IPMX-D20F-IRW2
2MP Starlight Dome Network Camera

IC REALTIME

- 2MP, 1/2.8" CMOS image sensor, low illuminance, high image definition
- H.265 & H.264 triple-stream encoding
- Outputs 2MP (1920 × 1080)@30 fps
- Starlight Support, Max IR distance: 164 ft
- Intelligent Motion Detect, Perimeter Protection, IVS support
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 GB Micro SD card
- 12V DC/PoE, IP67, IK10
- TAA Compliant, Made in South Korea

System Overview

The IPMX-D20F-IRW2 is a 2MP dome camera featuring our latest generation of 1/2.8" low illuminance, high image definition CMOS sensors and H.265/H.264 triple-stream encoding. It adopts our vandal proof dome style housing with a 2.8mm fixed lens. This camera also has enhanced night vision due to both Smart IR and Starlight functions with an IR illumination up to ~164'.

Additional features include IVS functions including Tripwire and Intrusion with Perimeter Protection as well as Intelligent Motion Detect (iMD). The camera is protected by both IP67 and IK10 ratings and can be powered via PoE or 12V.

Made in South Korea and conforms to the Trade Agreements Act (TAA).

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

Intelligent Video Analysis (IVS)
With built-in intelligent video analytics, the camera has the ability to detect and analyze moving objects for improved video surveillance. The camera provides optional standard intelligence at the edge allowing detection of multiple object behaviors such as Tripwire analytics, allowing the camera to detect when a predetermined line has been crossed, ideal for business intelligence, workforce optimization, and actionable intelligence.

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.

Starlight
For challenging low-light applications, Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Protection (IP67, IK10, wide voltage)
The camera allows for ±25% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 2KV lightning rating provides effective protection for both the camera and its structure against lightning. Subjected and certified to rigorous dust and immersion tests (IP67) and impact tests (IK10), The camera complies with an IK10 impact rating making it capable of withstanding the equivalent of 5 kg (11.02 lbs) of force dropped from a height of 40 cm (15.75 in.)

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.

Technical Specification

Camera

Image Sensor	1/2.8" 2 Megapixel progressive CMOS
Effective Pixels	1920 (H) × 1080 (V)
RAM/ROM	256 /128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100000 s
Minimum Illumination	0.002 Lux@F1.6 (Color, 30IRE) 0.0002 Lux@F1.6 (B/W, 30IRE) 0 Lux (Illuminator on)
IR Distance	50 m (164.0 ft)
IR On/Off Control	Auto / Manual
IR LEDs	3

Lens

Lens Type	Fixed focal
Mount Type	M12
Focal Length	2.8mm
Max. Aperture	F1.6
Angle of View	Horizontal:106°; Vertical: 57°;
Iris Type	Fixed
Close Focus Distance	0.6 m (2.0 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8mm	126 ft	50 ft	25 ft	12 ft

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan:0° ~355° ;Tilt:0° ~65° ;Rotation:0° ~355°

Intelligence

Perimeter Protection	Tripwire; Intrusion (Supports recognition of human and vehicles)
Intelligent Motion Detect	Supported

Video

Compression	H.265; H.264; H.264H; H.264B; MJPEG
Streaming Capability	3 Streams
Resolution	1080P(1920x1080)/1.3M(1280x960)/ 720P(1280×720)/D1(704×576/704×480)/ VGA(640×480)/CIF(352×288/352×240)
Frame Rate	Main Stream: (1920 × 1080@1–25/30 fps)
	Sub Stream (704 × 576@1–25 fps/704 × 480@1–30 fps)
	Third Stream (1280 × 720@1–25/30 fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 3 Kbps–8192 Kbps H.265: 3 Kbps–8192 Kbps
Day/Night	Auto(ICR) / Color / B/W
BLC Mode	BLC / HLC / WDR(120dB)
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Auto / Manual
Noise Reduction	3D DNR
Scene Self-adaptation	Yes

Motion Detection	Off / On (4 Zone, Rectangle)
Region of Interest	Off / On (4 Zone)
Smart IR	Support
Starlight	Support
Flip	0°/90°/180°/270°
Mirror	Off / On
Privacy Masking	Off / On (4 Area, Rectangle)

Audio

Compression	G.711a; G.711Mu; G726

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;N TP;Multicast;ICMP;IGMP;NFS;PPPoE;802.1x;SNMP
Interoperability	ONVIF(Profile S/Profile G);CGI;P2P;Milestone
Cyber Security	Video encryption; firmware encryption; configuration encryption; Digest; WSSE; account lockout; security logs; IP/MAC filtering; generation and importing of X.509 certification; syslog; HTTPS; 802.1x; trusted boot; trusted execution; trusted upgrade
Scene Self-adaptation (SSA)	Supported
Max. User Access	20 (Total bandwidth: 64 M)
Edge Storage	NAS, FTP, SFTP, Local PC for instant recording Micro SD card 256GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	SmartICRSS, DSS
Smart Phone	IOS, Android

Certifications

Certifications	CE-LVD: EN60950-1CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart BUL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07

Interface

Video Interface	N/A
Audio Interface	1/1 channel In/Out (RCA)
RS485	N/A
Alarm	1 channel In: 5mA 3V–5V DC 1 channel Out: 300mA 12VDC

Electrical

Power Supply	DC12V, PoE (802.3af)
Power Consumption	<6.9W

Environmental

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

Construction

Casing	Metal
Dimensions	81 mm × 109.9 mm (3.2" × 4.3")
Net Weight	378 g (0.8 lb)
Gross Weight	523 g (1.2 lb)

Accessories

Dimensions (mm/in)

109.9 [4.33"]

81.0 [3.19"]

⌀109.9 [⌀4.33"]
⌀98.2 [⌀3.87"]

3-⌀4.7 [⌀0.19"]