# **IPEL-M80F-IRW2**

4x2MP Multi-Lens Panoramic Network IR Dome Camera





### 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.

- 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

#### 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  $\pm 25\%$  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.



## **Technical Specification**

#### Camera

Camera					
Image Sensor	Four 1/2.8" 2	Megapixel prog	ressive scan CN	MOS	
Effective Pixels	4096(H)×1800(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°; Ro	otation:±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				
	Main Stream: 4096x1800 (1~25/30fps)				
Frame Rate	Sub Stream: 1	Sub Stream: 1024X452 (1 ~ 25/30fps)			

Third stream:  $1920 \times 832$  (1–25/30 fps)

Auto/ Natural/ Street Lamp/ Outdoor/Manual

H.264: 9 kbps–17664 kbps H.265: 9 kbps–17664 kbps

Off / On (4 Zone, Rectangle) Off / On (4 Zone)

Auto(ICR) / Color / B/W

BLC / HLC / DWDR

Auto / Manual

3D DNR

CBR/VBR

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Audio         Compression       6.711A; G.711Mu; G.726; AAC; G.723         Network         Ethernet       RI-45 (10/100/1000 Base-T)         Protocol       IPv4; IPv6; HTTP; HTTP; TCP; UDP; APP; PTSP; RTCP; RTMP; SMTP; FTP; STP; DHCP; DMS; DDMS; QoS; UPnP; MTP; Mutticast ICMP; IGMP; MFS; SAMA2, PPDG; B02.1X; SNNP         Interoparability       ONVIF (Profile G/Profile G/Profile T); CGI; P2P         Cyber Security       ONVIF (Profile G/Profile G/Profile T); CGI; P2P         Cyber Security       Unicast / Muticast         Streaming Method       Unicast / Muticast         Max. User Access       20 (Total bandwidth: 80 M)         Edge Storage       Lical PC for instant recording Micro SD card 256GB         Web Viewer       Lie IE9 and later, Chrome: 50 and later, Firefox: 48 and Later         Management Software       SmartICRSS, DSS         Smart Phone       IOS, Android         Certifications       FCC Part 15, Subpart B         Interface       J12 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         Etertical       Super consumption: Max, power consumption (	Mirror	N/A			
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web viewerlaterManagement SoftwareSmartlCRSS,DSSSmart PhoneIOS, AndroidCertificationsFCC Part 15, Subpart BInterfaceAudio InterfaceAudio Interface1/1 channel In/Out (RCA)RS4851 (baud rate range: 1200 bps-115200 bps)Alarm2 channels In: 5mA 3V-5V DC 2 channels Out: 1,000mA 30V DC/500mA 50V DCElectricalPower Supply12V DC/24V AC/PoE(802.3at)Basic power consumption: 4.9W (12V DC); 6.4W (24V AC); 6.5W (PoE)Max, power consumption: 4.9W (12V DC); 6.4W (24V AC); 6.5W (PoE)Power Consumption: 4.9W (12V DC); 6.4W (24V AC); 14.9W (PoE)Environmental100 parting ConditionsAdv° F~+140° F (-40° C~+60° C) / Less than 95% RHStorage Conditions-40° F~+140° F (-40° C~+60° C) / Less than 95% RHStorage Conditions1P67Vandal ResistanceIP67ConstructionIK10ConstructionCasingMetal + PlasticDimensions6.7" × 8.3" (169.5 mm × 212 mm)Net Weight8.0 lb (3.65 kg)	Edge Storage	Local PC for instant recording			
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Certifications         FCC Part 15, Subpart B           Interface         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         2           Power Supply         12V DC/24V AC/PoE(802.3at)           Basic power consumption: 4.9W (12V DC); 6.4W(24V AC); 6.5W (PoE)           Max. power consumption: (12V DC); 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) / Less than 95% RH           Storage Conditions         1P67           Vandal Resistance         IK10           Casing         Metal + Plastic           Dimensions         6.7" × 8.3" (169.5 mm × 212 mm)           Net Weight         80 lb (3.65 kg)	Smart Phone	IOS, Android			
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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         2 channels Out: 1,000mA 30V DC/500mA 50V DC           Power Supply         12V DC/24V AC/PoE(802.3at)           Power Supply         12V DC/24V AC/PoE(802.3at)           Power Consumption         Assic power consumption: 4.9W (12V DC); 6.4W(24V AC); 6.5W (PoE)           Power Consumption         Ass. power consumption (Al + IR LED): 12.5W (12V DC); 14.3W(24V AC); 14.9W (PoE)           Environmental         -40° F ~ +140° F (-40° C ~ +60° C) / Less than 95% RH           Storage Conditions         -40° F ~ +140° F (-40° C ~ +60° C) / Less than 95% RH           Ingress Protection         IP67           Vandal Resistance         IK10           Construction         Ktoa           Casing         Metal + Plastic           Dimensions         6.7" × 8.3" (169.5 mm × 212 mm)           Net Weight         80 Ub (3.65 kg)					
Alarm2 channels In: 5mA 3V-5V DC 2 channels Out: 1,000mA 30V DC/500mA 50V DCElectricalPower Supply12V DC/24V AC/PoE(802.3at)Power Consumption4.9W (12V DC); 6.4W(24V AC); 6.5W (PoE)Max. power consumption: (12V DC); 14.3W(24V AC); 14.9W (PoE)EnvironmentalOperating Conditions-40° F ~ +140° F (-40° C ~ +60° C) / Less than 95% RHStorage Conditions-40° F ~ +140° F (-40° C ~ +60° C)Ingress ProtectionIP67Vandal ResistanceIK10ConstructionKet VeightStorage6.7" × 8.3" (169.5 mm × 212 mm)					
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Power Supply     12V DC/24V AC/PoE(802.3at)       Basic power consumption: 4.9W (12V DC); 6.4W(24V AC); 6.5W (PoE)       Power Consumption (Al + 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) / Less than 95% RH       Ingress Protection     1P67       Vandal Resistance     IN67       Construction     K10       Casing     Metal + Plastic       Dimensions     6.7" × 8.3" (169.5 mm × 212 mm)       Net Weight     80 lb (3.65 kg)	Alarm				
Power Consumption     Basic power consumption: 4.9W (12V DC); 6.4W(24V AC); 6.5W (PoE)       Max. power consumption (Al + 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     Metal + Plastic       Dimensions     6.7" × 8.3" (169.5 mm × 212 mm)       Net Weight     8.0 lb (3.65 kg)	Electrical				
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) / Less than 95% RH           Ingress Protection         IP67           Vandal Resistance         IK10           Construction         Kotal + Plastic           Dimensions         6.7" × 8.3" (169.5 mm × 212 mm)           Net Weight         8.0 lb (3.65 kg)	Power Supply	12V DC/24V AC/PoE(802.3at)			
Max. power consumption (Al + IR LED): 12.5W (12VDC): 14.3W(24V AC): 14.9W (PoE)EnvironmentalOperating Conditions-40° F ~ +140° F (-40° C ~ +60° C) / Less than 95% RHStorage Conditions-40° F ~ +140° F (-40° C ~ +60° C)Ingress ProtectionIP67Vandal ResistanceIK10ConstructionCasingMetal + PlasticDimensions6.7" × 8.3" (169.5 mm × 212 mm)Net Weight8.0 Ub (3.65 kg)	Power Consumption				
Operating Conditions         -40° F ~ +140° F (-40° C ~ +60° C) / Less than 95% RH           Storage Conditions         -40° F ~ +140° F (-40° C ~ +60° C) / Less than 95% RH           Ingress Protection         IP67           Vandal Resistance         IK10           Construction           Construction         Metal + Plastic           Dimensions         6.7" × 8.3" (169.5 mm × 212 mm)           Net Weight         8.0 lb (3.65 kg)					
Storage Conditions-40° F ~ +140° F (-40° C ~ +60° C)Ingress ProtectionIP67Vandal ResistanceIK10ConstructionConstructionCasingMetal + PlasticDimensions6.7" × 8.3" (169.5 mm × 212 mm)Net Weight8.0 lb (3.65 kg)	Environmental				
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)	Operating Conditions	-40° F ~ +140° F (-40° C ~ +60° C) / Less than 95% RH			
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)	Storage Conditions	-40° F ~ +140° F (-40° C ~ +60° C)			
Construction       Casing     Metal + Plastic       Dimensions     6.7" × 8.3" (169.5 mm × 212 mm)       Net Weight     8.0 lb (3.65 kg)	Ingress Protection	IP67			
Casing         Metal + Plastic           Dimensions         6.7" × 8.3" (169.5 mm × 212 mm)           Net Weight         8.0 lb (3.65 kg)	Vandal Resistance	IK10			
Dimensions         6.7" × 8.3" (169.5 mm × 212 mm)           Net Weight         8.0 lb (3.65 kg)	Construction				
Net Weight 8.0 lb (3.65 kg)	Casing	Metal + Plastic			
	Dimensions	6.7" × 8.3" (169.5 mm × 212 mm)			
Gross Weight 9.6 lb (4.37 kg)	Net Weight	8.0 lb (3.65 kg)			
	Gross Weight	9.6 lb (4.37 kg)			

Bit Rate Control

Bit Rate

Day/Night

BLC Mode

White Balance

Noise Reduction

Region of Interest

Gain Control





