LINOVISION

GO SOLO LPR

4G LTE Solar Power ANPR Camera Kit with built-in License Plate Recognition Software and Vehicle Capture

Outstanding Features

- Complete solar power camera kit, easy to install and setup
- 600Wh high capacity lithium battery to keep system running around 72 hrs in raining days
- Built-in unlocked industrial 4G LTE router, compatible to AT&T, T-Mobile and Verizon (SIM Card is not included)
- AI deep learning + OCR dual recognition modes
- Up to 98% recognition accuracy, much higher than regular OCR-based recognition
- Dedicated firmware for the United States,Europe,Asia and Middle East.
- 8-32mm motorized lens(optional 2.8-12mm lens)
- Vehicle attributes analysis
- Alarm l/O
- Onboard 256GB storage for one month continuous recording
- Free mobile App for both Android & iOS (App name: Guarding Vision)
- Optional API document for 3rd party system integration

What is included in this camera:

- Solar panel 100W and pole mount bracket
- 600WH lithium battery with built-in charge controller
- One ANPR Camera (IPC7A27-ANPR)
- Built-in 4G LTE cellular router (SIM card needs to purchase separately)
- 256GB SD Card

Camera Specification

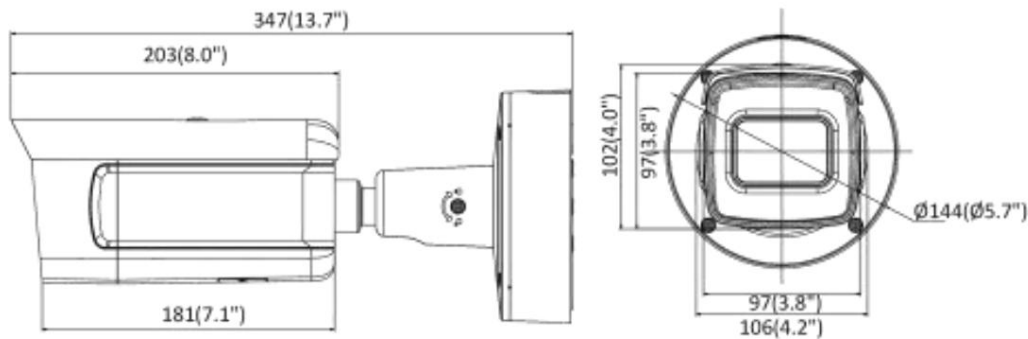| Camera	
Image Sensor	1/1.8" Progressive Scan CMOS
Min. Illumination	Color: 0.0005 Lux @ (F1.2, AGC ON); B/W: 0.0001 Lux @ (F1.2, AGC ON)
Shutter Speed	1 s to 1/100,000 s
Wide Dynamic Range	140 dB
Day & Night	IR cut filter Blue glass module to reduce ghost phenomenon
Lens	
Focus	Auto, semi-auto, manual.
Lens Type & FOV	2.8 to 12 mm, horizontal FOV: 114.5° to 41.8°, vertical FOV: 59.3° to 23.6°, diagonal FOV: 141.1° to 48° 8 to 32 mm, horizontal FOV: 42.5° to 15.1°, vertical FOV: 23.3° to 8.64°, diagonal FOV: 49.6° to 17.3°
Aperture	2.8 to 12 mm: F1.2 to 2.5 8 to 32 mm: F1.7 to F1.73
P-Iris	Yes
Illuminator	
IR Range	2.8 to 12 mm: 50 m 8 to 32 mm: 100 m
Wavelength	850 nm
Smart Supplement Light	Yes
Video	
Max. Resolution	1920 × 1080
Main Stream	50 Hz: 25 fps (1920 × 1080, 1280 × 720) 60 Hz: 30 fps (1920 × 1080, 1280 × 720)
Sub Stream	50Hz: 25fps (704 × 576, 640 × 480) 60Hz: 30fps (704 × 480, 640 × 480)
Third Stream	50Hz: 25fps (1920 × 1080, 1280 × 720, 704 × 576, 640 × 480) 60Hz: 30fps (1920 × 1080, 1280 × 720, 704 × 480, 640 × 480)
Fourth Stream	50Hz: 25fps (1920 × 1080, 1280 × 720, 704 × 576, 640 × 480) 60Hz: 30fps (1920 × 1080, 1280 × 720, 704 × 480, 640 × 480)
Fifth Stream	50Hz: 25fps (704 × 576, 640 × 480) 60Hz: 30fps (704 × 480, 640 × 480)
Custom Stream	50Hz: 25fps (1920 × 1080, 1280 × 720, 704 × 576, 640 × 480) 60Hz: 30fps (1920 × 1080, 1280 × 720, 704 × 480, 640 × 480)
Video Compression	Main stream: H.265+/H.265/H.264+/ H.264 Sub-stream/Third stream/Fourth stream/Fifth stream/custom stream: H.265/H.264/MJPEG
Video Bit Rate	32 Kbps to 8 Mbps
H.264 Type	Baseline Profile/Main Profile/High Profile
H.265 Type	Main Profile
Bit Rate Control	CBR/VBR
Stream Type	Main stream/sub-stream/third stream/fourth stream/fifth stream/custom stream
Scalable Video Coding (SVC)	H.265 and H.264 support
Region of Interest (ROI)	4 fixed regions for each stream
Audio	
Environment Noise Filtering	Yes
Audio Sampling Rate	8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz
Audio Compression	G.711/G.722.1/G.726/MP2L2/PCM/MP3
Audio Bit Rate	64Kbps(G.711)/16Kbps(G.722.1)/16Kbps(G.726)/32-192Kbps(MP2L2)/32Kbps(PCM)/8-320Kbps(MP3)
Audio Type	Mono sound
Network	
Simultaneous Live View	Up to 20 channels
API	ONVIF (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK, ISUP
Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, SFTP, SRTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP,UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour, SSL/TLS
Smooth Streaming	Yes
User/Host	Up to 32 users. 3 user levels: administrator, operator and user
Security	Password protection, complicated password, HTTPS encryption,802.1X authentication (EAP-TLS, EAP-LEAP, EAP-MD5), watermark, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for ONVIF, RTP/RTSP OVER HTTPS, Control Timeout Settings, Security Audit Log, TLS 1.2
Network Storage	microSD/SDHC/SDXC card (256 GB) local storage, and NAS (NFS, SMB/CIFS), auto network replenishment (ANR) Together with high-end Hikvision memory card, memory card encryption and health detection are supported.
Client	iVMS-4200, Hik-Connect, Hik-Central
Web Browser	Plug-in required live view: IE8+ Plug-in free live view: Chrome 57.0+, Firefox 52.0+, Safari 11+ Local service: Chrome 41.0+, Firefox 30.0+

Specification

Image	
Smart IR	The IR LEDs on camera should support Smart IR function to automatically adjust power to avoid image overexposure.
Day/Night Switch	Day, Night, Auto, Schedule, Triggered by Alarm In, Triggered by Video
Target Cropping	Yes
Distortion Correction Distortion	Yes
Picture Overlay	LOGO picture can be overlaid on video with 128 × 128 24bit bmp format
Image Enhancement	BLC, HLC, 3D DNR, Defog, EIS, Distortion Correction
Image Parameters Switch	Yes
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser
SNR	≥52 dB

Interface	
Alarm	2 input, 2 outputs (max. 24 VDC, 1 A)
Video Output	1 Vp-p Composite Output(75Ω/CVBS)(For debugging only)
On-board Storage	Built-in micro SD/SDHC/SDXC slot, up to 256 GB
Hardware Reset	Yes
Communication Interface	1 RJ45 10M/100M/1000M self-adaptive Ethernet port

Smart Feature-Set	
Basic Event	Motion detection, video tampering alarm, exception (network disconnected, IP address conflict, illegal login, HDD full, HDD error), black/white list of license plate
Smart Event	Line crossing detection, up to 4 lines configurable Intrusion detection, up to 4 regions configurable Region entrance detection, up to 4 regions configurable Region exiting detection, up to 4 regions configurable Unattended baggage detection, up to 4 regions configurable Object removal detection, up to 4 regions configurable Scene change detection, audio exception detection
Counting	Yes

Intelligent (Deep Learning Algorithm)	
Premier Protection	Line crossing, intrusion, region entrance, region exiting Support alarm triggering by specified target types (human and vehicle) Filtering out mistaken alarm caused by target types such as leaf, light, animal, and flag, etc.
Road Traffic and Vehicle Detection	Accuracy (under recommended installation and lighting conditions) Capture rate > 98% Vehicle moving direction recognition accuracy > 96% Mistaken capture rate < 2% (entrance/exit), < 5% (checkpoint) Blacklist and whitelist: up to 10000 records Captures vehicle that has no license plate Support license plate recognition of motorcycles (only in checkpoint scenario) Support vehicle attribute detection, including vehicle type, color, brand, etc. (City Street mode is recommended.)

General	
Linkage Method	Upload to FTP/NAS/memory card, notify surveillance center, send email, trigger alarm output, trigger recording, trigger capture Trigger recording: memory card, network storage, pre-record and post-record Trigger captured pictures uploading: FTP SFTP, HTTP, NAS, Email Trigger notification: HTTP, ISAPI, alarm output, Email
Online Upgrade	Yes
Dual Backup	Yes
Firmware Version	V5.5.121
Web Client Language	33 languages English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil), Ukrainian
General Function	Anti- flicker, 5 streams and up to 5 custom streams, heartbeat, mirror, privacy masks, flash log, password reset via e-mail, pixel counter
Software Reset	Yes
Storage Conditions	-40 ℃ to 60 ℃ (-40 ℉ to 140 ℉). Humidity 95% or less (non-condensing)
Startup and Operating Conditions	-40 ℃ to 60 ℃ (-40 ℉ to 140 ℉). Humidity 95% or less (non-condensing)
Power Supply	12 VDC ± 20%, three-core terminal block, reverse polarity protection; PoE: 802.3at, Type 2 Class 4
Power Consumption and Current	12 VDC, 1.33 A, max. 16.0 W PoE: (802.3at, 42.5V-57V), 0.43 A to 0.31 A, max. 18.0 W
Power Interface	Three-core terminal block
Material	Aluminum alloy body
Screw Material	Mild steel
Camera Dimension	Ø144 × 347 mm (Ø5.7″ × 13.7″)

Disclaimer: Design and specifications are subject to changes without prior notice.

Specification

Package Dimension	405 × 190 × 180 mm (15.9″ × 7.5″ × 7.1″)
Camera Weight	1920 g (4.2 lb.)
With Package Weight	3060 g (6.7 lb.)
Metadata	
Metadata	Metadata of intrusion detection, line crossing detection, region entrance detection, region exiting detection, unattended baggage detection, object removal are supported.
Approval	
Class	Class B
EMC	FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4: 2011 +A1: 2014); RCM (AS/NZS CISPR 32: 2015); IC (ICES-003: Issue 6, 2016); KC (KN 32: 2015, KN 35: 2015)
Safety	UL (UL 60950-1); CB (IEC 60950-1:2005 + Am 1:2009 + Am 2:2013); CE-LVD (EN 60950-1:2005 + Am 1:2009 + Am 2:2013); BIS (IS 13252(Part 1):2010+A1:2013+A2:2015); LOA (IEC/EN 60950-1)
Environment	CE-RoHS (2011/65/EU); WEEE (2012/19/EU); Reach (Regulation (EC) No 1907/2006)
Protection	Ingress protection: IK10 (IEC 62262:2002), IP67 (IEC 60529-2013)

Dimension

Unit: mm(inch)

4G LTE Router Specification

4G LTE Bands	US Version: B2/B4/B5/B12/B13/B14/B66/B71@FDD LTE (For North America, AT&T, T-Mobile, Verizon)
	EU Version: B1/B3/B5/B7/B8/B20/B28A@FDD LTE (For European Countries)
	AU Version: B1/B2/B3/B4/B5/B7/B8/B28@FDD LTE, B40@TDD LTE (For Australia)

Battery Specification

SKU	Solar-S1250
Battery Type	Lithium Solar Battery (Li-ion Battery) with built-in charge controller
Nominal Voltage	11.1V
Rated Capacity	50Ah
Energy	555Wh
Charge Voltage Cut0off	12.5V
Maximum Continuous Charge Current	10A
Discharge Under-Voltage Protection	9V
Reconnect Voltage	10.5V
Dimension	330 x 160 x 90 mm (12.99" x 6.3" x 3.54")
Weight	4.5kg (9.92 Lbs)

Solar Panel Specification

Solar Panel Type	Monocrystalline solar panels, 36 cells
Maximum Power at STC	100W
Optimum Operating Voltage (Vmp)	20.4V
Open-Circuit Voltage (Voc)	24.3V
Optimum Operating Current (Imp)	4.91A
Short-Circuit Current (Isc)	5.21A
Operating Temperature	-40°F to 176°F
Panel Leads (Pair)	14 AWG (1.96 ft)
Weight	14.1lbs/6.4kg
Dimension	41.8 x 20.9 x1.38 in

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