

Multi-shutter Streaming mode

2025

#Dual streaming camera #Global shutter #LPR #Reflective/Non reflective License plate
#LongShot #ShortShot #Backlight #Motionblur, #Strong sunlight #Shadow

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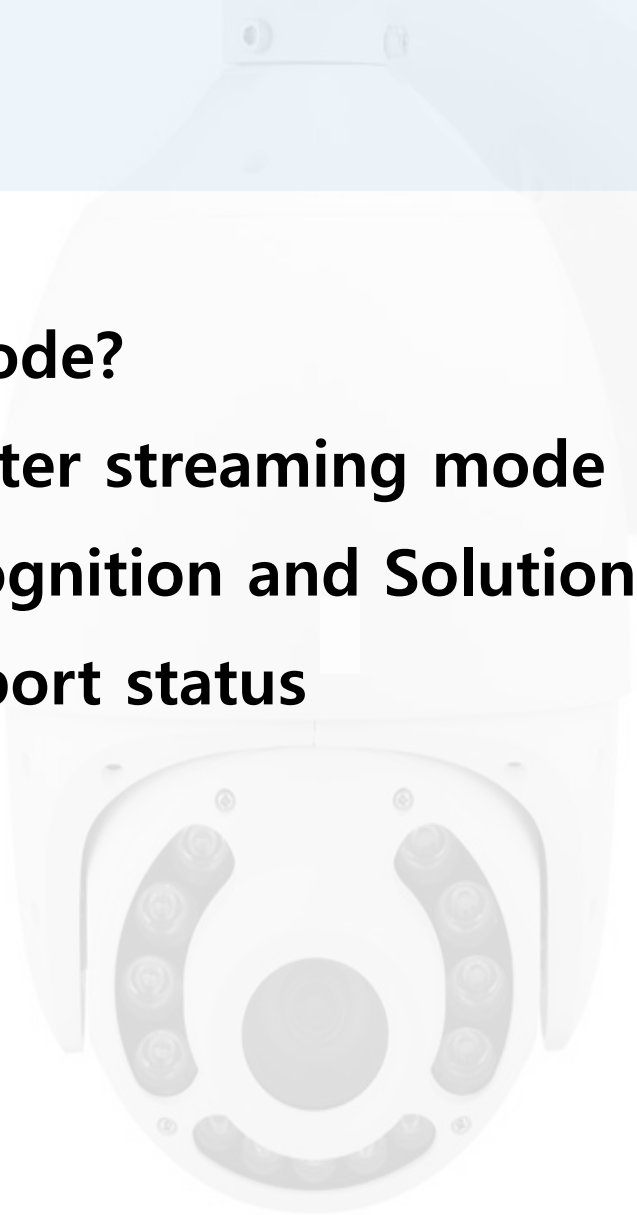
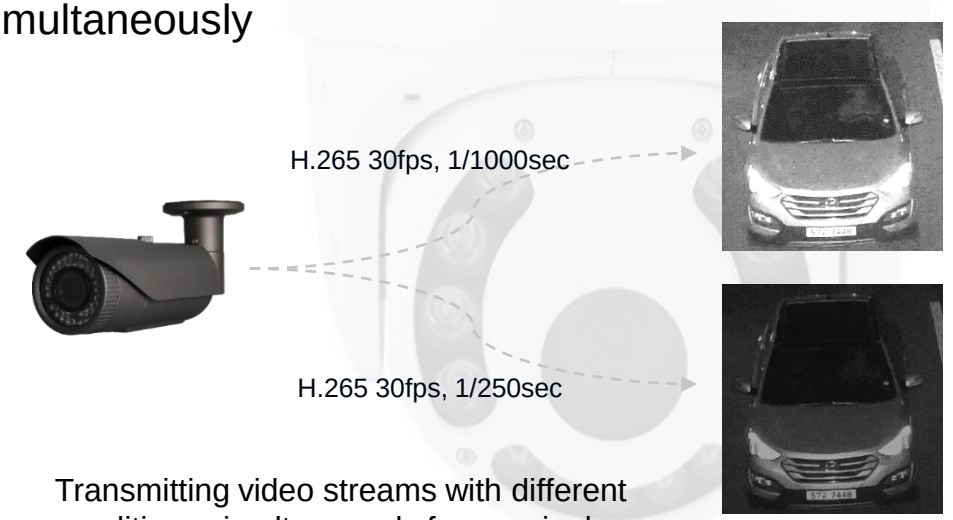


What is multi-shutter streaming mode?

“Multi-shutter streaming mode?

A feature that supports streaming of two independent types of video streams from a single camera.

A feature that configures multiple video streams with different shutter speeds from a single camera and transmits them independently as dual streams simultaneously



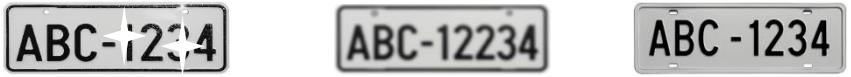
Transmitting video streams with different conditions simultaneously from a single camera, allowing ***the client side to select and use the appropriate screen for their purpose***

2 Support background for multi-shutter streaming mode

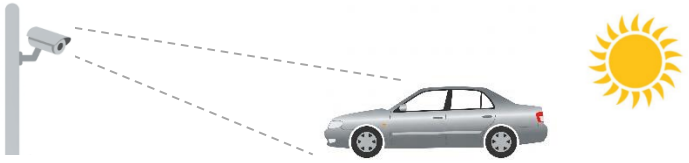
“Issues to resolve”

Issues for LPR/LPD

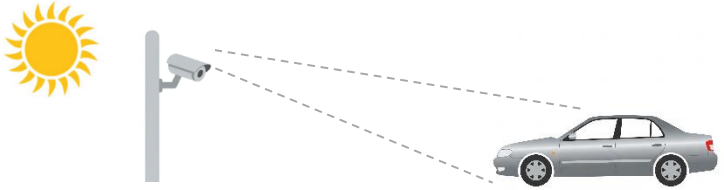
Reflective & non-reflective License plates(night)



Sun light is located behind a car



Strong sunlight is reflected from License plate



Irregular shadow from tree or building



3 Factors affecting License Plate Recognition and Solutions

Lighting environment

Backlight: The license plate darkens when sunlight hits the camera
Shadow: If located in areas such as tunnels, trees, or building shade
Strong sunlight: license plate is overexposed that numbers unreadable

Solved with HDR/WDR, & various shutter speed

License plate material and reflective properties

Reflective plate: Overexposure issue
Non reflective plate: In low-light environment, readability may decrease

It can be resolved by optimizing IR LED or **adjusting the shutter speed optimized** for license plates

Global shutter
WDR/HDR
Shutter speed

Vehicle speed and motion blur

The license plate of a high-speed vehicle is blurred. Distortion occurs when using a rolling shutter.

Solved with global shutter sensor. Minimize motion blur with short shutter speed setting

Environmental factors

If the license plate is not installed in the front, distortion occurs.
Issues such as rain, fog, snow, and pollution

Optimized installation and operation to solve

4 Multi-shutter streaming mode support status

“Long Shutter Short Shutter

Supports 2 modes with different Shutter Speed

Long shutter, Short Shutter

The default settings of the camera are for Long shutter, Short shutter applies all settings except for Exposure time.

Short Shutter Mode	(●) Ratio ( ) Absolute
Exposure Ratio	30 (Defalut:30, Range:1 % ~ 100 %)

Supports each Dual stream

Long Shutter stream: Primary/Tertiary
Short Shutter stream: Secondary/Quaternary
Set stream settings individually and independently

Primary | Secondary | Tertiary | Quaternary	
Camera Name	Primary Stream
Frame Rate	30 fps
Image Size	2304 x 1728
Encoding Standard	H.264
H.264 Profile	( ) Base ( ) Main (●) High
Rate Control Mode	CBR Mode
Target Bitrate	5.0 Mbps
GOP Structure	30 [1~64]
Audio	( ) Enable (●) Disable

4 Multi-shutter streaming mode support status

Global shutter IP camera module

Multi-shutter streaming mode at 50/60fps

The goal is to support individual streams at 25/30fps

Global shutter module

2M 30fps FWC-EX2-900
4M 30fps FWC-EX2-567
Prepare the housing type finished product camera.

Rolling shutter module

20 30fps FWC-EX2-307 (under preparation)

Domestic patent application

Domestic patent application completed

Contacts



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