ANPR Camera Specification

1 Function Description

ANPR camera are designed to meet the needs of a wide range of applications including traffic management, Police, security, parking and tolling in addition to further Intelligent Transport System (ITS) requirements.

High-precision vehicle and license plate recognition algorithm

- The mature video vehicle detection technology can identify vehicles running at 0~50kM/H(*See Algorithm Specification*) without stopping them for card swiping or embedding ground loops.
- Support the recognition of unlicensed vehicles and feature code comparison
- Support Video triggering, coil trigger, vehicle capture rate exceeds 99%, recognition rate exceeds 99%.(*See Algorithm Specification*)

Adaptive to complicated environments

- Can work under a variety of special circumstances: wide roads, short depth, vehicles from multiple directions, etc.
- Support ultra-wide dynamic image optimization and dynamic adjustment of plate image parameters, and adapt to complicated lighting scenarios: front/back lighting, inconsistent front/back plates, rain/snow.

2MP low light HD camera

- SONY 1/2.8" Progressive Scan CMOS， Provide 1920 × 1080 @25fps.
- Support H.265/H.264/MJPEG video compression, multi-level video quality configuration.
- 120dB WDR is supportable for backlight environment.

Support diversified businesses

- Support built-in white lists.
- Support secondary development inside the camera and allow offline billing.
- Free SDK; support multiple linking solutions such as the dynamic link library (DLL) and com components; support a variety of development languages like C, C++, C#, VB, Delphi, Java, etc.

2 Specification

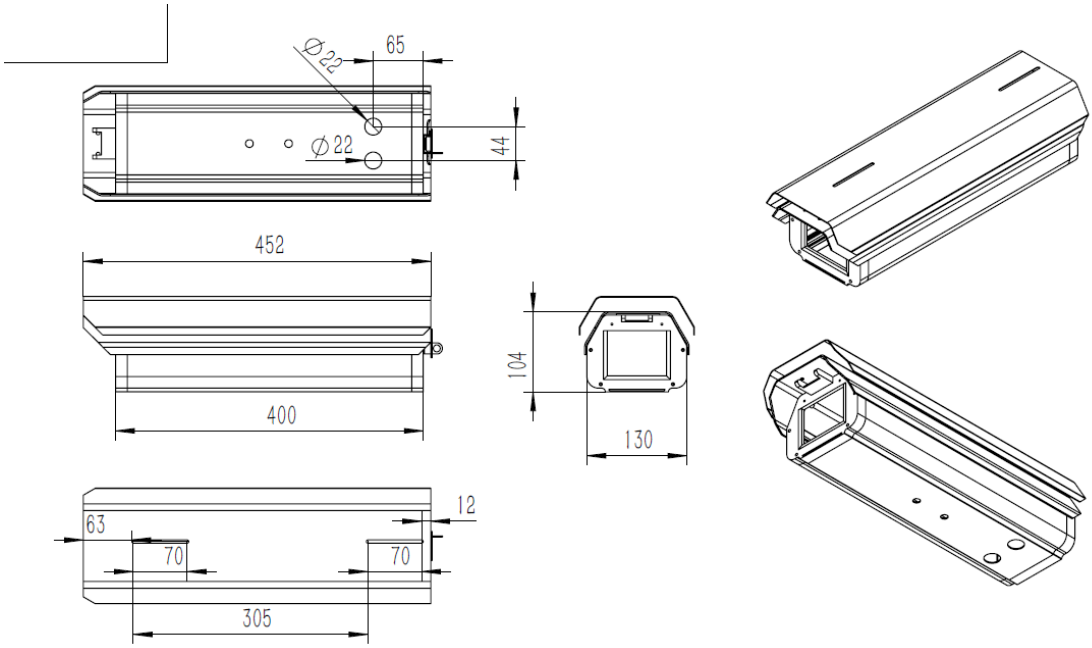
Hardware indexes	
Name	Intelligent ANPR Camera
Processor	Hisilicon, specialized license plate recognition chip
Sensor Type	SONY 1/2.8" Progressive Scan CMOS
Minimum illumination	0.1 Lux
Electronic shutter	0–1ms, 0-2ms, 0-3ms, 0-4ms
Lens	CS mountable, fixed iris, 6mm prime lens
WDR	120dB
Performance indexes	
Plate recognition rate	95~99% (if the optimal recognition condition met)
Recognizable license plates	10 Arabic numbers（0-9）and 26 English letters（A-Z）License plates
Triggering mode	Video triggering, coil trigger, vehicle capturing rate≥99%
Image output	1080P（1920×1080）,960P（1280x960）, 720P（1280x720）,D1（704x576）
Picture output	2 mega-pixel JPEG
Video compression format	H.265/ H.264/ MJPEG
Interface and Electric parameters	
Network interfaces	10/100M network adaptive, RJ45 adaptor
IO interface	4 input/2 output
Audio interface	1 audio input(line in)/1 audio output(line out)
Serial interfaces	1 RS485
TF card	Support SD2.0 standard Micro SD(TF) card with a maximum capacity of 128G
Power supply	12V DC
Power consumption	≤5W
Working temperature	-20℃ ~ +70℃
Protection Level	IP65
Size(mm)	452mm(L)*130mm(W)*104mm(H)
Gross Weight	2.5KG

3 Algorithm Specification

The recognition rate should be used under the condition of the following **optimal recognition range** restriction indicators. The recognition rate is not guaranteed to be the optimal, although it can be recognized within the **general recognition range** supported.

Algorithm Specification		
Condition	**General Recognition Range**	**Optimal Recognition Range**
Car speeds	< 50KM/h	< 30KM/h
Installation Level Angle	< 60°	< 40°
Installation Depression Angle	15 ~ 40°	< 20°
Read Range	2 ~ 7 m	3 ~ 5 m
Plate Pixel	80 – 600 Pixel	140 – 240 Pixel
Recognizable License Plates	According to common license plate type in different Area, it is normal that the algorithm does not correctly identify the sample font that has never appeared	
Recognizable Plate Definition	The license plate is clearly recognizable, free of stains and deformation. If the human observation is difficult to recognize, the algorithm is not correctly identified as a normal phenomenon	

4 Dimension




A1
B1
OUT1
OUT2
LED+
LED-
RJ45
AIN
GND
AOUT
IN1
IN2
IN3
IN4
GND
SYS
RESET
USB
TF
CARD
DC
GND
12 V