

FREEWAYCAM

DIGITAL(IP) ANPR/LPR CAMERA
DESIGNED FOR NUMBER PLATE RECOGNITION



• NUMBER PLATE: ARH 001



ANPR/LPR CAMERA DESIGNED FOR HIGH-SPEED TRAFFIC APPLICATIONS

FreewayCAM is a versatile digital IP camera specifically designed for automatic number plate recognition (ANPR) in high speed traffic. It consistently captures high quality images in any environment. In glare from sunlight and reflections or in nighttime darkness; in temperatures ranging from freezing cold to direct sun in desert heat; in precipitation from rain, fog or snow and at observation distances from 3 to 20 meters (9 to 60 feet) FreewayCAM flawlessly operates.

The unique optical module with auto-adjustable shutter time and real-time motion detection-based self-triggering ensures appropriate image capturing at virtually any speed – even up to 255 km/h (158 mph).

KEY FEATURES

- Built-in auto-setup functions help easy integration and configuration
- IP camera with embedded web server allows remote access from web browsers
- Automatic brightness control optimized for number plate recognition
- IR LED (optional white LED) illumination synchronized with the image capturing and control

MAIN BENEFITS

- Higher OCR accuracy in license plate recognition based systems
- High quality image capture of fast-moving vehicles – up to 255 km/h (158.5 mph)
- Easy installation; auto-setup wizard for simple configuration



TOLL
COLLECTION



JOURNEY TIME
MEASUREMENT



CONGESTION
CHARGING



ACCESS
CONTROL



AIRPORT AND
HARBOR
LOGISTICS



TRAFFIC
MONITORING



BUS LANE
AND RED LIGHT
ENFORCEMENT



BORDER
CONTROL

SPECIFICATIONS

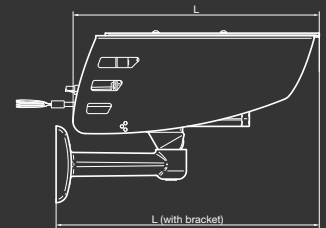
FreewayCAM

IMAGING	WVGA CAMERA	HD CAMERA	FHD CAMERA
Resolution (H × V pixels)	752 × 480	1280 × 720	1920 × 1080, 1920 × 1440
Sensor	B&W, Progressive scan CMOS 1/3"	Color, CCD 1/3"	Color, CCD 1/1.8"
Max Frame Rate (at all resolution)	60 frames/sec	30 frames/sec	30 frames/sec (1920 × 1080)
Output Format	JPEG, MJPEG stream	JPEG, MJPEG stream, H.264	
Exposure Control	Global shutter, software adjustable 1/30 s – 1/30000 s		
JPEG Quality	Adjustable between 40 % – 90 %		
Day/Night Mode	Configurable day/night mode switching		

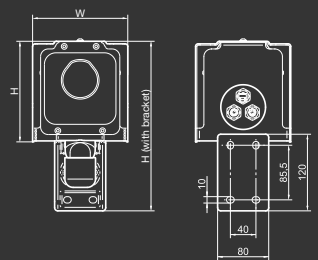
LENS	WVGA CAMERA	HD CAMERA	FHD CAMERA
Lens Type	5.2 – 58.8 mm with high precision motorized positioning		15.0 – 50.0 mm with high precision motorized positioning
Iris; Focus	Automatic motorized, programmable		
Zoom	Automatic motorized, programmable		
Optical Filter	Fixed, IR pass above 720 nm	Switchable: All pass / IR cut above 850 nm	
Recommended ANPR Range	3 m – 20 m (10 ft – 65 ft)		

PROCESSING & I/O	WVGA CAMERA	HD CAMERA	FHD CAMERA
CPU	400 MHz DSP with image processing chip (X9)	500 MHz DSP with image processing chip (X25)	ARM Dual Core 2 × 766 Mhz
Operating Memory	64 MB	64 MB + 128 MB	1 GB + 256 MB
Storage Memory	256 MB		32 GB (SD only)
Operating System	ucLinux		
Communication Protocol	ARP, ICMP, TCP/IP, DHCP, NTP, FTP, HTTP, SMTP, RTP		
Communication Interface	RJ45, 100 Mbit/sec, Ethernet		1 Gbit/sec, Ethernet

ELECTRICAL DATA	WVGA CAMERA	HD CAMERA	FHD CAMERA
Input Voltage	24 V – 28 V AC		
Basic Power Consumption	7 W – 14 W	8 W – 15 W	11 W – 17 W
Power Consumption With Heating	31 W	32 W	35 W
Conformity	CE, RoHS, FCC		
I/O ports	Opto Isolated In/Out, RS232		
Junction Box	Optional		



PHYSICAL CHARACTERISTICS	WVGA CAMERA	HD CAMERA	FHD CAMERA
Operating Temperature	-45 °C – 55 °C (-49 °F – 131 °F)*	-45 °C – 50 °C (-49 °F – 122 °F)*	
Startup Temperature	-40 °C (-40 °F)	-40 °C (-40 °F)	
IP rating	IP67		
Dimensions (L × W × H)	386 mm × 147 mm × 160 mm (15.2" × 5.8" × 6.3") with bracket: 412 mm × 147 mm × 270 mm (16.2" × 5.8" × 10.6")		389 mm × 156 mm × 162 mm (15.3" × 6.2" × 10.6") with bracket: 424 mm × 156 mm × 270 mm (16.7" × 6.2" × 10.6")
Weight (without bracket)	4.3 kg (9.5 lbs)	4.3 kg (9.5 lbs)	4.8 kg (10.6 lbs)
Weight (bracket)	0.6 kg (1.32 lbs)		
Housing Material	Aluminum		
Housing Color / Shield Color	RAL 9007 / Optional Custom		



ILLUMINATION	
Type	High power IR LED (optional white LED), regulated
IR Wavelength	850 nm (white LED: 435–750 nm)
Number of LEDs	8
Intensity	3 preconfigured modes (low, medium, high)
Flash Time	Software adjustable, up to 950 μs
Additional Illuminator	Optional



RADAR	
Radar	Optional
Measurement Principle	Doppler-Radar
Measurement Range	0 – 255 km/h (0 – 158.5 mph)
Radar frequency	24.165 GHz, K-Band
Direction	Selectable uni- or bidirectional
Installation angle	25° for official speed measurement
Operating mode	Counting (signed) speed



Technical specifications are subject to change without prior notice. This document does not constitute an offer.

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