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.

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).

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 lanee, the IP9165-LPC-v2 Kit is also the most economic solution in LPR applications.

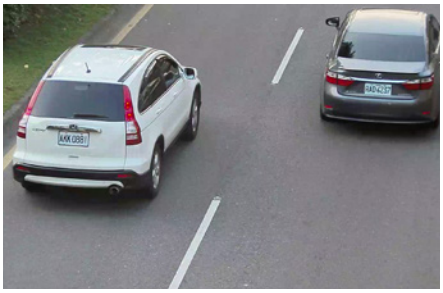
Key Features

- 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

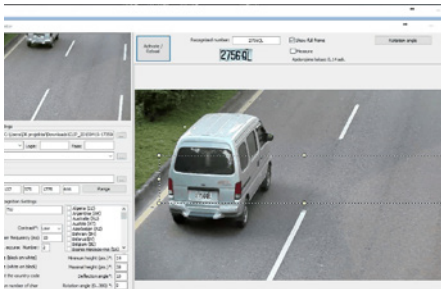
Functions

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.



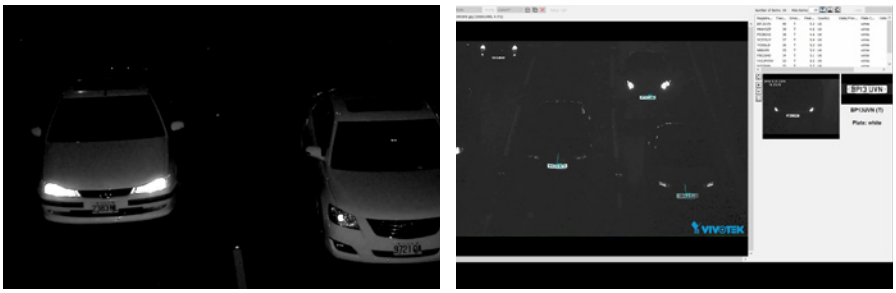
Scene Overview



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.



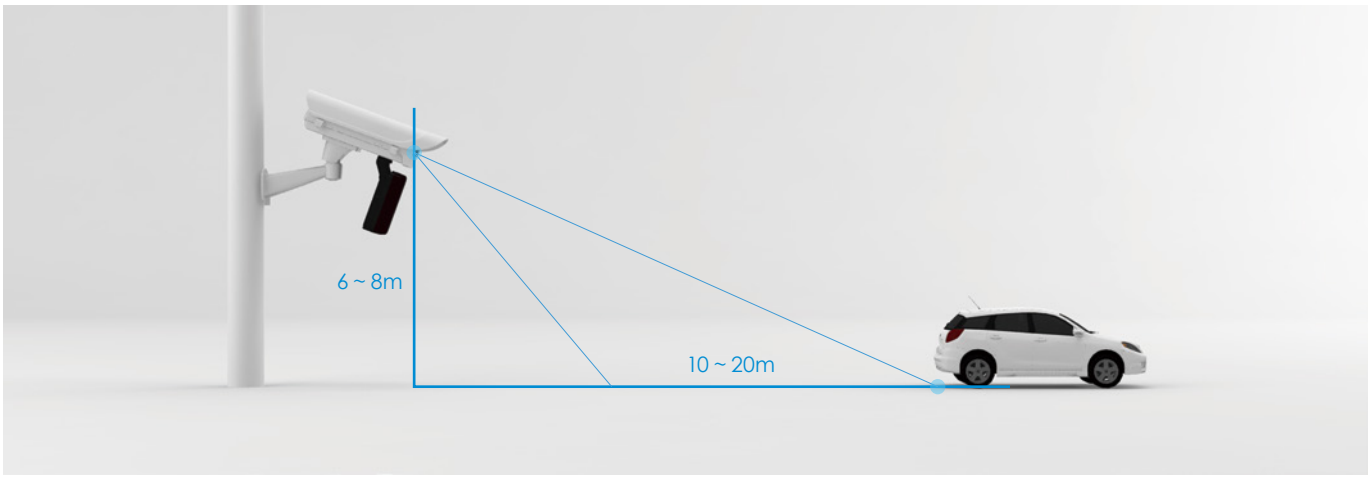
Clear Image Captured with IR Illuminators and Headlight Filter

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	 IP9165-LPC-v2(9-50mm) 2MP, 60fps, WDR Pro 140dB, i-CS, 3DNR, EIS	 IP9165-LPC-v2(12-40mm) 2MP, 60fps, WDR Pro 140dB, Remote Back Focus, 3DNR, EIS
IR Illuminator	 CA80I8-2040 80W IR Illuminator, 850nm, 20° ~ 40° adjustable beam angle with CVA Tech	 AI-109 48W embedded IR Illuminator, 850nm 10° ~ 30° remote control beam angle
Enclosure	 AE-23L Outdoor Enclosure with Anti-Icing Heated Glass, Fan, AC/DC 24V input, IP68, IK10, Sun shield	 AE-23A Outdoor Enclosure with Anti-Icing Heated Glass, Fan, AC24V/DC28V in, IP68, IK10, Sun shield, 80W surge protect, optional VAIR Illuminators
Bracket	 AM-21E-v2 Cable Management, Wall Mount Bracket	 AM-21E Cable Management, Wall Mount Bracket

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)
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: CA80I8-2040 *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
Image Settings	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
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/RTP/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 notif ication, SD card lif e 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 Camemra 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
Warranty	36 months

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)
CPU	Multimedia SoC (System-on-Chip)
Flash	8 GB
RAM	2 GB
Camera Features	
Image Sensor	1/2" Progressive CMOS
Maximum Resolution	1920x1080 (2MP)
Lens Type	9-50mm: Vari-f ocal, Remote Focus(i-CS) 12-40mm: Vari-focal, Manual Focus
Focal Length	f = 9 ~ 50 mm f = 12 ~ 40 mm
Aperture	9-50mm: F1.5 ~ F1.6 12-40mm: F1.8 ~ F2.3
Auto-iris	9-50mm: i-CS 12-40mm: P-iris (i-CS/P-iris/DC-iris all reserved)
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)

WDR Technology	WDR Pro II
Day/Night	Removable IR-cut filter for day & night function (Headlight filter design for Anti-Glare)
Pan/Tilt/Zoom Functionalities	ePTZ: 48x digital zoom (4x on IE plug-in, 12x built-in)
Storage	Seamless Recording to MicroSD/SDHC/SDXC card and recording to network-attached storage (NAS)
Video	
Maximum Frame Rate	60 fps @ 1920x1080
S/N Ratio	66.2 dB
Dynamic Range	140 dB
Audio	
Audio Capability	Two-way audio (Full duplex)
Compression	G.711, G.726
Interface	External microphone input External line output

IR LED - Technical Specifications

Model	CA80I8-2040: IP9165-LPC-v2 Kit (Highway), 80W, 20° ~ 40° remote adjustable AI-109: IP9165-LPC-v2 Kit (Street), 48W, 10° ~ 30° remote adjustable
Max. Distance	CA80I8-2040: 170 ~ 280 meters AI-109: 150 ~ 350 meters
Beam Angle	CA80I8-2040: 20° ~ 40° remote adjustable AI-109: 10° ~ 30° remote adjustable

Input Power	CA80I8-2040: 24VDC ±10%, 24VAC(50/60Hz) ±10% AI-109: 24VAC/28VDC with AE-23A encolsure
Power Consumption	CA80I8-2040: 80W AI-109: 48W
Weight	CA80I8-2040: 2.1 kg AI-109: 450 g
Housing	Weather-proof IP68-rated housing Vandal-proof IK10-rated housing

IR LED - Technical Specifications

Operating Temperature	CA80I8-2040: -40 °C ~ 60 °C (-40 °F ~ 140 °F) AI-109: -40 °C ~ 50 °C (-40°F ~ 122°F)
Color	CA80I8-2040: Black AI-109: White
Wavelength	850nm
Dimensions	CA80I8-2040: 220 x 160 x 73 mm AI-109: 135 x 106 x 111 mm

Included Accessories	CA80I8-2040: U-Type Bracket (134 × 34 × 81.5 mm)
Certifications	CA80I8-2040: 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
Integrated Control	Built-in photocell for automatic IR on/off

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

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