

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 designed specifically for ANPR (automatic number plate recognition) in high speed traffic environments. FreewayCAM consistently captures high quality images in the widest environment ranges. In glare from strong sunshine and reflections or in night-time darkness; in temperatures ranging from freezing cold to direct sunshine in desert temperatures; in precipitation of 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 (158.5 mph).

KEY FEATURES

- Built-in auto-setup functions to help easy integration and configuration
- IP camera with embedded web server, remote access from web browser
- Automatic brightness control optimized for number plate recognition
- IR LED illumination synchronized with the image capturing and control

MAIN BENEFITS

- Offering higher OCR accuracy in license plate recognition based systems
- Capturing high quality images, even of vehicles traveling at speeds up to 255 km/h (158.5 mph)
- Installing easily, auto-setup wizard for easy 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	1.3 MP CAMERA
Resolution (H × V pixels)	752 × 480	1280 × 720	1280 × 960
Sensor	B&W, Progressive scan CMOS 1/3"	Color, Progressive scan CCD 1/3"	Color, Progressive scan CCD 1/3"
Max Frame Rate (at all resolution)	60 frames/sec	30 frames/sec	22.5 frames/sec
Output Format	JPEG, MJPEG stream	JPEG, MJPEG stream, H.264	JPEG, MJPEG stream, H.264
Exposure Control	Global shutter, software adjustable 1/100 s – 1/30000 s		
JPEG Quality	Adjustable between 40 % – 90 %		
Day/Night Mode	Configurable day/night mode switching		

LENS	WVGA CAMERA	HD CAMERA	1.3 MP CAMERA
Lens Type	5.2 – 58.8 mm with high precision motorized positioning		
Iris	Automatic motorized, programmable		
Focus	Automatic motorized, programmable		
Zoom	Automatic motorized, programmable		
Optical Filter	Fixed, IR pass above 720 nm	Switchable: All pass / IR cut above 850 nm	Switchable: All pass / IR cut above 850 nm
Recommended ANPR Range	3 m – 20 m (10 feet – 65 feet)		

PROCESSING & I/O	WVGA CAMERA	HD CAMERA	1.3 MP CAMERA
CPU	400 MHz DSP with image processing chip (X9)	500 MHz DSP with image processing chip (X25)	500 MHz DSP with image processing chip (X25)
Operating Memory	64 MB	64 MB + 128MB	64 MB + 128MB
Storage Memory	256 MB		
Operating System	ucLinux		
Communication Protocol	ARP, ICMP, TCP/IP, DHCP, NTP, FTP, HTTP, SMTP, RTP		
Communication Interface	RJ45, 100 Mbit/sec, Ethernet		

ELECTRICAL DATA	WVGA CAMERA	HD CAMERA, 1.3 MP CAMERA
Input Voltage	24 V – 28 V AC	
Basic Power Consumption	18 W	20 W
Power Consumption With Heating	57 W	
Conformity	CE, RoHS, FCC	
I/O ports	Opto Isolated In/Out, RS232	
Junction Box	Optional	

MECHANICAL DATA	WVGA CAMERA	HD CAMERA, 1.3 MP CAMERA
Operating Temperature	-40 °C – 55 °C (-40 °F – 131 °F)*	-40 °C – 70 °C (-40 °F – 158 °F)*
Additional Heating	Optional	
Startup Temperature	Over -20 °C (-4 °F)	
IP rating	IP67	
Dimensions (L × W × H)	440 mm × 150 mm × 262 mm (17.32" × 5.91" × 10.31")	
Weight (without bracket)	4.7 kg (10.4 lbs)	
Weight (bracket)	0.6 kg (1.32 lbs)	
Housing Material	Aluminum	
Housing Color	RAL 9007 / Optional Custom	
Shield Color	RAL 9007 / Optional Custom	

ILLUMINATION	
Type	High power IR LED, regulated
IR Wavelength	850 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	10° – 25° for official speed measurement
Operating mode	Counting (signed) speed

