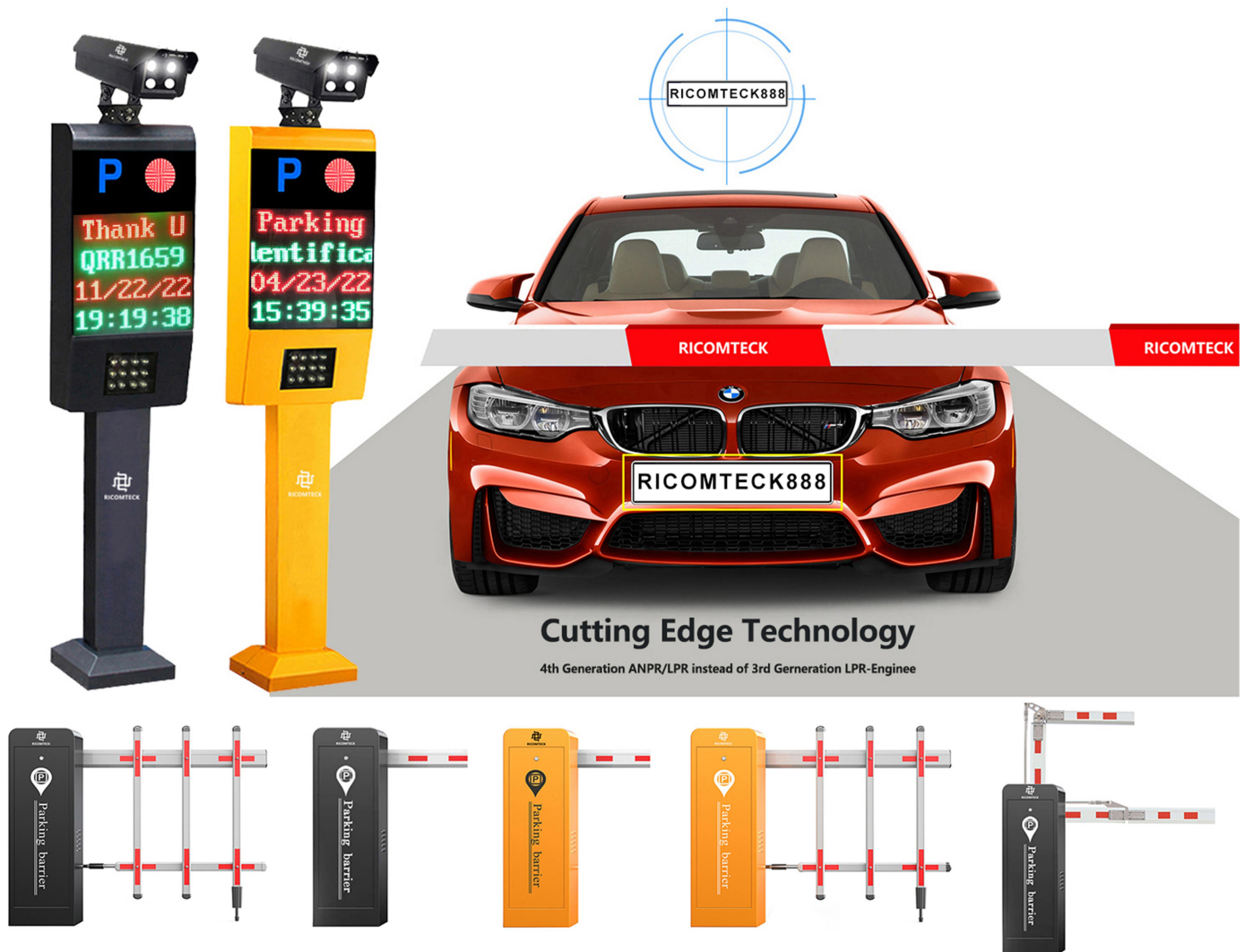# AI Intelligent ANPR Equipment for Parking Lot

Vehicle Access Control

Product overview:

Exit & Entrance LPR camera ,through the embedded system architecture ,which can achieve the vehicle License Plate recognition and capture function ,Meanwhile with black & white list , large angle   recognition ,special License Plate recognition,coil mode filter non-motor vehicles , car color recognition function etc. It wildly used on different kinds of parking lot application.

Product Features:

- Built-in Deep Learning Vehicle License Plate Recognition Algorithms ;

- Support Black & White list (Hereinafter referred to as B/W list) management;

- Built in LED light, can be used for fill-in light at night recognition;

- The algorithm can automatic adjust camera image brightness per to environment light,to ensure the image capture quality whole day;

- The algorithm can automatic adjust camera image brightness per to the vehicle License Plate brightness ,to ensure License Plate recognition rate in smooth and backlight environment;

- Support Video ,coil and coil &video hybrid trigger capture mode;

- Prime lens, can support from 2.8 to 10 meters recognition, automatic adjustment algorithm resolution;

- Support remote access and control;

- Support voice broadcast and two-way voice intercom

- Support real-time or offline SD card storage, when network recovery, can automatically upload capture data;

- Supports variety of SDK docking methods, it is more convenient for camera integration and development ;

- Multi-IOs design, control the gate to open, close, normally open, normally closed, receive triggering and anti-crash ground signal, receive multi-channel gate state signal;

- Maximum support for 70°large angle LP recognition;

- Fully support for special License Plate recognition;

- Supports coil mode non-motor vehicle filtration;

- The Latest CNN Deep Learning. rather than OCR Tech;

- Easy to Integrate with your Platform or 3rd Party Platform;

- Free API;

-Best Solution for cloud platform/mobile payment/smart city/industry 4.0;

Note:

-In Europe it's generally called Automatic Number Plate Recognition (ANPR).

-In USA it's often called Automatic License Plate Recognition (ALPR or LPR).

Automatic License Plate Recognition Camera

ALPR Camera Technical Parameters:

Types	Item	Parameter
Performance	Recognition rate	vehicle capturing rate≥99.9999% , Plate Recognition rate≥99% ,
	Front inspection	Support for front detection(Camera Recognize License Plate Directly)
	Identify license plate type	Each Country with Independent License Plate Algorithms
	Triggering mode	Video trigger, coil trigger, Video Trigger+Coil Trigger(3 Modes)

	Image output	1080P(1920x1080) , 960P(1280x960) , 720P(1280x720) , D1(704x576) , CIF(352x288)
	Picture output	2 mega-pixel JPEG
	Ultra-wide dynamics	120dB
	Video compression format	H.264 High Profile , Main Profile, Baseline , MJPEG
Hardware	Processor	Mstar, specialized license plate recognition chip
	Sensor type	1/3" CMOS Image Sensor
	Minimum illumination	0.01Lux
	Electronic	1/25 to 1/30,000 seconds
	Lens	CS interface, fixed iris, 6mm prime lens/ 2.8-12mm electric zoom lens, optional
	Built-in light	4 high-power LED white lights
External interface	Net work	1 RJ45 10/100M adaptive network interface
	communication	2 RS485 interfaces
	power supply	AC 220V/DC 12V
	IO	2 input & 2 output 3.5mm connecting terminals
	storage	Support SD2.0 standard Micro SD(TF) card with a maximum capacity of 32G
	Audio	1 input & 1 output
working environment	Total power	≤7.5W
	Working temperature and humidity	-35 to +75 degrees, <95% (no condensation)
	Protection level	IP67
Appearance	Size(mm)	452(L)*148(W)*120(H)
	Weight（Kg）	2.7kg

Display Screen Technical Parameters:

you can customize the display contents of the display screen.

Name	Specification	Color
Two line display screen	64*32cm	Red and green light
Four line display screen	128*64cm	Red and green light

Column Brackets:

the column and the appearance of the product are formed by cold-rolled iron sheet, strong and waterproof.

Fill light:

With an automatic light sense < 25Lux, the light will be automatically opened according to the surrounding environment of the project site, and will remain bright until the supplementary light detects that the surrounding environment becomes brighter, and the light sense will be automatically closed when it is greater than 25Lux.

Power Supply	DV5V(Red wire:+5V,Black Wire:COM)
Rate power	12W
Exposure distance	3-20meters
Light sensor feature	Below 25LUX, instantly lit up;Higher than 25LUX, delay 15 Seconds to turn off the light.
Features of Controller	the switch on and off is controlled by the German relay, which is stable and reliable.
Lamp bead type	12PCS high brightness white light chip
Light Angle	45~60 degrees
Anti-glare treatment	acrylic anti-glare optical lens + photocatalyst anti-glare grating
Protection grade	IP65

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Shell material	tempered glass, die-cast aluminum
Light weight	0.3KG
Light dimension	155*120*23mm

Smart Parking For Smart City Solution

■ **Schematic diagram: parking lot**

01.Out-door LED Guidance Indicator

Display the number of available parking space in each area

02.ANPR/LPR Camera at Entrance

Recognize license number by embedded A.I. algorithm, upload result to server and control the barrier gate

03.In-door LED Guidance Indicator

Display the number of available parking space in indicated direction

06.ANPR/LPR Camera at Exit

Recognize the license number to match with the entrance record and then generate the parking bill automatically

04.Smart Vehicle Guidance Camera

Recognize license number and parking space status through embedded A.I. algorithm. The embedded or external led indicator show the parking space's status, green is available, red is occupied

05.Self-help Car-Finding Kiosk

Terminal for car finding and route plan by license number, entrance time or parking space number