



Harsh Environments	Modular Two-Part Kit	Edge AI Analytics	4 MP @ 60 fps
-40 °C to +60 °C, all-metal housing, dual power backup	Electronics box + Ø30.5 mm pinhole lens, 8 m coaxial cable	Perimeter, human/vehicle, AI target search, people counting	1/2.7" CMOS, 120 dB WDR, 0.005 Lux color, triple stream

AI Pinhole Camera Kit for Industrial Process Monitoring

Two-part pinhole camera engineered for industrial cabinets: electronics inside the enclosure, Ø30.5 mm lens behind the machine panel, joined by an 8 m coaxial cable. -40 °C to +60 °C range, dual power backup and edge AI make it equally suitable for ATMs, vending machines and retail.

FEATURES

- Two-part kit: electronics box + 2.8 mm pinhole lens joined by an 8 m coaxial cable
- Wide -40 °C to +60 °C operating range, all-metal housing for control cabinets
- Dual power backup: PoE (802.3af) + 12 V DC, no restart if one source is lost
- 4 MP 1/2.7" progressive CMOS, max 2688 × 1520 @ 60 fps, triple stream
- Low-light 0.005 Lux color / 0.0005 Lux B/W @ F2.0, ideal for unlit interiors
- 120 dB WDR, BLC, HLC, 3D NR, defog, LDC for high-contrast scenes
- Edge AI: perimeter protection, human/vehicle classification, AI target search
- Smart object detection, face detection, people counting with reports
- Audio I/O, 2 alarm in / 2 alarm out for PLC and process integration
- Local recording on microSD up to 512 GB, no automatic cloud upload
- Hardened cybersecurity stack: HTTPS, 802.1x, X.509, trusted boot
- Suitable also for ATMs, vending machines, bank counters and retail

MT-IPHUM81P-4M

TECHNICAL SPECIFICATIONS

Camera	
Image Sensor	1/2.7" CMOS
Max. Resolution	2688 (H) × 1520 (V)
ROM / RAM	256 MB / 1 GB
Scanning System	Progressive
Electronic Shutter	Auto / Manual, 1/3 s - 1/100,000 s
Min. Illumination	0.005 Lux @ F2.0 (Color, 30 IRE) / 0.0005 Lux @ F2.0 (B/W, 30 IRE)
S/N Ratio	> 56 dB

Intelligent	
IVS (Perimeter Protection)	Tripwire, intrusion, fast moving (with vehicle/human classification); loitering detection, people gathering, parking detection
Smart Object Detection	Smart abandoned object; smart missing object
AI Target Search	Uses deep-learning algorithms with compatible back-end devices to match targets (people, animals, motor vehicles) and quickly locate them in live and recorded video
Face Detection	Detection, snapshot, optimization, optimal-face upload, face exposure, attribute extraction (6 attributes, 8 expressions), snapshot strategies (real-time / quality priority / optimization), face angle filter
People Counting	Tripwire and area people counting; queue management; up to 4 rules per function; report export (day / month / year)
Smart Search	AI-powered quick target search (find specific person or vehicle in seconds) when paired with compatible recorders

Audio	
Audio Compression	G.711a; G.711Mu; PCM; G.726; G.723

Alarm Event	
Alarm Triggers	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; intelligent motion detection; video tampering; tripwire; intrusion; fast moving; missing object; abandoned object; parking detection; loitering detection; people gathering; scene change; audio detection; voltage detection; external alarm; face detection; people counting; people number error; security exception

Network	
Network Port	RJ-45 (10/100 Base-T)
SDK and API	Yes
Network 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; SNMP; P2P; Bonjour; Auto Registration
Interoperability	ONVIF (Profile S / G / T); CGI; P2P; Milestone; Genetec
User / Host	20 (Total bandwidth: 64 Mbps)
Storage	FTP; SFTP; microSD card (max 512 GB); NAS
Browser	IE 8 / 9 / 11; Chrome; Firefox
Management Software	ONVIF (Profile S/G/T), CGI, compatible VMS
Mobile Client	iOS; Android
Cyber Security	Digest; WSSE; account lockout; security logs; IP/MAC filtering; X.509; syslog; HTTPS; 802.1x; trusted boot / execution / upgrade; session security; security warning

Lens			
Lens Type	Fixed-focal pinhole		
Lens Mount	M12		
Focal Length	2.8 mm		
Max. Aperture	F2.0		
Field of View	H: 100° / V: 57° / D: 114°		
Iris Control	Fixed		
Close Focus Distance	0.8 m (2.62 ft)		
DORI Distance	Lens	W	T
	Detect	61.0 m (200.13 ft)	
	Observe	24.4 m (80.05 ft)	
	Recognize	12.2 m (40.03 ft)	
	Identify	6.1 m (20.01 ft)	

Video	
Video Compression	H.265; H.264; H.264H; H.264B; MJPEG (sub stream only)
Advanced Codec	AI H.265 / AI H.264 with adaptive scene-aware bit rate
Video Frame Rate	Main: 2688 × 1520 @ 1-50/60 fps · Sub: 1920 × 1080 @ 1-25/30 fps · Third: 1920 × 1080 @ 1-25/30 fps
Streaming Capability	3 streams
Resolution	4M (2688 × 1520 / 2560 × 1440); 3M (2048 × 1536); 1080p; 1.3M; 720p; D1; VGA; CIF
Bit Rate Control	VBR / CBR / ABR
Video Bit Rate	H.264: 3 - 16384 kbps · H.265: 3 - 16384 kbps
Day/Night	Color / B/W
BLC / HLC / WDR	BLC: Yes · HLC: Yes · WDR: 120 dB
Scene Self-Adaptation	Yes
White Balance	Auto, Natural, Street Lamp, Outdoor, Manual, Regional Custom
Gain Control	Auto / Manual
Noise Reduction	3D NR
Intelligent Motion Detection	Intelligent motion detection with human/vehicle classification (eliminates false alerts from animals, leaves, rain) - 4 rectangular areas
Region of Interest (RoI)	Yes (4 areas)
Defog / LDC	Defog: Yes · LDC: Yes
Image Rotation	0° / 90° / 180° / 270° (90°/270° supported up to 2688 × 1520)
Mirror / Privacy Masking	Mirror: Yes · Privacy masking: 4 areas

Power	
Power Supply	12 V DC; PoE (IEEE 802.3af)
Dual Power Backup	When PoE and 12 V DC supply the device simultaneously, removing one source keeps the camera running without restart
Power Consumption	Basic: 4.28 W (12 V DC) / 6 W (PoE) · Max: 6.7 W (12 V DC) / 8.6 W (PoE) with high frame rate, AI and WDR enabled

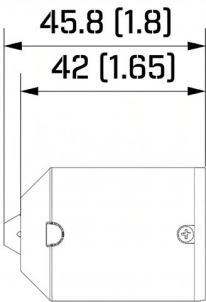
Environment	
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Humidity	≤ 95 % RH (non-condensing)
Storage Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Storage Humidity	≤ 95 % RH (non-condensing)

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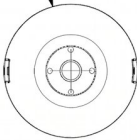
TECHNICAL SPECIFICATIONS

Structure	
Casing Material	Metal
Main Box Dimensions	110 × 83 × 24 mm (4.33" × 3.27" × 0.94")
Lens Module Dimensions	Ø 30.5 × 45.8 mm (Ø 1.20" × 1.80")
Coaxial Cable Length	8 m (included, main box ↔ lens module)
Net Weight	511 g (1.13 lb)
Gross Weight	646 g (1.42 lb)

Certifications	
CE-LVD	EN 62368-1
CE-EMC	Directive 2014/30/EU
Port	
Audio Input / Output	1 channel in / 1 channel out (3.5 mm jack)
Alarm Input	2 channels - wet contact, 5 mA, 3 - 5 V DC
Alarm Output	2 channels - dry contact, 1 000 mA @ 30 V DC / 500 mA @ 50 V AC



Ø30.5 [Ø1.2]



Ø4.9 [Ø0.19]

