multiple factors such as weather, IR reflection level of objects in frame, lens adjustment, and camera settings. Please refer to the camera datasheet for the standard IR range.

Note: Avoid installing the IR camera closely facing a solid object such as a tree or wall. The reflection will cause over-exposure and loss of visibility of detail in field of view.

Accessing the SD card

Insert a Micro SD card with up to 265GB to use the camera as an additional recording device, or as a backup in case of failure of communication with the network video recorder (see Figure 1 on page 6). The card is not supplied with the camera.

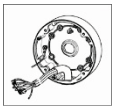
Recorded video and log files can be accessed via the web browser or via TruVision Navigator.

Mounting the camera

Mount the camera on a ceiling or wall.

1.

1-A.



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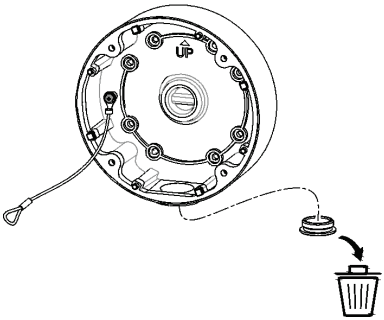

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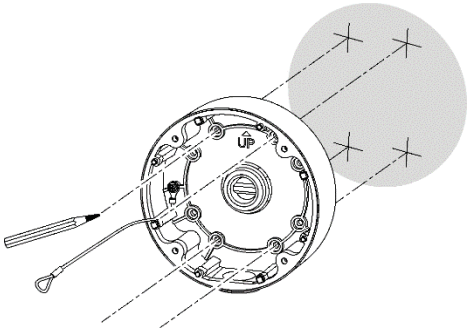

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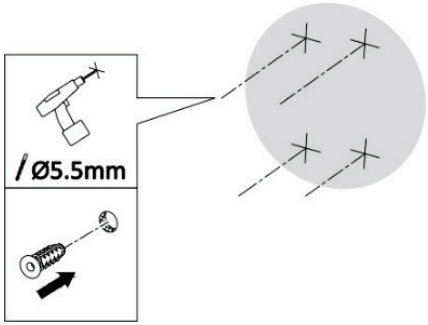

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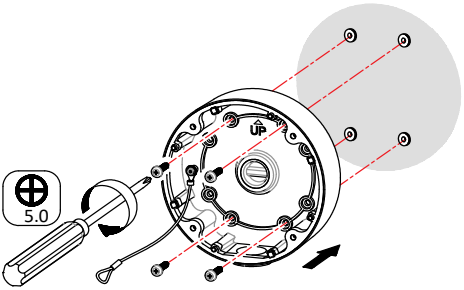

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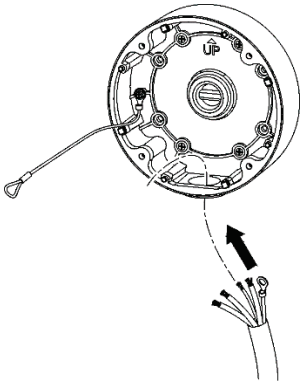

1-B.

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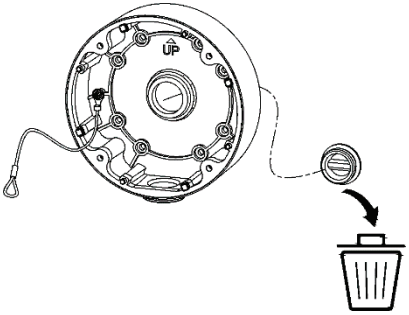

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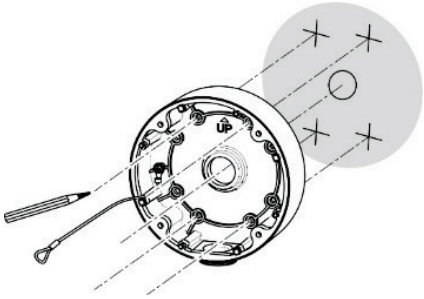

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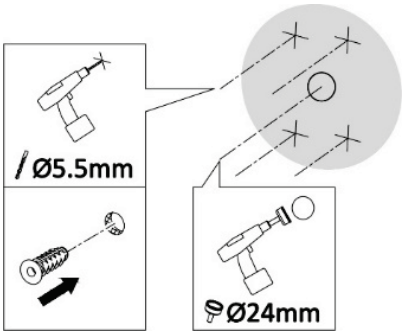

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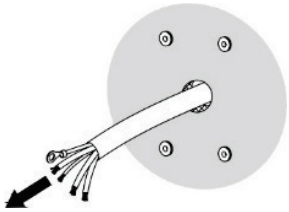

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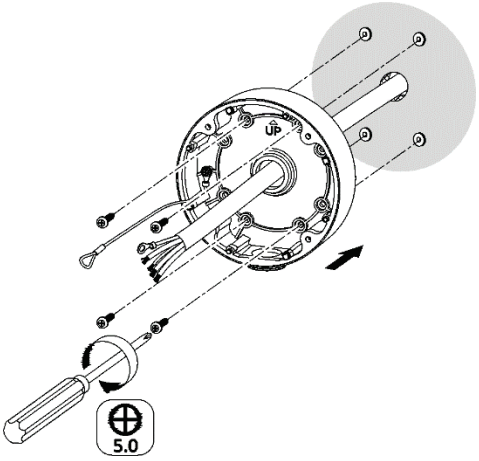

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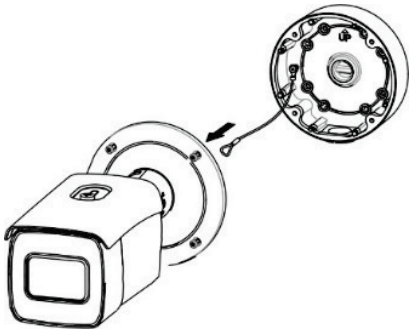

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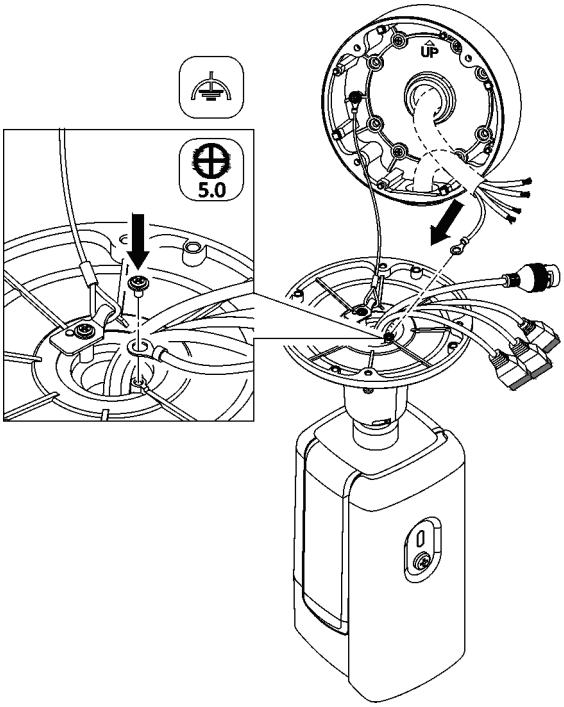

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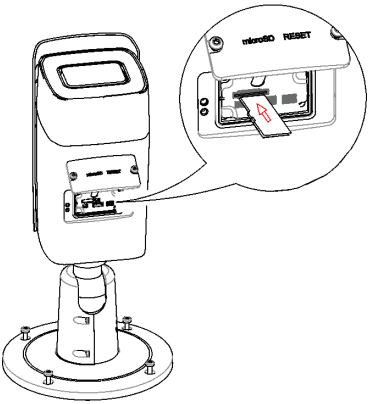

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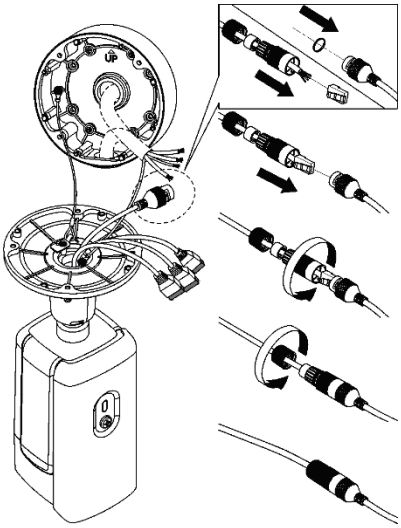

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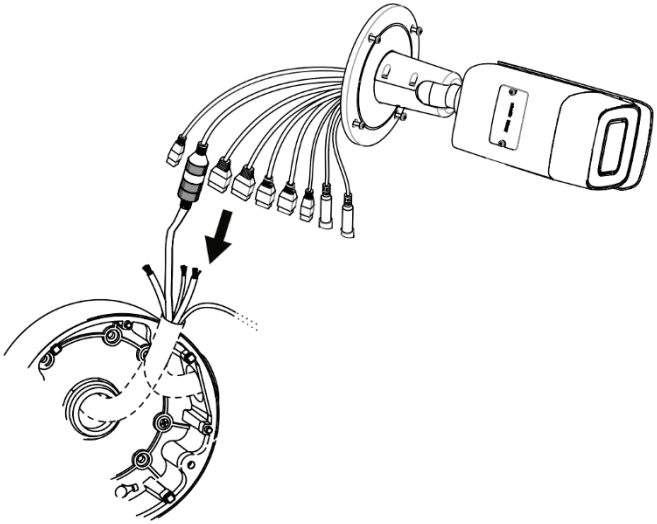

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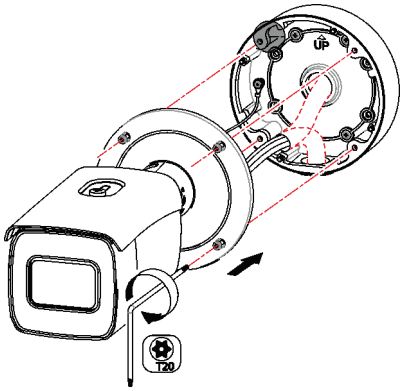

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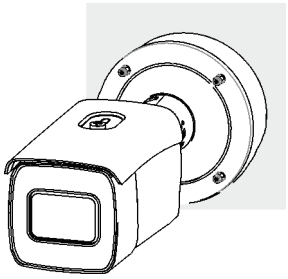


Using the camera with a TruVision recorder or another system

Please refer to the NVR/DVR user manuals for instructions on connecting and operating the camera with these systems.

Using the camera with TruVision Navigator

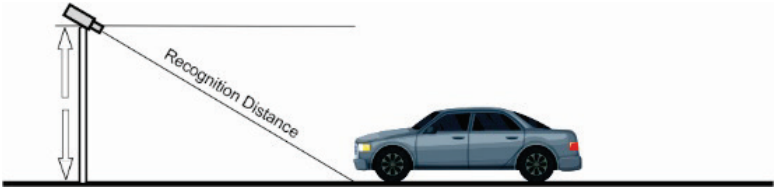
A camera can either be connected to a TruVision, or it can be added directly to TruVision Navigator. Please refer to the TruVision Navigator user manual for instructions on operating the camera with TruVision Navigator.

Installation recommendations

When installing the camera, please follow these recommendations:

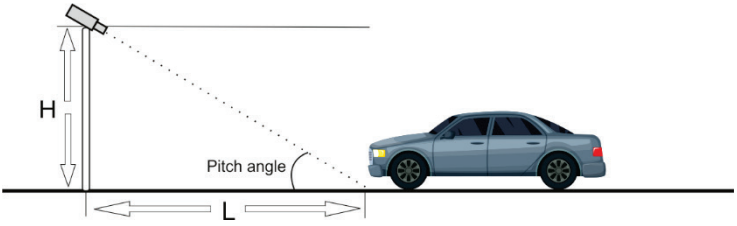
1. It is recommended that no more than two traffic lanes are covered by each ANPR camera.

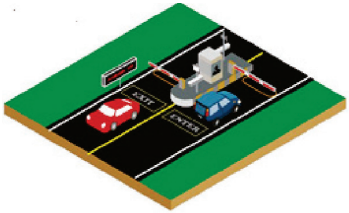
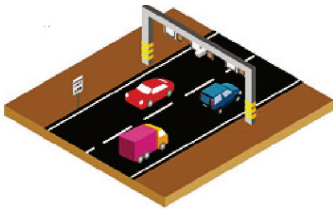
2. Select the appropriate lens according to the following table:



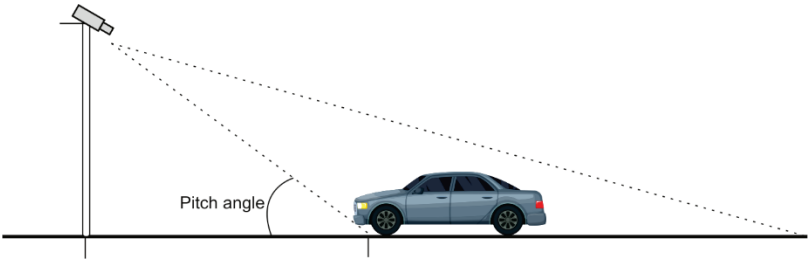
Lens (mm)	Min. recognition distance (m)	Max. recognition distance (m)
2.8~12	2	18
8~32	6	48
3.8~16	3	24
11~40	8	60

3. Choose the desired installation height when the pitch angle is 30° (the pitch angle is the angle between the camera/vehicle line and the road).



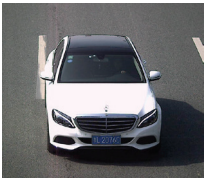
Type	Height H (m)	Min. Length L (m)
Entrance / Exit 	1.5	2.5
	2	3.5
City street 	3	5
	4	7
	5	8.5
	6	10

4. The pitch angle should be greater than 15°and less than 30°. ≤



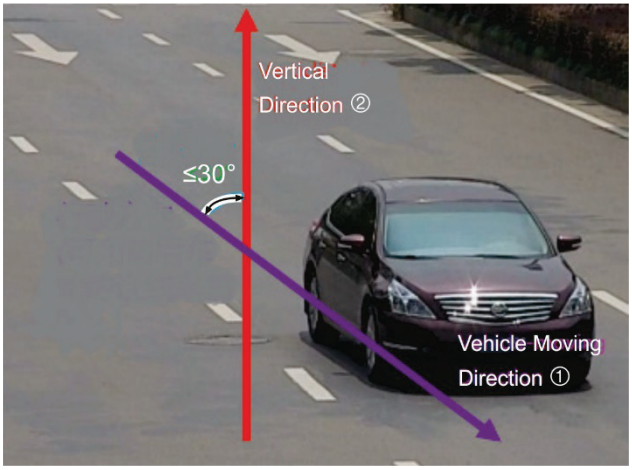
Pitch angle too small

Pitch angle too large

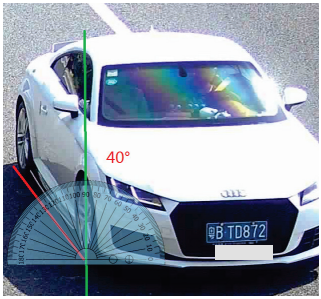


Pitch angle OK

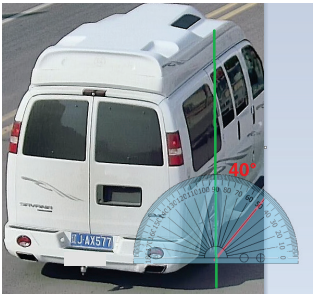
5. The angle between the direction of the moving vehicle (1) and the vertical direction (2) should be less than 30°.



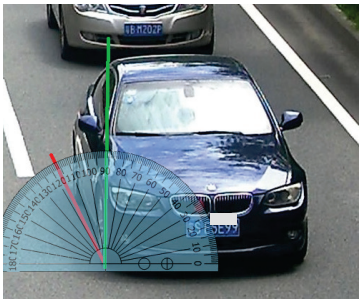
For example:



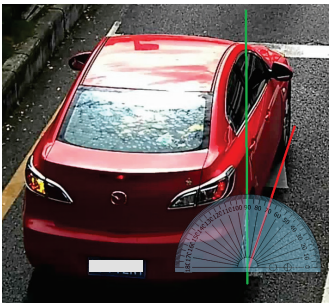
>30° , too large



>30° , too large



<30° OK



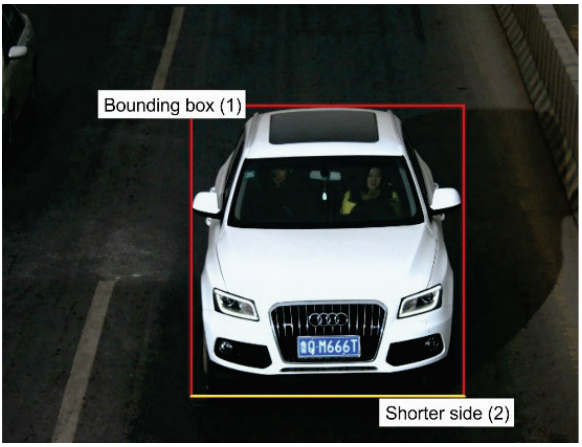
<30° OK

6. The number of pixel required to identify the following items:

Number of Pixels		
Plate Character Recognition	**Vehicle Brand Recognition**	**Vehicle Type Recognition (*)**
27 <Height <40 135 <Width <270	>34 x 34	>345

*** Note**: To recognize the vehicle type (car, truck, bus, etc**), the camera needs to be installed above the road and be able to see the whole vehicle. When measured in pixels, the shorter side (2) of the vehicle's bounding box (1) (see the figure below) should be larger than the number of pixels for the items listed in the above table.

** Motorcycle can only be identified in a checkpoint scenario and only in certain countries. The countries are Italy, Spain, Myanmar, Vietnam, Colombia, Brazil, Middle East, and Taiwan.



Specifications

Electrical	
Voltage input	12 VDC, PoE+ (IEEE 802.3at)
Power consumption	Max. 14.28 W
Miscellaneous	
Connectors	Audio In/Out, Alarm In/Out, 12 VDC Power Input, Network Port (PoE), RS-485, AUX Power Output, Wiegand Interface
Operating temperature	-30 to +60 °C (-22 to +140 °F)
Dimensions	405 × 190 × 180 mm (15.9 × 7.5 × 7.1 in.)
Weight	1920 g (4.2 lb.)
Environmental rating	IP67; IK10