



IP9165-LPC-v2 Kit

License Plate Capture Solution



Dual Lanes • Anti-Glare • 110MPH (180km/hr) • Scene Overview •
Recognition Distance 35M • Remote Back Focus • EIS • CVA Tech

VIVOTEK's IP9165-LPC-v2 Kit is embbed powerful new generation SoC with 2GB RAM and 8GB Storage represents a total solution for LPC (License Plate Capture) applications by leveraging the top tier image quality and traffic monitoring ability of the IP9165-LPC-v2 box camera. The IR Illuminator utilizing CVA Tech provides adjustable beam angles for different distances. The Headlight filter is implemented to reduce instances of glare from direct headlight contact. The IP9165-LPC-v2 Kit delivers clear license plate images for reliable recognition, in both the sunniest days, and in the darkest nights.

Value-added features such as i-CS (intelligent-CS) lens, EIS (Electric Image Stabilization) and remote IR beam angle adjustment ensure that the IP9165-LPC-v2 Kit can be easily installed and adjusted to provide the perfect LPR solution. Further, with the high-resolution images supporting a wide range of up to two lanees, the IP9165-LPC-v2 Kit is also the most economic solution in LPR applications.

Empowered with VIVOTEK Scene Mode, which provides different exposure levels to avoid overexposure in some lighting conditions, the IP9165-LPC-v2 Kit can capture clear plate images from the vehicles moving at speeds of up to 110MPH (180km).

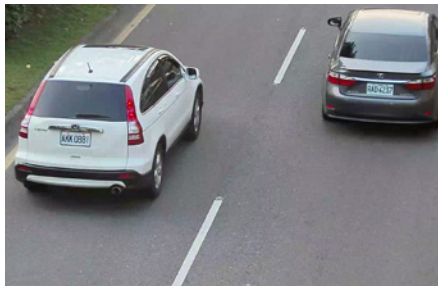
Key Features

- Capture Vehicle Speed up to 110MPH (180km/hr)
- One Camera Covers Both Scene Overview & LPC View
- Supreme Anti-Glare Capability
- One Camera Covers Dual Lanes
- Easy Installation and Low Maintenance with i-CS Lens and Remote IR
- i-CS Lens and Remote Controllable IR Illuminator for Clear Images and Easy Installation
- Certified by Numerous LPR Software Manufacturers around the World
- Vandal-Proof IK10-rated and Weather-Proof IP68-rated Housing

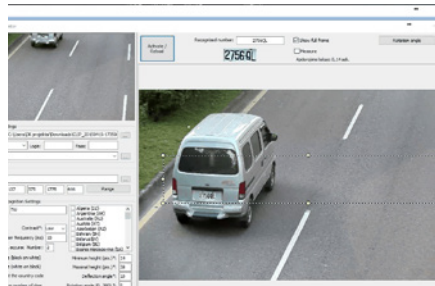
Functions

One Camera Covers Both Scene Overview & LPC View

VIVOTEK's 2 Mega-pixel resolution kit provides not only sufficient PPF for license plate capture, but also for a clear overview of moving vehicles, including car color, brand and type for general traffic surveillance purposes. Therefore, with only one VIVOTEK IP9165-LPC-v2 Kit, users can yield more information from one single location.



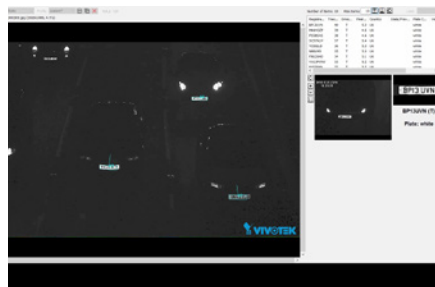
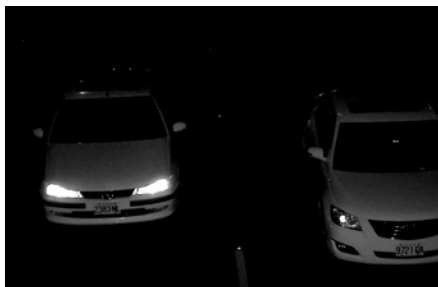
Scene Overview



License Plate Recognition View

Supreme Anti-Glare Capability

Capturing images at night is a challenging issue for any surveillance application, but for License Plate Capture applications the challenge is even greater due to noise and glare caused by the headlights of cars. The IP9165-LPC-v2 Kit is equipped with external 48W/80W IR Illuminators and a delicate headlight filter, which help to filter out reflected light and only capture detailed information from the plates. Moreover, the IR threshold is also programmed to deploy the IR Illuminator automatically to ensure 24/7 & Day/Night performance.



Clear Image Captured with IR Illuminators and Headlight Filter

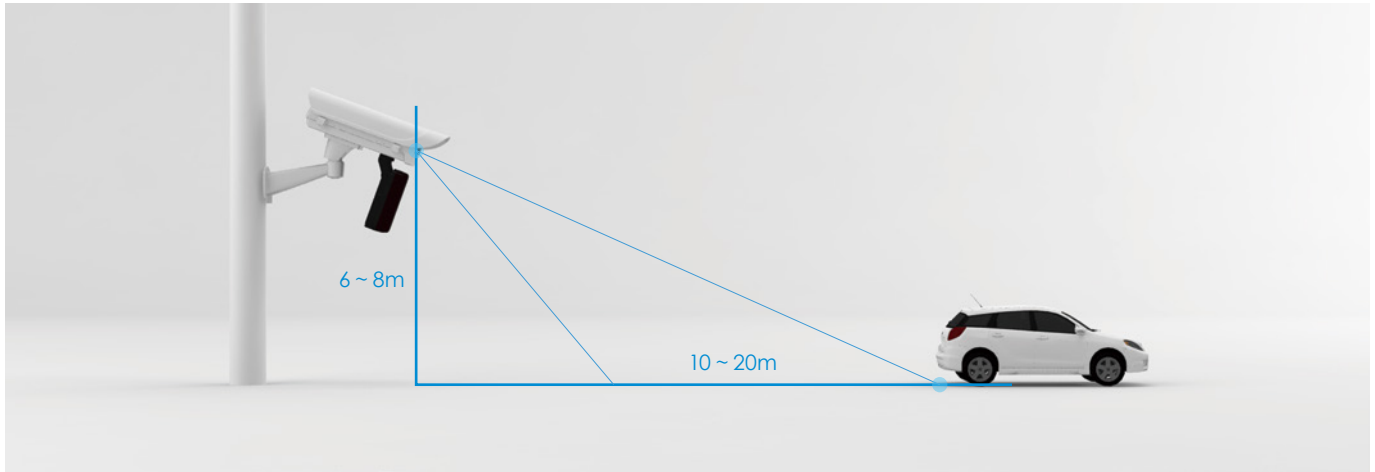
Remote Control Zoom/Focus and IR Beam Angle

Equipped with the i-CS (intelligent-CS mount) lens and remote controllable IR illuminator, the camera enables installers to remotely adjust zoom/focus and beam angle of IR for easy setup and fine-tuning setting.











Remote Zoom and Beam Angle Settings for Easy Installation

Suggested Installation



Ordering Information



LPC Kit	IP9165-LPC-v2 Kit (Highway, 9-50mm, i-CS) IP9165-LPC-v2 Kit (Highway, 12-40mm)	IP9165-LPC-v2 Kit (Street, Snap-in IR, 9-50mm, i-CS) IP9165-LPC-v2 Kit (Street, Snap-in IR, 12-40mm)
P/N.	9-50mm: 199006000G 12-40mm: 199006100G	9-50mm: 199005800G 12-40mm: 199005900G
Category	Model/Description	
IP Camera	 <p>iCS IP9165-LPC-v2(9-50mm) 2MP, 60fps, WDR Pro 140dB, i-CS, 3DNR, EIS</p>	 <p>IP9165-LPC-v2(12-40mm) 2MP, 60fps, WDR Pro 140dB, Remote Back Focus, 3DNR, EIS</p>
IR Illuminator	 <p>CA8018-2040 80W IR Illuminator, 850nm, 20° ~ 40° adjustable beam angle with CVA Tech</p>	 <p>AI-109 48W embedded IR Illuminator, 850nm 10° ~ 30° remote control beam angle</p>
Enclosure	 <p>AE-23L Outdoor Enclosure with Anti-Icing Heated Glass, Fan, AC/DC 24V input, IP68, IK10, Sun shield</p>	 <p>AE-23A Outdoor Enclosure with Anti-Icing Heated Glass, Fan, AC24V/DC28V in, IP68, IK10, Sun shield, 80W surge protect, optional VAIR Illuminators</p>
Bracket	 <p>AM-21E-v2 Cable Management, Wall Mount Bracket</p>	 <p>AM-21E Cable Management, Wall Mount Bracket</p>

Technical Specifications

Model	IP9165-LPC-v2 Kit (Street, 9-50mm, i-CS) IP9165-LPC-v2 Kit (Street, 12-40mm) IP9165-LPC-v2 Kit (Highway, 9-50mm, i-CS) IP9165-LPC-v2 Kit (Highway, 12-40mm)	<p>Image Settings</p> <p>General settings: video title and time stamp overlay, video orientation (flip, mirror, rotation), day/night settings; Illuminators: illuminators, anti-overexposure; Image settings: white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR, EIS, scene mode (auto, deblur); Exposure: BLC, HLC, exposure control (exposure level, iris adjustment, exposure time, gain control, iris mode), AE speed adjustment, WDR; Focus: zoom, Remote focus(i-CS), Remove back focus; Privacy mask; Scheduled profile settings</p>
Model	Highway: 110MPH (180 km/hr) Street: 60MPH (90 km/hr)	
IR Threshold	IR on: 300 lux IR off: 600 lux RS485 configurable	
Shutter Time	Highway: 1/1,600 to 1/10,000 sec. Street: 1/1,000 to 1/10,000 sec.	
Max. Shutter Time	1/5 to 1/32,000 sec.	
IR Illuminators	Highway: CA8018-2040 *1, 80W, 20° ~ 40° remote control beam angle Street: AI-109 *1, 48W, 10° ~ 30° remote control beam angle, embedded IR illuminator	
Capture Range	Up to 35 meters *Suggested Distance: 10 ~ 20 m	
Captured Lanes	Highway: Road-side: 2 Lanes Gantry: 2 Lanes Street: Road-side: 1 Lane Gantry: 2 Lanes *Suggested width per lane: 3.5 ~ 4M	
Power Input	AC 24V, DC 24V	
Power Consumption	Highway: Max. 110W (AC 24V / DC 24V) Suggested Power: AC 24V or DC 24V/5A Street: Max. 110W (AC 24V / DC 24V) Suggested Power: DC 24V or AC 24V/3.5A	
Weight	9-50mm: Highway: 6.66 kg Street: 6.38 kg 12-40mm: Highway: 6.48 kg Street: 6.2 kg	
Housing	Weather-proof IP68-rated housing Vandal-proof IK10-rated housing	
Operating Temperature	Starting Temperature: 0°C ~ 60°C (32°F ~ 140°F) Working Temperature: -20°C ~ 60°C (-4°F ~ 140°F) -40°C ~ 60°C (-40°F ~ 140°F), with optional cold start heater	
Humidity	90%(non-condensing)	
Video		
Compression	H.265, H.264, MJPEG	
Maximum Streams	3 simultaneous streams	
Network		
Users	Live viewing for up to 10 clients	
Protocols	802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMPv3, IPv4, IPv6, NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTMP/RTCP, SMTP, SNMP, SSL, SFTP, TCP/IP, TLS 1.2, UDP, UPnP	
Interface	10 Base-T/100 Base-TX/1000 Base-T Ethernet (RJ-45) *It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard.	
ONVIF	Profile G, S, T supported, specification available at www.onvif.org	
Solution Integration		
Video Motion Detection	Five-window video motion detection	
Alarm and Event		
Event Trigger	Audio detection, camera tampering detection, cybersecurity events (brute force attack event, cyberattack event, quarantine event), digital input, manual trigger, motion detection, periodical trigger, recording notification, SD card life expectancy, shock detection, system boot	
Event Action	Event notification via audio clip, camera link, digital output, email, HTTP, FTP/SFTP, NAS server, SD card, File upload via email, HTTP, FTP/SFTP, NAS server, SD card	
General		
Smart Focus System	Remote Focus with i-CS lens RBF (Remote Back Focus) with non i-CS lens	
IP Camera Connectors	RJ-45 cable connector for 10/100/1000Mbps Network/PoE connection Audio input Audio output AC 24V power input *1 DC 12V power input*1 Digital input *2 Digital output *2 RS485*1 BNC *1	
Certifications	IP Camera: CE, LVD, FCC Class B, VCCI, C-Tick, UL/CUL, BIS, BSMI	

Technical Specifications

System Requirements

Operating System	Microsoft Windows 10/8/7
Web Browser	Chrome 58.0 or above Internet Explorer 10/11
Other Players	VLC: 1.1.11 or above

Network Camera - Technical Specifications

Model	IP9165-LPC-v2 Kit(9-50mm, i-CS) IP9165-LPC-v2 Kit(12-40mm)	WDR Technology	WDR Pro II
CPU	Multimedia SoC (System-on-Chip)	Day/Night	Removable IR-cut filter for day & night function (Headlight filter design for Anti-Glare)
Flash	8 GB	Pan/Tilt/Zoom Functionalities	ePTZ: 48x digital zoom (4x on IE plug-in, 12x built-in)
RAM	2 GB	Storage	Seamless Recording to MicroSD/SDHC/SDXC card and recording to network-attached storage (NAS)
Camera Features			
Image Sensor	1/2" Progressive CMOS	Video	
Maximum Resolution	1920x1080 (2MP)	Maximum Frame Rate	60 fps @ 1920x1080
Lens Type	9-50mm: Vari-focal, Remote Focus(i-CS) 12-40mm: Vari-focal, Manual Focus	S/N Ratio	66.2 dB
Focal Length	f = 9 ~ 50 mm f = 12 ~ 40 mm	Dynamic Range	140 dB
Aperture	9-50mm: F1.5 ~ F1.6 12-40mm: F1.8 ~ F2.3	Audio	
Auto-iris	9-50mm: i-CS 12-40mm: P-iris (i-CS/P-iris/DC-iris all reserved)	Audio Capability	Two-way audio (Full duplex)
Field of View	9-50mm: 42.8° ~ 8.3° (Horizontal) 24.3° ~ 4.7° (Vertical) 48.9° ~ 9.46° (Diagonal) 12-40mm: 34.2° ~ 11.6° (Horizontal) 18.7° ~ 6.6° (Vertical) 39.8° ~ 13.3° (Diagonal)	Compression	G.711, G.726
		Interface	External microphone input External line output

IR LED - Technical Specifications

Model	CA8018-2040: IP9165-LPC-v2 Kit (Highway), 80W, 20° ~ 40° remote adjustable AI-109: IP9165-LPC-v2 Kit (Street), 48W, 10° ~ 30° remote adjustable	Input Power	CA8018-2040: 24VDC ±10%, 24VAC(50/60Hz) ±10% AI-109: 24VAC/28VDC with AE-23A enclosure
Max. Distance	CA8018-2040: 170 ~ 280 meters AI-109: 150 ~ 350 meters	Power Consumption	CA8018-2040: 80W AI-109: 48W
Beam Angle	CA8018-2040: 20° ~ 40° remote adjustable AI-109: 10° ~ 30° remote adjustable	Weight	CA8018-2040: 2.1 kg AI-109: 450 g
		Housing	Weather-proof IP68-rated housing Vandal-proof IK10-rated housing

IR LED - Technical Specifications

Operating Temperature	CA8018-2040: -40 °C ~ 60 °C (-40 °F ~ 140 °F) AI-109: -40 °C ~ 50 °C (-40 °F ~ 122 °F)	Included Accessories	CA8018-2040: U-Type Bracket (134 × 34 × 81.5 mm)
Color	CA8018-2040: Black AI-109: White	Certifications	CA8018-2040: IEC 62471, EN 50130-4, CE: EN61000-6-3, EN60598-1, EN60598-2-5, FCC Class A, EN60529 AI-109: CE, FCC class B, EN62471
Wavelength	850nm	Integrated Control	Built-in photocell for automatic IR on/off
Dimensions	CA8018-2040: 220 x 160 x 73 mm AI-109: 135 x 106 x 111 mm		

Compatible Accessories

Lens



AL-239
8 ~ 80 mm, F1.6, DC-iris



AL-24A
12 ~ 40 mm, F1.8, P-iris
(Standard Package)



AL-24E
3.9~10mm, F1.5, P-iris



AL-24F
4.4~10mm, F1.3, P-iris



AL-248
12 ~ 50 mm, F1.8, P-iris

Lens



AL-251
3.9 ~ 10 mm, F1.5, i-CS



AL-252
9 ~ 50 mm, F1.5, i-CS
(Standard Package)

Brackets



AM-314
Pole Mount Bracket



AM-315
Pole Mount Bracket

Power



HLG-120H-24
120W Single Output Switching Power Supply,
DC24V



AA-351
Outdoor Power Box, IP67, IK10



AA-352
Outdoor Power Box, IP67, IK10