INTELLIO

ILO-601-BL-35/07/10

Bi-Spectrum Bullet camera



NEO ThermalDuo

Made in Japan / NDAA certified

Camera

	Thermal	Visible
Max Resolution	Sensor is 256(H) × 192(V) , Image can be scaled up to 704 × 576	2880(H) × 1620(V)
Min Illumination	N/A	Color: 0.05Lux @(F1.6, AGC ON), B/W: 0.005Lux @(F1.6, AGC ON), 0Lux with IR on
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays	1/2.7" CMOS
Pixel Pitch	12μm	N/A
Spectral Range	8 to 14μm	N/A
NETD	≤ 50mK	N/A
Shutter Speed	N/A	1/5 to 1/20,000s
Day & Night	N/A	Auto (ICR)

Illuminator

Type	IR
IR wavelength	850 nm
Distance	4 mm: Up to 35 m (114.83 ft) 8 mm: Up to 50 m (164.04 ft)
Control	Auto / Manual

Lens

Lens Type	Fixed lens	Fixed lens
Focal Length	3.5 mm, 7 mm, 10 mm optional	4 mm, 8 mm optional
Max. Aperture	F1.0	F1.6 / F2.0
Field of View (FOV)	3.5 mm - H: 48.1°, V: 35.9°; 7 mm - H: 24.1°, V: 17.9°; 10 mm - H: 17.1°, V: 12.9°	4 mm - H: 92.1°, V: 45.9°; 8 mm - H: 40.1°, V: 19.9°
Focus Control	Fixed	Fixed

DORI Distance

Detect	4 mm: 71.9 m (235.89 ft), 8 mm: 145 m (475.72 ft)
Observe	4 mm: 28.7 m (94.16 ft), 8 mm: 58.3 m (191.27 ft)
Recognize	4 mm: 14.3 m (46.92 ft), 8 mm: 29.1 m (95.47 ft)
Identify	4 mm: 7.1 m (23.29 ft), 8 mm: 14.5 m (47.57 ft)

Thermal DRI Distance

Thermal Lens	3.5 mm	7 mm	10 mm
Detection (Human: 1.8×0.5 m)	145.5 m (477.36 ft)	291 m (954.72 ft)	416 m (1,364.83 ft)
Detection (Vehicle: 4×1.5 m)	446.5 m (1,464.90 ft)	893.9 m (2,932.74 ft)	1,277 m (4,189.63 ft)
Recognition (Human: 1.8×0.5 m)	35.9 m (117.78 ft)	72.9 m (239.17 ft)	103.9 m (340.88 ft)
Recognition (Vehicle: 4×1.5 m)	111.5 m (365.81 ft)	223.9 m (734.58 ft)	318 m (1,043.31 ft)
Identification (Human: 1.8×0.5 m)	17.9 m (58.73 ft)	35.9 m (117.78 ft)	51.9 m (170.28 ft)
Identification (Vehicle: 4×1.5 m)	55.9 m (183.40 ft)	111.9 m (367.13 ft)	159 m (521.65 ft)
Note:			
Distances are calculated based on Johnson's Criteria.			
Detection: Object must be covered by ≥1.5 pixels.			
Recognition: Object must be covered by ≥6 pixels.			
Identification: Object must be covered by ≥12 pixels.			

Thermal Function

Temperature Range	-20°C to 150°C (-4°F to 302°F)
Accuracy	±2°C / ±2%
Temperature Detection	3 temperature measurement rule types, 20 rules in total, 1 full screen, 19 others (spot, areas, line)
Temperature Alarm	Temperature difference alarm, Threshold alarm, Temperature rise alarm
Temperature Display	Display in the lower left corner, follow the cursor display of the highest temperature, lowest temperature or average temperature
Response Time	≤ 30ms
Image Fusion	Fusion view of thermal view and overlaid details of the optical channel

Thermal Smart Detection

Lens	3.5 mm	7 mm	10 mm
VCA Detection (Human: 1.8×0.5 m)	29.9 m (98.10 ft)	59.9 m (196.52 ft)	102 m (334.65 ft)
VCA Detection (Front/Rear of Vehicle: 4×1.5 m)	34 m (111.55 ft)	69.9 m (229.33 ft)	229.9 m (754.27 ft)
Temperature Measurement (1 ×1 m)	58.2 m (190.94 ft)	116.6 m (382.55 ft)	166.6 m (546.59 ft)
Temperature Measurement (0.2×0.2 m)	11.6 m (38.06 ft)	23.2 m (76.12 ft)	33.2 m (108.92 ft)
Fire Detection (0.2×0.2 m)	29.1 m (95.47 ft)	58.2 m (190.94 ft)	83.2 m 272.97 ft)
Smoking Detection	12.8 m (41.99 ft)	24.9 m (81.69 ft)	39.9 m (130.91 ft)
Note:			
Values are for reference only. Actual detection range may vary with atmospheric conditions, target size, and installation environment.			

Image Settings		
Image Adjustment	Brightness, Contrast, Sharpness	Brightness, Saturation, Contrast, Sharpness
Scene Mode	Mirror	Indoor, Outdoor, Mirror
Pseudo-color Setting	Up to 17 colors (White-hot / Black-hot / Rainbow / Iron red / HSV /Bone / Cool /	N/A
FFC Control	Auto / Manual	N/A
Exposure Mode	N/A	Auto, Manual, Shutter priority
White Balance	N/A	Auto / Tungsten / Fluorescent / Daylight / Shadow
Day/Night Setting	N/A	Auto / Day mode / Night mode / Timer
Noise Reduction	2D/3D DNR	2D/3D DNR
Image Enhancement	N/A	WDR, HLC, BLC, Defog
Wide Dynamic Range	N/A	True WDR 120dB
OSD	Up to 8 OSD	Up to 8 OSD
Privacy Masking	4 areas	4 areas
Video & Audio Streams		
Main Stream	D1 (704×576)	2880×1620, 2560×1440, 2304×1296, 1920×1080, 1280×720
Sub Stream	D1, CIF, 256×192	D1, VGA
Frame Rate	Up to 25fps	Up to 25fps
Bit Rate Control	CBR/VBR	CBR/VBR
Bit Rate	Main Stream: 100 Kbps to 3 Mbps, Sub Stream: 10 Kbps to 3 Mbps	Main Stream: 100 Kbps to 12 Mbps, Sub Stream: 10 Kbps to 6 Mbps
Smart Encoding	Supported	Supported
Audio Compression	G.711 A-law, G.711 μ-law, RAW_PCM	G.711 A-law, G.711 μ-law, RAW_PCM
Audio Bit Rate	64 Kbps (G.711), 128 Kbps (RAW_PCM)	64 Kbps (G.711), 128 Kbps (RAW_PCM)
Events & Alarms		
Alarm Triggers	IVS, Motion detection, Alarm input, Network alarm, Disk alarm, Abnormal sound detection	
Event Actions	Alarm output, Recording, SMTP, FTP upload, Flashlight alarm, Audible alarm output	
Intelligent Analytics		
Smart Tracking	Supports fullbody and vehicle detection	
Smart Detectors	Intrusion, Smart Motion, Single-Line Crossing, Double-Line Crossing, Loitering, Wrong-Way, Enter Area and Leave Area Supports accurate target classification (fullbody/vehicle)	
Statistical Detectors	People Counting	
Thermal Detectors	Smoking and Fire Spot Detection	Smoke and Flame Detection
Security		
OS / Firmware Protect	Encrypted firmware, Signed firmware	
User Authentication	Digest authentication, Prevent brute-force attack	
Network Authentication	IEEE 802.1X (EAP-TLS)	
Secure Communication	HTTPS, WSS (WebSocket Secure), SRTP	
Access Control	IP-based access control, Auto logout	
Data Protect	Encryption credentials	
Audit	Access / System / Event Log management	
Secure Storage	SDcard partition encrypt (AES-256), Secure element	
Supply Chain Security	SBOM	

Network	
Protocols	IPv4/IPv6, TCP/UDP, DNS, DHCP, HTTP/HTTPS, DDNS, PPPoE, RTSP/ RTCP/RTP, NTP, ARP, UPnP, FTP, SMTP, QoS, SMTP, 802.1x, SNMP, Multicast
Application Programming Interface	ONVIF (Profile G/S/T/M), SDK, CGI
Max Concurrent Streams	10 channels
User/Host Level	32+ users, 3 levels: Administrator, Operator, Media user
Web Viewer	<IE11, Chrome, Firefox, Microsoft Edge
Interfaces	
Network Interface	1 × Ethernet (10/100 Base-T), RJ-45 connector
Built-in Speaker	Supported
Audio Interface	1ch input, 1ch output
Alarm Interface	2ch input, 2ch output
Control Interface	1ch RS-485
SD Card Slot	Support microSD card, up to 512GB
Reset Button	Supported
General Specifications	
Language	English (default), Hungarian, Japanese, Polish, Italian, Portuguese, Spanish, Russian, Chinese, Traditional Chinese, Korean, French, Czech
Power Supply	12 VDC / 24 VDC / PoE (802.3af)
Power Consumption	Max 12 W
Operating Temperature	-40°C to 60°C (-40°F to 140°F)
Operating Humidity	Less than 95% RH
Ingress Protection	IP66
Certifications	CE-EMC - EN 55032, EN IEC 61000-6-3, EN IEC 61000-3-2, EN 61000-3-3, EN 55035, EN 50130-4 FCC 47 CFR Part 15 Subpart B
Material	Metal
Dimensions	303.01 × 95.1 × 107.05 mm (11.93 × 3.74 × 4.21 inch)
Net Weight	Approx. 1.38 Kg (3.04 lb) with 3.5mm lens

Accessories (optional)

Junction box	 ILA-106
Pole mount	 ILA-301
Pole mount	 ILA-304

Dimensions (mm)

