Video | AUTODOME 7000 IP

AUTODOME 7000 IP

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Invented for life

Onvif

▶ Day/night IP camera with 28x or 36x optical zoom (12x digital zoom), Wide Dynamic Range (WDR), and Sodium Vapor White Balance mode that restores objects to their original color

▶ New Intelligent Tracking and alarm rules engine with on-board Intelligent Video Analytics (IVA)

▶ Enhanced system flexibility with dual recording options (iSCSI, SD card)

▶ Fully configurable quad streaming with individually configurable SD streams, based on Bosch's new Common Product Platform (CPP4)

▶ Easy and intuitive installation with multiple pre-configured user modes that allow users to select the camera configuration that is ideal for their applications

The AUTODOME 7000 IP is an easy to install, high-speed PTZ dome camera, in a field-proven housing suitable for indoor or outdoor installation, that delivers unmatched picture quality and network performance day and night.

The camera provides complete network-based control of all dome functionality including pan/tilt/zoom operation, presets, tours and alarms as well as web-based configuration of all dome settings. It also provides direct network video streaming using H.264 compression / bandwidth throttling to efficiently manage bandwidth and storage requirements while delivering outstanding image quality.

Functions

High-performance PTZ day/night camera

The camera has a 1/4-in. CCD sensor, with 4CIF/D1 resolution and sensitivity to below 1.0 lux, and is available with a choice of 28x and the industry-leading 36x optical zoom lens. Both camera options have a full 12x digital zoom and provide D1 horizontal resolution

for outstanding clarity and image detail. The camera also incorporates Wide Dynamic Range (WDR) technology that allows for the capture of clear images from both bright and dark areas in the same frame. WDR ensures that bright areas are not saturated and that dark areas are not too dark.

Day/night capabilities and outstanding sensitivity make the camera an exceptional performer in all lighting conditions. In low light, the camera switches automatically from color to monochrome by removing the IR filter to boost the infrared illumination sensitivity, while maintaining superior image quality. For operation in the darkest conditions, the SensUp control feature automatically reduces the shutter speed to as little as one second. This increases sensitivity by more than 50 times.

Progressive scan

The camera is ideally suited for IP imaging applications. The progressive scan technology in the camera provides smooth and clear images when viewing images from the camera.

Sodium vapor lamp white balance
The camera is an exceptional performer when capturing video under a sodium vapor lamp (a street lamp or tunnel lamp, for example). Images under these conditions may have a yellowish tint, which may make identification difficult. In the Sodium Vapor White Balance mode, the camera automatically compensates for the light from a sodium vapor lamp to restore objects to their original color.

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 background motion in the scene such as moving trees, pulsating lights, busy roads, etc.

Intelligent Tracking
The camera utilizes the built-in Intelligent Video Analytics (IVA) to follow an individual or an object continuously. Objects detected by IVA when the camera is in a stationary position activate the Intelligent Tracking feature, which controls the pan/tilt/zoom actions of the camera to keep the tracked object 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.
IVA-triggered mode: In this mode, the camera continuously analyzes the scene for IVA alarms or IVA rule violations. If an IVA 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 IVA and Intelligent Tracking allows the camera to track moving objects of interest without getting distracted by other moving objects in the scene.

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

The AUTODOME comes with Bosch's Intelligent Video Analysis (IVA) built-in. IVA is state-of-the-art intelligent video analysis that reliably detects, and analyzes moving objects while suppressing unwanted alarms from spurious sources in the image.
The IVA functionality built into the AUTODOME is able to detect idle and removed objects as well as loitering, multiple line crossing, and trajectories. IVA also supports BEV (Bird's Eye View) People counting. Assisted Self Calibration and configurable detection filters improve reliability and reduce operator work load.

AUTODOME 7000 PTZ drive and mechanism
The AUTODOME 7000 supports 256 pre-positions and two styles of Guard Tours: Preset and Record/Playback. Users can configure the preset standard tour with as many as 256 sequential pre-positions, with a configurable dwell time between pre-positions. The AUTODOME Series also provides support for two recorded tours, which are recorded macros of an operator's movements, including pan, tilt, and zoom activities, and can be played back with the click of a button.
Pan and tilt preset repeatability are accurate to within ±0.1 degrees to ensure that the correct scene is captured every time. The camera delivers variable pan/tilt speeds from a crawl speed of only 0.1 degrees per second to a full 400 degrees per second. The camera is capable of pan speeds of 400 degrees per second and tilt speeds of 300 degrees per second between prepositions. The camera provides a tilt angle 18 degrees above the horizon, and a pan range of up to 360 degrees continuous rotation.
The AutoScaling (proportional zoom) and AutoPivot (automatically rotates and flips the camera) features ensure optimal control.

Five (5) pre-programmed user modes
Five pre-programmed but configurable user modes, optimized with the best settings for a variety of typical applications, make camera programming on-site easy and user-friendly. Users select from the menu the mode that best defines the environment in which the camera is installed:
- Outdoor – general day-to-night changes with sun highlights and street lighting
- Indoor – general day-to-night changes without sun highlights and street lighting
- Low light –optimized for sufficient details at low light
- Motion – monitoring traffic or fast moving objects; motion artifacts are minimized
- Vibrant – enhanced contrast color reproduction and sharpness

Users have the ability to customize these modes, if necessary, for the specific requirements of the site.

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.

Comprehensive streaming capabilities on Bosch's Common Product Platform (CPP4)

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

Recording and storage management

A memory card (SD (Secure Digital), SDHC (Secure Digital High Capacity), or SDXC (Secure Digital eXtended Capacity)) can be used for local alarm recording or for scheduled local recording to improve the overall recording reliability. Recording management can be controlled by the Bosch Video Recording Manager (VRM), or the camera can use iSCSI targets directly without any recording software.

Advanced networking capabilities

The AUTODOME offers advanced capabilities so you can configure the camera to take advantage of the latest networking technology.

The AUTODOME offers Quality of Service (QoS) configuration options to ensure fast network response to PTZ data and images. Quality of Service (QoS) is the set of techniques to manage network resources. QoS manages the delay, delay variation (jitter), bandwidth, and packet loss parameters to guarantee the ability of a network to deliver predictable results. QoS identifies the type of data in a data packet and divides the packets into traffic classes that can be prioritized for forwarding.

The AUTODOME also supports the IPv6 internet-layer protocol for packet-switched internetworking across multiple IP networks. IPv6 uses 128-bit addresses (IPv4 uses 32-bit addressing), which allows for many more devices and users on the internet as well as extra flexibility in allocating addresses and efficiency for routing traffic.

Ease of installation and servicing

The camera has been designed for quick and easy installation; a key feature from Bosch CCTV products. All housings feature recessed screws and latches for increased tamper resistance.

AUTODOME in-ceiling housings provide IP54 protection. With an optional, impact-resistant, rugged polycarbonate bubble (sold separately), they are rated IK 8 (IEC 62262) to protect the camera from vandalism. The rugged bubble can withstand impacts equivalent to a 4.5 kg (10 lb) weight dropped from a height of 3 m (10 ft).

Indoor/outdoor pendant housings are rated to provide IP66 protection and offer an operating temperature range down to -40 °C (-40 °F). The indoor/outdoor pendant comes fully assembled with a sunshield and ready for wall or pipe applications with the proper mounting hardware (sold separately). In addition, the camera models with pendant housing come equipped with a low-impact, high-resolution acrylic bubble for enhanced image clarity. You can easily convert the outdoor pendant for indoor applications by removing the sunshield.

Bosch offers a full complement of hardware and accessories (sold separately) for wall, corner, mast, roof, pipe mount, and in-ceiling applications, which allow the camera to be adapted easily to individual site requirements.

Video management system support

The camera ships with Bosch Video Client (BVC), an easy-to-use software from Bosch that is suitable for midsize installations. For large enterprise systems, AUTODOME cameras can be used with Bosch Video Management System (BVMS), which allows enhanced video management and viewing capabilities.

In addition, the camera is supported/integrated into all of the leading third party video management systems.

ONVIF conformant

The AUTODOME Series conforms to the ONVIF Profile S specification allowing easy integration with the conformant devices and VMS.

For more information about ONVIF, visit www.onvif.org.

The camera conforms to the ONVIF (Open Network Video Interface Forum) specification which guarantees interoperability between network video products regardless of manufacturer. ONVIF conformant devices are able to exchange live video, audio, metadata and control information. They are automatically discovered and connected to network applications such as video management systems.

Fiber Optic Kit

Bosch offers the optional VG4-SFPSCKT, a unique media converter module for use with AUTODOME cameras. This media converter module is designed to accept a wide-range of 10/100 Mbps SFP modules for use with Multimode or Singlemode optical fiber with LC or SC connectors.

The media converter module along with the SFP module is user-installed directly into the camera's power supply box to provide an integrated fiber optic solution.

Unsurpassed reliability

As with all Bosch products, the AUTODOME Series has been subjected to the industry's most comprehensive and demanding battery of endurance tests such as HALT (highly accelerated life testing) to make sure it will hold up through years of use. And of course, it comes with Bosch's industry-leading 3-year warranty.

Access security

Access security

Various security levels are available for accessing the network, the camera, and the data channels. As well as password protection with three levels, 802.1x authentication using a RADIUS (Remote Authentication Dial In User Service) server is supported. To secure Web browser access, use HTTPS with a SSL certificate stored in the camera. For total data protection, the video and audio communication channels can be independently AES encrypted with 128-bit keys by installing the optional encryption site license.

Easy upgrade

Remotely upgrade the camera whenever new firmware becomes available. This ensures up-to-date products, thus protecting investment with little effort.

Certifications and approvals

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations, including EN 50130-4, EN 55022 Class A, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2, and EN 50121-4 (Railway applications)
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards EN60950-1
Environmental	In-ceiling: IP54, Plenum rated (with acrylic bubble) Also: IK8 rating when using optional Polycarbonate bubble, sold separately Indoor/Outdoor Pendant: IP66, NEMA 4X
ONVIF conformance	EN 50132-5-2

ℹ 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, VG4-A-PSU2, VG4-A-PA0, VG4-A-PA1, or VG4-A-PA2.

Parts included

In-ceiling

Quantity	Item
1	AUTODOME 7000 In-Ceiling camera with acrylic bubble and white trim ring
1	Interface box
1	Optional black trim ring
1	Ceiling gasket (for IP54 conformance)
	Product DVD (which includes complete Operation Manual)
	Packet of printed Safety literature

Outdoor Pendant

Quantity	Item
1	AUTODOME 7000 Pendant camera with clear acrylic bubble and sunshield
1	Product DVD (which includes complete Operation Manual)
1	Packet of printed Safety literature

Notes:

- The pendant can be converted to an indoor pendant by removing the sunshield.
- Mounting hardware and accessories are available separately.

Technical specifications

Camera 36x Day/Night

Imager	1/4 in.-type Exview HAD CCD (progressive scan)
Effective Picture Elements	PAL: Approx. 440,000; 752(H) x 582(V) NTSC: Approx. 380,000; 768 (H) x 494 (V)
Lens	36x Zoom (3.4–122.4 mm) F1.6 to F4.5
Focus	Automatic with manual override
Iris	Automatic with manual override

Zoom Movement Speed		NTSC	PAL
•	Optical WIDE / Optical TELE – Focus Tracking ON	4.0 sec.	4.0 sec.
•	Optical WIDE / Optical TELE – Focus Tracking OFF	2.7 sec.	2.7 sec.
•	Optical WIDE / Digital TELE	6.0 sec.	6.2 sec.
•	Digital WIDE / Digital TELE	2.1 sec.	2.3 sec.

Optical Zoom Field of View (FOV)	1.7° to 57.8°
Minimum Working Distance	320 mm (wide) to 1500 mm (tele)
Gain Control	Auto/Manual/Max. (−3 dB to 28 dB, 2 dB steps)
Synchronization	Line-Lock (−120° to 120° vertical phase adjust) or internal crystal
Aperture Correction	Horizontal and vertical
Digital Zoom	12x

Sensitivity (typical) [1]		30 IRE	50 IRE
Day Mode			
SensUp Off (NTSC: 1/60s PAL: 1/50s)		0.66 lux (0.061 fc)	1.4 lux (0.13 fc)
SensUp On (NTSC: 1/4s, 15X; PAL 1/3s, 16.7X)		0.04 lux (0.0037 fc)	0.1 lux (0.0092 fc)
Night Mode			

SensUp Off	0.104 lux (0.0097 fc)	0.209 lux (0.0194 fc)
SensUp On (NTSC: 1/4s, 15X; PAL 1/3s, 16.7X)	0.0052 lux (0.0005 fc)	0.0103 lux (0.001 fc)
Electronic Shutter Speed	NTSC: 1/4 to 1/10,000 sec., 20 steps PAL: 1/3 to 1/10,000 sec., 20 steps	
Wide Dynamic Range (WDR)	92 dB (50 dB with WDR Off)	
Signal-to-Noise Ratio (SNR)	>50 dB (Weighting ON)	
Backlight Compensation	On/Off	
White Balance	ATW, Indoor, Outdoor, AWB Hold, Extended ATW, Manual, Outdoor Auto, Sodium Lamp Auto, Sodium Lamp	
Day/Night	Monochrome, Color, Auto	
Stabilization	On/Off	

1. Unless otherwise stated, test conditions are: F1.6; shutter = NTSC 1/60s, PAL 1/50s; max AGC; no bubble. Clear bubble adds 0.09 f-stop loss (90% light transmission). Tinted bubble adds 0.47 f-stop loss (60% light transmission).

Camera 28x Day/Night

Imager	1/4 in.-type Exview HAD CCD (progressive scan)
Effective Picture Elements	PAL: Approx. 440,000; 752(H) x 582(V) NTSC: Approx. 380,000; 768 (H) x 494 (V)
Lens	28x Zoom (3.5–98.0 mm) F1.35 to F3.7
Focus	Automatic with manual override
Iris	Automatic with manual override

Zoom Movement Speed	NTSC	PAL
• Optical WIDE / Optical TELE – Focus Tracking ON	2.5 sec.	2.5 sec
• Optical WIDE / Optical TELE – Focus Tracking OFF	1.7 sec.	1.7 sec.
• Optical WIDE / Digital TELE – Focus Tracking ON	4.5 sec.	4.9 sec.
• Optical WIDE / Digital TELE – Focus Tracking OFF	1.7 sec.	1.7 sec.
• Digital WIDE / Digital TELE	2.0 sec.	2.5 sec.

Optical Zoom Field of View (FOV)	2.1° to 55.8°
Minimum Working Distance	300 mm (wide) to 1500 mm (tele)
Gain Control	Auto/Manual/Max. (−3 dB to 28 dB, 2 dB steps)
Synchronization	Line-Lock (-120° to +120° vertical phase adjust) or internal crystal
Aperture Correction	Horizontal and vertical

Digital Zoom	12x		
Sensitivity (typical) [2]		**30 IRE**	**50 IRE**
Day Mode			
SensUp Off		0.33 lux (0.031 fc)	0.66 lux (0.061 fc)
SensUp On (NTSC: 1/4s, 15X; PAL 1/3s, 16.7X)		0.02 lux (0.002 fc)	0.04 lux (0.004 fc)
Night Mode			
SensUp Off		0.066 lux (0.006 fc)	0.166 lux (0.015 fc)
SensUp On (NTSC: 1/4s, 15X; PAL 1/3s, 16.7X)		0.0026 lux (0.0002 fc)	0.0082 lux (0.0008 fc)
Electronic Shutter Speed	NTSC: 1/4 to 1/10,000 sec., 20 steps PAL: 1/3 to 1/10,000 sec., 20 steps		
Wide Dynamic Range (WDR)	92 dB (50 dB with WDR Off)		
Signal-to-Noise Ratio (SNR)	>50 dB (Weighting ON)		
Backlight Compensation	On/Off		
White Balance	ATW, Indoor, Outdoor, AWB Hold, Extended ATW, Manual, Outdoor Auto, Sodium Lamp Auto, Sodium Lamp		
Day/Night	Monochrome, Color, Auto		
Stabilization	On/Off		

2. Unless otherwise stated, test conditions are: F1.6; shutter = NTSC 1/60s, PAL 1/50s; max AGC; no bubble. Clear bubble adds 0.09 f-stop loss (90% light transmission). Tinted bubble adds 0.47 f-stop loss (60% light transmission).

Mechanical

	In-Ceiling	Pendant
Pan Range	360° cont.	360° cont.
Tilt Angle	1° above horizon	18° above horizon
Pre-position Speed	Pan: 400°/s Tilt: 300°/s	Pan: 400°/s Tilt: 300°/s
Pan/Tilt Modes		
• Turbo Mode (Manual Control)	Pan: 0.1°/s – 400°/s Tilt: 0.1°/s – 300°/s	
• Normal Mode	0.1°/s-120°/s	0.1°/s-120°/s
Preset Accuracy	± 0.1° typ.	± 0.1° typ.

Electrical

	In-Ceiling	Pendant
Input Voltage	21-30 VAC, 50/60 Hz High PoE or PoE+ (IEEE 802.3at, class 4 standard)	21-30 VAC, 50/60 Hz or High PoE
Power Consumption, typical	24 W / 44 VA	60 W / 69 VA (heaters on) or 24 W / 44 VA[3] (heaters off)

3. Without heater connected in power supply box for indoor applications.

Surge Suppression

Protection on Alarm Inputs	Peak current 17 A, peak power 300 W (8/20 μs)
Protection on Alarm Outputs	Peak current 2 A, peak power 300 W (8/20 μs)
Protection on Relay Output	Peak current 7.3 A, peak power 600 W (10/1000 μs)
Protection on Power Input (Dome)	Peak current 7.3 A, peak power 600 W (10/1000 μs)
Protection on Power Output (Arm Power Supply)	Peak current 21.4 A, peak power 1500 W (10/1000 μs)
10/100 Ethernet Data Lines	Peak current 14 A, peak power 200 W (8/20 μs)

Software Control

Camera Setup/ Control	Via web browser (such as Internet Explorer version 7.0 or later), Bosch Configuration Manager, Bosch Video Management System (BVMS), or Bosch Video Client (BVC)
Software Update	Network firmware upload

Network

Video compression	H.264 (ISO/IEC 14496-10), M-JPEG

Encoding / Streaming

	H.264			MJPEG
			Scenario	
	Stream 1	Stream 2	Stream 3	Stream 4
1	4CIF@30ips	4CIF@30ips	I-frame only from Stream 1	4CIF@30ips
2	4CIF@30ips	Copy of Stream 1	I-frame only from Stream 1	4CIF@30ips
3	Downscaled stream	Downscaled stream	I-frame only from Stream 1	Downscaled stream from Stream 1

GOP Structure	IP, IBP, IBBP
Data Rate	9.6 kbps to10 Mbps (per stream)
Overall IP Delay	240 ms

Resolution (Horizontal x Vertical, PAL/NTSC)

• 4CIF/D1	704 x 576/480 (25/30 ips, or 50/60 fields/s for interlaced fields)
• CIF	352 x 288/240 (25/30 ips, or 50/60 fields/s for interlaced fields)
Ethernet	10-Base T/100 Base-TX, auto-sensing, half/full duplex, RJ45
Protocols	IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, FTP, Telnet, ARP, DHCP, 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
Advanced Networking	IPv6, QoS
Audio	
• Standard	G.711, 8 kHz sampling rate L16, 16 kHz sampling rate AAC, 16 kHz sampling rate
• Signal-to-Noise Ratio	>50 dB
• Audio Streaming	Bidirectional (full duplex)

Local Storage

Memory Card Slot	User-supplied SD/SDHC/SDXC memory card (maximum 2TB − SDXC)
Recording	Continuous recording of video and audio

Fiber Optic Kit

VG4-SFPSCKT

Description	Fiber Optic Ethernet Media Converter kit[5]. Requires a small form-factor pluggable (SFP) module (sold separately).
Data Interface	Ethernet
Data Rate	10/100 Mbps IEEE 802.3 Compliant Full Duplex or Half Duplex Electrical Port Full Duplex Optical Port
Compatible Receiver	CNFE2MC

Installation	Installed inside a VG4-A-PA0, VG4-A-PA1, VG4-A-PA2, VG4-A-PSU1, or a VG4-A-PSU2 power supply box with supplied mounting hardware

5. Kit available separately and must be installed inside the AUTODOME power supply box.

SFP Modules

Description	Interchangeable modules available for use with MMF or SMF optical fiber.
Data Interface	Ethernet
Data Rate	10/100 Mbps IEEE 802.3 Compliant

Mechanical

Dimensions (LxWxH)	
• SFP-2 and SFP-3	55.5 x 13.5 x 8.5 mm (2.2 x 0.5 x 0.3 in.)
• SFP-25, SFP-26	63.8 x 13.5 x 8.5 mm (2.5 x 0.5 x 0.3 in.)
Weight (all SFP modules)	0.23 kg (.05 lb)

	Type	Connector	Wavelength (transmit / receive)	Max. Distance
SFP-2	MMF	Duplex LC	1310 nm / 1310 nm	2 km (1.2 miles)
SFP-3	SMF	Duplex LC	1310 nm / 1310 nm	20 km (12.4 miles)
SFP-25	MMF	Single SC	1310 nm / 1550 nm	2 km (1.2 miles)
SFP-26	MMF	Single SC	1550 nm / 1310 nm	2 km (1.2 miles)

Fiber Compatibility

Optical Fiber Compatibility, MMF	50/125 µm MMF. For 50/125 µm fiber, subtract 4 dB from the specified optical budget value. Must meet or exceed fiber standard ITU-T G.651.
Optical Fiber Compatibility, SMF	8–10/125 µm SMF. Must meet or exceed fiber standard ITU-T G.652.
Optical Distance Specifications	Specified transmission distances are limited to the optical loss of the fiber and any additional loss introduced by connectors, splices, and patch panels. The modules are designed to operate over the entire optical loss budget range, so they do not require a minimum loss in order to operate.

Miscellaneous

Sectors/Titling	16 independent sectors with a 20-character title/sector
Masking	24 individually configurable privacy masks
Pre-positions	256, each with a 20-character title
Guard Tours	Two (2) types of tours:

	• Recorded tours – two (2) • Preset tour – one (1), consisting of up to 256 scenes, consecutively
Supported Languages	English, Chinese, Dutch, French, German, Italian, Japanese, Polish, Portuguese, and Spanish

User Connections

Power, Camera	RJ-45 10/100 Base-TX Ethernet (High Power-over-Ethernet (High PoE)) or PoE+ (IEEE 802.3at, class 4 standard) 21-30 VAC, 50/60 Hz
Power, Heater	RJ-45 10/100 Base-TX Ethernet (High Power-over-Ethernet (High PoE)) 21-30 VAC, 50/60 Hz
Video and Control	RJ-45 10/100 Base-TX Ethernet
Alarm Inputs (7)	2 supervised; 5 non-supervised Programmable for "normally open" or "normally closed"
Alarm Outputs (4)	1 dry contact relay; 3 open collector/ transistor outputs 32 VDC @ 150 ma max.
Audio	1 x mono line in, 1 x mono line out
• Signal line in	12 kOhm typical, 1 Vrms max
• Signal line out	1 Vrms at 1.5 kOhm, typical

Environmental

	In-Ceiling	Pendant
Ingress Protection Rating/ Standard	IP54, Plenum rated	IP66[7]
	NEMA 4X for: • Access to Hazardous parts • Ingress of solid foreign objects (falling dirt, circulating dust, settling dust) • Ingress of water (dripping and light splashing, hosedown and splashing) • Corrosive agents	
Operating Temp.	-10℃ to 40℃ (14℉ to 104℉)	-40℃ to 55℃ (-40℉ to 131℉) or -10℃ to 55℃ (14℉ to 131℉)[6]
Storage Temp.	-40℃ to 60℃ (-40℉ to 140℉)	-40℃ to 60℃ (-40℉ to 140℉)
Humidity	0% to 90% relative, non-condensing	0% to 100% relative, condensing

6. Without heater connected in power supply box for indoor applications.

7. Meets requirements for NEMA 4X certification with use of a polycarbonate bubble.

Meets requirements for NEMA 4X, except impact test, with use of an acrylic bubble.

Construction

Dimensions	See dimensional drawings
Weight	
• In-ceiling	2.58 kg (5.69 lb)

• Indoor/Outdoor Pendant	3.06 kg (6.75 lb)
Bubble Size	153.1 mm diameter (6.03 in.)
Construction Material	
• Housing	In-ceiling: Magnesium Pendant: Cast aluminum
• Bubble	In-ceiling: High-resolution acrylic, rugged polycarbonate, or HD high-resolution acrylic Pendant: High-resolution acrylic or rugged polycarbonate
Standard Color	White (RAL 9003)
Standard Finish	Powder coated, sand finish

Mounts/Accessories

Bubbles

In-ceiling

Clear high-resolution acrylic *(Included with in-ceiling PAL camera models.)*	VGA-BUBBLE-CCLA
Tinted high-resolution acrylic *(Included with in-ceiling NTSC camera models.)*	VGA-BUBBLE-CTIA
Clear rugged polycarbonate	VGA-BUBBLE-CCLR
Tinted rugged polycarbonate	VGA-BUBBLE-CTIR
Clear HD high-resolution acrylic	VGA-BUBHD-CCLA
Tinted HD high-resolution acrylic	VGA-BUBHD-CTIA

Pendant

Clear high-resolution acrylic *(Included with pendant camera models.)*	VGA-BUBBLE-PCLA
Tinted high-resolution acrylic	VGA-BUBBLE-PTIA
Clear rugged polycarbonate	VGA-BUBBLE-PCLR
Tinted rugged polycarbonate	VGA-BUBBLE-PTIR

Pendant Arm Mounts

Wall Arm (No Transformer)	VG4-A-PA0
Wall Arm (120/230 VAC Transformer)	VG4-A-PA1 / VG4-A-PA2
Pendant Arm with Wiring	VGA-PEND-ARM
Mounting plate for VGA-PEND-ARM	VGA-PEND-WPLATE
Trim skirt for VG4 Series Power Supplies	VG4-A-TSKIRT

Optional Mounting Plates for Arm Mounts

Corner Mounting Plate	VG4-A-9542
Mast (Pole) Mounting Plate	VG4-A-9541

Pendant Pipe Mounts

Pipe Mount Cap	VG4-A-9543

Pendant Roof Mounts

|	
Roof (Parapet) Mount (VG4-A-9543 Pipe Mount Cap required. Available separately.)	VGA-ROOF-MOUNT

Optional Mounting Plates for Roof Mounts

Flat Roof Adapter for Parapet Mount	LTC 9230/01

In-ceiling Support Kits

Bracket for suspended or drop ceilings	VGA-IC-SP

Power Supplies

|	
High PoE Midspan 60W, single port, AC in	NPD-6001A
Outdoor Power Supply Box, no transformer	VG4-A-PSU0
Outdoor Power Supply Box (120/230 VAC Transformer)	VG4-A-PSU1 / VG4-A-PSU2
Fiber Optic Kit	VG4-SFPSCKT

Dimensional Drawings
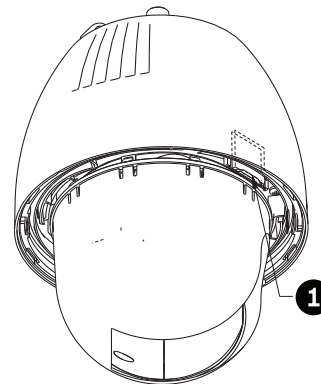
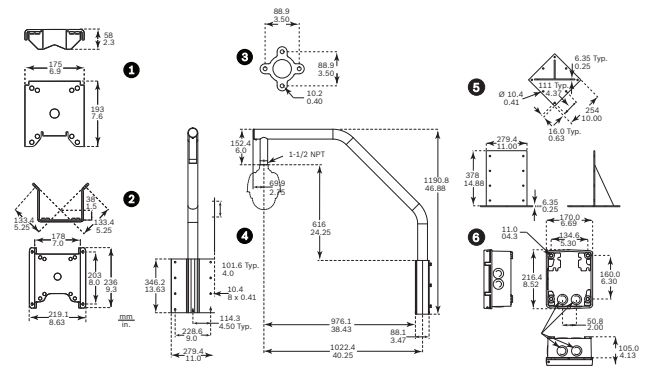

AUTODOME 7000 – Slot for SD card

1 Slot for SD card
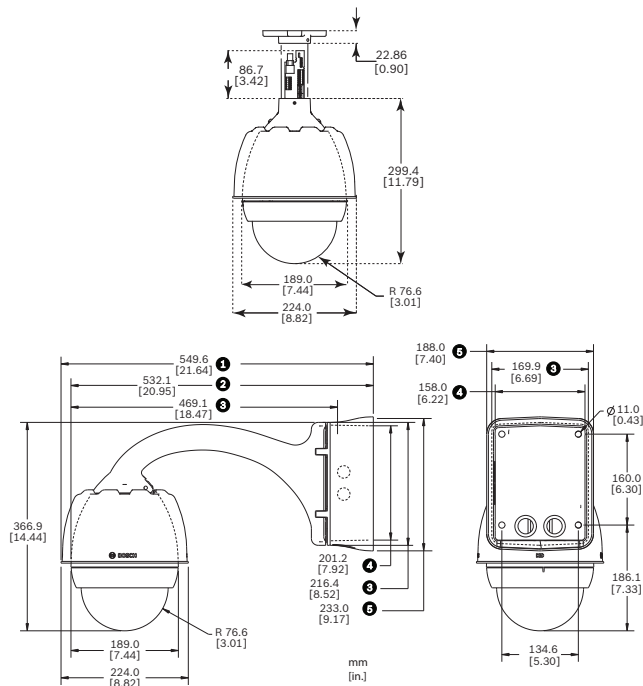
AUTODOME 7000 Dimensions – Pendant, Pipe

1 Power supply box and sunshield

2 Sunshield removed

3 Mounting plate

4 Power supply box

5 Trim skirt
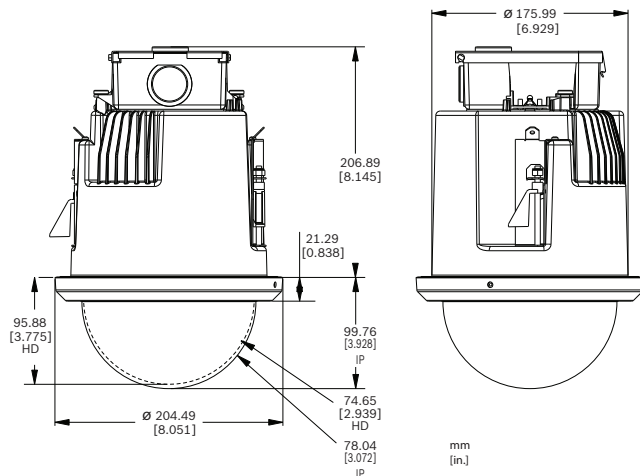
AUTODOME 7000 Dimensions – In-ceiling

AUTODOME Dimensions - Mounts

1 Mast Mount

2 Corner Mount

3 Pipe Mount

4 Roof Mount

5 Roof Mount Adapter

6 Power Supply for Pipe and Roof Mounts

Ordering information

AUTODOME 7000 IP 28x In-ceiling PAL with Clear Bubble
Order number **VG5-7028-C1PC4**

AUTODOME 7000 IP 28x In-ceiling NTSC with Tinted Bubble
Order number **VG5-7028-C2PT4**

AUTODOME 7000 IP 28x Indoor/Outdoor Pendant PAL with Clear Bubble
Order number **VG5-7028-E1PC4**

AUTODOME 7000 IP 28x Indoor/Outdoor Pendant NTSC with Clear Bubble
Order number **VG5-7028-E2PC4**

AUTODOME 7000 IP 36x Indoor/Outdoor Pendant PAL with Clear Bubble
Order number **VG5-7036-E1PC4**

AUTODOME 7000 IP 36x Indoor/Outdoor Pendant NTSC with Clear Bubble
Order number **VG5-7036-E2PC4**

Accessories

VG4-A-PSU0 24 VAC Power Supply Unit
24 VAC, 100 W, white, for an AutoDome Series camera
Order number **VG4-A-PSU0**

VG4-A-PSU1 120 VAC Power Supply Unit
120 VAC, 100 W, white, for an AutoDome Series camera
Order number **VG4-A-PSU1**

VG4-A-PSU2 230 VAC Power Supply Unit
230 VAC, 100 W, white, for an AutoDome Series camera
Order number **VG4-A-PSU2**

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

VG4-A-PA0 Pendant Arm Mount
Pendant arm mount with power supply box for a
AutoDome Series cameras, no transformer, white
Order number **VG4-A-PA0**

VG4-A-PA1 Pendant Arm Mount with 120 VAC Transformer
Pendant arm mount with power supply box for
AutoDome Series cameras with a 120 VAC
transformer, white
Order number **VG4-A-PA1**

VG4-A-PA2 Pendant Arm Mount with 230 VAC Transformer
Pendant arm mount with power supply box for
AutoDome Series cameras with a 230 VAC
transformer, white
Order number **VG4-A-PA2**

VGA-PEND-ARM Pendant Arm with Wiring
Compatible with an AutoDome Series pendant housing
Order number **VGA-PEND-ARM**

VGA-PEND-WPLATE Mounting Plate
Mounting plate for VGA-PEND-ARM, compatible with
an AutoDome Series camera
Order number **VGA-PEND-WPLATE**

VGA-ROOF-MOUNT Roof Mount
Roof parapet mount, white
(VG4-A-9543 Pipe Mount Cap required. Available
separately.)
Order number **VGA-ROOF-MOUNT**

LTC 9230/01 Flat Roof Mount Adapter
For mounting a unit in an upright position on a flat
surface for roof parapet mount VGA-ROOF-MOUNT
Order number **LTC 9230/01**

VG4-A-9541 Pole Mount Adapter
Pole mount adapter for a for an AutoDome Series
pendant arm or a VEI-30 or NEI-30 Dinion Infrared
Imager, designed for poles with a diameter of
100-380 mm (4-15 in.), white
Order number **VG4-A-9541**

VG4-A-9542 Corner Mount Adapter
Corner mount adapter for an AutoDome Series
pendant arm or a VEI-30 or NEI-30 Dinion Infrared
Imager
Order number **VG4-A-9542**

VG4-A-9543 Pipe Mount
Pipe mount, white, for an AutoDome Series pendant
housing
Order number **VG4-A-9543**

VGA-IC-SP In-ceiling Support Kit for Various Bosch Dome Cameras
Suspended ceiling support kit for various families of
Bosch dome cameras
Order number **VGA-IC-SP**

VGA-SBOX-COVER Cover for AutoDome Power Supply Boxes
Order number **VGA-SBOX-COVER**

VG4-A-TSKIRT Trim Skirt for AutoDome Power Supply Boxes
Trim skirt for the following AutoDome Series power
supply boxes:
VG4-A-PSU0, VG4-A-PSU1, and VG4-A-PSU2
Order number **VG4-A-TSKIRT**

VGA-BUBBLE-CCLR Clear Rugged Bubble for an In-ceiling Housing
Impact resistant polycarbonate bubble
Order number **VGA-BUBBLE-CCLR**

VGA-BUBBLE-CTIR Tinted Rugged Bubble for an In-ceiling Housing
Impact resistant polycarbonate bubble
Order number **VGA-BUBBLE-CTIR**

VGA-BUBBLE-CCLA Clear High-resolution Bubble for an In-ceiling Housing
Low-impact acrylic bubble
Order number **VGA-BUBBLE-CCLA**

VGA-BUBBLE-CTIA Tinted High-resolution Bubble for an In-ceiling Housing
Low-impact acrylic bubble
Order number **VGA-BUBBLE-CTIA**

VGA-BUBBLE-PCLR Clear Rugged Bubble for a Pendant Housing
Impact resistant polycarbonate bubble
Order number **VGA-BUBBLE-PCLR**

VGA-BUBBLE-PTIR Tinted Rugged Bubble for a Pendant Housing
Impact resistant polycarbonate bubble
Order number **VGA-BUBBLE-PTIR**

VGA-BUBBLE-PCLA Clear High-resolution Bubble for a Pendant Housing
Low-impact acrylic bubble
Order number **VGA-BUBBLE-PCLA**

VGA-BUBBLE-PTIA Tinted High-resolution Bubble for a Pendant Housing
Low-impact acrylic bubble
Order number **VGA-BUBBLE-PTIA**

VGA-BUBHD-CCLA Clear HD High-Resolution Acrylic Bubble for In-Ceiling AUTODOME cameras
Order number **VGA-BUBHD-CCLA**

VGA-BUBHD-CTIA Tinted HD High-Resolution Acrylic Bubble for In-Ceiling AUTODOME cameras
Order number **VGA-BUBHD-CTIA**

VG4-SFPSCKT Fiber Optic Ethernet Media Converter Kit
Ethernet media converter video transmitter/data receiver fiber optic kit
Order number **VG4-SFPSCKT**

SFP-2 Small Form-factor Pluggable Optical Interface
SFP Fiber Optic Module, Multi-mode, 1310 nm, 2 km (1.2 miles), 2 LC connectors
Order number **SFP-2**

SFP-3 Small Form-factor Pluggable Optical Interface
SFP Fiber Optic Module, Single-mode, 1310 nm, 20 km (12.4 miles), 2 LC connectors
Order number **SFP-3**

SFP-25 Small Form-factor Pluggable Optical Interface
SFP Fiber Optic Module, Multi-mode, 1310/1550 nm, 2 km (1.2 miles), 1 SC connector
Order number **SFP-25**

SFP-26 Small Form-factor Pluggable Optical Interface
SFP Fiber Optic Module, Multi-mode, 1550/1310 nm, 2 km (1.2 miles), 1 SC connector
Order number **SFP-26**