

# ITS EXPRESS

A **HN** HARDENED NETWORKS BRAND



## Advanced Imagers Series AIS-8300

The Advanced Imager series delivers a new generation of stunning low-light, night color camera performance for the ITS/Traffic and Law Enforcement industries. Advanced artificial intelligence engines and state-of-the-art low-light imagers, matched with Advanced AI vision processors and LiDar focusing, deliver a new level of picture quality and artificial intelligence for 2024.

With these state-of-the-art advancements in one feature-rich camera, 8 MP ultra-high resolution for high-end analytics, 1080p stream for video walls, and a small stream for cellular. The Advanced Imager series processing power can deliver these streams simultaneously, in beautiful Night Color Mode, well beyond other competitors' capabilities.

- ▶ **Security:**
  - Secure Boot with Trustzone
  - Secure memory
  - TRNG, OTP, ARM TBSA compliance
  - Dram scrambling and virtualization
- ▶ **Applicable Software Analytics:**
  - People counting and tracking
  - Face detection, tracking, and recognition
  - Human, pet, & vehicle classifications
  - Object classifications & recognitions
  - License plate recognition
- ▶ **FL APL Approval Number:**  
682-002-025

### Advanced Artificial Intelligence

The camera boasts a cutting-edge 3rd Gen Engine Computer Vision Processor (CVFlow), integrating Convolutional Neural Network (CNN) and Deep Neural Network (DNN) technologies. Its advanced features include 3D Motion-compensated temporal filtering. The camera excels in low-light conditions with its superior Low Light Processing technology and employs intelligent H.264/H.265 encoder algorithms.

**Solar Friendly**

Model	AIS-8300	
<b>Image Sensor</b>		
Image Sensor	1 /1/8" low power cmos active square pixels	
Effective Pixels	3840 x 2160 8.4 mp 4k	
Pixel Size	2.0 μm (H) x 2.0 μm (V)	
Total Number of Pixels	3856 x 2200 8.48Mps	
Image Processor	3rd Gen. Computer Vision Engine CVflow CNN / DNN engine	
Sensitivity	15886 Difit/Lx/S	
Signal to Noise Ratio	50dB	
<b>Lens</b>		
Lens	Type	31x zoom lens, P-Iris, Auto-Iris, F1.35
	Focal Length	6.9-214.6 mm
	Horizontal FOV	61.7° (wide), 2.1° (tele)
	Vertical FOV	35.8° (wide), 1.2° (tele)
Focus	Manual and Auto via LiDar or Contrast	
<b>Camera Features</b>		
Frame Rate (Maximum)	H.265	HDR 8MP@30fps + 2M @30fps
	H.265	8MP @ 60 fps
	H.264	HDR 8MP@30fps + 2M @30fps
	H.264	8MP @ 60 fps
	MJPEG	2MP@30fps
Advanced AI Image Processing	<ul style="list-style-type: none"> <li>-Advanced Night Color Mode</li> <li>-Superior Low-Light processing</li> <li>-Electronic image stabilization</li> <li>-Chromatic aberration correction</li> </ul>	
HDR Function	<ul style="list-style-type: none"> <li>-Clear HDR</li> <li>-Multi-exposure</li> <li>-Line -interleaved HDR</li> </ul>	
Day & Night	Removable IR-cut filter	
Shutter Time	1 to 1/10K sec.	
HDR	Gen3 Engine	
EIS	Yes	
Digital Zoom	10x	
Image Settings	<ul style="list-style-type: none"> <li>-Exposure</li> <li>-Brightness</li> <li>-Hue</li> <li>-White Balance</li> <li>-Text Overlay</li> <li>-Backlight Compensation</li> </ul>	<ul style="list-style-type: none"> <li>-Sharpness</li> <li>-Contrast</li> <li>-Saturation</li> <li>-IR Threshold</li> <li>-Privacy Mask</li> <li>-Noise Reduction</li> </ul>
Image Rotation	90°, 180°, 270° rotation	
<b>Pan/ Tilt</b>		
Pan/Tilt Range	Pan: 0 to 360° endless	Tilt: -20 to 100°
Manual Speed	Pan: 0.1 to 90°/s	Tilt: 0.1 to 55°/s
Preset Speed	Pan: 300°/s	Tilt: 300°/s
Preset	256	
PTZ Mode	8 tours, 8 pattern, & 4 auto pan	
Preset Return Accuracy	±0.16°/±0.18°	
<b>Video Codec</b>		
Compression	H.265/H.264/MJPEG	
Streaming	<ul style="list-style-type: none"> <li>-Up to 4 individually configurable streams in H.265/H.264/MJPEG</li> <li>-Configurable resolution/frame rate/bandwidth LBR/VBR/CBR in H.265/H.264</li> </ul>	

NEMA Specifications	Meets NEMA TS2 requirements
<b>Network</b>	
Interface	10/100/1000Mbps ethernet
Security	-User authentication -HTTPS -IP Filter -IEEE 802.1x -OpenVPN
Supported Protocols	-ARP            -UDP            -TCP            -IGMP            -HTTP -PPoE          -DHCP          -RTSP          -QoS            -HTTPS -IPv4/v6       -UPnP          -FTP            -DDNS          -RTP -ICMP          -SNMP          -NTP            -SMTP
ONVIF	Profile S/G/T/M conformant
<b>Intelligent Video Analytics</b>	
Advanced Analytics	-Convolutional Neural Network (CNN) -Deep Neural Network (DNN) based processing
General Analytics	Motion & audio detection
DNN Analytics	-Facial Attributes -LPR Detection & Recognition -People Detection & Tracking -Human & Vehicle Classification -Object Classification & Recognition
<b>General</b>	
Casing	Aluminum and ABS
Power	IEEE802.3bt, Type 3, class 6, max 51 watt, AC24V, DC12V
Amphenol Cable 1 (Included)	-IP67, waterproof connector -IP67, waterproof connector -IP67, waterproof connector -Alarm in x2, Alarm out x2, unterminated wire
IR Illumination Distance	100m
Storage	Support for microSD, microSDHC, microSDXC card & recording to Network Attached Storage
Operating Conditions	-40°C to 74°C Humidity 0 to 95% (non-condensing)
Storage Conditions	-45°C to 85°C
Approvals	-EMC: CE/FCC -Safety: RoHS, UL -Environment: IP66/IK10 <sup>1</sup> -Others: NEMA TS2 (Section 2.2.7/2.2.8/2.2.9) -FL APL Approval # 682-002-025
Dimensions	Ø 241x338 mm with Sunshield
Weight	5.5kg
Wind Speed Rating	160 mph
Video Resolutions	-Maximum resolution: 8.3 MP 3840x2160 (4K) -Minimum resolution: 240 vertical lines
Warranty	-Three (3) years -Three (3) years from the date of acceptance when applicable

<sup>1</sup>IK10 rating excluding glass window