

METATRONIX

Innovative Intelligent Transport Systems



IATF 16949
Automotive

WDR

HD

IP66

IK10



IT PT

EMark

R118

M-IPCAM2

2.0 MP Weather Vandal Proof Network Mobile Camera

- High quality imaging with 4 MP resolution
- 2.8/4/6/8mm fixed lens
- Clear imaging against strong back light due to 120 dB WDR technology
- Water and dust resistant (IP66) and vandal resistant (IK10)
- ITxPT module Inventory Service, M12 D-coded plug

Camera	
Sensor	1/8" CMOS Progressive Scan
Resolution	2 MP
Min. Illumination	0.01 Lux @ (F1.6, AGC ON)
Wide Dynamic Range	120 dB
Day & Night	IR Cut Filter
Shutter Speed	1/3 s to 1/100,000 s
Angle Adjustment	Pan: -30°~+30° - Tilt: 0°~80° Rotate: 0°~360°
P/N	PAL: 25 fps - NTSC: 30 fps
White Balance	Support four white balance configurations: fluorescent, incandescent, warm and natural light; Support manual/automatic white balance adjustment.
Protection Level	IP66, IK10
Lens	
Lens Type	2.8mm/4mm/6mm
Focal Length	2.8 mm, 4 mm, 6 mm
Lens Mount	M12
Aperture	2.8/4/6/8mm: F1.6
Focus	Manual focus
Illuminator	
IR Range	Up to 10 m
IR Wavelength	850 nm
Supplement Light Type	Infrared fill light lamp
Smart Supplement Light	Support
Video	
Max. Resolution	1920 × 1080
Main Stream	50 Hz: 25 fps (1920x1080, 1280x960, 1280x720) 60 Hz: 30 fps (1920x1080, 1280x960, 1280x720)
Sub-Stream	50 Hz: 25 fps (704x576, 640x480, 352*288, 320x240) 60 Hz: 30 fps (704x480, 640x480, 320x240)
Third Stream	50 Hz: 25 fps (1280x720) - 60 Hz: 30 fps (1280x720)
Video Compression	Main stream: H.264, H.265, H.264+, H.265+, Sub-stream: H.264, H.265, MJPEG, Third stream: H.264, H.265
Video Bit Rate	256 Kbps to 16 Mbps
H.264 Type	Main Profile/High Profile
H.265 Type	Main Profile
Bit Rate Control	CBR, VBR
Stream Type	Main stream, sub stream, third stream
Scalable Video Coding	H.264 and H.265 encoding
Region of Interest (ROI)	Main stream:1 region - Sub stream:1 region
Audio	
Audio Compression	G711U, G711A, G726, AAC, G722, PCM, AAC
Audio Bit Rate	64 Kbps
Audio Sampling Rate	16 kHz
Env. Noise Filtering	Yes

Network

Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, Email, RTP, RTSP, RTCP, NTP, UPnP, SMTP, SNMP, ICMP 802.1X, QoS, IPv6, Bonjour, ISUP5.0
Simultaneous Live View	Up to 8 channels
API	ONVIF (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK
User/Host	Up to 16 users, 3 levels: Administrator, Operator and User
Web Browser	IE8+, Chrome45+, Edge41+, Firefox45+

Image

Image Settings	Support rotation mode. Browser and client software can adjust brightness, contrast, saturation and sharpness.
Day/Night Switch	Day/Night/Auto/Schedule
SNR	> 50 dB
Image Enhancement	BLC, HLC, 3D DNR
Privacy Mask	Enables configuration, and supports drawing of up to 4 areas
Picture Overlay	Support image overlay, uploading images, enabling, coordinates, etc.
Target Cropping	Support (only the third stream)
Backlight	Support up, down, left, right, center and custom backlight
Compensation(BLC)	compensation adjustment

Interface

Ethernet Interface	M12 aviation plug
On-Board Storage	Built-in micro SD/SDHC/SDXC slot, up to 256 GB
Audio	1 built-in mic, mono sound
Reset Key	Yes
Interface Style	Interpolate

Event

Basic Event	Motion detection, video tampering alarm
Smart Event	Line crossing detection, Intrusion detection, Region entrance detection, Region exiting detection, Unattended baggage detection, Object removal detection, Face detection: detects faces and upload images Scene change detection, defocus detection
Linkage	Upload to FTP, notify surveillance center, send email, trigger recording

General

Camera Material	Metal
Camera Dimension	Camera: Ø 99,3 mm × 96,7 mm x 52.9 mm
Package Dimension	Package: 252 × 160 × 95 mm
Camera Weight	Camera: Approx. 430 g
Startup and Operating Conditions	-30 °C to 75 °C (-22 °F to 167°F), humidity less than 95% or less (non-condensing)
General Function	Anti-flicker, heartbeat, mirror
Power	PoE: 0.30 A to 0.20 A, max: 7.5 W
Power Supply	PoE (802.3 af, 36 V to 57 V)
Power Interface	PoE power supply M12 plug
Software Reset	Support
Cable Length	50 cm

Approval

PoE Support	PoE (802.3 af)
Class	Class B
EMC	FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN, 61000-3-3: 2013, EN 50130-4: 2011 +A1: 2014);
Safety	UL (UL 60950-1); CB (IEC 60950-1:2005 + Am 1:2009 + Am 2:2013); CE-LVD (EN 60950-1:2005 + Am 1:2009 + Am 2:2013); CE-RoHS (2011/65/EU);
Environment	IP66 (IEC 60529-2013), IK10(IEC 62262:2002)
Protection	EN50155-2017(EN 50155:2017, EN 50121-3-2:2016, IEC 60068-2-1:2007, IEC 60068-2-2:2007, IEC 60068-2-30:2005, IEC 61373:2010); EN45545 (EN 45545-2:2013+A1:2015); E-MARK (ECE R10)
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EMark

R118

M-IPC4

4.0 MP Weather Vandal Proof Network Mobile Camera

- High quality imaging with 4 MP resolution
- 2/2.8/4/6/8mm fixed lens
- Clear imaging against strong back light due to 120 dB WDR technology
- Water and dust resistant (IP67) and vandal resistant (IK10)
- ITxPT module Inventory Service, M12 D-coded plug

Camera

Sensor	1/3' CMOS Progressive Scan
Resolution	4 MP
Min. Illumination	0.01 Lux @ (F1.6, AGC ON)
Wide Dynamic Range	120 dB
Day & Night	IR Cut Filter
Shutter Speed	1/3 s to 1/100,000 s
Angle Adjustment	Pan: -30°~+30° - Tilt: 0°~75° Rotate: 0°~ 360°
P/N	PAL: 25 fps - NTSC: 30 fps
White Balance	Support four white balance configurations: fluorescent, incandescent, warm and natural light; Support manual/automatic white balance adjustment.
Protection Level	IP67, IK10

Lens

Lens Type	2mm/2.8mm/4mm/6mm/8mm
Focal Length	2 mm, 2.8 mm, 4 mm, 6 mm, 8 mm
Lens Mount	M12
Aperture	2mm: F2.25 - 2.8/4/6/8mm: F1.6
Focus	Manual focus

Illuminator

IR Range	Up to 10 m
IR Wavelength	850 nm
Supplement Light Type	Infrared fill light lamp
Smart Supplement Light	Support

Video

Max. Resolution	2560*1440
Main Stream	50 Hz: 25 fps (2560x1440, 1920x1080, 1280x960, 1280x720) 60 Hz: 30 fps (2560x1440, 1920x1080, 1280x960, 1280x720)
Sub-Stream	50 Hz: 25 fps (704x576, 640x480, 352*288, 320x240) 60 Hz: 30 fps (704x480, 640x480, 320x240)
Third Stream	50 Hz: 25 fps (1280x720) - 60 Hz: 30 fps (1280x720)
Video Compression	Main stream: H.264, H.265, H.264+, H.265+, Sub-stream: H.264, H.265, MJPEG, Third stream: H.264, H.265
Video Bit Rate	256 Kbps to 16 Mbps
H.264 Type	Main Profile/High Profile
H.265 Type	Main Profile
Bit Rate Control	Constant Bit Rate, Variable Bit Rate
Stream Type	Main stream, sub stream, third stream
Scalable Video Coding	H.264 and H.265 encoding
Region of Interest (ROI)	Main stream:1 region - Sub stream:1 region

Audio

Audio Compression	G711U, G711A, G726, AAC, G722, PCM, AAC
Audio Bit Rate	64 Kbps
Audio Sampling Rate	16 kHz
Env. Noise Filtering	Yes

Network

Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, Email, RTP, RTSP, RTCP, NTP, UPnP, SMTP, SNMP, ICMP 802.1X, QoS, IPv6, Bonjour, ISUP5.0
Simultaneous Live View	Up to 6 channels
API	ONVIF (PROFILE S, PROFILE G, PROFILE T), ISAPI, SDK
User/Host	Up to 16 users, 3 levels: Administrator, Operator and User
Web Browser	IE8+, Chrome45+, Edge41+, Firefox45+

Image

Image Settings	Support rotation mode. Browser and client software can adjust brightness, contrast, saturation and sharpness.
Day/Night Switch	Day/Night/Auto/Schedule
SNR	> 50 dB
Image Enhancement	BLC, HLC, 3D DNR
Privacy Mask	Enables configuration, and supports drawing of up to 4 areas
Picture Overlay	Support image overlay, uploading images, enabling, coordinates, etc.
Target Cropping	Support (only the third stream)
Backlight Compensation(BLC)	Support up, down, left, right, center and custom backlight compensation adjustment

Interface

Ethernet Interface	-ID: 1 RJ45 10 M/100 M self-adaptive Ethernet port -IM/ND, IDM: 1 four-core M12 aviation plug
On-Board Storage	Built-in micro SD/SDHC/SDXC slot, up to 256 GB
Audio	1 built-in mic, mono sound
Reset Key	Yes
Interface Style	Interpolate

Event

Basic Event	Motion detection, video tampering alarm
Smart Event	Line crossing detection, intrusion detection, Region entrance detection, Region exiting detection, Unattended baggage detection, Object removal detection, Face detection: detects faces and upload images Scene change detection, defocus detection
Linkage	Upload to FTP, notify surveillance center, send email, trigger recording

General

Camera Material	Metal
Camera Dimension	Camera: Φ 110 mm × 57.4 mm (4.3" × 2.26")
Package Dimension	Package: 252 × 160 × 95 mm (9.9" × 6.3" × 3.7")
Camera Weight	Camera: Approx. 452 g (1 lb.)
Startup and Operating Conditions	-30 °C to 75 °C (-22 °F to 167°F), humidity less than 95% or less (non-condensing)
General Function	Anti-flicker, heartbeat, mirror
Power	PoE: 0.30 A to 0.20 A, max: 7.5 W
Power Supply	PoE (802.3 af, 36 V to 57 V)
Power Interface	PoE power supply M12 plug
Software Reset	Support
Cable Length	50 cm

Selection Parameter

PoE Support	PoE (802.3 af)
Class	Class B
EMC	FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN, 61000-3-3: 2013, EN 50130-4: 2011 +A1: 2014);
Safety	UL (UL 60950-1); CB (IEC 60950-1:2005 + Am 1:2009 + Am 2:2013); CE-LVD (EN 60950-1:2005 + Am 1:2009 + Am 2:2013);
Environment	CE-RoHS (2011/65/EU);
Protection	IP68 (IEC 60529-2013), IK10(IEC 62262:2002) EN50155-2017(EN 50155:2017, EN 50121-3-2:2016, IEC 60068-2-1:2007, IEC 60068-2-2:2007, IEC 60068-2-30:2005, IEC 61373:2010); EN45545 (EN 45545-2:2013+A1:2015); E-MARK (ECE R10)

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(*) ITxPT Labelling ongoing

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Automotive

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IP67

IK10



ITxPT*

EMark

R118

M-IPCAMR

2.0 MP IR Weather Proof Network Mobile Camera

- High quality imaging with 2 MP resolution
- IR range: 10 to 30 meters
- Water and dust resistant (IP67) and vandal resistant (IK10)
- ITxPT module Inventory Service, M12 D-coded plug

Camera	
Sensor	1/2,7" CMOS Progressive Scan
Resolution	2 MP
Min. Illumination	Color 0.018 Lux @ (F1.2, AGC ON) B/W 0.006 AGC ON), 0 lux with IR
Wide Dynamic Range	120 dB
Day & Night	IR Cut Filter
Shutter Speed	1/3 s to 1/100,000 s
Reduction	3D DNR
Adjustment	20° to 20°, tilt: -15° to 20°
Protection Level	IP67, IK10
Lens	
Focal Length	2.8mm/4mm/6mm/12mm
Aperture	2.0
FOV	horiz FOV 115°, vert FOV 62°, diag FOV 135° 4 mm: horiz FOV 87°, vert FOV 48°, diag FOV 102° 6 mm: horiz FOV 60°, vert FOV 32.4°, diag FOV 70° 8 mm: horiz FOV 41°, vert FOV 23.2°, diag FOV 47.6° 12 mm: horiz FOV 26.5°, vert FOV 15°, diag FOV 30.5°
Lens Mount	M12
Illuminator	
IR Range	10 to 30 m
IR Wavelength	850 nm
Video	
Max. Resolution	1920 × 1080
Main Stream	50 Hz: 25 fps (1920x1080, 1280x960, 1280x720) 60 Hz: 30 fps (1920x1080, 1280x960, 1280x720)
Sub-Stream	50 Hz: 25 fps (704x576, 640x480, 352x288, 320x240) 60 Hz: 30 fps (704x480, 640x480, 320x240)
Third Stream	50 Hz: 25 fps (1920x1080, 1280x960, 1280x720, 704x576, 352x288, 640x40, 320x240) 60 Hz: 30 fps (1920x1080, 1280x960, 1280x720, 704x576, 352x288, 640x40, 320x240))
Video Enhancement	BLC, 3D DNR, HLC, defog, EIS
Image setting	Rotate mode, saturation, brightness, contrast, sharpness, AGC, and white balance are adjustable by client software or web browser.
Day/Night Switch	Auto/Schedule
Target Cropping	Yes
Picture Overlay	Logo picture can be overlaid on video with 128 × 128 24bit bmp format, region optional

(*) ITxPT Labelling ongoing

Network	
Network Storage	Support microSD/SDHC/SDXC card (128 GB) local storage and NAS (NFS,SMB/CIFS), ANR
Alarm Trigger	Motion detection, video tampering, network disconnected, IP address conflict, illegal login, HDD full, HDD error
Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP™, SMTP, SNMP, IGMP, 802.1X, QoS, IPv6, UDP, Bonjour
General Function	One key reset, anti flicker, three streams, heartbeat, mirror, password protection, privacy mask, watermark, IP address filter
Simultaneous Live View	Up to 6 channels
API	ONVIF (PROFILE S, PROFILE G), ISAPI
User/Host	Up to 32 users, 3 levels: Administrator, Operator and User
Web Browser	IE8+, Chrome 31.0 44, Firefox 30.0 51, Safari 8.0++
Image	
Image Settings	Support rotation mode. Browser and client software can adjust brightness, contrast, saturation and sharpness.
Day/Night Switch	Day/Night/Auto/Schedule
SNR	> 50 dB
Image Enhancement	BLC, HLC, 3D DNR
Privacy Mask	Enables configuration, and supports drawing of up to 4 areas
Picture Overlay	Support image overlay, uploading images, enabling, coordinates, etc.
Target Cropping	Support (only the third stream)
Backlight Compensation(BLC)	Support up, down, left, right, center and custom backlight compensation adjustment
Interface	
Ethernet Interface	M12 aviation plug
On-Board Storage	Built-in micro SD/SDHC/SDXC slot, up to 128 GB
Reset Key	Yes
SVC	Yes
General	
Camera Material	Aluminum alloy
Camera Dimension	Camera: 78.8 × 81.6 × 64 mm (3.10" × 3.21" × 2.52")
Camera Weight	Approx. 330 g (0.73 lb.)
Startup and Operating Conditions	-30 °C to +65 °C 22 °F to +149 °F), Humidity 95% or less (non condensing)
General Function	Anti-flicker, heartbeat, mirror
Power	PoE (802.3af, 36V to 57V), 0.14 A to 0.09 A, max. 5.2 W
Power Supply	PoE (802.3 af, 36 V to 57 V)
Approval	
PoE Support	PoE (802.3 af)
Class	Class B
EMC	FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN, 61000-3-3: 2013, EN 50130-4: 2011 +A1: 2014);
Safety	UL (UL 60950-1); CB (IEC 60950-1:2005 + Am 1:2009 + Am 2:2013); CE-LVD (EN 60950-1:2005 + Am 1:2009 + Am 2:2013); CE-RoHS (2011/65/EU);
Environment	
Protection	IP66 (IEC 60529-2013), IK10(IEC 62262:2002) EN50155-2017(EN 50155:2017, EN 50121-3-2:2016, IEC 60068-2-1:2007, IEC 60068-2-2:2007, IEC 60068-2-30:2005, IEC 61373:2010); EN45545 (EN 45545-2:2013+A1:2015); E-MARK (ECE R10)
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