

# AutoDome Junior HD Fixed Camera

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Invented for life

**HD** ONVIF

- ▶ Remote commissioning for simplified installations and hands-free camera positioning and focusing
- ▶ HD 1080p/30, 720p/60, and 720p/30 resolutions
- ▶ 160x zoom (10x optical, 16x digital)
- ▶ Quad video streaming generates simultaneous H.264, M-JPEG, and JPEG video streams
- ▶ ONVIF conformant; provides interoperability with other conformant systems

The AutoDome Junior HD Fixed camera is a rugged, extremely compact, and easy to install camera featuring remote commissioning. The remote commissioning feature simplifies installation by allowing operators the ability to position and focus the camera via a remote head-end unit.

The AutoDome Junior HD Fixed camera provides direct network connection using H.264 and JPEG compression and bandwidth throttling to efficiently manage bandwidth and storage requirements while delivering outstanding image quality. The AutoDome Junior HD Fixed camera provides complete network-based control of all functionality including alarms and web-based configuration of all settings.

The AutoDome Junior HD Fixed camera conforms to the ONVIF (Open Network Video Interface Forum) specification guaranteeing interoperability between network video products regardless of manufacturer.

## AutoDome Junior HD Fixed Camera highlights

With a dome diameter of only 5.04 inches (12.8 cm), the AutoDome Junior HD Fixed camera is nearly 50% smaller than the Bosch AutoDome. These compact dimensions make the AutoDome Junior HD Fixed camera ideal for discrete surveillance applications.

The AutoDome Junior HD Fixed camera maximizes your security investment by integrating with Bosch video products including the Bosch Video Client, the Bosch Recording Station, as well as the full range of Bosch video over IP products.

The AutoDome Junior HD Fixed camera is simple to install and to use and is available with surface, wall, recessed, and pipe mount options.

## System overview

### Remote commissioning

The AutoDome Junior HD Fixed camera allows an operator to commission the camera from a remote head-end unit, eliminating the need for hands-on camera positioning and focusing. Once mounted, the operator can use the built-in Web interface to remotely

position the camera and fix its location without removing the bubble or connecting a monitor directly to the camera.

**High-performance 160x day/night camera**

The AutoDome Junior HD Fixed camera has a 1/2.5-inch progressive scan CMOS sensor. With up to 1080p resolution and sensitivity to below 1.0 lux, the AutoDome Junior HD Fixed camera offers exceptional performance at a very affordable price.

**Ultra-efficient H.264 encoding**

The AutoDome Junior HD Fixed camera uses an advanced H.264 encoder to create DVD-quality streaming video at ultra-low bit rates. Use of H.264 encoding, bandwidth throttling, and multicasting capabilities, minimizes bandwidth and storage usage to significantly reduce costs. The AutoDome Junior HD Fixed camera supports 1080p30, 720p60, 720p30, 480p30 (WVGA), and 240p30 (WQVGA) resolutions for 50 Hz and 60 Hz models at 16:9 aspect ratio.

**Multiple video streams**

Bosch's innovative Quad-streaming feature enables the AutoDome Junior HD Fixed camera to deliver three H.264 streams together with an M-JPEG stream in full and reduced bandwidth modes. During full bandwidth operation (full HD 1080p30 or high frame rate 720p60) the second stream is an exact copy of the first stream. In reduced band-width mode (720p30), the second stream is an independently configurable, downscaled-resolution stream. In both modes the third H.264 stream consists of HD I-frames only. These streams facilitate bandwidth-efficient viewing and recording options as well as integration with third-party video management systems.

**ONVIF conformant**

The AutoDome Junior HD Fixed camera conforms to the ONVIF (Open Network Video Interface Forum) specification guaranteeing interoperability between network video products regardless of manufacturer. 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.

**Intelligence**

With built-in video content analysis, the standard AutoDome Junior HD Fixed camera reinforces the Intelligence-at-the-Edge concept where edge devices become increasingly intelligent. This camera comes with built-in MOTION+ video motion detection. This motion detection algorithm is based on pixel change and includes object size filtering capabilities and sophisticated tamper detection capabilities.

The AutoDome Junior HD Fixed camera also features Bosch's Intelligent Video Analysis (IVA). IVA is state-of-the-art intelligent video analysis that reliably detects, tracks, and analyzes moving objects while suppressing unwanted alarms from spurious sources in the image.

**Rugged reliability**

A heavy-duty, tamper-resistant aluminum housing protects the camera from vandalism and theft, ensuring the AutoDome Junior HD Fixed camera continues to deliver critical images even in the toughest environments.

**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).

**Functions**

The following are some of the features that make the AutoDome Junior HD Fixed camera the perfect fit for a variety of indoor surveillance applications.

**Ease of installation and servicing**

The AutoDome Junior HD Fixed camera has been designed for quick and easy installation; a key feature from Bosch CCTV products. The dome comes fully assembled and ready for surface mount applications. Also available are wall, recessed, and pipe mounting kits which allow the AutoDome Junior HD Fixed camera to be easily adapted for the individual site requirements. Available in white or charcoal. The AutoDome Junior HD Fixed camera allows an operator to commission the camera from a remote head-end unit, eliminating the need for hands-on camera positioning and focusing, and the need for special equipment at the camera site.

**iSCSI device support**

Built-in iSCSI support allows the AutoDome Junior HD Fixed camera to stream video directly to an iSCSI RAID array. This enables local video storage just like a conventional DVR without streaming high bandwidth video across the network. Local recording, or Recording at the Edge, minimizes bandwidth usage and makes system recording performance totally independent from network performance.

**Network-based control and configuration**

The AutoDome Junior HD Fixed camera enables full camera control and configuration capabilities over the network. Operators or technicians can configure alarm management functions virtually anywhere without need for additional wiring. The embedded web server lets the installer access all the user settings, make camera adjustments, and update firmware via a standard web browser.

### Device management

Simple Network Management Protocol (SNMP) support facilitates the remote monitoring and management. The AutoDome Junior HD Fixed camera provides full support for SNMP v1.

### Superior privacy masking

The AutoDome Junior HD Fixed camera allows for a total of 15 individual, easy to configure privacy masks, with up to 15 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. You also have a choice of black, gray, or white masking characteristics.

### Power over Ethernet

Power for indoor camera models may be supplied via a Power over Ethernet Plus (PoE+, IEEE 802.3at, class 4) compliant network cable connection. With this configuration, only a single cable connection is required to power and to control the camera while also viewing images from the camera.

### Viewing

View the video on a PC using a Web browser or via the Bosch Video Client, the Bosch Recording Station, the Bosch Video Management System, or integrate it into a third party video management system.

### Certifications and approvals

#### 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

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards
Environmental	IP54 (excluding VJR-A3-IC mounting option)



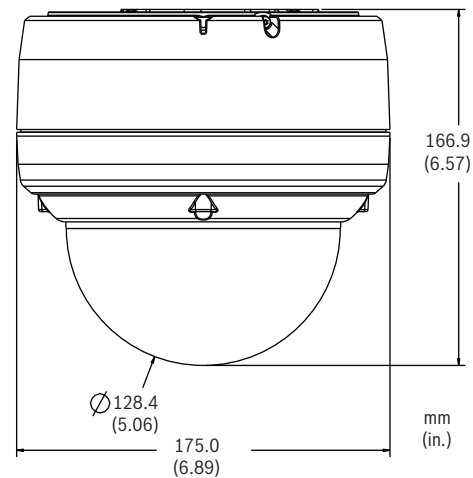
#### Notice

##### Conformity to EN 50130-4

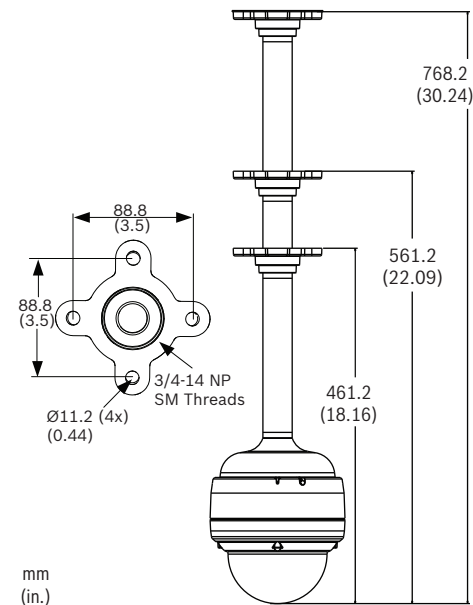
One of the following power supply units is required to conform to the EN 50130-4 standard: VG4-A-PSU0, VG4-A-PSU1, or VG4-A-PSU2.

Region	Certification
Europe	CE (Declaration of Conformity)

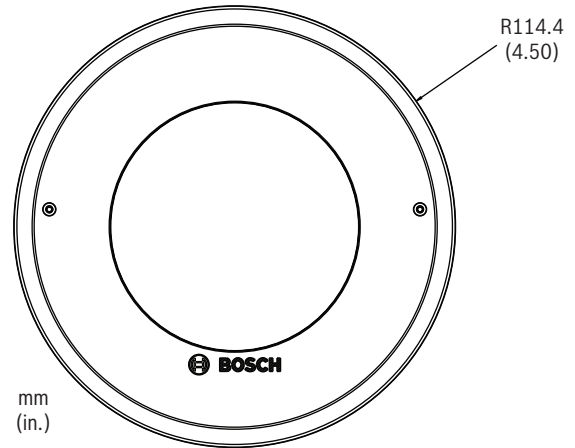
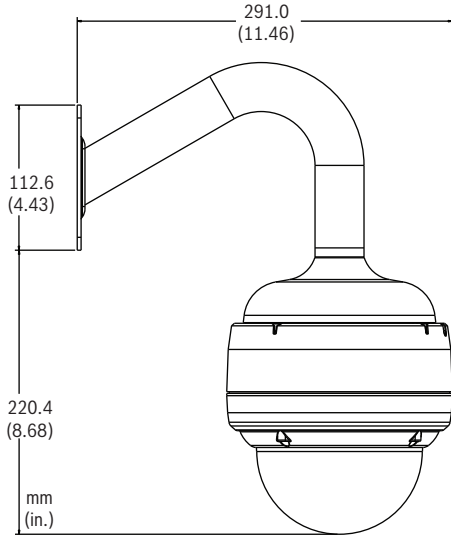
### Installation/configuration notes



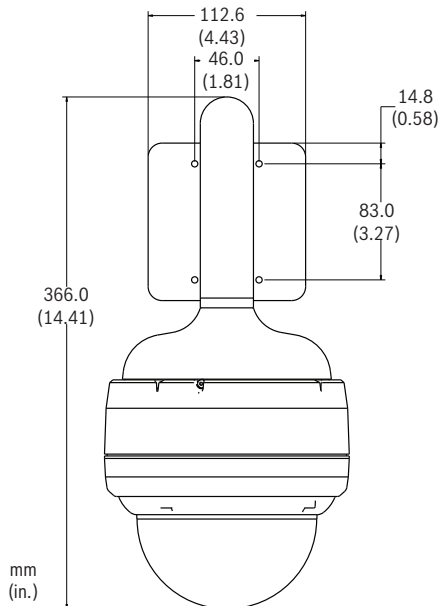
AutoDome Junior HD Fixed Camera Dimensions



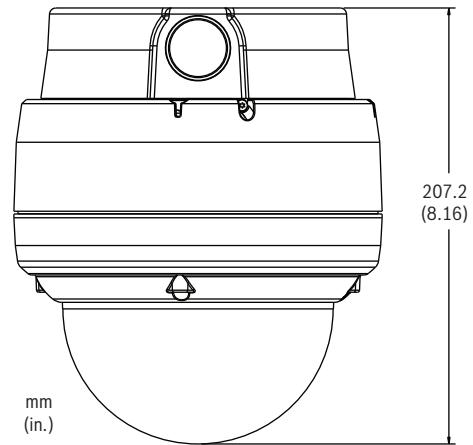
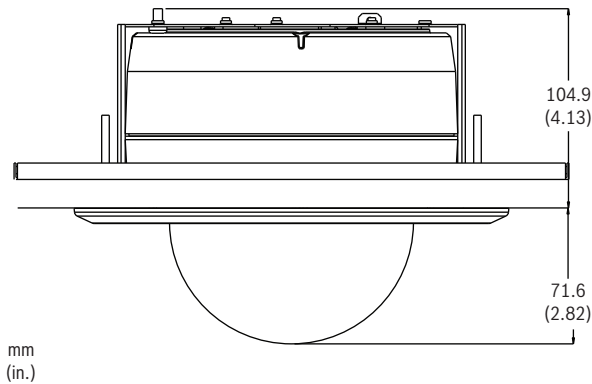
Pipe Mount Dimensions



In-Ceiling / Recessed Mount Dimensions



Wall Mount Dimensions



Surface Mount Dimensions

### Technical specifications

#### 10x HD Day/Night Camera

Imager	1/2.5 inch progressive scan CMOS	
Number of Pixels	2.1 Megapixels	
Aspect Ratio	16:9	
Lens	10x optical zoom (6.3 to 63 mm) (F1.8/F2.5 to close)	
Focus	Single-shot autofocus	
Iris	Automatic with manual override	
Field of View	Horizontal: 5.5° to 50.6° Vertical: 3.1° to 29.3°	
Automatic Gain Control	Normal, Medium, High, Fixed	
Synchronization	Internal	
Aperture Correction	On/Off	
Digital Zoom	16x	
Sensitivity(typical) <sup>1</sup>	30 IRE <sup>2</sup>	50 IRE <sup>2</sup>

<b>Day Mode</b>		
SensUP Off	1.2 lx	2.0 lx
SensUP On (64x)	0.038 lx	0.063 lx
<b>Night Mode</b>		
SensUP Off	0.06 lx	0.1 lx
SensUP On (64x)	0.0018 lx	0.0031 lx
Electronic Shutter Speed (AES)	1x to 64x; 1/50 (1/60) to 1/10000	
Signal to Noise Ratio	> 50 dB (AGC off)	
Wide Dynamic Range	50 dB	
Backlight Compensation	On/Off	
White Balance	ATW, Indoor, Outdoor, AWB Hold, Extended ATW, Manual (adjustable R and B signals in Manual mode)	
Day/Night	Monochrome, Color, Auto	

1. F1.8, 1/30 (1/25) shutter, maximum AGC.

2. Tinted bubble adds 0.8 f-stop loss.

## Software Control

Camera Setup/Control	Via Internet Explorer Web browser version 7.0 version or later, Bosch Configuration Manager, or BVMS
Software Update	Firmware upload

## Network

Standards	H.264 (ISO/IEC 14496-10), M-JPEG, JPEG
Streaming	Individually configurable streams in H.264 and M-JPEG, configurable frame rate and bandwidth;
• 1080p30	One (1) H.264 1080p30 stream plus one (1) M-JPEG and one (1) I-frame stream
• 720p60	One (1) H.264 720p60 stream plus one (1) M-JPEG and one (1) I-frame stream
• 720p30	Two (2) independently configurable H.264 streams: One (1) H.264 720p30 stream, One (1) H.264 BP+ or H.264 MP SD stream, plus one (1) M-JPEG and one (1) I-frame stream
GOP Structure	IP, IBP, IBBP
Data Rate	9.6 kbps to 6 Mbps
Overall IP Delay	240 ms

## Resolutions (H x V) and Frame Rates

### Stream 1

• Full HD/1080p	1920 x 1080, 30 ips
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• HD/720p	1280 x 720, 60 ips
• HD/720p	1280 x 720, 30 ips

### Stream 2<sup>3</sup>

• SD/480p (WVGA) <sup>4</sup>	854 x 480, 30 ips
• SD/240p (WQVGA) <sup>4</sup>	432 x 240, 30 ips

3. Stream 1 must be set to 720p at 30 ips.

4. Images displayed in 16:9 aspect ratio.

## Network

Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS, FTP, DHCP, IGMP V2/V3, ICMP, ARP, SMTP, SNMP, RTSP, 802.1x, iSCSI, DynDNS, UPnP
Ethernet	10-Base T/100 Base-TX, auto-sensing, half/full duplex, RJ45
PoE+	IEEE 802.3at, class 4

## Electrical

Rated Voltage	24 VAC ± 10%, 50/60 Hz or PoE+ (IEEE 802.3at, class 4)
Power Draw	14 W typical

## Environmental

Operating Temperature	–10°C to 40°C (14°F to 104°F)
Storage Temperature	–20°C to 60°C (–4°F to 140°F)
Operating Humidity	0% to 90% relative, non-condensing
Water/Dust Protection	IP54 (excluding VJR-A3-IC mounting option)

## Miscellaneous

Masking	Fifteen (15) individually configurable privacy masks
Protocol Support	Bosch (OSRD), ONVIF
Supported Languages	English, German, Dutch, French, Italian, Spanish, Portuguese, Polish, Russian, Chinese, and Japanese

## User Connections

<b>Power</b>	
• PoE+, Indoor Models	RJ-45 100 Base-TX Ethernet PoE+ IEEE 802.3at, class 4
• Camera, All Models	24 VAC, 50/60 Hz
Video and Control	RJ-45 100 Base-TX Ethernet
Alarm Input (2)	NC/NO

Alarm Output	Open collector NPN 32 VDC @ 150 mA max
Audio	9 K Ohm typical 5.5 Vp-p max

### Construction

Size (Diameter x Height)	153.0 x 133.0 mm (6.02 x 4.61 in.)
Bubble Size	128.0 mm (5.04 in.)
Weight	1.92 kg (4.24 lb)
Material	
• Housing	Cast aluminum
• Bubble	Acrylic
Color	White or Charcoal

### Ordering information

#### VJR-F801-ICCV Fixed Indoor 10x AutoDome Junior HD with IVA, Charcoal, Clear Bubble

Indoor AutoDome Junior HD Fixed camera with IVA, charcoal, 10x day/night camera with clear bubble  
Order number **VJR-F801-ICCV**

#### VJR-F801-IWCV Fixed Indoor 10x AutoDome Junior HD with IVA, White, Clear Bubble

Indoor AutoDome Junior HD Fixed camera with IVA, white, 10x day/night camera with clear bubble  
Order number **VJR-F801-IWCV**

#### VJR-F801-ICTV Fixed Indoor 10x AutoDome Junior HD with IVA, Charcoal, Tinted Bubble

Indoor AutoDome Junior HD Fixed camera with IVA, charcoal, 10x day/night camera with tinted bubble  
Order number **VJR-F801-ICTV**

#### VJR-F801-IWTV Fixed Indoor 10x AutoDome Junior HD with IVA, White, Tinted Bubble

Indoor AutoDome Junior HD Fixed camera with IVA, white, 10x day/night camera with tinted bubble  
Order number **VJR-F801-IWTV**

### Accessories

#### UPA-2450-60 Power Supply, 120 V, 60 Hz

Indoor power supply for camera. 120 VAC, 60 Hz In; 24 VAC, 50 VA Out  
Order number **UPA-2450-60**

#### UPA-2450-50 Power Supply, 220 V, 50 Hz

Indoor power supply for camera. 220 VAC, 50 Hz In; 24 VAC, 50 VA Out  
Order number **UPA-2450-50**

#### VJR-A3-IC AutoDome Junior HD Indoor Recessed Mount

Recessed mount for indoor camera applications that do not require IP54 or a plenum rating  
Order number **VJR-A3-IC**

#### VJR-A3-SP In-ceiling Support Kit for AutoDome 700/800 Series and AutoDome Junior HD

Suspended ceiling support kit for AutoDome 700 and 800 Series and AutoDome Junior HD In-ceiling mounts  
Order number **VJR-A3-SP**

#### VEZ-A2-JC Surface Mount Adapter

Charcoal adapter for AutoDome Junior surface installations  
Order number **VEZ-A2-JC**

#### VEZ-A2-JW Surface Mount Adapter

White adapter for AutoDome Junior surface installations  
Order number **VEZ-A2-JW**

#### VEZ-A2-PC AutoDome Junior Pipe Mount

Charcoal  
Order number **VEZ-A2-PC**

#### VEZ-A2-PW AutoDome Junior Pipe Mount

White  
Order number **VEZ-A2-PW**

#### VEZ-A2-WC AutoDome Junior Wall Mount

Charcoal  
Order number **VEZ-A2-WC**

#### VEZ-A2-WW Wall Mount

White  
Order number **VEZ-A2-WW**

#### VJR-SBUB2-CL AutoDome Junior HD Clear Bubble

Order number **VJR-SBUB2-CL**

#### VJR-SBUB2-TI AutoDome Junior HD Tinted Bubble

Order number **VJR-SBUB2-TI**

#### VJR-A3-IC54 AutoDome Junior HD Plenum-rated and Outdoor Recessed Mount

Recessed mount required for indoor camera applications that must attain an IP54 or a plenum rating, and required for all recessed outdoor camera applications  
Order number **VJR-A3-IC54**

### Software Options

#### BVIP AES 128 Bit Encryption

Single installation licence for BVIP AES 128-bit encryption site. Enables encrypted communication between BVIP devices and management stations.  
Order number **MVS-FENC-AES**

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