AVYCON®

AVC NBL41M-L1

KEY IMAGE SETTINGS

4MP HD ANPR NETWORK CAMERA

Content

◆ **Why Is Image Setting Important**

◆ **The Big improvement by Correct Image Setting**

◆ **Specific Image Settings**

1.1 Why are Image Settings Important

Camera ➡️

- High-speed vehicle
- High-light scene
- **Various Scene**
- Car plate reflection
- Low-light scene
- Back-light scene
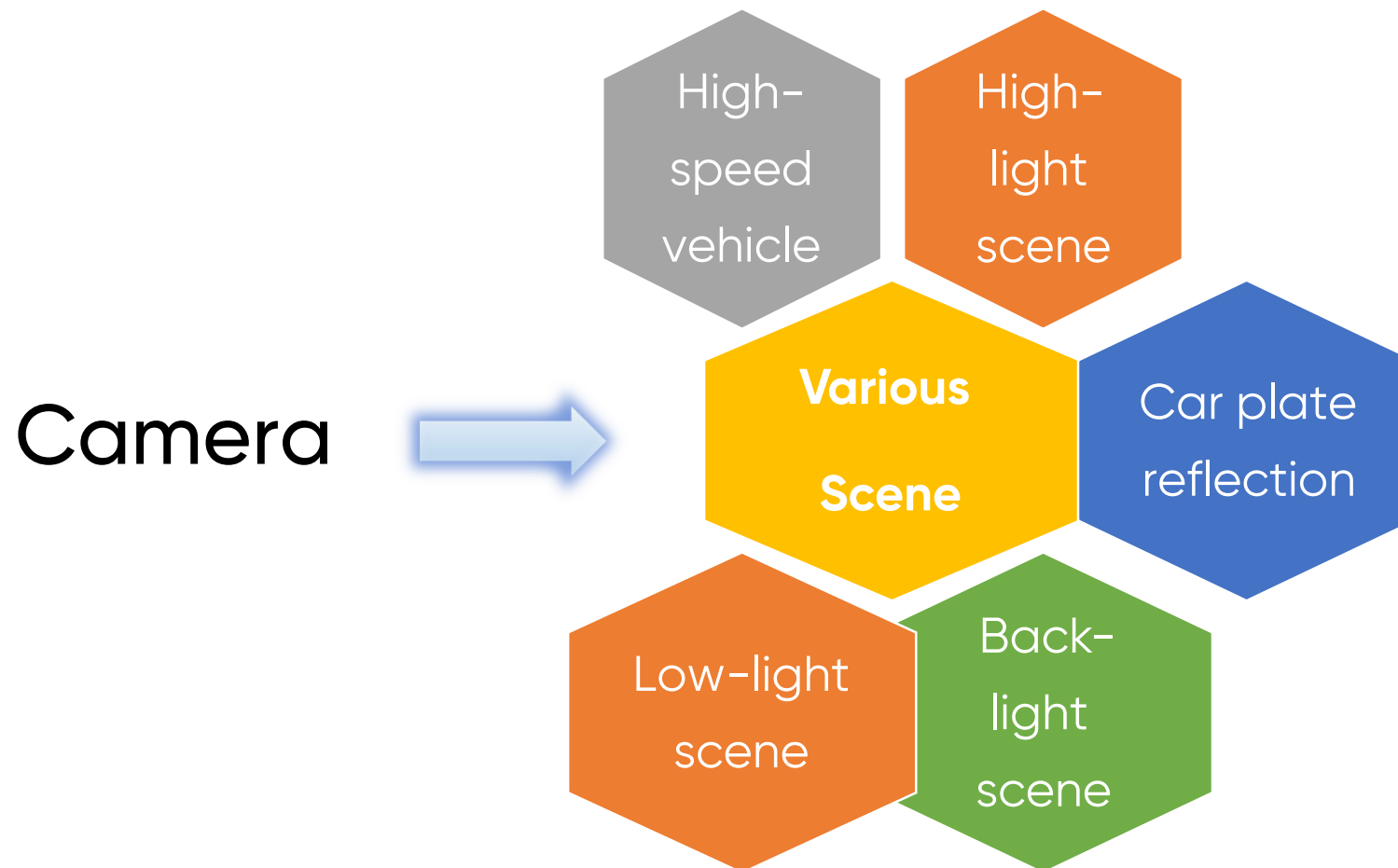
Note: Camera may cause different image quality issues under different extreme conditions; adopting image setting accordingly is necessary.

1.2 Big Improvement by Correct Image Setting

1.2.1 Day/Night Mode

Why is it recommended to adopt the schedule setting for day/night mode ?

Ø Headlights directly from the vehicle will cause the image to switch from B/W mode to color mode.

Ø Under a night-time scene, the image quality is poor, it will get a better performance with infrared light enabled.

Ø It may cause the camera to keep images in color mode all night with street lights.

Note: 4 and 180 mean brightness value ,unit is **Lux**

1.2.2 Brightness

➢ Setting the daylight brightness to a smaller value in the profile will cause the screen to be dark overall, but it will be better for reflective license plates

1.2.3 Shutter Upper Limit

➢ Simulate the brightness of the evening scene: the shorter the shutter upper limit time setting, the greater the image noise

1/25	1/100	1/750

➢ In scenes with lights (such as street lights), power frequency interference is prone to occur when the exposure time is set to less than 1/100

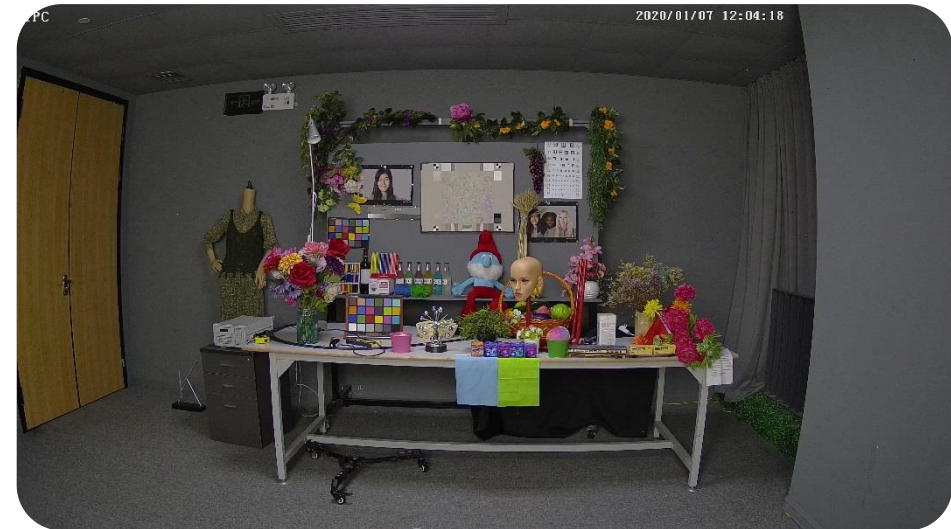*** The picture on the right is a screenshot of the customer site**

1.2.4 Gain

➤ Under insufficient light environment , with higher Gain value ,can improve the image brightness

Gain 1

Gain 2

1.3 Specific Image settings

1.3.1 Image Settings Under Day Mode

➢ **Brightness setting:** If the license plate is reflective, it is recommended to reduce it to about 5

➢ **Day and night mode setting:** day mode

➢ **Infrared light setting:** off

➢ **Shutter upper limit setting:** according to the use scene configuration, such as the gate can be set to 1/100, **the faster the speed, the smaller the value needs to be set**

➢ **Gain mode setting:** automatic mode

➢ **Gain value setting:** can be reduced to about 10

Brightness	5
Day/Night Mode	Day
Infra-red Mode	Off
shutterMode	Auto
shutterUpper	1/100
shutterLower	1/10000
Gain Mode	Auto
Gain Limit	50

* The smaller the shutter setting, the worse the image will be in low light scenes, so you need to switch to night vision mode earlier.

1.3.2 Effect by Brightness Setting

Reflective license plate

Non-reflective license plate

1.3.3 Backlighting Scene Configuration

License plate exposure settings

Frame selection license plate detection area

Turn on the license plate exposure function and set the intensity

Detection Area	Blocked Area

⦿ Min 6 %   ◯ Max 22 %

Draw Area   Clear

License Plate Exposure ☐ ⦿———————— 1

Save

NOTES:

If the image is still dark after setting the license plate as above, it means that this scene has a large dynamic range, and this setting is not enough to improve the capturing performance

Suitable detection area is necessary

1.3.4 Image Settings Under Night Mode

➢ **Brightness setting:** If the license plate is reflective, it is recommended to reduce it to about 5

➢ **Day and night mode settings:** night mode

➢ **Infrared light setting:** On

➢ **Shutter upper limit setting:** According to the use scene configuration, such as the gate can be set to 1/100, **the faster the speed, the smaller the value needs to be**

➢ **Gain mode setting:** Auto

➢ **Gain value setting:** 10

Brightness	5
Day/Night Mode	Night
Infra-red Mode	On
shutterMode	Auto
shutterUpper	1/100
shutterLower	1/10000
Gain Mode	Auto
Gain Limit	10

◆ **Demo 1**

◆ **Demo 2**

◆ **Demo 3**

◆ **Demo 4**

2.1 Demo 1

Scenario description

- Vehicle speed around 18-31mph

- Device cannot switch to day mode when it is very bright

Configured Setting

- The upper limit is set to 1/750 shutter

Updated setting

Set day and night gain to 10

Set the brightness of the night profile to 10 (optional)

Schedule day and night profiles (optional)

Note: Demo 1 is a special customized version. It is not necessary to set the day and night switching schedule, and it can be switched according to the auto mode. There is no need to set the schedule to switch the day and night profile. Auto mode may not work for all situations so modifications may be necessary.

2.2 Demo 2

Scenario description

- Cars are slower at the gate 6-9km/h

- License plate reflection

Configured Setting

- Shutter speed is set to 1/1000 in day profile

- Night profile shutter mode is set to manual, value is 1/2000

Updated Setting

Set the day profile gain to 10, the day and night mode to day mode, and the infrared light to turn off

Set the brightness of the night profile to 5, the gain value to 10, the day and night mode to night mode, and the infrared light to turn on

Switch day and night mode and its configuration file according to schedule
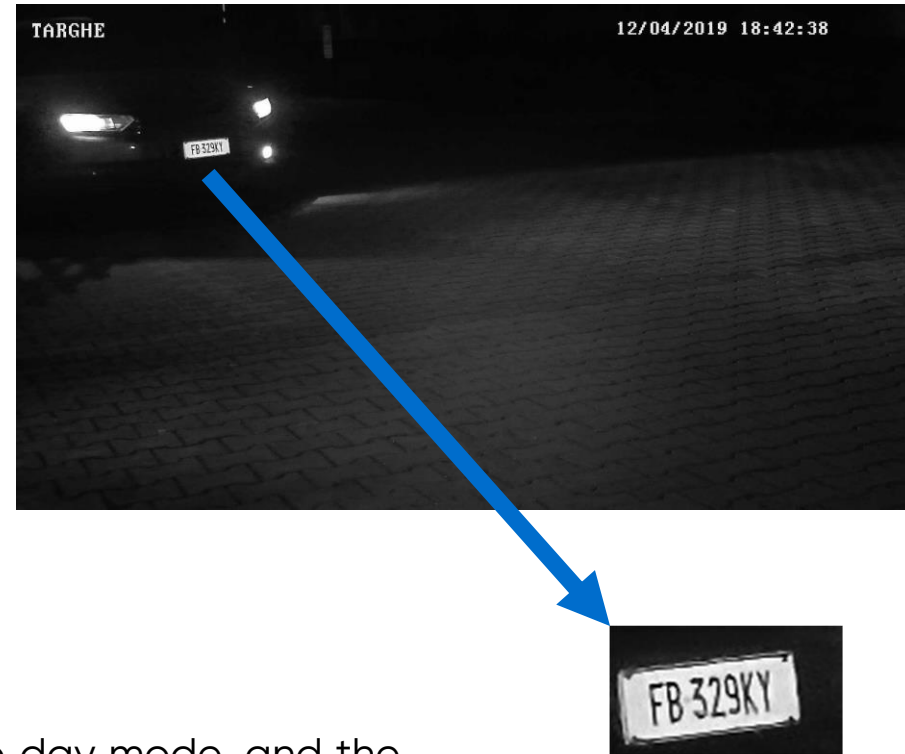
2.3 Demo 3

Scenario description

➢ Faster speed 18-31mph

➢ The device does not switch to infrared mode at night, making the license plate unreadable

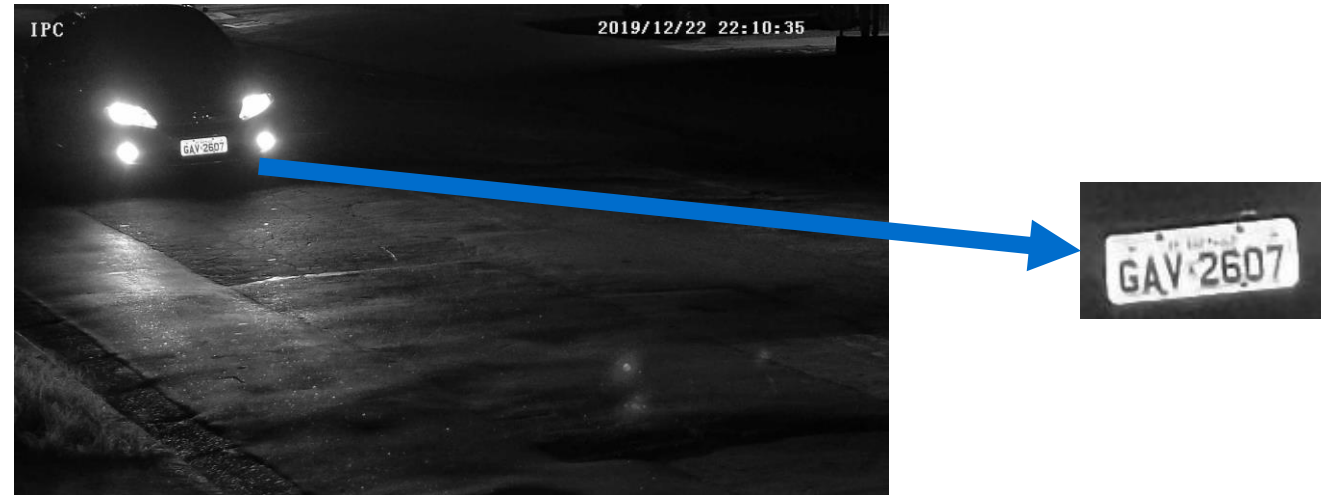## Configured Setting

● Enable HWDR

● Shutter cap is 1/25

Updated Setting

Set the daytime gain to 10, the day and night mode to daylight, and the infrared light to turn off; Disable HWDR;

Set the brightness of the night profile to 4, the gain value to 10, the day and night mode to night, and the infrared light to turn on;

The shutter speed is set to 1/750 in both day and night profiles;

Switch day and night mode and its configuration file according to schedule;

2.4 Demo 4

Configured Settings

Set the daytime gain to 10, the day and night mode to daylight, and the infrared light to off

Set the brightness of the night profile to 3, the gain value to 2, the day and night mode to night, and the infrared light to turn on

The shutter cap is set to 1/750 in both day and night profiles

Switch day and night mode and its configuration file according to schedule

Attention Please

NOTE: This is a **wrong installation case**, the camera is not with suitable angle with car plate. All the above configurations can only effectively improve the license plate effect, and cannot completely solve the problem of overexposure or darkness of all license plates, especially in the scene **where the license plate occupies a very small proportion of the screen**.

Backlight scene

Turn on license plate exposure

Different speed

Set different shutter upper limit values according to different vehicle speeds

Reflective scene

Adjust the brightness and gain according to the actual scene