

MIC IP starlight 7000i

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BOSCH

Invented for life



- ▶ Exceptional strength and ruggedness for any outdoor application including traffic monitoring (bridges, tunnels, or highways), perimeter protection, city surveillance, and mining
- ▶ Built-in Intelligent Video Analytics alert operators in case of unusual scene activity
- ▶ Edge intelligence with Intelligent Tracking and object detection even when the camera is moving
- ▶ Starlight camera technology with excellent low-light sensitivity (color = 0.0077 lx) and High dynamic range (120 dB) (to see details in bright and dark areas simultaneously)
- ▶ Optional, variable beam illuminator with multi spectrum LEDs ensures that IR light (up to 450 m (1476 ft)) is uniformly distributed in the field to avoid dark spots or an over-illuminated scene

The MIC IP starlight 7000i camera is an advanced PTZ surveillance platform designed to provide early detection in mission-critical applications. With starlight imaging technology and excellent low-light sensitivity, the MIC IP starlight 7000i camera is the perfect solution for robust and high-quality imaging needs.

The camera's true advantage is its rugged design combined with Intelligent Video Analytics developed specifically for the most demanding environments. The camera is well-suited for extreme environments and adverse weather conditions such as high winds, rain, fog, ice, and snow. The camera operates at extreme temperatures ranging from -40 °C to +65 °C (-40 °F to +149 °F). Even in extreme conditions and challenging illumination scenarios, the camera provides the highest-quality video images and relevant data interpreted directly at the source. H.265 compression technology, Intelligent Dynamic Noise Reduction and dynamic Encoder Regions contribute to bit rate saving.

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.

High dynamic range

The dynamic range of the camera is outstanding and is obvious in real-world performance comparisons. In extended dynamic range mode, the camera uses an electronic shutter to capture four images with different exposure time and reproduce a high-contrast frame. The result is that you can view details in both the bright areas (highlights) and the dark areas (shadows) of a scene at the same time. You can easily distinguish objects and features (for example, faces) with bright backlight.

To obtain this exceptional dynamic range, some functions are automatically controlled by the camera (for example, frame rate and exposure time, Intelligent Auto Exposure, and saturation control).

Ruggedized design for extreme applications

The camera is designed to last in surveillance applications that are beyond the mechanical capabilities of 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.

The closed-loop PTZ positioning system allows the camera to maintain its position under continuous vibration or after an extreme shock event, even without homing or pre-position calibration.

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.

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 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 unit integrity, the factory tests each MIC camera for leaks before shipping.

Pan and tilt drive and mechanism

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

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.

Dual-mode Illumination

The field-installable MIC illuminator accessory (sold separately) consists of covert IR LEDs, visible IR LEDs, and White light LEDs. IR LEDs enable Detection of objects 450 m (1476 ft) away.

The following table identifies the application for each type of LED.

Application	Type of illuminator
Close-range covert illumination	940 nm IR LEDs
Long-range detection	850 nm IR LEDs
Identification and deterrent	White light LEDs

The MIC camera can steer the IR beam dynamically to match the illumination intensity with the camera's field of view according to the zoom level.

Beam intensity is controlled automatically or manually, depending on user preference. Decreasing intensity reduces overexposure.

The patented, integrated Constant Light technology delivers a consistent level of illumination performance throughout the life of the product, even in fluctuating temperatures.

White light mode allows operators to capture full scene details in color or use the light as a deterrent effect.

H.265 high efficiency video coding

The camera is designed on the most efficient and powerful H.264 and H.265/HEVC encoding platform. The camera is capable to deliver high-quality and high-resolution video with very low network load. With a doubling of encoding efficiency, H.265 is the new compression standard of choice for IP video surveillance systems.

Intelligent Dynamic Noise Reduction

The Intelligent Dynamic Noise Reduction technology reduces unnecessary load for the encoder by distinguishing between noise and relevant information in a scene. Because noise is reduced at the source during image capture, the encoder can produce a lower bit rate without compromising video quality. Intelligent Dynamic Noise Reduction technology adjusts spatial and temporal filtering. The filtering method is based on intelligent analysis of the scene content.

Motion compensated temporal filtering reduces motion blur normally associated with standard temporal filtering. This motion compensated temporal filtering also maintains image quality of fast moving objects while still optimizing the encoder input. The motion compensated temporal filtering allows the lowest possible bit rate.

Intelligent streaming

Smart encoding capabilities, together with Intelligent Dynamic Noise Reduction technology and analytics, make the bandwidth consumption drop to extremely low levels. Only relevant information in the scene, such as motion or objects found with the analytics, are encoded.

The camera is capable of providing 4 streams of thermal video and 4 streams of HD visible video simultaneously (8 streams total). This allows the

camera to deliver independent, configurable streams for live viewing, recording, or remote monitoring via constrained bandwidths.

Recording and storage management

Recording management can be controlled by the Bosch Video Recording Manager application, or the camera can use local storage and iSCSI targets directly without any recording software.

Internal memory can be used for recording "at the edge" or for Automatic Network Replenishment (ANR) technology to improve the overall recording reliability. At full streaming capacity, up to 4 hours of storage is possible.

Pre-alarm recording in RAM reduces bandwidth consumption on the network and extends the effective life of the memory card.

Intelligent Video Analytics on the edge

The camera includes the latest release of Intelligent Video Analytics application for use on pre-positions.

Designed for mission-critical applications, the video analytics can reliably detect, track, and analyze moving objects while suppressing unwanted alarms from spurious sources in the image, even in harsh weather conditions.

Advanced tasks like multiple line crossing, loitering, idle / removed object detection, crowd density estimation, occupancy and people counting are available for live alarming and forensic search. Object filters based on size, speed, direction, aspect ratio, and color can be defined.

A simplified calibration mode reduces installation time significantly, because you only need to enter the installation height once for each camera, independent of pre-positions.

After the camera is calibrated, the analytics engine can automatically classify objects as upright person, car, bike, or truck.

Video analytics while camera is moving

The Intelligent Video Analytics can trigger an alarm when the visible imager detects objects in motion in alarm fields while the camera is moving.

These alarm fields are defined once across all PTZ camera views. Any part of those fields that is currently within the camera's view becomes active. Thus, guard tours sweeping across the monitored areas in order to provide an intruder less time to slip by can now automatically alarm on those intruders as well.

If desired, the alarm can even be used to trigger the camera's Intelligent Tracking feature.

Intelligent Tracking

When the Intelligent Video Analytics application in the camera detects objects or individuals, the camera can automatically activate the Intelligent Tracking feature, which controls the pan/tilt/zoom actions of the camera to track objects and keep them in view.

The newest generation of the Intelligent Tracking feature ensures smoother camera motion for more comfortable viewing and more reliably tracking objects even under challenging scenes.

Areas with potentially interfering background motion (moving trees, pulsating lights, and busy roads) can be masked out.

The camera supports 2 Intelligent Tracking modes:

- Auto mode: In this mode, the camera follows any object that has triggered an alarm in the Intelligent Video Analytics application. This mode is most useful for scenarios where the alarm cases can be clearly defined, for example, when no motion is expected at all.
- Click mode: In this mode, users can click on any object detected by the Intelligent Video Analytics application 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.

Data security

Special measures are necessary to ensure the highest level of security for device access and data transport. On initial setup, the camera is only accessible over secure channels and enforces a password.

Web browser and viewing client access can be protected using HTTPS or other secure protocols that support state-of-the-art TLS 1.2 protocol with updated cipher suites including AES encryption with 256 bit keys. No software can be installed in the camera, and only authenticated firmware can be uploaded. A three-level password protection with security recommendations allows users to customize device access. Network and device access can be protected using 802.1x network authentication with EAP/TLS protocol. Superior protection from malicious attacks is guaranteed by the Embedded Login Firewall, on-board Trusted Platform Module (TPM) and Public Key Infrastructure (PKI) support.

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

System integration and ONVIF conformance

The camera conforms to the Open Network Video Interface Forum (ONVIF) Profile S and Profile G specifications. For H.265 configuration the camera also supports Media Service 2 which is part of the future ONVIF Profile T. Compliance with these standards guarantees interoperability between network video products regardless of manufacturer. 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) for more information.

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.

Power options

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

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 MIC IP starlight 7000i, including models with the illuminator accessory.

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).

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.

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 47 CFR Part 15, ICES-003, and CE regulations, including latest versions of:

EN 50130-4
EN 61000-3-3
EN 50121-4 (Railway applications)
EN 55032
EN 61000 3-2
AS/NZS CISPR 22

Product Safety	Complies with UL, CE, CSA, EN, and IEC Standards including: UL 62368-1 UL 60950-1, Ed. 2 CAN/CSA-C22.2 No. E60950-1B-07 EN 62368-1
Marks	UL, CE, WEEE, RCM, EAC, VCCI, FCC, RoHS
Ingress Protection Rating / Standard	IP68 (1m submersion for 24 hrs) NEMA 6P
External Mechanical Impact (IK Code or Impact rating)	IEC 62262, IK10

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, 30, 50 and 60 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

In the table below, an "X" identifies the power source options for MIC IP camera models.

CAMERA MODELS	60 W midspan	95 W midspan	VIDEOJET connect 7000	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 or VG4-A-PSU2
95 W midspan (NPD-9501A)	
VIDEOJET connect 7000 (VJC-7000-90)	

Technical specifications

MIC IP starlight 7000i

Imager	1/2.8-type Exmor R CMOS sensor
Effective Picture Elements (Pixels)	1945 x 1097 (2.13 MP)
Lens	30x motorized Zoom 4.3 mm to 129 mm F1.6 to F4.7
Field of View (FOV)	2.3° to 63.7°
Focus	Automatic with manual override
Iris	Automatic with manual override
Digital Zoom	12x

Video performance - Sensitivity

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

Color	0.0077 lx
Monochrome	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
Day/Night switch	Automatic IR cut filter
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
Defog mode feature	Improves visibility when viewing foggy or other low-contrast scenes.
High dynamic range (HDR)	120 dB (25/30 fps)

Video content analysis

Analysis type	Intelligent Video Analytics
Configurations	Off / Global VCA / Profiles 1 - 16
Calibration	Automatic self-calibrating when height is set

Alarm rules (combinable)

Any object
Object in field
Crossing line
Entering field
Leaving field
Loitering
Following route
Idle object
Removed object
Counter
Occupancy
Crowd detection
Condition change
Similarity search
Tampering

Object filters

Duration
Size
Aspect ratio v/h
Speed
Direction
Object classes (Upright persons, Bikes, Cars, Trucks)
Color

Network

Standard/Video compression	H.265, H.264 (ISO/IEC 14496), M-JPEG, JPEG
Streaming	Independent H.264 and H.265 streams 3 encoder instances of H.264 or H.265 stream
Supported Streams	SD 720p 1080p D1 4:3 (cropped) 640x480 1280x1024 (cropped)
Resolution (H x V)	
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), 802.1x, DNS, DNSv6, DDNS (Dyn.com, selfHOST.de, no-ip.com), SMTP, iSCSI, UPnP (SSDP), DiffServ (QoS), LLDP, SOAP, Dropbox™, CHAP, digest authentication
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Note: Dropbox is a trademark of Dropbox, Inc.

Ethernet	10BASE-T/100BASE-TX, auto-sensing, half/full duplex
Encryption	TLS 1.0, SSL, DES, 3DES, AES
Ethernet connector	RJ45
GOP Structure	IP, IBP, IBBP
Data Rate (H.265, 1080P)	61 kbps to 2.8 Mbps (depending on the scene, the frame rate, and the quality settings)
IP Delay (camera only)	30fps: 120ms 60fps: 67ms
Connectivity	ONVIF Profile S, ONVIF Profile G, ONVIF Profile Q, Auto-MDIX, NTCIP (Note: For NTCIP, a separate license (MVS-NTCIP) is required.)

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

Video compression	H.265	
IPS	1080p	720p
60	712	525
30	600	450
15	477	358
10	438	328
5	283	213
2	122	91

Miscellaneous

Sectors / Title	4, 8, 12, or 16 user-selectable, independent Sectors, each with 20 characters per Title
Privacy Masks	24, individually configurable; maximum 8 per Pre-position; programmable with 3, 4 or 5 corners; selectable color of Black, White, or Gray, as well as an "Auto" option in which the camera selects the most prevalent of the three colors (Black, White, or Gray) in the background scene as the Pattern color.

Virtual Masks	24 individually configurable Virtual 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.
Pre-positions	256, each with 20 characters per Title
Guard Tours	Custom Recorded Tours - two (2), total duration 30 minutes: Pre-position tour - one (1), consisting of up to 256 scenes consecutively, and one (1) customized with up to 64 user-defined scenes
Supported Languages	English, Czech, Dutch, French, German, Italian, Polish, Portuguese, Russian, Spanish, Japanese, Chinese
Washer Pump Interface	Control functions integrated. MIC-ALM-WAS-24 Alarm/Washer Interface Unit (sold separately) provides electrical interface to user supplied washer pump device.
Camera status monitoring	Integrated sensors monitor operational status such as internal temperature, humidity level, incoming voltage level, vibration, and shock events.
Diagnostics	Various status conditions are tracked in internal diagnostic log. Critical fault conditions will also be displayed on screen.
Supported mounting options (with applicable accessories)	Direct to a surface On a wall (Cables through the wall) On a wall (Conduit/cables down the wall) On the corner of a wall On a pole
Mechanical	
Drive Unit	Brushless, integral pan/tilt motor drive
Supported mounting orientation	Upright Inverted Canted
Pan Range	360° continuous rotation
Tilt Angle	Without illuminators (camera upright): 290° Without illuminators (Inverted): 250° With illuminators: 186.6°
Tilt Range	Upright/Inverted: -55° - +90° Canted: -90° - +90°
Variable Pan Speed	0.2°/second - 120°/second
Variable Tilt Speed	0.2°/second - 90°/second
Intelligent Tracking Speed	>0.2°/second (minimum)
Pre-position Speed	120°/second
Preposition Accuracy	Without illuminators: +/-0.06° With illuminators: +/-0.07°

Proportional Pan / Tilt to Zoom	Yes
Audible Noise	<65 dB

Electrical

Input Voltage	21-30 VAC, ±10%, 50/60 Hz, and/or High Power over Ethernet (56 VDC nominal)
Power Consumption (typical)	Without illuminator: 40 W With illuminator: 70 W
Current Consumption	40 W (24 VAC): 2.4A 70 W (24 VAC): 4.1A 40 W (High PoE): 0.9A 70 W (High PoE): 1.25A
Redundant configuration	Connect both a High PoE Midspan and a separate 24 VAC power source. If either the High PoE or the 24 VAC power source fails, the camera seamlessly transitions over to use the remaining power source.
Surge protection	Built-in surge protection for power, data, and network interfaces

User Connections

Accessory Interface/ Control Data	RS-485, Simplex, half and full duplex, user-selectable baud rate or auto-baud Used to communicate with optional MIC-ALM-WAS-24 Alarm/washer interface box or Bosch OSRD, Pelco P/D, Forward Vision, and Cohu serial protocols.
Power, network	Ethernet High PoE (95 W) RJ-45 100/1000Base-TX, male connector; Female to female RJ-45 coupler included
Power, pigtail	24 VAC (nominal)
Chassis ground	Ground wire with connector lug
Power, Network	Without illuminator: RJ45 100BASE-TX Ethernet High PoE Midspan - 60 W (NPD-6001A) or 95 W (NPD-9501A) With illuminator: 95 W High PoE 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 (VJC-7000-90) in order to use the High PoE solution.

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, Forward Vision, and Cohu (Note: For Pelco, Forward Vision, and Cohu protocols, a separate license (MVS-FCOM-PRCL) is required.)

Environmental

Note: Unit includes internal heater and fan.

Ingress Protection Rating/Standard	IP68 / NEMA 6P (dust and immersion) when installed on a MIC-DCA or on a MIC wall mount IP67 (moisture and dust) rating on connectors in the base of the camera when using the IP67 Connector Kit (MIC-IP67-5PK), which is also required when using non-Bosch mounts
External Mechanical Impact (IK Code or Impact rating)	IK10 (excluding glass window)
Operating temperature	-40 °C to +65 °C (-40 °F to +149 °F)
NEMA TS 2-2003 (R2008), para 2.1.5.1 using fig. 2.1 test profile	-34 °C to +74 °C (-30 °F to +165 °F)
Cold Start-up Temperature	-40 °C (-40 °F) (Requires 60-minute warm-up prior to PTZ operations.)
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): 0.070 m ² (0.76 ft ²)

Vibration	IEC 60068-2-6, Test Fc: Vibration (sinusoidal), 10m/s ² (1.0G) NEMA TS2 Section 2.2.8 Vibration: 5-30 Hz, (0.5G) Sinusoidal vibration test IAW MIL-STD-167-1A
Shock	IEC 60068-2-27, Test Ea: Shock, Half Sine Impulse, 6ms, 40G NEMA TS 2 Section 2.2.9 Shock (Impact) Test Half sine wave 11 ms, 10G
Salt Mist Spray (Corrosion Test)	ASTM B117 / ISO 9227 (2000 hours) ISO 12944 C5-M (high durability)

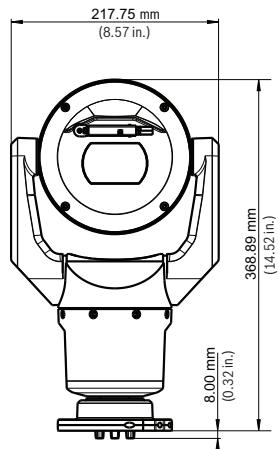
Construction

Dimensions (W x H x D)	<p>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.)</p> <p>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.)</p> <p>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.)</p>
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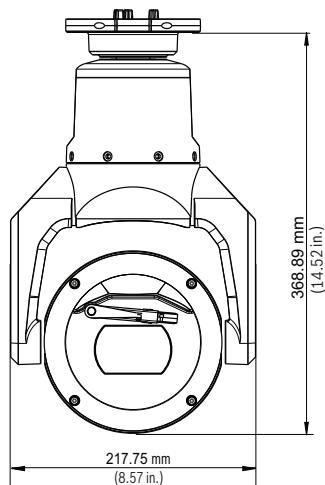
Weight	6.7 kg (14.7 lb) 7.9 kg (17.4 lb) with attached illuminator
Window	Tempered flat glass
Construction Material	Cast solid aluminum
Window Wiper	Standard, long-life silicone wiper
Sunshield (to prevent sun load in hot climates)	Optional; sold separately
Canting	On-site canting functionality
Standard Colors	Black (RAL 9005), White (RAL 9010), or Grey (RAL 7001, available in specific regions only)

Standard Finish	Alodine 5200 surface treatment with powder coat paint, sand finish
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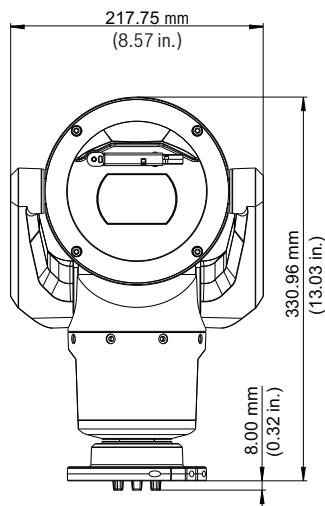
Dimensional Drawings



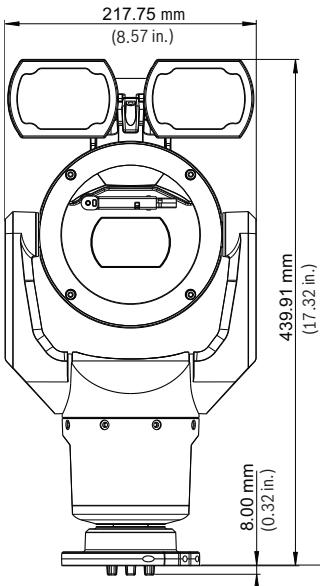
Front view - upright



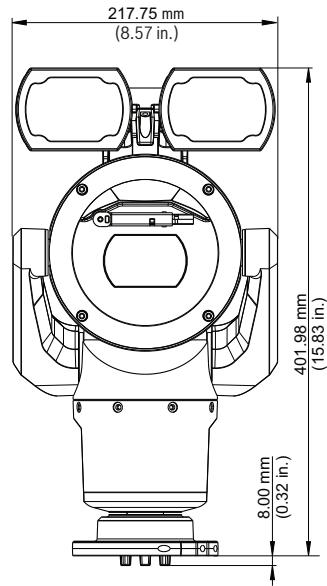
Front view - inverted



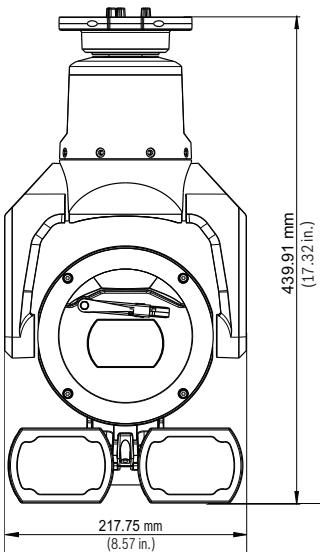
Front view - canted



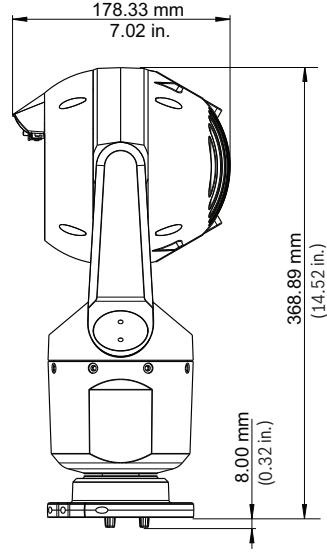
Front view, with illuminator - upright



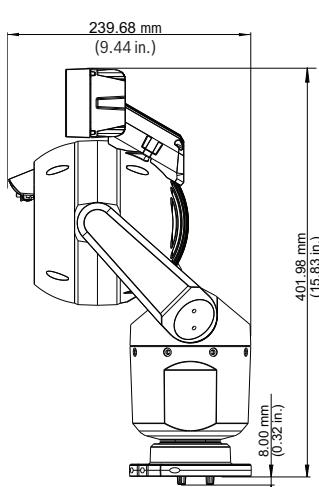
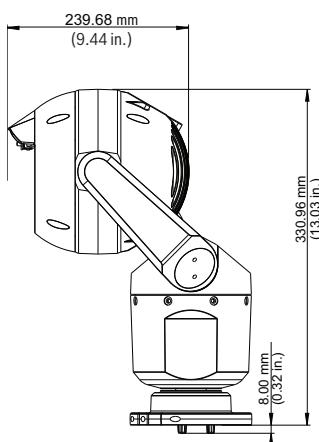
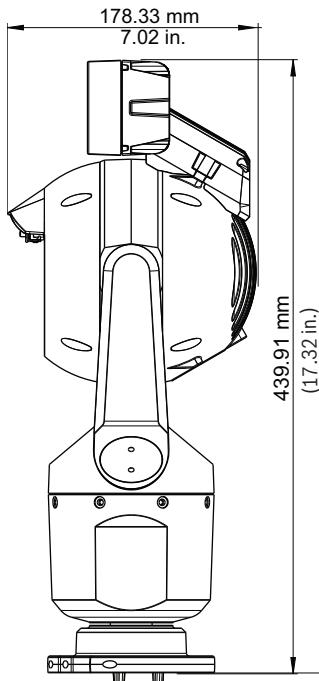
Front view, with illuminator - canted



Front view, with illuminator - inverted



Side view - upright



Not all models and/or accessories listed in **Ordering information** may be available in all regions and/or countries. Please contact your local Bosch representative for further details.

Ordering information

MIC-7502-Z30B PTZ camera 2MP HDR 30x black

Ruggedized 1080p50/60 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-7502-Z30B**

MIC-7502-Z30W PTZ camera 2MP HDR 30x white

Ruggedized 1080p50/60 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-7502-Z30W**

MIC-7502-Z30G PTZ camera 2MP HDR 30x gray

Ruggedized 1080p50/60 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) color. Available in specific regions only.

Order number **MIC-7502-Z30G**

MIC-M25XNPT34 Adapter, M25 to 3/4"NPT, stainless steel

Stainless Steel M25 to $\frac{3}{4}$ " NPT thread adapter

Order number **MIC-M25XNPT34**

Accessories

MIC-ILB-300 Illuminator white-IR light 450m, black

Illuminator accessory for MIC IP starlight 7000i cameras. Combination of IR (850 nm/940 nm) + White light (5600-6300K) LEDs.

Black (RAL 9005). Sand finish.

Order number **MIC-ILB-300**

MIC-ILW-300 Illuminator white-IR light 450m, white

Illuminator accessory for MIC IP starlight 7000i cameras. Combination of IR (850 nm/940 nm) + White light (5600-6300K) LEDs.

White (RAL 9010). Sand finish.

Order number **MIC-ILW-300**

MIC-ILG-300 Illuminator white-IR light 450m, gray

Illuminator accessory for MIC IP starlight 7000i cameras. Combination of IR (850 nm/940 nm) + White light (5600-6300K) LEDs.

Grey (RAL 7001) color. Available in specific regions only.

Order number **MIC-ILG-300**

NPD-9501A Midspan, high PoE, single port, AC in
 High PoE, 95 W, Single port indoor Midspan.
 120/230VAC input. Supplies a data and power
 interface to camera using a single standard CAT5e (or
 better) network cable.
 Order number **NPD-9501A**

NPD-6001A Midspan, high PoE, single port, AC in
 High Power, 60 W Single Port PoE Midspan with AC in
 Order number **NPD-6001A**

VG4-A-PSU1 PSU, 120VAC, for AUTODOME, MIC7000
 Power supply, 120VAC input, 24VAC output @ 96VA.
 Suitable for powering AUTODOME, MIC IP 7000, and
 MIC IP fusion 9000i cameras. White aluminum
 enclosure with cover. IP66 ingress. IK10 impact.
 Order number **VG4-A-PSU1**

**VG4-A-PSU2 Power supply, 230VAC, AUTODOME,
 MIC7000**
 Power supply, 230VAC input, 24VAC output @ 96VA.
 Suitable for powering AUTODOME, MIC IP 7000, and
 MIC IP fusion 9000i cameras. White aluminum
 enclosure with cover. IP66 ingress. IK10 impact.
 Order number **VG4-A-PSU2**

VJC-7000-90 PSU, PoE IP, 100-240VAC, 50/60Hz
 IP power supply unit with PoE, 100 VAC – 240 VAC (90
 VAC -264 VAC with tolerance), 50/60 Hz.
 Order number **VJC-7000-90**

MIC-DCA-HB Deep conduit mount, M25 holes, black
 DCA mount for MIC7000 and MIC IP fusion 9000i
 cameras. Aluminum. Two M25 holes for conduit/cable
 glands.
 Black (RAL 9005) color.
 Order number **MIC-DCA-HB**

MIC-DCA-HBA Deep conduit mount, M25 holes, black
 DCA mount for MIC7000 and MIC IP fusion 9000i
 cameras. 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) color.
 Order number **MIC-DCA-HBA**

**MIC-DCA-HW Deep conduit mount, two M25 holes,
 white**
 DCA mount for MIC7000 and MIC IP fusion 9000i
 cameras. Aluminum. Two M25 holes for conduit/cable
 glands.
 White (RAL 9010) color.
 Order number **MIC-DCA-HW**

MIC-DCA-HWA Deep conduit mount, M25 holes,white
 DCA mount for MIC7000 and MIC IP fusion 9000i
 cameras. 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) color.
 Order number **MIC-DCA-HWA**

MIC-DCA-HG Deep conduit mount, two M25 holes, grey
 DCA mount for MIC7000 and MIC IP fusion 9000i
 cameras. Aluminum. Two M25 holes for conduit/cable
 glands.

Grey (RAL 7001) color. Available in specific regions
 only.

Order number **MIC-DCA-HG**

MIC-DCA-HGA Deep conduit mount, M25 holes, grey
 DCA mount for MIC7000 and MIC IP fusion 9000i
 cameras. 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) color.
 Order number **MIC-DCA-HGA**

MIC-WMB-BD Wall mount bracket , black

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

MIC-WMB-WD Wall mount bracket, white

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

MIC-WMB-MG Wall mount for rugged PTZ camera, grey
 Wall Mount Bracket.

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

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**

MIC-CMB-BD Corner mount bracket, black

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

MIC-CMB-WD Corner mount bracket, white

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

MIC-CMB-MG Corner mount bracket, grey sand

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

MIC-SPR-BD Wall mount spreader plate, black sand

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

MIC-SPR-WD Wall mount spreader plate, white sand

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

MIC-SPR-MG Wall mount spreader plate, grey sand

Aluminum spreader plate suitable for brickwork surface mounting.

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

Sand finish.

Order number **MIC-SPR-MG**

MIC-SCA-BD Shallow conduit adapter, black sand

Shallow conduit adapter for a MIC-WMB, a MIC-PMB, or a MIC-SPR, black sand finish (RAL9005)

Order number **MIC-SCA-BD**

MIC-SCA-WD Shallow conduit adapter, white sand

Shallow conduit adapter for a MIC-WMB, a MIC-PMB, or a MIC-SPR mount, white sand finish (RAL9010)

Order number **MIC-SCA-WD**

MIC-SCA-MG Conduit adapter, shallow, grey sand

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**

MIC-67SUNSHLD Sunshield for MIC7000 series, white

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**

MIC-IP67-5PK Connector kit, IP67, 5pcs

5-pack weather protection kit for MIC7000 cameras.

Provides an IP67-rated barrier against dust or moisture. Recommended when MIC camera is mounted directly to installation surface (instead of onto a MIC-DCA or MIC wall mount).

Order number **MIC-IP67-5PK**

MIC-WKT-IR Washer kit, MIC IR

Washer kit for analog infrared MIC camera models as well as for MIC IP starlight 7000i and MIC IP fusion 9000i camera models.

Order number **MIC-WKT-IR**

Software Options**MVS-FCOM-PRCL License key for serial protocol**

Serial Protocol Software License (e-license) for IP Cameras

Order number **MVS-FCOM-PRCL**

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