ViPRO VP205-LPR

License plate recognition Camera

VP205-LPR is a high-definition License Plate Recognition Camera embedded with low-power, high-performance ARM processor and low-light Starlight CMOS sensor. It is an intelligent license plate recognition device integrated with on-board license plate recognition, camera and storage.

VP205-LPR is tailor-made for the parking lot industry and is the best application form of the license plate recognition function of the parking lot management system. The products are widely used in various parking lot, community, highway entrances and exits, garage ground locks, unattended vehicle washing shops, etc.
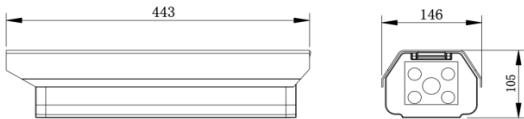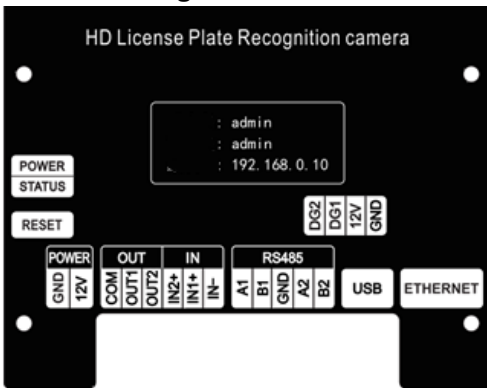
Key Features

- All day license plate recognition rate higher than 97%
- Monocular license plate anti-counterfeiting technology
- False license plate detection and identification
- Stable recognition at wide-angle
- Wide-distance recognition at 2-12 meters
- Video compression technology H.264 / JPEG
- Support PC local recording
- Support TF card storage
- Three detection methods: coil detection, video detection, coil detection + video detection
- Video/picture overlay watermark
- Whitelist import and export function, fuzzy matching on whitelist
- Manual key reset
- Support multi countries' license plates
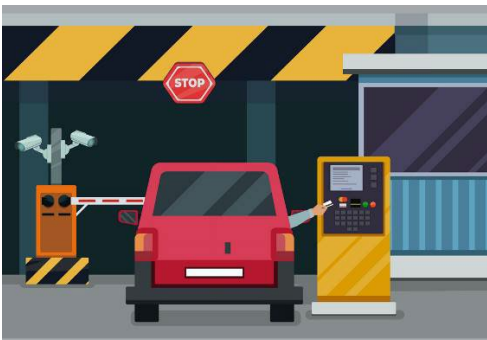- OSD information overlay function
- Surge protection level: 6KV

Dimensions

Schematic diagram

Application

Technical Parameters

Intelligent Recognition	Model	VP205-LPR
	License plate recognition rate	≥97%
	Front inspection	Support for front detection
	Type of Plate	Argentina, Brazil, Bolivia, Chile, Colombia, China, Dubai, Ecuador, Europe, Guyana, Indonesia, HKG, Malaysia, Paraguay, Peru, Singapore, South Africa, Taiwan, Thailand, Turkey, Uruguay, USA, Venezuela, Vietnam, etc.
Video input	Sensor type	4 Megapixel Starlight CMOS
	Resolution	2560x1440
	Lens and focal length	2.8~12mm zoom lens
	Illumination	0.1 Lux color
	Electronic shutter	0-10ms (5ms by default)
	Exposure time	1/100 ~ 1/10000s
	Interface	M12
	ONVIF	Support
Video output	Video Resolution	1920x1080, 1280x720, 704x576, 352x288
	Compression standard	H.264/MJPEG
	Compressed output bit rate	384Kbps~4Mbps
	Maximum frame rate	Main-stream 25FPS, sub-stream 25FPS
	Image setting	Adjustable shutter, gain, brightness, etc.
	Noise reduction	2D/3D noise reduction
Functions	Capture trigger type	Video, coil, video + coil
	False license plate	Anti-counterfeiting rate over 99%
	Built-in fill light	Built-in 4 LED fill light, adjustable brightness
	Output information	Vehicle big picture, license plate small picture, license plate number, license plate color
	OSD information overlay	Define time, location, license plate, etc.
	One-button reset	Short press 2 seconds to restore the default IP, username and password, Press and hold for 10 seconds to restore the default IP, username and password, factory configuration
	Whitelist function	Support whitelists import and export functions
	Main and auxiliary mode	Support main and auxiliary camera mode
	Offline charge	Support offline charging function
External interface	Network	1x RJ45 10/100Mbps adaptive network port
	Communication	2x RS485 ports
	Power supply	1x AC 220V voltage indicator
	I/O Input	4-way switch input (default switch quantity to switch different level signals)
	I/O Output	2-way switch output (relay)
	Reset	1x reset button
	Storage	1x TF card s
	USB	1x standard A type USB port
	System indicator	1x GPIO status indicator
Working environment	Power supply	12V DC
	Power consumption	Turn off the light <4W, turn on the light <5W
	Static electricity	Contact 6 kV, air 8 kV
	Surge	Electric surge 2 kV, Interface surge 6 kV
	EFT	Power supply EFT 2 kV, Data cable EFT 2 kV
	Working temperature/humidity	-30℃~ +75℃, <95% (no condensation)
	Protection level	IP65
Outlook	Dimension	443mm ×146mm × 105mm
	Weight (kg)	1.8

Function Specifications

Category	Item	Description
Recognition Algorithm	License plate recognition rate	97% or above
	Unlicensed vehicle detection rate	99% or above
	Anti-counterfeiting rate	99% or above
	Recognition angle	The maximum angle on the left and right is 65°, maximum angle up and down is 60°
	Stable recognition rate at a large angle	97% or above
	Recognition distance	2~12 m
	Vehicle speed	45km/h
	License plate recognition type	Able to recognize license plates of Argentina, Brazil, Bolivia, Chile, Colombia, China, Dubai, Ecuador, Europe, Guyana, Indonesia, HKG, Malaysia, Paraguay, Peru, Singapore, South Africa, Taiwan, Thailand, Turkey, Uruguay, USA, Venezuela, Vietnam, etc.
	Vehicle structuring information	Able to recognize different vehicle features, such as the vehicle model, vehicle type, and vehicle color
	License plate recognition features	Number, color, type and width
	Whitelist of license plates	Adopt rules to accurately, intelligently and fuzzily match license plates in the whitelist
	Intelligent calibration	Able to calibrate the license plate number, license plate type and license plate color intelligently with the accurate or wildcard methods
Imaging	Basic configuration	Embedded intelligent ISP algorithm Able to intelligently optimize the dimming algorithm and intelligently adapt to complex scenarios. Basic parameters (brightness/definition/gain/ exposure time) can be set independently.
Video	Video compression standard	H.264/MJPEG;
	Video resolution	352*288, 704*576, 1280*720, 1920*1080
	Compress the output bitrate	384Kbps ~ 4Mbps
	Frame rate	1 ~ 25 frames (the default value is 25fps)
Communication	Communication protocol	SDK, HTTP, MQTT, ONVIF, RTSP, TCP/IP, UDP, NTP，DHCP
	HTTP push	Able to upload recognition results, and re-upload them offline
Networking	Offline networking	Without any upper computers or servers, operation networking can be achieved among different cameras
	Offline billing	Able to set billing rules according to the vehicle type, duration, frequency, time period, and time ladder.
	Blacklist and whitelist	Able to satisfy the requirements of vehicle classification management with the strategy.
	Primary and secondary cameras	Multiple cameras can be added to the same entrance/exit, such as one primary and one secondary, which can be applicable to scenarios with the big angle or wide entrance/exit
	Screen display protocol	Able to be connected to mainstream brand LED screens, and output recognition/billing results
Management	Management protocol	PC/mobile terminal management, PC management tools, SDK development suites, and HTTP push
	Cloud management	Remotely manage a single camera, uniformly manage multiple cameras through the account, and support the cloud SDK development management platform