IPEL-D40V-W1-LED
4MP Full-Color LED AI Varifocal Dome Network Camera

IC REALTIME

- 4MP 1/1.8" CMOS image sensor, low illuminance, high image definition
- H.265 & H.264 triple-stream encoding
- 2.7-12mm Varifocal lens, 4MP (2688 × 1520)@30 fps
- IVS, Intelligent Motion Detect, Perimeter Protection
- WDR(140dB), 3D DNR, HLC, BLC
- Built-in Mic and Speakers, 1 input/1 output Alarm and Audio
- Warm light LEDs, up to 131ft of full color Illumination
- 256GB Micro SD Support, IP67, IK10, PoE, ePOE support

System Overview

IC Realtime's IPEL-D40V-W1-LED lets you experience full color video from day to night! This IK10- rated vandal proof dome camera is equipped with a high-performance sensor and large aperture lens enabling clear, colorful image in ultra low illuminance environments. This camera provides 30FPS@ 4MP (2688 × 1520) with H.265 support and features a 1/2.7" low illuminance, high image definition CMOS image sensor on top of a 2.7-12mm motorized varifocal lens. With up to 131 feet of full color illumination and 140dB WDR, the camera provides a colorful, vibrant image under the most demanding lighting conditions.

The camera also comes with Intelligent Motion Detect (iMD) and Perimeter Protection technology, which filters moving objects as vehicle or person on motion detect or when setting up virtual tripwire and intrusion zones. This helps reduce false alarms and streamline the playback search functionality.

Functions

Smart (H.265+ & H.264+)
Deliver high quality video without straining the network, Smart H.265+ is the optimized implementation of H.265. The Smart H.265+ encoding technology includes a scene adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction, providing saving of up to 70% of bandwidth and storage when compared with standard H.265

Starlight Technology
Featuring Starlight Technology, this camera is ideal for applications with challenging lighting conditions. Its low-light performance delivers usable video with minimal ambient light. Even in extreme low-light conditions, Starlight Technology is capable of delivering color images in near complete darkness (0.0005 lux).

Perimeter Protection
IC Realtime's Perimeter Protection features significantly improve detection accuracy. The benefits of Perimeter Protection include up to a 90% reduction in false alarms. Other advantages include a decrease in pixel count requirement for object detection, which translates into more efficiency with less strain on the system. Perimeter Protection options let you customize tripwires based on the object type and allow intelligent automation within a limited area of access such as pedestrian or vehicle-only zones. The combination of advanced AI analytics and real-time alerts maximizes efficiency & balance of the total systems capacity and resources resulting in greater surveillance system efficiency.

Full Color at Night
Utilizing a high-performance sensor and large aperture lens, IC Realtime's Full-color LED technology can display clear colorful image in the environment of ultra low illuminance. With this photosensitivity technology, the camera can capture more available light, and display more colorful image details.

iMD (Intelligent Motion Detect)
This is an upgraded version of motion detection currently known as Intelligent Motion Detection (iMD). The upgraded Plus version greatly improves alarm accuracy by pre-loading a deep learning algorithm that recognizes people and vehicles. Motion detection alerts containing a human and/or vehicle intrusion event are now possible with up to 95% accuracy. Eliminate false alarms, save time and keep stress levels low knowing you're protected.

Protection
The camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67 rating, making it suitable for indoor or outdoor environments.

Technical Specification

Camera

Image Sensor	1/1.8" CMOS
Effective Pixels	2688 (H) ×1520 (V)
RAM/ROM	512MB / 128MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Minimum Illumination	0.0005Lux@F1.0
S/N Ratio	> 56 dB
Illumination Distance	Distance up to 131.2 ft (40m)
LED On/Off Control	Auto / Manual
Full color LEDs	3 (Warm White)

Lens

Lens Type	Motorized vari-focal
Mount Type	φ16
Focal Length	2.7 mm–12 mm
Max. Aperture	F1.0
Angle of View	Horizontal: 115°–48° Vertical: 59°–27°
Close Focus Distance	5.7 ft (1.75 m)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8mm	198 ft	79 ft	39 ft	19 ft
	12mm	421 ft	168 ft	84 ft	42 ft

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan:0˚~360˚; Tilt:0˚~90˚; Rotation:0˚~360˚

Intelligence

IVS	Abandoned object; missing object
Advanced IVS	Face Detection, Heat Map, People Counting
Perimeter Protection	Tripwire; Intrusion, fast moving (Recognition of human and vehicle)
Intelligent Motion Detect (iMD)	Motion detection alarm for human and vehicle. Filters misinformation such as leaves and light.
Intelligent Search	Works together with AI-enabled NVRs to perform refined intelligent search, event extraction and merging to event videos

Video

Compression	H.265; H.264; H.264H; H.264B; MJPEG (sub stream only)
Streaming Capability	3 Streams
Resolution	4M (2688 × 1520); 3M (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Frame Rate	Main Stream: 2688 × 1520(1–25/30 fps) Sub Stream: D1 (1 fps–25/30 fps) Third Stream: 1080p (1 fps–25/30 fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 3 kbps–20480 kbps H.265: 3 kbps–20480 kbps
Day/Night	Color/B/W
BLC Mode	BLC / HLC / WDR (140dB)

White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Auto / Manual
Noise Reduction	3D DNR
Motion Detection	Off / On (4 Zone, Rectangle)
Region of Interest	Off / On (4 Zone)
Smart IR	Support
Flip	0°/90°/180°/270°
Mirror	Off / On
Privacy Masking	8 areas

Audio

Compression	PCM; G.711a; G.711Mu; G.726; G.723

Network

Ethernet	RJ-45 (10/100Base-T)
Protocol	IPv4;IPv6;HTTP;HTTPS;TCP;UDP;ARP;RTP;RTSP;RTCP;RTMP;SMTP;FTP;SFTP;DHCP;DNS;DDNS;QoS;UPnP;NTP;Multicast;ICMP;IGMP;NFS;PPPoE;802.1x;SNMP
Interoperability	ONVIF(Profile S/Profile G/Profile T);CGI;P2P
Cyber Security	Video encryption; configuration encryption; Digest; WSSE; account lockout; security logs; generation and importing of X.509 certification; HTTPS; trusted boot; trusted execution; trusted upgrade
Streaming Method	Unicast / Multicast
Max. User Access	20 (Total bandwidth: 80 M)
Edge Storage	FTP; SFTP; Micro SD card (256 GB); NAS
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	SmartICRSS, DSS
Smart Phone	IOS, Android

Certifications

Certifications	FCC Part 15, Subpart B

Interface

Audio Interface	Built-In MIc and Speaker, 1 Audio In/ Out (RCA ports)
RS485	N/A
Alarm	1 channel in: 5mA 3V–5V DC 1 channel out: 300mA 12V DC

Electrical

Power Supply	12V DC (±30%)/PoE (802.3af)/ePoE
Power Consumption	Basic: 2.3 W (12 VDC); 3.3 W (PoE) Max. (H.265 + 3 streams + intelligence + LED): 7.4 W (12 VDC); 9.0 W (PoE)

Environmental

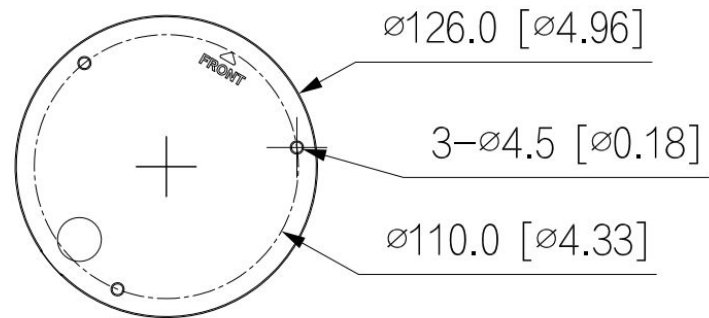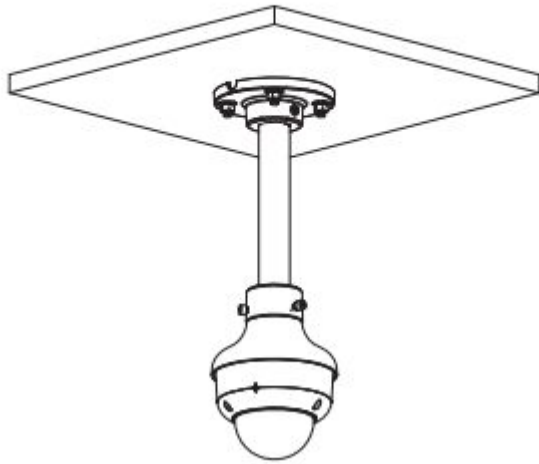|	
Operating Conditions	−22°F to +140°F (−30°C to +60°C)/less than 95%
Storage Conditions	-40°F to +140°F (-40°C to +60°C)
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	4.1" × 5.0" (105 mm × 126 mm)
Net Weight	1.6 lb (716 g)
Gross Weight	2 lb (929 g)

Accessories

Dimensions (mm/in)

MNT-CEILING-30

MNT-JUNCTIONBOX-7

∅126.0 [∅4.96]

3−∅4.5 [∅0.18]

∅110.0 [∅4.33]

61.6 [2.43]

105.0 [4.13]