IPEL-M80F-IRW2
4x2MP Multi-Lens Panoramic Network IR Dome Camera

IC REALTIME

- Four 1/2.8" 2MP CMOS, low illuminance, high image definition
- H.265/H.264 triple-stream encoding
- Max 30fps@ 8MP (4096x1800)
- Supports 180-degree panoramic view
- DWDR, 3DNR, AWB, AGC, BLC
- IVS Support
- Starlight, Max IR LEDs Length 98ft
- 256GB Micro SD memory, IP67, IK10, PoE

System Overview

IC Realtime's IPEL-M80F-IRW2 features four 2MP I-Sniper sensors working in unison, creating a panoramic, 180° overview, allowing the camera to replace multiple single sensor cameras at a lower overall cost. The unique 4 lens camera provides added flexibility for capturing wide area surveillance. Each sensor is the latest I-Sniper gen2 chipset which provides vibrant color at the lowest levels of illumination.

Beyond this, the camera also supports the line of Advanced Intelligence notifications, including Tripwire, Intrusion as well as Crowd and Vehicle density. Future proof as well, this camera supports 3 video streams in addition to H.264 and H.265 compression capabilities. Ideal applications for this camera include parking lots, schools, resorts and hotels.

Functions

Smart H.265+
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.

Panoramic Splicing
Make no mistake - this is not just 4 side-by-side camera views - this is a single image 180° panorama. IC Realtime's Panoramic Splicing technology applies unique "splice & blend" algorithms to overlapped areas to create a complete, single image rendition. After splicing, the field of view of four-sensor camera can be set to 180° to maintain a constant blended view.

Intelligent Video System (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 abandoned or missing objects. IVS also supports Tripwire analytics, allowing the camera to detect when a predetermined line has been crossed, ideal for business intelligence, workforce optimization, and actionable intelligence.

Smart IR
With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts the intensity of camera's infrared LEDs to compensate the distance of an object. Smart IR technology prevents IR LEDs from whitening out images as they come closer to the camera. The camera's integrated infrared illumination provides high performance in extreme low-light environments up to 98ft (30m).

Protection (IP67, IK10, wide voltage)
The camera's outstanding reliability, 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. The camera complies with an IK10 vandal resistance rating making it capable of withstanding the equivalent of 11.02 lbs (5 kg) of force dropped from a height of 15.75 in (40 cm). It also features ±25% input voltage tolerance, allowing it to operate under unstable power supply conditions. Its 6KV lightning rating provides protection from the effects of a lightning strike.

Starlight Technology
Featured with Starlight Technology, the camera is ideal for applications with challenging light 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 nearly complete darkness.

IC REALTIME

Technical Specification

Camera

Image Sensor	Four 1/2.8" 2 Megapixel progressive scan CMOS
Effective Pixels	4096(H)x1800(V)
RAM/ROM	2GB/ 4GB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual, 1/3~1/100000s
Minimum Illumination	0.005 Lux@F1.6 (Color,30IRE) 0.0005 Lux@F1.6 (B/W,30IRE) 0 Lux (Illuminator on)
S/N Ratio	＞56dB
IR Distance	Distance up to 98ft (30m)
IR On/Off Control	Auto / Manual
IR LEDs	6

Lens

Lens Type	Fixed			
Mount Type	M12			
Focal Length	2.8mm			
Max. Aperture	F1.6			
Angle of View	Horizontal :180°; Vertical 90°			
Iris Type	Fixed			
Close Focus Distance	2.0 ft (0.6 m)			
DORI Distance	Detect	Observe	Recognize	Identify
	126ft	50ft	25ft	13ft

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan:0˚~355˚; Tilt:0˚~75˚; Rotation:±20˚

Intelligence

IVS	Tripwire, Intrusion
Advanced Intelligent Functions	(BETA) Vehicle Density, Crowd map

Video

Compression	H.265; H.264; H.264H; H.264B; MJPEG (only supported by the sub stream)
Streaming Capability	3 Streams
Resolution	4096 × 1800; 3840 × 1680; 2880 × 1264; 1024 × 452; 1920 × 832; 1280 × 560
Frame Rate	Main Stream: 4096x1800 (1~25/30fps)
	Sub Stream: 1024X452 (1 ~ 25/30fps)
	Third stream: 1920 × 832 (1–25/30 fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 9 kbps–17664 kbps H.265: 9 kbps–17664 kbps
Day/Night	Auto(ICR) / Color / B/W
BLC Mode	BLC / HLC / DWDR
White Balance	Auto/ Natural/ Street Lamp/ Outdoor/Manual
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
Defog	Yes
Digital Zoom	16x
Flip	N/A
Mirror	N/A
Privacy Masking	Off / On (4 Area, Rectangle)

Audio

Compression	G.711A; G.711Mu; G.726; AAC; G.723

Network

Ethernet	RJ-45 (10/100/1000 Base-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; SAMBA; PPPoE; 802.1x; SNMP
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P
Cyber Security	Video encryption; firmware encryption; configuration encryption; Digest; WSSE; account lockout; security logs; IP/MAC filtering; generation and of X.509 certification import; syslog; HTTPS; 802.1x; trusted boot; trusted execution; trusted upgrade
Streaming Method	Unicast / Multicast
Max. User Access	20 (Total bandwidth: 80 M)
Edge Storage	NAS Local PC for instant recording Micro SD card 256GB
Web Viewer	IE: IE9 and later, Chrome: 50 and later, Firefox: 48 and later
Management Software	SmartICRSS, DSS
Smart Phone	IOS, Android

Certifications

Certifications	FCC Part 15, Subpart B

Interface

Audio Interface	1/1 channel In/Out (RCA)
RS485	1 (baud rate range: 1200 bps–115200 bps)
Alarm	2 channels In: 5mA 3V–5V DC 2 channels Out: 1,000mA 30V DC/500mA 50V DC

Electrical

Power Supply	12V DC/24V AC/PoE(802.3at)
Power Consumption	Basic power consumption: 4.9W (12V DC); 6.4W(24V AC); 6.5W (PoE)
	Max. power consumption (AI + IR LED): 12.5W (12VDC); 14.3W(24V AC); 14.9W (PoE)

Environmental

Operating Conditions	-40° F ~ +140° F (-40° C ~ +60° C) / Less than 95% RH
Storage Conditions	-40° F ~ +140° F (-40° C ~ +60° C)
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal + Plastic
Dimensions	6.7" × 8.3" (169.5 mm × 212 mm)
Net Weight	8.0 lb (3.65 kg)
Gross Weight	9.6 lb (4.37 kg)

Accessories

Dimensions (mm/in)

MNT-CEILING-MPA

∅212.0 [∅8.35]

212.0 [8.35]

201.6 [7.94]

169.5 [6.67]