

# MIC IP starlight 7000 HD

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**BOSCH**

Invented for life



- ▶ Exceptional strength and ruggedness for any outdoor application such as traffic monitoring (bridges, tunnels, or highways), perimeter protection, and city surveillance
- ▶ Starlight (1080p25/30) camera technology with excellent low-light sensitivity (color = 0.0077 lux)
- ▶ Extended Dynamic Range mode (120 dB) to see details in bright and dark areas simultaneously
- ▶ Optional, field-installable combo illuminator (IR/White light) provides detection of objects up to 300 m (984 ft) away

The MIC IP starlight 7000 HD camera has an advanced PTZ platform that was designed using Bosch's domain expertise in material engineering, mechanical design, intelligent imaging, and video streaming. The camera complies to some of the toughest industry standards such as IP68, NEMA 6P, and IK10 for extreme mechanical strength and durability. The camera is designed using the latest technology in intelligent imaging and video streaming. Thanks to the intelligent encoding and Content-Based Imaging Technology (CBIT), the HD module delivers high-resolution video even under challenging light conditions at very low bit rates.

## Functions

### Exceptional low-light performance

The latest sensor technology combined with the sophisticated noise suppression results in an exceptional sensitivity in color. The low-light performance is so good that the camera continues to provide excellent color performance even with a minimum of ambient light.

### Ruggedized design for extreme applications

The camera is designed to last in surveillance applications that are beyond the mechanical capabilities of normal PTZ domes or conventional positioning systems. The complete metal body has been engineered to withstand high-impact or continuous low-frequency vibration. The camera models comply to IK10 rating for impact resistance and to the IEC 60068 standards applicable to vibration and shock.

With a temperature range of -40 °C to +60 °C (-40 °F to +140 °F), the camera is designed specifically for use in extreme environments around the world.

The camera benefits from Bosch Automotive domain knowledge in material engineering and coatings. As a result, the superior metallurgy and the finish of the camera provide unprecedented protection against corrosion. The camera has been tested for 2000 hours of salt spray per the ASTM B117 standard.

### Intelligence

With built-in video content analysis (VCA), the camera reinforces the Intelligence-at-the-Edge concept where edge devices become increasingly intelligent.

The camera comes with the state-of-the-art VCA method by Bosch, Intelligent Video Analytics, that reliably detects, and analyzes moving objects while suppressing unwanted alarms from spurious sources in the image.

With this method, the camera is able to detect idle and removed objects as well as loitering, multiple line crossing, and trajectories. This method also supports BEV (Bird's Eye View) People counting. Assisted Self Calibration and configurable detection filters improve reliability and reduce operator work load.

### **Intelligent Tracking**

The camera utilizes the built-in Intelligent Video Analytics to follow an individual or an object continuously.

When Intelligent Video Analytics detects objects while the camera is in a stationary position, the camera activates the Intelligent Tracking feature. This feature controls the pan/tilt/zoom actions of the camera to track the objects and keep them in view in the scene. The new Intelligent Tracking is based on robust flow detection algorithms which can reliably track moving objects even under challenging scenes.

The tracking and detection reliability can be enhanced further with virtual masking for scenes with a lot of background motion such as trees or other objects creating constant motion in the scene.

The camera supports three modes for Intelligent Tracking:

**Auto mode:** When configured in this mode, the camera actively analyzes the video to detect any moving object. If it detects movement, it begins to track the object. This mode is most useful for scenarios where normally no motion is expected.

**One Click mode:** In this mode, users can click an object moving in the live video image to enable the camera to track the movement of the selected object. This mode is most useful for scenarios where normal scene activity is expected.

**Triggered mode:** In this mode, the camera continuously analyzes the scene for alarms or rule violations. If a rule is violated, it triggers the advanced tracking feature of the camera to start following the object / person that triggered the alarm.

This unique combination of robust Intelligent Video Analytics and Intelligent Tracking allows the camera to track moving objects of interest without getting distracted by other moving objects in the scene.

### **Virtual masking**

The camera offers Virtual Masking, which gives users flexibility to mask parts of the scene which should not be considered for flow analysis to trigger Intelligent Tracking. This allows users to mask from IVA/Tracking any background motion (moving trees, pulsating lights, and busy roads) in the scene without blocking the motion from the video.

### **Content Based Imaging Technology**

Content Based Imaging Technology (CBIT) is used to radically improve image quality in all lighting conditions and to identify areas for enhanced processing. The camera examines the scene using intelligent video analytics and provides feedback to re-tune the image processing. This provides better detail in the areas that matter and better all-round performance.

### **High-performance imaging platforms**

Image control and quality are integral aspects of any PTZ camera, and the camera delivers outstanding clarity and image detail.

The camera has a professional-grade imaging platform capable of delivering 1080p25/30 HD resolution in environments with ambient light extremes. The camera also has a 30x optical zoom lens (12x digital zoom) and flexible mounting options (upright, inverted, or canted) to achieve the perfect field of view.

Day/night capabilities and outstanding sensitivity make the camera an exceptional performer in all lighting conditions. In low light, the camera automatically switches from color to monochrome by removing the IR filter to boost sensitivity, while maintaining superior image quality. For operation in the darkest conditions, automatic control of shutter speeds increases sensitivity by more than 50 times.

### **Intelligent Defog**

Users can configure the mode to be active continuously, or to activate automatically when the video analytics in the camera detect fog and add light to the video image (and then deactivate when the fog clears or the scene changes).

### **Superior privacy masking**

The camera provides 24 individual, easy to configure privacy masks, with up to 8 displayed in the same scene. As the camera is zoomed, each mask changes size smoothly and quickly, ensuring that the covered object cannot be seen in most cases.

### **Integrated wiper**

Thanks to its integrated, long-lasting wiper, the MIC camera captures images of the highest quality all year long, regardless of the weather.

### **Pan and tilt drive and mechanism**

The pan and tilt mechanism is a ruggedized, direct-drive system. The motors directly control the pan and tilt movement using a finely-tuned gear train, ensuring continuous operation without significant wear and tear.

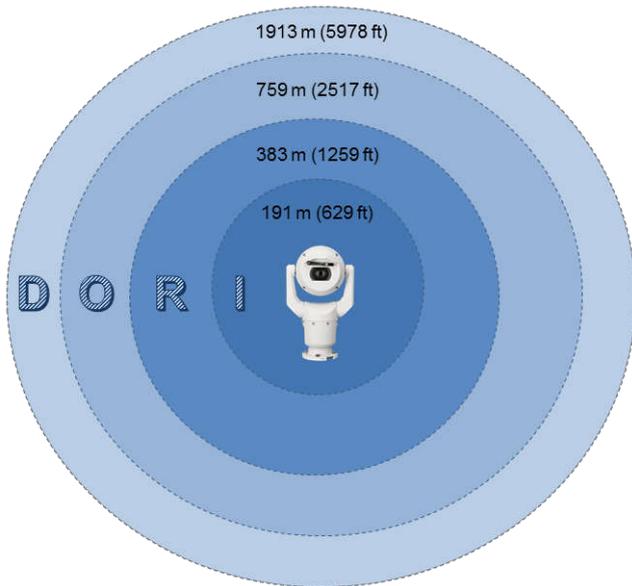
The camera has a closed-loop position control system using a 15-bit position resolver. This resolver ensures that every pan/tilt position has an address. The camera never loses a preset position even when moved by an external force.

With a full 360° continuous rotation pan and 290° tilt control (on upright models without illuminators) and super-quick pan (120°/second) and tilt (90°/second) for exceptional viewing capability, the camera outperforms other cameras in its class. The resolver inside the camera ensures that the camera will never lose its position.

**DORI coverage**

DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a camera to distinguish persons or objects within a covered area. The maximum distance at which a camera/lens combination can meet these criteria is shown below:

	DORI definition	Distance	
		WIDE 1X	TELE 30X
<b>Detect</b>	25 px/m (8 px/ft)	62 m (193 ft)	1913 m (5978 ft)
<b>Observe</b>	63 px/m (19 px/ft)	25 m (81 ft)	759 m (2517 ft)
<b>Recognize</b>	125 px/m (38 px/ft)	12 m (41 ft)	383 m (1259 ft)
<b>Identify</b>	250 px/m (76 px/ft)	6 m (20 ft)	191 m (629 ft)



**Dual-mode Illumination**

The field-installable MIC illuminator accessory (sold separately) enables Detection of objects 300 m (984 ft) away using IR light. Unique 3D Diffuser technology ensures even illumination across the entire scene. Ensuring long-term reliability, the patented, integrated Constant Light technology automatically controls and adjusts output to deliver a consistent level of illumination performance throughout the life of the product, even when operating in fluctuating

temperatures. The illuminator accessory consists of both IR and White light LEDs. Operators can switch between the two light sources with a single click.

**Image Stabilization**

As PTZ cameras continue to increase their optical zoom capabilities, image stabilization becomes critical to eliminate movement caused by unstable camera mounts. Minor movement of the camera mount can shift the field of view by a large distance when the camera is zoomed to a high value. This can render images unusable. The camera incorporates an Image Stabilization algorithm that allows the camera to detect continuous vibration. If it detects vibration, the camera dynamically corrects the shaky video in both the vertical and horizontal axis, resulting in exceptional image clarity and a stable field of view on the monitor.

**Common product platform (CPP4)**

The camera has an advanced, efficient H.264 encoder (CPP4) embedded for high quality HD streaming video and very efficient streaming and network capabilities. The new platform supports simultaneous streaming of individually configurable HD streams, and allows a choice of HD resolution in combination of SD resolutions.

**Bitrate optimized profile**

The average typical optimized bitrate in kbits/s for various frame rates is shown in the table:

IPS	1080p	720p	480p
60	--	2600	2000
30	2600	1300	1000
15	2100	1100	800
10	1800	1000	700
5	1250	600	450
2	500	270	200

Actual bitrate may vary depending on the scene complexities and encoding configurations.

**Intelligent Dynamic Noise Reduction reduces bandwidth and storage requirements**

The camera uses Intelligent Dynamic Noise Reduction (IDNR) which actively analyzes the contents of a scene and reduces noise artifacts accordingly. The low-noise image and the efficient H.264 compression technology combine to provide clear images while reducing bandwidth and storage by up to 50% compared to other H.264 cameras. This results in reduced-bandwidth streams that still retain a high image quality and smooth motion. The camera provides the most usable image possible by cleverly optimizing the detail-to-bandwidth ratio.

### System integration

The camera conforms to the ONVIF (Open Network Video Interface Forum) specification which guarantees interoperability between network video products regardless of manufacturer. The ONVIF Profile S specification allows easy integration with other conformant devices and VMS. ONVIF conformant devices are able to exchange live video, audio, metadata, and control information, and ensure that they are automatically discovered and connected to network applications such as video management systems.

Third-party integrators can easily access the internal feature set of the camera for integration into large projects. Visit the Bosch Integration Partner Program (IPP) website ([ipp.boschsecurity.com](http://ipp.boschsecurity.com)) for more information.

### Data security

Special measures have been put in place to ensure the highest level of security for device access and data transport. The three-level password protection with security recommendations allows users to customize device access. Web browser access can be protected using HTTPS and firmware updates can also be protected with authenticated secure uploads. The on-board Trusted Platform Module (TPM) and Public Key Infrastructure (PKI) support, guarantee superior protection from malicious attacks. The 802.1x network authentication with EAP/TLS, supports TLS 1.2 with updated cipher suites including AES 256 encryption.

The advanced certificate handling offers:

- Self-signed unique certificates automatically created when required
- Client and server certificates for authentication
- Client certificates for proof of authenticity
- Certificates with encrypted private keys

### Ease of installation

The camera has been designed for quick and easy installation, a key feature from Bosch IP video security products.

The camera supports mounting in upright, inverted, or canted orientation. The field-selectable canting option allows the upper section of the camera to be tilted down at a 45° angle. This is very useful for installations that require a view of the scene directly under the camera. No matter the installation position, the camera will provide the perfect field of view.

The MIC Series has a wide range of mounting accessories, including a new *Hinged* DCA mount, a wall mount, a corner mount, and a pole mount. In addition, a sunshield is available for camera installations in hot, sunny locations.

The MIC Hinged DCA (MIC-DCA-Hx) provides a convenient mounting point for a MIC camera.

The hinge feature allows installers to “hang” the MIC7000 camera temporarily during installation for easier connection of cables/wiring before final bolts are installed.

Made from cast aluminum, the hinged DCA is deeper than the standard MIC-DCA in order to easily accommodate the connections from the base of the camera, and has two M25 holes (or 3/4 in. NPT holes using the conduit adapter (male M25 to female 3/4" NPT) (Available in specific regions only.)) to accept weatherproof conduit or cable glands. An O-ring provides an IP68-rated seal between the base of the camera and the top of the DCA.

For installations in locations that require additional protection for the camera’s electrical connectors, a special weatherproof kit is available. The kit includes IP67-rated watertight glands that seal the connectors to prevent damage from high humidity or moisture condensation.

Bosch offers several power/control accessories, including a high-capacity 24 VAC power supply, and an inexpensive ‘alarm/washer’ interface accessory unit to connect external alarm signals and control optional external washer pump devices.

If a more sophisticated installation is required, connect the camera to the advanced accessory named VIDEOJET connect, which includes an integrated HPOE network connection, two standard network interfaces, integrated Bosch transcoder technology, Compact Flash-based local storage, a built-in network switch, alarm/washer control interfaces, audio I/O, and two sockets for SFP-based network fiber optic modules.

### Robust design rated to an industry-leading IP68, Type 6P, IK10

Subjected and certified to rigorous dust and immersion tests (IP68, Type 6P) and impact test (IK10), MIC Series cameras are perfectly suited for installation in even the most unforgiving environments. The cameras’ aluminum housing receives a corrosion protection surface treatment, along with robust, powder coat paint. Reliable O-ring seals completely protect the internal components from the external environment, meaning that there is no need to pressurize the camera. To guarantee the seal, the factory submerges each MIC camera to ensure seal integrity before shipping.

### Dual power options

The camera can be powered by a network compliant to High Power-over-Ethernet (Bosch’s version of High PoE) using a Bosch model of High PoE Midspans (sold separately). With this configuration, only a single (Cat5e/Cat6e) cable connection is required to view, to power, and to control the camera.

The camera can also accept a standard 24 VAC power source if a High PoE network interface will not be used. User-supplied wiring must be in compliance with electrical codes (Class 2 power levels).

For maximum reliability, the camera can be connected simultaneously to a High PoE Midspan and a separate 24 VAC power source. If High PoE and 24 VAC are applied simultaneously, the camera usually selects auxiliary input (24 VAC) and will draw minimal power from the High PoE Midspan. If the 24 VAC power

source fails, the camera switches power input seamlessly to High PoE. After the 24 VAC power source is restored, the camera switches power input again to 24 VAC.

The 60 W midspan (NPD-6001A) can supply power to models without an illuminator accessory. The 95 W midspan (NPD-9501A) can supply power to all models of MIC7000, including models with the illuminator accessory.

Refer to the table in the Installation/configuration notes section for more information.

### Camera Diagnostics

The camera has several built-in sensors / advanced diagnostics that display warnings on the camera's OSD about the health of the camera. The diagnostics log records the events such as:

- Low voltage - a drop in incoming power below the level where the camera becomes non-functional
- High temperature - the internal temperature exceeds specifications
- Low temperature - the internal temperature exceeds minimum levels
- High humidity - the internal humidity exceeds 70%
- High vibration - the acceptable level of acceleration forces was exceeded
- Total hours of camera operation
- Illuminator aging history

Certain events also appear on the camera's OSD.

These diagnostic records are available for the installation or service technician to review.

### Unsurpassed reliability

As with all Bosch products, the camera is designed using the industry's best design process and is subjected to the most stringent testing standards such as HALT (highly accelerated life testing), which pushes the limits of products to ensure reliability throughout their lifetime.

### Certifications and approvals

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations, including latest versions of: EN 50130-4 EN 55022:2006 inc. AL:2007 EN 61000-3-3 EN 61000-6-1 EN 61000-6-2 EN 50121-4 (Railway applications) EN 55024 EN 55032 EN 61000 3-2
Product Safety	Complies with UL, CE, CSA, EN, and IEC Standards 60950-1 & 22
Ingress Protection Rating / Standard	IP68 (1m submersion for 24 hrs) NEMA 6P
IK Code	IK10

Salt Mist Spray (Corrosion Test)	ASTM B117 (2000 hours)
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### HD standards

- Complies with the SMPTE 274M-2008 Standard in:
  - Resolution: 1920x1080
  - Scan: Progressive
  - Color representation: complies with ITU-R BT.709
  - Aspect ratio: 16:9
  - Frame rate: 25 and 30 frames/s
- Complies with the 296M-2001 Standard in:
  - Resolution: 1280x720
  - Scan: Progressive
  - Color representation: complies with ITU-R BT.709
  - Aspect ratio: 16:9
  - Frame rate: 25, 30, 50 and 60 frames/s

### Installation/configuration notes

CAMERA MODELS	60 W midspan	95 W midspan	VIDEOJET connect	24 VAC PSU
Models with illuminator		X	X	X
Models without illuminator	X	X	X	X

The table below identifies the power devices that can be connected simultaneously to the camera.

If power is supplied from:	Camera can receive power simultaneously from:
60 W midspan (NPD-6001A)	24 VAC PSU (VG4-A-PSU1, VG4-A-PSU2)
95 W midspan (NPD-9501A)	
VIDEOJET connect (VJC-7000-90)	

### Parts included

One (1) MIC IP starlight 7000 HD Camera
One (1) Quick Installation Guide
One (1) spanner tool [to remove and to attach the yoke caps in order to cant the camera if desired, and to remove the access plug from the camera head when installing the optional illuminator accessory (sold separately)]
One (1) base gasket
One (1) RJ45 coupler
Four (4) MAC address labels
One (1) ground screw

**Technical specifications****MIC IP starlight 7000 HD camera [1080p models]**

Imager	1/2.8-type Exmor R CMOS sensor
Effective Picture Elements (Pixels)	1945 x 1097 (2.13 MP)
Lens	30x Zoom 4.3 mm to 129 mm F1.6 to F4.7
Field of View (FOV)	2.3° to 65°
Focus	<i>Automatic with manual override</i>
Iris	<i>Automatic with manual override</i>
Digital Zoom	12x

**Video performance - Sensitivity**

(3100K, reflectivity 89%, 1/30, F1.6, 30 IRE)

Color	0.0077 lx
Mono	0.0008 lx

**Additional Camera Settings**

Gain control	AGC, Fixed
Aperture Correction	Horizontal and vertical
Electronic Shutter Speed (AES)	1/1 sec to 1/10000 sec (22 steps)
Signal-to-Noise Ratio (SNR)	>55 dB
Backlight compensation (BLC)	On, Off
White balance	2000 K to 10,000 K ATW, AWB Hold, Extended ATW, Manual, Sodium Lamp Auto, Sodium Lamp
Day/Night	Monochrome, Color, Auto
Intelligent defog	Improves visibility when viewing foggy or other low-contrast scenes.

**High dynamic range (HDR)**

25/30 fps	120 dB
50/60 fps	90 dB

**Mechanical**

Drive Unit	Brushless, integral pan/tilt motor drive
Pan Range	360° continuous rotation
Tilt Angle	Without illuminators (camera upright): 290° Without illuminators (camera inverted): 250° With illuminators: 186.6°

Tilt Range	Upright unit: -55° - +90° Canted unit: -90° - +90°
Variable Pan Speed	0.2°/second - 120°/second
Variable Tilt Speed	0.2°/second - 90°/second
Intelligent Tracking Speed	4°/second - 120°/second
Pre-position Speed	120°/second
Preset Accuracy	0.17° (typical)
Proportional Pan / Tilt to Zoom	Yes
Zoom Movement Speed	<5 seconds (optical Wide to optical TELE) <7.5 seconds (optical Wide to digital TELE)
Audible Noise	<65 dB

**Electrical**

Input Voltage	21-30 VAC, 50/60 Hz and/or Ethernet High PoE cable connection (56 VDC)
Power Consumption	Without illuminator: 40 W maximum With illuminator: 70 W maximum

**Communications / Software Control**

Camera Setup/Control	Via Internet Explorer web browser version 7.0 or later, Bosch Configuration Manager, Bosch Video Management System (BVMS), Bosch Video Client (BVC), or support for third party software
Software Update	Network firmware upload
Serial protocols	Bosch OSRD, Pelco P/D, and Forward Vision (Note: For Pelco and Forward Vision protocols, a separate license (MVS-FCOM-PRCL) is required.)

**Network**

Standards / Video compression	H.264 (ISO/IEC 14496-10), M-JPEG, JPEG
Streaming	Four (4) streams with individually configurable frame rate and resolution: <ul style="list-style-type: none"> <li>Two (2) independently configurable H.264 recording streams</li> <li>Two (2) non-recording streams (profiles)</li> </ul>

When the option in field "Property" for Stream 1 is:	The available options in field "Property" for Stream 2 are:
H.264 MP SD	- H.264 MP SD
H.264 MP 720p fixed	- H.264 MP SD - H.264 MP 720p fixed - H.264 MP 400x720 upright (cropped) - H.264 MP D1 4:3 (cropped) - H.264 MP 1280x960 (cropped) - H.264 MP 640x480
H.264 MP 1080p fixed	- Copy Stream 1 - H.264 MP SD - H.264 MP 720p8/10 fixed - H.264 MP 1080p4/5 fixed - H.264 MP 400x720 upright (cropped) - H.264 MP D1 4:3 (cropped) - H.264 MP 640x480
H.264 MP 720p50/60 fixed	- Copy Stream 1 - H.264 MP SD - H.264 MP 720p6/7 fixed - H.264 MP 400x720 upright (cropped) - H.264 MP D1 4:3 (cropped) - H.264 MP 640x480
Non-recording profiles	Two (2) streams, I-frame only Options are: - HD Image Optimized; - HD Balanced; - HD Bit Rate Optimized; - SD Image Optimized; - SD Balanced; - SD Bit Rate Optimized; - DSL Optimized; - 3G Optimized
<b>Resolution (H x V)</b>	
1080p HD	1920 x 1080
720p HD	1280 x 720
432p SD	768 x 432
288p SD	512 x 288
144p SD	256 x 144
Protocols	IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, FTP, Telnet, ARP, DHCP, APIPA (Auto-IP, link local address), NTP (SNTP), SNMP (V1, MIB-II), 802.1x, DNS, DNSv6, DDNS (DynDNS.org, selfHOST.de, no-ip.com), SMTP, iSCSI, UPnP (SSDP), DiffServ (QoS), LLDP, SOAP, Dropbox, CHAP, digest authentication
Ethernet	10BASE-T/100BASE-TX, auto-sensing, half/full duplex
Encryption	TLS 1.0, SSL, DES, 3DES, AES

Ethernet connector	RJ45
Connectivity	ONVIF Profile S, Auto-MDIX
GOP Structure	IP, IBP, IBBP
Data Rate	9.6 kbps to 6 Mbps
Overall IP Delay	240 ms (typical)

### Miscellaneous

Sectors / Title	16 independent sectors with 20 characters per title
Privacy Masks	24 individually configurable privacy masks
Virtual Masks	24 individually configurable masks to hide parts of the scene (background motion such as moving trees, pulsating lights, busy roads, etc.) which should not be considered for flow analysis to trigger Intelligent Tracking.
Prepositions	256, each with 20 characters per title
Guard Tours	Two (2) types of tours: <ul style="list-style-type: none"> <li>Recorded tours - two (2), maximum total duration 30 minutes (depending on amount of commands sent during recording)</li> <li>Preset tour - one (1), consisting of up to 256 scenes consecutively, and (1) customized up to 64 scenes</li> </ul>
Supported Languages	English, Czech*, Dutch, French, German, Italian, Polish, Portuguese, Russian*, Spanish, Japanese, Chinese <small>* Available with separate language upload</small>

### User Connections

Power, Network	Without illuminator: RJ45 100BASE-TX Ethernet High PoE midspan - 60 W (NPD-6001A) or 95 W (NPD-9501A) With illuminator: High PoE 95 W midspan (NPD-9501A)*
Power, Camera	24 VAC (power supply)
Video and Control	RJ45 100BASE-TX Ethernet RS-485 Simplex 9600 baud (dedicated for MIC-ALM-WAS-24)
Alarm/Washer	3-wire RS-485

\* Must purchase either NPD-9501A or VIDEOJET connect 7000 in order to use the High PoE solution.

### Environmental

**Note:** Unit includes internal heater and fan.

Ingress Protection Rating/ Standard	IP68 NEMA 6P, when using installed MIC-DCA or MIC wall mount IP67 (moisture and dust) rating on connectors in the base of the camera
External Mechanical Impact (IK Code or Impact rating)	IK10
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Storage Temperature	-60 °C to +70 °C (-76 °F to +158 °F)
Humidity	0-100%
Wind Load	241 km/h (150 mph) (sustained) (Gusts up to 290 km/h (180 mph)) Effective Projected Area (EPA): 0.044m <sup>2</sup> (0.47 ft <sup>2</sup> )
Vibration	IEC 60068-2-6, Test Fc: Vibration (sinusoidal), 20m/s <sup>2</sup> (2.0g) Sinusoidal vibration test IAW MIL-STD-167-1A
Shock	IEC 60068-2-7, Test Ea: Shock, 40g, 6ms Half Sine Impulse Medium weight Hammer Shock IAW MIL-S-901D

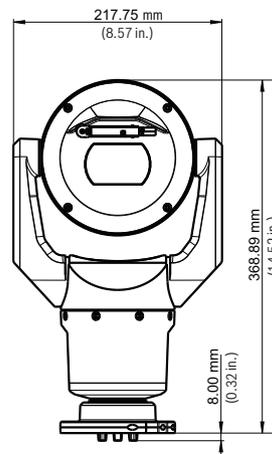
**Construction**

Dimensions (W x H x D)	Without illuminator accessory or sunshield: <i>Upright, Inverted:</i> 217.75 mm x 368.89 mm x 178.33 mm (8.57 in. x 14.52 in. x 7.02 in.) <i>Canted:</i> 217.75 mm x 330.96 mm x 239.68 mm (8.57 in. x 13.03 in. x 9.44 in.)
	Without illuminator accessory, but with sunshield: <i>Upright, Inverted:</i> 217.75 mm x 372.20 mm x 178.33 mm (8.57 in. x 14.65 in. x 7.02 in.) <i>Canted:</i> 217.75 mm x 334.27 mm x 239.68 mm (8.57 in. x 13.16 in. x 9.44 in.)
	With illuminator accessory: <i>Upright, Inverted:</i> 217.75 mm x 439.91 mm x 178.33 mm (8.57 in. x 17.32 in. x 7.02 in.) <i>Canted:</i> 217.75 mm x 401.98 mm x 239.68 mm (8.57 in. x 15.83 in. x 9.44 in.)

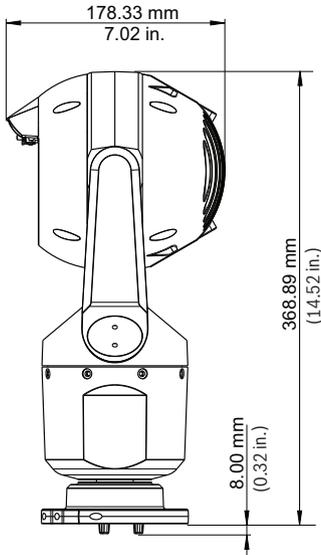
Weight	6.7 kg (14.7 lb)
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Window	Tempered flat glass
Construction Material	Cast solid aluminum
Window Wiper	Standard, long-life silicone wiper
Sunshield (to prevent sun load in hot climates)	Optional; sold separately
Canting	On-site canting functionality
Color	Black (RAL 9005)
Color	White (RAL 9003)
Color	Grey (RAL 7001) Available in specific regions only.
Standard Finish	Corrosion protection surface treatment with powder coat paint, sand finish

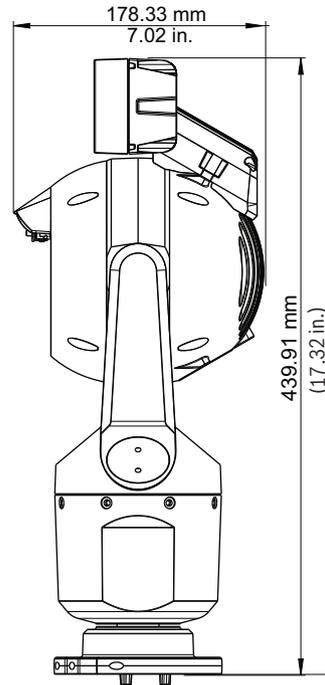
**Dimensional Drawings**



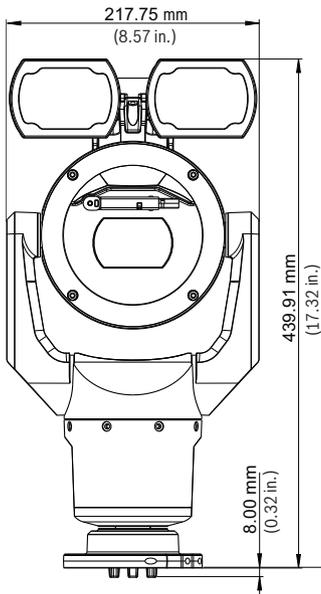
Front view - upright



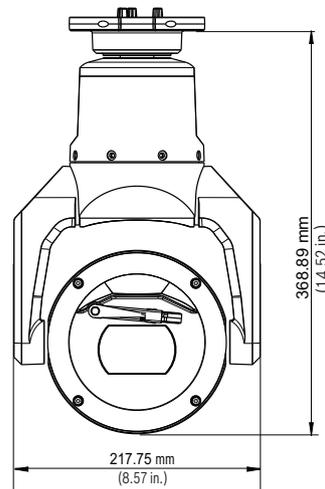
Side view - upright



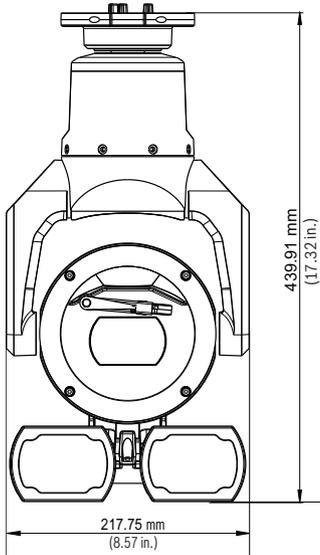
Side view, with illuminator - upright



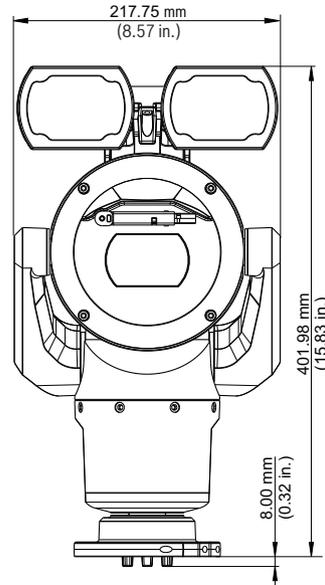
Front view, with illuminator - upright



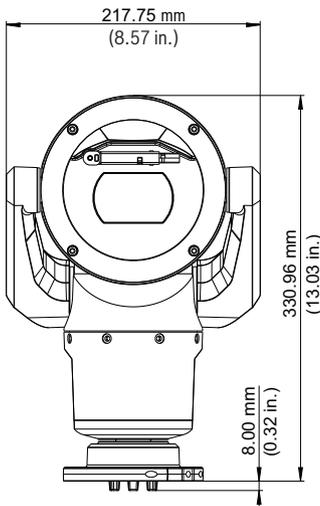
Front view - inverted



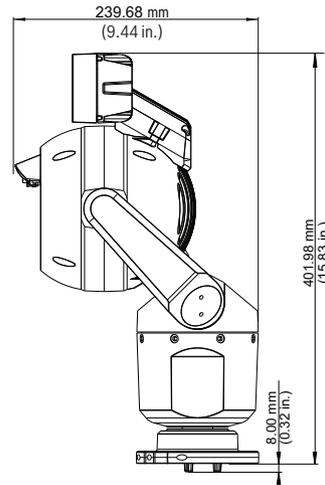
Front view, with illuminator - inverted



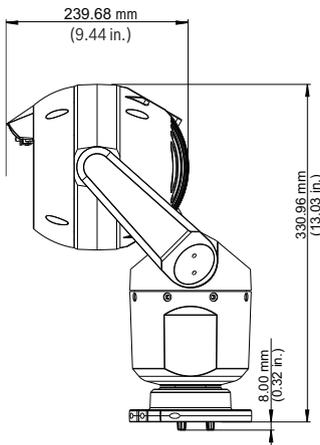
Front view, with illuminator - canted



Front view - canted



Side view, with illuminator - canted



Side view - canted

### Ordering information

#### MIC-7230-B5 Rugged PTZ 2MP 30x Black CPP4

Ruggedized 1080p25/30 HD PTZ day/night camera with 30x zoom, starlight imaging; PoE; IVA. Easy install with hinged DCA mount (sold separately). Optional illuminator (sold separately).

Black (RAL 9005). Sand finish.

Order number **MIC-7230-B5**

#### MIC-7230-W5 Rugged PTZ 2MP 30x White CPP4

Ruggedized 1080p25/30 HD PTZ day/night camera with 30x zoom, starlight imaging; PoE; IVA. Easy install with hinged DCA mount (sold separately). Optional illuminator (sold separately).

White (RAL 9010). Sand finish.

Order number **MIC-7230-W5**

**MIC-7230-G5 Rugged PTZ 2MP 30x Gray CPP4**

Ruggedized 1080p25/30 HD PTZ day/night camera with 30x zoom, starlight imaging; PoE; IVA. Easy install with hinged DCA mount (sold separately). Optional illuminator (sold separately).

Grey (RAL 7001), sand finish. Available in specific regions only.

Order number **MIC-7230-G5**

**Accessories****MIC-ILB-100 Illuminator, IR/White light combo, Black**

Illuminator accessory for MIC7000 Series.

Combination of IR (850 nm) + White light (6700K) LEDs.

Black (RAL 9005). Sand finish.

Order number **MIC-ILB-100**

**MIC-ILW-100 Illuminator, IR/White light combo, White**

Illuminator accessory for MIC7000 Series.

Combination of IR (850 nm) + White light (6700K) LEDs.

White (RAL 9010). Sand finish.

Order number **MIC-ILW-100**

**MIC-ILG-100 Illuminator, IR/White light combo, Grey**

Illuminator accessory for MIC7000 Series.

Combination of IR (850 nm) + White light (6700K) LEDs.

Grey (RAL 7001). Available in specific regions only. Sand finish.

Order number **MIC-ILG-100**

**High PoE Midspan, 95 W, single port, AC in**

High PoE, 95 W, Single Port Midspan with AC in

Order number **NPD-9501A**

**High PoE Midspan, 60 W, single port, AC in**

High Power, 60 W Single Port PoE Midspan with AC in

Order number **NPD-6001A**

**VG4-A-PSU1 120 VAC Power Supply Unit**

Power supply with transformer, 120 VAC input, for an AUTODOME or MIC7000 Series PTZ camera. White, aluminum enclosure with cover, rated IP66 and IK 08. 100 W output. Optional trim skirt (sold separately).

Order number **VG4-A-PSU1**

**VG4-A-PSU2 230 VAC Power Supply Unit**

Power supply with transformer, 230 VAC input, for an AUTODOME or MIC7000 Series PTZ camera. White, aluminum enclosure with cover, rated IP66 and IK 08. 100 W output. Optional trim skirt (sold separately).

Order number **VG4-A-PSU2**

**VIDEOJET connect 7000**

95 W, PoE IP power supply unit, 100 VAC - 240 VAC (90 VAC - 264 VAC with tolerance considered), 50/60 Hz

Order number **VJC-7000-90**

**MIC7000 Alarm/Washer Interface Unit**

Interface box for alarms and washer pump connections for MIC7000 cameras, 24 VAC. Impact-resistant polycarbonate enclosure, rated to IP67 and NEMA 4X, with four (4) watertight glands. Grey (RAL 7035).

Order number **MIC-ALM-WAS-24**

**MIC-DCA-HB MIC Hinged DCA, Black**

DCA mount for a MIC7000 camera. Hinge allows camera to hang temporarily during installation for easier connection of cables/wiring. Aluminum. Two M25 holes for conduit/cable glands.

Black (RAL 9005). Sand finish.

Order number **MIC-DCA-HB**

**MIC-DCA-HBA MIC Hinged DCA with Adapter, Black**

DCA mount for a MIC7000 camera. Hinge allows camera to hang temporarily during installation for easier connection of cables/wiring. Aluminum. Two M25 holes for conduit/cable glands. Includes an conduit adapter (male M25 to female 3/4" NPT). Available in specific regions only.

Black (RAL 9005). Sand finish.

Order number **MIC-DCA-HBA**

**MIC-DCA-HW MIC Hinged DCA, White**

DCA mount for a MIC7000 camera. Hinge allows camera to hang temporarily during installation for easier connection of cables/wiring. Aluminum. Two M25 holes for conduit/cable glands.

White (RAL 9010). Sand finish.

Order number **MIC-DCA-HW**

**MIC-DCA-HWA MIC Hinged DCA with Adapter, White**

DCA mount for a MIC7000 camera. Hinge allows camera to hang temporarily during installation for easier connection of cables/wiring. Aluminum. Two M25 holes for conduit/cable glands. Includes an conduit adapter (male M25 to female 3/4" NPT). Available in specific regions only.

White (RAL 9010). Sand finish.

Order number **MIC-DCA-HWA**

**MIC-DCA-HG MIC Hinged DCA, Grey**

DCA mount for a MIC7000 camera. Hinge allows camera to hang temporarily during installation for easier connection of cables/wiring. Aluminum. Two M25 holes for conduit/cable glands.

Grey (RAL 7001). Available in specific regions only. Sand finish.

Order number **MIC-DCA-HG**

**MIC-DCA-HGA MIC Hinged DCA with Adapter, Grey**  
DCA mount for a MIC7000 camera. Hinge allows camera to hang temporarily during installation for easier connection of cables/wiring. Aluminum. Two M25 holes for conduit/cable glands. Includes an conduit adapter (male M25 to female 3/4" NPT). Available in specific regions only. Grey (RAL 7001). Sand finish.  
Order number **MIC-DCA-HGA**

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**MIC-WMB-BD Wall Mount Bracket, Black**  
Wall mount bracket, black sand finish (RAL9005)  
Order number **MIC-WMB-BD**

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**MIC-WMB-WD Wall Mount Bracket, White**  
Wall mount bracket, white sand finish (RAL9010)  
Order number **MIC-WMB-WD**

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**MIC-WMB-MG Wall Mount Bracket, Grey**  
Wall Mount Bracket.  
Grey (RAL 7001). Available in specific regions only. Sand finish.  
Order number **MIC-WMB-MG**

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**MIC-PMB Pole Mount Bracket**  
Pole mount bracket (includes 2 x 455 mm stainless steel banding straps for pole diameters 75 to 145 mm)  
Order number **MIC-PMB**

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**MIC-CMB-BD Corner Mount Bracket, Black**  
Corner mount bracket, black sand finish (RAL9005)  
Order number **MIC-CMB-BD**

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**MIC-CMB-WD Corner Mount Bracket, White**  
Corner mount bracket, white sand finish (RAL9010)  
Order number **MIC-CMB-WD**

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**MIC-CMB-MG Corner Mount Bracket, Grey**  
Corner mount bracket.  
Grey (RAL 7001). Available in specific regions only. Sand finish.  
Order number **MIC-CMB-MG**

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**MIC-SPR-BD Spreader Plate, Black**  
Aluminum spreader plate suitable for brickwork surface mounting, black sand finish (RAL9005)  
Order number **MIC-SPR-BD**

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**MIC-SPR-WD Spreader Plate, White**  
Aluminum spreader plate suitable for brickwork surface mounting, white sand finish (RAL9010)  
Order number **MIC-SPR-WD**

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**MIC-SPR-MG Spreader Plate, Grey**  
Aluminum spreader plate suitable for brickwork surface mounting.  
Grey (RAL 7001). Available in specific regions only. Sand finish.  
Order number **MIC-SPR-MG**

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**MIC-SCA-BD Shallow Conduit Adapter, Black**  
Shallow conduit adapter for a MIC-WMB, a MIC-PMB, or a MIC-SPR, black sand finish (RAL9005)  
Order number **MIC-SCA-BD**

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**MIC-SCA-WD Shallow Conduit Adapter, White**  
Shallow conduit adapter for a MIC-WMB, a MIC-PMB, or a MIC-SPR mount, white sand finish (RAL9010)  
Order number **MIC-SCA-WD**

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**MIC-SCA-MG Shallow Conduit Adapter, Grey**  
Shallow conduit adapter for a MIC-WMB, a MIC-PMB, or a MIC-SPR.  
Grey (RAL 7001). Available in specific regions only. Sand finish.  
Order number **MIC-SCA-MG**

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**MIC-67SUNSHLD**  
Three-part molded sunshield for MIC7000 cameras – 1 bottom shell, 2 top shells (1 for around the optional illuminator accessory). White.  
Order number **MIC-67SUNSHLD**

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**MIC-IP67-5PK MIC7000 IP67 Connector Kit, 5Pack**  
Order number **MIC-IP67-5PK**

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**MIC-WKT-IR Washer Kit**  
Washer kit for analog infrared MIC camera models and for MIC7000 camera models only. Includes washer nozzle and mounting brackets for wall or 101.6 mm (4 in.) PCD base. Requires washer pump, purchase separately.  
Order number **MIC-WKT-IR**

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#### Software Options

**MVS-FCOM-PRCL Software License for IP Cameras**  
Serial Protocol Software License (e-license) for IP Cameras  
Order number **MVS-FCOM-PRCL**

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